National Park Service
U.S. Department of the Interior
In cooperation with the U.S. Fish and Wildlife Service

Final Environmental Impact Statement

Disposition of Bureau of Mines Property, Twin Cities Research Center Main Campus Hennepin County, Minnesota

Volume I
December 2009

FINAL ENVIRONMENTAL IMPACT STATEMENT
Disposition of Bureau of Mines Property
Twin Cities Research Center Main Campus
Hennepin County, Minnesota

Volume 1 of 2
Main Report

Mississippi National River and Recreation Area
National Park Service
U.S. Department of the Interior

In cooperation with the U.S. Fish and Wildlife Service

Prepared By:
National Park Service
U.S. Department of the Interior

with assistance from
engineering-environmental Management, Inc.

December 2009

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Disposition of Bureau of Mines Property, Twin Cities Research Center Main Campus Hennepin County, Minnesota Mississippi National River and Recreation Area

SUMMARY

The Bureau of Mines property consists of approximately 27 acres of land near the confluence of the Mississippi and Minnesota rivers. The property has been in federal ownership since 1805 and was once part of the much larger Fort Snelling Military Reservation. The U.S. Bureau of Mines began managing the property in 1949 and eventually constructed 11 buildings on site.

The property is partially wooded. Its buildings have been largely vacant since 1996 and most of them are deteriorating rapidly. The site and buildings have national historic significance associated with the mining and mine safety technologies that were developed there. In addition, the site contains Coldwater Spring. The spring has cultural importance to some American Indians; spiritual, environmental and other interest groups; as well as individuals. Beginning in 1820, the spring provided water to the soldiers who originally built Fort Snelling. Late in the 1800's, a springhouse, reservoir and related waterworks infrastructure were constructed to supply water to the Fort as it expanded. Currently, the springhouse and reservoir remain. There are three historic districts and a national historic landmark that overlap on the site.

Congress abolished the U.S. Bureau of Mines in 1996 and the facility closed that year. Congress later directed the National Park Service (NPS) to lead a process to determine the ultimate disposition of the property. The National Park Service was selected because the property lies entirely within the Mississippi National River and Recreation Area, an NPS unit.

The National Park Service began development of this Environmental Impact Statement (EIS) in 2004. Public scoping meetings were held in 2005 and a Draft EIS was published in 2006. The public comment period, which included several public meetings, ended in late 2006 with the receipt of 509 comment statements and letters from federal, state, local governments, American Indian tribes, interest groups and individual citizens. Those comments were summarized and transmitted to the U.S. Department of the Interior in early 2007 for selection of a preferred alternative for disposition of the property. In late 2008, the Department of the Interior selected a preferred alternative and directed the National Park Service to complete this Final EIS. The Department of the Interior's preferred alternative is alternative D and the land use scenario, open space / park.

Under preferred Alternative D the federal government would manage and bear the cost of modification for all or part of the land, structures, or other improvements prior to conveyance or retention of the Center. Following completion of the modifications, the Center would be

disposed through transfer to a university or nonfederal government entity without conditions (alternative B), transfer to a university or nonfederal government entity with conditions (alternative C), or retention by the federal government.

The land use scenario open space / park entails conversion of the Center property to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center property would become a park or be used as open space. This could be accomplished by removing some or all buildings, structures, and roadways. Nonnative plant species could be identified and removed. Native vegetation could then be planted and the site naturalized to recreate the historic characteristics of an open oak savanna, prairie-type setting.

In establishing the process for determining the site's future, Congress authorized potential transfer of the site to state or local governments or to a university. In developing the Draft EIS, the National Park Service contacted a broad list of state and local governments and universities, including the adjacent landowners: Minneapolis Park and Recreation Board, Minnesota Historical Society and Minnesota Department of Natural Resources. None expressed an interest in owning the property. Three American Indian tribes submitted separate requests that the property be retained in federal ownership and held in trust for them by the Bureau of Indian Affairs.

In evaluating the environmental impacts of alternative futures for the site, this document focuses more specifically on future uses—and their environmental effects—than on future owners. In addition to the no-action alternative evaluated to provide a baseline against which to compare the alternatives, three alternatives were evaluated: 1) Alternative B - transfer of the Center to a university or nonfederal government entity without conditions; 2) Alternative C - transfer of the Center to a university or nonfederal government entity with conditions; or 3) Alternative D -modification of the Center property prior to transfer or retention (either with or without conditions on the transfer). Within each alternative, three potential land-use scenarios were evaluated: open space/park, interpretive/nature/history center, and training center/office park.

Upon publication of the Final EIS, there will be a 30-day no-action period during which the document will be available to the public. Requests for information about the Final EIS may be directed to the

National Park Service
Mississippi National River and Recreation Area
111 Kellogg Blvd East, Suite 105
St. Paul, Minnesota 55101

Telephone: 651-290-4160
Fax: 651-290-3214
Email: missinfo@nps.gov

Following conclusion of the no action period, the Secretary of the Interior (or his designee) will issue a Record of Decision (ROD). The ROD will announce the final decision and summarize the rationale for the disposition of the Center property.

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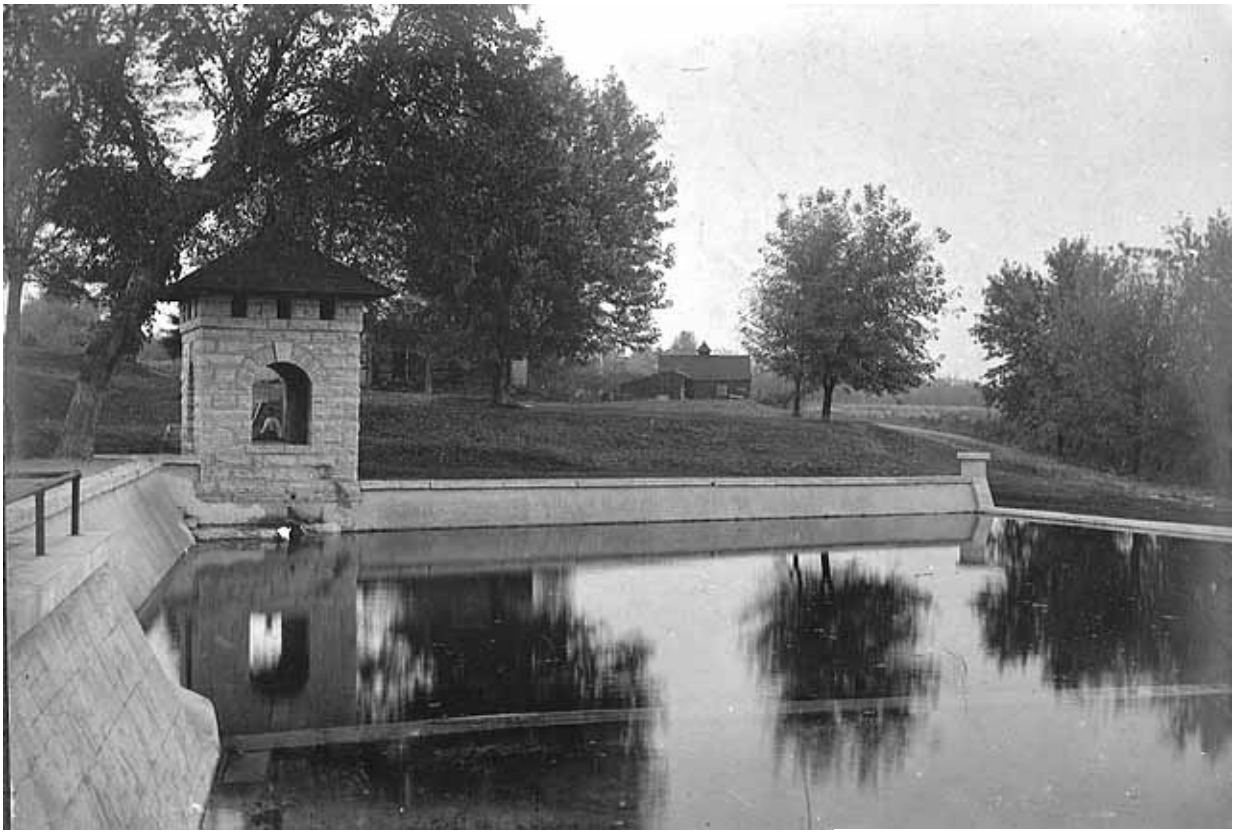
ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
BP	Before Present
Center	U.S. Bureau of Mines, Twin Cities Research Center, Main Campus
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
C.F.R.	Code of Federal Regulations
CMP	Comprehensive Management Plan
Critical Area	Mississippi River Corridor Critical Area
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
GIS	Geographic Information System
HABS	Historic American Buildings Survey
HAER	Historic Architecture Engineering Record
MAC	Metropolitan Airports Commission
MDH	Minnesota Department of Health
MDNR	Minnesota Department of Natural Resources
MIAC	Minnesota Indian Affairs Council
MnDOT	Minnesota Department of Transportation
MNRRA	Mississippi National River and Recreation Area
MOA	Memorandum of Agreement
MPCA	Minnesota Pollution Control Agency
MSL	Mean Sea Level
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NPS	National Park Service
NRHP	National Register of Historic Places
PCB	Polychlorinated Biphenyls
PPE	Personal Protective Equipment
PUBF	Palustrine Unconsolidated Bottom Semi-Permanently Flooded
Pub.L.	Public Law
S.F.	Senate File
SH	State Highway
SHPO	State Historic Preservation Office
TCP	Traditional Cultural Property
TCRC	Twin Cities Research Center
USACE	U.S. Army Corps of Engineers
USBM	U.S. Bureau of Mines
U.S.C.	United States Code
USDI	U.S. Department of the Interior
USFWS	U.S. Fish and Wildlife Service

CHAPTER ONE



Coldwater Spring House and Reservoir, Circa 1900
Photo Credit: Minnesota Historical Society

PURPOSE AND NEED

INTRODUCTION

This environmental impact statement (EIS) was prepared for the proposed disposition of the U.S. Bureau of Mines Twin Cities Research Center Main Campus (Center), in accordance with the National Environmental Policy Act of 1969, Public Law (Pub. L.) 93-205, 87 Stat. 884, 16 *United States Code* (U.S.C.) § 4321 *et seq*. (NEPA); regulations of the Council on Environmental Quality (CEQ) 40 *Code of Federal Regulations* [C.F.R.] 1500 *et seq*.), and the National Historic Preservation Act, as amended, Pub. L. 89–665, 80 Stat. 915, 16 U.S.C. § 470 *et seq*.; and 36 C.F.R. 18, 60, 61, 63, 68, 79, 800 (NHPA). The Center lies within the boundaries of the Mississippi National River and Recreation Area (MNRRA). The National Park Service (NPS) is the lead agency for this EIS.

This chapter addresses the following topics:

- Background on the Center
- Authority for Disposition of the Center
- Purpose and Need
- Previous Planning Efforts
- Relationship with Other Laws, Regulations, and Planning Documents
- Scoping
- Issues and Impacts Topics

Subsequent chapters of this EIS discuss the proposed action and alternatives, including the no-action alternative, affected environment, environmental consequences associated with each alternative, a list of preparers of this document, and references used.

BACKGROUND ON THE CENTER

The 27.32-acre area of the Center is located within the boundaries of the historic Fort Snelling Military Reservation in Hennepin County, Minnesota. The Center is within the congressionally designated 72-mile boundary of the MNRRA, a unit of the national park system. The property consists of a partially wooded area adjacent to Fort Snelling State Park near the intersection of State Highways (SH) 62 and 55 (Hiawatha Avenue) in the Twin Cities metropolitan area (figure 1). The day-to-day management responsibility for the Center has been assumed by the U.S. Fish and Wildlife Service (USFWS).

Activities of the U.S. Bureau of Mines (USBM) in the Twin Cities area began in 1915 with congressional authorization for a metallurgical research station (known as the Lake Superior Station) located on the University of Minnesota main campus. In 1949, the Veterans Administration agreed to transfer 43 acres of land under their jurisdiction to the USBM. The land was subsequently transferred through the 1951 General Appropriations Act (Pub. L. No. 759, 64 Stat. 595, 1950) (Ollendorf and Godfrey 1996). The original intent of this acquisition was to erect a new storage facility for cores drilled by the USBM and private companies in their assessments of mineral deposits, primarily in the north-central part of the country. The storage facility was erected in 1949, and became the first building constructed on lands that would later become the Center (figure 2). Between 1949 and 1953, three more buildings were erected on the site. In late 1957, Congress appropriated funds to the USBM to design and construct a new research center to consolidate the research efforts of the Lake Superior region. The construction efforts included the addition of three more buildings, which were completed by 1959. The completion of these buildings consolidated USBM activities in the Twin Cities area in one location with approximately 100 employees. The Center eventually employed up to 200 people and included 11 buildings (figure 3). The Center was consolidated to approximately 27 acres as a result of several land transfers with the Veterans Administration and the Minnesota Department of Natural Resources.

By the beginning of the 1990s, the Center was on the cutting edge of modern minerals technology. However, in 1994 the USBM proposed a major reorganization in response to an initiative from the Clinton administration to review the efficiency of federal agencies. The reorganization would have closed all but four USBM research facilities. The Center was one of four to remain open, but its focus would change from mining technology to environmental technology or research into measures to protect the environment during and after mining activities. Before this reorganization could be implemented, Congress abolished the USBM. President Clinton signed the Balanced Budget Downpayment Act I, dated January 26, 1996 (Pub. L. No. 104-99, 110 Stat. 26) (Thomas 2005), which terminated funding for the USBM. Three months later, the Center permanently closed.

Background Image: Digital Orthophoto, 2003, National Agricultural Imagery Program (NAIP), U.S. Department of Agriculture (USDA)
Boundary Data: MNRRA 2005

0 0.25 0.5 1 Mile

Figure 1: General Location Map

Source U.S. Bureau of Mines Archives, date unknown

Figure 2: Historic Photo of First Building Constructed at the Center

Upon closing the Center, administration of the property remained with the U.S. Department of the Interior (USDI) under the USBM closure legislation (Pub. L. No. 104-134 [1996]). The Metropolitan Airports Commission (MAC) considered purchasing the Center, but withdrew from the negotiations in October 2001. Since that time, the USDI considered reuse of the site and buildings as an office complex for its bureaus and offices, but concluded this proposal was not economically viable. The property has been vacant since 1996, except for occasional temporary use by other agencies or organizations.

Background Image: Digital Orthophoto, 2003, National Agricultural Imagery Program (NAIP), U.S. Department of Agriculture (USDA)
Building Designations: MNRRA 2005

Figure 3: General Site Map and Building Locations

AUTHORITY FOR DISPOSITION OF THE CENTER

Center Conveyance

Three federal appropriations acts authorize conveyance of the Center to any university or government entity deemed appropriate by the Secretary of the Interior (appendix A).

The U.S. Department of the Interior and Related Agencies Appropriations Act of 1996, Pub. L. No. 104-134 (1996), provides for the conveyance of certain USBM facilities to specific entities and concluded that section by stating:

> *That notwithstanding any other provision of law, the Secretary is authorized to convey, without reimbursement, title and all interest of the United States in property and facilities of the United States Bureau of Mines in Juneau, Alaska, to the City and Borough of Juneau, Alaska; in Tuscaloosa, Alabama, to the University of Alabama; in Rolla, Missouri, to the University of Missouri-Rolla; and in other localities to such university or government entities as the Secretary deems appropriate* [emphasis added].

The Omnibus Consolidated Appropriations Act, Pub. L. No. 104-208 § 123 (1996), modifies the language to include the word "hereafter" after the word "authorized."

The U.S. Department of the Interior and Related Agencies Appropriation Act of 2000, Pub. L. No. 106-113, gives the Secretary of the Interior authority to accept financial remuneration for the disposition of the Center and to distribute such funds to the MNRRA and the National Wildlife Refuge System for the benefit of their respective activities within the state of Minnesota, and in accordance with their legislative authorities. The language, contained in appendix C of the legislation, states:

> *SEC. 140. Notwithstanding any other provision of law, in conveying the Twin Cities Research Center under the authority provided by Public Law 104-134, as amended by Public Law 104-208, the Secretary may accept and retain land and other forms of reimbursement: Provided, That the Secretary may retain and use any such reimbursement until expended and without further appropriation: (1) for the benefit of the National Wildlife Refuge System within the State of Minnesota; and (2) for all activities authorized by Public Law 100-696: 16 U.S.C. 460zz.*

Pub. L. No. 100-696, 16 U.S.C. 460zz, is the legislation that established the MNRRA. The information presented in this EIS is not intended to limit other available property disposal authorities available to the Secretary.

Planning Process

To encourage and support the USDI disposition process, Congress included language and funding in the 2003 USDI appropriations bill (H.R. Rep. No. 107-564, p. 56 [2002]) for the National Park Service to lead the public planning process for disposition of the Center (appendix A).

> *The Committee has included $750,000 in the planning portion of the Service's construction budget for the National Park Service to lead a public planning process associated with disposition of the former Twin Cities Bureau of Mines Research Center. After lengthy discussions with the Department of the Interior, the Metropolitan Airports Commission decided against acquiring the Center. The Committee is informed that the Department of the Interior has concluded that reuse of the center as an office complex for its bureaus and offices is not economically viable. The Committee agrees with this conclusion and with the decision of the Department to examine other options, including returning the site to natural conditions.*
>
> *The Committee understands that while the responsibility for the site rests with the Secretary of the Interior, the National Park Service participated extensively and effectively in prior public efforts to determine the potential future uses of the site. The funds provided will allow the National Park Service to oversee the necessary studies and reviews associated with the potential disposal of Federal property. The Service should use the funds provided to obtain the necessary assistance for the studies and reviews, including contracting for services as appropriate.*
>
> *Other Department of the Interior bureaus, including the U.S. Fish and Wildlife Service, should provide such assistance as is necessary to facilitate the Service's accomplishment of this work. The Committee does not intend for the Service's oversight of this process to disrupt or interfere with the ongoing operations at the Mississippi National River and Recreation Area (MNRRA), and thus provides the resources necessary to accomplish this workload.*
>
> *While the Park Service is being asked to coordinate the process, it is imperative that other public interests, including the U.S. Fish and Wildlife Service and local and state governments, participate in the public review and comment periods. By requesting the Park Service to lead this process, it is not the Committee's intention that the site be transferred to MNRRA. The Committee understands that this option is inconsistent with MNRRA's comprehensive management plan.*

Cooperating Agencies

The National Park Service is the lead agency for this EIS, in cooperation with the USFWS. A memorandum of agreement (MOA) between the National Park Service and the USFWS was signed in 2004 (appendix B). The MOA outlines roles and responsibilities for each agency in preparation of the EIS and an ensuing record of decision on the proposed disposition of the Center.

Decision-Making Process

After the National Park Service completes the NEPA planning and environmental review process, the decision on the disposition of the Center will be made by the Secretary of the Interior, or his designee.

PURPOSE AND NEED

The proposed action is to dispose of the Center in accordance with authority provided by Congress in legislation addressing the closure of the Center. This authority is contained, in part, in the Department of the Interior and Related Agencies Appropriations Act of 1996, Pub. L. No. 104-134 (1996), which provides the Secretary of the Interior with authority to convey the Center directly to a university or government entity as the Secretary deems appropriate. The Secretary's overall authority for disposition of the Center under this EIS, however, should not be construed as being limited to the Department of the Interior and Related Agencies Appropriations Act of 1996, Pub. L. No. 104-134.

The proposed action is needed because the Center permanently closed after Congress abolished the USBM by enacting the Balanced Budget Downpayment Act I, dated January 26, 1996 (Pub. L. No. 104-99, 110 Stat. 26) (Thomas 2005). This authority terminated funding for the USBM.

PREVIOUS PLANNING EFFORTS

In 2000, the MAC proposed to acquire the Center to protect the approach to runway 4-22 after that runway was to be extended to accommodate larger aircraft. The MAC withdrew their proposal in October 2001.

In 2002, the USDI evaluated the cost to renovate the Center for use as a central campus for all USDI agencies and operations in the Twin Cities area, to be known as the USDI Midwest Campus. The USFWS, through a local contractor, completed a space utilization study and associated master plan for needed improvements to the Center. After review of the plans, the USDI determined the project was cost prohibitive and declined to move forward.

In addition to proposals that specifically addressed the Center, planning for the realignment of SH 55 / Hiawatha Avenue in the vicinity of SH 62 brought attention to potential impacts on the flow and water quality of Camp Coldwater Spring as a result of the highway construction. An EIS for the reconstruction of SH 55 / Hiawatha Avenue from SH 62 to Interstate 94 was issued by the Minnesota Department of Transportation (MnDOT) in 1985, with construction beginning in 1988. Work on the section between East 54th Avenue and SH 62 began in 1998. Public concerns were expressed regarding the potential of highway work to occur within 500 feet of Camp Coldwater Spring. Minnesota Senate File (S.F.) 2049 was passed to protect flow to and from the spring (refer to the following section for additional details on this legislation). The SH 55 / Hiawatha Avenue realignment opened to traffic in October 2000 (MnDOT 2000).

RELATIONSHIP WITH OTHER LAWS, REGULATIONS, AND PLANNING DOCUMENTS

Following disposition of the Center, the future recipient would comply with applicable laws and regulations, including those related to protection of air quality, water quality, and wetlands. Applicable authorities typically would not preclude uses of the Center lands, but rather would require mitigative measures. There are several key authorities and planning documents that could preclude certain types of activities, development, or uses of the Center. These authorities and planning documents are discussed below.

Mississippi River Corridor Critical Area (Critical Areas Act of 1973, Executive Order 79-19, Interim Development Regulations)

The Critical Areas Act of 1973 (Minn. Stat. § 116G.01) was enacted by the Minnesota legislature to provide the state with a means to protect areas possessing important historical, cultural, or aesthetic values, or natural systems that perform functions of greater than local significance. The legislature found that the development of such areas could result in irreversible damage to these resources, decrease their value and utility for public purposes, or unreasonably endanger life and property. The act authorized the governor to establish a state "critical area" to provide protection of these special areas by means of an executive order.

The geographic area that in 1988 would become the federal MNRRA was previously designated as the state Mississippi River Corridor Critical Area (Critical Area) in 1976 by executive order of the governor. The order was renewed in 1979, and made permanent that same year by the Metropolitan Council. Purposes of designating the Mississippi River corridor as a state critical area include:

- Protecting and preserving a unique and valuable state and regional resource for the benefit of the health, safety, and welfare of the citizens for the state, region, and nation
- Preventing and mitigating irreversible damage to this resource
- Preserving and enhancing its natural, aesthetic, cultural, and historical value for public use
- Protecting and preserving the river as an essential element in the national, state, and regional transportation, sewer and water, and recreational systems
- Protecting and preserving the biological and ecological functions of the corridor

In 1991, the Minnesota legislature reinforced the state's interest in protecting the river corridor by designating the MNRRA as a state critical area. Local units of government and regional agencies are required to adopt critical area plans and regulations that comply with Executive Order 79-19. The standards in Executive Order 79-19, as well as Minnesota statutes

and Minnesota rules, are required to be followed by all local units of government in the corridor when preparing or modifying plans and regulations. Critical area standards and guidelines include, but are not limited to: protecting aesthetic qualities; preserving riverbanks, bluffs, and scenic overlooks in their natural state; and minimizing interference with views of and from the river.

The Critical Area contains four land-use districts and the Center is located within the Urban Open Space District. The executive order states this district ". . .shall be managed to conserve and protect the existing and potential recreational, scenic, natural, and historic resources and uses. . . for the use and enjoyment of the surrounding region."

Local units of government and regional and state agencies shall permit development in the corridor only in accordance with adopted plans and regulations or the interim development regulations that are found within the executive order. Because the Center does not lie within any municipality, the local government responsible for enforcing Critical Area standards for the site is Hennepin County. All lands within the Critical Area under Hennepin County's jurisdiction are state or federally owned, so the state has never required the county to adopt a critical area ordinance. As a result, the executive order's interim development regulations would have jurisdiction over future land uses by any nonfederal owner. Because the MNRRA comprehensive management plan (CMP) embraces the executive order, and the MNRRA enabling legislation provides a framework for federal undertakings to achieve conformance with the MNRRA plan, the interim development regulations would also influence any future federal agency that may manage the Center.

The interim development regulations would allow a variety of uses of the Center. Site disturbance would be limited, and slopes over 18% would have to be left in a natural state. Any new structures would need to be set back 40 feet from the top of all slopes over 18%, and any new structures could not exceed 35 feet in height.

MNRRA Enabling Legislation and the MNRRA Comprehensive Management Plan

As previously discussed, the Center is located entirely within the MNRRA. On November 18, 1988, Pub. L. 100-696, 16 U.S.C. 460zz, established the MNRRA as a unit of the national park system to:

- Protect, preserve, and enhance the significant values of the waters and land of the Mississippi River corridor within the St. Paul-Minneapolis metropolitan area;

- Encourage adequate coordination of all governmental programs affecting the land and water resources of the Mississippi River corridor;

- Provide a management framework to assist the state of Minnesota and its units of local government in the development and implementation of integrated resource management programs for the Mississippi River corridor in order to assure orderly

public and private development in the area consistent with the findings of the MNRRA legislation (appendix C).

The MNRRA includes 72 miles of the Mississippi River and 4 miles of the Minnesota River. It encompasses approximately 54,000 acres of public and private land and water in five Minnesota counties stretching from the cities of Dayton and Ramsey to just south of Hastings. Unlike many units of the national park system that have extensive federal land ownership, the MNRRA owns and directly manages less than 50 acres within its administrative boundary. Congress charged the Secretary of the Interior, through the MNRRA, with coordinating the efforts of federal, state, and local governments to keep this 72-mile section of the Mississippi River corridor in good condition and enhance its resources (NPS 1995).

The MNRRA enabling legislation required that a comprehensive plan for land and water use measures for the area be developed that was to be implemented by the responsible federal agencies, the state of Minnesota, and local political subdivisions. The plan was to include, but not be limited to, the following:

- A program for management of existing and future land and water use;
- A program providing for coordinated implementation and administration of the plan with proposed assignment of responsibilities to the appropriate governmental unit at the federal, state, regional, and local levels;
- A coordination and consistency component that details the ways in which local, state, and federal programs and policies may best be coordinated to promote the purposes of the MNRRA;
- A program for the coordination and consolidation, to the extent feasible, of permits that may be required by federal, state, and local agencies having jurisdiction over land and water within the area.

To satisfy this mandate, the MNRRA CMP was completed in 1994 and signed by the Secretary of the Interior in 1995 (NPS 1995).

Under the CMP, protection of scenic and natural resource values is largely the responsibility of local government partners through special zoning controls. In the same geographic area that would later become the MNRRA corridor, the state of Minnesota has had special land-use rules in effect since 1976. Where a state critical area is designated, the Critical Areas Act of 1973 requires affected local governments to prepare plans and ordinances consistent with certain standards. Compliance with the Critical Area standards is the first line of protection for the MNRRA under the CMP; therefore, the National Park Service believes that any future use of the Center should comply with those requirements. In addition to compliance with the Critical Area standards, the CMP contains a number of policy statements that could affect reuse of the Center, depending on the type of use proposed.

Land ownership and management by the National Park Service is addressed in the CMP. The MNRRA is a partnership park in a largely developed urban area and, as such, the CMP does

not anticipate the National Park Service becoming a major landowner. The enabling legislation, however, provides specific authority for acquisition by adverse possession in certain circumstances. Congress did not appear to have expected significant NPS acquisition in a corridor that is so heavily developed. The CMP does not anticipate significant NPS land ownership, but NPS management of the Center property, which is already in federal ownership, would be consistent with the enabling legislation, other NPS authorities and the MNRRA CMP.

Because it is not the intent of the National Park Service to acquire large tracts of land, the CMP embraces the Critical Area's land-use controls as the primary means of protecting resources within the MNRRA. However, it is important to note that the National Park Service has no approval authority for specific land-use decisions in the MNRRA, except on the small amount of federally owned property that it directly manages. The MNRRA CMP states:

> *The Comprehensive Management Plan] is not a regulatory document and does not mandate actions by non-NPS entities. The National Park Service and the commission do not have approval authority over local plans and ordinances, and they do not have authority to approve or deny project-specific land use decisions. The MNRRA legislation specifies that NPS regulatory authority in the Code of Federal Regulations, 36 C.F.R., only applies to lands that the National Park Service owns* (NPS 1995).

According to the CMP, the National Park Service is the primary advocate for national interests within the corridor and has mandated review responsibility for federally funded or permitted activities.

Minneapolis-St. Paul International Airport (Wold-Chamberlain Field) Zoning Ordinance (Airport Zoning Ordinance)

The Wold-Chamberlain Field Joint Airport Zoning Board adopted an airport zoning ordinance in January 1984, and subsequently restated and amended said ordinance on April 29, 2004. The airport zoning ordinance was adopted pursuant to the authority of Minnesota law (Minn. Stat. § 360.061–360.074). The purpose of the airport zoning ordinance is to establish a mechanism for prevention of creation or establishment of airport hazards and for elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards. The Joint Zoning Board that amended the airport zoning ordinance in 2004 was comprised of representatives of municipalities containing airport hazard areas in the vicinity of the Minneapolis-St. Paul International Airport, as well as the Metropolitan Airports Commission (MAC) and Hennepin County. The municipalities include the cities of Eagan, Mendota, Mendota Heights, Richfield, Bloomington, Minneapolis, and St. Paul.

The airport zoning ordinance was established by the Joint Zoning Board with oversight from the MnDOT, Office of Aeronautics and Aviation. The Office of Aeronautics and Aviation is charged with, among other things, ensuring that local airport zoning ordinances comply with Minnesota laws and regulations regarding airport zoning. The Office of Aeronautics and Aviation is also responsible for general oversight of zoning ordinance enforcement and review of variances to airport zoning ordinances. Local enforcement of airport zoning ordinances is accomplished through airport zoning administrators.

Airport zoning, as presented in the airport zoning ordinance, includes airspace obstruction zoning, land-use safety zoning, and permitting requirements, including maximum allowable height restrictions that do not require a permit.

Airspace Obstruction Zone

The airspace obstruction zone identifies airspace lying beneath precision instrument approach zones for each runway, and the height at which this approach zone projects outward from the runway. The airspace obstruction zoning indicates that "except as otherwise provided in this MSP Zoning Ordinance, and except as necessary and incidental to Airport operations, no new Structure shall be constructed or established; no existing Structure shall be altered, repaired, replaced, or replanted in any Airspace Zone so as to project above any Airspace Surface. Nor shall any equipment used to accomplish any of the foregoing activities be allowed to project above any Airspace Surface. Where a Lot is beneath more than one Airspace Surface, the height of the more restrictive (lower) Airspace Surface shall control" (JZB 2004).

The Joint Zoning Board has imposed special airport zoning that affects areas near the airport, including all property of the Center. An airspace obstruction zone (figure 4) limits the topographic elevation of the highest point of structures erected in areas off the ends of a runway on a gradually rising plane; the farther a site is from the runway, the taller new structures could be. The entire Center is affected by this structure height standard, which would limit new structures on Center property. In the area of Building 10, a new structure would be limited to about 80 feet high. In the area of Building 7, a structure height limit of about 170 feet would apply. Around Building 1, the limit would be about 85 feet. The tallest building on the site is Building 1, which is about 60 feet tall.

Land-use Safety Zoning

There are also three safety zones that affect land use; their application to the Center is displayed in figure 5. Safety Zone A is the most restrictive and allows no new structures or trees. Safety Zone B allows new structures, but limits their use; a lengthy list of land uses are prohibited, including residential uses, amphitheaters, campgrounds, churches, hospitals, nursing homes, schools, stadiums and theaters. Safety Zone C allows all types of land use, but prohibits uses that create or cause interference with the operations of radio or electronic facilities on the airport or with radio or electronic communications between airport and aircraft. Zone C also prohibits uses that make it difficult for pilots to distinguish between airport lights and other lights; that result in glare in the eyes of pilots using the airport; that impair the visibility in the vicinity of the airport; or otherwise endangers landings, take offs, or maneuvering the aircraft.

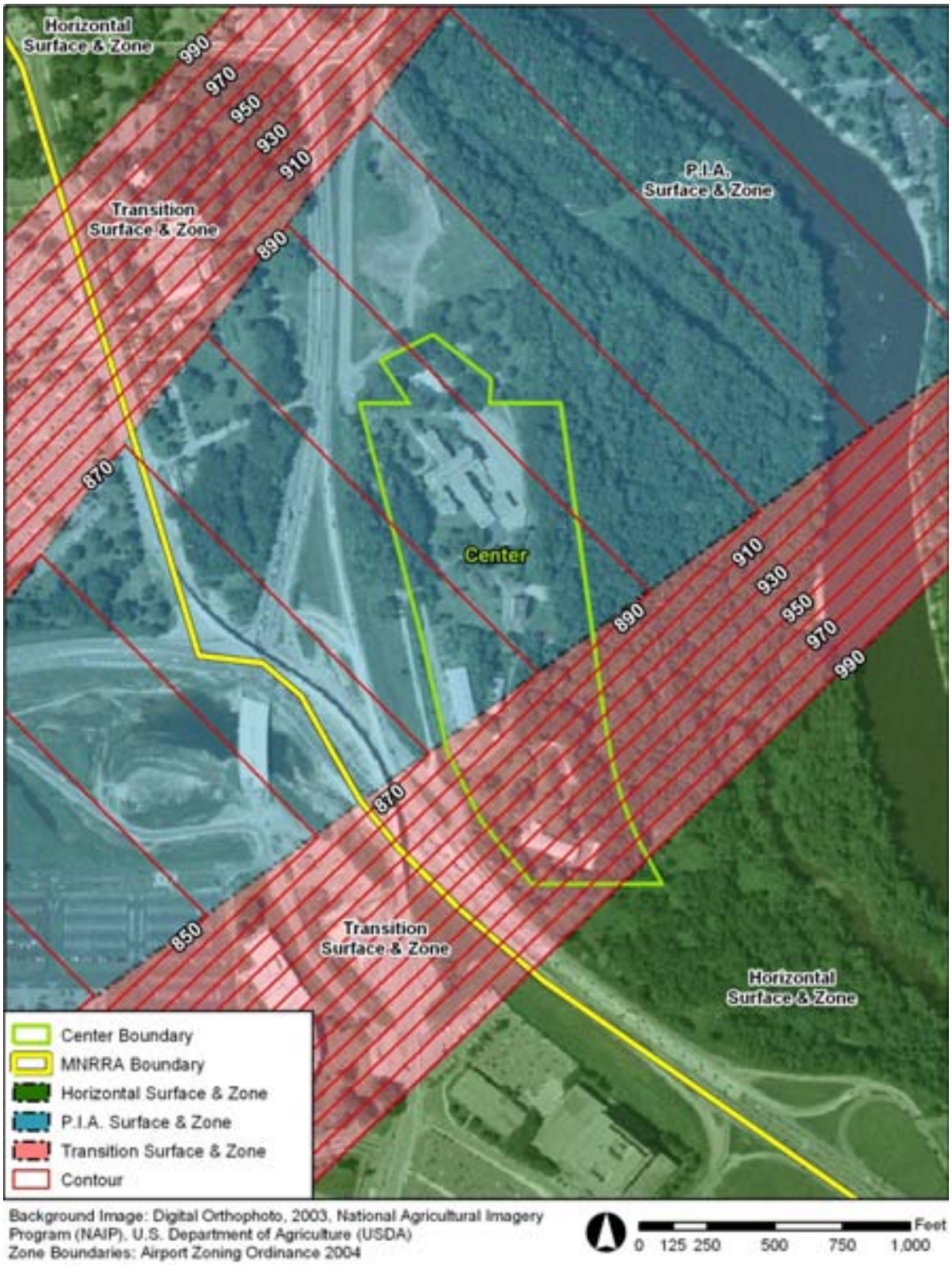


Figure 4: Maximum Building Elevations

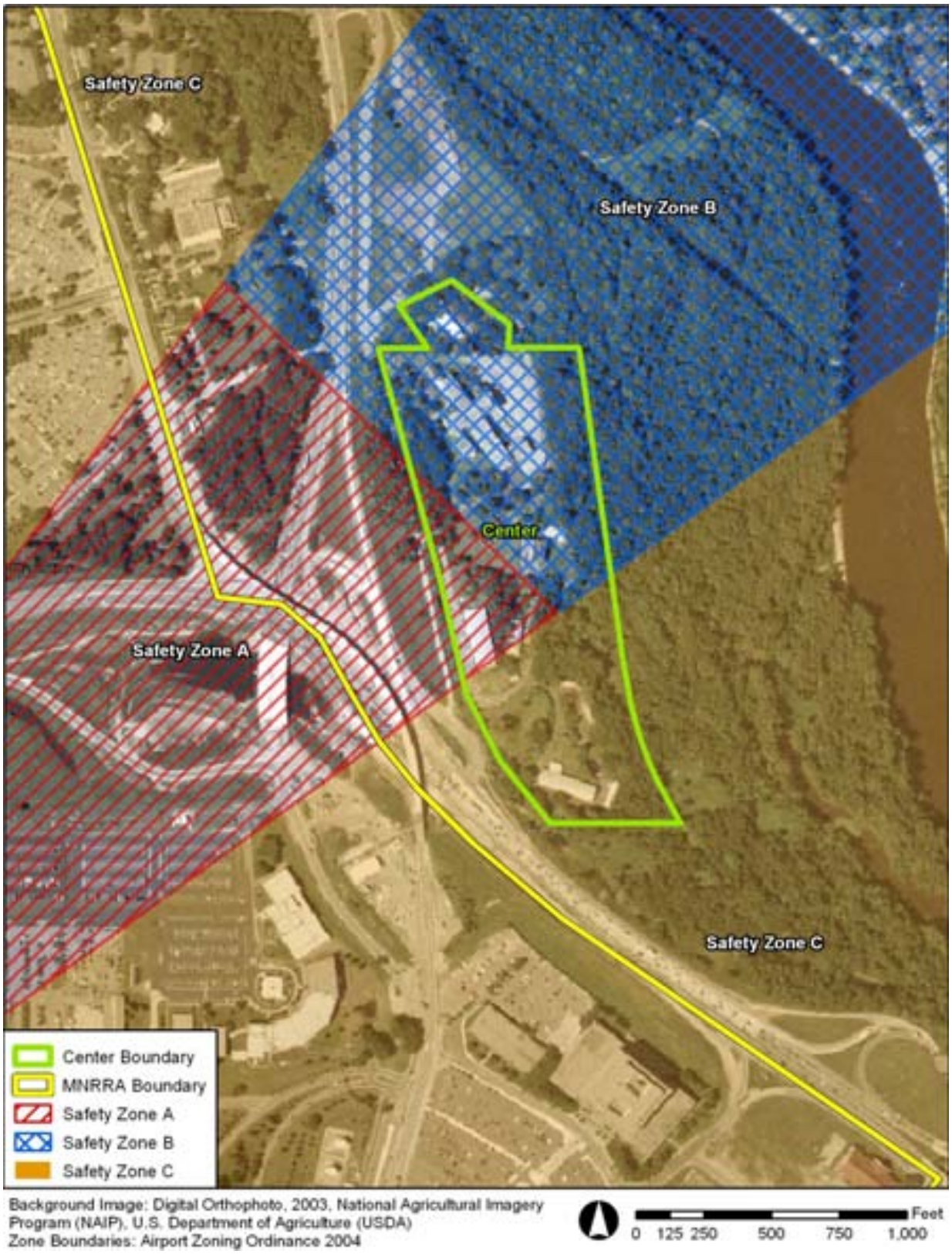


Figure 5: Airport Safety Zones

Permitting Requirements

Any future landowner would be subject to airport zoning requirements for activities that may occur within the airport safety zones. According to the airport zoning ordinance, an airport zoning permit may not be required for new structures to be built or otherwise established, or for existing structures to be altered, changed, rebuilt, or replaced, if the highest point on the structure or on any equipment used to accomplish any of these activities, whichever is higher, measured in feet from curb level or from natural grade at a point 10 feet away from the front center of the structure, whichever is lower, does not exceed the maximum construction height aboveground. However, any activities not consistent with these conditions may require an airport zoning permit. Therefore, any future owner of the Center would have to comply with all applicable airport zoning ordinance and permit requirements. Figure 6 illustrates the maximum construction heights for the Center and vicinity.

Airport Zoning and the Center

The various buildings located within the Center boundary are identified in figure 3. Buildings 4 and 11 are located in the area of the Center that falls in Safety Zone A. Structures, as well as trees, are prohibited in Safety Zone A. While Buildings 4 and 11 are grandfathered in, they could not be enlarged or replaced within Safety Zone A.

The airport zoning ordinance parallels the Federal Aviation Administration's (FAA) authority and rules designed to prevent obstructions to the navigable airspace around the airport runways. The FAA rules found in 14 C.F.R. part 77, "Objects Affecting Navigable Airspace," require the proponent of certain construction or alteration projects to first notify the FAA administrator. The notice requirements are applicable to certain proposed projects that would be certain distances from the ends of runways, and that extend a certain distance into the air. Specific requirements for notice are enumerated in 14 C.F.R. part 77. Any future owner of the Center must comply with the FAA notice requirements prior to beginning any alteration or construction project that may fall under FAA review authority. The FAA notice rules would apply to any owner of the Center, whether federal, state, or private. Any future owner would need to coordinate any proposed use or construction and acquire permits deemed necessary with the authorities having jurisdiction over the airport and air space.

Buildings 1, 2, 3, and 9 are located in Safety Zone B. Building 1 is the tallest building on the Center with an approximate height of 59.5 feet. The penthouse roof beam of Building 1 is at an elevation of 860 feet mean sea level (MSL) (USFWS). The most restrictive airspace surface over the Center is the precision instrument approach surface (see figure 4). The lowest contour over the Center is between 870 and 880 feet MSL. Therefore, Building 1 appears to conform to the requirements of the airspace obstruction zone because it is less than 870 feet MSL in elevation. However, the maximum construction height without a permit for the majority of the Center is 30 feet; therefore, an airport zoning permit may be required for Building 1 prior to any alteration or addition.

Figure 6: Maximum Construction Height Without Permit - Airport Zoning

Building 2 is approximately 38 feet high. The ground elevation for other buildings in the vicinity of Building 2 is approximately 800 feet MSL. Therefore, the top of Building 2 is at an elevation of 838 feet MSL. Building 2 is well below the precision instrument approach surface, and therefore appears to conform to the airspace obstruction zone requirements. Because Building 2 is more than 30 feet tall, airport zoning would require a permit before it could be altered, changed, rebuilt, repaired, or replaced.

Buildings 3 and 9 are single-story structures with heights well below the precision instrument approach surface and, therefore appear to conform to the requirements of the airspace obstruction zone. Building 3 is not greater than 30 feet high and would not require a permit for any additions or renovations as long as the height of the structure is not increased above the precision instrument approach surface. Building 9 is located in an area of the Center where the maximum construction height (without a permit) is 60 feet, and as a single-story structure, is well below the requirement for a permit for additions or renovations.

Buildings 5, 6, 7, 8, 9, and 10 are not located in any identified safety zone; however, they are in the airspace obstruction zone identified as the transition zone. The lowest contour of transition surface over the southern third of the Center is approximately 872 feet MSL. These buildings are all approximately one story, and with a ground elevation of approximately 800 feet MSL, all conform to airspace obstruction zone requirements. The maximum construction height (without a permit) for this area is approximately 70 feet, although any building over 30 feet high would require a permit under airport zoning. All of the buildings are less than 30 feet high and, therefore, would not need a permit for additions or renovations.

These airport zoning standards are regional and would apply to any future owner that is not a federal agency. A federal owner would need to comply only with FAA standards, which in the case of this property simply provide guidance to local airport zoning and are not mandatory.

Camp Coldwater Spring Protection Legislation – Minnesota Senate File 2049 and Minnesota Historic Sites Act

The state of Minnesota enacted legislation in 2001 to protect the flow of groundwater to and from Camp Coldwater Spring. The legislation, sometimes referred to as S.F. 2049, dated May 15, 2001 (2001 Minn. Sess. L. Serv. ch. 101), states:

> *Neither the state, nor a unit of metropolitan government, nor a political subdivision of the state may take any action that may diminish the flow of water to or from Camp Coldwater Springs [sic]. All projects must be reviewed under the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act with regard to the flow of water to or from Camp Coldwater Springs [sic].*

S.F. 2049 was amended in 2002 (2002 Minn. Sess. L. ch. 364 sec. 33) to reflect that a stipulation agreement was entered into between the Minnehaha Creek Watershed District and the Minnesota Department of Transportation. This agreement, according to the Law, now supersedes the provisions of S.F. 2049. Appendix J includes a copy of the stipulation agreement and the session laws.

Camp Coldwater is designated as a state historic site under the Minnesota Historic Sites Act, Minn. Stat. §§ 138.661 – 138.669 (see § 138.662, subdivision 6). The state, state departments, agencies, and political subdivisions, including the Board of Regents of the University of Minnesota, have a responsibility under the Minnesota Historic Sites Act to protect the physical features and historic character of properties designated under either the Minnesota Historic Sites Act or the National Historic Preservation Act (NHPA). The duty of state entities to protect the physical features and historic character of state or federally designated historic properties is outlined in the Minnesota Historic Sites Act as follows:

> *Before carrying out any undertaking that will affect designated or listed properties, or funding or licensing an undertaking by other parties, the state department or agency shall consult with the Minnesota Historical Society pursuant to the society's established procedures to determine appropriate treatments and to seek ways to avoid and mitigate any adverse effects on designated or listed properties (Minn. Stat. §§ 138.665, Subd. 2).*

As a result of the Camp Coldwater Spring groundwater flow protection afforded by S.F. 2049, and the designation of Camp Coldwater under the Minnesota Historic Sites Act, any Minnesota state government entity that were to receive the Center would be required to consult with the Minnesota State Historic Preservation Office (SHPO) prior to any undertakings that would affect Camp Coldwater, as defined by the Minnesota State Historic Sites Act, and associated physical features, such as the spring. These state laws would not apply to a federal owner.

Wetland Regulations

Agencies representing federal, state, and local governments in Minnesota regulate certain activities that affect the course, current, and cross-section of lakes, wetlands, rivers, and streams. Work affecting the course, current, or cross-section of a lake, wetlands, river, or stream may require a permit from one or all of these agencies.

On the federal level, regulation is by the U.S. Army Corps of Engineers (USACE) under section 404 of the Clean Water Act (33 U.S.C. § 1344) ("section 404"). Section 404 prohibits the discharge of dredge or fill material into navigable waters, defined as including special aquatic sites such as wetlands, without a permit from the USACE. This agency defines wetlands as "areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas," (33 C.F.R. Part 328.3[b]). The USACE generally covers all water and wetland areas, including those that are regulated by the Minnesota Department of Natural Resources (DNR) or subject to the Wetland Conservation Act (Wetlands Conservation Act of 1991, Laws 1991, chapter 354, as amended by Laws 1993, chapter 175, Laws 1994, chapter 627, Laws 1996, chapter 462, Laws 2000, chapter 382, and Laws 2001, chapter 146).

At the state level, regulation is by the Minnesota Department of Natural Resources (MDNR) Public Waters Work Permit Program. The permit program applies to those lakes, wetlands, rivers, and streams identified on MDNR Public Waters Inventory maps.

At the local level, regulation is by local units of government under the Wetland Conservation Act (Laws 1991, chapter 354, as amended by Laws 1993, chapter 175, Laws 1994, chapter 627, Laws 1996, chapter 462, Laws 2000, chapter 382, and Laws 2001, chapter 146). This law was originally enacted by the State of Minnesota in 1991, and applies to nearly all wetlands not shown on the Minnesota Department of Natural Resources Public Water Inventory maps. The Wetland Conservation Act's purpose is to maintain and protect Minnesota's wetlands and the benefits they provide. The act requires anyone proposing to drain, fill, or excavate a wetlands to first try to avoid disturbing the wetlands; second, to try to minimize any impact on the wetlands; and finally, to replace any lost wetlands acres, functions, and values. Certain wetlands activities are exempt from the act, allowing projects with minimal impact or projects located on land where certain pre-established land uses are present to proceed without regulation. Local government units (cities, counties, watershed management organizations, soil and water conservation districts, and townships) implement the act locally. The Minnesota Board of Water and Soil Resources administers the act statewide, and the Minnesota Department of Natural Resources enforces it (BWSR 2005). At the Center site, the local government unit that implements that act is the Minnehaha Creek Watershed District.

National Historic Preservation Act

The National Historic Preservation Act (Pub. L. No. 102-575, 16 U.S.C. 470) (NHPA) directs federal agencies to take a leadership role in the nation's preservation efforts, and to make informed decisions about the administration of federally owned or controlled historic properties. The NHPA includes a number of directives to federal agencies, the primary of which are subsumed under section 106 (16 U.S.C. 470f) and section 110 (16 U.S.C. 470h).

Section 106 (16 U.S.C. 470f)

Section 106 (16 U.S.C. 470f) of the NHPA states:

> *The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation…a reasonable opportunity to comment with regard to such undertaking.*

In short, section 106 (16 U.S.C. 470f), and its implementing regulations (36 C.F.R. part 800) requires federal agencies to consider the effects of their undertakings on historic properties prior to implementation.

Section 301(7) of the NHPA defines an undertaking as any "project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency," but

also states that an undertaking only requires review under section 106 if it is the "type of activity that has the potential to cause effects on historic properties" (36 C.F.R. 800.3[a]). The NHPA defines "historic property" as any prehistoric or historic district, site, building, or structure included or eligible for inclusion in, the National Register of Historic Places (NRHP), including related artifacts, records, and material remains. Traditional, religious, and cultural properties holding significance for American Indian tribes, Alaska Natives, and Native Hawaiian organizations may also be considered eligible for inclusion in the NRHP. In general, undertakings that have the potential to affect historic properties are those that involve modifications to land or buildings/structures, including everything from construction, grading, excavation, maintenance, rehabilitation, and renovation, to the sale or lease of a historic property.

Applicability. The proposed action outlined in this EIS constitutes an undertaking and has the potential to cause effects on historic properties. The area in the vicinity of the Center contains a number of previously recorded historic properties, including the Fort Snelling National Historic District and National Historic Landmark, the USBM Twin Cities Research Center Historic District, and the Old Fort Snelling State Historic District (figure 7). There are no independently NRHP-eligible buildings or structures located at the Center.

Two locations, or zones, within the Center have been identified as archeologically sensitive (Clouse 2001). Zone I, as defined by and according to Clouse (2001), requires further testing to determine if the area contains cultural materials that would contribute to the Fort Snelling National Historic District and National Historic Landmark, should future undertakings require ground disturbance in this area. Also according to Clouse (2001), Zone II contains in situ cultural deposits that correspond to the period of significance of the national historic landmark and national historic district, and should be included within the boundaries of the Fort Snelling National Historic Landmark.

Under section 106 of the NHPA, the National Park Service reviews the potential effects of the actions outlined in the EIS on the historic properties that lie within the undertaking's area of potential effect. This review must be coordinated with the Minnesota SHPO, tribal representatives of federally recognized American Indian tribes with ancestral lands that intersect the area of potential effect, and any interested parties. For an undertaking having an adverse effect on any historic property, consultation would occur with the aforementioned consulting parties and the Advisory Council on Historic Preservation (ACHP), as appropriate, to either alter the undertaking to avoid or minimize the adverse effect, or to identify measures to mitigate the adverse effect.

An additional resource, Camp Coldwater Spring and Reservoir, is of historic importance for its association with the Fort Snelling National Historic District and National Historic Landmark, Old Fort Snelling State Historic District, and the USBM Twin Cities Research Center Historic District (USBM TCRC Historic District). Four federally recognized Dakota tribes in Minnesota—the Upper Sioux Indian Community, Lower Sioux Indian Community, Prairie Island Indian Community, and Shakopee Mdewakanton Sioux Community—have also declared Camp Coldwater Spring and Reservoir and the surrounding area central to their history, stating "it is well established that the Coldwater Springs area and the area where the Minnesota and Mississippi rivers converge hold significant cultural importance to the Dakota people (Dakota Tribes 2000). In 2001, the federally recognized Iowa Tribe of Oklahoma

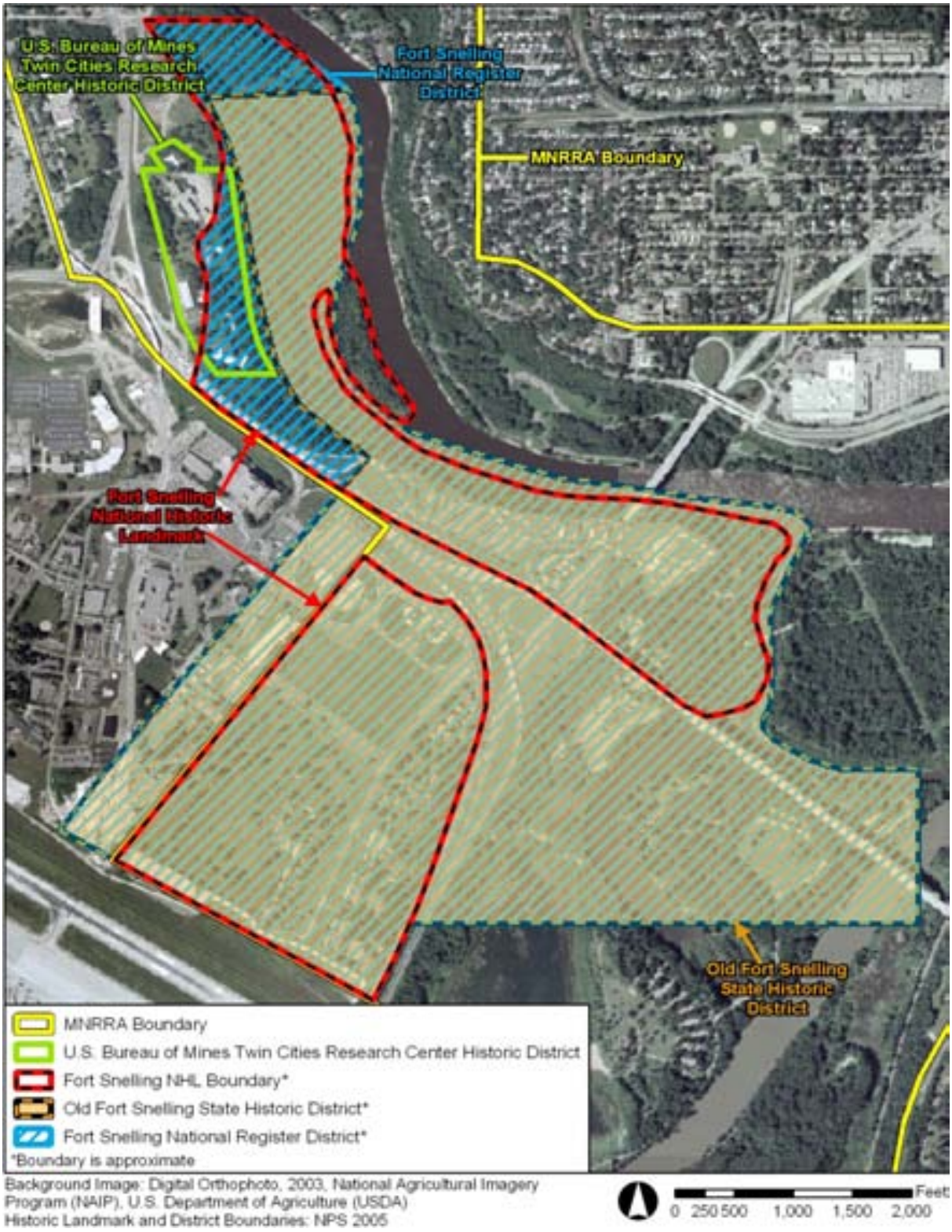


Figure 7: Fort Snelling National Historic District and National Historic Landmark Boundary, Old Fort Snelling State Historic District Boundary, and U.S. Bureau of Mines Twin Cities Research Center Historic District

issued a resolution stating that Camp Coldwater is a sacred site and requesting the USDI to designate Camp Coldwater as a traditional cultural property (TCP) (Iowa Tribe of Oklahoma 2001).

In support of the EIS planning process, an ethnographic resources study was completed at the Center (Terrell et al. 2005). The primary focus of this study was to document tribal use and perceptions of this area, to assess whether Camp Coldwater Spring constitutes a TCP under NHPA section 106 (16 U.S.C. 470f) or a sacred site under Executive Order 13007 (*Indian Sacred Sites*), and to identify any additional ethnographic resources present within the area of potential effect of the proposed action and alternatives being assessed in this EIS. A TCP is generally defined as a property that "is eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1998).

After review of the study, the National Park Service has determined that Camp Coldwater Spring does not meet the criteria listed in the NRHP for designation as a TCP. However, Camp Coldwater Spring and Reservoir are culturally important to some Indian people for ritual and ceremonial reasons. The importance ascribed to this area, including the spring and reservoir and the subsequent need for protection, is addressed in the alternatives presented in this EIS. A copy of the draft ethnography report was also provided to the Indian tribes and interviewees that participated in the study by the National Park Service. The ethnographic resources study will be sent to the Minnesota SHPO as part of the section 106 process occurring concurrently with this EIS.

Section 110 (16 U.S.C. 470h)

Section 110 of the NHPA (16 U.S.C. 470h) delineates affirmative federal agency responsibilities with respect to historic properties under the agency's stewardship. Of specific relevance to the actions outlined in this EIS is the responsibility of federal agencies that:

> *. . .historic properties under the jurisdiction or control of the agency are identified, evaluated, and nominated for the NRHP; and that such properties under the jurisdiction or control of the agency as are listed in or may be eligible for the NRHP are managed and maintained in a way that considers the preservation of their historic, archeological, architectural, and cultural values in compliance with section 106 of this act and gives special consideration to the preservation of such values in the case of properties designated as having national significance (16 U.S.C. 470h-2(a)(2)).*

Also relevant is the NHPA section 110 requirement that federal agencies document historic properties that would be altered or destroyed as a result of agency actions.

Applicability. This section of the NHPA is particularly applicable because Fort Snelling National Historic Landmark is a known historic property that encompasses part of the Center. Therefore, any future actions at the Center that would affect Fort Snelling National Historic Landmark or any other identified historic properties would need to take into account the

management of such properties in accordance with NHPA section 110. Furthermore, if the proposed action outlined in this EIS were to result in the alteration or destruction of any identified historic properties, the National Park Service would give consideration to the NHPA section 110 requirements for documenting such properties prior to implementing the actions. Documentation completed to the standards established by the Historic American Buildings Survey (HABS) and Historic Architecture Engineering Record (HAER) is considered an appropriate measure to mitigate adverse effects on historic properties. The specific documentation will be determined through the MOA negotiated under the Section 106 process.

The proposed action described in this EIS has the potential to affect Fort Snelling National Historic Landmark. In addition to reviewing effects to the national historic landmark as a historic property under NHPA section 106, it is important to note that NHPA section 110 expressly states that:

> *Prior to the approval of any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking (16 U.S.C. 470 h-2(f)).*

The National Park Service, therefore, is the reviewer for determining whether the proposed action and alternatives outlined in this EIS may have an adverse effect on Fort Snelling National Historic Landmark. The National Park Service is meeting this requirement through the section 106 process that is taking place concurrently with the EIS planning process.

American Indian Religious Freedom Act of 1978 and Executive Order 13007 (Indian Sacred Sites)

The American Indian Religious Freedom Act (Pub. L. No. 95-341, 42 U.S.C. 1996 and 1996a) was passed on August 11, 1978, and amended in 1996. In this act, the United States made it a policy to protect and preserve the inherent right of freedom of religion for American Indians, Alaska Natives, and Native Hawaiians. This right includes, but is not limited to, access to sites, use and possession of sacred objects, and the freedom to practice ceremonies and traditional rites. Federal agencies were directed to review their policies and procedures to see if changes were necessary in order to protect and preserve American Indian religious cultural rights and practices.

Executive Order 13007 (*Indian Sacred Sites*) was signed by President Clinton on May 24, 1996. The executive order directs federal agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. The executive order defined two key terms: “Indian tribe” and “sacred site.” For purposes of the executive order, “Indian tribe” means an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that has been federally recognized under Pub. L. No. 103-454, 108 Stat. 4791, with “Indian” meaning a member of such a federally recognized tribe. “Sacred site” is defined as any specific, discrete, narrowly

delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site. The executive order does not create any rights, benefits, or trust responsibilities.

Applicability. Four recognized Dakota tribes in Minnesota—the Upper Sioux Indian Community, Lower Sioux Indian Community, Prairie Island Indian Community, and Shakopee Mdewakanton Sioux Community—have declared Camp Coldwater Spring and Reservoir and the surrounding area central to their history. A September 13, 2000, letter to the National Park Service from the elected chairs of the four federally recognized Dakota Indian tribes in Minnesota (Shakopee Mdewakanton Sioux Community, Lower Sioux Indian Community, Prairie Island Indian Community, Upper Sioux Indian Community) stated "it is well established that the Coldwater Springs and the area where the Minnesota and Mississippi rivers converge hold significant cultural importance to the Dakota people" (Dakota Tribes 2000). The letter further stated that "because of its important use and cultural connection, we feel that the protection of the site from any development is critical."

In February 2005, the National Park Service officially initiated the NHPA section 106 process via letters to federally recognized tribes and the Minnesota SHPO from the MNRRA superintendent. The superintendent in March of 2005 made follow-up telephone calls to the four federally recognized Minnesota Dakota tribes and the Iowa Tribe of Oklahoma, also federally recognized. Letters inviting tribal participation in the ethnography study commissioned by the National Park Service as part of the EIS process were sent in April 2005, and a site visit to the property with tribal representatives from three federally recognized Minnesota Dakota tribes was conducted during May 2005. On July 14, 2005, NPS officials held a consultation meeting with representatives from the Lower Sioux Indian Community and the Shakopee Mdewakanton Sioux Community, both of which are federally recognized. Many telephone calls have been made by the NPS project manager and the MNRRA superintendent inviting tribal participation in the EIS process. In addition, the MNRRA superintendent met with members of the Minnesota Indian Affairs Council (MIAC) on April 26, 2005, and the chairman of the Upper Sioux Indian Community on August 18, 2005, in St. Paul, Minnesota.

The Iowa Tribe of Oklahoma has stated that Camp Coldwater is sacred. In July 1999, the tribe sent a letter to the Honorable Mike Anderson, Deputy Assistant Secretary of the Interior (letter from Marianne Long, the then director of tribal operations / historic preservation, dated July 30, 1999), protesting a proposed re-route of SH 55 through the Camp Coldwater area by the MnDOT, a project not associated with the proposed action discussed in this EIS. In the letter, Ms. Long notes that, "the waters in this location have been important to tribal traditions and ceremonies for centuries. . . burials are located near the many beautiful trees." The tribe requested a cultural resources survey of the re-route and preparation of an EIS prior to any further action on the proposed re-route. In 2001, the tribe issued a resolution requesting the USDI to designate Camp Coldwater as a TCP (Resolution I-01-27, March 19, 2001). This resolution stated "Camp Coldwater is a sacred site for the Iowa Tribe and other Native American groups." The director of the TCRC Closure Team sent letters to the Chairman of the Iowa Tribe of Oklahoma on January 8, 2001, and July 2, 2001, requesting additional information from the tribe. As part of the scoping process for this EIS, the MNRRA contacted the Iowa Tribe of Oklahoma on several occasions to gain additional information on the

resolution and the tribes' concerns regarding Camp Coldwater and the associated spring and reservoir; no response was received from the tribe. Specific attempts to contact the tribe included:

- A letter to the Iowa Tribe of Oklahoma inviting participation in the Center EIS planning process (02/18/05);
- A National Park Service scoping newsletter/comment card faxed and mailed to the Iowa Tribe of Oklahoma (03/15/05);
- A letter to 11 federally recognized tribes, including the Iowa Tribe of Oklahoma, inviting participation in the Center EIS / section 106 process (04/06/05);
- A letter to 16 federally recognized tribes, including the Iowa Tribe of Oklahoma, inviting participation in the ethnographic study (including TCP and sacred site analysis) (04/11/05).

PUBLIC INVOLVEMENT

The CEQ regulations for implementing procedural provisions of NEPA state that, "there shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This process shall be termed scoping" (40 C.F.R. § 1501.7). NEPA's public involvement process requires agencies to involve the public in NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform those persons or agencies who may be interested or affected (40 C.F.R. § 1506.6).

Internal scoping for this EIS began with interdisciplinary team meetings including staff from the National Park Service Midwest Regional Office, the MNRRA staff, and USFWS staff. This interdisciplinary process defined the purpose and need for the proposed action, identified potential actions to address the need, and identified likely issues and impact topics.

Public participation in the scoping process began with four separate public scoping meetings held on March 30 and 31, 2005. The public scoping meetings were held in an open house format. Four different information stations provided background and information on NEPA and the Center planning process; details of the Center, the MNRRA, and the National Park Service; and cultural and historic resources. Handouts and maps were available at each station. Appendix D, *Public Scoping Comment Summary,* provides the background and information received during the public scoping meetings.

Using information collected during the scoping process, preparation on a draft EIS for the Center property began in April 2005. A consultant assisted the NPS in managing the workload and producing a draft document. A draft EIS was completed in July 2006 with a Notice of Availability published in the Federal Register on August 23, 2006. Public open house meetings on the draft EIS were held on September 24 and 25, 2006. Appendix I, *A Comment Analysis Report – Comments Received on the Draft EIS,* provides a summary and categorization of public comments received on the draft EIS.

An open house meeting on February 23, 2009 served, in part, the purpose of complying with the public input requirements of Section 106 of the National Historic Preservation Act. The meeting announcement, comment cards and MNNRA staff let people know that MNRRA wanted feedback on the presence and treatment of cultural resources. In particular, MNRRA sought input for the Memorandum of Agreement on how to avoid, minimize and mitigate for any adverse effects to National Register or NHL resources that implementation of the selected Preferred Alternative could have. Some individuals wanted the Fort Snelling, Upper Post Water Works features removed from the site and others wanted them preserved. Some people voiced concern for another archeological survey prior to building removal and land restoration work, rather than archaeological monitoring during the work. MNRRA staff also discussed the possibility of leaving some of the Bureau of Mines features, such as ore bins, in place as a way to mitigate for demolition of the campus. Some thought it might be a good idea, some did not care one way or the other, and some wanted all traces of American influence erased. The MOA reflects input received at the open house.

Detailed information on the public information meetings held can be found in Chapter 5.

ISSUES AND IMPACT TOPICS

Issues and impact topics affecting the disposition of the Center were identified from past planning efforts and input obtained from the public scoping effort, as well as National Park Service and USFWS knowledge of the Center, and applicable laws and regulations. Some public comments received during scoping were used to identify issues or areas of concern. Some public concerns focused on protecting the site, in particular, cultural and historic resources associated with Camp Coldwater Spring, and protection of the flow of the spring. The public also expressed a desire to restore native vegetation to the site and to remove some or all of the buildings. The public indicated a desire for public access to the site and to visit Camp Coldwater Spring. Concerns were expressed over potential existing environmental contamination of the site that would inhibit future development. Public comments included a number of potential uses for the site, primarily involving general public access, outdoor recreation, and little or no industrial use.

The following topics were selected for detailed analysis in this EIS on the basis of federal laws, regulations, executive orders, NPS expertise, and concerns expressed by other agencies or members of the public during the scoping process.

Impact Topics Included in this Document

Archeological Resources	Water Quality
Historic Structures and Districts	Wetlands
Ethnographic Resources	Socioeconomics
Soils	Health and Safety
Vegetation	Land Use
Wildlife	Public Use and Experience
Hydrology	Visual Resources

Impact Topics Dismissed from Further Analysis

The following topics are not analyzed in detail, and the rationale for not including these topics is presented below.

Museum Collections

Museum collections can include prehistoric and historic objects, artifacts, works of art, archival documents, and natural history specimens. They can be threatened by fire, vandalism, natural disasters, and careless acts. The preservation of museum collections is the ongoing process of preventive conservation, supplemented by conservation treatment, when necessary. There are currently manuscripts, files, and other documents related to the Center's operation. Other museum collections, if found, would be packed, moved, and stored in accordance with

appropriate standards and guidelines. Therefore, there would be no impact to museum collections and the impact topic of museum objects was dismissed from further analysis.

Air Quality

The Clean Air Act of 1990 (Pub. L. No. 360, 69 Stat. 322, 42 U.S.C. § 7401 *et seq.*), as amended, provides that the federal land manager has an affirmative responsibility to protect the Center's air quality-related values (including visibility, plants, animals, soils, water quality, cultural and historic resources, and visitor health) from adverse air pollution impacts. Section 118 of the Clean Air Act requires the Center to meet all federal, state, and local air pollution standards. Section 176(c) of the Clean Air Act requires all federal activities and projects to conform to state air quality implementation plans to attain and maintain national ambient air quality standards.

The impacts to air quality from the alternatives under consideration in this EIS would result in temporary, minor impacts to air quality through dust and vehicle emissions during construction or demolition. Increased traffic to the site could also result in minor long-term air quality impacts. Because the Center is located within the Minneapolis-St. Paul urban area, impacts to air quality are expected to be negligible compared with the overall regional air quality. Heavy industrial use is not expected for the Center so industrial impacts to air quality are not anticipated. Therefore, the impact topic of air quality was dismissed from further analysis.

Geology

Although ground-disturbing activities could occur under the alternatives, impacts to geology in the area are not anticipated because excavation into bedrock is not expected. Therefore, the impact topic of geology was dismissed from further analysis.

Threatened and Endangered Species, Species of Concern, and Designated Critical Habitat

The Endangered Species Act of 1973, as amended (Pub. L. No. 93-205, 87 Stat. 884, 16 U.S.C. § 1531 *et seq.*), requires an examination of impacts on all federally listed threatened or endangered species and designated critical habitat. The USFWS was contacted for a list of special-status species and designated critical habitat at the Center and replied in a letter dated June 8, 2005. No threatened and endangered species or species of concern or designated critical habitat would be affected by the proposed action (appendix F) (USFWS 2005). Therefore, the impact topic of threatened and endangered species, species of concern, and designated critical habitat was dismissed from further analysis.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271-1287) calls for the identification of potential wild, scenic, and recreational river areas within the nation:

> *In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic, and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potential. The*

> *Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic, and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved* (16 U.S.C. § 1276[d]).

The stretch of the Mississippi River between the St. Croix River and Lock and Dam 1, including the river reach east of the Center, is listed on the Nationwide Rivers Inventory maintained by the National Park Service. This 36-mile stretch of the Mississippi River was placed on the Nationwide Rivers Inventory in 1982 (NPS 2005c). An August 2, 1979, presidential directive requires all federal agencies, as part of their normal planning and environmental review process, to "take care to avoid or mitigate adverse effects on rivers listed in the Nationwide Inventory," and to "consult with the Heritage Conservation and Recreation Service prior to taking actions that could effectively foreclose wild, scenic, or recreational river status on rivers in the Inventory." Functions of the former Heritage Conservation and Recreation Service, including administration of the Nationwide Rivers Inventory, were transferred to the National Park Service through Secretary's Order 3060 on February 19, 1981.

The Center property does not include the slopes going down to the river and the river is screened from view by vegetation. Despite the fact that the scenarios presented under the range of alternatives in this EIS may involve new construction or expansion of existing developments, because the Center is screened from view from the river and tall structures that could be visible are prohibited by airport zoning, there would not be any impacts to the Nationwide Rivers Inventory-listed stretch of the Mississippi River. Therefore, the topic of wild and scenic rivers was dismissed from further analysis.

Executive Order 11988 (Floodplain Management)

The Center is located on the bluffs above the gorge of the Mississippi River. According to maps produced by the Federal Emergency Management Administration, the Center is not in a floodplain of the Mississippi River; therefore, the impact topic of floodplains was dismissed from further analysis.

Prime and Unique Farmlands

In 1980, the CEQ directed federal agencies to assess the effects of their actions on farmland soils classified as prime or unique by the U.S. Department of Agriculture, Natural Resources Conservation Service. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water. Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops (7 C.F.R. 657.5). The majority of soil types within the Center are not classified by the Natural Resources Conservation Service as prime farmlands (NRCS 2004). One area in the northern part of the Center consists of Forada sandy loam (0% to 2% slopes), which is considered prime farmland if it is drained and if it is available for these uses. There is a road running through this area of the Center, impacting its availability for farmland use; therefore, this land is not considered prime farmland. Lands of the Center are not considered unique farmlands because they do not produce economically

sustained high quality and/or high yields of crops such as tree nuts, olives, cranberries, citruses, and other fruits, or vegetables. Therefore, the impact topic of prime and unique farmlands was dismissed from further analysis.

Ecologically Critical Areas

No areas within the Center are designated as ecologically critical areas, nor do any areas within the Center qualify as ecologically unique based on vegetation or soils. Therefore, the impact topic of ecologically critical areas was dismissed from further analysis.

Wilderness Areas

Wilderness areas are managed in a manner that will leave them unimpaired for future use and enjoyment as wilderness. None of the lands located within the Center are designated wilderness, nor are there any designated wilderness areas in the vicinity. The Center is located in an urban setting; therefore, the impact topic of wilderness areas was dismissed from further analysis.

Environmental Justice

Executive Order 12898 (*General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*) 1996, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the U.S. Environmental Protection Agency (EPA), environmental justice is the

> *…fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.*

The goal of fair treatment is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

The Twin Cities metropolitan area contains both minority and low-income populations and communities; however, there are no minority or low-income populations that are present in the area to be affected by the proposed alternatives (within the Center boundary). Under the proposed alternatives to dispose of the Center, any potential environmental impacts would be localized on the Center, and it would be unlikely that such potential impacts would extend off the Center property. Therefore, the proposed alternatives would not result in any disproportionate adverse human health effects to minority or low-income populations. The impacts on the natural environment that would occur due to implementation of any alternative would not disproportionately affect any minority or low-income population or community. The proposed alternatives would not result in any identified effects that would be specific to any minority or

low-income community. Therefore, the impact topic of environmental justice was dismissed from further analysis.

Noise

Physically, there is no distinction between sound and noise. Sound is a sensory perception and the complex pattern of sound waves is labeled (e.g., noise, music, speech). Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Human response to noise varies according to the source type, characteristics of the noise source, distance between source and receptor, receptor sensitivity, and time of day. Federal and local governments have established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise.

The Center is located in a highly urbanized area, and is particularly impacted by the traffic noise from SH 55, which runs directly adjacent to the site (see the description of roads and highways under the transportation heading below). Any construction associated with implementation of the alternatives, e.g., the hauling of material or the operation of construction equipment, could result in dissonant noise, but these sounds would not be unlike the heavy traffic noise already associated with the area. In addition, the Center is nearby and lies within the flight path of the Minneapolis-St. Paul International Airport—noise from low flying commercial aircraft is prevalent. Because traffic and aircraft noise is already pervasive in the area, any noise impacts from any of the alternatives would be negligible or less. Therefore, the impact topic of noise was dismissed from further analysis.

Lightscapes

Natural ambient lightscapes are natural resources and values that exist in the absence of human-caused light. Since the Center is located within the Minneapolis-St. Paul metropolitan area, there are no natural ambient lightscapes that are currently unaffected by the lights of the city; nor could any of the alternatives prevent the Center from being impacted by existing light sources. Therefore, the impact topic of lightscapes was dismissed from further analysis.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by USDI agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes. There are no Indian trust resources in the area of the Center, which is federal property and was, prior to the closure of the USBM in 1996, used for federal offices and laboratories. The lands comprising the Center are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, the impact topic of Indian trust resources was dismissed from further analysis.

Transportation

Vehicular access to the Center is via Minnehaha Avenue South that parallels SH 55. Minnehaha Avenue is accessed from East 54th Street, east of the intersection of SH 55 and East 54th Street. The southern entrance to Minnehaha Park lies east of Minnehaha Avenue South. The site is in close proximity to light rail and transit routes. The Metro Transit Hiawatha line (SH 55) connects downtown Minneapolis to a park-and-ride facility at Fort Snelling (950 spaces). In December 2004, the line was extended through the airport to the Mall of America in Bloomington, Minnesota. The nearest station to the Center is at the entrance to the Veterans Administration Medical Center on Hiawatha Avenue. Transit planners consider a radius of 0.25 to 0.5 mile to be the influence area of the light rail stop. Although the Center lies within that distance to the stop, it is separated from the light rail station by SH 55. Transit bus routes 436 and 446 also serve the local area.

Use from any of the scenarios described under the alternatives could potentially result in increased traffic to the Center. However, any impacts to transportation would be minor due to availability and capacity of existing transportation systems in the area. Furthermore, significant traffic volume increases to the Center are not anticipated under any of the land-use scenarios being contemplated for each alternative to the proposed action. Therefore, the impact topic of transportation as an individual impact topic was dismissed from further analysis. Potential transportation impacts are discussed, however, as a subcomponent of the socioeconomic impacts sections of this EIS.

Hazardous Materials and Waste Management

After closing the Center in 1996, the federal government performed a wide range of environmental investigations on the Center to identify and abate any environmental issues that could potentially have an adverse impact on human health and the environment. These actions were taken pursuant to section 120(h) of the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) (42 U.S.C. § 9620[h]) and EPA rules at 40 C.F.R. part 373. During these actions, the TCRC Closure Team elected to place the Center in the Voluntary Investigation and Cleanup Program of the Minnesota Pollution Control Agency. The objectives of placing the Center in the Voluntary Investigation and Cleanup Program were to obtain an independent review of the data gathered during the investigation and abatement actions and to obtain written concurrence that the investigation and abatement actions were completed and were sufficient to protect human health and the environment (TCRC Closure Team 1997).

After an independent review by the Minnesota Pollution Control Agency (MPCA) of the data gathered during the investigation and abatement actions at the Center, MPCA did not recommend any further investigation or remedial actions with respect to the Center property (MPCA 1998).

A building and infrastructure removal cost estimate report prepared for the Center indicates that additional environmental issues such as asbestos, polychlorinated biphenyls (PCBs) in fluorescent light ballasts, or mercury in switches may be present in some buildings (Innovar 2006). If the buildings were removed prior to conveyance, the federal government would address those issues in accordance with applicable federal, state, and local requirements.

If the Center is conveyed in its current condition with buildings and infrastructure intact, the transferee would receive the applicable disclosure statements required by law. Due to the previous efforts to identify and abate hazardous materials at the Center, and the substantial reports that were produced incident to those efforts, the National Park Service is including in the administrative record of this EIS the previous reports produced by the TCRC Closure Team to provide the public with the information regarding those efforts. Therefore, the impact topic of hazardous materials was dismissed from further analysis.

CHAPTER TWO

Twin Cities Research Center Campus, 1959
Photo Credit: Minnesota Historical Society

DESCRIPTION OF ALTERNATIVES

INTRODUCTION

This chapter of the Final EIS describes alternatives for disposition of the Center, conceptual land-use scenarios considered under each alternative, and mitigation measures that may be applicable to each alternative.

A complete discussion of existing conditions at the Center is contained in Chapter 3: Affected Environment.

The four alternatives for disposition of the Center are:

- Alternative A, no action/retention of the Center by the federal government.
- Alternative B, convey the Center, without conditions, to a university or a nonfederal government entity.
- Alternative C, convey the Center, with condition(s), to a university or nonfederal government entity.
- Alternative D, modify land, structures, or other improvements at the Center prior to conveyance (either without conditions, as in alternative B, or with conditions, as in alternative C) or retention. Alternative D is the Department of the Interior's preferred alternative.

The alternatives were developed by the planning team to include a reasonable range of potential uses discussed in scoping comments and address issues and concerns raised during the scoping period. The alternatives present a reasonable range of potential future uses of the Center, including potential future land uses. Potential environmental impacts that may or would result from each alterative are discussed in chapter 4. The no-action alternative is included as a baseline for comparing the potential environmental consequences of implementing each alternative.

Laws, Regulations, and Planning Documents Governing Use

Potential environmental impacts may vary depending on the final recipient of the property and the land uses implemented by the recipient. The laws, regulations, and plans that apply to use of the property may also depend on the recipient of the Center because various governing authorities or documents may not apply equally to all potential future owners. Some common authorities govern resources including, but not limited to, those related to protection of air quality, water quality, and wetlands. Others, such as the airport zoning ordinance, relate to public safety or other concerns. The potentially applicable authorities typically would not preclude uses of the Center lands, but may require mitigative measures. There are several key laws and regulations that may preclude certain types of activities, development, or uses of the Center. Implications of these laws and regulations are discussed by alternative.

CONCEPTUAL LAND-USE SCENARIOS

Three conceptual land use scenarios were developed to address a range of potential development options that may be feasible under alternatives B, C, and D.

The environmental impacts of alternatives B, C, and D depend on how a future owner would use the Center, and on the activities associated with that use. However, neither the future owner nor the future use of the Center were identified until after the EIS was circulated for public review. Therefore, the EIS analyzes the impacts of alternatives B, C, and D in terms of a reasonable range of potential uses of the Center by a future owner under three conceptual land-use scenarios. This includes the preferred alternative.

The conceptual land-use scenarios reflect potential uses of the Center suggested in public comments during the scoping process, and encompass a reasonable range of environmental impact-generating activities. The impact analysis in chapter 4 of this EIS applies each scenario to alternatives B, C, and D, and thus captures the impacts that may or would result from disposition of the Center. The three conceptual land-use scenarios are: open space/park, interpretative/nature/history center, and training center/office park.

Open Space / Park

Under this conceptual scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center property would become a park or be used as open space. This could be accomplished by removing some or all buildings, structures, and roadways. Nonnative plant species could be identified and removed. Native vegetation could then be planted and the site naturalized to recreate the historic characteristics of an open oak savanna, prairie-type setting. This scenario is part of the Department of the Interior's preferred alternative.

Interpretive / Nature / History Center

Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. New structures could be built at the Center, and all or a portion of the existing structures could be demolished. New construction would be limited by the Minnesota Critical Areas legislation, airport zoning restrictions, Minnesota S.F. 2049 (Camp Coldwater Spring groundwater protection legislation), and other applicable federal, state, and local regulations. Most of the existing buildings at the Center have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required if reuse is desired.

Training Center / Office Park

Under this conceptual scenario, the focus of the Center would be the built environment and active reuse of the Center. Under this scenario uses would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most of the existing buildings at the Center have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements would be required. New construction would be limited by the Minnesota Critical Areas legislation, airport zoning restrictions, Minnesota S.F. 2049 (Camp Coldwater Spring groundwater protection legislation), and other applicable federal, state, and local regulations.

ALTERNATIVE A

NO ACTION—RETENTION OF THE CENTER BY THE FEDERAL GOVERNMENT

The Secretary of the Interior is authorized, but not directed, to convey the Center under the USBM closure legislation, Pub. L. No. 104-134 (1996). Accordingly, the Center could be retained by the federal government. Under the no-action alternative, existing conditions would continue at the Center. Disposition of the Center to a university or nonfederal government entity would not occur and the Center would continue in caretaker status under control of the federal government.

Under alternative A, the no-action alternative, the Center would continue as it is currently used and maintained. Currently, the public has unrestricted access to the Center property. Under alternative A, this schedule would not change. The Center gate and fence would be maintained to limit entry by the general public, as determined by the administering agency. The buildings would continue to be vacant, except for occasional permitted special use. Maintenance would consist of lawn care, security patrols to ensure the buildings remain locked, inspecting the fence surrounding the site and repairing breaks, maintaining power and phone service for the existing alarm system, and boarding up broken windows. The USFWS currently maintains the Center and the federal government has no current plans to change this under alternative A. The Center would remain available for future disposal or use by the federal government. Should the no-action alternative be selected, the federal government would retain the responsibility and authority to respond to future needs and conditions, such as general maintenance or repair, without major actions or change in present use.

The no-action alternative does not preclude short-term minor repair or improvement activities that would be part of routine maintenance of the Center. No plans currently exist, however, for improvement or renovation of the buildings. The no-action alternative would not include use of the buildings for anything other than short-term, special, permitted use. The no-action alternative is used to compare baseline conditions at the Center with potential impacts that could result from implementing any of the other action alternatives. Impacts associated with the no-action alternative, which would be considered continuing or ongoing impacts of current conditions, are discussed in chapter 4 of this EIS.

ALTERNATIVE B

CONVEY THE CENTER WITHOUT CONDITIONS TO A UNIVERSITY OR NONFEDERAL GOVERNMENT ENTITY

Under alternative B, the Center would be conveyed to a university or nonfederal government entity with no conditions imposed on the future use of the Center or the land, except for those restrictions on use that currently exist for the property and arise out of applicable laws and regulations.

Under alternative B, a university or nonfederal government entity that receives the Center would have no restrictions on subsequent transfer or sale of the property. Therefore, any future owner under this alternative would be free to subsequently use, sell, or transfer the Center property to a private entity for use or development.

Except for the restrictions on future use outlined in chapter 1, the actual use or combination of uses of the Center would be determined by the recipient. This EIS evaluates potential impacts from uses under alternative B as a park or as open space, as an interpretive nature or history center and as a training center or office park.

LAWS, REGULATIONS, AND PLANNING DOCUMENTS GOVERNING USE

MNRRA Enabling Legislation and the MNRRA Comprehensive Management Plan

Under the MNRRA enabling legislation and the MNRRA CMP, the National Park Service would review federally funded or permitted activities. The CMP was developed to provide a similar level of protection as the Critical Area legislation. Any nonfederal government entities would be subject to these state requirements, as discussed below.

Mississippi River Corridor Critical Area

If the Center were conveyed under this alternative, the entity would be required to comply with the Critical Areas Act of 1973, State Executive Order 79-19. This would limit structure height, prevent disturbance of steep slopes and limit removal of vegetation.

Minneapolis-St. Paul International Airport Zoning Ordinance

In any of the circumstances in alternative B, the transferee of the Center would be required to comply with the requirements of the airport zoning ordinance. If the Center were to transfer to a university or nonfederal government entity, the entity that administers the Center would have to determine its own compliance obligations pertaining to the airport zoning ordinance. All existing buildings on the Center are currently within the topographic height limitations of the airspace obstruction zone. However, evaluation of the airport zoning ordinance requirements and restrictions may be necessary for rehabilitation of existing structures.

Under land-use scenarios calling for use as a training center / office park or as an interpretive / nature / history center, new construction and rehabilitation of existing structures should proceed, while giving consideration to the safety zone requirements in the airport zoning ordinance (see figure 5). No new structures or trees would be allowed in Safety Zone A. Buildings 4 and 11 lie in Safety Zone A. However, because these buildings are existing, they could be rehabilitated or repaired, provided they were not made larger or taller.

Buildings 1, 2, 3, and 9 are located in Safety Zone B. Under the airport zoning ordinance, certain uses that would result in large group gatherings or storage and use of fuels are prohibited. Although none of the land-use circumstances described above are prohibited uses in Safety Zone B, certain structures that could be associated with those uses, such as an outdoor amphitheater, may be prohibited.

Camp Coldwater Spring Protection Legislation – Minnesota Senate File 2049 and Minnesota Historic Sites Act

The state of Minnesota enacted legislation in 2001 to protect the flow of groundwater to and from Camp Coldwater Spring. The legislation, sometimes referred to as S.F. 2049, dated May 15, 2001 (2001 Minn. Sess. L. Serv. ch. 101), states that:

> *Neither the state, nor a unit of metropolitan government, nor a political subdivision of the state may take any action that may diminish the flow of water to or from Camp Coldwater Spring [sic]. All projects must be reviewed under the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act with regard to the flow of water to or from Camp Coldwater Spring [sic].*

Camp Coldwater is designated as a state historic site under the Minnesota Historic Sites Act, Minn. Stat. §§ 138.661 – 138.669 (see § 138.662, subdivision 6). As a Minnesota historic site, any state departments, agencies, and political subdivisions, including the Board of Regents of the University of Minnesota, have a responsibility to protect the physical features and historic - of Camp Coldwater if any of these entities were to undertake projects affecting this resource. Specifically, the Minnesota Historic Sites Act states that:

> *Before carrying out any undertaking that will affect designated or listed properties, or funding or licensing an undertaking by other parties, the state department or agency shall consult with the Minnesota Historical Society pursuant to the society's established procedures to determine appropriate treatments and to seek ways to avoid and mitigate any adverse effects on designated or listed properties.*

Any state recipient of the Center property must comply with the requirements of Minnesota S.F. 2049 and the Minnesota Historic Sites Act in any development and use of the property. Any projects that may impact the flow of groundwater to or from Camp Coldwater Spring or the physical features of Camp Coldwater, such as the spring, contemplated by a future owner that is considered a state entity must be reviewed in accordance with the Camp Coldwater Spring protection legislation and the Minnesota Historic Sites Act under this alternative.

National Historic Preservation Act

The federal government will comply with section 106 of the NHPA to determine appropriate mitigation for historic properties prior to conveyance. Once the NHPA section 106 process is completed, no covenants or restrictions protecting cultural resources would be placed on the conveyance. The NHPA section 106 process would be completed with the knowledge that any required mitigation could not include protective measures that would require conditions to be placed on the transfer. Therefore, any identified mitigation would be completed prior to conveyance of the Center. Once the Center is conveyed to a university or nonfederal government entity, no federal protections would be available for historic properties unless an action causing an effect to the site was a federal action as defined by the NHPA.

ALTERNATIVE C

CONVEY THE CENTER WITH CONDITION(S) TO A UNIVERSITY OR NONFEDERAL GOVERNMENT ENTITY

Alternative C would include the transfer of the Center to a university or nonfederal government entity, as described in alternative B. However, transfer of the Center would be subject to conditions that would limit the recipient's use of the property or create affirmative obligations to be carried out by the recipient. Examples of restrictions that could be placed on the transfer include building or redevelopment restrictions, restrictions on use of resources, or restrictions on operations or types of uses. Affirmative obligations that may be placed on the transfer include those that create a duty in the recipient to manage or maintain the Center or its resources in a specific way. For example, the federal government could convey with conditions designed to protect natural, historic, cultural resources, or with conditions designed to ensure compliance with various authorities that may apply to the recipient. These foregoing examples, however, are not meant to limit the types or subject matter of conditions available for use by the federal government in the actual transfer of the Center.

Preservation and protection of Center resources upon transfer could be accomplished by applying restrictions to the transfer agreement or by retaining title to a portion of the property. Methods by which restrictions on use of the Center may be imposed by the transfer agreement include the use of various types of defeasible estates, covenants, or easements, including conservation easements. A general description of the more applicable methods for placing conditions on the transfer is provided below. The legislation that authorizes the disposal of the Center, as discussed in chapter 1 of this EIS, limits the transfer to either a nonfederal government entity or university. Therefore, the federal government would impose conditions on the transfer of the Center based on the types of recipients that could receive the property to reflect the proposed use of the property.

CONDITIONS

Various means exist to place conditions on the transfer of the Center for the purpose of future protection of Center resources. Some conditions, however, would provide better or more definite protections for the resources at the Center than other conditions. The two types of conditions that would offer the best protections for the Center after transfer to a university or nonfederal government entity are retention of a portion of or interest in the Center property, and use of conservation easements. This section describes various means of placing conditions on the transfer of the Center, including retention of a portion of or interest in the Center, and conservation easements. This section also describes other potential conditions that could be utilized, and why they would not afford sufficient protections of Center resources after transfer.

Retention of a Portion of the Center Property

Under this option, the federal government could reserve any portion of or interest in the Center property from conveyance. The federal government would continue to own and

maintain any retained portion of the Center property. Selectively retaining portions of the Center would afford the federal government continued control and management of the retained portions of or interest in the Center.

Conservation Easements

A conservation easement (or conservation restriction) is a legal agreement between a landowner and a land trust or government entity that permanently limits uses of the land in order to protect its conservation values. It allows the present owner to continue to own and use the land and to sell it or pass it on to heirs. When a conservation easement is donated or sold to a land trust, the landowner loses some of the rights associated with the land. The land trust, or other conservation easement holder, such as a government entity, is responsible for making sure the easement's terms are followed (Land Trust Alliance 2005). Conservation easements in Minnesota are perpetual as long as they are created in accordance with Minn. Stat. § 84C.

The Minnesota conservation easement statute defines conservation easement as a non-possessory interest of a holder in real property imposing limitations or affirmative obligations, the purpose of which include retaining or protecting natural, scenic, or open space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archeological, or cultural aspects of real property (Minn. Stat. § 84C.01 [2005]).

The Minnesota conservation easement statute provides that the easement may be indefinite in duration and may impose affirmative duties or obligations on the holder of the easement (often a private land trust or government entity serving in the capacity of land trust) or the owner of the burdened property. Another notable point of the Minnesota conservation easement statute is that it allows for third-party enforcement of the easement. This means that the easement language can create easement enforcement rights in other entities, even though these third-party entities are neither holders of the easement nor owners of the burdened property. This would include interested or affected persons or organizations. This means of placing conditions on the transfer of the Center would afford definitive and perpetual protections to resources at the Center, provided that the affected persons or organization continues to monitor compliance.

Covenants and Easements

A covenant is a contractual obligation between two parties. It can stand alone, or be incorporated into other documents such as deeds to transfer property. A covenant could be used as a means to restrict or limit future use of the Center. When a covenant is broken, a landowner who is benefited by the covenant may enforce it. However, landowners who are not benefited by the covenant would have no power to enforce it if such landowners are not a party to the contract creating the covenant, or the contract creating the covenant is not specifically made to benefit such third parties.

Easements are recorded instruments that establish non-possessory property rights in the land of another, such as the right to access certain areas subject to the easement. Easements are created when the owner of the property that is burdened by the easement conveys the easement right to another person or entity. The most likely type of easement for use in restricting use of property is the "negative" easement, which gives the owner of the easement the right to prevent the owner of the burdened property from using the land in a certain way. Other easements may establish a right to enter or use a portion of real property for a specific purpose. An easement may be binding on subsequent owners of the property as long as the easement is established by written instrument such as a deed, and duly recorded.

Although a covenant could be used to protect certain resources at the Center, it has the potential under Minnesota law to become void under certain circumstances. Therefore, this means for applying conditions to the transfer of the Center may not provide definite protections for Center resources. The use of conditions or restrictions in Minnesota such as covenants is modified and limited by state statute. The relevant sections contained in Minn. Stat. § 500.20 first create a mechanism whereby any restrictions, covenants, or conditions placed on real property automatically become void if, over time, the conditions become "nominal" and of no actual or substantial benefit to the party or parties to whom or in whose favor they are to be performed. This situation could arise at any point in the future and is not dependant on statutory deadlines. This law creates uncertainty as to the future enforceability of conditions or restrictions like covenants on real property in Minnesota. Under current practice, the United States interprets conditions under state law.

Minnesota law also states that any conditions or restrictions on real property, such as covenants, may be disregarded automatically after 30 years (this does not affect conservation easements created in accordance with Minn. Stat. § 84C). Before the 30-year period is over, the Minnesota law first gives the person who owns or has an interest in the real estate against which covenants, conditions, or restrictions have been filed, and who claims to be benefited by the conditions or restrictions, the opportunity to file a statement that the person still claims the benefit created by the conditions or restrictions. If such a statement is filed between the 28th and 30th anniversary of the recordation of the original restriction or condition, then filing the required notice may extend the condition or restriction for an additional seven years. The person claiming the benefit of the restrictions or conditions would be required to seek judicial intervention to keep the restrictions or conditions alive for longer than the additional seven years.

Minnesota law also restricts the window of time within which a person who owns a right of re-entry may actually re-enter and take back real property where a condition or restriction is broken. In Minnesota, the right to re-enter the property upon breach of a condition or restriction subsequent is only valid for six years after the breach was committed.

LAWS, REGULATIONS, AND PLANNING DOCUMENTS GOVERNING USE

MNRRA Enabling Legislation and the MNRRA Comprehensive Management Plan

The relationship of the MNRRA enabling legislation and the MNRRA CMP to uses under alternative C would be much the same as that described for alternative B. Under the CMP, the MNRRA would retain review authority for federally funded or permitted activities that were to occur on the Center property, regardless of ownership. Additionally, upon conveyance, the Center property would continue to be subject to the requirements of the Critical Area legislation, as discussed below. Under alternative C, conditions could be imposed on the conveyance to ensure that site development occurs within the tenets of the MNRRA enabling legislation and the MNRRA CMP.

Mississippi River Corridor Critical Area Legislation

The relationship of the Critical Area legislation to uses under alternative C would be much the same as that described for alternative B. If the Center is acquired by a nonfederal government entity, regardless of the proposed land use, the entity would be required to adopt plans and zoning ordinances that implement the requirements of the Critical Areas Act of 1973, State Executive Order 79-19. In addition, under alternative C, conditions could be imposed on the conveyance to provide added protections to this critical area or to enhance those protections already in existence through the Critical Area legislation.

Minneapolis-St. Paul International Airport Zoning Ordinance

In any of the situations in alternative C, the transfer or sale of the Center property into nonfederal ownership would require evaluation of the airport zoning ordinance. Should the Center transfer to a nonfederal government entity, the agency that administers the Center would have to determine its compliance obligations pertaining to the ordinance. Much the same as discussed under alternative B, building height restrictions under the airspace obstruction zones and maximum construction height would need to be determined for new construction and rehabilitation of existing buildings. Uses would be evaluated under the safety zone requirements and no new construction would be allowed in Safety Zone A. Under alternative C, additional conditions could also be imposed through the conveyance that would limit building heights, vegetation to be planted, or uses.

Camp Coldwater Spring Protection Legislation – Minnesota Senate File 2049

Under alternative C, a university or nonfederal government entity would need to determine its compliance obligations with respect to the Camp Coldwater Spring protection legislation, sometimes referred to as Minnesota S.F. 2049, in any development and use of the property. Under alternative C, the federal government could also impose additional conditions to protect the flow of groundwater to and from the spring, as well as protections for the physical structure of the existing discharge and reservoir. Although this state law does not guarantee access to the Camp Coldwater Spring area, alternative C could allow for conditions on the transfer of the Center that would assure public access.

National Historic Preservation Act

The federal government will evaluate application of the NHPA section 106 consultation process to determine appropriate mitigation potential adverse effects on historic properties prior to conveyance. Under alternative C, the additional conveyance conditions to be imposed could include mitigation measures to protect identified historic properties at the Center. Once transferred to a nonfederal entity, protection of historic properties would not be guaranteed without conditions placed on the conveyance because the NHPA section 106 responsibilities apply only to the federal government.

ALTERNATIVE D

MODIFICATION OF LAND, STRUCTURES, OR OTHER IMPROVEMENTS BY THE FEDERAL GOVERNMENT PRIOR TO CONVEYANCE OR RETENTION OF THE CENTER

(PREFERRED ALTERNATIVE)

Under alternative D, the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to conveyance or retention of the Center. Modifications could include removal of all or a portion of the existing structures and associated aboveground infrastructure (roads, power lines, ore bins, etc.) at the Center. Modifications could also include construction of new structures, or rehabilitation of existing buildings, or both.

Following completion of the modifications, the property would be disposed through transfer to a university or nonfederal government entity without restrictions (alternative B), transfer to a university or nonfederal government entity with restrictions (alternative C), or retention by the federal government for use such as those described under the three conceptual land-use scenarios. If the property was retained by the federal government, management responsibility could be assigned to a variety of federal agencies. This includes assigning the property to the Bureau of Indian Affairs to be held in trust for an American Indian tribe.

In selecting Alternative D as the preferred alternative, USDI would manage and bear the costs for removal of some or all of the existing structures and associated aboveground infrastructure, and has choosen open space/park as the preferred land use scenario.

The National Park Service completed a building demolition report (Innovar 2006). The removal report includes a cost estimate for possible demolition activities at the Center that could take place under alternative D. The demolition report indicates the cost to abate all hazardous materials such as asbestos, remove all structures, and clean and grade the areas around the removals would be approximately $1,081,000 (Innovar 2006). The demolition report assumes that the majority of all salvageable materials comprising the structures on the Center property would be salvaged, rather than disposed of in a landfill, resulting in a significant cost savings for demolition of the Center. The removal report also assumes that all hazardous materials encountered during removal would be abated and disposed of in accordance with applicable federal, state, and local requirements. The costs outlined in the removal report take into account an estimate for removing hazardous materials that could be encountered during the demolition.

The cost estimate is from 2006 and has not been updated to reflect inflation and changes in the value of recycled materials that may have occurred in the intervening three years.

LAWS, REGULATIONS, AND PLANNING DOCUMENTS GOVERNING MODIFICATION AND USE

The application of laws, regulations, and planning documents governing use of the Center under alternative D would be the same as under alternative B if the Center were conveyed without conditions, or the same as under alternative C if the Center were conveyed with conditions. The difference between this alternative and alternatives B and C is that under alternative D, the federal government would modify the Center prior to conveyance or retaining the Center by demolishing structures, removing paved areas, or other related activities. Any modifications made by the federal government prior to conveyance or retention would be made in compliance with all laws, regulations, and planning documents that govern use of and resources located at the Center.

Under the preferred alternative, all buildings and associated aboveground infrastructure (roads, power lines, etc.) would be removed and the Center retained by the federal government. The site would be restored to natural conditions as described in the open space/park scenario
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CHAPTER THREE

Twin Cities Research Center, Main Building, circa 1970
Photo Credit: Bureau of Mines, TCRC Files

AFFECTED ENVIRONMENT

CENTER FACILITIES AND OPERATIONS

Chapter 3 provides a description of the Center and its setting. It identifies resources and elements of the human environment that could be affected by the Center disposition. Because the Center site is relatively small, it is discussed herein within the context of the Twin Cities area and the MNRRA, within which the site is located. Detailed information on the latter can be found in the *Mississippi National River and Recreation Area Comprehensive Management Plan* (NPS 1995).

LOCATION, SETTING, AND OPERATIONS

The federally owned, 27.32-acre Center site is located in Hennepin County, within the Twin Cities metropolitan area. It is situated northeast of the intersection of SH 62 and SH 55, on the west side of the Mississippi River. The property boundary is an irregularly shaped polygon with the long axis oriented approximately north-south (see figure 3). The physical address of the property is 5629 Minnehaha Avenue South, Minneapolis, Minnesota 55417. It is accessed by turning east from Hiawatha Avenue (SH 55) onto East 54th Street, then south on the frontage road.

The Center is set on a Mississippi River bluff top. The property slopes gently eastward toward the Mississippi River; however, just east of the site there is a steep drop to the river. Elevations range from about 810 feet MSL in the northwest portion of the site, to 750 feet MSL in the southeastern portion. The river's elevation is about 685 feet MSL. A 6-foot chain-link perimeter fence closely corresponds to the property boundaries. The main entrance is located on the northwest corner of the property, and consists of a stone wall with a large iron gate. The stone wall and gate have been damaged and a chain-link fence and gate currently serve as the main entrance.

The property is bound on the north by a service road and land owned by the U.S. Department of Veterans Affairs, on the west by SH 55 (Hiawatha Avenue), and on the south by Fort Snelling State Park. To the east of the Center is property owned by the Minnesota Historical Society. Also to the east of the Center is an old railroad bed that has been converted to a paved pedestrian and bicycle trail administered by Fort Snelling State Park. East of the railroad bed is a steep slope running down to the Mississippi River and a 10-acre island (Island 108-01) owned and managed by the National Park Service.

The site's vegetation consists of a mix of grassy areas interspersed with mature trees and forest thickets. The eastern one-third of the Center is wooded. Much of the Center has experienced ground disturbance of some type. The site includes buildings, roads, parking lots, and other infrastructure associated with the USBM tenure. These features are discussed in the sections that follow.

Day-to-day administration of the Center, including administration of special uses and events, is the responsibility of the USFWS. Law enforcement at the site is provided by the Hennepin

County Sheriff's Department. Permits for special uses are granted through the USFWS after submittal and acceptance of a form explaining the date, time, and intended special use. Since the Center's closure in 1995, special uses for building interiors have included law enforcement training (Building 1) and equipment storage for private and government entities. The Center grounds are open to the public.

The Center currently has no official full-time uses. Building use is available through special permit and several buildings are currently or have been used for storage or training by other government agencies on a short-term basis. Structures receive very minimal maintenance due to lack of funds. Buildings 1 and 2 have broken windows, which have allowed pigeons to roost inside. Both buildings have been vandalized both inside and out, and both buildings have leaking roofs that are leading to further interior damage. Building 9 has standing water in the basement and significant mold damage. Other buildings have experienced limited vandalism and are deteriorating. Grounds maintenance is limited to periodic mowing, boundary fence repair, and removal of downed limbs.

BUILDINGS AND OTHER STRUCTURES

There are 11 vacated buildings of various types on the Center (table 1). Some buildings display distinctive architecture dating from the 1950s to early 1960s (e.g., Buildings 1, 2, and 3), and others are simple metal out-buildings. Other notable site features include historic Camp Coldwater Spring and the associated spring house and reservoir (see the "Historic Overview" section of this chapter for details) located near the heart of the site.

TABLE 1. BUILDINGS OF THE CENTER SITE

ID No.	Size (sq ft)	Description	Original Uses
Building 1	106,000	4-Story Brick / Masonry	Offices and Laboratories with Warehouse Facility at South End
Building 2	10,692	3-Story Brick / Masonry	Ore Crushing, Laboratories and Storage
Building 3	1,997	1-Story Brick / Masonry	Garage
Building 4	5,673	1-Story Transite / Metal	Pilot Plant and Laboratories
Building 5	13,280	1-Story Metal	Core Storage and Miscellaneous Storage
Building 6	160	1-Story Metal	Flammable Materials Storage
Building 7	2,500	1-Story Metal / Wood	Miscellaneous Storage
Building 8	160	1-Story Metal	Explosives Storage
Building 9	9,800	1-Story Metal	Offices and Library
Building 10	420	1-Story Concrete / Metal	Laboratory
Building 11	14,000	1-Story Metal	Warehouse and Office Space

More details regarding individual buildings are provided below. Information on potentially hazardous materials associated with the buildings is provided in the "Health and Safety" section of this chapter.

Building 1 (sometimes referred to as the "main building") was constructed in 1959. It is located just inside the entrance gate (figure 8). It served as the main administration building, and included laboratories and pilot plants, in addition to offices. The building is representative of Modern architectural design. The building is multi-level with the height of the tallest portion four stories. It has concrete formed pilasters and a veneer of fabricated stone and blue colored glazed brick and tile (figure 9). Mechanical, electrical, and boiler rooms are located on the first floor. The southern end of the building is an annex that was constructed in 1981–1982. The annex included a machine shop on the ground floor, and drafting and facility services on the upper level. A large paved parking area is located on the eastern side of the building.

Power is active to the building to control the alarm system and to provide power to a sump pump to control sewer system backflow during high storm runoff periods. Past sewer system backups have caused a persistent foul odor to be present in the building, particularly during the warmer summer months. One active phone line exists for the building alarm system. There is no water service to the building.

Although Building 1 has remained mostly unused since the Center closed, it was used by the Federal Emergency Management Agency for office space in 1997, and more recently for law enforcement tactical training.

Building 2 was constructed in 1959. It is known as the Crusher Building because it housed facilities to crush ore to various sizes upon receipt for testing. The building is located south of Building 1 and northeast of Camp Coldwater Spring and Reservoir. It is a three-story rectangular building, and shares the same exterior finish (blue colored glazed brick and tile and concrete formed pilasters) as Building 1 (figure 10). It included crushing facilities, laboratories, and miscellaneous storage areas. The third floor was used as a staging and assembly area for mine fire-fighting equipment. Building 2 has no active power or water service. It has not been actively used since closure of the Center.

Building 3 was also built in 1959 and shares the same exterior architectural details as Buildings 1 and 2 (figure 11). It is a garage structure with seven bays for vehicle and maintenance equipment storage. Building 3 is located south of Building 1 and west of Building 2. It lacks active power and water service. Building 3 has not been used since closure of the Center, except for some limited storage.

Building 4 is a one-story structure located directly south of the Camp Coldwater Spring area and is surrounded by wetlands (e^2M 2005) (figure 12). Its original use, in a different location, was as a World War I balloon hanger. At that time, it was owned by the Veterans Administration. The USBM purchased the building in 1951, dismantled it, and reconstructed the steel framework at its current location. Transite wallboard siding was then added. Transite is a composite material of concrete and asbestos that was commonly used in the 1950s and early 1960s; hence, the building was historically known as the Transite Building. At its current location, it was used first for metallurgical testing, and later for laboratories. Building 4 lacks active power and water service and has not been actively used since closure of the Center.

FIGURE 8. BUILDING 1- MAIN OFFICE AND LABORATORIES

FIGURE 9. CLOSE-UP OF BUILDING 1 WITH VISIBLE BLUE, GLAZED BRICK AND LIMESTONE VENEER

FIGURE 10. BUILDING 2 – CRUSHER BUILDING

FIGURE 11. BUILDING 3 - GARAGE

FIGURE 12. BUILDING 4 – "TRANSITE" BUILDING

Building 5 was the first building to be constructed at the Center—it was completed in 1949. It is located at the south end of the property. It was designed to store mining core samples, and later served as a test facility for *in situ* leaching (leaching of minerals or other products from rock that remains in its original form and location and is not moved or crushed) and soils analysis laboratory for the EPA superfund work. It was also used for miscellaneous and overflow vehicle storage. Building 5 is a one-story, Quonset-style prefabricated building with a steel frame and aluminum siding (figure 13). Building 5 lacks active power and water service. Building 5 is not currently being used, but has been used in the past for storage for other federal agencies. The TCRC Closure Team moved two above-ground storage tanks to adjacent Building 5—one a 300-gallon gasoline tank and the other a 300-gallon diesel tank (figure 14). Both tanks were emptied by the TCRC Closure Team in 2000 (TCRC Closure Team 2000).

Building 6 was constructed in 1949–1950. It is a small, single-story, prefabricated steel frame and aluminum-sided building constructed to provide for storage of flammable materials away from active work areas (figure 15). It is located southwest of Building 5. Building 6 has not been used since closure of the Center.

Building 7 was constructed in 1949–1950 as a single-story gable-roofed warehouse for miscellaneous storage (figure 16). It is located east of Building 5. It was once known as "the black shed" because in the early years the only protective cover was black tarpaper. It was later covered with aluminum sheeting.

Building 8 is a concrete-formed explosives bunker that is partially buried into a hillside. It was constructed in the early 1960s. It is located west of Building 5. The entrance to Building 8 lies within a wetlands area (figure 17). The building has not been actively used since closure of the Center.

Building 9 is a one-story, flat-roofed building sided in fabricated steel sheeting (figure 18). It was moved to the Center site from Keewatin, Minnesota, where it had served as the USBM Iron Range Demonstration Plant. It was dismantled around 1970 and moved to the Center site, where it was stored disassembled for several years. In 1975–1976 it was reconstructed in its current location north of Building 1. The main floor includes offices, a library, and an electronics laboratory. The basement was used for archives and miscellaneous storage. The building has been determined unsafe for entry without protective equipment due to the presence of mold (from sewage backflow-related flooding). There is standing water in the basement.

Building 10 is a small rectangular concrete building with a steel-sided office on the west side (figure 19). Building 10 has not been actively used since closure of the Center.

Building 11 was the last one constructed at the site in 1989 (figure 20). It is a large building located near the western boundary of the property. It is made of fabricated steel. The northern part of the building contained offices, and the remainder served as storage. Building 11 has been periodically used for storage by other government agencies since the Center closed.

FIGURE 13. BUILDING 5 – CORE STORAGE

FIGURE 14. BUILDING 5 ADDITION

FIGURE 15. BUILDING 6 - STORAGE

FIGURE 16. BUILDING 7 - WAREHOUSE

FIGURE 17. BUILDING 8 – EXPLOSIVES STORAGE

FIGURE 18. BUILDING 9 – OFFICES/LIBRARY

FIGURE 19. BUILDING 10 - LABORATORY

FIGURE 20. BUILDING 11 – WAREHOUSE/OFFICE

OTHER INFRASTRUCTURE

In addition to buildings, the Center contains support infrastructure and utilities such as powerlines, waterlines, wastewater lines, ore storage bins, parking areas, and roads for building access and circulation. Parking lots or spaces with a total capacity for 250 vehicles are associated with most, but not all, of the Center buildings. The largest lot is located immediately east of Building 1.

There is currently no city water supply connected to the Center. During construction work on SH 55, the water main for the Center was severed and has not been reconnected. The estimated cost of repairing and reconnecting the water main is $75,000. There are no wells on the site.

Some of the smaller buildings (Buildings 6, 7, 8, and 10) never had wastewater systems. Buildings 2, 4, and 5 had individual septic systems. After being tested and pumped, the underground septic tanks were broken up in place and filled with sand in the late 1990s (TCRC Closure Team 2000). One aboveground septic tank was emptied, cleaned, and hauled offsite. Buildings 1, 9, and 11 are linked to the municipal sewer system; however, without water the sewer systems are not operational. As previously discussed, a sump pump associated with Building 1 operates to prevent sewer backups into the buildings serviced by sewer systems. The type of wastewater disposal system in place for Building 3 is unknown.

There is a series of one-story ore bins in three locations at the Center: south of Building 1 and east of Building 2. These are designed to store ore and rock materials, and occur in a series of four or five bins to each area. They are partially buried in the hillside so that ore can be dumped from above after opening metal doors, or scooped from ground level (figure 21).

FIGURE 21. ORE BINS

HISTORIC OVERVIEW

AMERICAN INDIAN HISTORY

Paleo-Indian (12,000 BP – 10,000 BP)

There is evidence, albeit limited, that the first people to inhabit the region in which the Center lies were in the area approximately 12,000 years ago. The mobile, dispersed population of Paleo-Indians pursued giant bison, great bears, and other animals that lived in the region. Minnesota's Paleo-Indian population was apparently derived largely from Great Plains cultures. Eventually, the populations of large animals the residents depended on declined from a combination of environmental factors and pressure from hunting. As the large animals disappeared, the Paleo-Indians modified their hunting styles to enable them to catch more agile animals such as moose, woodland caribou, and smaller, quicker animals.

The Paleo-Indians left little evidence of their passing. Abandoned campsites, quarries, stone tools (lithics), and other scattered remains are usually the only evidence of Paleo-Indian presence. Regional sites that include diagnostic point types (Clovis, Folsom, Agate, Basin, Cody, Plainview, Hell Gap, Alberta) have been located in Anoka, Hennepin, Ramsey, and Washington counties (Ollendorf and Godfrey 1996, Clouse 2001). While no definitive Paleo-Indian sites have been recorded within the MNRRA corridor, a Paleo-Indian point was found upstream at the Washington Avenue Bridge.

Archaic (10,000 BP – 2500 BP)

The Archaic period is typically divided into Early, Middle, and Late subperiods based on technological changes that are often manifested in projectile point styles. For most of this period, populations were dispersed and the people obtained food through hunting and gathering. It was during this period that the atlatl (spear thrower) came into widespread use.

The early archaic subperiod (10,000 BP – 8000 BP) is poorly understood and scarcely represented along the Mississippi River in Minnesota. Diagnostically, it is represented by notched projectile points. There are only a few known early archaic sites; in the Twin Cities area they consist mainly of surface finds of projectile points.

The Middle Archaic subperiod (8000 BP – 4500 BP) is characterized by side-notched projectile points found in surface collections throughout southeastern Minnesota. These sites are often located on high river terraces, alluvial fans, and uplands.

Late Archaic (4500 BP – 2500 BP) sites are larger and more numerous than earlier sites. This may suggest that population sizes were increasing, or that sites were being repeatedly occupied over a number of years. In any case, it is clear that people were staying longer in one general location. Archeological evidence also suggests that subsistence patterns were evolving to include a wider variety of resources. Material culture continued to develop too. Native copper became widespread as a component in tools, and tools themselves were more varied and specialized than before. Concentrated habitation sites tend to be located on fairly high, well-

drained ground overlooking lakes, lake-stream junctions, and stream-stream junctions. Smaller campsites associated with seasonal activities or travel have also been recorded (Harrison 1985). Late Archaic sites in eastern Minnesota include several rock shelters and open air occupations (Ollendorf and Godfrey 1996, Clouse 2001). There are Late Archaic sites within the MNRRA corridor. Some sites exist in the vicinity of the Center, especially in Mendota, southeast of the project area.

Woodland (2500 BP – 300 BP)

The Woodland period is marked by three new activities: the use of pottery vessels, burial mound and earthwork construction, and plant cultivation. Cultural materials and traditions that began to develop in the Late Archaic also continued to evolve during this period. Like the Archaic period, the Woodland period is divided into three subperiods: Early, Middle, and Late.

Early Woodland sites reflect the addition of pottery into Archaic traditions. Vessels of this subperiod are similar in shape to flat-bottomed woven baskets. Some archeologists believe there are Early Woodland sites in the Twin Cities area, but this has not been verified by diagnostic techniques for ceramic materials. Other literature suggests the Schilling site located on Lower Grey Cloud Island is the only known Early Woodland site recorded in the MNRRA corridor (Anfinson 2003). There are no Early Woodland sites north of the Twin Cities. Two well-known sites, La Moille Rockshelter and King Coulee, are located 90 to100 miles southeast of the Center.

The Middle Woodland subperiod is characterized by the clear beginning of horticultural economies (tobacco, rice, squash, barley), continued refinement and specialization of material culture, and the use of burial mounds. Regionally, sites are found along all major river drainages. Middle Woodland sites in the Twin Cities area are part of the Havana tradition and there is evidence that there was interaction with the Hopewell culture through long-distance exchange networks (Harrison 1985). Indian Mounds Park in St. Paul, and within the MNRRA corridor, is an example of a Middle Woodland site that reflects Havana Hopewell interaction (Anfinson 2003). Middle Woodland sites have been identified from the Anoka Sand Plain to Spring Lake, near Hastings, indicating the Middle Woodland peoples clearly used the Mississippi River through the MNRRA corridor (Anfinson 2003).

Late Woodland developments began about 1350 BP and are marked by less elaborate material culture and mortuary goods than the Middle Woodland. There is evidence, however, of the introduction of the bow and arrow during this subperiod. Settlement patterns shifted from large distinct settlement sites to small seasonal encampments around wetlands, lakes, and rivers. Late Woodland peoples continued to build burial mounds, and mound shapes generally were more varied and smaller than before. Two Late Woodland traditions are evident in the Twin Cities area: the Effigy Mound tradition peoples of southeastern Minnesota and the St. Croix-Onamia (Transitional Woodland) groups of central and southwest Minnesota. The demarcation between the two groups appears to be St. Anthony Falls. The Effigy Mound settlement pattern involved seasonal movement between major river valleys and smaller streams. Group size varied, often in correlation to the season and size of the river valley. Larger groups aggregated in the major river valleys and dispersed into smaller family groups along streams in the winter. The St. Croix-Onamia settlements were typically small sites located on

lake shores, or on streams near the outlets of lakes. Lifeways were dominated by hunter-gatherer traditions and foods included waterfowl, fish, and wild rice. There are a number of Late Woodland sites recorded within the MNRRA corridor, including the Sorg site, Lee Mill Cave, the Hamm site, and the Sibley House / American Fur Company sites (Anfinson 2003).

Late Pre-Contact (1,000 – Historic Contact)

Generally, the Late Pre-Contact period (represented by the Oneota tradition in the Twin Cities area) is characterized by villages and intensive food production manifested in horticultural and agricultural lifeways. Archeologists recognize six major trends of the Late Pre-Contact period:

1. cultivation of maize (southern Minnesota) and wild rice (central Minnesota)
2. introduction of new food production technologies
3. population increases and development of well-defined regional complexes
4. cultural contact with the highly developed Middle Mississippian cultures
5. relationship between human adaptations and changing climactic conditions
6. association with known American Indian groups of the Historic period`

Late Pre-Contact sites (villages and other sites) of the Oneota Tradition exist in the Twin Cities region and within the MNRRA. The MNRRA sites are small and not fully understood, but it appears that they were hunting camps rather than actual settlements. Known sites within the MNRRA corridor with Oneota components include the Schilling site, the Lee Mill Cave site, the Point Douglas Townsite, and the Grey Cloud Mounds site (Anfinson 2003).

POST-CONTACT HISTORY

When Europeans first entered Minnesota in the middle 1600s, a number of different American Indian groups occupied the region. Some had been forced into the area by European settlement to the east. Historic contact period tribes in Minnesota can be divided into two main groups: the Chiwere-Winnebago language group and the Eastern Dakota.

The Chiwere-Winnebago language group is actually a composite of several groups, including the Ioway, Oto, and Missouri, that shared language, beliefs, culture, and kinship. French contact with the Ioway was initiated in 1676 outside present-day Green Bay, Wisconsin. Initially, trade began through the use of Algonquin-speaking tribes as middlemen. Metal items, glass beads, guns, and ammunition were commonly exchanged for bison hides and beaver pelts. As the fur trade expanded westward, contact between the French and Ioway became more frequent and middlemen were no longer needed. This led to intertribal tension, and the resulting warfare forced the Ioway out of southeastern Minnesota and northeastern Iowa. They moved to northwestern Iowa, near the Oto group (Anfinson 2003).

The Eastern Dakota, which included the Mdewakanton, Wahpeton, Wahkpute, and Sisseton, inhabited much of Minnesota at the time of European contact. These people came to be known to the French as the Sioux (hereafter referred to as the “Eastern Dakota”). By the time of initial French contact in the mid-1600s, the Eastern Dakota had adapted their subsistence

and settlement patterns to the prairie/forest border and occupied relatively permanent villages in forest areas. Following contact with the French, Eastern Dakota lifeways, material culture, and geographic distribution changed considerably. There is limited archeological knowledge about Eastern Dakota presence within the MNRRA corridor. The approximate locations of villages and other communities are known, but few sites have been recorded or excavated. Within the MNRRA corridor, communities where approximate locations are known include Kaposia, Shakopee, Pine Bend, Black Dog's village, and the Little Rapids site. Additionally, a Dakota internment camp where some 1,500 individuals were held following the Dakota Conflict of 1862 is located in the river bottom below Fort Snelling, but has never been archeologically investigated (Anfinson 2003). Pike Island, at the confluence of the Mississippi and Minnesota rivers, was frequented by the Eastern Dakota, but has never been investigated (Anfinson 2003).

French Period (ca. 1654 – 1763)

French penetration into the Upper Mississippi River region was fairly gradual. The French began to explore eastern Canada in the early 1500s, and by 1604, Samuel de Champlain had founded the settlement of Quebec. Explorers ventured farther inland over time and eventually reached the Great Lakes. They also contacted various tribes of the Ohio River Valley and elsewhere. Based on existing evidence, the French reached the Mississippi River by the 1670s. An expedition led by Louis Joliet and Father Jacques Marquette was prompted by rumors of the Mississippi River. The expedition departed for the fabled river on May 17, 1673, and a month later they were floating the Mississippi with the goal of following it to its mouth. They traveled downstream for about a month until turning around for fear of Spanish and Indian attacks (Anfinson 2003). This was the first well-documented French encounter with the Mississippi River. The region became a new outlet for French trade as merchants and traders developed relationships with regional tribes.

On March 19, 1680 an expedition including Michael Accualt, Antoine Auguelle, and Father Louis Hennepin departed for the Mississippi River. Nineteen days later, accompanied by a Dakota war party, the men left the river just upstream of what is now Indian Mounds Park (located on the river, east of downtown St. Paul) and traveled overland. On July 1, the men were back in the area with their Dakota escorts and this time they described and named St. Anthony Falls (Anfinson 2003). This was the first recorded case of Europeans visiting what is now the Twin Cities area.

As French presence in the Upper Mississippi River region increased, the French began building forts for trade centers and as bulwarks against Spanish and British expansion. Most of the forts were built south of what is now the Twin Cities area. By the end of the 1600s, however, French influence in the region was waning. Spurred by attacks from the Iroquois in 1696, the French consolidated their operations around Montreal. Shortly thereafter, the War of Spanish Succession (1702–1713) dominated French interests and drew attention away from North America. In the 1720s–1750s, the French focused their trade in the Great Lakes and Ohio River Valley region. By 1756, the French were involved in the French and Indian War (Seven Years War) with Great Britain. The Treaty of Paris ended the war on February 10, 1763, and stipulated that France cede her claims in Canada and all lands east of the Mississippi River (except New Orleans) to the British. This effectively brought the French period to an end.

British and Early American Period (1763 – 1819)

The Treaty of Paris did not mark an immediate change in the Upper Mississippi River region or in other ceded lands. The British were slow to enter the area, and as a result, French (and Spanish) traders continued to visit tribes in the western Great Lakes and in the Upper Mississippi River valley. When the British finally entered the regional trade network, they tried a different trading system. Instead of visiting the tribes, they built trading posts and expected the tribes to come to them. This policy failed, and in 1767 the British Crown began granting licenses to independent traders who rushed to the interior to conduct business with tribes. By 1780, English traders were working among the Dakota. Still, posts continued to serve as a hub of activity for the trade industry. There is no evidence that the British (or for that matter the French or Spanish) established any trading posts within the MNRRA corridor. It is likely, however, that British and French traders regularly journeyed along the corridor to trade with the Dakota and Chippewa (Anfinson 2003).

British sovereignty over the region ended with the conclusion of the American Revolution in 1783. The resulting treaty granted all lands east of the Mississippi to the new United States of America. However, just as with the conclusion of the French and Indian War 20 years earlier, not much changed immediately; the British continued to trade with tribes and build trading posts in the region. Meanwhile, intertribal warfare between the Dakota and Chippewa was intensifying. In an effort to end the conflict and prevent further disruption in trade, the British tried to convince the two tribes to accept the Mississippi River as a tribal boundary (Anfinson 2003). This was never fully accepted, as the Dakota still claimed both sides of the river.

The Americans' first entrance into the area that now contains the MNRRA and the Center occurred after the Louisiana Purchase of 1803. Wishing to eliminate British influence in the region, the U.S. sent Zebulon Pike up the Mississippi River from St. Louis in 1805. Pike was to secure land for military posts and prepare the way for government trading posts, make alliances with the Chippewa and Dakota, stop intertribal fighting, and locate the Mississippi's source (Anfinson 2003). Pike visited the MNRRA region in the autumn (he portaged St. Anthony Falls on October 1, 1805) and recorded details about the area.

Pike arrived at the confluence of the Mississippi and Minnesota rivers on September 21, 1805, and set up camp on the island that would take his name. The next day, Little Crow and about 150 Dakota men arrived to meet with him, and together they traveled up the Minnesota River to a Dakota village. On September 23, Pike negotiated a treaty with the Dakota for an area of land "nine miles square at the mouth of the St. Croix, [and] also from below the confluence of the Mississippi and St. Peters [Minnesota] up the Mississippi to include the falls of St. Anthony, extending nine on each side of the river, ..." This land included the future Fort Snelling military reserve. In return, the Pike offered $200. Little Crow and Way Ago Enagee signed for the Dakota. (Coues 1987, pp. 24-26, 231.)

Growing tensions between the British and United States began to affect trade in the region. In 1807, President Thomas Jefferson placed an embargo on all British commerce and actively worked to prevent British traders from exchanging goods with the tribes. This had two predictable results. First, some British traders left the region, and second, the tribes (especially the Dakota) suffered from lack of goods they had grown accustomed to. When the War of 1812 broke out, the Dakota, who had developed strong relationships with the British, fought against the Americans. British/Dakota trade continued, but at a diminished level. Only after the

Treaty of Ghent ended the war in 1815 was there an official agreement that the British should leave the area (Anfinson 2003). American explorers and traders quickly rushed in to stake a share in the trading business.

Some British traders remained in the area, however, which was a source of concern to the Americans. The United States attempted to end British influence through passage of the Foreign Intercourse Act of 1816, which required foreign traders to either leave or become naturalized citizens. The act was ineffective, because it was essentially unenforceable. A year later, Secretary of War John C. Calhoun sent Stephen H. Long up the Mississippi River from St. Louis to map the river and ascertain potential sites for military posts. In the summer of 1817, Long recorded the Minneapolis/St. Paul area and recommended that a fort be built at the confluence of the Mississippi and Minnesota rivers. The recommendation was heeded, and two years later, an American military contingent established a fort near the confluence of the two rivers.

Fort Snelling (1820 – 1946)

In late summer 1819, Lieutenant Colonel Henry Leavenworth and a contingent of 200 soldiers arrived at the confluence of the Minnesota and Mississippi Rivers. They established a temporary camp on the south side of the Minnesota River and spent the winter of 1819–1820 there, but determined that the swampy location would not be practical for a summer encampment. As summer approached, Leavenworth directed the soldiers to relocate the camp to the west side of the Mississippi River (Anfinson 2003, Henning 2002). A clear running spring, known today as Camp Coldwater Spring, was the key reason they chose that site. Over the summer "Camp Coldwater" became a reality.

The United States Army was not in the region to build temporary camps; it intended to establish a fort in the area. Colonel Josiah Snelling replaced Leavenworth at Camp Coldwater in August 1820. Shortly thereafter, Snelling placed the cornerstone of what eventually became known as Fort Snelling, located to the south of Camp Coldwater. Soldiers continued to use Camp Coldwater as a base for summer operations for the next two to four years as they built the fort (Henning 2002). The fort was apparently completed and occupied by 1824 (Anfinson 2003).

Settlers began to filter into the area once the fort was completed. One group consisting of individuals from the Selkirk Colony (an agricultural settlement far to the northwest of the fort that was caught in the middle of conflicts between fur traders) arrived in 1821. Thirteen families from the Selkirk Colony arrived in the vicinity of the fort in 1823 and another group of 243 individuals arrived in 1826. With the settlers came limited economic growth associated with farming, the fur trade, the fort, or Indian agency employment. The agency had been established in 1820. (Henning 2002).

In 1837, Major Joseph Plympton assumed command of Fort Snelling and ordered that a survey of the fort be undertaken. Once the survey was complete, the boundaries of the military reservation and the number of settlers living there were known. On July 6, 1838, Major Plympton announced that the military would no longer allow settlers to build structures or cut timber on the military reservation. By 1840, unauthorized settlers had been removed from the Camp Coldwater area (Henning 2002). Many of the structures were razed, but a large stone

trading house remained at Camp Coldwater. This structure was used occasionally as temporary residence until 1853, when it was refurbished as the St. Louis Hotel (Henning 2002). The structure, which was likely within what became the Center's boundaries, burned down in 1862.

As settlement of the region continued, Fort Snelling's function and boundaries evolved. By the mid-1850s, it was essentially a supply depot. Federal officials determined that the 12-square-mile military reservation was far larger than necessary, and took steps to dispose of excess land. On June 8, 1857, Franklin Steele, a permitted settler on fort land, purchased a portion of the reservation for $90,000. He platted the property as the town of Fort Snelling, which included Camp Coldwater Spring.

With the outbreak of the Civil War, however, Fort Snelling once again became a military installation. The fort served as the rendezvous point for the First Minnesota Infantry Regiment. At the fort, soldiers received training and were mustered and sent off to war. After the Civil War, Fort Snelling continued to serve martial roles in support of the Indian wars in the west. By the early 1880s, numerous improvements at the fort were undertaken, including development of a pressurized water system that delivered Camp Coldwater Spring water to the fort (prior to that, water was delivered to the fort by wagon). The water system consisted of an engineer's house, an open reservoir, a water tank, and a pumphouse. Another water tank was added in 1900 (Henning 2002). This system was used until 1920, when the fort began purchasing its water from the city of St. Paul. Most of the structures associated with the waterworks were either razed or converted to other uses over the next two decades (Henning 2002). During the late 1930s and into the 1940s, the area around the springs became known as Coldwater Park. A polo field, nine-hole golf course, baseball stadium, and game preserve are located on the Upper Bluff portion of the Fort Snelling property (Henning 2002).

The Fort Snelling era came to a close in 1946, when the fort was turned over to the Veterans Administration. The Veterans Administration transferred a portion of the property to the USBM in 1949. The rest of the original Veterans Administration property at Fort Snelling was donated in 1961 to the state of Minnesota. The portion of the reservation that included Camp Coldwater Spring was turned over to the USBM in 1957 (Henning 2002).

From its beginnings on the frontier of the young and rapidly growing United States through its many vital roles in World War II, Fort Snelling has represented regional, national and global stories, which is why is was designated at Minnesota's first National Historic Landmark.

Urbanization and Industry (1823 – present)

The Twin Cities region changed dramatically after the establishment of Fort Snelling. What was once an isolated outpost evolved into an important industrial and commercial center. St. Paul developed as the northern terminus of Mississippi River steamboat traffic, and was the first locale to be settled in any numbers by civilians. The first steamboat arrived in the area in 1823. At first growth was slow, but in 1854, the St. Paul newspaper reported that passengers and cargo overflowed every ship that arrived and that there were not enough ships on the river to handle the trade emanating from the town. The population of Minnesota exploded from 6,077 to 172,023 between 1850 and 1860 (Anfinson 2003). The settlements of St. Anthony Falls

and Minneapolis were established in 1849 and 1851, respectively. By 1890, Minneapolis had eclipsed St. Paul in population and had incorporated the town of St. Anthony Falls.
The industrial history of the Twin Cities is linked to the engineering of the Mississippi River, hydropower generated by St. Anthony Falls, and railroads. With the need to transport goods and individuals up the river, there arose a drive to engineer the Mississippi River into a readily navigable waterway. The shifting channel and ubiquitous snags made travel difficult. As such, beginning in 1866, local activists and politicians embarked on multiple campaigns to improve the navigability of the Mississippi River. These included the 4-, 4.5-, 6-, and 9-foot channel projects, locks and dams 1 and 2, lower and upper St. Anthony Falls locks and dams, and the Meeker Island lock and dam. These projects transformed the river's unpredictable changing nature into a thoroughly managed and manipulated waterway amenable to extensive boat traffic.

The use of power generated by St. Anthony Falls dates to the establishment of Fort Snelling, when the army built saw and grist mills at the falls. But it was not until 1848 that commercial exploitation of the falls' hydropower began in earnest. This first stage of development centered on sawmills. By 1855, sawmills at the falls were producing a daily output of 100,000 board feet of lumber. By 1869, there were 18 mills on either side of the river producing a total of 90 million board feet of lumber per year. The sawmill era at St. Anthony Falls drew to a close by 1880, but another industry was coming into its own—flour milling. In fact, between 1870 and 1880, flour production at St. Anthony Falls grist mills grew from just over $1 million (193,000 barrels) to over $20 million (2,051,840 barrels) annually. Flour production continued to surge until 1916, when it began to gradually decline. Despite this decline, flour was still being produced at the falls as late as the 1960s. In addition to the sawmill and gristmill activity, St. Anthony Falls was an important site for hydroelectric power production. As early as 1882, electricity generated by the first hydroelectric power central station in the nation at St. Anthony Falls was lighting local businesses (Anfinson 2003).

The post Civil War railroad boom is one of the most dramatic periods in the development of the midwestern and western United States, and the Twin Cities was an epicenter of this change. The Northern Pacific Railway (later to become the Great Northern Railroad, and eventually the Burlington Northern Railroad) was based in the region and as such, a vast network of rail lines sprang from here. The first train traveled along the first railroad in the state, between St. Anthony Falls and St. Paul, in 1862. By 1888, the Northern Pacific Railroad linked the Pacific Ocean to the Twin Cities. Five years later, another transcontinental line based in the Twin Cities was completed (Anfinson 2003). By the turn of the 20th century, at least nine lines converged in Minneapolis and St. Paul. Railroads and facilities supporting or supported by the railroads dominated local industry. The railroad industry is still evident in local commercial development, although not to the level it once was. A railroad spur is still present at the Center near the northeast corner of the site.

Today, the Twin Cities area remains an important commercial hub. As the largest urban center between Denver and Chicago, the Twin Cities still reflects its history as a center for transport, industry, and innovation.

Twin Cities Research Center Main Campus (1949 – 1996)

The USBM was established within the USDI in 1910. Its mission revolved around scientific research associated with the development of the nation's mineral resources. To this end, experiment stations were established in important mining regions around the country. Establishment of the Lake Superior Station in 1917, at the University of Minnesota, marked the beginning of a long productive history of USBM facilities in the Twin Cities.

After World War II, the USBM grew in size and stature. To meet the demands of its expanded role, the agency was reorganized into regions in 1949. Region V was based in Minneapolis and served the states of Minnesota, Wisconsin, Michigan, North Dakota, South Dakota, Nebraska, and Iowa. The regional office was divided into six divisions, five of which were housed in the Buzza Building in Minneapolis; the sixth was located at the University of Minnesota. At the same time the agency was being reorganized, the Veterans Administration was attempting to dispose of excess land at the former Fort Snelling Military Reservation. The USBM officially acquired this land in 1951, but it began constructing a core storage library there even earlier, in 1949. This was the first USBM building at what eventually became the Center. By 1953, three more buildings had been built.

The scope and complexity of the USBM work in Minneapolis expanded quickly, and by 1957, it became clear that the agency needed more space. Senator Hubert Humphrey responded with introduction of a bill in Congress that provided for the establishment and operation of a mining and metallurgical research center. Congress appropriated the needed funds, more land was acquired from the Veterans Administration, and construction of what eventually became the Center (originally called the North Central Experiment Station) began in 1958. The research center was completed on October 21, 1959 (Ollendorf and Godfrey 1996).

Over the next three decades, the Center excelled in a wide range of basic and applied research programs in fragmentation, drilling technology, blasting, rock physics, in situ mining, mine hydrology, wastewater technology, health and safety, ore processing and palletizing, iron making, and steel making, among others. In the 1960s, the Center partnered with the National Atmospheric and Space Administration to study the possibility of mining the surface of the moon.

There were six specific areas, however, in which the Center made its most important contributions to the science and technology of mining. These were:

- Development of the Tilden Process, which allowed the exploitation of untapped iron ore;
- Advances in diesel health and safety that included the use of water jackets and flame traps to prevent fires and filters to cut down on emissions;
- Advances in equipment safety (both underground and aboveground);
- Development of procedures to significantly reduce the incidence of black lung disease through dust control;
- Advances in mine fire control and detection;
- Alternate fuels research in which ore kiln equipment was developed that could operate with coal, oil, or natural gas (Ollendorf and Godfrey 1996).

In 1993, the era of the Twin Cities Research Center was about to take a turn. The USDI directed the USBM to undergo a major reorganization that included formation of four focused programs directed by four associated centers. The Center was selected as an associated center, but had to transform itself into an environmental remediation center. This effort was short lived. In January 1996, all funding for the USBM was eliminated as part of the Balanced Budget Downpayment Act. The Center officially closed three months later (Ollendorf and Godfrey 1996).

ARCHEOLOGICAL RESOURCES

Two projects involving archeological survey and testing have been completed at the Center. Ollendorf and Godfrey conducted the first in 1996, and Clouse conducted the second in 2001. Both studies found material evidence of post-European contact historic use of the area, but neither found materials dating to prehistoric American Indian use.

The 1996 effort focused on 10 areas within the site that were thought to have been minimally disturbed and, based on topography, location, and viewpoints, thought to be likely locations for American Indian or European use. This study found that several of the focus areas had, in fact, been previously disturbed (fill deposited). Six archeological test units containing post-European contact (historic) artifacts were identified. Of these, one unit was identified as containing information contributing to the Fort Snelling National Historic District due to its structural integrity and association with the military. A second test unit was determined potentially eligible for the NRHP and recommended for further study (Ollendorf and Godfrey 1996).

The subsequent study by Clouse (2001) was more comprehensive. It found that there has been substantial earth movement (cut, fill, and other disturbance) on the Center site; historical documents such as accounts, maps, and photos were used to determine which areas are likely to have been disturbed. Despite this earth movement, many areas of the property appear to contain buried, intact, undisturbed topsoils.

The 2001 study made two main recommendations, which were based on test excavations, stratigraphy, recovered material culture, historic documentation, and information from the 1996 study. The first recommendation was to organize the Center site into five distinct zones based on their potential to yield additional archeological information (Figure 29). Zones III, IV, and V were found to contain no important cultural materials and warrant no further archeological study, according to the author. Zone I was recommended for further testing to determine if the area contains cultural materials that would contribute to the Fort Snelling National Historic Landmark and National Historic District. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the national historic landmark and national historic district. The second main recommendation of this study was to revise the boundaries of the Fort Snelling National Historic Landmark to include Zone II (Clouse 2001).

HISTORIC STRUCTURES AND DISTRICTS

There are three historic districts and a national historic landmark that overlap in the area of the Center: the Fort Snelling National Historic District (designated in October 1966 and expanded in 1970) and National Historic Landmark (designated in December 1960 and updated in 1978), Old Fort Snelling State Historic District (designated in 1971), and the USBM Twin Cities Research Center Historic District (determined eligible for listing on the NRHP by consensus determination with the Minnesota SHPO in 1996).

The Fort Snelling National Historic District and Old Fort Snelling State Historic District share almost identical boundaries. The national historic district is bounded by Minnehaha Park, the Mississippi River, Minneapolis/St. Paul International Airport, and Bloomington Road. The national historic landmark includes Fort Snelling proper and land along the Mississippi River included in the other districts (see figure 7).

The USBM Twin Cities Research Center Historic District is bounded by the Center campus, and consists of 11 contributing buildings and 3 ore bins that represent an important period in the history of science and technology related to mineral production (Ollendorf and Godfry 1996).

A historical study completed in 2002 by Barbara J. Henning focused on the Center and also made a determination as to whether Camp Coldwater Spring is independently eligible for the NRHP. The author concluded that neither the spring nor associated features are independently eligible for the NRHP. However, she did conclude that Camp Coldwater Spring does contribute to the significance of the Fort Snelling National Historic District, the Fort Snelling National Historic Landmark, and the Old Fort Snelling State Historic District.

Camp Coldwater Reservoir (which includes a spring house) is the only remaining physical structure from the Fort Snelling history in the Camp Coldwater area. The reservoir and the flow of Camp Coldwater Spring (a natural feature directly associated with the reservoir) are integral components of the historic character of the national historic landmark and national historic district. Clouse (2001) has recommended that Fort Snelling National Historic Landmark be revised to include more of the Center site.

There are no independently NRHP-eligible buildings or structures located at or near the Center.

ETHNOGRAPHY

An ethnographic resources study was conducted of the Center property in 2005 (Terrell et al. 2005). The purpose of the study was to identify any relationships of the Dakota and Ojibwe people with the resources located within the boundaries of the Center property. During the course of that study, some participants identified springs as a general category of culturally important resources due to spirit entities that inhabit such water sources, and the ceremonial use of the water for various purposes.

Although no historical documentation of American Indian use of Camp Coldwater Spring was found, the oral traditions and histories collected during the investigation suggest that natural springs like Camp Coldwater Spring are associated with sacred healing ceremonies. Camp Coldwater Spring is currently used by some members of federally recognized Dakota and Ojibwe communities, and by other American Indians as a source of water for ceremonies. Camp Coldwater Spring was also identified as important in relationship to the Mdote Minnesota, or the confluence of the Minnesota and Mississippi Rivers. While the confluence is not located within the area of the proposed action, the interviewees stressed the importance of considering Camp Coldwater Spring within this larger context (Terrell et al. 2005).

The primary American Indian communities that have been identified as having an association with the area surrounding the spring are the Mdewakanton Dakota, who currently reside at the federally recognized Lower Sioux Indian Community; Prairie Island Indian Community; Shakopee Mdewakanton Sioux Community; and Upper Sioux Indian Community. Other federally recognized Eastern Dakota communities have historical ties to the Fort Snelling area. In addition, there are American Indian residents of the Twin Cites who are not members of a federally recognized tribe that claim cultural ties to the confluence region. After European American contact, the presence of fur traders and the Indian agency at Fort Snelling caused some Ojibwe to frequent the confluence area.

NATURAL RESOURCES

SOILS

The Center site contains the following soil series and types, which are described in more detail below: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Figure 22 presents the distribution of soil map units on the Center site. Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. Table 2 presents selected building limitations for Center soils. It is important to note, however, that recent archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads. Thus, figure 22 should be considered an approximation at best.

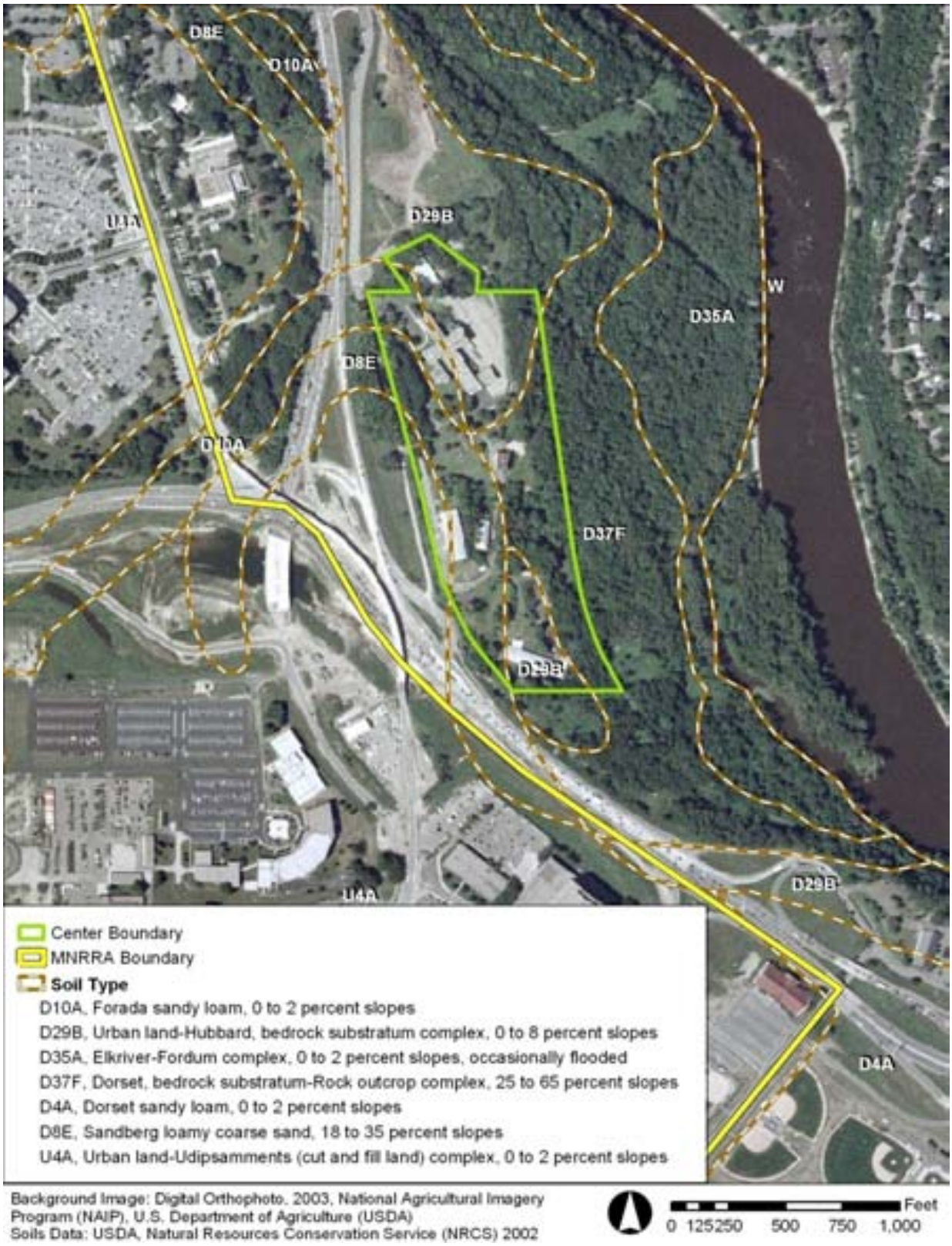

FIGURE 22. SOILS OF THE CENTER SITE AND VICINITY

TABLE 2. SOIL LIMITATIONS FOR BUILDING SITE DEVELOPMENT—CENTER SITE[1]

Soil Type	Limitation for dwellings without basements	Limitation for dwellings with basements	Limitation for small commercial buildings	Limitation for local roads and streets	Limitation for shallow excavations	Limitation for lawns and landscaping
Forada sandy loam	Very limited (depth to saturated zone)	Very limited (depth to saturated zone)	Very limited (depth to saturated zone)	Very limited	Very limited (depth to saturated zone, cutbanks cave)	Very limited (depth to saturated zone)
Urban land – Hubbard, bedrock stratum complex	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated
Dorset, bedrock stratum complex	Very limited (slope)	Very limited (slope)	Very limited (slope)	Very limited (slope, frost action)	Very limited (slope, cutbanks, cave)	Very limited (slopes, droughty)
Sandberg, loamy coarse sand	Very limited (slope)	Very limited (slope)	Very limited (slope)	Very limited (slope)	Very limited (slope, cutbanks cave)	Very limited (slope, drought, too sandy)
Urban land – udipsamments	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated

[1]Hennepin County, Minnesota Soil Survey, NRCS 2005

Dorset Series

The Dorset series consists of very deep, somewhat excessively drained soils formed in a thin loamy mantle and in underlying sandy and gravelly outwash sediments. They can be encountered on outwash plains, valley trains, stream terraces, and moraines. They have moderately rapid permeability in the upper mantle and rapid permeability in the lower sediments. Slopes range from 0% to 35%. Native vegetation is prairie grasses, later succeeded by mixed deciduous and coniferous forest (NRCS 2005).

Forada Series

The Forada series consists of very deep, poorly drained, and very poorly drained soils formed in 20 to 40 inches of loamy sediments over sandy and gravelly material on plane or concave surfaces on outwash plains, stream terraces, and valley trains. These soils have moderate or moderately rapid permeability in the upper loamy sediments and rapid permeability in the underlying material. Slopes range from 0% to 2%. Native vegetation includes tallgrass prairie and sedges (USDA/NRCS 2005, USDA/NRCS 2005a). The Forada soil mapping unit is a state-listed hydric soil (USDA/NRCS 2005b).

Sandberg Series

The Sandberg series consists of very deep, excessively drained soils that formed in coarse or moderately coarse glacial outwash sediments or glacial beach deposits with or without a thin loamy mantle. These soils are on outwash plains, glacial lake beaches, stream terraces, valley trains, and glacial moraines. Permeability is moderately rapid or rapid in the upper part and very rapid in the lower part. Slopes range from 0% to 45%. Native vegetation is mixed prairie grasses with scattered oak hardwoods (USDA/NRCS 2005, USDA/NRCS 2005a).

Urban Land – Udipsamments

The Udipsamments (cut and fill) soil consists of nearly level areas that have undergone minimal grading. The cut and fill material is dominantly sandy. Because of the variability of this component, interpretations for specific uses are not available (USDA/NRCS 2004, USDA/NRCS 2005a). Onsite investigation is needed to ascertain the character of the soil and use limitations.

Urban Land – Hubbard

The Urban Land soil mapping unit mainly consists of residential areas covered by impervious surfaces (USDA/NRCS 2004, USDA/NRCS 2005a). Most areas have been disturbed to some degree by construction activity. Because of the variability of this component, interpretations for specific uses are not available. Onsite investigation is needed to determine the properties of the soil mapping unit (USDA/NRCS 2005, USDA/NRCS 2005a). The Hubbard series consists of very deep, excessively drained soils that formed in sandy glacial outwash on outwash plains, valley trains, and stream terraces. Permeability is rapid. Slopes range from 0% to 35%. Native vegetation is principally tallgrass prairie with scattered bur oak and hazel (USDA/NRCS 2005, USDA/NRCS 2005a).

VEGETATION

The Mississippi River reach containing the bluff top occupied by the Center and the associated slope that adjoins the Mississippi River floodplain lie within the Hot Continental Division, Eastern Broadleaf Forest Province, as described by Bailey (1995). This vegetation province occupies the transition zone between tallgrass prairie provinces to the west and true forest provinces to the east, with dominant species from both provinces typically present in natural vegetation stands (MN DNR 2005a). Average annual temperatures are 40°F and precipitation averages between 25 to 30 inches per year.

Rolling topography and past glaciation characterizes the northern portion of the Eastern Broadleaf Forest Province, including the Center. Most of the regional geology and landforms, including the Mississippi River valley and its sand plain outwash, are derived from glacial activity. The Minneapolis/St. Paul metropolitan area is cupped in a gently sloped basin formed of Paleozoic sedimentary rocks (MN DNR 2005b). Channels of pre-glacial rivers cut through these sedimentary formations. These channels were then filled over time by glacial till, forming the chains of lakes located within the cities. Soils onsite are predominantly Alfisols, which are moderately leached forest soils with relatively high native fertility (McDaniel 2005). Alfisols are productive soils due to the combination of favorable climate and high fertility. Most are farmed unless they have become developed as urban areas expand.

Local Plant Communities

The environs adjacent to the Center are a combination of developed lands, highways, roadways, facilities, and parks to the west and south, and natural vegetation of the Mississippi River floodplain to the east and north. The natural vegetation exists on the bluff slope, toeslope, and on the floodplain terrace.

The bluff slope located on the eastern boundary of the project site supports a maple – basswood forest community. This is a mesic forest community of mixed hardwoods, with sugar maple (*Acer saccharum*), American basswood (*Tilia americana*), species of elm (*Ulmus* spp.), green ash *(Fraxinus pennsylvanica*), and northern red and white oak (*Quercus rubra* and *Q. alba*) (MN DNR 2005b). The closed maple – basswood canopy intercepts most of the sunlight, resulting in a patchy distribution of understory plant species. The subcanopy consists of saplings of the canopy tree, plus hophornbeam or ironwood (*Ostrya virginiana*), leatherwood (*Dirca palustris*), bitternut hickory (*Carya cordiformis*), and/or pagoda dogwood (*Cornus alternifolia*) (MN DNR 2005b). A variety of forbs are common in the herbaceous layer of this community, including trout lilies (*Erythronium* spp.), Dutchmen's breeches (*Dicentra* spp.), spring beauty (*Claytonia* spp.), toothwort (*Dentaria* spp.), false rue anemone (*Isopyrum biternatum*), mayapples (*Podophyllum* spp.), and trilliums (*Trillium* spp.) (MN DNR 2005b).

The toeslope, maintained in a saturated condition by natural groundwater seepage, supports a black ash (*Fraxinus nigra*) swamp community. Located between the slope and the Mississippi River floodplain and at the boundary of the Center site, a wet ash swamp hardwood forest stand characterized by black ash and other hardwood trees, including American elm, American basswood, and sugar maple, has become established (MN DNR 2005b). The understory shrub layer is typically sparse and often includes sapling black ash, chokecherry (*Prunus virginiana*), wild black currant (*Ribes americanum*), nannyberry (*Viburnum lentago*), and the liana Virginia creeper (*Parthenocissus quinquefolia*). Common species comprising the herbaceous layer include fowl mannagrass (*Glyceria striata*), common marsh marigold (*Caltha palustris*), touch-me-not (*Impatiens* spp.), and wild geranium (*Geranium maculatum*). The ground surface of swamp stands can be covered by pooled water or have hummocks of peat (MN DNR 2005b).

Occupying the Mississippi River floodplain adjacent to the toeslope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), black willow (*Salix nigra*), and eastern cottonwood (*Populus deltoides*). Seasonal flooding occurs when flows in the river overtop the banks and spread across the floodplain terrace. Runoff and seepage from the Center site is delivered to the floodplain terrace, which supports the Central Wet – Mesic Hardwood Forest community (MN DNR 2005b). Common canopy trees include American basswood, black ash, silver maple (*Acer saccharinum*), black willow (*Salix nigra*), eastern cottonwood, northern red oak, and green ash (MN DNR 2005b). The subcanopy is characterized by sapling sugar maple and American basswood trees and hophornbeam or ironwood tall shrubs. The shrub layer is usually sparse to moderately dense in terms of cover and includes beaked hazelnut (*Corylus cornuta*), chokecherry, and nannyberry, along with seedlings of the dominant tree species and the lianas Virginia creeper and wild grape (*Vitis riparia*). The herbaceous layer is dense with

lady fern (*Athyrium filix-femina*), the most abundant forb, and several species of sedge (*Carex* spp.) are commonly present (MN DNR 2005b).

The Minnesota Natural Heritage database identified five native plant communities within a 1-mile radius of the Center. The black ash swamp seepage subtype 10 is dominated by black ash (*Fraxinus nigra*) and has an herb layer that includes sympocarpus, caltha, and impatiens (all common) (MN DNR 2005c).

Black ash swamp seepage subtype 9 is dominated by black ash (*Fraxinus nigra*) that is 2 inches to 10 inches diameter-at-breast-height. Fifty percent of the area is covered by trees other than black ash including green ash (*Fraxinus pennsylvanica*), American basswood (*Tilia americana*), slippery elm (*Ulmus rubra*), and sugar maple (*Acer saccharum*). Scattered shrubs include dogwood (*Cornus stol*), elder (*Sambucus can*), black current (*Ribes americanus*), and buckthorn (*Rhamnus cath*). In addition to containing the same common herbs as black ash swamp seepage subtype 10, this area also contains *Saxifraga pens uncommon* (MN DNR 2005c).

The moist cliff is an area where the cliffs vary from dry to moist, portions have some seepage, the tallest cliffs are about 15 meters tall with layers that include limestone, shale, and sandstone, with a large amount of erosion. The driest areas are populated with harebell (*Campanula rotundifolia*), wild columbine (*Aquilegia canadensis*), northern bedstraw (*Galium boreale*), and shadowy goldenrod (*Solidago CF sciaphila*). The wettest areas are populated with bulblet fern (*Cystopteris bulbifera*), clearweed (*Pilea pumila*), mosses, and liverworts (MN DNR 2005c).

Mesic oak savanna (central) 1 is a gentle east-facing slope on sandy loam, and has a 5% canopy cover of bur oak (*Quercus macrocarpa*) and northern pin oak (*Quercus ellipsoidalis*). Common herbs include big bluestem (*Andropogen gerardii*), Kentucky bluegrass (*Poa pratensis*), stiff goldenrod (*Solaigo rigida*), goldenrod (*S. canadensis*), wild bergamot (*Monarda fistulosa*), Canada tick trefoil (*Desmodium canadense*), coneflower (*Ratibida pinnata*), and false boneset (*Kuhnia eupatorioides*) (MN DNR 2005c).

Mesic prairie (central) 5 is a dry mesic prairie cover class, but very weedy. It is dominated by big bluestem (*Andropogon gerardii*), bluegrass (*Poa pratensis*), little bluestem (*Schizacyrhium scoparium*), and slippery elm (MN DNR 2005c).

Center Plant Communities

Plant communities in the project area and onsite are influenced by the climate, topography, soils, and fire (MN DNR 2005b). Pre-settlement, this bluff top likely supported an oak savanna characterized by bur oak (*Quercus macrocarpa*) and tallgrass species including big bluestem (*Andropogon gerardii*) and Indian grass (*Sorghastrum nutans*) that would correspond to the Bur Oak Northern Tallgrass Wooded Herbaceous vegetation association of NatureServe (2005). Currently, the Center is occupied by business infrastructure including access roads, parking areas, buildings, and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from

the natural, pre-settlement condition or have become established on sites disturbed by development (figure23). These vegetation types found on the Center property have been divided among upland and wetlands plant communities in the following discussion.

FIGURE 23. REPRESENTATIVE WETLANDS ON THE CENTER SITE

Center Upland Plant Communities

- **Open Area**
  The open areas of the Center consist of introduced and maintained landscape plant species and some individual native trees, possibly remaining from the pre-settlement woodland/ savanna stand. They are located upslope adjacent to the Camp Coldwater Spring area and Center buildings, extending to the edge of deciduous woodland/forest stands occupying the undeveloped bluff edges and steep slope. Grassy lawns and parks are maintained by regular mowing, and have been planted primarily to species of fescue (*Festuca* spp.), although some wet areas have become invaded by the aggressive nonnative reed canarygrass (*Phalaris arundinacea*). A few nonnative forbs have also become established in the lawns and parks, including common dandelion (*Taraxacum officianale*), black medic (*Medicago lupulina*), and goldenrod (*Solidago* sp.). Occasional large bur and northern red oak trees remain within the maintained Center landscape, along with introduced plantings of pine (*Pinus* sp.), spruce (*Picea* sp.), and weeping willow (*Salix babylonica*).

- **Bluff Top Woodland and Forest Stands**
  Undeveloped areas of the bluff top, mostly near the edge, support mixed deciduous woodland and forest stands that are successional and characterized by mature trees, including northern red oak, box-elder (*Acer negundo*), eastern cottonwood, and American sycamore (*Platanus occidentalis*). These trees form an open canopy. Canopy trees range in size from 8 to 18 inches diameter-at-breast-height, with larger trees scattered across stands or occupying the edge of stands and smaller trees occupying the stand interior. The understory canopy is dense and comprised of sapling box-elder, sugar maple, and green ash trees, buckthorn (*Rhamnus* sp.), and red elderberry (*Sambucus racemosa*) shrubs. The liana Virginia creeper is common in the tree canopy. The common herbaceous understory species is garlic mustard (*Alliaria petiolata*), a nonnative forb.

Center Wetland Plant Communities

Wetlands of three types (aquatic, emergent, and forested) are present within the Center property boundary, where they occupy drainages, ditches, ponds, swales, seeps, and springs. Seven distinct wetland systems were identified and delineated as part of this project, and occupy approximately 9% of the site area (e^2M 2005). Their regulation, delineation, and functional values, including wildlife habitat, are described under the wetlands section of this document and within a separate wetlands delineation report (e^2M 2005), incorporated into this EIS by reference. This section describes the wetlands vegetation.

- **Aquatic Wetlands**
  Formally classified as a palustrine unconsolidated bottom, semi-permanently flooded (PUBF) wetlands, two small aquatic systems were delineated on the Center (figure 24). Located at Camp Coldwater Spring and its associated reservoir, and within an unnamed wetlands in the southeast section of the site fed by Camp Coldwater Spring seepage. These systems encompass only small areas included within the approximately 0.9-acre area of palustrine emergent wetlands habitat, but provide flood storage functions, valuable water supplies, and habitat to resident wildlife. Floating vascular plants characterize the open water, including species such as duckweeds (*Lemna* spp. and *Spirodela* spp.) and bladderwort (*Utricularia* spp.), in addition to algae species. Floating and rooted aquatic plants provide substrate for the aquatic macro-invertebrates, which provide food for vertebrate wildlife including waterfowl, mammals, fish, and amphibians. Wetlands plant species that have become established in shallow water and saturated soils at the pond margins include cattails (*Typha* spp.), sedges (*Carex* spp.), reed canarygrass, orchardgrass (*Dactylis glomerata*), and touch-me-not (impatiens).

- **Emergent Wetlands**

Palustrine emergent (PEM) wetlands located on the Center generally function as headwater wetlands that seasonally discharge water downslope via runoff and/or seepage.

Less than 1.0 acre (approximately 0.9 acre) of emergent wetlands habitat was delineated, and most was considered disturbed by past human activity (e^2M 2005). These wetlands

FIGURE 24. REPRESENTATIVE AQUATIC WETLANDS AT THE CENTER

occupy shallow standing water and saturated soils around pond margins and in drainages, supporting mixed stands of broad- and narrow-leaved cattail (*Typha latifolia* and *T. angustifolia*), green bulrush (*Scirpus atrovirens*), woolgrass (*S. cyperinus*), soft stem bulrush (*S. validus*), spike-rush (*Eleocharis* sp.), broom sedge (*Carex scoparia*), reed canarygrass, touch-me-not or impatiens, Jack-in-the-pulpit (*Arisaema triphyllum*), common dandelion, black medic, dogbane or Indian-hemp (*Apocynum androsaemifolium*), and goldenrod (*Solidago* sp.) (figure 25). Associated short to tall shrubs scattered along emergent wetlands margins include black willow, box-elder, and green ash saplings and red elderberry and staghorn sumac (*Rhus typhina*) shrubs. The lianas, wild grape, and Virginia creeper were occasionally observed in these communities. Emergent wetlands onsite deposit thick layers of thatch, which provides good habitat for microorganisms, invertebrates, and small vertebrate species.

- **Forested Wetlands**

The forested wetlands on the Center predominantly occupy drainages and seeps and are classified as palustrine forested, broad-leaved deciduous (PFO) stands. These stands have become established on approximately 1.6 acres, and can be characterized as mid-succession woodlands possessing a dense shrub layer (figure 26). Trees common to forested wetlands

include eastern cottonwood, box-elder, green ash, American elm, hawthorn (*Crataegus* sp.), and sycamore. The majority of trees are saplings to young in age with estimated diameters-at-breast-height ranging from 2 to 10 inches. A few mature trees measured approximately 15 to 18 inches diameter-at-breast-height and the overall stand structure was considered to be complex (e^2M 2005). Stand subcanopy and shrub layers were characterized by sapling box-elder and green ash trees and buckthorn and red elderberry tall shrubs. The liana, Virginia creeper, was notable in some stands. The herbaceous layer was sparse to moderately dense and included reed canarygrass and the forbs touch-me-not or impatiens, garlic mustard, bittersweet nightshade (*Solanum dulcamera*), and Jack-in-the-pulpit. Some forested wetlands were disturbed historically and contained excavated depressions and piles of rubble and abandoned construction debris (e^2M 2005).

FIGURE 25. REPRESENTATIVE EMERGENT WETLANDS AT THE CENTER

FIGURE 26. REPRESENTATIVE FORESTED WETLANDS AT THE CENTER

Tree Management

Removal of trees from the project site, particularly buckthorn and species of elm, has occurred in recent years. Buckthorn is an aggressive nonnative shrub first imported from Europe during the 1800s, principally as a hedge-forming shrub or small tree (MN DNR 2005d). It aggressively invades disturbed sites and the deciduous forest understory where it: (1) forms an impenetrable layer and out-competes native plants for light, moisture, and nutrients; (2) shades and eliminates native ground cover and smaller shrubs, contributing to soil erosion; (3) generally degrades wildlife habitat; and (4) serves as host to pest species including the soybean aphid (*Aphis glycines matsumura*) and crown rust fungus (*Puccinia coronata*) (MN DNR 2005d). Because the fruit is eaten by several wildlife species, including birds, buckthorn seeds are rapidly spread and can remain viable in the soil for up to five years (MN DNR 2005d).

Buckthorn can be controlled by many methods, including hand-pulling seedlings, weed-wrenching saplings, herbicide application to foliage, and/or cutting the stem at the soil surface then treating the stump with herbicide to prevent re-sprouting. Late summer and fall is the optimal time to cut and chemically treat buckthorn stumps (MN DNR 2005). Buckthorn control, in the form of cutting shrubs and trees, was undertaken within the Center during the fall of 2004.

Nearly all American Elm (Ulmus americana) trees on the Center site have succumbed to Dutch elm disease, a fungus (*Ophiostoma ulmi*) transmitted by native and European bark beetles (*Hylurgopinus rufipes* and *Scolutus multistriatus*) (KSU 2006). Remaining elm species on site are primarily Siberian Elm (Ulmus pumila). These species are considered an invasive species in

Minnesota as they tend to crowd more desirable native tree species, invade grasslands and disturbed areas, and are prolific seed producers.

Elm trees of the Center range from healthy with no sign of infection to some discolored and wilted leaves on branches to completely dead trees. Infected elm trees were removed from around the Camp Coldwater Spring area in 2005, as well as other portions of the Center (figure 27).

FIGURE 27. ELM TREE STUMPS ADJACENT TO COLDWATER RESERVOIR

Rare Plant Species

There are 33 known occurrences of rare species or native plant communities in an area within a 1-mile radius of the Center. Endangered plant species listed by the Minnesota Natural Heritage database as being found in the 1-mile radius area include handsome sedge (*Carex formosa*) and plaintain-leaved sedge (*Carex plantagina*). The threatened plant species is rock clubmoss (*Huperzia porophila*). According to the Natural Heritage Program, disposition of the Center alone should not affect any known occurrences of rare plant species (MN DNR 2005c). No listed species were found on the site in either a DNR survey (2005) or an NPS plant survey conducted in 2008.

WILDLIFE

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 birds species are common to this area, and of these, 120 are known to nest in this part of Minnesota. Common waterfowl of this area include Canada geese, mallard duck, wood duck, green-winged teal, gadwall, and American wigeon. Marsh and water birds frequently observed along the Mississippi River corridor include great egrets, great blue heron, green-backed heron, and black-crowned night heron. Common birds of prey include red-tailed hawk, Coopers hawk, and American kestrel. Exposed sandbars and mudflats of the Mississippi River attract shorebirds including greater and lesser yellowlegs, solitary sandpipers, and spotted sandpipers.

Due to its location within one of America's most important migration corridors, the Center undoubtedly provides important stopover habit. Its forested habitats adjacent to the Mississippi River attract nighthawks, wood thrushes, vireos, and warblers. Over 70 other species of birds depend on the forests and wetlands of the area for either nesting or migration habitat, and many of these species winter in the tropical forests of Latin and South America. Camp Coldwater Spring and its associated reservoir also attract hundreds of waterfowl, especially mallards, to its open-water habitat every winter.

The peregrine falcon (*Falco peregrinus*) is the rarest bird of prey in Minnesota (MN DNR 2005e). After the peregrine falcon population in Minnesota was decimated in the 1950s and 1960s by pesticides, they are slowly being restored (MN DNR 2005f). Peregrine falcons are now found in Minnesota in cities, along the north shore of Lake Superior, and along the Mississippi River in southeastern Minnesota (Minnesota DNR 2005e). In Minnesota in 2005, 38 pairs of peregrine falcons successfully raised 84 young at traditional cliff areas along Lake Superior's north shore, new human-made habitats, power plant stacks, skyscraper balconies and rooftops, and on bridges over the Mississippi River in downtown Minneapolis and St. Paul (Minnesota DNR 2005f). In recent years, a pair of peregrine falcons was spotted nesting in the Mendota Bridge, just southeast of the Center.

A bald eagle nest is located in Fort Snelling State Park, approximately 1.25 miles southeast of the Center, and another is located in Lilydale Regional Park about two miles east of the center. The narrow band of forest in the eastern portion of the Center is considered to have the potential to be used as a diurnal perch site for bald eagles (Fort Snelling SP 2005). No bald eagles have been observed within the Center and the USFWS indicated by letter that the Center does not contain any threatened or endangered species or designated critical habitat (USFWS 2005a). Bald eagles were removed from the Endangered Species List in 2008. Bald eagles have been observed perching on large trees on the Mississippi River shoreline, but the Center is far enough from the river that bald eagle use would be uncommon.

Two federally endangered mussels have been reintroduced in the Mississippi River about a quarter-mile east of the Center.

At least 50 mammals occur within the Mississippi River corridor and some are likely visitors on Center property. The most visible of these mammals is the whitetail deer. Other year-round residents attracted to river habitats include mink, muskrat, raccoon, and beaver. River otter, nearly eliminated in the past, are now occasionally seen in this area. Small mammals typical of

this area include shorttail shrews, white-footed mouse, thirteen-lined ground squirrel, and plains pocket gopher. Eastern chipmunks, eastern gray fox, red fox, and red squirrels are commonly found in forested habitats. Both big and little brown bats are found in this area. Red fox are the most common carnivores of the area, followed by coyote and gray fox.

HYDROLOGY

Surface Water Resources

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, south of the intersection of the east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. Two distinct hydrologic basins exist within the Minnehaha Creek watershed. The first or "Upper Basin," which covers a 123-square-mile area, consists of that part of the watershed from Gray's Bay Dam on Lake Minnetonka to the western boundary of the district. The second or "Lower Basin," which covers approximately 50 square miles, includes the area east of Gray's Bay Dam that is drained by Minnehaha Creek to the Mississippi (Wenck Associates, Inc. 1997). The Center lies within the Lower Basin.

From its origin at Gray's Bay, Minnehaha Creek flows easterly through Minnetonka, Hopkins, St. Louis Park, Edina, and Minneapolis to its mouth at the Mississippi River. Although water released at Gray's Bay produces most stream flows, other sources, including overflow from Lake Nokomis and drainage from the Minneapolis Chain of Lakes (Brownie, Cedar, Lake of the Isles, Calhoun, and Harriet), contribute water to the creek. Several small intermittent streams, ditches, and numerous storm sewers also periodically supply water to Minnehaha Creek (Wenck Associates, Inc. 1997).

Rain water that falls on the Center does not flow into Minnehaha Creek, but rather flows by sheet flow or is collected in a series of gullies and unnamed drainages and drains eastward to the Mississippi River. There are several small depressions or holding basins present within the Center boundary that collect surface water runoff and eventually discharge toward the Mississippi River or allow the runoff to seep into the ground.

Camp Coldwater Spring primarily discharges inside the historic springhouse on the hillside above the reservoir and exits the springhouse from a 2" iron pipe into the reservoir. The reservoir empties through a cut in the reservoir wall and into a culvert which passes under the adjacent road. The culvert outfall on the road embankment allows the water to flow through existing wetlands and ravines to the Mississippi River.

Concerns related to potential impacts to the spring flows as a result of the SH 55 and SH 62 intersection improvements project resulted in a requirement that the MnDOT monitor spring/reservoir flows and post monthly reports on their website through May 2006. Based on the analysis of the MnDOT data,-the flow from Coldwater reservoir over the period from September 2004 to October 2005 varied from 65 gallons per minute to 79 gallons per minute. (MWCD, 2009). The flow measured was discharge from the reservoir.

A previous evaluation completed in 2000 with a more limited data set indicated-flows that varied between 77 and 115 gallons per minute (Short Elliot Hendrickson, Inc. 2000). Based on

the collected data, flows can vary throughout the year; however there does not appear to be any seasonally related pattern.

The Center lies within the jurisdiction of the Minnehaha Creek Watershed District, although lands immediately west of the Center lie within the jurisdiction of the Lower Minnesota River Watershed District.

Groundwater Resources

Groundwater can be found within about 20 feet of the land surface in most places within the Center property. No known measurements of the groundwater table exist within the Center area, although the discharge of the Camp Coldwater Spring reflects a surface discharge of groundwater. Groundwater for drinking water purposes usually comes from much greater depths, sometimes hundreds of feet below ground surface.
Almost every formation in the area will yield some water. The St. Peter sandstone, the Shakopee and Oneota dolomites (also known as the Prairie du Chien aquifer), Jordan sandstone, the Franconia and Galesville sandstones, and the Mount Simon and Hinckley sandstones yield large amounts (Maderak 1965).

Several bedrock aquifers underlie the glacial deposits. The most important are the Prairie du Chien aquifer, consisting of limestone and dolomite, and the Jordan sandstone aquifer. These aquifers can be more than 100-feet thick and yield large quantities of water. They are generally confined and therefore protected from contamination. The Platteville limestone and St. Peter sandstone occur closer to the land surface than the Prairie du Chien and Jordan aquifers, but they are less reliable sources of water and may be vulnerable to contamination. Below the Jordan sandstone lies the Franconia aquifer, which yields large quantities of water. The natural water quality of the Franconia aquifer, however, is not as good as that of the Prairie du Chien and Jordan aquifers, and water wells installed in that aquifer are more expensive due to the depth. The Mt. Simon aquifer lies below the Franconia. The Mt. Simon is potentially an important source of water. In order to maintain the quality of water in this aquifer, drilling has been limited.

Camp Coldwater Spring is fed by groundwater originating upgradient of the Center property. The exact source of the spring water is subject to some debate; however, it is not expected that any of the alternatives proposed in this document would affect the source of the spring.

While the Center lies within the jurisdiction of the Minnehaha Creek Watershed District, at least some of the groundwater sources for Camp Coldwater Spring come from lands immediately to the west and southwest, which lie within the jurisdiction of the Lower Minnesota River Watershed District.

TABLE 3. GENERALIZED GEOLOGIC SECTION OF THE MINNEAPOLIS –ST. PAUL AREA
(modified from Maderak 1965)

System	Formation	Thickness (feet)
Quaternary	Alluvium	0 – 150
	Glacial Drift	0 – 400
Ordovician	Decorah Shale	0 – 95
	Platteville Limestone	30 – 50
	St. Peter Sandstone	140 – 160
	Shakopee Dolomite	35 – 60
	New Richmond Sandstone	0 – 10
	Oneota Dolomite	70 – 90
Cambrian	Jordan Sandstone	80 – 105
	St. Lawrence Formation	35 – 70
	Franconia Sandstone	100 – 200
	Galesville Sandstone	250 – 400
	Eau Claire Sandstone	
	Mount Simon Sandstone	
Precambrian	Hinckley Sandstone	75 – 175
	Fond du Loc Sandstone	1,000 +

WATER QUALITY

Surface Water Quality

The outflow from the Camp Coldwater Reservoir is measured for limited water quality along with the flow rate. The water quality measurements include temperature and specific conductivity. Temperature measurements varied for the period of September 2004 through October 2005 from 33°F in January 2005 to 63°F in August 2005 (MnDOT 2005). Specific conductivity also showed great variance from -4.5 units of microSiemens/centimeter (µS/cm) to 2014 µS/cm (MnDOT 2005) with most of the readings ranging between 1,600 and 1,900 µS/cm. Specific conductivity is a measure of a water's ability to conduct electricity (and therefore the water's ionic activity and content) standardized to a given temperature. Specific

conductivity is generally thought to be a good measure of the concentration of total dissolved solids and, potentially, salinity. Elements with ionic forms that contribute the most to the measured specific conductivity include calcium, magnesium, sodium, potassium, bicarbonate, sulfate, and chloride. Values can vary greatly due to the geologic content of the groundwater system as well as from human-caused sources such as road salt, nonpoint source pollution (i.e., agricultural or urban runoff) and industrial inputs.

On August 31, 2005, representatives from the Minnesota Department of Health (MDH) undertook a water quality assessment of Camp Coldwater Spring. Based on observations during testing, the MDH determined that Camp Coldwater Spring has an open and unprotected reservoir, which subjects the water supply to environmental contamination from the immediate surroundings, compromising the integrity of the water (MDH 2005). MDH analytical results of Camp Coldwater Spring water indicate positive for bacteriological contamination of total coliform organisms, but absent for *E.Coli*. Based on water quality testing, MDH recommended to USFWS that:

- Warning signs be placed at Camp Coldwater Spring identifying the bacterial contamination.
- Commercially bottled water should be made available at any public events in the area of Camp Coldwater Spring.
- Water from the spring should not be used for cooking or culinary purposes (MDH 2005).

Groundwater Quality

Water quality in most aquifers of the Minnehaha Creek watershed is good. Drinking water standards have not been exceeded in samples collected from water supply wells. Iron concentrations are above the recommended limit in the Jordan and Franconia aquifers.

The quality of groundwater in the shallow aquifers is poor. It is clear that humans have dramatically impacted shallow groundwater quality. Chloride concentrations average about 245 parts per million (ppm), close to the drinking water standard of 250 ppm. Nitrate concentrations occasionally exceed the drinking water standard of 10 ppm. Shallow groundwater has also been impacted by organic pollutants. Groundwater quality is not measured anywhere on the Center property. Camp Coldwater Spring discharges from a groundwater source. Limited water quality measurements for the discharge from the reservoir are discussed in the “Surface Water Quality” section.

WETLANDS

Wetlands are important natural systems because they perform diverse biologic and hydrologic functions. These functions include water quality improvement, groundwater recharge, pollution abatement, nutrient cycling, the provision of wildlife habitat, unique flora and fauna niche creation, stormwater storage, and erosion protection.

Wetlands Classification and Inventory

The USFWS and National Park Service recognize and use the Cowardin system to classify wetlands and deepwater habitats. The Cowardin system uses a hierarchical classification scheme to categorize wetlands habitats based on similar hydrologic, geomorphic, chemical, or biological characteristics (Cowardin et al. 1979). There are five main wetlands types or "systems" in the Cowardin classification: marine, estuarine, riverine, lacustrine, and palustrine. These five systems are further refined hierarchically into subsytems, classes, subclasses, and dominance types. The palustrine system type is the one of interest for discussions related to wetlands at the Center site.

The USFWS *National Wetlands Inventory* is responsible for mapping and inventory of wetlands throughout the United States. The *National Wetlands Inventory* map that includes the Center site (St. Paul SE MN, Quadrangle) shows a single wetland within the Center boundaries. This wetland is classified on the map as Palustrine unconsolidated bottom semi-permanently flooded (PUBF). An onsite wetlands delineation, described below, confirmed the presence of this wetland, which was later determined to be Camp Coldwater Reservoir. The onsite delineation also revealed the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

Wetlands on the Center Site

In June 2005, wetlands on the Center site were delineated using the routine methodology described in the USACE *Wetlands Delineation Manual* (USACE 1987). Within the same month, a technical evaluation panel conducted onsite field review of the delineation. The technical panel consisted of regulatory representatives from the USACE, the Minnesota Board of Water and Soil Resources, the Minnehaha Creek Watershed District, the Hennepin Conservation District, and the National Park Service. The panel determined that the wetlands delineation was accurate in all but one case. That one case required that an area of approximately 20 square feet be added to one of the areas identified as emergent wetlands. The USACE and Minnesota Board of Water and Soil Resources have provided jurisdictional confirmation of the wetlands delineation performed at the Center site in June 2005.

In all, seven wetlands areas were identified on the Center site (table 4). Three can be characterized as palustrine emergent wetlands and four as palustrine forested wetlands. One of the emergent wetlands and one of the forested wetlands contain smaller areas that are shallow eutrophic (containing a high concentration of dissolved nutrients, with periods of oxygen deficiency) ponds. The boundaries of each wetlands area were marked in the field, and each wetland was assigned an alphanumeric identification label. The geographic coordinates of the wetlands boundaries were recorded with a Global Positioning System (GPS) and exported into a Geographic Information System (GIS) mapping program. A map showing the location of the seven wetlands is provided as figure 28.

TABLE 4. WETLANDS OF THE CENTER SITE

Wetlands ID	Palustrine Wetlands Type	Size (acres)	Notes
A	Emergent (PEM)	0.56	Includes a smaller shallow pond area (unconsolidated bottom—PUBF)
B	Emergent (PEM)	0.12	
C	Forested (PFO)	0.61	
D	Forested (PFO)	0.88	Includes a smaller shallow pond area (unconsolidated bottom—PUBF)
E	Forested (PFO)	0.08	
F	Emergent (PEM)	0.18	
G	Forested (PFO)	0.03	

Note: Under the Cowardin system, abbreviations (PEM, PFO, and PUBF) are used to denote these particular wetlands types.

Each of the wetlands on the Center site has been classified as belonging to the palustrine system. The palustrine system refers to vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie. It also includes the small, shallow, permanent or intermittent water bodies often called ponds (Cowardin et al. 1979). The wetlands of the Center site have been further classified under the Cowardin system into emergent, forested, and unconsolidated bottom wetlands. The wetlands are discussed further below by type.

- **Palustrine Emergent Wetlands**

*W*etlands A, B, and F are palustrine emergent wetlands that have been disturbed. Emergent wetlands are characterized by erect, rooted, herbaceous water-loving plants, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. These wetlands are located in the eastern half of the site, either adjacent to abandoned buildings or on the fringe of drainage ditches.

Vegetation in these wetlands generally consists of broad-leaved cattail (*Typha latifolia*), narrow-leaved cattail (*Typha angustifolia*), soft stem bulrush (*Scirpus validus*), green bulrush (*Scirpus atrovirens*), broom sedge (Carex *scoparia*), and impatiens (*Impatiens* sp.).

Emergent wetland A is associated with Camp Coldwater Spring and Reservoir, and functions as the headwaters of a stream. It discharges water into wetlands D and E from two locations. It discharges water eastward beneath a paved road into wetland D. The southern portion of wetland A has a seasonal surface connection to wetland E, as well as a subsurface connection. The surface connection is a shallow eastward-draining swale (about 1-foot wide) that runs across a road and into wetland E. The subsurface connection is an underground PVC pipe that seasonally conveys water eastward and into the drainage swale of wetland E. Building 4 of the Center is located entirely within wetland A. Wetland F consists of a vegetated drainage swale adjacent to Building 8 of the Center. In June 2005 there was standing water within the wetland, with the depth varying from 0–2 inches. The headwater of the drainage swale is an early seral scrub-shrub wetlands bordered by an emergent wetlands component (includes the invasive

reed canarygrass—*Phalaris arundinacea*). At its southernmost point, wetland F drains into a buried culvert that conveys water seasonally south and away from the site.

- **Palustrine Forested Wetlands**

Wetlands C, D, E, and G are palustrine forested wetlands. This wetlands type most commonly occurs in the eastern United States and in the West where moisture is relatively abundant, particularly along rivers and in the mountains. It occurs only in the palustrine and estuarine systems and normally possesses an overstory of trees, an understory of young trees or shrubs, and a herbaceous layer. It is characterized by woody vegetation that is 20 feet tall or taller (Cowardin et al. 1979).

Cottonwood and box-elder dominate in the forest canopy of wetlands C, D, E, and G. The trees have an estimated diameter-at-breast-height of four to 14 inches, suggesting that the woody vegetation became established within the past 40 to 50 years. The understory consists of dense stands of the nonnative, invasive buckthorn (*rhamnus cathartica*), plus box-elder and green ash. Some portions of the forested wetlands were disturbed historically and some contain excavated depressions and piles of rubble and abandoned construction debris. For example, abandoned construction debris is present along the southwest boundary of wetland D. A bike trail, located on an abandoned railway bed, borders the eastern boundary of wetlands C and D.

- **Palustrine Unconsolidated Bottom Wetlands**

Wetland areas A and D contain smaller subareas within them that can be classified under the Cowardin system as PUBF. These subareas are essentially shallow ponds. Palustrine unconsolidated bottoms wetlands are characterized by the lack of large stable surfaces for plant and animal attachment.

The first PUBF wetlands, a subarea of wetland A, is located near the middle of the Center site and is identified as Camp Coldwater Spring and Reservoir. It is a nutrient-rich wetlands vegetated by floating vascular emergent plants. Groundwater from hillside seeps bordering wetland A drains downslope into this PUBF wetlands. Surface water from Camp Coldwater Reservoir is then conveyed eastward beneath a paved road via an underground pipe and discharged into wetland D.

The second PUBF is located in the southeastern portion of wetland D. Its immediate surroundings include forested wetlands to the north and south, emergent wetlands to the west, and the Center property boundary to the east. Water is provided by overland flow from Camp Coldwater Spring, seasonal precipitation, and possibly, groundwater. The portion of the wetlands immediately upstream from the PUBF subarea is vegetated in reed canarygrass (*Phalaris arundinacea*), a nonnative invasive species, and impatiens.

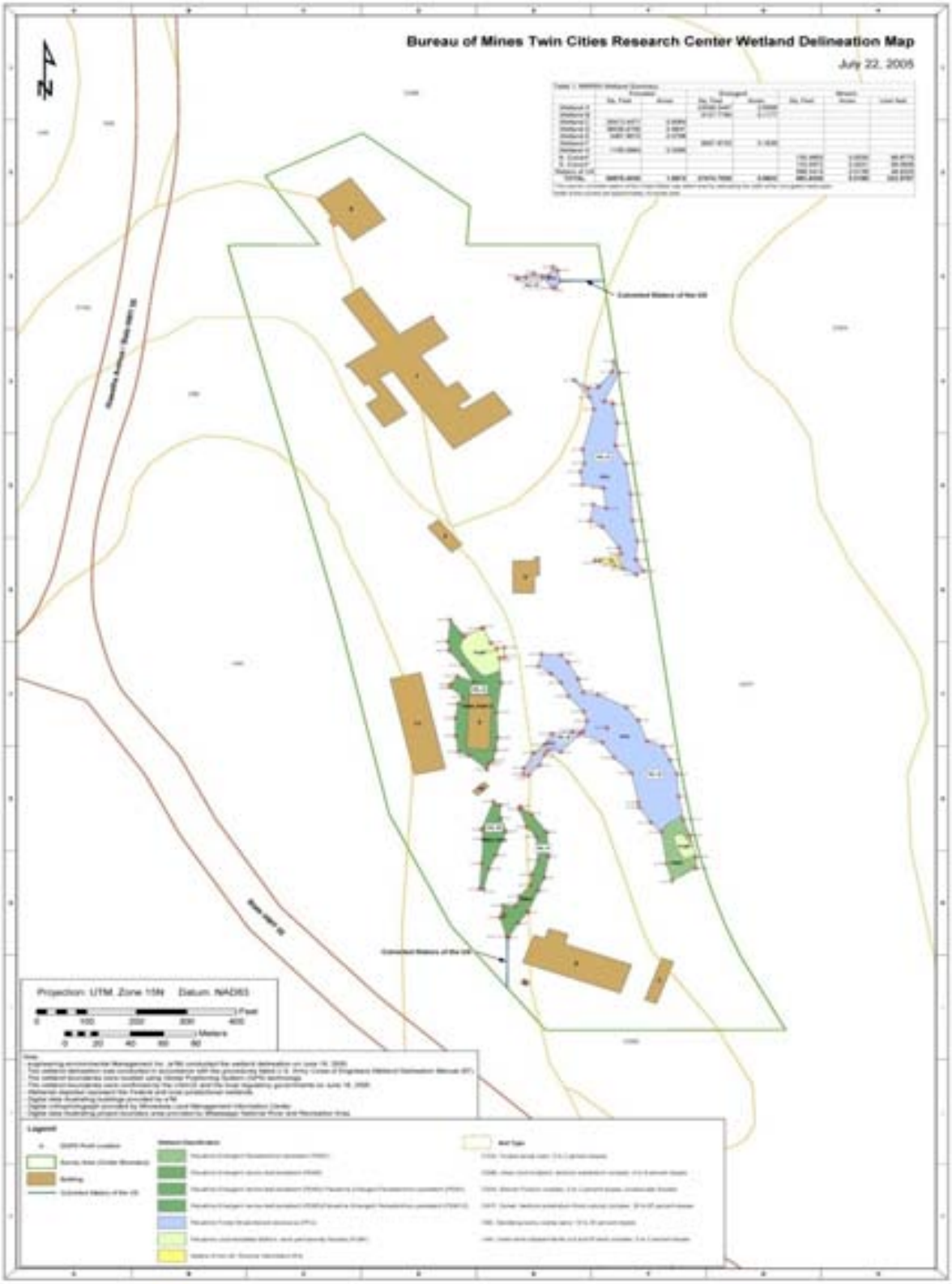

Figure 28: Wetlands Delineation Map

- **Palustrine Forested Wetlands**

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SOCIOECONOMICS

The Center is an integral part of the socioeconomic composition of the surrounding community. When operational, it employed as many as 200 workers. Today, it functions as an informal adjunct to adjoining properties and, when open to the public, a destination for visitors to the Camp Coldwater Spring area.

The 27.32-acre Center lies within unincorporated Hennepin County, Minnesota. It is part of a federal enclave lying south of the city of Minneapolis, which was once Fort Snelling, but has since been parceled out and developed over the years into a number of state and federal facilities. Among the latter are the Veterans Administration Medical Center, Fort Snelling State Park, Historic Fort Snelling, several military reserve units, federal office buildings, a golf course, and ball fields.

AREA DEMOGRAPHICS

The closest neighborhoods that could be affected by the disposition and reuse of the Center are four neighborhoods in the southeasternmost corner of Minneapolis: Minnehaha, Morris Park, Keewayden, and Wenonah. These are a portion of the larger Nokomis Community and are represented collectively in civic affairs by the Nokomis East Neighborhood Association. These stable neighborhoods saw little change in population or the number of households between the 1990 and 2000 censuses (table 5).

While minority race and ethnic population in the neighborhoods doubled over the decade, the area was still over 90% Caucasian in 2000.

The area is predominately single-family homes with over 80% of the households living in owner-occupied units in 2000. There was an increase in the number of owner-occupied units and a decrease in the number of renter occupied units over the decade from 1990 to 2000.

TABLE 5. NEIGHBORHOOD CHARACTERISTICS 1990–2000

Neighborhood	Population		Housing Units	
	1990	2000	1990	2000
Minnehaha	4,334	4,058	1,978	1,940
Morris Park	3,213	2,984	1,372	1,365
Keewayden	3,369	3,178	1,453	1,490
Wenonah	4,159	4,422	1,955	1,915
Nokomis East Total	15,075	14,642	6,758	6,710

Source: Census data compiled by Minneapolis Community Planning and Economic Development Department

Median household income in the four neighborhoods ranged from $42,400 (Wenonah) to $52,400 (Keewayden) in the 2000 census (1999 incomes), with virtually identical growth over

the previous decade. The overall median household income of the Nokomis East neighborhoods was above that of Minneapolis, but below that of Hennepin County and the seven-county metropolitan area (table 6).

TABLE 6. MEDIAN HOUSEHOLD INCOME 1999

Nokomis East	$45,836
Minneapolis	$37,974
Hennepin Co	$51,711
Metropolitan Area	$54,304

Source: Data derived from Minneapolis Community Planning and Economic Development Department statistics and U.S. Census 2000

Whatever the means of disposition or the eventual use of the site, it would take place within the context of the larger regional economy. The Twin Cities metropolitan area grew from 2.29 million people in 1990 to 2.64 million in 2000. According to forecasts prepared by the Metropolitan Council in 2004, the area is expected to reach a population of 3.33 million by 2020. In USDIng so, the region would produce a net gain of more than 340,500 households and 426,750 jobs between 2000 and 2020 (table 7).

TABLE 7. METROPOLITAN GROWTH AND PROJECTIONS 1990–2020

	1990	2000	2020
Population			
Minneapolis	368,383	382,747	423,000
Hennepin Co	1,032,431	1,116,206	1,310,030
Metropolitan Area	2,288,729	2,642,062	3,430,100
Households			
Minneapolis	160,682	162,352	181,000
Hennepin Co	419,060	456,133	550,480
Metropolitan Area	875,504	1,021,459	1,386,200
Employment			
Minneapolis	278,438	301,826	332,500
Hennepin Co	723,105	856,838	1,045,610
Metropolitan Area	1,272,773	1,563,245	2,002,100

Source: Metropolitan Council 2006

Other than the Veterans Administration Medical Center and the other government employment in the former Fort Snelling, there is little employment or commercial activity nearby. There are a few small businesses along Minnehaha Avenue north of East 54th Street. The closest commercial area of any size is a community-serving strip center at SH 55 and East 43rd Street at the north end of Minnehaha Park.

HEALTH AND SAFETY

Section 120 of CERCLA requires that "all remedial action necessary to protect human health and the environment be taken with respect to hazardous substances before real property may be transferred outside the federal government." In anticipation of divestiture of the Center property, the TCRC Closure Team conducted an extensive environmental cleanup of the property in the late 1990s. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings.

Several reports detail what remediation actions were taken and what potential hazards remain at the Center. These include the "Phase I Environmental Site Assessment" conducted by Loucks and Associates (1996), "Phase II Environmental Site Assessment" conducted by Rani Engineering (1997), "Environmental Actions Taken at TCRC: A Report to the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program" (1997), and an "Environmental Disclosure Statement" prepared by the TCRC Closure Team (2000). In addition, the Minnesota Pollution Control Agency sent a letter report to the TCRC Closure Team on May 5, 1998, indicating that the Center had satisfied the Minnesota Pollution Control Agency Voluntary Identification Cleanup requirements. More recently, a safety evaluation of the Center was conducted under the direction of the USFWS. This evaluation included inspections of the Center's buildings, roads and grounds, and parts of the perimeter fence (USFWS 2005b).

Demolition or reuse of the buildings at the Center would require safe cleanup or removal of remaining hazardous substances and elimination of other safety hazards. The following sections summarize the status of health and safety issues at the Center.

Asbestos

Asbestos is a naturally occurring mineral with a chain-like crystal structure. It is usually found mixed into other minerals. Asbestos was used in many ways over the years. Pipe insulation, shingles, wallboard, and blown-in insulation are just a few of the products that once contained asbestos. Although the federal government suspended production of most asbestos products in the early 1970s, installation of these products continued through the late 1970s and even into the early 1980s. Asbestos is dangerous only if its broken crystal fibers float in the air after being disturbed. Asbestos fibers can be released during renovation or demolition of older buildings. Chronic exposure to asbestos may increase the risk of lung cancer, mesothelioma, and nonmalignant lung and pleural disorders (USDHHS, Agency for Toxic Substances and Disease Registry 2005).

At the time the environmental disclosure statement was prepared in 2000, asbestos was present in the Center in various structures in the form of pipe insulation, floor and ceiling tiles, building panel, and possibly refractory brick. Asbestos-containing material in Buildings 1, 2, and 9 was found to be in good condition and not friable. The roof and siding of Building 4 were found to contain asbestos, and these were repaired and repainted to reduce the risk of asbestos fibers being released into the air. Known asbestos locations were labeled in each building for future use and information in case of building repair or demolition. However, asbestos labeling was limited to easily accessible locations and the potential for asbestos to be present behind sealed walls is unknown (i.e., asbestos pipe insulation for pipes behind walls). There is no known asbestos in Buildings 3, 5, 6, 7, 8, 10, and 11 (TCRC Closure Team 2000).

Mold

Building 9 has an extensive mold infestation on walls, ceilings, and curtains. It has been determined unsafe for entry without protective equipment due to the presence of mold. Mold is also evident on ceiling tiles and walls in some areas of Building 1 (USFWS 2005b). The mold is a result of past wet conditions caused by natural flooding and sewer system back up after power to sump pumps was disconnected. More recently, the roof of Building 1 has begun leaking, introducing more wet conditions.

Molds can grow on virtually any organic substance (including wood, paper, carpet, foods, and insulation), so long as moisture and oxygen are present. When excessive moisture accumulates in buildings or on building materials, mold growth often occurs, particularly if the moisture problem remains undiscovered or unaddressed. Molds reproduce by making spores that usually cannot be seen without magnification. These spores continually waft through the air and are easily inhaled by humans.

Molds produce allergens (substances that can cause allergic reactions), irritants, and in some cases, potentially toxic substances (mycotoxins). Inhaling or touching mold or mold spores may cause allergic reactions in sensitive individuals. Allergic responses include hay fever-type symptoms such as sneezing, runny nose, red eyes, and skin rash (dermatitis). Allergic reactions to mold are common. They can be immediate or delayed. Molds can also cause asthma attacks in people with asthma who are allergic to mold. In addition, mold exposure can irritate the eyes, skin, nose, throat, and lungs of both mold-allergic and non-allergic people (EPA 2005a). Health effects of mold can vary widely from person to person. However, long-term exposure to high levels from indoor mold growth can eventually be unhealthy for anyone (MDH 2005). Mold problems can be difficult to resolve. Mold can remain hidden even when all visible signs of mold have been removed. It may be growing on hidden surfaces, such as the back side of drywall, wallpaper, or paneling, the top of ceiling tiles, the underside of carpets and pads, etc. (EPA 2005a).

Radon

Radon is a naturally occurring gas that comes from various rocks, soils, and underground water sources. Radon gives off radiation that can cause lung cancer. In fact, radon is second only to smoking as a cause of lung cancer; as many as 12% of lung cancers annually in the United States may be attributable to radon (EPA 2005b). Radon is odorless, tasteless, and colorless. It forms from the breakdown of the natural elements uranium and radium. Radon

comes from the ground and can enter a building from the soil. One way radon can get into buildings is by cracks in basements, and if there is not good ventilation, radon concentrations can be high enough to be hazardous. The EPA publishes a map of radon risk levels, and Hennepin County, where the Center is located, is in the highest risk zone.

Radon levels at several Center buildings were measured by the USBM between December 1989 and September 1991, when the Center was still in operation. The basement of Building 9 was determined to be the only area of concern, based on radon levels greater than the EPA action limit of 4 pico curies per liter of air (pCi/L) for continuous occupation (8 hours per day). The Building 9 basement was vented and the floor cracks sealed in an effort to reduce radon levels. A warning sign was also posted warning employees and visitors of the radon risk associated with remaining in the basement for extended time periods (USBM 2000).

Radon levels were measured in the basement again as a part of the Center closure process and again found to be above recommended levels. However, because the space was not occupied continuously, the warning signs were left in place, but no additional action was taken.

Polychlorinated Biphenyls

PCBs are a group of chemicals that contain 209 individual compounds with varying harmful effects. There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in the air. PCBs have no known smell or taste. The EPA considers all PCB mixtures to be toxic. PCBs are probable human carcinogens and can also cause non-cancer health effects such as hormone disruption, effects to the nervous and reproductive system, immune system depression, respiratory tract systems, learning problems, etc. One source of PCB exposure is from contaminated indoor air in buildings that contain devices made with PCBs.

PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the United States in 1977 because evidence showed that they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.
PCBs may be present in most Center buildings in the form of capacitors, ballasts (electrical devices for starting and regulating fluorescent and discharge lamps), and other electrical components. Ballasts in light fixtures installed prior to 1977 contained PCBs. As ballasts became defective over the years, they were replaced with nonPCB ballasts. Many ballasts were replaced in Building 1 in 1997 by the Federal Emergency Management Administration, which was using the building space to coordinate flood relief for the state of Minnesota. The TCRC Closure Team continued the practice of collecting the PCB ballasts as they became non-functional, but some may still remain.

Buildings that may contain PCB-containing devices include 1, 2, 3, 4, 5, 6, 7, 8, and 9. Buildings 10 and 11 are not likely to contain PCBs because they were constructed well after 1977. A list of PCB capacitors used in the Center electrical distribution system at the time the environmental disclosure statement was prepared is available as an attachment to the statement (TCRC Closure Team 2000).

Safe disposal of materials containing PCBs (e.g., old lighting ballasts) is critical. They should be handled as hazardous wastes. The Toxic Substances Control Act regulates how materials containing PCBs should be disposed (15 U.S.C. section 2601 *et seq*., 1976).

Lead-based Paint

Lead-based paint is known to have been used, primarily on door frames and window sills, in Buildings 1, 2 , 4, and 9. As of the late 1990s, all lead-based paint was in good condition with no apparent peeling or deterioration (Rani Engineering 1997, TCRC Closure Team 2000). Some peeling and deterioration of lead-based paint was occurring in 2009.

Other Hazards

Break-ins and unauthorized entry of some buildings have occurred since closure of the Center. The chain-link boundary fence has been cut periodically by unauthorized persons to gain entry to the grounds. A recent safety evaluation (USFWS 2005b) determined that "break-ins" into the Center grounds and buildings continue to occur, and they could expose individuals to hazards with serious injury potential. Hazards documented by the 2005 safety evaluation include the following:

- electrical hazards (e.g., exposure to energized wires and equipment);
- fall hazards (there are numerous storage bins, floor openings, unlit stairways and passageways, and other hazards that may cause injuries from trips and falls);
- physical hazards (e.g., from broken windows and door planes, broken glass on floors, old ladders, dangerous tree limbs, etc.);
- health issues (mold, exposure to bird droppings, etc.).

The evaluation concluded that: (1) greater site security is necessary to prevent individuals from accessing buildings and restricted areas; and (2) corrective safety and action plans are needed to protect workers, visitors, and potential intruders using the Center site (USFWS 2005b).

As a result, the USFWS has installed additional fencing to limit public access when the Center is open to the public. The fencing directs the public to the Camp Coldwater Spring area and prohibits entrance to site buildings. Despite efforts to keep the buildings sealed, break-ins continue to occur, especially to Buildings 1 and 2, and there is widespread evidence of vandalism. Some parts of Building 1 show evidence of drug use by intruders.

LAND USE

The land use of the Center from the first construction in 1949 through closure in 1995 was for governmental light industrial purposes, researching mining techniques, and safety.

The lands surrounding the Center are primarily federal, state or local government owned and used for recreation or a medical center campus. The property is bounded on the north by a service road and a 23-acre parcel of undeveloped property, which was the Veterans Administration power plant, now used informally by visitors to Minnehaha Park, just to the north. The property is currently owned by the U.S. Department of Veterans Affairs. The eastern boundary is the Minnehaha Trail, a paved bike and hiking trail maintained by the Minnesota Department of Natural Resources as a part of Fort Snelling State Park. The land east of the trail to the Mississippi River (21 acres) is owned by the State of Minnesota with management authority assigned to the Minnesota Historical Society At the base of the Minnesota Historical Society property is Island 108-01, a 10-acre island owned and managed by the National Park Service. To the south, the Center abuts Fort Snelling State Park. Its western boundary is the right-of-way of SH 55, which separates the Center from the Veterans Administration Medical Center property to the west. The lands to the east, directly across the Mississippi River from the Center, contain Hidden Falls / Crosby Farm Regional Park under St. Paul Parks and Recreation ownership.

The other prominent land use in the area is the Minneapolis-St. Paul International Airport, which lies southwest of the Center. Although the airport is not contiguous with the Center, airport zoning regulations and Federal Aviation Administration airspace obstruction rules play an important role in governing land uses on the Center.

Local governments, the Metropolitan Council, the Minnesota Department of Natural Resources, and the National Park Service are partners in managing land uses along the Mississippi River corridor through the Critical Areas legislation and the MNRRA CMP. Critical Area plans are required for communities that manage land within the Critical Area.

EXISTING EASEMENTS, LICENSES, RIGHTS-OF WAY, AND LEASES

During the Center closure in 1998, the Bureau of Land Management contracted with Lake State Realty Services, Inc. to complete a fair market value appraisal for the Center property. The appraisal was completed by Julie Jeffrey-Schwartz, a certified general appraiser, and is detailed in a report entitled "Fair Market Appraisal of the Bureau of Mines, Twin Cities Research Center Main Campus, 27.32 Acres & Buildings at the NE Quadrant of Hiawatha Avenue at SH 55 –And – The 201 Building at 201 Federal Drive, Fort Snelling, Minnesota, Contract Number: 1422-N660-P98-2008." The final report is dated March 1998.

The appraisal identified existing easements, licenses, rights-of-way, and leases on the Center. The following text is taken directly from that report and contains the most recent listing of existing easements, licenses, rights-of-way, and leases. The National Park Service has not conducted additional research. Any recipient of the Center property should further investigate

any easements, licenses, rights-of-way, and leases that may continue to exist. The appraisal report states:

Easements / Licenses / Rights-of-Way / Leases

An attorney's title opinion and title commitment have never been complete. A list of the outstanding rights-of-way, licenses, and leases exists on the USBM property, Main Campus, was gleaned from the records which existed under the custody of Jim Olson. These were transmitted on December 16, 1997, from Mr. William A. Swanson, Chief, Division of Realty, USFWS, Fort Snelling. Additionally, NPS has viewed the "Analysis of (Todd Crawford) Deeds." Other than the information from the Todd Crawford Deeds, none of the rights-of-way or licenses (or easements) are recorded at the Hennepin County courthouse. The utilities that service the Center (water/sewer, electric, and telephone), are reported as being owned by the USBM (according to William A. Swanson); therefore, NPS has not made any standard assumptions about utility easements. There is an easement for the natural gas mains, in favor of Minneapolis Gas Co. (07/18/58) at the land area surrounding Building 9.

A list of applicable rights-of-way, licenses, and leases for the Center follows:

- Easement (58-67), dated July 18, 1958, in favor of Minneapolis Gas Co. (now Minnegasco) for natural gas mains. Please note that the information from Mr. Swanson indicates that the USBM and Minnegasco do not have any signed copies of this easement. The area of the easement is that area westerly of Building 9, following the irregular-shaped property line at the subject's westernmost edge.

- Easement dated December 21, 1990, in favor of the Williams Telecommunications Co. for installation of underground fiber optic cable. This is located along the existing bike trail, and is not on any portion of the Center property. This easement has no affect on the subject property since it is not located on the current USBM 27.32-acre parcel.

- A special-use permit dated July 1, 1952, in favor of the Department of the Air Force to construct and maintain a power transmission line, water supply line and sanitary sewer line. The information from William A. Swanson indicates that they are unsure if this is located on the USBM property.

- A letter dated April 1, 1952, from the USACE requesting a utility easement. No easement was found in the files, and William A. Swanson's notes indicate that they were unable to locate a legal description for the easement.

- There is a MOA dated August 19, 1949, whereby the Veterans Administration grants a right of entry to the USDI, USBM on 43.24 acres of land. The 43.24 acres of land represents the original land holding of the Center, which was reduced to approximately 27 acres after conveying a portion of the original property to the State of Minnesota.

- This MOA was subsequently terminated via a letter of unknown date, indicated and stamped October 30, 1950, for "ready to file," whereby the Veterans Administration grants the entire 43.24 acres to the USDI, USBM. It is not clear from this letter whether the transfer included the existing roadway for access; however, today, this roadway is maintained by the Veterans Administration. This letter of unknown date is included in the addenda of this report, entitled Main Campus Transfer, Legal Description and MOA.

- A lease in favor of the University of Minnesota (U of M), Board of Regents, extended and amended March 31, 1997. The U of M leased a portion of Building 1 and all of Building 2 for research purposes. Records are unclear, but it appears that lease was never completed and the diesel research contemplated never occurred.

- A right-of-way legal description dated October 2, 1963, and a letter from the U.S. Attorney, relating to a dispute over 3 acres of land claimed by the railroad. The U.S. District Court decided in favor of the Veterans Administration on April 21 ([sic] should be 1966, with the railway being shortly later abandoned.

- According to the Todd Crawford Deeds, on September 24, 1958, 11.82 acres of the USBM property was transferred to the General Services Administration for disposal to the Minnesota Department of Transportation via a Quit Claim Deed. On June 19, 1959, a correction of the Quit Claim Deed was registered. Although the Todd Crawford Deed analysis does not indicate what portion of land, it would seem that it would be that portion of land along existing SH 62 and/or SH 55. We assume that this is not an easement for the highways, rather the acquisition was in fee title, hence the use of a Quit Claim Deed." (Lake State Realty Services, Inc. 1998).

PUBLIC USE AND EXPERIENCE

The disposition of the Center may affect public use, opportunities for experiences at the site, or certain public values, depending on the alternative to be implemented and the actual use of the Center property by any future owner. There is considerable public concern that the values and resources that people cherish at the Center not be lost. The following information provides a sense of the current public uses, experiences, and values related to the site.

Public Use and Access

The Center has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. The easternmost portion of the site is wooded. Up until 1995, during the time that the Center was operating in its official capacity, the property was not open for general public use. After closure, it was open for public use during limited hours. In 2008, security at the center was reduced for budgetary reasons and public access is now unlimited. Additional fencing was installed to prevent the public from entering buildings and directing visitors to the Camp Coldwater Spring area. The Center is surrounded by a chain-link fence with a gated entry, and is patrolled by the Hennepin County

Sheriff's Department. The fence has been cut in places. The original gated entry was damaged by an automobile and is no longer functional.

Public Experience and Values

Groups of people have special fondness for the Center site. During public scoping meetings held by the National Park Service for this EIS, some members of the public reported coming to the Center to walk, picnic, enjoy the setting near the spring, watch wildlife, and recreate with their children. Special events at Camp Coldwater Spring, such as group activities and invited speakers, are organized by a local group, Friends of Coldwater (Friends of Coldwater 2005). One example is the monthly "Full Moon Tours" that usually include a guided walk and often a guest lecture on some aspect of the area's history or geology. The tours are available to the general public and are conducted on the Center site or in the surrounding area.

The site of the Center is viewed by some as being spiritually important to American Indians. At least one federally recognized tribe has declared the site sacred.

Although some long-time residents of the area recall using the Center site for informal recreation and "playing in the woods" before facilities were constructed in the late 1940s, there was little general public awareness of the site until the rerouting of SH 55 prompted protests in the late 1990s. The protests centered around the proposed demolition of four oak trees, believed by some to be sacred to American Indians, located along the new road corridor outside the Center boundaries. The protests and related media coverage brought increased public awareness of the presence and history of the Camp Coldwater Spring area. The highway protests and concerns about the spring resulted in the passage of S.F. 2049, state legislation for the protection of the flow of water to and from Camp Coldwater Spring.

Some groups organized to advocate for the protection and preservation of the spring and its underlying groundwater source. In the process, the site became an attraction in its own right, as well as a place for personal meditation and inspiration, and a setting for informal ceremonies and rituals. The site receives visitors for such purposes. The spring, springhouse, and reservoir are the primary focus of attention and concern. However, there is no general agreement regarding whether these elements should be preserved as they are, restored, or returned to a natural state.

Broad-based neighborhood organizations in the vicinity of the Center have special interest in Minnehaha Park, the Mississippi Gorge, and adjacent woodlands as "neighborhood parks," and they are interested in the preservation and accessibility of these areas. In that sense, the Center is viewed as a potential recreation resource. Several trails run through the area near the confluence of the Mississippi and Minnesota rivers, where the Center is located. A hiking/ bicycling trail administered by Fort Snelling State Park runs along the bluff, outside the northeast fenced boundary of the Center. This trail runs between the boundaries of the Center and adjacent Minnesota Historical Society tract just to the east of the Center. The trail connects Minnehaha Regional Park, located north of the Center, with Fort Snelling State Park, located southeast of the Center (NPS 2005).

Some members of the public are interested in celebrating the history of Camp Coldwater and the early settlement of Minnesota—both American Indian and European American. However,

there is recognition that the Center represents only one small piece of regional history. Public scoping for this EIS also indicated that some members of the public recognize that development of the site for economically viable purposes could occur, and they find this idea acceptable, provided development is done sensitively and complies with appropriate laws and regulations. Regardless of the final use of the Center, the general consensus of the public is for continued access to the Camp Coldwater Spring area.

Parks, Open Space, and Trails

As previously noted, the Center is within the MNRRA, a designated unit of the National Park System. The Center is in close proximity to several popular recreation facilities and open space, including a small island, Island 108-01, that is to the east of the Center and owned by the National Park Service. Under some alternatives the Center could complement those areas and their activities, or potentially be incorporated into their operations. Some of these more popular facilities and their characteristics are summarized in the following paragraphs.

- **Minnehaha Park**

Minnehaha Park is a 193-acre site operated by the Minneapolis Park and Recreation Board. The main feature of the park is the 53-foot Minnehaha Falls, but there are gardens, manicured lawns and picnic areas, trails through forests and along the creek down to the Mississippi, and a recently added off-leash pet area. According to the Metropolitan Council, Minnehaha Park generates about of 700,500 visits annually, of which 10,200 are for special events such as charity "walks" and ethnic festivals. Although no detailed records of specific activities are kept for the park, the Metropolitan Council has surveyed users and tabulated the most popular activities in its regional park system (of which Minnehaha Park is a part). Over the entire system,

TABLE 8. TOP ACTIVITIES IN THE REGIONAL PARK SYSTEM, 2004

Activity	Total Activity Occasions[1]
Walking/hiking	10,705,000
Biking	5,983,000
Swimming/wading	5,111,000
Picnicking	3,869,000
Relaxing	3,606,000
Jogging/running	3,085,000
Playground use	2,388,000
Sunbathing	1,958,000
Zoo visits	1,785,000
In-line skating	1,630,000
Fishing	1,385,000
Dog walking	682,000

[1] An activity occasion is one activity in a day. Visitors may participate in more than one activity during a single visit

Source: Metropolitan Council 2005

walking/hiking and biking were the most popular activities, followed by swimming/ wading, picnicking and a general category, "relaxing." Of course not all categories could be offered at the Center even if recreation were to be a component of the site's reuse; nevertheless, the survey gives an indication of the demand for various activities in the vicinity of the site (table 8).

- **Fort Snelling State Park**

Fort Snelling State Park, with a total of 2,931 acres, contains several components. The area in the lowlands below the bluffs and along the Mississippi and Minnesota rivers hosts picnic areas, a swimming beach, a boat ramp, bike and hiking trails, cross-country skiing in the winter, and a visitor center. The Upper Bluffs include the parade grounds of the "modern" Fort Snelling, which now hosts a golf course and ball fields operated by the Minneapolis Park and Recreation Board. The Upper Bluff also includes many vacant buildings that were a part of the former military occupancy that are awaiting restoration and reuse. The park reported a total attendance in 2004 of 512,700, of which 242,700 were in the lower area, 21,400 were rounds of golf, an estimated 65,000 were on the Minnehaha Trail (along the east boundary of the Center), and about 183,600 were in other uses, most of which were users of the athletic fields.

- **Historic Fort Snelling**

Although historic Fort Snelling is located within Fort Snelling State Park, it is a separate operation and is administered by the Minnesota Historical Society. The historic fort is a replica of the fort as it existed in the period 1820–1846. It features costumed guides and demonstrations of period activities such as musket loading, military drills and life on the frontier. It draws about 90,000 paying customers over its seven-month operating season, about one-third of whom are school children on field trips. The Minnesota Historical Society also owns the 21-acre Camp Coldwater Historic Site between the Center and the Mississippi River. That area is rich in archeological significance from the early settlers, but the Minnesota Historical Society does not currently have the resources to research or police the area. The area has been allowed to become overgrown to discourage informal use and to protect the resources.

TRANSPORTATION

Vehicular access to the Center is via Minnehaha Avenue South that parallels SH 55. Minnehaha Avenue is accessed from East 54th Street just east of the intersection of SH 55 and East 54th Street. The southern entrance to Minnehaha Park lies just east of Minnehaha Avenue South. There is metered parking along Minnehaha Avenue South that is used by visitors to Minnehaha Park and informal users of the old Veterans Administration property; these users are largely dog walkers accessing the off-leash area and bike riders accessing the Minnehaha Trail. Minnehaha Avenue South ends in a cul de sac with the Center main entrance gate driveway off the cul de sac.

State Highway 55 was rerouted from Minnehaha Avenue to a new right-of way in 2002. The Minnesota Department of Transportation reports traffic counts of 29,500 vehicles per day as the average annual daily traffic on SH 55 south of East 54th Street in 2004. Average annual daily traffic on East 54th Street west of SH 55 was 10,000 in 2004. Counts are not available for the

entrance to Minnehaha Park and the Center east of SH 55. The traffic volume on SH 55 was less in 2004 than the count on the old alignment of 30,500 average annual daily vehicles in 2000. The park board staff indicates that since the southern entrance to Minnehaha Park was opened at 54th Street, there has been a problem with people using the internal park road to avoid some of the congestion and traffic lights along the realigned SH 55.

The site is in close proximity to light rail and transit routes. The Metro Transit Hiawatha line (SH 55) opened in June 2004; it connects downtown Minneapolis to the Mall of America, via the international airport and a park-and-ride facility at Fort Snelling (950 spaces). It generally follows the old alignment of SH 55 near the Center. The closest station to the Center is at the entrance to the Veterans Administration Medical Center on Hiawatha Avenue. Transit planners consider a radius of 0.25 to 0.5 mile to be the influence area of light rail stop, and indeed those standards are reflected in the city of Minneapolis's guidance for the development of transit station areas in the city's comprehensive plan. Although the Center lies within that distance, it is separated from the light rail station by SH 55. The actual walking distance is over two-thirds of a mile to the entry point of the property at the end of the cul-de-sac. Fully integrating the Center into a transit oriented development as envisioned by the transit station areas principles would require a pedestrian bridge over SH 55. Transit bus routes 436 and 446 also serve the local area. Transportation impacts are treated in this EIS under the impact topic of socioeconomics in chapter 4.

VISUAL RESOURCES

Visual resources are the stimuli upon which actual visual experience is based or the appearance of the features that make up the visible landscape. Visual resources are described in terms of character, quality, and viewshed. Visual character includes landform, water features, vegetation types, and cultural modifications. The visual quality is the excellence of visual experience determined by vividness, intactness, and unity. The visual quality of an area ranges between areas that are entirely natural to those that are strongly influenced or modified by human action. A park or natural area is generally considered to have high scenic value whereas an industrial area would have low scenic quality. The viewshed comprises the limits of the visual environment associated with the proposed action, including view within and from the Center, and views of the Center.

The MNRRA CMP identifies that "a priority has been placed on preservation of visual character. Archeological resources, historic structures and sites, and key natural resources (the bluffs, shoreline, floodplain, vegetation, wetlands, and the water), and the views to and from the river provide this character (NPS 1995)."

Views from within the Center looking outward are limited (usually less than 1,000 feet and not panoramic). The character of the views consists of dense woods and vegetation on the east side. The Mississippi River is approximately 1,000 feet to the east and is not visible from the Center. Views to the north consist of the access road into the Center, the vacant Veterans Administration property, and Minnehaha Regional Park. Views to the west and south are urban, consisting of SH 55 and SH 62 and government/commercial development. The overall quality of the views is medium. The more natural views are unified and intact, but approximately half of

the views from the site are commercial or industrial in nature. Most viewers are visitors to the Center.

Views from within the Center include dense wooded bluffs along the east side. Views within the Center are limited due to woods and buildings, and include natural and introduced vegetation, driveways and parking lots, Center buildings, and the Camp Coldwater Spring and Reservoir. The overall quality of the views is medium to low. The buildings have an industrial quality and are not harmonious or coordinated in design. The buildings are deteriorating and the grounds are not adequately maintained to create a vivid and distinctive quality visual experience. Many of the structures are low cost construction. There are components of visual interest within the Center, such as the Camp Coldwater Spring and Reservoir.

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CHAPTER FOUR

Coldwater Spring Reservoir and Twin Cities Research Center Main Building, circa 1960s
Photo Credit: Bureau of Mines, TCRC Files

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter of the EIS analyzes the potential environmental effects of each alternative, including the preferred alternative. Overall, the National Park Service based these impact analyses and conclusions on the review of existing literature and the MNRRA studies, information provided by experts within the National Park Service and in other agencies, professional judgments and park staff insights, the Minnesota SHPO, input from interested tribes, and public input.

An explanation of the range of issues analyzed in this chapter is provided in chapters 1 and 2. Chapter 4 should be reviewed jointly with chapter 3, which describes the baseline or existing conditions.

DEFINITIONS

The following definitions are used to describe the potential effects that may be caused by implementation of the alternatives. The potential impacts are explained in terms of duration, intensity, and type of impact. Whether an effect is direct or indirect and the effect's context may also be discussed.

Direct and Indirect Effects

Direct—an effect that is caused by an action and occurs at the same time and in the same place

Indirect—an effect that is caused by an action that is later in time or farther removed in distance, but is still reasonably foreseeable

Context

Context is the setting within which an impact is analyzed such as local, parkwide, or regional. The CEQ requires that impact analyses include discussions of context. For this EIS, local impacts would occur within the Center while parkwide impacts would affect a greater portion of the MNRRA. Regional impacts would extend to include the Minneapolis/St. Paul area.

Duration

The duration of an impact is the time period for which the impacts are evident and are expressed in the short-term or in the long-term. A short-term impact would be temporary and would be associated with the final disposition of the Center, as well as the period of construction and/or demolition that may be implemented for preparing the site for future uses. A long-term impact would continue beyond the period of construction, possibly indefinitely.

Depending on the resource, impacts may last as long as construction takes place, or a single year or growing season, or longer. Impact duration for each resource is unique to each specific resource or impact topic. Impact duration for each impact topic is presented in association with impact intensities in the Impact Intensity Thresholds section.

Intensity

Impact intensity is the degree to which a resource would be affected. The criteria that were used to rate the intensity of the impacts for each impact topic are presented later in this section under Impact Intensity Thresholds.

Type of Impact

Impacts can be beneficial or adverse. Beneficial impacts would improve resource conditions while adverse impacts would deplete or negatively alter resources.

IMPACTS TO CULTURAL RESOURCES AND SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

Detailed information on the NHPA is provided in chapter 1. In this EIS, impacts to cultural resources are described in terms of type, context, duration, and intensity, as described above, which is consistent with the regulations of the CEQ that implement NEPA. These impact analyses are intended, however, to comply with the requirements of both NEPA and section 106 of the NHPA.

Under ACHP regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected NRHP-eligible historic resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristics of a historic resource that qualify it for inclusion in the NRHP, e.g., diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the proposed action that would occur later in time, be farther removed in distance, or be cumulative (36 C.F.R. Part 800.5, *Assessment of Adverse Effects*). A determination of no adverse effect means there is an effect, but the effect would not diminish in any way the characteristics of the resource that qualify it for inclusion in the NRHP.

A section 106 summary is included in the impact analysis sections for cultural resources (archeological resources, historic structures and districts) under each individual alternative. The section 106 summary is an assessment of the effect of the undertaking (implementation of one of the alternatives) on cultural resources, based on the criterion of effect and criteria of adverse effect found in ACHP regulations.

CHAPTER FORMAT

The remainder of chapter 4 is divided into two parts: "Impact Intensity Thresholds" and "Alternatives Analysis." Under "Impact Intensity Thresholds," each impact topic contains a discussion of the methodology used to assess the impacts under "Alternatives Analysis." Each alternative analyzed in this EIS contains a summary of the laws, regulations, and policies that apply to the respective alternative (detailed information on all laws, regulations, and policies is located under chapter 1, followed by an analysis of effect. Cumulative impacts of the alternatives are discussed at the end of chapter 4.

The alternatives analysis is the heart of the environmental impact statement that assesses the potential environmental impacts of each alternative. With the exception of no-action alternative A, the potential impacts are presented in terms of the conceptual land use scenarios of open space/park, interpretive/nature/history center, and training center/office park. Conceptual land use scenarios are described in chapter 2. The following outline illustrates how each impact topic is organized for discussion under the respective alternative.

Alternative A (No Action)	Alternatives B, C, and D
Impact Topic Title • Description • Impacts • Summary • Section 106 Assessment of Effect	**Impact Topic Title** • Description **Open Space / Park Scenario** o Assumptions o Impacts **Interpretive / Nature / History Center Scenario** o Assumptions o Impacts **Training Center / Office Park Scenario** o Assumptions o Impacts • Summary • Section 106 Assessment of Effect

Section 106 Assessment of Effect is only relevant to two impact topics—"Archeological Resources" and "Historic Resources," and is included only under these topics.

IMPACT INTENSITY THRESHOLDS

Archeological Resources

Certain important research questions about human history can only be answered by the actual physical material of cultural resources. Archeological resources have the potential to answer, in whole or in part, such research questions. An archeological site(s) can be eligible to be listed in the NRHP if the site(s) has yielded, or may be likely to yield, information important in prehistory or history. Archeological sites can be nominated to the NRHP on one of three levels of importance: local, state, or national (see *National Register Bulletin 15*, *How to Apply the National Register Criteria for Evaluation*). For purposes of analyzing impacts to archeological resources, thresholds of change for the intensity of an impact are based on the potential of a site to yield information important in prehistory or history, as well as the probable historic context of an affected site.

Impact Intensity	Archeological Resource Intensity Definition
Negligible	Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. Impacts are barely perceptible and not measurable. The determination of effect for section 106 would be *no adverse effect*.
Minor	**Adverse:** disturbance of a site(s) results in little, if any, loss of integrity. The determination of effect for section 106 would be *no adverse effect*.
	Beneficial: maintenance and preservation of a site(s). The determination of effect for section 106 would be *no adverse effect*.
Moderate	**Adverse:** Impacts are measurable and perceptible, change one or more character-defining features, but do not diminish the integrity of the site to the extent that its NRHP eligibility is jeopardized. The determination of effect for section 106 would be *adverse effect*. A loss of integrity could be mitigated through an agreement document.
	Beneficial: stabilization and protection of a site(s). The determination of effect for section 106 would be *no adverse effect*.
Major	**Adverse:** Impacts are substantial, noticeable, and permanent, including disturbance of a site(s) resulting in loss of integrity. The determination of effect for section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed on and the National Park Service and applicable state or historic preservation officer and/or ACHP are unable to negotiate and execute a MOA in accordance with 36 C.F.R. 800.6(b).
	Beneficial: active intervention to preserve a site(s). The determination of effect for section 106 would be *no adverse effect*.

Historic Structures and Districts

In order for a structure or building or district to be listed in the NRHP, it must be associated with an important historic context, i.e., possess significance—the meaning or value ascribed to the structure or building, and have integrity of those features necessary to convey its significance, i.e., location, design, setting, workmanship, materials, feeling, and association (see *National Register Bulletin 15*, *How to Apply the National Register Criteria for Evaluation*). For purposes of analyzing potential impacts to historic structures/buildings and districts, the thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Historic Structures and Districts Intensity Definition
Negligible	Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for section 106 would be *no adverse effect*.
Minor	**Adverse:** Alteration of a feature would not diminish the overall integrity or character-defining features of a NRHP-eligible or listed building, structure, or district.
	Beneficial: stabilization/preservation of features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The determination of effect for section 106 would be *no adverse effect*.
Moderate	**Adverse:** Impacts to a NRHP-eligible or listed building, structure, or district would change the character-defining features of the resource, but does not diminish the integrity of the resource to the point of being ineligible. The determination of effect for section 106 would be *adverse effect*. A MOA would be executed among the National Park Service and Minnesota SHPO and, if necessary, the ACHP in accordance with 36 C.F.R. 800.6(b). Measures identified in the MOA would minimize or mitigate adverse impacts and/or preserve important information.
	Beneficial: Rehabilitation of a structure in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The determination of effect for section 106 would be *no adverse effect*.
Major	**Adverse:** Impacts to a NRHP-eligible or listed building, structure, or district would change character-defining features of a resource, diminishing the integrity of the resource to the extent that it is no longer eligible for listing on the NRHP. The determination of effect for section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed on and the National Park Service and applicable state or historic preservation officer and/or ACHP are unable to negotiate and execute a MOA in accordance with 36 C.F.R. 800.6(b).
	Beneficial: Restoration of a structure in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The determination of effect for section 106 would be *no adverse effect*.

Ethnographic Resources

Certain important questions about human culture and history can only be answered by gathering information about the cultural content and context of associated cultural resources. Questions about contemporary peoples or groups, their identity, and heritage have the potential to be addressed through ethnographic resources. As defined in NPS Director's Order – 28: *Cultural Resource Management Guideline* (NPS 1998), ethnographic resources can be both natural and cultural resources that have been identified as having cultural significance by culturally associated users. Some specific places of traditional cultural use may be eligible for inclusion in the NRHP if the criteria for TCPs are met. For purposes of analyzing potential impacts to ethnographic resources for NEPA compliance, the thresholds of change for the intensity of an impact are defined below:

Impact Intensity	Ethnographic Resources Intensity Definition
Negligible	The impact(s) would be barely perceptible and would not alter resource conditions such as access or site preservation. OR The impact(s) would not alter the relationship between the resource and the affiliated group's body of practices and beliefs. There would be no change to a group's body of beliefs and practices.
Minor	**Adverse Impact:** The Impact would be slight but noticeable and would not appreciably alter resource conditions such as access or site preservation. OR The impact(s) would be slight but noticeable and would not alter the relationship between the resource and the affiliated group's body of beliefs and practices.
	Beneficial impact: The action would allow access to and/or accommodate a group's traditional practices or beliefs.
Moderate	**Adverse Impact:** The impact would be apparent and would alter resource conditions, access, or site preservation. OR The impact(s) would be apparent and would negatively alter the relationship between the resource and the affiliated group's beliefs and practices.
	Beneficial impact: The action would facilitate a group's traditional access to the resource, and/or noticeably improve the condition of the resource or site preservation.
Major	**Adverse Impact:** The impact would greatly alter resource conditions or block or greatly affect access or site preservation. OR The impact would greatly alter the relationship between the resource and the affiliated group's body of beliefs and practices.
	Beneficial impact: The action would encourage the culturally associated group's traditional access to the resource and/or greatly improve the condition of the resource or site preservation.

Soils

All available information on soils potentially impacted through implementation of the alternatives discussed in this EIS was compiled from U. S. Department of Agriculture, Natural Resources Conservation Service soil survey maps and soil series descriptions. Predictions about short- and long-term site impacts were based on previous projects with similar soils and recent studies. The thresholds of change for the intensity of an impact to soils are defined as follows:

Impact Intensity	Soils Intensity Definition
Negligible	Soils would not be affected or the effects to soils would be below or at the lower levels of detection. Any effects to soil productivity or fertility would be slight and no long-term effects to soils would occur.
Minor	The effects to soils would be detectable. Effects to soil productivity or fertility would be small as would the area affected. If mitigation were needed to offset adverse effects, it would be relatively simple to implement and would likely be successful.
Moderate	The effect on soil productivity or fertility would be readily apparent, likely long-term, and result in a change to the soil character over a relatively wide area. Mitigation measures would probably be necessary to offset adverse effects and would likely be successful.
Major	The effect on soil productivity or fertility would be readily apparent, long-term, and substantially change the character of the soils over a large area in and out of the Center. Mitigation measures to offset adverse effects would be needed, extensive, and their success could not be guaranteed.

Soil impacts would be considered short-term if the soils recover in less than three years and long-term if the recovery takes longer than three years.

Vegetation

All available information on vegetation and vegetative communities potentially impacted through implementation of the alternatives discussed in this EIS was compiled from data available from the Minnesota Department of Natural Resources, from the wetlands delineation report prepared for the Center (e^2M 2005), and from an NPS vegetation survey conducted in 2008. Where possible, map locations of sensitive vegetation species, populations, and communities were identified. Predictions about short- and long-term site impacts were based on previous projects with similar vegetation and recent studies. The thresholds of change for the intensity of an impact are defined follows. Duration of vegetation impacts is considered short-term if the vegetation recovers in less than three years and long-term if the vegetation takes longer than three years to recover.

Impact Intensity	Vegetation Intensity Definition
Negligible	No native vegetation would be affected or some individual native plants could be affected as a result of the alternative, but there would be no effect on native species populations. The effects would be short-term, on a small scale, and no species of special concern would be affected.
Minor	The alternative would affect some individual native plants and would also affect a relatively minor portion of that species' population. Mitigation to offset adverse effects, including special measures to avoid affecting species of special concern, could be required and would be effective.
Moderate	The alternative would affect some individual native plants and would also affect a sizeable segment of the species' population in the long-term and over a relatively large area. Mitigation to offset adverse effects could be extensive, but would likely be successful. Some species of special concern could also be affected. Beneficial impacts could include reduction of nonnative or invasive species and/or reintroduction of native species.
Major	The alternative would have a considerable long-term effect on native plant populations, including species of special concern, and affect a relatively large area in and out of the Center. Mitigation measures to offset adverse effects would be required, extensive, and success would not be guaranteed. Beneficial impacts might include eradicating nonnative or invasive species and/or reestablishing native plant communities.

Wildlife

Natural processes should be relied upon to control populations of native species to the greatest extent possible; otherwise, they are protected from harm by human activities. Examples of management goals for wildlife include maintaining components and processes of naturally evolving park ecosystems, including natural abundance, diversity, and the ecological integrity of plants and animals. The thresholds of change for the intensity of an impact to wildlife are defined as follows:

Impact Intensity	Wildlife Intensity Definition
Negligible	Wildlife would not be affected or the effects would be at or below the level of detection, would be short-term, changes would be so slight that they would not be of any measurable or perceptible consequence to the wildlife species' population.
Minor	Effects to wildlife would be detectable, although the effects would be localized, and would be small and of little consequence to the species' population. Mitigation measures, if needed to offset adverse effects, would be simple and successful.
Moderate	Effects to wildlife would be readily detectable, long-term, and localized, with consequences at the population level. Mitigation measures, if needed to offset adverse effects, would be extensive and likely successful.
Major	Effects to wildlife would be obvious, long-term, and would have substantial consequences to populations in the region. Extensive mitigation measures would be needed to offset any adverse effects, success would not be guaranteed.

The duration of wildlife impacts is considered short-term if the recovery is less than one year and long-term if the recovery is longer than one year.

Hydrology

Hydrology refers to hydrologic processes such as flood erosion and deposition, and channel movement. Particular attention was given to alterations to, or restoration of, water flow from Camp Coldwater Spring, and the overall hydrologic processes present on the Center, which is within the Minnehaha Creek watershed lower basin. The thresholds of change for the intensity of an impact to hydrology are defined as follows:

Impact Intensity	Hydrology Intensity Definition
Negligible	Hydrology would not be affected, or changes would be either non-detectable or if detected, would have effects that would be considered slight, local, and short-term.
Minor	Changes in hydrology would be measurable, although the changes would be localized. No mitigation measures associated with hydrology would be necessary.
Moderate	Changes in hydrology would be measurable and long-term, but would be relatively local. Mitigation measures associated with hydrology would be necessary and would likely succeed.
Major	Changes in hydrology would be readily measurable, would have substantial consequences, and would be noticed on a regional scale. Mitigation measures would be necessary, and their success would not be guaranteed.

The effects to hydrology are considered short-term if, following final disposition and any related construction, the changes would last less than one year. Impacts would be long-term if, following final disposition and any related construction, the changes to hydrology last more than one year or are permanent.

Water Quality

A water quality standard defines the water quality goals of a water body by designating uses to be made of the water, by setting minimum criteria to protect the uses, and by preventing degradation of water quality through anti-degradation provisions. The anti-degradation policy is only one portion of a water quality standard. Part of this policy (40 C.F.R. 131.12(a)(2)) strives to maintain water quality at existing levels if it is already better than the minimum criteria. Anti-degradation should not be interpreted to mean that “no degradation” can or will occur because even in the most pristine waters, degradation may be allowed for certain pollutants as long as it is temporary and short-term.

An additional consideration in assessing the magnitude of water quality impacts includes the effect on those resources dependent on a certain quality or condition of water. Sensitive aquatic organisms, submerged aquatic vegetation, riparian areas, and wetlands are affected by changes in water quality from direct and indirect sources.

In order to assess the magnitude of water quality impacts to Center waters under the various alternatives, state water quality standards governing the waters of the Center were examined and compared to baseline water quality data.

Given the above water quality issues, methodology, and assumptions, the following impact thresholds were established in order to describe the relative changes in water quality and quantity (overall, localized, short and long-term, cumulative, adverse, and beneficial).

Impact Intensity	Water Quality Intensity Definition
Negligible	Chemical or physical changes to water quality would not be detectable, would continue to conform to state water quality standards or criteria, and would be within historical water quality conditions.
Minor	Chemical or physical changes to water quality would be detectable, but would be well within state water quality standards or criteria and within historical water quality conditions.
Moderate	Chemical or physical changes to water quality would be detectable, but would be at or below state water quality standards or criteria. Water quality would be altered on a short-term basis and/or localized compared to historical baseline water quality conditions.
Major	Chemical or physical changes to water quality would be detectable and would be frequently altered from the historical baseline water quality conditions; and/or chemical, physical, or biological water quality standards or criteria would be regional and exceeded on a long-term basis.

The effects to water quality are considered short-term if, following final disposition and any related construction, the recovery would take less than one year. Impacts would be long-term if, following final disposition and any related construction, water quality takes more than one year to recover.

Wetlands

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes, (2) the substrate is predominantly undrained hydric soil, and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season (USFWS 1979). The planning team based the impact analysis and the conclusions for possible impacts to wetlands on the onsite inspection of known and potentially jurisdictional wetlands at the Center (e^2M 2005), review of existing literature and studies, information provided by experts in the National Park Service and other agencies, and the MNRRA staff insights and professional judgment. Where possible, map locations of wetlands were compared with locations of proposed developments and modifications of existing facilities. Predictions about short and long-term site impacts were

based on previous studies of impacts to wetlands from similar projects and recent scientific data. The thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Wetlands Intensity Definition
Negligible	Wetlands would not be affected or the effects to the resource would be below or at the lower levels of detection. No long-term effects to wetlands would occur and any detectable effects would be slight. A Clean Water Act section 404 permit would not be necessary.
Minor	The effects to wetlands or floodplains would be detectable and relatively minor in terms of area and the nature of the change. A Clean Water Act section 404 permit would not be required. No long-term effects to wetlands or floodplains would occur.
Moderate	The alternative would result in effects to wetlands or floodplains that would be readily apparent, including a long-term effect on wetlands vegetation. A Clean Water Act section 404 permit could be required. Wetlands or floodplain functions would not be affected in the long-term.
Major	Effects to wetlands or floodplains would be observable over a relatively large area, would be long-term, and would require a Clean Water Act section 404 permit. The character of the wetlands or floodplain would be changed so that the functions typically provided by the wetlands or floodplain would be substantially changed.

The effects to wetlands are considered short-term if the wetlands recover in less than three years. Impacts would be long-term if the wetlands take more than three years to recover.

Socioeconomics

Socioeconomic impact analysis within the context of NEPA typically assesses the impacts of a proposed action or alternatives on both the social and economic aspects of the area or region affected by a proposed action. Frequently, these two impact topics are assessed together under the heading “Socioeconomics,” giving emphasis to the economic impacts of a proposed action.

Issues were identified through the scoping process, and concerns covered by this section include effects on adjacent landowners, economic contributions of the Center to local economies, traditional land uses external to Center boundaries, and possible conflicts between the proposed action and local, state, or Indian tribal land use plans, policies, or controls. The thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Socioeconomic Intensity Definition
Negligible	No effects would occur or the effects to socioeconomic conditions would be below or at the level of detection. The effect would be slight and no long-term effects to socioeconomic conditions would occur.
Minor	The effects to socioeconomic conditions would be detectable, although short-term. Any effects would be minor and if mitigation were needed to offset potential adverse effects, it would be simple and successful. Activity that may occur on the site, but is negligible in relation to the total activity of the surrounding metropolitan community.
Moderate	The effects to socioeconomic conditions would be readily apparent and likely long-term. Any effects would result in changes to socioeconomic conditions on a local scale. If mitigation is needed to offset potential adverse effects, it could be extensive, but would likely be successful.
Major	The effects to socioeconomic conditions would be readily apparent, long-term, and would cause substantial changes to socioeconomic conditions in the region. Mitigation measures to offset potential adverse effects would be extensive and their success could not be guaranteed.

All of the socioeconomic impacts are considered long-term, except temporary construction-related activities, which are not separately addressed in this analysis.

Health and Safety

The impact assessment for health and safety focused on the number of potential individuals that would be impacted at the Center and the potential severity of the impact. The thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Health and Safety Intensity Definition
Negligible	Public health and safety would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on the public health or safety.
Minor	The effect would be detectable and would likely be short-term, but would not have an appreciable effect on public health and safety. If mitigation were needed, it would be relatively simple and would likely be successful.
Moderate	The effects would be readily apparent and long-term, and would result in substantial, noticeable effects to public health and safety on a local scale. Mitigation measures would probably be necessary and would likely be successful.
Major	The effects would be readily apparent and long-term, and would result in substantial, noticeable effects to public health and safety on a regional scale. Extensive mitigation measures would be needed, and their success would not be guaranteed.

The effects to health and safety are considered short-term if they last one year beyond the duration of final disposition and any related construction. Impacts would be long-term if they last longer than one year past the final disposition and any related construction.

Land Use

The impact assessment for land use focuses on the conformance of the alternatives to the existing area land uses, any existing city or county zoning, the Minneapolis-St. Paul International Airport Zoning Ordinance, and existing easements, licenses, rights-of-way, and leases. The analysis was conducted by examining the historic use of the Center, the types of land uses in the immediate area, and the existing easements, rights-of-way, and leases. The following definitions were used to assess the intensity of an impact:

Impact Intensity	Land Use Intensity Definition
Negligible	Land use in the form of construction of facilities and/or location or introduction of recreational or other activities in all cases conforms to the existing area land uses, any existing city or county zoning, the Minneapolis-St. Paul International Airport Zoning Ordinance, and existing easements, licenses, rights-of-way, and leases.
Minor	Land use in the form of construction of facilities and/or location or introduction of recreational or other activities generally conforms to the existing area land uses, any existing city or county zoning, the Minneapolis-St. Paul International Airport Zoning Ordinance (if required), and generally honors existing easements, licenses, rights-of-way, and leases. Nonconforming uses or activities can be easily mitigated to bring them into conformance.
Moderate	Land use in the form of construction of facilities and/or location or introduction of recreational or other activities generally conforms to the existing area land uses, any existing city or county zoning, the Minneapolis-St. Paul International Airport Zoning Ordinance (if required), and generally honors existing easements, licenses, rights-of-way, and leases. Nonconforming uses or activities can be mitigated to bring them into conformance; however, such mitigation is difficult and expensive and may result in substantial changes to the proposal.
Major	Land use in the form of construction of facilities and/or location or introduction of recreational or other activities does not conform to the existing area land uses, any existing city or county zoning, the Minneapolis-St. Paul International Airport Zoning Ordinance (if required), and/or honors all existing easements, licenses, rights-of-way, and leases, and constitutes a conflicting use. Mitigation measures cannot be implemented to change the level of conformance.

The effects to land use are considered short-term if they last for the duration of final disposition and any related construction. Impacts would be long-term if they last longer than the final disposition and any related construction.

Visual Resources

In assessing potential effects to visual resources, both the visual character and visual quality are considered. Visual character of a landscape includes landform, water features, vegetation types, and cultural modifications. The visual quality can be described as the excellence of visual experience determined by vividness, intactness, and unity. The viewshed comprises the limits of the visual environment associated with the proposed action, including views within and from the Center, and views of the Center. Views from and of the Center are limited due to dense wooded bluffs and woods or buildings along the west side. Views within the Center are limited in distance due to woods and buildings, and include natural and introduced vegetation, driveways and parking lots, the Center buildings, and Camp Coldwater Spring and Reservoir. The methodology for assessing impacts to visual resources has been established based on these key elements, and is defined as follows:

Impact Intensity	Visual Resource Intensity Definition
Negligible	The impact to visual resources is at the lowest levels of detection, barely perceptible, and not measurable.
Minor	The impact to visual resources would be noticeable, but would not alter the feeling, character, or setting associated with the viewshed of or from the Center.
Moderate	The impact to visual resources would be more noticeable, and may alter the feeling, character, or setting associated with the viewshed of or from the Center. Impacts can be negative or beneficial.
Major	The impact to visual resources would be readily apparent, and would alter the feeling, character, or setting associated with the viewshed of or from the Center. Impacts can be negative or beneficial.

The effects to visual resources are considered short-term if they last for the duration of final disposition and any directly related construction. Impacts would be long-term if they last longer than the final disposition and any directly related construction.

Public Use and Experience

Public scoping input and observation of visitation patterns, combined with an assessment of what uses are available to visitors under current management, were used to estimate the effects of the actions in the various alternatives of this document. The potential for change in public use proposed by the alternatives was evaluated by identifying projected increases or decreases in public uses, and determining how these projected changes would affect the desired experience, and to what degree and for how long. The thresholds of change for the intensity of an impact to public use and experience are defined as follows:

Impact Intensity	Public Use and Experience Intensity Definition
Negligible	The public would not be affected or changes in public use and experience would be below or at the level of detection. The public would not likely be aware of the effects associated with the alternative.
Minor	Changes in public use and experience would be detectable, although the changes would be slight and likely short-term. Some members of the public would be aware of the effects associated with the alternative, but the effects would be slight.
Moderate	Changes in public use and experience would be readily apparent and likely long-term. The public would be aware of the effects associated with the alternative and would likely express an opinion about the changes.
Major	Changes in public use and experience would be readily apparent and have important long-term consequences. The public would be aware of the effects associated with the alternative and would likely express a strong opinion about the changes.

The effects to public use and experience are considered short-term if they last for the duration of final disposition and any related construction. Impacts would be long-term if they last longer than the final disposition and any related construction.

IMPACT ANALYSIS

ALTERNATIVE A – NO ACTION

The Secretary of the Interior is authorized, but not directed, to convey the Center under the closure legislation, Pub. L. 104-134 (1996). Accordingly, the Center could be retained by the federal government. The no-action alternative would continue the existing conditions for the Center. Disposition of the Center to a university or nonfederal government entity would not occur.

Applicable Laws, Regulations, and Planning Documents

Under the no-action alternative, the Center would remain under federal ownership, therefore:

- The MNRRA would review any federally funded or permitted activities at the Center, including coordinating with the federal department or agency assigned responsibility to protect the resources of the Center, in accordance with the standards established in the CMP, which follow the standards of the Critical Area legislation.

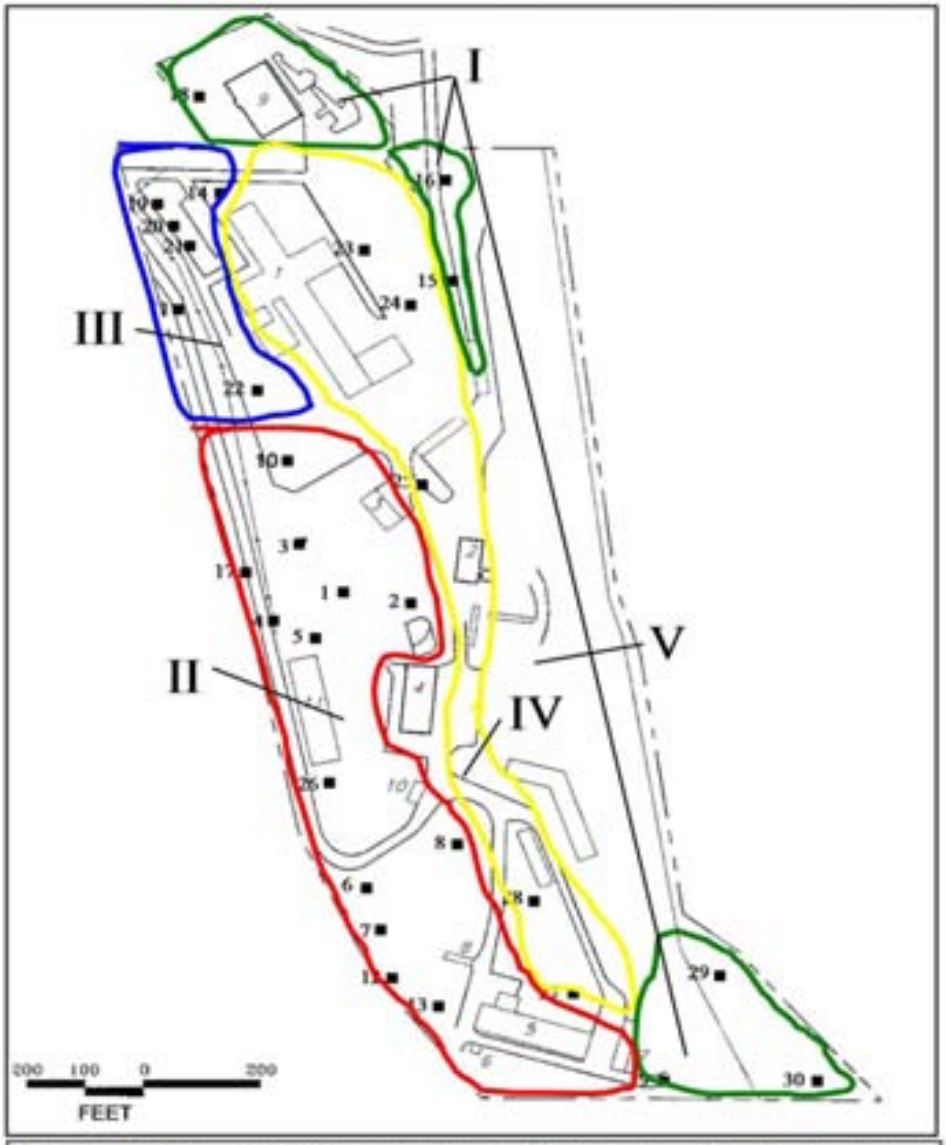
- The federal agency assigned responsibility for the Center under alternative A may not be required to comply with the airport zoning ordinance for repairs to Buildings 1 and 2, pending a determination of the federal basis for such regulations.

- The NHPA would require that the federal administering agency establish a historic preservation program for the Center, in accordance with section 110.

- Detailed information on the laws, regulations and planning documents, and their applicability to this alternative may be found in chapters 1 and 2, respectively.

Archeological Resources Impact

Based on the 2001 study, the Center was organized into five zones based on the potential to yield archeological information. Aerial photographs and grading maps for the Center show that Zone IV was disturbed to bedrock and there is no chance for in situ cultural materials. No further archeological study is needed in this zone. Zones I, III and V revealed no in situ cultural resources but still have some potential to contain them. These zones merit further testing or monitoring where an undertaking could impact undisturbed cultural resources. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the National Historic Landmark (NHL) and National Register Historic District (Historic District). The 2001 study also recommended revising to the Fort Snelling NHL and



Green	Zone I – Area of intact, undisturbed soils, but no material culture found
Red	Zone II – Area of intact, undisturbed soils with in situ material culture relating to period of significance of the Fort Snelling NHL
Blue	Zone III – Waterlogged and gleyed soils
Yellow	Zone IV – Area with no apparent remaining soils containing in situ material culture; heavily disturbed or destroyed due to Bureau of Mines facility construction; exposed bedrock at surface is some locations
	Zone V – East of marked zones I and IV; contains evidence of late-19th-century military railroad grade cut into and laid on the exposed upper surface of Platteville limestone formation

Source: Archeological Research at the former Twin Cities Bureau of Mines Testing Facility, Minnesota. Robert A. Clouse. 2001

Figure 29: Archeological Management Recommendations

Historic District boundaries to include Zones I and II (Clouse 2001). The Minnesota State Historic Preservation Office (SHPO) will undertake the boundary revision at a later date.

Impacts. Management of archeological resources would continue according to current policies. Visitor use would remain at low intensity and would have little potential to impact archeological sites through trampling, vandalism, or theft, as the resources are deeply buried. The incidence of unintentional or incidental damage would likely remain relatively low.

Removing trees from the Center, as discussed under "Vegetation," involves ground disturbance. Because this practice is anticipated to continue under the Alternative A, the potential for tree removal to affect archeological sites should be evaluated under Section 106.

Summary. No archeological resources have been affected under the current situation and Alternative A assumes the same conditions would occur. Impacts would be long-term, negligible and beneficial, as the resources would remain buried for future excavation, if called for. As the federal government would retain the land under this alternative, the agency managing the land would be responsible for Section 106 compliance for any action that had the potential to affect cultural resources.

Section 106 Assessment of Effect. See the above summary. The impact of maintaining the current management policies would be No Adverse Effect, and any action that could affect archeological resources would require a Section 106 review.

Historic Structures and Districts Impact

Coldwater Spring, spring house and reservoir are contributing elements to the Fort Snelling NHL and Historic District. Approximately half of the land within the Center falls within the boundaries of the Fort Snelling NHL and somewhat less in the National Register Historic District. Eleven of the buildings and structures at the Center are contributing elements to the USBM TCRC Historic District. The three ore bins and other features in the landscape directly associated with the Center's activities are important features that contribute to the District. Although the Center did not build the reservoir and spring house and these structures did not serve a specific function related to the Center's purposes, the structures are important elements in the Center's landscape. There are no individually NRHP-eligible structures within the Center.

Impacts. Under the Alternative A, current maintenance practices at the Center would continue. Current practice does not include rehabilitation, renovation, or stabilization. Consequently, the structures would continue to deteriorate. This would constitute an adverse effect on the USBM TCRC Historic District and on Coldwater spring house and reservoir, which are contributing elements of the Fort Snelling NHL and Historic District. As neglect is an adverse effect under Section 106, without adequate funding to stabilize and maintain the structures on the USBM TCRC Campus, those structures will continue to decline. Without funding, no documentation would occur. Under Alternative A, the impacts would be long-term, adverse and would range from minor to major (the complete loss of resources due to deterioration). Coldwater Spring would continue to flow as is and would not be affected.

Summary. The potential impacts of the Alternative A would include impacts on the USBM TCRC Historic District and the Coldwater spring house and reservoir. Impacts would be adverse, and would range from minor to major, depending on the rate of deterioration and extent of deterioration. Coldwater Spring would continue to flow as is and would not be affected.

Section 106 Assessment of Effect. Under the Alternative A, the USDI, or its designated caretaker, would continue to monitor deterioration of the structures within the Center. In the three years since preparation of the draft EIS, there has been considerable deterioration of several of the buildings at the center. This is especially true of Buildings 1, 2 and 9. Deterioration through neglect is considered an adverse effect under Section 106.

Ethnographic Resources Impact

The studies completed for the EIS and Section 106 reviews located no ethnographic sites eligible for inclusion on the National Register. Oral traditions and histories collected during these investigations suggest that natural springs, like Coldwater Spring, are associated with ceremonies and deities of the Dakota Indian spiritual world. Coldwater Spring is currently used by some members of the federally recognized Dakota and Ojibwe communities, and other American Indians, as a source of water for ceremonies. Many American Indian communities have a traditional association with the area surrounding the spring.

Impacts. Because no changes would be made under Alternative A, access to and the presence of Coldwater Spring on the property would remain the same. Direct access to the spring outlet is difficult now, as visitors have to work their way through or around the spring house and climb down a steep bank. If the spring house continues to deteriorate and begins to collapse, access to the outlet could become somewhat more difficult.

Summary. Under Alternative A, Coldwater Spring would continue to flow and individuals who regard it as an ethnographic resource would still have access to it. Therefore, impacts to this ethnographic resource would be long-term, negligible and beneficial.

Section 106 Assessment of Effect. As no ethnographic sites eligible for the National Register are located on the Center, none will be affected. Sites can be ethnographically significant, however, without being eligible for or listed on the National Register, as discussed above.

Soils Impact

Description. The Center site contains the following soil series and types: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. It is important to note that recent archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads.

Impacts. Because no changes would be made under the no-action alternative, impacts to soils at the Center would remain short and long-term, negligible, and adverse, largely as a result of erosion associated with social trails.

Summary. Because no changes would be made under the no-action alternative, impacts to soils at the Center would remain short and long-term, negligible, and adverse.

Vegetation Impact

Natural vegetation exists on the site's bluff slope, toe slope, and on the Mississippi River floodplain terrace. (Some of the bluff slope and all of the toe slope and floodplain terrace lie east of the Center property.) The bluff slope located on the eastern boundary of the project site supports a maple – basswood forest community. The toe slope, maintained in a saturated condition by natural groundwater seepage, supports a black ash swamp community. Occupying the Mississippi River floodplain adjacent to the toe slope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm, green ash, black willow, and eastern cottonwood. Currently, the Center is occupied by business infrastructure and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from the natural, presettlement condition or have become established on sites disturbed by development.

Removal of trees from the project site, particularly buckthorn (an aggressive nonnative shrub) and species of elm (to control the spread of Dutch elm disease), has occurred in recent years. This practice is anticipated to continue under the no-action alternative.

Impacts. Because no changes to current practices would be made under the no-action alternative, impacts to vegetation at the Center would be short and long-term, minor, and adverse as a result of the existing disturbance and loss of native vegetation.

Summary. Because no changes to past practices would be made under the no-action alternative, impacts to vegetation at the Center would remain short and long-term, minor, and adverse.

Wildlife Impact

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 bird species are common to this area, and of these, 120 are known to nest in this part of Minnesota. At least 50 mammals occur within the Mississippi River corridor and some are likely visitors to the Center.

Impacts. Because no changes would be made under the no-action alternative, impacts to wildlife at the Center would remain short and long-term, minor, and adverse, largely because developed areas have altered or destroyed habitat.

Summary. Because no changes would be made under the no-action alternative, impacts to wildlife at the Center would remain short and long-term, minor, and adverse.

Hydrology Impact

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, just south of the intersection of the east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. The main drainage from the site is from Camp Coldwater Spring and its associated reservoir. Groundwater can be found within about 20 feet of the land surface in most places within the Minnehaha Creek watershed, including the Center.

Impacts. Because no changes would be made under the no-action alternative, impacts to hydrology at the Center would remain short and long-term, negligible, and adverse. The current development at the Center does affect infiltration and the hydrologic cycle and would continue to do so.

Summary. Because no changes would be made under the no-action alternative, impacts to hydrology at the Center would remain short and long-term, negligible, and adverse.

Water Quality Impact

The outflow from Camp Coldwater reservoir is measured for water quality along with the flow rate. The water quality measurements include temperature and specific conductivity.

Impacts. Because no changes would be made under the no-action alternative, impacts to water quality at the Center would remain short and long-term, negligible, and adverse. The current development at the Center does affect water quality and would continue to do so.

Summary. Because no changes would be made under the no-action alternative, impacts to water quality would remain short and long-term, negligible, and adverse.

Wetlands Impact

The *National Wetlands Inventory* map that includes the Center site shows a single wetland within the Center boundaries: Camp Coldwater reservoir. An on-site delineation also revealed the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

Impacts. Because no changes would be made under the no-action alternative, impacts to wetlands at the Center would be short and long-term, major, and adverse. Structures have been built in existing wetlands, destroying some habitat.

Summary. Because no changes would be made under the no-action alternative, impacts to wetlands at the Center would remain short and long-term, major, and adverse.

Socioeconomics Impact

The Center is an integral part of the socioeconomic make-up of the surrounding community. When operational, it employed as many as 200 workers. Today, it functions as an informal adjunct to adjoining properties and, when open to the public, a destination for visitors to the Camp Coldwater Spring area. One aspect of the socioeconomy that would be affected by the various alternatives, other than employment, is operation and maintenance of the Center.

Impacts. Because no changes would be made under the no-action alternative, there would be no impacts on the socioeconomic setting as a result of implementing the no-action alternative.

Summary. Because no changes would be made under the no-action alternative, there would be no impacts on the socioeconomic setting as a result of implementing the no-action alternative.

Health and Safety Impact

In anticipation of divestiture of the Center, the TCRC Closure Team conducted an extensive environmental cleanup in the late 1990s. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings. Mold is a serious problem in Building 9 and a growing problem in Building 1.

A recent safety evaluation (USFWS 2005) determined that "break-ins" into the Center grounds and buildings continue to occur, and potential intruders could be exposed to electrical hazards, fall hazards, and physical hazards (such as broken windows). Aging and weathering of the buildings over time would result in increased incidence of hazardous conditions, which if encountered by potential intruders, would result in a localized, long-term, negligible, adverse impact to health and safety.

Impacts. Because no changes would be made under the no-action alternative, the buildings of the Center would continue to deteriorate over time. Aging and weathering of the buildings would result in localized releases of asbestos, PCBs, radon, and lead-based paint into the atmosphere where workers and potential intruders accessing the buildings could be exposed to these hazardous materials. Hazards associated with mold exposure would continue to worsen. Mitigation measures, including continued testing of the building environments for any sign of increased contamination and the wearing of personal protective equipment by workers accessing the buildings should contamination be detected, would reduce the localized, long-term, adverse impacts to a negligible level.

Summary. Impacts to health and safety under the no-action alternative would be localized, long-term, negligible, and adverse.

Land Use Impact

Land use of the Center from its inception in 1949 through closure in 1995 was for governmental light industrial purposes. The lands surrounding the Center are primarily government-owned and used for recreation or for government offices or a medical center. The other prominent land use in the area is the Minneapolis-St. Paul International Airport, which lies southwest of the Center. Although the airport is not contiguous with the Center, airport zoning regulations and Federal Aviation Administration airspace obstruction rules play an important role in governing land uses at the Center.

Impacts. Because no changes would be made under the no-action alternative, there would be no impacts to land use at the Center. All existing easements, licenses, rights-of-way, and leases would continue to be honored.

Summary. Because no changes would be made under the no-action alternative, there would be no impacts to land use at the Center. All existing easements, licenses, rights-of-way, and leases would continue to be honored.

Public Use and Experience Impact

The Center, which is open to the public, has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. During the time that the Center was operating in its official capacity (until 1995), it was not open for general public use and visitation. The Center is now used by the public on a frequent basis as an extension of the open space present in the surrounding parks and open areas. The area around Camp Coldwater Spring is viewed by some members of the public as being spiritually important and is used for meditation and a source of inspiration. Many groups of people have a special fondness for the Center property. Visitors to the Center include American Indians, spiritualists, environmentalists, and residents of the nearby neighborhoods. The alternatives presented in this EIS along with the scenarios present differing levels of access to the Center by the public for continuing the personal rituals and meditations as they currently exist.

Under the no-action alternative, the public may currently access the Center at any time. Recent installation of additional fencing to limit public access directs the public to Camp Coldwater Spring and Reservoir and prohibits entrance to site buildings. American Indian, spiritual, environmental, and neighborhood groups who now visit the site could continue to do so during the specified hours of operation.

Impacts. No changes to public use or experience would be made under the no-action alternative. Existing impacts to public use and experience at the Center would be considered short and long-term, moderate to major, and adverse.

Summary. Because no changes would be made under the no-action alternative, impacts to public use and experience at the Center would be considered short and long-term, moderate to major, and adverse.

Visual Resources Impact

The visual characteristics of the Center include a relatively limited viewshed (less than 1,000 feet and not expansive), dense woods and bluffs, nonnative vegetation and landscaping, driveways and parking lots, the Center buildings, and Camp Coldwater Spring and Reservoir. Characteristics along the Center edges include views of an urban setting with commercial and residential buildings and SH 55 and SH 68. The existing overall visual quality is average to below average because of lack of vividness and distinctiveness. The deteriorating conditions of the buildings and the lack of grounds maintenance are the primary contributing factors.

Impacts. The no-action alternative would not change the characteristics of the Center, nor would minimal maintenance of the Center improve visual quality. Impacts to visual resources under the no-action alternative would, therefore, be localized and continue to be long-term, minor to moderate, and adverse.

Summary. Impacts to visual resources under the no-action alternative would, therefore, be localized, long-term, minor to moderate, and adverse.

IMPACT ANALYSIS

ALTERNATIVE B – CONVEYANCE WITH NO CONDITIONS

Under alternative B, the Center would be conveyed to a university or nonfederal government entity with no conditions imposed on the future use of the Center, or the land, except for those restrictions on use that currently exist and arise from applicable laws and regulations. The university or nonfederal government entity that receives the Center would have no restrictions on its subsequent use, transfer or sale. Therefore, any future owner under this alternative would be free to subsequently use, sell, and transfer the Center to a private entity for various uses or development.

Applicable Laws, Regulations, and Planning Documents

MNRRA Enabling Legislation and the MNRRA Comprehensive Management Plan

Under the MNRRA enabling legislation and the MNRRA CMP, the National Park Service would review federally funded or permitted activities. The CMP was developed to provide a similar level of protection as the Critical Area legislation. Any nonfederal government entities would be subject to these state requirements, as discussed below.

Mississippi River Corridor Critical Area

If the Center were conveyed under this alternative, the entity would be required to comply with the Critical Areas Act of 1973, State Executive Order 79-19. This would limit structure height, prevent disturbance of steep slopes, and limit removal of vegetation.

Minneapolis-St. Paul International Airport Zoning Ordinance

In any of the circumstances in alternative B, the transferee of the Center would be required to comply with the requirements of the airport zoning ordinance. If the Center were to transfer to a university or nonfederal government entity, the entity that administers the Center would have to determine its own compliance obligations pertaining to the airport zoning ordinance. All existing buildings on the Center are currently within the topographic height limitations of the airspace obstruction zone. However, evaluation of the airport zoning ordinance requirements and restrictions may be necessary for rehabilitation of existing structures.

Under land use scenarios calling for use as a training center / office park or as an interpretive/nature/history center, new construction and rehabilitation of existing structures should proceed, while giving consideration to the safety zone requirements in the airport zoning ordinance (see figure 5). No new structures or trees would be allowed in Safety Zone A. Buildings 4 and 11 lie in Safety Zone A. However, because these buildings are existing, they could be rehabilitated or repaired, provided they were not enlarged.

Buildings 1, 2, 3, and 9 are located in Safety Zone B. Under the airport zoning ordinance, certain uses that would result in large group gatherings or storage and use of fuels are prohibited. Although none of the land use circumstances described above are prohibited uses in Safety Zone B, certain structures that could be associated with those uses, such as an outdoor amphitheater, may be prohibited.

Camp Coldwater Spring Protection Legislation – Minnesota Senate File 2049 and Minnesota Historic Sites Act

The State of Minnesota enacted legislation in 2001 to protect the flow of groundwater to and from Camp Coldwater Spring. The legislation, sometimes referred to as S.F. 2049, dated May 15, 2001 (2001 Minn. Sess. L. Serv. ch. 101), states that:

> *Neither the state, nor a unit of metropolitan government, nor a political subdivision of the state may take any action that may diminish the flow of water to or from Camp Coldwater Springs [sic]. All projects must be reviewed under the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act with regard to the flow of water to or from Camp Coldwater Springs [sic].*

Camp Coldwater is designated as a state historic site under the Minnesota Historic Sites Act, Minn. Stat. §§ 138.661 – 138.669 (see § 138.662, subdivision 6). As a Minnesota historic site, any state departments, agencies, and political subdivisions, including the Board of Regents of the University of Minnesota, have a responsibility to protect the physical features and historic character of Camp Coldwater, if any of these entities were to undertake projects affecting this resource. Specifically, the Minnesota Historic Sites Act states that:

> *Before carrying out any undertaking that will affect designated or listed properties, or funding or licensing an undertaking by other parties, the state department or agency shall consult with the Minnesota Historical Society pursuant to the society's established procedures to determine appropriate treatments and to seek ways to avoid and mitigate any adverse effects on designated or listed properties.*

Any state recipient of the Center property must comply with the requirements of Minnesota S.F. 2049 and the Minnesota Historic Sites Act in any development and use of the property. Any projects that may impact the flow of groundwater to or from Camp Coldwater Spring, or that impact the physical features of Camp Coldwater, such as the spring, contemplated by a future owner that is a state entity must be reviewed in accordance with the Camp Coldwater Spring protection legislation and the Minnesota Historic Sites Act under this alternative.

National Historic Preservation Act

The federal government will comply with section 106 of the NHPA to determine appropriate mitigation for historic properties prior to conveyance. Once the NHPA section 106 process is completed, no covenants or restrictions protecting cultural resources would be placed on the conveyance. The NHPA section 106 process would be completed with the knowledge that any required mitigation could not include protective measures that would require conditions to be placed on the transfer. Therefore, any identified mitigation would be completed prior to conveyance of the Center. Once the Center is conveyed to a university or nonfederal government entity, no federal protections would be available for historic properties unless an action causing an effect to the site was a federal action as defined by the NHPA.

Minnesota Statues, Chapter 138, Historical Societies, Sites, Archives, Archeology, Folklore, would offer some protection to archeological sites, if the Center is transferred to a state entity or government. Section 138.33, "Unlicensed field archeology prohibited," states:

> *No person, including state or other public employees other than the state archaeologist and individuals duly licensed by the director of the Minnesota Historical Society shall engage in any field archaeology on any state site.*

Archeological Resources Impact

Based on the 2001 study, the Center was organized into five zones based on the potential to contain archeological resources. Aerial photographs and grading maps for the Center show that Zone IV was disturbed to bedrock and there is no chance for in situ cultural materials. No further archeological study is needed in this zone. Zones I, III and V revealed no in situ cultural resources but still have some potential to contain them. These zones merit further testing or monitoring where an undertaking could impact undisturbed cultural resources. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the National Historic Landmark (NHL) and National Register Historic District (Historic District). The 2001 study also recommended revising the Fort Snelling NHL and Historic District boundaries to include Zones I and II (Clouse 2001). The Minnesota State Historic Preservation Office (SHPO) will undertake the boundary revision at a later date all the studies done for this EIS.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurface would be subject to disturbance.

Impacts. This scenario emphasizes the natural environment, but in the long-term the federal government could not guarantee this outcome, as the land would be transferred without restrictions. Adverse impacts to archeological resources could occur as a result of land restoration, and building and infrastructure removal. Impacts could include the loss of archeological resources because the new owner could undertake actions that could impact archaeological sites without review or provisions for their protection.

Under this scenario, USDI would negotiate and execute a MOA defining the treatment of NHL and NRHP-listed and eligible archeological resources at the Center, in consultation with the SHPO, the ACHP, federally recognized tribes, and interested parties. This treatment would include methods to avoid, minimize, and mitigate for adverse effects, with the idea that all archeological resources could be destroyed without review or protection at some future time.

The USDI would complete all necessary surveys, inventories and data recovery work, accessioning of artifacts, and all other provisions of the MOA prior to transfer. The impacts would be long-term, moderate, and adverse because the archeological resources would be removed from context for the data recovery effort. The impact would be moderate because the information about the resources would be available for future interpretation and research.

Interpretive / Nature / History Center Scenario

Assumptions. Under this scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. New structures could be built at the Center, and all or a portion of the existing buildings would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required if reuse is desired.

Impacts. This scenario combines a natural landscape with the potential reuse of some existing structures or the construction of new buildings. Adverse impacts to archeological resources could occur as a result of land restoration, building and infrastructure removal and new construction. With an interpretive center, the site's archeology could be interpreted. Again, without restrictions on the land owner, the land could eventually develop the land in ways that destroyed all the archeological resources at the Center.

Under this scenario, USDI would negotiate and execute a MOA defining the treatment of NHL and NRHP-listed and eligible archeological resources at the Center, in consultation with the SHPO, the ACHP, federally recognized tribes, and interested parties. This treatment would include methods to avoid, minimize, and mitigate for adverse effects, with the idea that all archeological resources could be destroyed without review or protection at some future time.

The USDI would complete all necessary surveys, inventories and data recovery work, accessioning of artifacts, and all other provisions of the MOA prior to transfer. The impacts would be long-term, moderate, and adverse because the archeological resources would be removed from context for the data recovery effort. The impact would be moderate because the information about the resources would be available for future interpretation and research.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Under this scenario, use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most of the existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required.

Impacts. This scenario emphasizes the built environment. Some or most of the buildings and structures of the USBM TCRC Historic District could be removed and new buildings could be constructed. The potential for disturbing archeological resources would be greatest under this alternative, at least initially, as new building or infrastructure construction could impact archeological resources. However, as with the other scenarios, anything could happen if the land is transferred without restrictions. With an interpretive center, the site's archeology could be interpreted.

Under this scenario, USDI would negotiate and execute a MOA defining future treatment of NHL and NRHP-listed and eligible archeological resources at the Center, in consultation with the SHPO, the ACHP, federally recognized tribes, and interested parties. This treatment would include methods to avoid, minimize, and mitigate for adverse effects, with the idea that all archeological resources could be destroyed without review or protection at some future time.

The USDI would complete all necessary surveys, inventories and data recovery work, accessioning of artifacts, and all other provisions of the MOA prior to transfer. The impacts would be long-term, moderate, and adverse because the archeological resources would be removed from context for the data recovery effort. Information about the resources would be available for future interpretation and research.

Summary – Archeological Resources Impact. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete a MOA under the Section 106 process to properly consider the effects of the transfer on archeological resources. The MOA would provide for data recovery and mitigation, as this alternative assumes the eventual loss of all archeological resources. Under all three scenarios, the impacts would be long-term, moderate, and adverse because the archeological resources would be removed from context for the data recovery effort. Information about the resources would be available for future interpretation and research.

Section 106 Assessment of Effect. The transfer of the Center out of federal control is considered to be an adverse effect under 36 C.F.R. 800.5. As noted above, the USDI would complete a MOA under the Section 106 process to detail necessary archeological recovery and mitigation.

Historic Structures and Districts Impact

Coldwater Spring, spring house and reservoir are contributing elements to the Fort Snelling NHL and Historic District. Approximately half of the land within the Center falls within the boundaries of the Fort Snelling NHL and somewhat less in the National Register Historic District. Eleven of the buildings and structures at the Center are contributing elements to the USBM TCRC Historic District. The three ore bins and other features in the landscape directly associated with the Center's activities are important features that contribute to the District. Although the Center did not build the reservoir and spring house and these structures did not serve a specific function related to the Center's purposes, the structures are important elements in the Center's landscape. There are no individually NRHP-eligible structures within the Center.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting.

Impacts. Under this scenario, USDI would negotiate and execute a MOA defining treatment of the Fort Snelling NHL and Historic District resources and of the USBM TCRC Historic District in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties. This treatment would include methods to avoid, minimize, and mitigate adverse effects to these resources, with the idea that all historic structures could be destroyed and the Fort Snelling NHL and Historic District adversely affected without review or protection at some future time.

As this scenario emphasizes the natural environment, most or all of the buildings and infrastructure of the USBM TCRC Historic District would be removed. This would constitute an adverse effect on the USBM TCRC Historic District. The impacts would be long-term, moderate and adverse. The adverse effects would be moderate because the MOA negotiated under Section 106 would contain provisions that mitigate for this adverse effect, such as written and photographic documentation. This documentation would be available for future research and interpretation of this historic district.

Coldwater spring, reservoir and spring house are contributing features of the Fort Snelling NHL and Historic District. As NHL resources, Section 800.10 of the ACHP regulations demands the highest level of review prior to allowing any adverse effects to occur. The MOA would address the treatment of these resources, as they could be entirely lost under this alternative. The treatment could include documentation and other mitigation measures. The impacts to these resources could be long-term, major and adverse. The effect would be major because the only remaining physical element associated with the Upper Post waterworks could be completely destroyed. While it would be documented prior to disposition of the land, the documentation would not completely compensate for the loss of this NHL resource.

Interpretative / Nature / History Center Scenario

Assumptions. Under this scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. New structures could be built at the Center, and all or a portion of the existing buildings would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required if reuse is desired.

Impacts. Under this scenario, USDI would negotiate and execute a MOA defining treatment of the Fort Snelling NHL and Historic District resources and of the USBM TCRC Historic District in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties. This treatment would include methods to avoid, minimize, and mitigate adverse effects to these resources, although the emphasis would be on mitigation, as this alternative does cannot guarantee how the resources will be treated in the long-term.

This scenario combines a natural landscape with the potential reuse of some existing structures or the construction of new buildings. Some or most of the buildings and structures of the USBM TCRC Historic District would be removed. The impacts to the USBM TCRC Historic District would be long-term, moderate, and adverse, because removing buildings and the associated infrastructure would adversely impact the district. The adverse effects could be mitigated through documentation of the site, which would then be available for future research and interpretive use. Also some features of the TCRC infrastructure, such as ore bins or building corners, could be retained as mitigation. With an interpretive center, the site's history could be interpreted.

Coldwater spring, reservoir and spring house are contributing features of the Fort Snelling NHL and Historic District. As NHL resources, Section 800.10 of the ACHP regulations demands the highest level of review prior to allowing any adverse effects to occur. The MOA would address the treatment of these resources as they could be entirely lost under this alternative. The treatment could include documentation and other mitigation measures. The impacts to these resources could be long-term, major and adverse. The effect would be major because the only remaining physical element associated with the Upper Post waterworks could be completely destroyed. While it would be documented prior to disposition of the land, the documentation would not completely compensate for the loss of this NHL resource.

Training Center / Office Park Scenario

Impacts. Under this scenario, USDI would negotiate and execute a MOA defining treatment of the Fort Snelling NHL and Historic District resources and of the USBM TCRC Historic District in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties. This treatment would include methods to avoid, minimize, and mitigate adverse effects to these resources, with the idea that all archeological resources could be destroyed without review or protection at some future time.

This scenario emphasizes the built environment. Some or most of the buildings and structures of the USBM TCRC Historic District could be removed and new buildings could be constructed. Therefore, the impacts to the USBM TCRC Historic District would be long-term,

moderate, and adverse, because removing some or all of the buildings and structures would impact the district adversely. Also, the construction of new buildings could adversely affect the USBM TCRC Historic District. The adverse effects could be mitigated through documentation of the USBM TCRC Historic District. This documentation would then be available for future research and interpretive use. Also some features of the TCRC infrastructure, such as ore bins or building corners, could be retained as mitigation.

Coldwater spring, reservoir and spring house are contributing features of the Fort Snelling NHL and Historic District. As NHL resources, Section 800.10 of the ACHP regulations demands the highest level of review prior to allowing any adverse effects to occur. The MOA will address the treatment of these resources as they could be entirely lost under this alternative. The treatment could include documentation and other mitigation measures. The impacts to these resources could be long-term, major and adverse. The effect would be major because the only remaining physical element associated with the Upper Post waterworks could be completely destroyed. While it would be documented prior to disposition of the land, the documentation would not completely compensate for the loss of this NHL resource.

Summary – Historic Structures and District Impacts. As this alternative does not allow for restrictions on the future use of the Center, it assumes that all cultural resources could be destroyed. Prior to transferring the land, the federal government would have to complete all mitigation measures needed to compensate for this loss. The impacts to the USBM TCRC Historic District would be long-term, moderate, and adverse, because removing some or all of the buildings and structures would impact the district adversely. The impacts to the Fort Snelling NHL and National Register spring, spring house and reservoir could be long-term, major and adverse. The effect would be major because the only remaining physical element associated with the Upper Post waterworks could be completely destroyed. While it would be documented prior to disposition of the land, the documentation would not completely compensate for the loss of this NHL resource.

Section 106 Assessment of Effect. The transfer of the Center out of federal control is considered to be an adverse effect under 36 C.F.R. 800.5. As noted above, the USDI would complete the Section 106 process to thoroughly consider effects on historic properties eligible for or listed on the National Register.

Ethnographic Resources Impact

The studies completed for the EIS and Section 106 reviews located no ethnographic sites eligible for inclusion on the National Register. Oral traditions and histories collected during these investigations suggest that natural springs, like Coldwater Spring, are associated with ceremonies and deities of the Dakota Indian spiritual world. Coldwater Spring is currently used by some members of the federally recognized Dakota and Ojibwe communities, and other American Indians, as a source of water for ceremonies. Many American Indian communities have a traditional association with the area surrounding the spring.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurface would be subject to disturbance.

Impacts. This scenario has the greatest potential to provide for public access to Coldwater Spring by American Indians. However, because no conditions would be placed on the transfer under Alternative B, the recipient could restrict access to the spring, resulting in moderate to major adverse impacts and even change the character around it so much that it would no longer be appealing as an ethnographic site .

Under S.F. 2049, and the designation of Camp Coldwater under the Minnesota Historic Sites Act, any state government entity that were to acquire the Center would be required to consult with the Minnesota SHPO prior to any undertaking that would affect flow of water to or from the spring, although these resource could still be diminished or destroyed after consultation, or the character of the site around the spring could be changed dramatically, so long as the flow to and from the spring was not affected. If the Center is transferred to a nonstate entity, such as a private university, there would be no requirement for compliance with S.F. 2049 or the Minnesota Historic Sites Act, which would result in a long-term, moderate to major, adverse impacts.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Under this scenario, the interpretive / nature / history center would be assumed to be open, thus enabling accessibility to Coldwater Spring by American Indian groups, resulting in a negligible to minor beneficial impact. However, because no conditions would be placed on the transfer under alternative B, the recipient could restrict access to the spring, resulting in moderate to major adverse impacts.

Under S.F. 2049, and the designation of Camp Coldwater under the Minnesota Historic Sites Act, any state government entity that were to acquire the Center would be required to consult with the Minnesota SHPO prior to any undertaking that would affect flow of water to or from the spring, although these resource could still be diminished or destroyed after consultation, or the character of the site around the spring could be changed dramatically, so long as the flow to and from the spring was not affected. If the Center is transferred to a nonstate entity,

such as a private university, there would be no requirement for compliance with S.F. 2049 or the Minnesota Historic Sites Act, which would result in a long-term, moderate to major, adverse impacts.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. There would be no guarantee of preservation of or access by American Indian communities to Coldwater Spring or associated resources because alternative B places no conditions on the transfer of the Center to a university or nonfederal government entity. New construction and building reuse this scenario could result in restriction of access to Coldwater Spring, or significant modification of the spring, resulting in long-term, moderate to major, adverse impacts.

Under S.F. 2049, and the designation of Camp Coldwater under the Minnesota Historic Sites Act, any state government entity that were to acquire the Center would be required to consult with the Minnesota SHPO prior to any undertaking that would affect flow of water to or from the spring, although these resource could still be diminished or destroyed after consultation, or the character of the site around the spring could be changed dramatically, so long as the flow to and from the spring was not affected. If the Center is transferred to a nonstate entity, such as a private university, there would be no requirement for compliance with S.F. 2049 or the Minnesota Historic Sites Act, which would result in a long-term, moderate to major, adverse impacts.

Summary – Ethnographic Resources Impact. There would be no guarantee of preservation of or access by American Indian communities to Camp Coldwater Spring because alternative B places no conditions on the transfer of the Center to a university or nonfederal government entity. Also, the spring itself could be changed so radically that it would lose its ethnographic character. Impacts to ethnographic resources under all three scenarios could range from long-term, moderate to major and adverse.

Section 106 Assessment of Effect. As no ethnographic sites eligible for the National Register are located on the Center, none will be affected by the no action alternative. Sites can be ethnographically significant, however, without being eligible for or listed on the National Register, as discussed above.

Soils Impact

The Center site contains the following soil series and types: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. It is important to note that recent archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads.

Factors that could affect soils at the Center under the following scenarios include disturbance, erosion potential, and increases or decreases in impermeable surfaces associated with rehabilitation or new structure construction. Local and state erosion control standards would apply to any future owner.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Conversion of the Center to open space or a park by a university or nonfederal government entity could involve removal of some or all of the existing Center structures, which would impact soils through the use of vehicles and demolition equipment, and would involve the need to fill in and/or regrade areas of existing foundations and/or parking lots. Under alternative B, no conditions (retention of property or a conservation easement) would be placed on the transfer of the Center, therefore, there would be no requirement for the recipient to take steps to avoid adverse impacts to soils, other than those in state and local regulations.

Should the recipient choose to remove the existing unused structures without regard for impacts to soils, building sites could be left to revegetate on their own, may suffer from erosion in the meantime, or imported topsoil may not be local. Under these conditions, short-term impacts would be negligible to minor and adverse during demolition, and long-term impacts would be minor to moderate and adverse.

If the recipient elects to implement mitigation measures such as importation of local topsoil and appropriate erosion-control measures to prevent erosion, the impacts to area soils would be reduced. Impacts to soils would be short-term, negligible, and adverse. Long-term impacts to soils under this scenario would be minor to moderate and beneficial as removal of structures and replacement of impermeable surfaces with topsoil would return areas to a more natural condition.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Reuse of one or more of the existing structures at the Center for an interpretive / nature / history center would require substantial rehabilitation. Rehabilitation would have little impact on soils of the Center unless work on underground piping (such as water or sewerlines) would be required.

The impacts of new construction on soils depends on whether the selected site currently contains structures, and whether existing structures would be removed in addition to the new construction. New construction without removal of any existing structures would increase the area of impermeable surfaces on the Center, and would alter the soils of the site in the long-term. Elimination of existing structures would either offset any adverse impacts of new construction, or have a beneficial impact on soils in the long-term by reducing the amount of impermeable surface.

Impacts to soils would be short and long-term, minor, and adverse if (1) the new construction takes place where no structures currently exist, (2) no existing structures are removed, and (3) no erosion-control measures are implemented. Impacts in the long-term would be minor and beneficial if new construction takes place in an area where structures currently exist, other structures are removed from the Center, and erosion-control measures are implemented in accordance with state and local regulations.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to soils from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space. Under the training center / office park scenario a combination of building reuse and new construction would result in an increase in the density of buildings, which would result in removal of topsoil and an increase in impermeable surfaces.

Impacts to soils from the training center / office park scenario would be short and long-term, minor to moderate, and adverse if there was (1) construction in new locations, (2) an increase in the total number of structures on the Center, and (3) no implementation of erosion-control

measures. Impacts would be short and long-term, negligible, and adverse with complete reuse or new construction in existing structure locations and no reduction in overall number of structures. Impacts would be short-term, negligible, and adverse, and long-term, negligible to minor, and beneficial with complete reuse or new construction in existing structure locations with reduction in the total number of structures and rehabilitation of soils in those locations.

Summary – Soils Impact. The impacts to soils depend largely on whether areas would remain or be converted to open space, whether or not existing structures would be demolished or restored, and if new structures are built, whether they are built at existing sites or new sites. Short-term, negligible to minor, adverse impacts would occur if heavy equipment is brought in for demolition or construction. Long-term, minor to moderate, adverse impacts would occur if open space is converted to buildings or a parking lot as impermeable surfaces would increase and topsoil would be removed or covered up.

Vegetation Impact

Natural vegetation exists on the site's bluff slope, toe slope, and on the Mississippi River floodplain terrace. The bluff slope, located on the eastern boundary of the project site, supports a maple – basswood forest community. The toe slope, maintained in a saturated condition by natural groundwater seepage, supports a black ash swamp community. Occupying the Mississippi River floodplain adjacent to the toe slope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm, green ash, black willow, and eastern cottonwood. Currently, the Center is occupied by business infrastructure and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from the natural, presettlement condition or have become established on sites disturbed by development.

Factors affecting native vegetation at the Center under the following scenarios could include disturbance due to rehabilitation and construction, and potential for revegetation with native species. The airport zoning ordinance could require that a university or nonfederal governmental entity manage trees on the Center such that no new trees would be allowed to grow in the portion of the Center that lies in Safety Zone A, and trees in all other areas of the Center could be required to be maintained at designated height requirements, or perhaps removed.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the

USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under this scenario, the open space / park could be assumed to be open for hours expanded from the current schedule, and the area could see increased use, resulting in impacts to vegetation that would be negligible and adverse in the short and long-term.

Conversion of the Center to open space or a park by a university or nonfederal government entity could involve removal of some or all of the existing Center structures, which would impact vegetation through the use of vehicles and demolition equipment. Mitigation measures, such as reseeding with native species and removal of invasive species (such as buckthorn) during the revegetation process would reduce the level of adverse impacts to area vegetation. Short-term impacts to vegetation would be negligible to minor and adverse. Should the recipient elect not to implement mitigation measures (allowing disturbed areas to revegetate on their own, or replace native vegetation with nonnatives), long-term impacts to vegetation would be minor and adverse. Long-term impacts to vegetation under this scenario would be moderate to major and beneficial if former building sites are revegetated using native species to restore historic vegetation schemes (such as oak savannah or prairie).

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Reuse of one or more of the existing structures on the Center for an interpretive / nature / history center would require substantial rehabilitation. Rehabilitation would have little impact on vegetation of the Center unless work on underground piping (such as water or sewerlines) would intrude on areas of native vegetation.

The impact of new construction on vegetation depends on whether the selected site currently contains structures, and whether existing structures would be removed in addition to the new construction. New construction without removal of any existing structures would increase the area covered with structures and would reduce native vegetation. Elimination of existing structures and revegetation with native species would either offset any adverse impacts of new construction, or have a beneficial impact on vegetation in the long-term by expanding the area covered by native species.

Construction of a structure in a location where there is currently no structure, and leaving all existing structures in place, would result in short- and long-term, negligible to minor, adverse impacts, depending on the location selected (and the presence of native vegetation). Long-term impacts to vegetation would be moderately beneficial if new construction is in the location of existing structures, if additional structures are removed, and if the sites are revegetated using native vegetation.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to vegetation from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there would be some emphasis on maintaining open space. Under the training center / office park scenario a combination of building reuse and new construction would result in an increase in the density of buildings, which would result in a reduction of native vegetation, depending on the site of the new construction.

Complete reuse or new construction in existing structure locations and no reduction in overall number of structures would result in short- and long-term, negligible, adverse impacts. Construction in new locations with no elimination of existing structures on the Center would result in short- and long-term, negligible to minor, adverse impacts. Complete reuse or new construction in existing structure locations, combined with a reduction in the total number of structures and revegetation with native species in those locations, would result in short-term, negligible, adverse, and long-term, negligible to minor, beneficial impacts to vegetation.

Summary – Vegetation Impact. Long-term impacts to vegetation would be moderate to major and beneficial if former building sites are revegetated using native species to restore historic vegetation schemes (such as oak savannah). Overall impacts to vegetation under the interpretive / nature / history center scenario would range from short- and long-term, negligible to minor, adverse or beneficial impacts, depending on the location selected (and the presence of native vegetation). Long-term, minor to moderate, adverse impacts would result if native vegetation was converted to parking or a new structure.

Wildlife Impact

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 bird species are common to this area, and of these, 120 are known to nest in this part of Minnesota. At least 50 mammals occur within the Mississippi River corridor and some are likely visitors to the Center.

Factors that could affect wildlife under the following scenarios include increased public use, and amount of habitat.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under this scenario, the open space / park would be assumed to be open for hours expanded from the current schedule, and the area could see increased public use, resulting in impacts to wildlife that would be long-term, negligible, and adverse. Because no conditions (retention of property or a conservation easement) would be placed on the transfer under alternative B, the recipient could clear all existing areas of natural vegetation and replace it with lawn and/or nonnative vegetation, which would reduce wildlife habitat, possibly resulting in short- and long-term, negligible to minor, adverse impacts.

Removal of some or all of the existing structures on the Center for use as open space or a park would have beneficial impacts on wildlife if the building sites were revegetated with species that could serve as wildlife habitat. In the short-term, wildlife would be adversely impacted by demolition activity; however, those impacts would be anticipated to be negligible. Long-term impacts would be minor to moderate and beneficial.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Use of the Center for an interpretive / nature / history center could either be accomplished by reuse of existing structures, or through new construction, with or without demolition of unused structures. Use of the Center as an interpretive / nature / history center could imply management of the Center to maintain or increase open space and to maintain or restore natural systems where possible.

If none of the existing structures would be reused or removed, and a new structure is erected in the area that is currently open space, and if any existing natural areas would be cleared and replaced with lawn or nonnative vegetation, the area that supports wildlife habitat would be reduced.

The impacts to wildlife would be short-term, negligible, and adverse due to construction activity, and long-term, minor, and adverse due to reduced habitat and potentially increased public use of the Center.

If existing structures are reused and all remaining unused structures are removed, and the sites are rehabilitated to a natural condition, the area that could support wildlife habitat could be expanded. The impacts to wildlife would be short-term, negligible, and adverse as rehabilitation and demolition activity would disrupt existing wildlife, and long-term, negligible, and adverse due to potentially increased public use of the Center; however, overall long-term impacts would be minor to moderate and beneficial as the area available for wildlife habitat would be expanded.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to wildlife from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario discussed previously. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space (which could serve as wildlife habitat). Under the training center / office park scenario, a combination of building reuse and new construction would result in an increase in the density of buildings over the current condition, which would result in a reduction of open space that serves as wildlife habitat, depending on the site of the new construction.

Complete reuse or new construction in existing structure locations and additional construction that would result in a reduction in the area available for wildlife habitat would result in short- and long-term, minor to moderate, adverse impacts. Complete reuse or new construction in existing structure locations, combined with a reduction in the total number of structures and revegetation with species to support wildlife habitat in those locations, would result in short-term, negligible, adverse impacts due to rehabilitation, demolition, and/or construction activity, and long-term, minor, beneficial impacts to wildlife.

Summary – Wildlife Impact. Removal of some or all of the existing structures on the Center for use as open space or a park would have beneficial impacts on wildlife if the building sites were revegetated with species that could serve as wildlife habitat. If none of the existing structures would be reused or removed, and a new structure is erected in the area that is currently open space, and if any existing natural areas would be cleared and replaced with turf or nonnative vegetation, the area that supports wildlife habitat would be reduced. The impacts to wildlife would be short-term, negligible, and adverse due to construction activity, and long-term, minor, and adverse due to reduced habitat and potentially increased public use of the Center. Long-term, minor, beneficial impacts to wildlife would occur assuming some conversion of space to wildlife habitat.

Hydrology Impact

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, south of the intersection of the east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. The main drainage from the site is from Camp Coldwater Spring and the associated reservoir. Groundwater can be found within about 20 feet of the land surface in most places within the Minnehaha Creek watershed, including the Center.

Camp Coldwater Spring is fed by groundwater from upgradient of the Center. The spring is protected under state law if it is under the administration of a state entity, but if the Center were transferred to a private university, for example, this law would not be applicable. Factors that could affect the hydrologic features of the Center under the following scenarios include the amount of impermeable surface area and the maintenance of Camp Coldwater Reservoir.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under this scenario, the difference in use as open space versus as a park would not result in different impacts to hydrology. It could be assumed that there would be no change to Camp Coldwater Reservoir under this scenario as it could be considered an attractive feature of open space or a park. Future operation of the Center, with continued use of the existing open space as open space or a park without removing any existing structures, would result in the continuance of existing impacts to hydrology: localized, short and long-term, negligible, and adverse.

Should the recipient of the Center choose to remove existing structures and expand the area available for use as open space or as a park, the amount of impermeable surface would be reduced, which would increase the surface area available for absorption of rainwater and runoff, which would result in localized, long-term, minor to moderate, beneficial impacts to hydrology as local hydrologic processes would be positively affected.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Use of the Center as an interpretive / nature / history center could imply management of the Center to maintain or increase open space and to maintain or restore natural systems where possible. It could be assumed that there would be no change to Camp Coldwater Spring and Reservoir under this scenario as it could be considered an attractive feature of an interpretive / nature / history center.

Construction of a new structure at the Center for use as an interpretive / nature / history center in a new location without removal of any existing structures would result in localized long-term, minor, adverse impacts to hydrology due to an increase in impermeable surfaces. This would increase the surface flow through existing drainages. Construction of a new structure in a location of an existing structure, along with removal of some or all unused structures, would result in localized, long-term, minor to moderate, beneficial impacts to hydrology due to decreases in impermeable surfaces.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Under the training center / office park scenario, a combination of building reuse and new construction would result in increased density of buildings over the current condition, which would result in an increase in impermeable surfaces. In addition, because no conditions (retention of property or a conservation easement) would be placed on the transfer, Camp Coldwater Reservoir could be removed in favor of development of that space.

Impacts to hydrology from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario discussed previously. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space (which is permeable). These actions would result in localized, long-term, minor to moderate, adverse impacts to hydrology.

Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with no change to Camp Coldwater Reservoir, would result in localized, long-term, minor, beneficial impacts to hydrology.

Summary – Hydrology Impact. Camp Coldwater Reservoir could be considered an attractive feature of open space or a park or in proximity to an interpretive / nature / history center. Under these conditions, impacts would be short and long-term, negligible, and beneficial. Under the training center / office park scenario, a combination of building reuse and new construction would result in an increase in the density of buildings, which would result in an increase in impermeable surfaces. In addition, because no conditions (retention of property or a conservation easement) would be placed on the transfer, Camp Coldwater Reservoir could be removed in favor of development of that space. Taken together, these actions would result in localized, long-term, minor to moderate, adverse impacts to hydrology.

Water Quality Impact

The outflow from Camp Coldwater Reservoir is measured for water quality along with the flow rate. The water quality measurements include temperature and specific conductivity. The main factors that could affect water quality on the Center would be sediment loads in the short-term and nonpoint source pollution such as contaminants from vehicles and potentially use of fertilizer, insecticides, or herbicides in the long-term.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Short-term impacts to water quality would include an increase in sedimentation from ground disturbance resulting from building demolition. Under alternative B, no conditions (retention of property or a conservation easement) would be placed on the transfer that could require mitigation measures to protect water quality, such as revegetation and sediment traps. Short-term impacts would be minor and adverse should structures be removed with no provisions to protect water quality. Long-term impacts would be negligible to minor and beneficial with an increase in permeable surface and vegetation.

Under this scenario, the potential long-term impacts to water quality would vary depending on whether the use was open space or a park. Should the Center be converted to a park, with existing parking lots retained with the possibility of increased public use, minor adverse impacts to water quality would result. Parks typically contain manicured lawn that could be treated with fertilizers, pesticides, and herbicides that could leach into the water, adversely impacting water quality. Increased public use would result in increased use of existing parking areas where vehicles could leak fluids that would adversely impact water quality through stormwater drainage from parking areas. This scenario would result in localized, long-term, minor, adverse impacts to water quality.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Creation of an interpretive / nature / history center would result in an increase in public use, which could translate to an increase in the number of vehicles contributing to long-term nonpoint source pollution at the Center. Impacts under this scenario would be short and long-term, minor, and adverse, as described in the open space / park scenario because structures may or may not be constructed or demolished. Alternative B contains no conditions (retention of property or a conservation easement) that could be put in place requiring mitigation measures to protect water quality. The Center could be managed with natural vegetation or in a less natural condition, and possibly treated with chemicals that could contribute to nonpoint source pollution. However, if many buildings were removed and converted to natural open space, long-term, negligible to minor, beneficial impacts would occur.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to water quality from new construction and building reuse under the training center / office park scenario would be similar to the other two scenarios in that structures may be constructed or demolished without mitigation measures in place to protect water quality. Increased vehicle traffic could possibly be expected, as well as an overall increase in impervious surfaces. The grounds of a training center / office park may be more likely to be managed in a less natural state, possibly resulting in an increase in nonpoint source pollution. However, the potential impacts of this scenario would still be anticipated to be short and long-term, minor, and adverse, similar to those described in the other scenarios.

Summary-Water Quality Impacts. Short-term impacts would be minor and adverse should structures be removed or constructed with no provisions to protect water quality. Increased public use would result in increased use of existing or new parking areas where vehicles could leak fluids that would adversely impact water quality through stormwater drainage. This scenario would result in localized, long-term, minor, adverse impacts to water quality.

Wetlands Impact

The *National Wetlands Inventory* map that includes the Center site shows a single wetland within the Center boundaries: Camp Coldwater Reservoir. An onsite delineation also revealed the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

The main factor that could potentially impact wetlands at the Center would be construction work that would damage, alter, or destroy wetlands resources. Work affecting the course, current, or cross-section of a wetlands may require a permit from the appropriate federal, state, or local agencies. Local and state regulations designed to protect wetlands would reduce the negative impacts of construction work at the Center.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under this scenario, the difference in use as open space versus a park would not result in different impacts to wetlands. It could be assumed that the wetlands could be considered an attractive feature of open space or a park, and therefore efforts could be made to conserve the resource. Future operation of the Center with continued use of the existing open space as open space or a park without removing any structures would result in existing major adverse impacts to wetlands. Should the recipient of the Center choose to remove structures and expand the area available for use as open space or as a park, operation of vehicles or demolition work could potentially damage the wetlands resources on the Center as alternative B would not contain conditions (retention of property or a conservation easement) requiring the protection of wetlands. Mitigation measures such as minimizing disturbed areas and revegetation may or may not be implemented by the recipient. Under this scenario, impacts to wetlands would be short and long-term, negligible to moderate, and adverse, depending on the extent of disturbance to wetlands and any mitigation measures implemented. Removal of existing structures, eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major, beneficial impacts to wetlands.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Use of the Center as an interpretive / nature / history center could imply management of the Center to maintain or increase open space and to maintain or restore natural systems where possible. It could be assumed that wetlands could be considered an attractive feature of an interpretive / nature / history center and efforts could be made to conserve the resource. However, alternative B would not include any conditions (retention of property or a conservation easement) on the transfer that would protect wetlands resources.

Construction of a new structure at the Center for use as an interpretive / nature / history center in a new location where wetlands could be damaged would result in long-term, major, adverse impacts to wetlands. Construction of a new structure in a location of an existing structure, or reuse of an existing structure with mitigation measures to minimize the impact to wetlands, and revegetation efforts to restore any damage would result in short-term, minor to moderate, and long-term, negligible, adverse impacts to wetlands. Removal of existing structures eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major beneficial impacts to wetlands.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to wetlands from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario previously discussed. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space (which is a permeable surface).

Under the training center / office park scenario, a combination of building reuse and/or new construction would result in maintaining or increasing the density of buildings and damage to, or loss of, wetlands as alternative B would contain no conditions (retention of property or a conservation easement) protecting wetlands. This would result in continued long-term, major, adverse impacts to wetlands. Removal of existing structures, eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major, beneficial impacts to wetlands.

Summary – Wetlands Impact. The main factor that could potentially impact wetlands on the Center would be construction work that would damage, alter, or destroy wetlands resources. Under the training center / office park scenario, a combination of building reuse and new construction would result in increased density of buildings and damage to, or loss of, wetlands as alternative B would contain no conditions (retention of property or a conservation easement) protecting wetlands. This would result in long-term, moderate to major, adverse impacts to wetlands. Measures to minimize impacts to wetlands would result in short-term, minor to moderate, and long-term, negligible, adverse impacts to wetlands. Removal of existing structures eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major, beneficial impacts to wetlands.

Socioeconomics Impact

The Center is an integral part of the socioeconomic composition of the surrounding community. When operational, it employed as many as 200 workers. Today, it functions as an informal adjunct to adjoining properties and, when open to the public, a destination for visitors to the Camp Coldwater Spring area. One aspect of the socioeconomy that could be affected by the various alternatives (other than employment) is operation and maintenance at the Center.

No alternative or scenario anticipates new housing on the site, so there would be no effect on the residential character of the area, nor substantial opportunity for additional retail development. There could be differences in the onsite employment, which would result in differences among the scenarios in job creation and commuting patterns.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Creation of open space or a park would have little effect on the socioeconomic setting as there would be little new employment. Operations and maintenance costs would likely decrease if the area was converted to a park or open space. Parks and open space would be beneficial to residents of the nearby neighborhoods. Impacts under this alternative and scenario would be local, minor, and beneficial.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Depending on its size and staffing, this scenario could provide a modest economic boost to the nearby community, as such uses would attract visitors from a wide area. There would likely be greater employment on the site than with the open space / park scenario. Operations and maintenance costs would likely remain similar to those currently at the Center. Impacts under this scenario would be regional, minor, and beneficial.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. This scenario would likely bring the greatest number of jobs to the site and the community, although airport zoning regulation would limit the size of a training center or office park. At a typical density for one- and two-story buildings, a 27-acre office park would have about 300,000 square feet of building space and 1,000 employees. Depending on the eventual size and density of the office park, there could be localized traffic congestion at peak hours due to the limited capacity of the signalized intersection at East 54th Street, which might cause commuters to short-cut through Minnehaha Park. Without conditions, the eventual developer could fully develop the site and preclude general public access. This scenario would likely produce the greatest benefit to the local tax base. Operations and maintenance costs would likely increase as the buildings and grounds would need to be cared for. Overall, the impacts of this scenario would be regional, moderate, and beneficial, although some local, minor, adverse impacts on local transportation and traffic flow patterns could occur.

Summary – Socioeconomic Impact. Overall, impacts to the socioeconomic setting under alternative B would be, for the most part, beneficial. In the case of the open space / park and interpretive / nature / history center scenarios, the benefits would accrue to neighboring residents and regional visitors. In the case of an office park, the benefits would accrue through added employment in the region and an enhanced local tax base. This, however, would be accompanied by localized adverse traffic impacts. Operations and maintenance costs would increase under this scenario as well.

Health and Safety Impact

In anticipation of divestiture of the Center, the TCRC Closure Team conducted an extensive environmental cleanup in the late 1990s. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings.

Under alternative B, the Center would be transferred with no conditions, and there would be no requirement that the existing structures and fences be maintained to protect health and safety.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under alternative B, the public may continue to access the Center Monday through Friday, 9:00 a.m. to 3:00 p.m., excluding federal holidays. Recent installation of additional fencing to limit public access when the Center is open directs the public to Camp Coldwater Spring and Reservoir and prohibits entrance to site buildings. The public accessing this area of the Center could be exposed to normal hazards expected with open space or parks, such as uneven surfaces that could lead to slips, trips, or falls.

If some or all of the existing structures on the Center are removed, impacts to potential intruder and worker health and safety could be anticipated. Adverse impacts to worker and health safety in the short-term would be reduced to a negligible level with proper testing, handling, removal, and disposal of all hazardous materials such as asbestos and PCBs, and with the proper personal protective equipment (PPE) for workers. Potential short-term adverse impacts to the visiting public or potential intruders would be reduced to a negligible level through adequate fencing and monitoring of the demolition site(s). Long-term impacts to workers and potential intruders would be minor and beneficial as potential exposure to hazardous materials would be eliminated.

A recent safety evaluation (USFWS 2005) determined that “break-ins” into the Center grounds and buildings continue to occur, and potential intruders could be exposed to electrical hazards, physical hazards (such as broken windows), and slips and falls. Aging and weathering of the buildings over time would result in increasingly hazardous conditions that could be encountered by potential intruders if the unused structures are not removed, and would result in a short- and long-term, negligible, adverse impact to health and safety.

If the buildings of the Center remain, they would continue to deteriorate over time. Aging and weathering of the buildings would result in localized releases of asbestos, PCBs, radon, and

lead-based paint into the atmosphere, and workers and potential intruders accessing the buildings could be exposed. Should the recipient choose to implement mitigation measures including continued testing of the building environments for any sign of increased contamination, and with the proper PPE for workers accessing the buildings should contamination be detected, the localized long-term adverse impacts would be reduced to a negligible level.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. This scenario may involve building reuse and/or new construction, which would result in a different set of impacts. Building rehabilitation for reuse would adversely impact the health and safety of workers and the public. Mitigation measures such as retesting building environments for signs of increased contamination, and with the proper PPE for workers rehabilitating the buildings (should contamination be detected), would maintain the localized, long-term, adverse impacts to a negligible level. Mitigation measures, such as fencing and monitoring construction/demolition/rehabilitation sites and with the proper PPE for workers during construction, would reduce adverse construction impacts to a negligible level in the short-term. Reducing the number of unused structures at the Center that contain hazardous materials or situations that could be hazardous for workers or potential intruders would result in long-term, minor, beneficial impacts to health and safety.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Potential impacts to health and safety from the training center / office park scenario would range from localized, long-term, negligible, and adverse, to short-term, negligible, and adverse, and long-term, minor, and beneficial.

Summary – Health and Safety Impact. If some or all of the existing structures on the Center are removed, adverse impacts to potential intruder and worker health and safety would be reduced to a negligible level with proper testing, handling, removal, and disposal of all hazardous materials. Potential short-term adverse impacts to the visiting public or intruders would be reduced to a negligible level through adequate fencing and the monitoring of

demolition site(s). Long-term impacts to workers and potential intruders would be minor and beneficial as potential exposure to hazardous materials and situations would be eliminated.

Land Use Impact

The land use of the Center from initial construction in 1949 through closure in 1995 was for governmental light industrial purposes. The lands surrounding the Center are primarily government-owned and used for recreation, government offices or a medical center. The other prominent land use in the area is the Minneapolis-St. Paul International Airport, which lies southwest of the Center. Although the airport is not contiguous with the Center, airport zoning regulations and Federal Aviation Administration airspace obstruction rules play an important role in governing land uses at the Center.

In general, some of the structures presently located on the Center do not appear to conform to the airport zoning ordinance, and removal of the potentially nonconforming structures would result in a long-term beneficial impact on land use under any of the following scenarios.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Use of the Center as open space or a park by a university or nonfederal government entity without conditions (retention of property or a conservation easement) appears to be consistent with the present use of the Center. Use under this scenario would appear to conform to the existing area land uses as Minnehaha Park and Fort Snelling State Park are located on either side of the Center. Use under this scenario would also appear to conform to the airport zoning ordinance. All existing easements, licenses, rights-of-way, and leases could be honored while the land is being used as open space or a park. There could be short- and long-term, minor, beneficial impacts on land use under this scenario if existing structures were removed that are not currently in conformance.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Use of the Center as an interpretive / nature / history center by a university or nonfederal government entity appears to generally conform to uses in the surrounding area as Fort Snelling State Park has a visitor education component to its operations and is located just east of the Center. In general, management of the Center as an interpretive / nature / history center could be very similar to use under the open space / park scenario as the natural environment could be one area of focus. Use under this scenario would also appear to conform to the airport zoning ordinance. All existing easements, licenses, rights-of-way, and leases would be honored while the land is being used as an interpretive / nature / history center.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Use of the Center as a training center / office park by a university or nonfederal government entity would appear to generally conform to existing uses in the area. The Veterans Administration Medical Center located nearby, a complex offering professional and medical services, represents a use similar to a training center or office park. Use under this scenario would also appear to conform to the airport zoning ordinance. All existing easements, licenses, rights-of-way, and leases would be honored while the land is being used as a training center / office park.

If use of the Center as a training center / office park includes reuse of some existing structures and expansion of the development with construction of new structures, this type of use would be consistent with other area uses. There would be minor beneficial impacts on land use if nonconforming structures are removed under this scenario.

Summary – Land Use Impact. Uses under all three scenarios would be consistent with other area uses. There would be short- and long-term, minor, beneficial impacts if nonconforming structures were removed.

Public Use and Experience Impact

The Center, which is open to the public during specified hours, has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. During the time that the Center was operating in its official capacity (until 1995), it was not open for general public use and visitation. The Center is now used by the public on a frequent basis as an extension of the open space present in the surrounding parks and open areas. The area around Camp Coldwater Spring is viewed by some members of the public as being spiritually important and is used for meditation and a source of inspiration. Many groups of people have a special fondness for the Center property. Visitors to the Center

include American Indians, spiritualists, environmentalists, and residents of the nearby neighborhoods. The alternatives presented in this EIS along with the scenarios present differing levels of access to the Center by the public for continuing the personal rituals and meditations as they currently exist.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. There would be short- and long-term, moderate to major, adverse impacts to public use and experience under alternative B if the fenced section of the Center were to continue to be open to the public Monday through Friday, 9:00 a.m. to 3:00 p.m., and if no modifications are made to the Center, such as removal of unused structures. This is largely because the public has expressed an interest in longer hours and access on weekends.

Use of the Center by a university or nonfederal government entity as open space or a park would beneficially impact public use and experience if all structures were removed and the building sites restored to a natural condition, thereby expanding the open space area available for public use. Short-term impacts would be negligible to minor and adverse during the demolition process due to equipment operation and activity, thereby restricting public access. Long-term impacts would be moderate and beneficial as the visibility of the changes to the Center would be prominent and the area available for public use may be expanded.

Creation of open space and park facilities could preserve access to Camp Coldwater Spring, but that would not be assured. If access were denied or restricted, there would be an adverse impact to public use and experience. Impacts related to Camp Coldwater Spring access would possibly be regional, long-term, moderate, and adverse. However, because the spring is an important part of the natural setting and would be complementary to a park, it is more likely under this scenario that access would be preserved or even enhanced.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. New construction of a structure for use as an interpretive / nature / history center by a university or nonfederal government entity, in conjunction with retention of all unused

existing structures, would reduce the overall amount of space that could be devoted to public use of the natural environment. Short-term, negligible to minor, adverse impacts may occur due to construction equipment activity. Long-term beneficial impacts would be negligible.

Reuse of one or some existing structures at the Center, in conjunction with demolition of all remaining unused structures and rehabilitation of the building sites, would result in short-term, negligible to minor, adverse impacts due to rehabilitation work onsite limiting public access. Long-term, moderate, beneficial impacts would occur if public use of the Center was expanded.

Depending on the nature and type of facility and who is responsible for its operation, access to the spring could be denied, restricted, maintained, or enhanced. The spring could be integrated into the experience and be a subject for interpretation, but this would not be assured. If access were denied or restricted, there would be an adverse impact to public use and experience. If the spring were to be incorporated into the interpretive program, it would bring exposure to a wider audience and result in a beneficial impact. Impacts related to Camp Coldwater Spring access would possibly be regional, long-term, moderate, and would be either adverse or beneficial depending on whether future public access to Camp Coldwater Spring is further restricted or enhanced.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. New construction of a training center or office park by a university or nonfederal government entity without removal of unused existing structures would result in short-term, minor to moderate, adverse impacts during construction. This approach would significantly reduce or eliminate public use of the Center, depending on the policies of the recipient, which would have a long-term, major, adverse impact on public use and experience.

Reuse of some or all of the existing structures on the Center for a training center / office park, with no new construction, and continuing to allow public access to areas of current public use would result in short-term, negligible to minor, adverse impacts due to equipment and activity associated with rehabilitation work. Long-term, negligible to minor, beneficial impacts would occur if structures that are currently deteriorating and unused were restored.

This scenario could be the most likely to result in conditions on or elimination of public access to the Camp Coldwater Spring area. Without conditions (retention of property or a conservation easement), the eventual recipient could fully develop the site and preclude general public access and could have an economic incentive to do so. If access were denied or restricted, there would be a major adverse impact to public use and experience. Impacts related to Camp Coldwater Spring access would be regional, long-term, major, and adverse.

Summary – Public Use and Experience Impact. Creation of open space and park facilities could preserve access to Camp Coldwater Spring, but that would not be assured. If access were denied or restricted, there would be an adverse impact to public use and experience. Impacts related to Camp Coldwater Spring access would possibly be regional, short and long-term, moderate to major, and adverse. The training center / office park scenario would be the most likely to result in conditions on, or elimination of, public access to the spring area. Without conditions (retention of property or a conservation easement), the eventual recipient could fully develop the site and preclude general public access, and could have an economic incentive to do so.

Visual Resources Impact

The visual characteristics of the Center include a relatively limited viewshed (less than 1,000 feet and not expansive), dense woods and bluffs, nonnative vegetation and landscaping, driveways and parking lots, the Center buildings, and Camp Coldwater Spring and Reservoir. Characteristics along the Center boundaries include views of an urban setting with commercial and residential buildings and SH 55 and SH 68. The existing overall visual quality is average to below average because of lack of vividness and distinctiveness. The deteriorating conditions of the buildings and the lack of grounds maintenance are the primary contributing factors.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance. This scenario is expected to have the lowest density of buildings and the greatest open/nature space. No development is expected along the wooded bluff portion east of and adjacent to the Center; therefore, the wooded screen of the Center from the east is expected to remain.

Impacts. Removal of some or all of the existing structures from the Center under this scenario would result in short-term, negligible to minor, adverse impacts as equipment and activity associated with demolition would detract from visual resources. In the long-term, removal of the unused structures and rehabilitation of building sites would result in moderate to major beneficial impacts to visual resources by expanding the visual perception of open space, and removing the detracting element of deteriorating unused buildings. Removal of Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Because viewers outside the Center are in motion or at a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in no to negligible long-term impacts.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired. This scenario is expected to have a balance between building density and open/nature space. No development is expected along the wooded bluff portion east of and adjacent to the Center; therefore, the wooded screen of the Center from the east is expected to remain.

Impacts. Rehabilitation of some existing structures for use as an interpretive / nature / history center, in conjunction with removal of all remaining unused structures and rehabilitation of building sites, would result in improved visual character and quality. Short-term impacts would be negligible to minor and adverse due to equipment and activity associated with rehabilitation work. Long-term impacts would be minor to moderate and beneficial due to the removal of some structures and improved appearance of remaining structure(s) and increased natural areas. Removal of Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Because viewers outside the Center are in motion or at a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in no to negligible long-term impacts.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required. This scenario is expected to have the highest density of buildings and the least amount of open/ nature space. No development is expected along the wooded bluff portion east of and adjacent to the Center; therefore, the wooded screen of the Center from the east is expected to remain.

Impacts. Reuse of many or all existing structures on the Center for a training center / office park in conjunction with removal of any unused structures and rehabilitation of building sites would result in short-term, minor, adverse impacts to visual resources due to construction equipment and activities. Long-term impacts would be minor and beneficial as the outward appearance of the rehabilitated structures would detract less from the visual resources than the unused structures. It is assumed that new construction and design for a training center or office park scenario would be more visually and stylistically cohesive than the collection of existing Modern style primary buildings and vernacular, utilitarian support structures, also resulting in long-term, localized, minor, beneficial impacts. Removal of Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Because viewers outside the Center are in motion or at a distance, and the wooded screen on the east side is not expected

to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in no to negligible long-term impacts.

Summary – Visual Resources Impact. Overall impacts to visual resources under the open space / park scenario would be beneficial in the long-term. The existing buildings and structures create a low to medium visual experience. With each scenario, as more buildings are removed from the Center, the greater the beneficial effect would be. Long-term impact would be localized, beneficial, and range for negligible to major. Removal of Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Short-term impacts due to construction activities would be localized, short-term, adverse, and minor.

IMPACT ANALYSIS

ALTERNATIVE C – CONVEYANCE WITH CONDITIONS

Under alternative C, the Center would be conveyed to a university or nonfederal government entity with conditions (retention of property or a conservation easement) imposed on the future use of the Center that would limit the recipient's use or create affirmative obligations to be carried out by the recipient. The university or nonfederal government entity that acquires the Center would have conditions on subsequent transfer or sale of the Center. Affirmative obligations that may be placed on the transfer include those that create a duty in the recipient to manage or maintain the Center or its resources in a specific way. For example, the federal government could convey with conditions (retention of property or a conservation easement) that would be designed to protect natural, historical, and cultural resources. Methods by which conditions on use of the Center may be imposed by the transfer agreement include the use of a conservation easement or by retaining a portion of the Center.

Applicable Laws, Regulations, and Planning Documents

MNRRA Enabling Legislation and the MNRRA Comprehensive Plan

The relationship of the MNRRA enabling legislation and the MNRRA CMP to uses under alternative C would be much the same as that described for alternative B. Under the CMP, the MNRRA would retain review authority for federally funded or permitted activities that were to occur on the Center property, regardless of ownership. Additionally, upon conveyance, the Center property would continue to be subject to the requirements of the Critical Area legislation, as discussed below. Under alternative C, conditions could be imposed on the conveyance to ensure that site development occurs within the tenets of the MNRRA enabling legislation and the MNRRA CMP.

Mississippi River Corridor Critical Area Legislation

The relationship of the Critical Area legislation to uses under alternative C would be much the same as that described for alternative B. If the Center is acquired by a nonfederal government entity, regardless of the proposed land use, the entity would be required to adopt plans and zoning ordinances that implement the requirements of the Critical Areas Act of 1973, State Executive Order 79-19. In addition, under alternative C, conditions could be imposed on the conveyance to provide added protections to this critical area or to enhance those protections already in existence through the Critical Area legislation.

Minneapolis-St. Paul International Airport Zoning Ordinance

In any of the situations in alternative C, the transfer or sale of the Center property into nonfederal ownership would require evaluation of the airport zoning ordinance. Should the Center transfer to a nonfederal government entity, the agency that administers the Center would have to determine its compliance obligations pertaining to the ordinance. Much the same as discussed under alternative B, building height restrictions under the airspace obstruction zones and maximum construction height would need to be determined for new construction and rehabilitation of existing buildings. Uses would be evaluated under the safety zone requirements and no new construction would be allowed in Safety Zone A. Under alternative C, additional conditions could also be imposed through the conveyance that would limit building heights, vegetation to be planted, or uses.

Camp Coldwater Spring Protection Legislation – Minnesota Senate File 2049

Under alternative C, a university or nonfederal government entity would need to determine its compliance obligations with respect to the Camp Coldwater Spring protection legislation, sometimes referred to as Minnesota S.F. 2049, in any development and use of the property. Under alternative C, the federal government could also impose additional conditions to protect the flow of groundwater to and from the spring, as well as protections for the physical structure of the existing discharge and reservoir. Although this state law does not guarantee access to the Camp Coldwater Spring area, alternative C could permit conditions on the transfer of the Center that would assure public access.

National Historic Preservation Act

The federal government will evaluate application of the NHPA section 106 consultation process to determine appropriate mitigation potential adverse effects on historic properties prior to conveyance. Under alternative C, the additional conveyance conditions to be imposed could include mitigation measures to protect identified historic properties at the Center. Once transferred to a nonfederal entity, protection of historic properties would not be guaranteed without conditions placed on the conveyance because the NHPA section 106 responsibilities apply only to the federal government.

Archeological Resources Impact

Based on the 2001 study, the Center was organized into five zones based on the potential to contain archeological resources. Aerial photographs and grading maps for the Center show that Zone IV was disturbed to bedrock and there is no chance for in situ cultural materials. No further archeological study is needed in this zone. Zones I, III and V revealed no in situ cultural resources but still have some potential to contain them. These zones merit further testing or monitoring where an undertaking could impact undisturbed cultural resources. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the National Historic Landmark (NHL) and National Register Historic District (Historic District). The 2001 study also recommended revising the Fort Snelling NHL and Historic District boundaries to include Zones I and II (Clouse 2001). The Minnesota State

Historic Preservation Office (SHPO) will undertake the boundary revision at a later date all the studies done for this EIS.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting.

Impacts. This scenario emphasizes the natural environment. Impacts to archeological resources could occur as a result of land restoration, and building and infrastructure removal. Under this scenario, USDI would negotiate and execute a MOA defining future treatment of NHL and NRHP-listed and eligible archeological resources at the Center, in consultation with the SHPO, the ACHP, federally recognized tribes, and interested parties. This treatment would include methods to avoid, minimize, and mitigate for adverse effects. The treatment identified in the MOA would be embodied in a conservation easement to ensure adequate review and treatment in perpetuity. If the federal government retained the archeologically significant portions of the Center, the agency holding the land would have to comply with Section 106 for any future actions that could impact the archeological resources. The MOA would require an archeological survey prior to land restoration and building and infrastructure removal, targeting the areas that would be disturbed, to ensure that no archeological sites are impacted without adequate review. Impacts to archeological resources would be long-term, minor and beneficial. The effects would be long-term, minor and beneficial, because the MOA would define how to avoid impacts to archeological resources or how to document them for future study and interpretation prior to removal.

Interpretative / Nature / History Center Scenario

Assumptions. Under this scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. New structures could be built at the Center, and all or a portion of the existing buildings would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required if reuse is desired.

Impacts. This scenario combines a natural landscape with the potential reuse of some existing structures or the construction of new buildings. Impacts to archeological resources could occur as a result of land restoration, building and infrastructure removal, and as a result of new building or infrastructure construction.

Under this scenario, USDI would negotiate and execute a MOA defining future treatment of NHL and NRHP-listed and eligible archeological resources at the Center, in consultation with the SHPO, the ACHP, federally recognized tribes, and interested parties. This treatment would include methods to avoid, minimize, and mitigate for adverse effects. The treatment identified

in the MOA would be embodied in a conservation easement to ensure adequate review and treatment in perpetuity. If the federal government retained the archeologically significant portions of the Center, the agency holding the land would have to comply with Section 106 for any future actions that could impact the archeological resources. The MOA would require an archeological survey prior to land restoration and building and infrastructure removal, or new construction, targeting the areas that would be disturbed, to ensure that no archeological sites are impacted without adequate review. Impacts to archeological resources would be long-term, minor and beneficial. The effects would be minor and beneficial, because the MOA would define how to avoid impacts to archeological resources or how to document them for future study and interpretation prior to removal.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most of the existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required.

Impacts. This scenario emphasizes the built environment. Some or most of the buildings and structures of the USBM TCRC Historic District could be removed and new buildings could be constructed. The potential for disturbing archeological resources would be greatest under this alternative, as new building or infrastructure construction could impact archeological resources. With an interpretive center, the site's archeology could be interpreted.

Under this scenario, USDI would negotiate and execute a MOA defining future treatment of NHL and NRHP-listed and eligible archeological resources at the Center, in consultation with the SHPO, the ACHP, federally recognized tribes, and interested parties. This treatment would include methods to avoid, minimize, and mitigate for adverse effects. The treatment identified in the MOA would be embodied in a conservation easement to ensure adequate review and treatment in perpetuity. If the federal government retained the archeologically significant portions of the Center, the agency holding the land would have to comply with Section 106 for any future actions that could impact the archeological resources. The MOA would require an archeological survey prior to land restoration and building and infrastructure removal, or new construction, targeting the areas that would be disturbed, to ensure that no archeological sites are impacted without adequate review. Impacts to archeological resources would be long-term, minor and beneficial. The effects would be minor and beneficial, because the MOA would define how to avoid impacts to archeological resources or how to document them for future study and interpretation prior to removal.

Summary – Archeological Resources Impact. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete a MOA under the Section 106 process to properly consider the effects of the transfer on archeological resources and use a conservation easement for land containing National Register eligible or listed resources. The MOA and conservation easement would provide for a review process similar to that found in Section 106. Or the federal government could retain land containing significant archeological resources as a way to protect them. The federal agency holding the land would be required to

comply with Section 106 for future actions on the property. Under all three scenarios, the impacts to archeological resources would be long-term, minor and beneficial. The effects would be minor and beneficial, because the MOA would define how to avoid impacts to archeological resources or how to document them for future study and interpretation prior to removal.

Section 106 Assessment of Effect. The transfer of the Center out of federal control is considered to be an adverse effect under 36 C.F.R. 800.5. As noted above, the USDI would complete a MOA under the Section 106 process and negotiate a conservation easement to properly consider effects on National Register eligible or listed archeological resources and provide for long-term preservation. The MOA and easement could require that future actions taken by the new owner would to follow a process similar to Section 106. If the federal government retained some or all of the land, the federal agency holding the land would be required to comply with Section 106 for future actions on the property.

Historic Structures and Districts Impact

Coldwater spring, spring house and reservoir are contributing elements to the Fort Snelling NHL and Historic District. Approximately half of the land within the Center falls within the boundaries of the Fort Snelling NHL and somewhat less in the National Register Historic District. Eleven of the buildings and structures at the Center are contributing elements to the USBM TCRC Historic District. The three ore bins and other features in the landscape directly associated with the Center's activities are important features that contribute to the District. Although the Center did not build the Camp Coldwater reservoir and the spring house and these structures did not serve a specific function related to the Center's purposes, the structures are important elements in the Center's landscape. There are no individually NRHP-eligible structures within the Center.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting.

Impacts. Under this scenario, USDI would negotiate and execute a MOA defining treatment of the Fort Snelling NHL and Historic District resources and of the USBM TCRC Historic District in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties. This treatment would include methods to avoid, minimize, and mitigate adverse effects to these resources. As transfer out of federal control is an adverse effect (Section 800.5 of the ACHP regulations), conditions would be placed on the transfer through the MOA and a conservation easement to protect the Center's NHL and National Register resources.

As this scenario emphasizes the natural environment, most or all of the buildings and infrastructure of the USBM TCRC Historic District would be removed. This would constitute an adverse effect on the USBM TCRC Historic District. The impacts would be long-term, moderate and adverse. The adverse effects would be moderate because the MOA negotiated under Section 106 would contain provisions that mitigate for this adverse effect through, for example, written and photographic documentation. This documentation would be available for future research and interpretation of this historic district.

Coldwater spring, reservoir and spring house are contributing features of the Fort Snelling NHL and Historic District. As NHL resources, Section 800.10 of the ACHP regulations demands the highest level of review prior to allowing any adverse effects to occur. The MOA will address the treatment of these resources and make provisions for their permanent protection through a conservation easement. Permanent protection does not necessarily guarantee preservation of the resources in their current state, but the MOA and conservation easement would provide for an extensive public review process similar to that provided under Section 800.10 prior to allowing any adverse effects.

If the federal government retained ownership of the NHL and National Register listed and eligible resources, the agency holding the land would have to comply with the Section 106 process prior undertaking any action that could affect these resources.

Impacts to the Fort Snelling NHL and Historic District historic structures and districts under this scenario would cover a range of possibilities. Impacts to Coldwater Spring would be minor, as state law S.F. 2049 requires review of any action that could impact the flow to or from the spring, and the MOA would contain a strong review provision for any actions affecting the spring. The impacts to the spring house and reservoir could be minor to major, depending upon which era the site is restored to. If the site is restored to a more natural condition, then the spring house and reservoir would be removed, which would constitute an adverse effect on these NHL contributing resources, in terms of their relation to the story of the Fort Snelling Upper Post. In a more natural condition, Coldwater Spring's association with the frontier era of Fort Snelling could be enhanced. If future plans call for the restoration and preservation of the spring house and reservoir, then the impacts could be long-term, moderate and beneficial for these resources.

Interpretative / Nature / History Center Scenario

Assumptions. Under this scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. New structures could be built at the Center and all or a portion of the existing buildings would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required if reuse is desired.

Impacts. Under this scenario, USDI would negotiate and execute a MOA defining treatment of the Fort Snelling NHL and Historic District resources and of the USBM TCRC Historic District in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties. This treatment would include methods to avoid, minimize, and mitigate adverse

effects to these resources. As transfer out of federal control is an adverse effect (Section 800.5), conditions would be placed on the transfer through the MOA and a conservation easement to protect the Center's NHL and National Register resources. With an interpretive center, the site's history could be interpreted.

This scenario combines a natural landscape with the potential reuse of some existing structures or the construction of new buildings. Some or most of the buildings and structures of the USBM TCRC Historic District would be removed. The impacts to the USBM TCRC Historic District would be long-term, moderate, and adverse, because removing buildings and the associated infrastructure would adversely impact the district. The adverse effects could be mitigated through documentation of the site, which would then be available for future research and interpretive use. Also some features of the TCRC infrastructure, such as ore bins or building corners, could be retained as mitigation.

Coldwater spring, reservoir and spring house are contributing features of the Fort Snelling NHL and Historic District. As NHL resources, Section 800.10 of the ACHP regulations demands the highest level of review prior to allowing any adverse effects to occur. The MOA will address the treatment of these resources and make provisions for their permanent protection through a conservation easement. Permanent protection does not necessarily guarantee preservation of the resources in their current state, but the MOA and conservation easement would provide for an extensive public review process similar to that provided under Section 800.10 prior to allowing any adverse effects.

If the federal government retained ownership of the NHL and National Register listed and eligible resources, the agency holding the land would have to comply with the Section 106 process prior undertaking any action that could affect these resources.

Impacts to the Fort Snelling NHL and Historic District historic structures and districts under this scenario would cover a range of possibilities. Impacts to Coldwater Spring would be minor, as state law S.F. 2049 requires review of any action that could impact the flow to or from the spring, and the MOA would contain a strong review provision for any actions affecting the spring. The impacts to the spring house and reservoir could be minor to major, depending upon which era the site is restored to. If the site is restored to a more natural condition, then the spring house and reservoir would be removed, which would constitute an adverse effect on these NHL contributing resources, in terms of their relation to the story of the Fort Snelling Upper Post. In a more natural condition, Coldwater Spring's association with the frontier era of Fort Snelling could be enhanced. If future plans call for the restoration and preservation of the spring house and reservoir, then the impacts could be long-term, moderate and beneficial for these resources.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most of the existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required.

Impacts. Under this scenario, USDI would negotiate and execute a MOA defining future treatment of the Fort Snelling NHL and Historic District resources and of the USBM TCRC Historic District in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties. This treatment would include methods to avoid, minimize, and mitigate adverse effects to these resources. As transfer out of federal control is an adverse effect (Section 800.5), conditions would be placed on the transfer through the MOA and a conservation easement to protect the Center's NHL and National Register resources.

This scenario emphasizes the built environment. Some or most of the buildings and structures of the USBM TCRC Historic District could be removed and new buildings could be constructed. Therefore, the impacts to the USBM TCRC Historic District would be long-term, moderate and adverse, because removing some or all of the buildings and structures would impact the district adversely. Also, the construction of new buildings could adversely affect the USBM TCRC Historic District. The adverse effects could be mitigated through documentation of the USBM TCRC Historic District. This documentation would then be available for future research and interpretive use. Also some features of the TCRC infrastructure, such as ore bins or building corners, could be retained as mitigation. Adverse effects from new construction could be avoided by requiring such construction to comply with the Secretary of the Interior's Standards.

Coldwater spring, reservoir and spring house are contributing features of the Fort Snelling NHL and Historic District. As NHL resources, Section 800.10 of the ACHP regulations demands the highest level of review prior to allowing any adverse effects to occur. The MOA will address the treatment of these resources and make provisions for their permanent protection through a conservation easement. Permanent protection does not necessarily guarantee preservation of the resources in their current state, but the MOA and conservation easement could provide for an extensive public review process similar to that provided under Section 800.10 prior to allowing any adverse effects.

If the federal government retained ownership of the NHL and National Register listed and eligible resources, the agency holding the land would have to comply with the Section 106 process prior undertaking any action that could affect these resources.

Impacts to the Fort Snelling NHL and Historic District historic structures and districts under this scenario would cover a range of possibilities. Impacts to Coldwater Spring would be minor, as state law S.F. 2049 requires review of any action that could impact the flow to or from the spring, and the MOA would contain a strong review provision for any actions affecting the spring. The impacts to the spring house and reservoir could be minor to major, depending upon which era the site is restored to. If the site is restored to a more natural condition, then the spring house and reservoir would be removed, which would constitute an adverse effect on these NHL contributing resources, in terms of their relation to the story of the Fort Snelling Upper Post. In a more natural condition, Coldwater Spring's association with the frontier era of Fort Snelling could be enhanced. If future plans call for the restoration and preservation of the spring house and reservoir, then the impacts could be long-term, moderate and beneficial for these resources.

Summary – Historic Structures and Districts Impact. Prior to transfer of ownership of the Center to other than a federal owner, the USDI would complete the Section 106 process to

properly consider the effects of the transfer on the historic structures and districts. The relevant provisions of the MOA would be included in a conservation easement to ensure long-term protections equivalent to those provided under the Section 106 process.

Under all three scenarios, most or all of the buildings and infrastructure of the USBM TCRC Historic District could be removed or changed. This would constitute an adverse effect on the USBM TCRC Historic District. The impacts would be long-term, moderate and adverse. The adverse effects would be moderate because the MOA negotiated under Section 106 would contain provisions that mitigate for this adverse effect through, for example, written and photographic documentation. This documentation would be available for future research and interpretation of this historic district.

Impacts to the Fort Snelling NHL and Historic District historic structures and districts under each of the scenarios would cover a range of possibilities. Impacts to Coldwater Spring would be minor, as state law S.F. 2049 requires review of any action that could impact the flow to or from the spring, and the MOA would contain a strong review provision for any actions affecting the spring. The impacts to the spring house and reservoir could be minor to major, depending upon which era the site is restored to. If the site is restored to a more natural condition, then the spring house and reservoir would be removed, which would constitute an adverse effect on these NHL contributing resources, in terms of their relation to the story of the Fort Snelling Upper Post. In a more natural condition, Coldwater Spring's association with the frontier era of Fort Snelling could be enhanced. If future plans call for the restoration and preservation of the spring house and reservoir, then the impacts could be long-term, moderate and beneficial for these resources.

Section 106 Assessment of Effect. The transfer of the Center out of federal control is considered to be an adverse effect under 36 C.F.R. 800.5. As noted above, the USDI would complete the Section 106 process to properly consider effects on historic properties eligible for or listed on the National Register. The treatment of Historic resources associated with the Fort Snelling NHL and Historic District and the USBM TCRC Historic District would be addressed in the MOA and conservation easement.

Ethnographic Resources Impact

The studies completed for the EIS and Section 106 reviews located no ethnographic sites eligible for inclusion on the National Register. Oral traditions and histories collected during these investigations suggest that natural springs, like Coldwater Spring, are associated with ceremonies and deities of the Dakota Indian spiritual world. Coldwater Spring is currently used by some members of the federally recognized Dakota and Ojibwe communities, and other American Indians, as a source of water for ceremonies. Many American Indian communities have a traditional association with the area surrounding the spring.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting.

Impacts. Creation of an open space / park at the Center by a university or nonfederal government entity would work best to enhance the natural and ethnographic character of the area around Coldwater Spring. In the conservation easement that would be completed under this scenario, the USDI could ensure access to Coldwater Spring by American Indians and require the new owner to protect the spring and the area around it. Any state entity would also have to comply with S.F. 2049. If the USDI retained control of the spring and area around it, the federal government would continue to provide access and protect the site's character. Consequently, the impacts would be long-term, negligible, and beneficial.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Under this scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation elsewhere. In the conservation easement that would be completed under this scenario, the USDI could ensure access to Coldwater Spring by American Indians and require the new owner to protect the spring and the area around it. Any state entity would also have to comply with S.F. 2049. If the USDI retained control of the spring and area around it, the federal government would continue to provide access and protect the site's character. Consequently, the impacts would be long-term, negligible, and beneficial.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. This scenario calls for the most intense use of the land. Existing buildings could remain, new buildings constructed and the infrastructure rebuilt or expanded. This could create high levels of vehicular and pedestrian traffic at Coldwater Spring as well as create visual elements out of character with the ethnographic setting. In the conservation easement that would be completed under this scenario, the USDI could ensure access to Coldwater Spring by American Indians and require the new owner to protect the spring and the area around it. Any state entity would also have to comply with S.F. 2049. If the USDI retained control of the spring and area around it, the federal government would continue provide access and protect the site's character. Consequently, the impacts would be long-term, negligible, and beneficial.

Summary – Ethnographic Resources Impact. Under alternative C, conditions on the transfer of the Center to a university or nonfederal government entity could be used to require preservation of and provide access by American Indian communities to the Coldwater Spring. Overall impacts to ethnographic resources under this alternative would be long-term, minor and beneficial.

Section 106 Assessment of Effect. As no sites ethnographic sites eligible for the National Register are located on the Center, none will be affected by the no action alternative.

Soils Impact

The Center site contains the following soil series and types: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. It is important to note that recent archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads.

Factors that could affect soils at the Center under the following scenarios include disturbance and increases or decreases in impermeable surfaces associated with rehabilitation or new construction of structures.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Should the recipient opt to manage the Center as open space or a park without removal of any existing structures, there would be a continuance of short- and long-term, negligible, adverse impacts to soils.

Removal of structures would impact soils through the use of vehicles and demolition equipment, and could involve the need to fill in and/or regrade areas of existing foundations and/or parking lots. Under alternative C, required implementation of mitigation measures, such as importation of local topsoil and appropriate erosion-control measures, and sustained revegetation efforts to prevent erosion, would reduce the level of adverse impacts to area soils. Impacts to soils would be short-term, minor to moderate, and adverse. Long-term impacts to soils under this scenario would be minor to moderate and beneficial as removal of structures and replacement of impermeable surfaces with topsoil could return the area to a more natural condition.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Reuse of one or more of the existing structures on the Center for an interpretive / nature / history center would require substantial rehabilitation of the existing structures. Rehabilitation would have little impact on soils of the Center unless work on underground piping (such as water or sewerlines) would be required. New construction in the location of existing structures would result in more ground disturbance than rehabilitation, but overall, less disturbance than new construction in a new location.

The impacts on soils could also depend on whether existing structures would be removed in addition to the reuse and/or new construction. Elimination of existing structures with associated site rehabilitation could either offset any adverse impacts of new construction or have a beneficial impact on soils in the long-term by reducing the amount of impermeable surface.

Impacts to soils would be short-term, negligible to minor, and adverse and long-term, minor, and beneficial if new construction takes place in an area where human-made structures currently exist and other structures are removed from the Center.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to soils from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario. The

main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space.

Impacts to soils from the training center / office park scenario would be short and long-term, minor, and adverse with construction in new locations and an increase in the total number of structures on the Center. Impacts would be short and long-term, negligible, and adverse with complete reuse or new construction in existing structure locations, no reduction in overall number of structures, and with appropriate mitigation. Impacts would be short-term, negligible, and adverse, and long-term, negligible to minor, and beneficial with complete reuse or new construction in existing structure locations, with reduction in the total number of structures, and rehabilitation of soils in those locations.

Summary – Soils Impact. The impacts to soils depend largely on whether areas would remain or be converted to open space, whether or not existing structures would be demolished or restored, and if new structures are built, whether they are built at existing sites or new sites. Short-term, negligible, adverse impacts would occur if heavy equipment is brought in for demolition or construction. These impacts would be minimized by conditions placed on the new proprietor. Long-term, minor to moderate, adverse impacts would occur if open space is converted to buildings or a parking lot as impermeable surfaces would increase and topsoil would be covered up. Long-term, minor, beneficial impacts would occur if buildings are removed and soils restored.

Vegetation Impact

Natural vegetation exists on the site's bluff slope, toe slope, and on the Mississippi River floodplain terrace. The bluff slope located on the eastern boundary of the project site supports a maple – basswood forest community. The toe slope, maintained in a saturated condition by natural groundwater seepage, supports a black ash swamp community. Occupying the Mississippi River floodplain adjacent to the toe slope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm, green ash, black willow, and eastern cottonwood. Currently, the Center is occupied by business infrastructure and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from the natural, pre-settlement condition or have become established on sites disturbed by development.

Assumptions. Factors affecting native vegetation at the Center under all three scenarios may include disturbance due to rehabilitation and construction, and potential for revegetation with native species. The airport zoning ordinance may require that a university or nonfederal governmental entity manage trees on the Center such that no new trees would be allowed to grow in the portion of the Center that lies in Safety Zone A, and trees in all other areas of the Center may be required to be maintained at designated height requirements.

Impacts. Use of the Center under any of the scenarios by a university or nonfederal government entity under alternative C would be the same as described under alternative B,

except the ability to apply conditions under alternative C would result in beneficial impacts to vegetation. Using one of the mechanisms discussed in chapter 2 (retention of property or an easement), the new university or nonfederal governmental owner of the Center could be required to restore the sites of existing structures to native vegetation, remove existing nonnative vegetation, and/or control the spread of invasive species (such as buckthorn) in the future (see discussion of "Tree Management," chapter 3).

Summary – Vegetation Impact. Long-term impacts to vegetation would be moderate to major and beneficial if former building sites are revegetated using native species to restore historic vegetation schemes (such as oak savannah). Overall impacts to vegetation under the interpretive / nature / history center scenario would range from short- and long-term, negligible to minor, adverse or beneficial impacts, depending on the location selected (and the presence of native vegetation). Unlike alternative B, a covenant or easement could be created to mitigate or avoid long-term adverse impacts to vegetation, such as would result if native vegetation was converted to a parking lot or a new structure.

Wildlife Impact

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 bird species are common to this area, and of these, 120 are known to nest in this part of Minnesota. At least 50 mammals occur within the Mississippi River corridor and some are likely visitors on the Center.

Factors that could affect wildlife under the following scenarios include increased public use and amount of habitat.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Conditions (retention of property or a conservation easement) could be placed on the transfer under alternative C requiring the recipient to retain all existing areas of natural vegetation and revegetate any newly disturbed areas with native species that could support wildlife habitat, possibly resulting in long-term, negligible to minor, beneficial impacts.

Under this scenario, the open space / park could be assumed to be open for hours expanded from the current schedule, and the area could see increased public use, resulting in impacts to wildlife that would be long-term, negligible, and adverse.

Removal of some or all of the existing structures on the Center for use as open space or a park would have beneficial impacts on wildlife, if conditions were placed on the transfer requiring the building sites to be revegetated with species that could serve as wildlife habitat, particularly those native to the area's oak savanna. In the short-term, wildlife would be adversely impacted by the demolition activity; however, those impacts may be anticipated to be negligible. Impacts would be long-term, negligible to minor, and beneficial.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Use of the Center as an interpretive / nature / history center could imply management of the Center to maintain or increase open space and to maintain or restore natural systems where possible.

If conditions were placed on the transfer requiring the recipient to retain all existing areas of natural vegetation and revegetate any newly disturbed areas with native species that could support wildlife habitat, new construction could be limited to existing building sites. If no unused buildings would be removed, and existing structures would be rehabilitated for use or demolished with new construction in their place, there would be short-term negligible adverse impacts to wildlife due to disturbance from construction activity. In the long-term, the amount of wildlife habitat could remain the same; however, the potential increase in public use would result in negligible adverse impacts.

If existing structures are reused and all remaining unused structures are removed and the sites rehabilitated to a natural condition, the area that could support wildlife habitat could be expanded. The impacts to wildlife would be short-term, negligible, and adverse as rehabilitation and demolition activity would disrupt existing wildlife. Impacts in the long-term would be negligible and adverse due to potentially increased public use of the Center. Long-term, negligible to minor, beneficial impacts would occur if the area available for wildlife habitat could be expanded.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to wildlife from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center

scenario. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space (which would contain vegetation). Under alternative C, conditions could be placed on the transfer requiring the recipient to retain all existing areas of natural vegetation and revegetate any newly disturbed areas with native species that could support wildlife habitat.

Construction in new locations with no elimination of existing structures on the Center would result in short- and long-term, minor to moderate, adverse impacts to wildlife.

Conditions placed on the transfer that could require complete reuse or new construction in existing structure locations with no reduction in overall number of structures would result in short- and long-term, negligible, adverse impacts due to increased levels of activity. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures and revegetation with species to support wildlife habitat in those locations would result in short-term, negligible, adverse impacts due to rehabilitation, demolition, and/or construction activity. Long-term, minor, beneficial impacts to wildlife would occur assuming some rehabilitation of space to support wildlife habitat.

Summary – Wildlife Impact. Removal of some or all of the existing structures on the Center for use as open space or a park would have beneficial impacts on wildlife if the building sites were revegetated with species that would serve as wildlife habitat. If none of the existing structures would be reused or removed, and a new structure is erected in the area that is currently open space, and if any existing natural areas would be cleared and replaced with turf or nonnative vegetation, the area that supports wildlife habitat would be reduced. The impacts to wildlife would be short-term, negligible, and adverse due to construction activity, and long-term, minor, and adverse due to reduced habitat and potentially increased public use of the Center. Long-term, minor, beneficial impacts to wildlife would occur assuming some conversion of space to wildlife habitat.

Hydrology Impact

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, south of the intersection of east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. The main drainage from the site is from Camp Coldwater Spring and the associated reservoir. Groundwater can be found within about 20 feet of the land surface in most places within the Minnehaha Creek watershed, including the Center.

The Camp Coldwater Spring is fed by groundwater from upgradient of the Center and it is not expected that any of the alternatives proposed in this document would affect the source of the spring. Factors that could affect the hydrologic features of the Center under the following scenarios include the amount of impermeable surface area and the maintenance of Camp Coldwater Reservoir.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Creation of open space / a park at the Center by a university or nonfederal government entity could involve continued use of the existing open space as such or as a park. Under this scenario, the difference in use as open space versus as a park would not result in different impacts to hydrology. Under alternative C, conditions could be put in place to ensure that there would be no change to Camp Coldwater Reservoir.

Future operation of the Center with continued use of the existing open space as open space or a park without removing any existing structures would result in continuation of the existing localized, short- and long-term, negligible, adverse impacts to hydrology as described under alternative A.

Beneficial impacts to hydrology under this scenario could be localized, long-term, and minor to moderate, as described under alternative B.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Use of the Center as an interpretive / nature / history center could imply management of the Center to maintain or increase open space and to maintain or restore natural systems where possible. Under alternative C, conditions could be put in place to ensure that there would be no change to Camp Coldwater Reservoir.

Construction of a new structure at the Center for use as an interpretive / nature / history center in a location of an existing structure without removal of any other existing structures would result in a continuance of localized, short- and long-term, negligible, adverse impacts to hydrology because there would be no change in the amount of impermeable surfaces. Construction of a new structure in a location of an existing structure, along with removal of some or all unused structures, would result in localized, long-term, minor to moderate, beneficial impacts to hydrology due to a decrease in impermeable surfaces.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to hydrology from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space (a permeable surface).

Development of a training center / office park using a combination of building reuse and new construction in existing building locations with no reduction in the total number of structures would result in long-term, negligible to minor, adverse impacts to hydrology. Additional development in new locations and with an increase in impermeable surfaces (e.g., a parking lot) would result in a localized, long-term, minor to moderate, adverse impact to hydrology.

Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with no change of Camp Coldwater Reservoir, would result in localized, long-term, minor, beneficial impacts to hydrology.

Summary – Hydrology Impact. Camp Coldwater Reservoir could be considered an attractive feature of open space or a park or in proximity to an interpretive / nature / history center. Under these conditions, impacts could be short and long-term, negligible, and beneficial. Under the training center / office park scenario, a combination of building reuse and new construction would result in increased density of buildings over the current condition, which would result in an increase in impermeable surfaces and a localized, long-term, minor to moderate, adverse impact on hydrology.

Water Quality Impact

The outflow from Camp Coldwater Reservoir is measured for water quality along with the flow rate. The water quality measurements include temperature and specific conductivity.

The main factors that could affect water quality on the Center would be sediment loads in the short-term, and nonpoint source pollution such as contaminants from vehicles and potentially from use of fertilizer, insecticides or herbicides in the long-term.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some

or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Creation of open space / park at the Center by a university or nonfederal government entity could involve continued use of the existing open space as such or as a park. Short-term impacts to water quality could include increased sedimentation from ground disturbance resulting from building demolition. Under alternative C, conditions could be placed on the transfer that could require mitigation measures to protect water quality, such as revegetation and sediment traps.

Short-term impacts could be negligible and adverse if none of the existing structures are removed. Short-term adverse impacts resulting from removal of existing structures with implementation of mitigation measures would be minor.

Under this scenario, the potential long-term impacts to water quality could vary depending on whether the use was open space or a park. Continued use of existing open space with no elimination of existing structures or change in this type of use could result in long-term, negligible, adverse impacts to water quality. Should the Center be converted to a park, with existing parking lots retained with the possibility of increased public use, a conservation easement could be put in place under alternative C requiring mitigation measures to minimize adverse impacts to water quality. If the easement limited use of chemical fertilizers, herbicides, and other pesticides, nonpoint source pollution could be limited, and long-term adverse impacts to water quality would be negligible to minor.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Creation of an interpretive / nature / history center would result in increased public use, which could translate to an increase in the number of vehicles contributing to long-term nonpoint source pollution on the Center. Impacts under this scenario would be short-term, localized, negligible, and adverse, and localized, long-term, minor, and adverse, the same as those described for the open space / park scenario because structures may or may not be constructed or demolished.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as

few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to water quality from new construction and building reuse under the training center / office park scenario would be similar to the other scenarios in that structures may be constructed or demolished with mitigation measures in place to protect water quality. Increased vehicle traffic could be expected. The grounds of a training center / office park may be more likely to be managed in a cultivated fashion, adding a chemical load to the nonpoint source pollution of the Center. However, the potential impacts of this scenario would still be anticipated to be similar to those described in the foregoing scenarios.

Summary – Water Quality Impact. Short-term impacts would be reduced to negligible and adverse should structures be removed or constructed if provisions to protect water quality are established. Increased public use would result in increased use of existing or new parking areas where vehicles could leak fluids that could adversely impact water quality through stormwater drainage. This scenario would result in localized, long-term, minor, adverse impacts to water quality. Under alternative C , a conservation easement that includes mitigation measures to minimize adverse impacts to water quality could be implemented. If the easement were to limit use of chemical fertilizers, herbicides, and other pesticides, then nonpoint source pollution adverse impacts to water quality would be reduced to negligible levels.

Wetlands Impact

The *National Wetlands Inventory* map that includes the Center site shows a single wetland within the Center boundaries—Camp Coldwater Reservoir. An onsite delineation also revealed the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

The main factor that could potentially impact wetlands on the Center would be construction work that would damage, alter, or destroy wetlands resources. Work affecting the course, current, or cross-section of a wetlands may require a permit from one or all applicable federal, state, or local agencies.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under this scenario, the difference in use as open space versus as a park would not result in different impacts to wetlands. It could be assumed that the wetlands could be considered an attractive feature of open space or a park under this scenario; therefore, efforts could be made to conserve the resource. Future operation of the Center with continue use of the existing open space as open space or a park without removing any existing structures, would result in continued short- and long-term, major, adverse impacts to wetlands. Alternative B could contain conditions (retention of property or a conservation easement) requiring the protection of wetlands. Should the recipient of the Center choose to remove existing structures and expand the area available for use as open space or as a park, operation of vehicles or demolition work that could damage the wetlands resources on the Center could be minimized, and rehabilitation required. Under this scenario impacts to wetlands would be short-term, minor to moderate, and long-term, negligible, and adverse. Removal of existing structures, eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major, beneficial impacts to wetlands.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required for reuse.

Impacts. Use of the Center as an interpretive / nature / history center could imply management of the Center to maintain or increase open space and to maintain or restore natural systems where possible. It could be assumed that wetlands could be considered an attractive feature of an interpretive / nature / history center and efforts could be made to conserve the resource.

Under alternative C, conditions could be placed on the transfer to protect wetlands resources on the Center.

Rehabilitation of an existing structure at the Center for use as an interpretive / nature / history center without removal of any existing structures would have short-term, negligible, and long-term, moderate to major, adverse impacts on wetlands. Construction of a new structure could be limited to existing structure locations and could require rehabilitation of any damage to wetlands resources, possibly resulting in short-term, minor to moderate, adverse impacts. Removal of existing structures eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major, beneficial impacts to wetlands.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for

reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.
Impacts. Impacts to wetlands from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space (a permeable surface). Alternative C could contain conditions protecting wetlands. Complete reuse or new construction in existing structure locations, in combination with mitigation measures to minimize impacts to wetlands and revegetation efforts to restore any damage, would result in short-term, minor to moderate, adverse impacts, and long-term, major, adverse impacts to wetlands. Removal of existing structures, eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major, beneficial impacts to wetlands.

Summary – Wetlands Impacts. The main factor that could potentially impact wetlands at the Center would be construction work that would damage, alter, or destroy wetlands resources. Alternative C would allow for conditions (retention of property or a conservation easement) that would prevent unacceptable damage to, or loss of, wetlands. Measures to minimize impacts to wetlands would result in short-term, minor to moderate, and long-term, moderate to major, adverse impacts to wetlands. Removal of existing structures, eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major, beneficial impacts to wetlands. Future operation of the Center, without removing any existing structures, would result in continued short- and long-term, major, adverse impacts to wetlands.

Socioeconomic Impact

The Center is an integral part of the socioeconomic composition of the surrounding community. When operational, it employed as many as 200 workers. Today, it functions as an informal adjunct to adjoining properties and, when open to the public, a destination for visitors to the Camp Coldwater Spring area. One aspect of the socioeconomy that could be affected by the various alternatives (other than employment) is operation and maintenance of the Center.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. The impact of this scenario would be similar to that of alternative B. However, depending on the conditions placed on the transfer, the Center could serve either more or fewer visitors than currently. Operations and maintenance costs would likely decrease if the area was converted to a park or open space. Impacts of this scenario would be local, moderate, and beneficial.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. The impact of this scenario would be similar to alternative B, except conditions such as a conservation easement could require more park and open space land. Operations and maintenance costs would likely decrease or remain similar if the area was converted to this type of facility. The impacts of this scenario would be regional, moderate, and beneficial.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. The impact of this scenario would be similar to alternative B, except that conditions could be placed on the scale and density of the development to avoid adverse traffic impacts, preserve public use and access to portions of the site, and maintain some natural areas. Operations and maintenance costs would likely increase if the area was converted to this type of facility. The impact of this scenario would be regional, minor, and beneficial.

Summary – Socioeconomic Impact. Overall impacts to the socioeconomic setting under alternative C would be for the most part beneficial. In the case of the park and interpretive center, the benefits would accrue to the neighboring residents and regional visitors. In the case of an office park, the benefits would accrue through added employment in the region and an enhanced local tax base. However, these benefits would be less than in alternative B assuming conditions would be placed on the size of the development and the number of employees to avoid localized adverse traffic impacts.

Health and Safety Impact

In anticipation of divestiture of the Center, the TCRC Closure Team conducted an extensive environmental cleanup in the late 1990s. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Impacts to health and safety under this scenario, without removal of any structures would remain localized, long-term, negligible, and adverse.

If unused buildings were removed, the impacts would be short-term, negligible, and adverse with mitigation measures such as testing building environments for contamination and with the proper PPE for workers. Long-term impacts would be minor and beneficial due to elimination of potential hazardous situations for workers and potential intruders.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Impacts to health and safety under this scenario without removal of any structures would remain localized, long-term, negligible, and adverse.

If unused buildings were removed, the impacts would be short-term, negligible, and adverse with mitigation measures such as testing building environments for contamination and with the proper PPE for workers. Long-term impacts would be minor and beneficial due to elimination of potential hazardous situations for workers and potential intruders.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to health and safety under this scenario without removal of any structures would remain localized, long-term, negligible, and adverse.

If unused buildings were removed, the impacts would be short-term, negligible, and adverse with mitigation measures such as testing building environments for contamination and with the proper PPE for workers. Long-term impacts would be minor and beneficial due to elimination of potential hazardous situations for workers and potential intruders.

Summary – Health and Safety Impact. Impacts to health and safety under these scenarios would remain localized, long-term, negligible, and adverse.

If unused buildings were removed, the impacts would be short-term, negligible, and adverse with mitigation measures such as testing building environments for contamination and with the proper PPE for workers. Long-term impacts would be minor and beneficial due to elimination of potential hazardous situations for workers and potential intruders.

Land Use Impact

The land use of the Center from the initial construction in 1949 through closure in 1995 was for governmental light industrial purposes. The lands surrounding the Center are primarily government-owned and used for recreation or for government offices or a medical center. The other prominent land use in the area is the Minneapolis-St. Paul International Airport, which lies southwest of the Center. Although the airport is not contiguous with the Center, airport zoning regulations and Federal Aviation Administration airspace obstruction rules play an important role in governing land uses at the Center.

Impacts. Analysis of land use by scenario is not presented in this section because impacts to land use for all scenarios under alternative C would be the same as those described for all scenarios under alternative B. All scenarios appear to be consistent with existing area land uses, and adding conditions (retention of property or a conservation easement) to the transfer of the Center under alternative C may not result in additional beneficial impacts.

Summary. Use of the Center under all three scenarios would be consistent with other area uses, regardless of any imposed conditions (retention of property or a conservation easement). Long-term, minor, beneficial impacts on land use would result under any scenario if existing structures were removed that are not currently in conformance.

Public Use and Experience Impact

The Center, which is open to the public during specified hours, has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. During the time that the Center was operating in its official capacity (until 1995), it was not open for general public use and visitation. The Center is now used by the public on a frequent basis as an extension of the open space present in the surrounding parks and open areas. The area around Camp Coldwater Spring is viewed by some members of the public as being spiritually important and is used for meditation and a source of inspiration. Many groups of people have a special fondness for the Center property. Visitors to the Center include American Indians, spiritualists, environmentalists, and residents of the nearby neighborhoods. The alternatives presented in this EIS along with the scenarios present differing levels of access to the Center by the public for continuing the personal rituals and meditations as they currently exist.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under alternative C, conditions could be placed on the transfer of the Center, such as requiring any unused structures to be removed and the building sites revegetated, and requiring that the hours the Center is open to the public be expanded. This requirement could expand the area available for public use and beneficial impacts to public use and experience would result. However, any easement could be subject to competing and conflicting uses.

Short-term impacts would be negligible to minor and adverse during the demolition process due to equipment operation and activity. Long-term impacts would be moderate to major and beneficial as the visibility of the changes to the Center may be prominent and the area and hours available for public use could be expanded.

The impact of this scenario on access to the Camp Coldwater Spring area would be similar to that of alternative B, but continued vehicular could be assured with a permanent easement. This could eliminate the possibility of restricted access inherent in alternative B, and perhaps even enhance public use and experience. Impacts with regard to access to the Camp Coldwater Spring area would be regional, long-term, minor, and beneficial.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would

be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Reuse or new construction at an existing building site of one or more existing structures at the Center, in conjunction with demolition of all remaining unused structures and rehabilitation of the building sites (in compliance with a restriction placed on the transfer under alternative C), would result in short-term, negligible to minor, adverse impacts due to construction work onsite. Conditions placed on the transfer could require expanded hours at the Center. Long-term, moderate, beneficial impacts to public use and experience would be expected through the expanded area and hours available for public use of the Center.

As with the open space / park scenario, conditions placed on the disposition of the Center could avoid the possible adverse effects of alternative B with regard to access to the Camp Coldwater Spring area. It is also more likely that, with conditions (retention of property or a conservation easement), the spring area could become an integral part of the educational and interpretive experience. This could enhance public use and experience, and may attract a wider audience. Impacts with regard to access to the Camp Coldwater Spring area would be regional, long-term, moderate, and beneficial.

Training Center / Office Park Scenario Impact

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Conditions placed on the transfer requiring reuse or new construction at an existing building site of some or all of the existing structures on the Center for a training center / office park, along with a restriction on the transfer requiring expanded public access to areas of current public use, would result in short-term, negligible to minor, adverse impacts due to equipment activity associated with construction work and long-term, minor to moderate, beneficial, impacts due to expanded hours of availability of the Center for public use, and revitalization of the structures that are currently deteriorating and vacant.

Under this scenario, much of the site would be developed for uses that are presumably unavailable to the general public, but conditions could be placed to preserve the spring and public access to that area. However, because the primary use of the site would be for offices, access would likely be more limited in area and perhaps time than the more public-use-oriented scenarios. Furthermore, the nature of the conditions (retention of property or a conservation easement) could make implementation of this scenario less likely, as they could reduce the economic potential of the site and burden the eventual owner with additional administrative and security costs. Impacts with regard to access to the Camp Coldwater Spring area would be regional, long-term, minor, and beneficial.

Summary – Public Use and Experience Impact. Overall impacts to the ability to visit the Camp Coldwater Springs area would be preserved under alternative C. Access and the nature of public visitation would be provided through a conservation easement or the federal government could retain ownership and management of that portion of the Center.

Visual Resources Impact

The visual characteristics of the Center include a relatively limited viewshed (less than 1,000 feet and not expansive), dense woods and bluffs, nonnative vegetation and landscaping, driveways and parking lots, the Center buildings, and Camp Coldwater Spring and Reservoir. Characteristics along the Center boundaries include views of an urban setting with commercial and residential buildings and SH 55 and SH 68. The existing overall visual quality is average to below average because of lack of vividness and distinctiveness. The deteriorating conditions of the buildings and the lack of grounds maintenance are the primary contributing factors.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance. This scenario is expected to have the lowest density of buildings and the greatest open/nature space. No development is expected along the wooded bluff area east of and adjacent to the Center; therefore, the wooded screen of the Center from the east is expected to remain.

Impacts. Under alternative C, if conditions are placed on the transfer that require exterior maintenance or removal of unused structures with rehabilitation of building sites, in the long-term there would be negligible to minor and beneficial impacts to visual resources because the modifications may be noticeable and exterior improvements may improve the feeling associated with the viewshed. If all existing structures are removed, the impacts to visual resources would be moderate to major and beneficial because the impact would be noticeable, if not readily apparent. Rehabilitation or removal of some existing structures for use of the Center as open space or a park would result in short-term, negligible to minor, adverse impacts due to equipment and activity associated with rehabilitation work.

Removing some or all of the buildings would improve visual character and quality by expanding open, natural space, and removing the detracting and disjointed elements. Because viewers outside the Center are in motion or at a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore, result in no to negligible long-term impacts.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired. This scenario is expected to have a balance between building density and open/nature space. No development is expected along the wooded bluff area east of and adjacent to the Center; therefore, the wooded screen of the Center from the east is expected to remain.

Impacts. Rehabilitation or replacement of some existing structures for use as an interpretive / nature / history center, in conjunction with removal of all remaining unused structures and rehabilitation of the building sites, would result in short-term, negligible to minor, adverse impacts due to equipment and activity associated with rehabilitation work. Long-term, minor to moderate, beneficial impacts to visual resources would occur if some structures were removed and the appearance of the remaining structure(s) improved. Because viewers outside the Center are in motion or at a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore, result in negligible long-term impacts, if any.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required. This scenario is expected to have the highest density of buildings and the least amount of open / nature space. No development is expected along the wooded bluff area east of and adjacent to the Center; therefore, the wooded screen of the Center from the east is expected to remain.

Impacts. Reuse or reconstruction of many or all existing structures on the Center for a training enter / office park in conjunction with removal of any unused structures and rehabilitation of building sites would result in short-term, minor, adverse impacts to visual resources due to construction equipment and activity. Long-term impacts would be negligible to minor and beneficial as the outward appearance of the rehabilitated or new structures would detract less from the visual resources than the unused structures. Because viewers outside the Center are in motion or from a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore, result in no to negligible long-term impacts.

Summary – Visual Resources Impact. Overall impacts to visual resources under the open space/park scenario would be beneficial in the long-term. The existing buildings and structures create a low to medium visual experience. With each scenario, as more buildings are removed from the Center, the greater the beneficial effect would be. Long-term impacts would

be localized and beneficial and range from negligible to major. Removal of Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center, but could be mitigated through the use of conditions on the transfer under this alternative. Short-term impacts due to construction activities would be localized, short-term, adverse, and minor.

IMPACT ANALYSIS

PREFERRED ALTERNATIVE D

MODIFICATION AND RETENTION BY THE FEDERAL GOVERNMENT

Under alternative D, the federal government would manage and bear the cost of modification for all or part of the land, structures, or other improvements prior to conveyance or retention of the Center. Following completion of the modifications, the Center would be disposed through transfer to a university or nonfederal government entity without conditions (alternative B), transfer to a university or nonfederal government entity with conditions (alternative C), or retention by the federal government for use such as those described under the three conceptual land use situations.

Alternative D as described in the draft EIS included three conceptual land-use scenarios. The Department of the Interior has selected Alternative D, with land use scenario Park/Open Space as its **preferred alternative.**

Applicable Laws, Regulations, and Planning Documents

The application of laws, regulations, and planning documents governing use of the Center under alternative D would be the same as under alternative B if the Center were conveyed without conditions, or the same as under alternative C if the Center were conveyed with conditions. The difference between this alternative and alternatives B and C is that under alternative D, the federal government would modify the Center prior to conveyance or retaining the Center by demolishing structures, removing paved areas, or other related activities. Any modifications made by the federal government prior to conveyance or retention would be made in compliance with all laws, regulations, and planning documents that govern use of and resources located at the Center.

Archeological Resources Impact

Based on the 2001 study, the Center was organized into five zones based on the potential to yield archeological information. Aerial photographs and grading maps for the Center show that Zone IV was disturbed to bedrock and there was no chance for in situ cultural materials. No further archeological study is needed in this zone. Zones I, III and V revealed no in situ cultural resources but still have some potential to contain them. These zones merit further testing or monitoring where an undertaking could impact undisturbed cultural resources. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the National Historic Landmark (NHL) and National Register Historic District (Historic District). The 2001 study also recommended revising to the Fort Snelling NHL and Historic District boundaries to include Zones I and II (Clouse 2001). The Minnesota State

Historic Preservation Office (SHPO) will undertake the boundary revision at a later date. For purposes of this EIS, it is assumed the boundaries include the entire Center.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI may have no control over any landscaping plans or other measures to modify the land, or the USDI could apply conservation easements or other conditions to the Center as described under alternative C.

Impacts. Prior to taking any actions that could impact National Register listed or eligible archeological resources, the USDI must comply with Section 106 of the National Historic Preservation Act, which would include completing a MOA. Under this alternative, the first action that could impact archeological resources would be the land restoration and building removal or modification, as the USDI would undertake this work prior to transfer or retention. The USDI would, therefore, have to complete the Section 106 process to address the potential impacts to archeological resources.

Transferring federal property with National Register eligible or listed sites on it to non-federal entities is also an action that has the potential to adversely affect archeological resources. If the transfer is without restrictions, then the USDI must assume a future owner could destroy all the archeological resources on the property, and the USDI must develop the appropriate studies and recovery efforts, which would be provided for in the MOA. In this case, the USDI would most likely conduct extensive archeological recovery and data recordation.

If the transfer was with restrictions, the USDI, through the MOA and the easement, would require any future owner to undertake appropriate surveys for and treatment of archeological resources prior to taking any action that could adversely impact them.

If the USDI retains the property, then it would address archeological resources through the MOA, which could include provisions for further archeological testing. Where future actions could affect archeological resources, the agency managing the land for USDI would either follow the provisions of the MOA or undertake a new Section 106 review.

If the Center is conveyed without permanent restrictions or an easement, the impacts would be long-term, moderate and adverse because the resources could be entirely destroyed. For the purposes of the EIS, the effect would be moderate in that the information available from data recovery would be available for future research and interpretation. If the Center is conveyed with conditions, the impacts would be long-term, minor and beneficial because the resources would be protected in place or treated appropriately under the MOA. If the Center is retained, the impacts would be long-term, minor and beneficial as the agency holding the land for the USDI would have to comply with the MOA and complete additional Section 106 reviews as needed.

Per the requirements of the MOA, the USDI would conduct an archeological survey to avoid, minimize or mitigate for National Register listed or eligible archeological resources that might be affected by building and infrastructure removal and land restoration.

Interpretative / Nature / History Center Scenario

Assumptions. Under this scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. New structures could be built at the Center, and all or a portion of the existing buildings would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required if reuse is desired. After conveyance, the USDI may have no control over any landscaping plans or other measures to modify the land, or the USDI could apply conservation easements or other conditions on the Center as described under alternative C.

Impacts. Prior to taking any actions that could impact National Register listed or eligible archeological resources, the USDI must comply with Section 106 of the National Historic Preservation Act, which would include completing a MOA. Under this alternative, the first action that could impact archeological resources would be the land restoration and building removal or modification, as the USDI would undertake this work prior to transfer or retention. This scenario could have less potential to effect archeological resources, as fewer buildings less infrastructure might be removed than on the Open Space scenario. This would mean less ground disturbance. The USDI would have to complete the Section 106 process to address the potential impacts to archeological resources prior to any modifications to the property.

Transferring federal property with National Register eligible or listed sites to non-federal entities is also an action that has the potential to adversely affect such resources and the known and potential effects must be addressed prior to the transfer. If the transfer is without restrictions, then the USDI must assume a future owner could destroy all the archeological resources on the property and must develop the appropriate studies and recovery efforts, which would be provided for in the MOA. In this case, the USDI would most likely conduct extensive archeological recovery and data recordation.

If the transfer was with restrictions, the USDI, through the MOA and the easement, would require any future owner to undertake appropriate surveys for and treatment of archeological resources prior to taking any action that could adversely impact them.

If the USDI retains the property, then it would conduct archeological survey and/or monitoring as described in the MOA. Where future actions could affect archeological resources, the agency managing the land for USDI would either follow the provisions of the MOA or undertake a new Section 106 review process.

If the Center is conveyed without permanent restrictions or an easement, the impacts would be long-term, moderate and adverse, because the resources could be entirely destroyed. For the purposes of the EIS, the effect would be moderate in that the information available from data recovery would be available for future research and interpretation. If the Center is conveyed with conditions, the impacts would be long-term, minor and beneficial, because the resources

would be protected in place or treated appropriately under the MOA. If the Center is retained, the impacts would be long-term, minor and beneficial, as the agency holding the land for the USDI would have to comply with the MOA or complete additional Section 106 reviews as needed.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Under this scenario, use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most of the existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required. After conveyance, the USDI may have no control over any landscaping plans or other measures to modify the land, or the USDI could apply conservation easements or other conditions on the Center as described under alternative C.

Impacts. Prior to taking any actions that could impact National Register listed or eligible archeological resources, the USDI must comply with Section 106 of the National Historic Preservation Act, which would include completing a MOA. Under this alternative, the first action that could impact archeological resources would be the land restoration and building removal or modification, as the USDI would undertake this work prior to transfer or retention. The USDI would, therefore, have to complete the Section 106 process to address the potential impacts to archeological resources.

Transferring federal property with National Register eligible or listed sites to non-federal entities is also an action that has the potential to adversely affect such resources and must be addressed prior to the transfer. If the transfer is without restrictions, then the USDI must assume a future owner could destroy all the archeological resources on the property and must develop the appropriate studies and recovery efforts, which would be provided for in the MOA. In this case, the USDI would most likely conduct extensive archeological recovery and data recordation.

If the transfer was with restrictions, the USDI, through the MOA and the easement, would require any future owner to undertake appropriate surveys for and treatment of archeological resources prior to taking any action that could adversely impact them.

If the USDI retains the property, then it would most likely conduct an archeological survey and/or monitoring before or during land restoration and building removal or modifications. Where future actions could affect archeological resources, the agency managing the land for USDI would either follow the provisions of the MOA or undertake a new Section 106 review process.

If the Center is conveyed without permanent restrictions or an easement, the impacts would be long-term, moderate and adverse, because the resources could be entirely destroyed. For the purposes of the EIS, the effect would be moderate in that the information available from data recovery would be available for future research and interpretation. If the Center is conveyed with conditions, the impacts would be long-term and minor to moderate because the resources would be protected in place or treated appropriately under the MOA. If the Center is retained,

the impacts would be long-term and minor to moderate, as the agency holding the land for the USDI would have to comply with the MOA or complete additional Section 106 reviews.

Summary - Archeological Resources Impact . As discussed above, a range of effects could occur based on which scenario is implemented and what kind of transfer, if any, occurs. Transfer out of federal control without restrictions would lead to recovering as much of the archeological information from the land as reasonable, rather than leaving it in place and undisturbed. Transfer with restrictions or retention by the USDI would lead the USDI to minimize disturbing the property's archeological resources. The USDI would conduct an archeological study prior to any ground-disturbing activities to identify any archeological resources that might be affected and would develop a plan, per the MOA, to avoid, minimize or mitigate the effects during building and infrastructure removal, and land restoration activities. The MOA or Section 106 (for any portion the USDI retains) would guide future actions on the property that might affect archeological resources.

Section 106 Assessment of Effect. The transfer of the Center out of federal control is considered to be an adverse effect under 36 C.F.R. 800.5. As noted above, the USDI would complete the Section 106 process to properly consider and mitigate for adverse effects on archeological resources.

Moderate adverse impacts could occur to National Register listed or eligible archeological resources during building and infrastructure removal and land restoration. The MOA, however, would require an archeological survey targeting the areas that would be disturbed to ensure that no archeological sites are impacted without adequate review. The archeological surveys and historical research conducted to date suggest that the potential for affecting such resources is low.

Historic Structures and Districts Impact

Coldwater Spring, spring house and reservoir are contributing elements to the Fort Snelling NHL and Historic District. Approximately half of the land within the Center falls within the boundaries of the Fort Snelling NHL and somewhat less in the National Register Historic District. Eleven of the buildings and structures at the Center are contributing elements to the USBM TCRC Historic District. The three ore bins and other features in the landscape directly associated with the Center's activities are important features that contribute to the District. Although the Center did not build the reservoir and spring house and these structures did not serve a specific function related to the Center's purposes, the structures are important elements in the Center's landscape. There are no individually NRHP-eligible structures within the Center. (Henning 2002).

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be

accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under this scenario, USDI, in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties would negotiate and execute a MOA defining treatment of historic structures and districts at the Center. This treatment would include methods to avoid, minimize, and mitigate for adverse effects to the resources.

Under this scenario the emphasis is on the natural environment and it is assumed that most or all of the buildings and structures of the USBM TCRC Historic District would be removed, which would constitute an adverse effect, under Section 106. The USDI would complete all necessary documentation of the structures and the district as required by the MOA. The impacts would be long-term, moderate and adverse because the resources would be destroyed, but documentation of the buildings and district would be available for future research and interpretive use.

The impacts to and treatment of Coldwater Spring, spring house and reservoir would be defined in the MOA before any transfer took place, with or without restrictions. If the Center was transferred without restrictions, the EIS assumes that the Fort Snelling NHL and Historic District contributing resources (Coldwater Spring, spring house and reservoir) could be destroyed at some future date. Consequently, the MOA would require that they be documented and could require additional compensation prior to the transfer. If the USDI transferred the Center with restrictions or retained the Center, then the MOA would define the specific treatment of the NHL and Historic District resources.

If transferred without restriction, the impacts to the NHL and Historic District resources would be long-term, moderate to major and adverse. If the property is transferred with permanent restrictions or if it is retained by the USDI, then the impacts to the NHL and Historic District resources would be long-term, minor, and beneficial because the resources would be protected.

Under the preferred alternative, the some or all of the buildings and structures associated with the USBM TCRC Historic District could be removed, and the site would be restored to open space/park. USDI would complete all necessary inventories and data recovery plans, documentation of the structures and district prior to their removal. The impact would be long-term, moderate and adverse because the resources would be permanently removed from context, but the information available in the recovered data would be available for future research. Impacts to the Coldwater Spring would be long-term, minor and beneficial because the resource would be protected in place. The impacts to the spring house and reservoir could be minor to major, depending upon which era the site is restored to. If the site is restored to a more natural condition, then the spring house and reservoir would be removed, which would constitute an adverse effect on these NHL contributing resources, in terms of their relation to the story of the Fort Snelling Upper Post. In a more natural condition, Coldwater Spring's association with the frontier era of Fort Snelling could be enhanced. If future plans call for the

restoration and preservation of the spring house and reservoir, then the impacts could be long-term, moderate and beneficial for these resources.

Interpretative / Nature / History Center Scenario

Assumptions. Under this scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. New structures could be built at the Center, and all or a portion of the existing buildings would be demolished. Most existing buildings have the potential for reuse; however, some are in better conditions and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required if reuse is desired.

Impacts. Under this scenario, USDI, in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties would negotiate and execute a MOA defining treatment of historic structures and districts at the Center. This treatment would include methods to avoid, minimize, and mitigate for adverse effects to the resources.

Under this scenario some of the buildings and structures of the USBM TCRC Historic District would be removed and some might be left. New construction could also occur, although limited. Removing any buildings or structures that contribute to the USBM TCRC Historic District would constitute an adverse effect under Section 106. The USDI would complete all necessary documentation of the structures and the district as required by the MOA prior to transfer or retention. The impacts would be long-term, moderate, and adverse because the resources would be destroyed but documentation of the buildings and district would be available for future research and interpretive use.

The impacts to and treatment of Coldwater Spring, spring house and reservoir would be defined in the MOA before any transfer took place, with or without restrictions. If the Center was transferred without restrictions, the EIS assumes that the Fort Snelling NHL and Historic District contributing resources (Coldwater Spring, spring house and reservoir) could be destroyed at some future date. Consequently, the MOA would require that they be documented and could require additional compensation prior to the transfer. If the USDI transferred the Center with restrictions or retained the Center, then the MOA would define the specific treatment of the NHL and Historic District resources.

If transferred without restriction, the impacts to the NHL and Historic District resources would be long-term, moderate to major and adverse. If the property is transferred with permanent restrictions or if it is retained by the USDI, then the impacts to the NHL and Historic District resources would be long-term, minor, and beneficial because the resources would be protected.

Under the preferred alternative, the some or all of the buildings and structures associated with the USBM TCRC Historic District could be removed and the site would be restored to open space/park. USDI would complete all necessary inventories and data recovery plans, documentation of the structures and district prior to their removal. The impact would be long-term, moderate and adverse because the resources would be permanently removed from context, but the information available in the recovered data would be available for future

research. Impacts to the Coldwater Spring would be long-term, minor and beneficial because the resource would be protected in place. The impacts to the spring house and reservoir could be minor to major, depending upon which era the site is restored to. If the site is restored to a more natural condition, then the spring house and reservoir would be removed, which would constitute an adverse effect on these NHL contributing resources, in terms of their relation to the story of the Fort Snelling Upper Post. In a more natural condition, Coldwater Spring's association with the frontier era of Fort Snelling could be enhanced. If future plans call for the restoration and preservation of the spring house and reservoir, then the impacts could be long-term, moderate and beneficial for these resources.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Under this scenario, use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most of the existing buildings have the potential for reuse; however, some are in better conditions and more readily lend themselves to reuse. Most of the infrastructure is not reusable in the current form; improvements may be required.

Impacts. Under this scenario, USDI, in consultation with the SHPO, the ACHP, federally recognized tribes and interested parties would negotiate and execute a MOA defining treatment of historic structures and districts at the Center. This treatment would include methods to avoid, minimize, and mitigate for adverse effects to the resources.

Under this scenario the emphasis is on the built environment. This scenario assumes that some or most of the buildings and structures of the USBM TCRC Historic District could be removed and replaced with new ones or reused. Therefore, the impacts to the USBM TCRC Historic District would be long-term, moderate, and adverse, because removing some or all of the buildings and structures would impact the district adversely. Also, the construction of new buildings on the USBM TCRC Historic District could cause adverse effects to the District. The MOA, with or without restrictions on the land transfer, would require that the adverse effects be mitigated through documentation of the USBM TCRC Historic District, which would then be available for future research and interpretive use.

The impacts to and treatment of Coldwater Spring, spring house and reservoir would be defined in the MOA before any transfer took place, with or without restrictions. If the Center was transferred without restrictions, the EIS assumes that the Fort Snelling NHL and Historic District contributing resources (Coldwater Spring, spring house and reservoir) could be destroyed at some future date. Consequently, the MOA would require that they be documented and could require additional compensation prior to the transfer. If the USDI transferred the Center with restrictions or retained the Center, then the MOA would define the specific treatment of the NHL and Historic District resources.

If transferred without restriction, the impacts to the NHL and Historic District resources would be long-term, moderate to major and adverse. If the property is transferred with permanent restrictions or if it is retained by the USDI, then the impacts to the NHL and Historic District resources would be long-term, minor, and beneficial because the resources would be protected.

Under the preferred alternative, some or all of the buildings and structures associated with the USBM TCRC Historic District could be removed and the site would be restored to open space/park. USDI would complete all necessary inventories and data recovery plans, documentation of the structures and district prior to their removal. The impact would be long-term, moderate and adverse because the resources would be permanently removed from context, but the information available in the recovered data would be available for future research. Impacts to the Coldwater Spring would be long-term, minor and beneficial because the resource would be protected in place. The impacts to the spring house and reservoir could be minor to major, depending upon which era the site is restored to. If the site is restored to a more natural condition, then the spring house and reservoir would be removed, which would constitute an adverse effect on these NHL contributing resources, in terms of their relation to the story of the Fort Snelling Upper Post. In a more natural condition, Coldwater Spring's association with the frontier era of Fort Snelling could be enhanced. If future plans call for the restoration and preservation of the spring house and reservoir, then the impacts could be long-term, moderate and beneficial for these resources.

Summary – Historic Structures and Resources Impact. Prior to transfer of ownership of the Center to other than a federal owner, the USDI would complete the Section 106 process to consider the effects of the transfer on the historic structures and districts. Regardless of the land use scenarios described above, the overall impact on the resource would be long-term, moderate, and adverse to the USBM TCRC Historic District because some or all of the contributing buildings and structures would be permanently removed from context, but the information available in the recovered data would be available for future research.

Impacts to Coldwater Spring, the reservoir and spring house would be the same as to USBM TCRC Historic District if no conservation easements or other conditions are in place. The impacts could be long-term, major and adverse. The USDI transferred the property with a conservation easement then the MOA would define the treatment of Coldwater Spring, reservoir and spring house. Impacts to these resources would be long-term, minor, and beneficial.

Under the preferred alternative, some or all of the buildings and structures associated with the USBM TCRC Historic District could be removed and the site would be restored to open space/park. USDI would complete all necessary inventories and data recovery plans, documentation of the structures and district prior to their removal. The impact would be long-term, moderate and adverse because the resources would be permanently removed from context, but the information available in the recovered data would be available for future research. Impacts to the Coldwater Spring would be long-term, minor and beneficial because the resource would be protected in place. The impacts to the spring house and reservoir could be minor to major, depending upon which era the site is restored to. If the site is restored to a more natural condition, then the spring house and reservoir would be removed, which would constitute an adverse effect on these NHL contributing resources, in terms of their relation to the story of the Fort Snelling Upper Post. In a more natural condition, Coldwater Spring's association with the frontier era of Fort Snelling could be enhanced. If future plans call for the restoration and preservation of the spring house and reservoir, then the impacts could be long-term, moderate and beneficial for these resources.

Section 106 Assessment of Effect. The transfer of the Center out of federal control is considered to be an adverse effect under 36 C.F.R. 800.5. As noted above, the USDI would complete the section 106 process to consider and mitigate adverse effects on historic structures and districts.

Under the preferred alternative, removal of some or all of the buildings associated with the USBM TCRC Historic District would constitute an adverse effect. USDI would complete the Section 106 process, including a MOA, to consider and address that adverse effect.

Ethnographic Resources Impact

The studies completed for the EIS and Section 106 reviews located no ethnographic sites eligible for inclusion on the National Register. Oral traditions and histories collected during these investigations suggest that natural springs, like Coldwater Spring, are associated with ceremonies and deities of the Dakota Indian spiritual world. Coldwater Spring is currently used by some members of the federally recognized Dakota and Ojibwe communities, and other American Indians, as a source of water for ceremonies. Many American Indian communities have a traditional association with the area surrounding the spring.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurface would be subject to disturbance.

Impacts. Access to Coldwater Spring and protection of the water flow are the two critical concerns from an ethnographic perspective. Many who regard the spring as sacred or culturally significant would prefer the more natural setting and idea of greater public use anticipated by the Open Space/Park Scenario. However, the specific nature of the transfer will determine the overall effect of the action on the spring as an ethnographic resource.

If the USDI transfers the land without restriction, a future owner could deny access to the spring or modify in such ways as to diminish or destroy the ethnographic character. As the Coldwater Spring and Reservoir are contributing features of the Fort Snelling NHL and Historic District, if a state agency or entity acquired the land, it would have to comply with the Minnesota Historic Sites Act and S.F. 2049. Compliance, however, would not guarantee protection or access, as after consultation the resource could still be diminished or destroyed. If transferred to a non-state entity, that entity would not have to comply with the Minnesota

Historic Sites Act or S.F. 2049. Thus transfer out of federal control with no restrictions would result in long-term, major and adverse impacts on Coldwater Spring.

If the USDI transfers the land with restrictions, such as in a conservation easement, then it can make provisions for permanent access to the spring by those groups that hold it as an ethnographic resource and make provisions for its protection.

If the USDI retains ownership of the land, then the agency managing the land will provide access to the spring as required or provided for by federal laws, regulations and executive orders. While the federal government is not bound by the state law concerning the flow of water to the spring, the agency managing the land would have to comply with laws and regulations affecting the spring as a contributing feature to the Fort Snelling NHL and Historic District. As some tribes have declared the spring sacred, the agency would also have to comply with E.O. 13007.

If transferred with restrictions or retained by the USDI, the spring would remain accessible and protected. Therefore the impacts would be long-term, negligible to minor, and beneficial. If no conditions were placed on the transfer, the recipient could restrict access to the spring and alter its character, resulting in long-term, moderate to major, adverse impacts.

If the property went to a federal owner, the federal owner would have to follow the requirements of historic preservation laws, executive orders and NPS regulations, which along with the idea of the preferred alternative, would ensure the long-term protection of the spring and access to it.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual land use scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Access to Coldwater Spring and protection of the water flow are the two critical concerns from an ethnographic perspective. Under this scenario, Coldwater Spring and Reservoir would most likely be features protected and interpreted. However, the specific nature of the transfer will determine the overall effect of the action on the spring as an ethnographic resource.

If the USDI transfers the land without restriction, a future owner could deny access to the spring or modify in such ways as to diminish or destroy the ethnographic character. As the Coldwater Spring and Reservoir are contributing features of the Fort Snelling NHL and Historic District, if a state agency or entity acquired the land, it would have to comply with the Minnesota Historic Sites Act and S.F. 2049. Compliance, however, would not guarantee protection or access, as after consultation the resource could still be diminished or destroyed. If transferred to a non-state entity, that entity would not have to comply with the Minnesota

Historic Sites Act or S.F. 2049. Thus transfer out of federal control with no restrictions would result in long-term, major, and adverse impacts on Coldwater Spring.

If the USDI transfers the land with restrictions, such as in a conservation easement, then it can make provisions for permanent access to the spring by those groups that hold it as an ethnographic resource and make provisions for its protection.

If the USDI retains ownership of the land, then the agency managing the land will provide access to the spring as required or provided for by federal laws, regulations and executive orders. While the federal government is not bound by the state law concerning the flow of water to the spring, the agency managing the land would have to comply with laws and regulations affecting the spring as a contributing feature to the Fort Snelling NHL and Historic District. As some tribes have declared the spring sacred, the agency would also have to comply with E.O. 13007.

If transferred with restrictions or retained by the USDI, the spring would remain accessible and protected. Therefore the impacts would be long-term, negligible to minor, beneficial. If no conditions were placed on the transfer, the recipient could restrict access to the spring and alter its character, resulting in long-term, moderate to major, adverse impacts.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Access to Coldwater Spring and protection of the water flow are the two critical concerns from an ethnographic perspective. Under this scenario, the emphasis on an office park or training center could impinge on the ethnographic aspects of the site, even to the point of excluding visitors. However, the specific nature of the transfer will determine the overall effect of the action on the spring as an ethnographic resource.

If the USDI transfers the land without restriction, a future owner could deny access to the spring or modify in such ways as to diminish or destroy the ethnographic character. As the Coldwater Spring and Reservoir are contributing features of the Fort Snelling NHL and Historic District, if a state agency or entity acquired the land, it would have to comply with the Minnesota Historic Sites Act and S.F. 2049. Compliance, however, would not guarantee protection or access, as after consultation the resource could still be diminished or destroyed. If transferred to a non-state entity, that entity would not have to comply with the Minnesota Historic Sites Act or S.F. 2049. Thus transfer out of federal control with no restrictions would result in long-term, major, and adverse impacts on Coldwater Spring.

If the USDI transfers the land with restrictions, such as in a conservation easement, then it can make provisions for permanent access to the spring by those groups that hold it as an ethnographic resource and make provisions for its protection.

If the USDI retains ownership of the land, then the agency managing the land will provide access to the spring as required or provided for by federal laws, regulations and executive orders. While the federal government is not bound by the state law concerning the flow of water to the spring, the agency managing the land would have to comply with laws and regulations affecting the spring as a contributing feature to the Fort Snelling NHL and Historic District. As some tribes have declared the spring sacred, the agency would also have to comply with E.O. 13007.

If transferred with restrictions or retained by the USDI, the spring would remain accessible and protected. Therefore the impacts would be long-term, negligible to minor, beneficial. If no conditions were placed on the transfer, the recipient could restrict access to the spring and alter its character, resulting in long-term, moderate to major, adverse impacts.

If the property went to a federal owner, federal owner would have to follow the requirements of historic preservation laws, executive orders and NPS regulations, which along with the idea of the preferred alternative, would ensure the long-term protection of the spring and access to it.

Summary – Ethnographic Resources Impact. Impacts range widely under alternative D because the Center could be transferred either with or without conditions after modification. If conditions are not placed on the transfer under alternative D, there would be no guarantee of preservation of or access by American Indian communities to Coldwater Spring, and the impacts would be similar to those discussed under Alternative B. The impacts would be long-term, major and adverse. If the Center is transferred with protective conditions, impacts would be similar to alternative C and result in long-term, minor to moderate, beneficial impacts to ethnographic resources. If the federal government retained the land, then the federal government would have to follow the requirements of historic preservation laws, executive orders and NPS regulations, which along with the idea of the preferred alternative, would ensure the long-term protection of the spring and access to it.

Section 106 Compliance. As no ethnographic resources eligible for or listed on the National Register of Historic Places lie on the Center, none will be impacted under this alternative. Sites can be ethnographically significant, however, without being eligible for or listed on the National Register, as discussed above.

Soils Impact

The Center site contains the following soil series and types: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. It is important to note that recent archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads.

Factors that could affect soils at the Center under the following scenarios include disturbance and increases or decreases in impermeable surfaces associated with rehabilitation or construction of new structures.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation could then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under alternative D, the federal government would manage and bear the cost of modification for all or part of the land, structures, or other improvements prior to conveyance or retention of the Center.

Under the **preferred alternative,** some soil disturbance would occur when existing buildings, roads and other infrastructure were modified. Most soil disturbance would occur in areas that were heavily disturbed when the buildings, roads and infrastructure were originally constructed. There would be a significant decrease in impermeable surfaces.

Impacts to soils in the short-term from federal modifications prior to transfer could include disturbance to and compaction of soils from operation of equipment, and exposure of soils to erosion. These impacts could be mitigated during the modification process through minimizing the area of disturbance. Revegetating disturbed areas could reduce soil erosion once demolition/construction is complete, and prior to transfer. With mitigation, short-term impacts would be negligible to minor and adverse.

The nature of long-term impacts to soils would depend on efforts made to protect the soils of the Center once the modifications are made and after transfer of the Center to the recipient. Rehabilitation of former building sites may require filling with locally acquired topsoil. If the Center is then transferred with no covenant or easement (conservation or other), the recipient would not be required to sustain any revegetation efforts, which if neglected would result in long-term, minor to moderate, adverse impacts to soils as the disturbed areas could either immediately erode or be overtaken by buckthorn and erode over time.

If the transfer of the Center includes conditions requiring revegetated areas to be actively managed until they become established, and that all future imported topsoils be obtained locally, the long-term impacts to soils would be minor to moderate and beneficial.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the

natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.
Impacts. Under alternative D, the federal government would manage and bear the cost of modification for all or part of the land, structures, or other improvements prior to conveyance of the Center. Conditions may or may not be placed on the transfer of the Center requiring the recipient to take steps to avoid adverse impacts to soils.

Demolition of structures, rehabilitation of structures, and/or any new construction prior to transfer would result in short-term adverse impacts to soils ranging from negligible to minor. Mitigation measures implemented during modification, such as minimizing the amount of disturbed area, utilizing locally obtained topsoils, and revegetating to prevent erosion, would help to reduce short-term impacts. Any new construction could be located in previous building sites, also minimizing both short- and long-term impacts.

Once modifications are complete, if the Center is transferred to a recipient who elects not to sustain revegetation efforts initiated prior to transfer, long-term impacts to soils would be minor to moderate and adverse, depending on the extent of the modification prior to transfer. If the transfer of the Center includes conditions requiring revegetated areas to be actively managed until they become established, and that all future imported topsoils be obtained locally, the long-term impacts to soils would be minor to moderate and beneficial.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Under alternative D, the federal government would manage and bear the cost for modification of all or part of the land, structures, or other improvements prior to conveyance of the Center. Short-term adverse impacts to soils ranging from negligible to minor in intensity would result from modification of the Center prior to transfer for the same reasons as those described under the interpretive / nature / history center scenario.

Should the Center transfer without the benefit of conditions, long-term impacts to soils from actions taken by the recipient would be minor to moderate and adverse for the same reasons as described under the interpretive / nature / history center, or should the recipient increase the density of structures after transfer (thus reducing the impermeable surfaces because taller structures would have a smaller footprint). Because it could be assumed that use of the Center as a training center / office park could necessitate that a greater portion of the grounds would be covered by structures than in the open space / park or interpretive / nature / history center scenarios, long-term beneficial impacts would be negligible to minor with mitigation.

Summary – Soils Impact. The impacts to soils depend largely on whether areas would remain or be converted to open space, whether or not existing structures would be demolished or restored, and if new structures are built, whether they are built at existing sites or new sites. Short-term adverse impacts could occur if heavy equipment is brought in for demolition or construction prior to transfer, and could be mitigated to a negligible level. Long-term, minor to moderate, adverse impacts could occur subsequent to transfer of the Center if open space is converted to buildings or a parking lot as impermeable surfaces would increase and topsoil would be covered up, and if the recipient does not sustain any revegetation efforts initiated prior to transfer to prevent future soil erosion. These impacts could be minimized by conditions placed on the recipient.

Vegetation Impact

Natural vegetation exists on the site's bluff slope, toe slope, and on the Mississippi River floodplain terrace. The bluff slope located on the eastern boundary of the project site supports a maple – basswood forest community. The toe slope, maintained in a saturated condition by natural groundwater seepage, supports a black ash swamp community. Occupying the Mississippi River floodplain adjacent to the toe slope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm, green ash, black willow, and eastern cottonwood. Currently, the Center is occupied by business infrastructure and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from the natural, pre-settlement condition or have become established on sites disturbed by development.

Factors affecting native vegetation at the Center under the following scenarios may include disturbance due to rehabilitation and construction, and potential for revegetation with native species. The airport zoning ordinance may require that a university or nonfederal government entity manage trees on the Center so that no new trees would be allowed to grow in Safety Zone A,.

Impacts. Modification of the Center prior to transfer, under any of the scenarios under alternative D, would result in the same short-term, negligible to minor, adverse impacts to vegetation as described under alternative B. Should the center be transferred without a conservation easement and the recipient not elect to implement or continue mitigation measures to protect native vegetation, long-term impacts would be the same adverse impacts described under alternative B.

The ability to apply conditions under alternative D could enhance the beneficial impacts to vegetation. Through conditions placed on the transfer of the Center, the new university or nonfederal government entity of the Center could be required to restore the sites of existing structures to native vegetation, remove existing nonnative vegetation, and/or control the spread of invasive species (such as buckthorn) in the future. Under these conditions, long-term impacts to vegetation would be the same beneficial impacts as described under alternative B.

Summary – Vegetation Impact. The impacts to vegetation under alternative D would be short-term, negligible to minor, and adverse, and long-term, moderate to major, and beneficial as described under alternative B.

Under the preferred alternative, modification of some or all of the Center's buildings and roads would result in short-term, negligible to minor, adverse impacts to existing vegetation. With subsequent restoration of the site under the open space/park scenario, the long-term impacts to vegetation would be moderate to major and beneficial.

Wildlife Impact

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 bird species are common to this area, and of these, 120 are known to nest in this part of Minnesota. At least 50 mammals occur within the Mississippi River corridor and some are likely visitors on the Center.

Factors that could affect wildlife under the following scenarios would include the intensity of public use and amount of habitat.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under preferred alternative D, the federal government would manage and bear the cost for modification of all or part of the land, structures, or other improvements and could revegetate former building sites with species that could serve as wildlife habitat to convert the Center to open space or a park prior to transfer to a university or nonfederal government entity.

In the short-term, wildlife would be adversely impacted by the demolition activity performed prior to transfer; however, those impacts are anticipated to be negligible.

Long-term impacts on wildlife from actions taken by the recipient would depend on efforts made to maintain wildlife habitat. If the Center were transferred without conditions, the recipient would not be required to sustain revegetation initiated prior to transfer, and could replace any existing natural wildlife habitat with lawn and/or cultivated and/or nonnative vegetation, which would have a long-term, negligible to minor, adverse impact on wildlife due to the reduction in habitat.

If the Center is transferred with conditions protecting wildlife and their habitat, the long-term impacts would be negligible to minor and beneficial as the amount of wildlife habitat for local populations could be maintained, if not increased.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Impacts to wildlife would be the same as those described for the open space / park scenario as any structures used for an interpretive / nature / history center would not have a substantive impact on the remaining wildlife habitat. In the short-term, wildlife would be adversely impacted by the demolition activity performed prior to transfer; however, those impacts are anticipated to be negligible. Long-term impacts on wildlife from actions taken by the recipient would depend on efforts made to maintain wildlife habitat. If the Center were transferred without conditions, long-term, negligible to minor, adverse impacts to wildlife would result from reduction in habitat. If the Center is transferred with conditions protecting wildlife and their habitat, the long-term impacts would be negligible to minor and beneficial as the amount of wildlife habitat for local populations could be maintained, if not increased.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to wildlife would be the same as those described for the interpretive / nature / history center, except under the training center / office park scenario, the density of structures would remain the same prior to transfer. In the short-term, wildlife would be adversely impacted by the demolition / rehabilitation / construction activity performed prior to transfer; however, those impacts are anticipated to be negligible. Long-term impacts on wildlife from actions taken by the recipient would depend on efforts made to maintain wildlife habitat. If the Center were transferred without conditions, long-term, minor, adverse impacts to wildlife would result from reduction in habitat. If the Center is transferred with conditions protecting wildlife and their habitat, the long-term impacts would be negligible to minor and beneficial as the amount of wildlife habitat for local populations could be maintained, if not increased.

Summary – Wildlife Impact. Removal of some or all of the existing structures on the Center for use as open space or a park would have beneficial impacts on wildlife if the building sites were revegetated prior to transfer with species that could serve as wildlife habitat, and if the recipient sustained those revegetation efforts. If none of the existing structures would be reused or removed, and a new structure is erected in the area that is currently open space, and if any existing natural areas would be cleared and replaced with turf or nonnative vegetation, the area that supports wildlife habitat could be reduced. The impacts to wildlife would be short-term, negligible, and adverse due to construction activity, and long-term, minor, and adverse due to reduced habitat and potentially increased public use of the Center. Long-term, minor, beneficial impacts to wildlife would occur assuming some conversion of space to wildlife habitat.

Hydrology Impact

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, just south of the intersection of the east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. The main drainage from the site is from Camp Coldwater Spring and the associated reservoir. Groundwater can be found within about 20 feet of the land surface in most places within the Minnehaha Creek watershed, including the Center.

Camp Coldwater Spring is fed by groundwater from upgradient of the Center and it is not expected that any of the alternatives proposed in this document would affect the source of the spring. Factors that could affect the hydrologic features of the Center under the following scenarios include the amount of impermeable surface area, and the maintenance of the Camp Coldwater Reservoir.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under this preferred alternative D scenario, creation of open space / a park at the Center by a university or nonfederal government entity could involve continued use of the existing open space as such, or as a park. Under this scenario, whether the Center would be used as open space or as a park would not result in different impacts to hydrology. While the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to transfer, the entity making the modifications would not change the impacts to hydrology. Assuming all structures would be removed prior to transfer, localized long-term, minor to moderate, beneficial impacts to hydrology would

result as the local hydrologic processes would be positively affected by reductions in impermeable surfaces.

Under alternative D, conditions may or may not be put in place to assure there would be no change to Camp Coldwater Reservoir; however, it is assumed that the reservoir would be an attractive feature of any open space or park and as such would not be changed.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Use of the Center as an interpretive / nature / history center could imply management of the Center to maintain or increase open space and to maintain or restore natural systems where possible. Under alternative D, the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to conveyance or retention of the Center. Modifications could include removal of all or a portion of the existing structures and associated aboveground infrastructure (roads, powerlines, ore bins, etc.) at the Center. Modifications could also include construction of new structures, or rehabilitation of existing buildings, or both. The impacts to hydrology resulting from these modifications would be the same as those described under alternative C: localized, long-term, minor to moderate, and beneficial, depending on whether any structures are removed.

Construction of a new structure at the Center for use as an interpretive / nature / history center in a location of an existing structure without removal of any other existing structures would result in the continuance of localized, short- and long-term, negligible, adverse impacts to hydrology because there would be no change in the amount of impermeable surfaces. Construction of a new structure in a location of an existing structure, along with removal of some or all unused structures would result in localized long-term, minor to moderate, beneficial impacts to hydrology due to a decrease in impermeable surfaces.

Should the Center be transferred without a conservation easement and the recipient elect to construct more structures, long-term impacts to hydrology would be localized, minor, and adverse.

Under alternative D, conditions may or may not be put in place that could ensure that there would be no change to the Camp Coldwater Reservoir or that any future construction after transfer would take place in locations of existing structures to avoid the potential increase in impermeable surfaces. However it is assumed that the reservoir would be an attractive feature of any interpretive / nature / history center and as such would not be changed.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to hydrology from new construction and building reuse under the training center / office park scenario would be similar to the interpretive / nature / history center scenario. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space (a permeable surface). Under alternative D, a federal entity would make modifications to the Center prior to transfer. Those modifications could include construction of a new structure in a new location, with or without retention of the existing structures, or construction of a new structure in the location of an existing structure. Modifications of the Center prior to transfer using a combination of building reuse and new construction in existing building locations with no reduction in the total number of structures would result in localized, short- and long-term, negligible, adverse impacts to hydrology. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with no change of the Camp Coldwater Reservoir, would result in localized long-term minor beneficial impacts to hydrology.

Should the Center be transferred without a conservation easement, the recipient could construct new structures in the future, increasing impermeable surfaces, resulting in long-term, minor to moderate, adverse impacts to hydrology.

Under alternative D, conditions may or may not be put in place prohibiting future new construction that would increase impermeable surfaces, and make any changes to Camp Coldwater Reservoir. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with elimination of the Camp Coldwater Reservoir, would result in localized long-term, minor to moderate, adverse impacts to hydrology.

Summary – Hydrology Impact. Camp Coldwater Reservoir could be considered an attractive feature of open space or a park or in proximity to a interpretive / nature / history center; under these conditions impacts to hydrology would be short and long-term, negligible, and beneficial. Under the training center / office park scenario a combination of building reuse and new construction would result in increased density of buildings over the current condition, which would result in an increase in impermeable surfaces. Under alternative D the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to transfer. Impacts to hydrology from construction/demolition would be the same regardless of the entity making the modifications, and regardless of whether the modifications are made before or after transfer. Conditions could be placed on the amount of impermeable surface permitted and the removal of Camp Coldwater Reservoir prohibited.

Water Quality Impact

The outflow from the Camp Coldwater Reservoir is measured for water quality along with the flow rate. The water quality measurements include temperature and specific conductivity.

The main factors that could affect water quality at the Center would be sediment loads in the short-term, and nonpoint source pollution, such as contaminants from vehicles and potentially from use of fertilizer, insecticides or herbicides in the long-term.

Open Space / Park Scenario

Assumptions. Under this scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under this preferred alternative D scenario, the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to transfer of the Center to a nonfederal government entity or university for use as open space or a park. All work could be done so as to minimize impacts to surface water resources on the Center, and any unavoidable damage repaired using best management practices prior to transfer. Short-term impacts to water quality resulting from federal modifications to the Center prior to transfer would be minor and adverse.

Long-term impacts to water quality would depend on the actions of the recipient after transfer of the Center, and would be localized, long-term, minor, and adverse, as described under alternative C, regardless of potential conditions placed on the transfer.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Creation of an interpretive / nature / history center would result in increased public use, which could translate to an increase in the number of vehicles contributing to long-term nonpoint source pollution on the Center. Impacts under this scenario would be the same as those described for the open space / park scenario because structures may or may not be constructed or demolished. Short-term impacts to water quality resulting from federal modifi-

cations to the Center prior to transfer would be minor and adverse. Long-term impacts to water quality would depend on the actions of the recipient after transfer of the Center, and would be localized, long-term, minor, and adverse, as described under alternative B and C, regardless of potential conditions placed on the transfer.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Under alternative D, the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to transfer of the Center to a nonfederal government or university entity for use as an interpretive / nature / history center.

Impacts to water quality from new construction and building reuse under the training center / office park scenario would be similar to the other scenarios in that structures may be constructed or demolished with mitigation measures in place to protect water quality. Increased vehicular traffic could be expected. The grounds of a training center / office park may be more likely to be managed in a cultivated fashion, adding to nonpoint source pollution of the Center. However, the potential impacts of this scenario would still be anticipated to be similar to those described in the scenarios above. Short-term impacts to water quality resulting from federal modifications to the Center prior to transfer would be minor and adverse. Long-term impacts to water quality would depend on the actions of the recipient after transfer of the Center, and would be localized long-term, minor, and adverse, as described under alternative B and C, regardless of potential conditions placed on the transfer.

Summary – Water Quality Impact. Short-term impacts to water quality would be reduced to negligible to minor and adverse should structures be removed or constructed if provisions to protect water quality are established. Increased public use would result in increased use of existing or new parking areas where vehicles could leak fluids that could adversely impact water quality through stormwater drainage. This scenario would result in localized long-term minor adverse impacts to water quality.

Wetlands Impact

The *National Wetlands Inventory* map that includes the Center site shows a single wetland within the Center boundaries: Camp Coldwater Reservoir. An onsite delineation also revealed the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

The main factor that could potentially impact wetlands on the Center would be construction work that would damage, alter, or destroy wetlands resources. Work affecting the course, current, or cross-section of a wetlands may require a permit from one or all applicable federal, state, or local agencies.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under alternative D, the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to transfer of the Center to a nonfederal government or university entity for use as open space or a park. Mitigation measures could be implemented to protect wetland resources during the demolition process, to repair any damage the wetland may sustain during the process, and to rehabilitate modified wetlands prior to transfer.

This process would result in short-term minor and long-term major adverse impacts to wetlands. If structures were removed from former wetlands, short-term, minor to moderate, adverse impacts and long-term, moderate to major, beneficial impacts would occur. Under alternative D, the Center could be transferred to a nonfederal government or university entity with or without conditions. Because wetlands could be considered a valuable element of open space or a park, protection of wetlands from future impacts through conditions on the transfer may change the future impacts.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Under alternative D, the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to transfer of the Center to a nonfederal government or university entity for use as open space or a park. Mitigation measures could be implemented to protect wetland resources during the demolition process, and to repair any damage the wetland may sustain during the process and prior to transfer. Modification prior to transfer without removal of any existing structures

would result in short-term minor and long-term major adverse impacts as described in the open space / park scenario. If structures were removed from former wetlands, short-term, minor to moderate, adverse impacts and long-term, moderate to major, beneficial impacts would occur. Conditions may or may not be placed on the transfer to protect wetlands resources on the Center. Because wetlands could be considered a valuable element of open space or a park, protection of wetlands from future impacts through conditions on the transfer may change the future impacts.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Impacts to wetlands from new construction and building reuse under the training center / office park scenario would be short-term minor to moderate and long-term major and adverse, similar to the interpretive / nature / history center scenario. The main difference between the two scenarios would be that under the interpretive / nature / history center scenario there could be some emphasis on maintaining open space (a permeable surface). Alternative D may or may not contain conditions protecting wetlands. Without conditions on the transfer, future development at the Center could destroy wetlands, possibly continuing in long-term major adverse impacts. Placing conditions on the transfer that would protect wetlands would result in short-term, minor to moderate, adverse impacts and long-term major adverse impacts. If structures were removed from former wetlands, short-term, minor to moderate, adverse impacts and long-term, moderate to major, beneficial impacts would occur.

Summary – Wetlands Impact. The main factor that could potentially impact wetlands on the Center would be construction work that would damage, alter, or destroy wetlands resources. Under alternative D, the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements, and in that process mitigation measures could be put in place to protect wetlands, or steps could be taken to restore any damage to wetlands. Alternative D may or may not allow for conditions on the transfer to prevent unacceptable damage to, or loss of, wetlands. Measures to minimize impacts to wetlands would result in short-term, minor to moderate, adverse impacts; however, long-term major adverse impacts to wetlands would remain if buildings remained in former wetlands. If structures were removed from former wetlands, short-term, minor to moderate, adverse impacts and long-term, moderate to major, beneficial impacts would occur.

Socioeconomic Impact

The Center is an integral part of the socioeconomic composition of the surrounding community. When operational it employed as many as 200 workers. Today it functions as an informal adjunct to adjoining properties and, when open to the public, a destination for visitors to the Camp Coldwater Spring area. One aspect of the socioeconomy other than employment that could be affected by the various alternatives is operation and maintenance of the Center.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. The impact of this scenario would be similar to alternatives B or C, depending on what conditions were placed on the eventual transfer. The most significant difference with this alternative is that by renovation and/or clearing buildings and completing remediation of the site prior to disposition, the government would be more likely to find a willing transferee because they would then be spared the cost and risk of such activities. Operations and maintenance costs would likely decrease if the area was converted to a park or open space. The impact of this scenario would be local, moderate, and beneficial.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Similarly, this scenario would be more easily implemented if the site were cleared. One complicating factor in this scenario is the uncertainty as to whether any of the existing buildings would be useful for the intended purpose. Renovation without an identified end user could hinder implementation of this scenario. Operations and maintenance costs would likely decrease or remain similar if the area was converted to this type of facility. The impact of this scenario would be regional, moderate, and beneficial.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Alternative D provides the most flexibility and the least cost and risk to the eventual developer of the Center. However, this could accelerate any adverse effects if the Center eventually were to be transferred without conditions. Operations and maintenance costs would likely increase if the area was converted to this type of facility. With conditions, the impact of this scenario would be regional, moderate, and beneficial.

Summary – Socioeconomic Impact. Overall impacts to the socioeconomy under alternative D would be for the most part beneficial. In the case of the park and interpretive center, the benefits would accrue to the neighboring residents and the regional visitors. In the case of an office park, the benefits would accrue through added employment in the region and an enhanced local tax base. However, these benefits could be less than those of alternative B, assuming conditions could be placed on the size of the development and the number of employees. Operations and maintenance costs would likely decrease or remain similar if the area was converted to open space or a nature center but increase if converted to an office park. Although the impacts would be similar to alternative B or C, there is a greater likelihood that any of the scenarios could be implemented, or implemented sooner, if the site were cleared and cleaned prior to disposition.

Health and Safety Impact

In anticipation of divestiture of the Center, the TCRC Closure Team conducted an extensive environmental cleanup in the late 1990s. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings.

Under alternative D, all unused buildings could be removed, and any remaining buildings could be rehabilitated prior to transfer to a university or nonfederal government entity.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or

other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. With mitigation measures such as testing building environments for potential contamination, and with the proper PPE for workers, the federal government managing and bearing the costs for modification of all or part of the land, structures, or other improvements would result in short-term negligible adverse impacts to workers during the demolition and rehabilitation process. Long-term minor beneficial impacts to health and safety would result from elimination of hazardous conditions that could be encountered by workers or potential intruders in the future, regardless of any conditions placed on the transfer.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. The impacts for this scenario would be the same as those described for the open space / park scenario. Short-term negligible adverse impacts to workers during the demolition and rehabilitation process, and long-term minor beneficial impacts to health and safety would result from elimination of hazardous conditions that could be encountered by workers or potential intruders in the future, regardless of any conditions placed on the transfer.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. The impacts for this scenario would be the same as those described for the open space / park scenario. Short-term negligible adverse impacts to workers during the demolition and rehabilitation process, and long-term minor beneficial impacts to health and safety would result from elimination of hazardous conditions that could be encountered by workers or potential intruders in the future, regardless of any conditions placed on the transfer.

Summary – Health and Safety Impact. If a restriction were put on the transfer requiring some or all unused buildings be removed, the impacts to health and safety would be short-term, negligible, and adverse with mitigation measures such as testing of building environments for contamination and with the proper PPE for workers. Long-term impacts would be minor and beneficial due to elimination of potential hazardous situations for workers and potential intruders.

Land Use Impact

The land use of the Center from the first construction in 1949 through closure in 1995 was for governmental light industrial purposes. The lands surrounding the Center are primarily government-owned and used for recreation or for government offices or a medical center. The other prominent land use in the area is the Minneapolis-St. Paul International Airport, which lies southwest of the Center. Although the airport is not contiguous with the Center, airport zoning regulations and Federal Aviation Administration airspace obstruction rules play an important role in governing land uses at the Center.

Impacts to land use under alternative D would be the same as those described for all scenarios under alternative B because all scenarios appear to be consistent with existing area land uses; the entity making changes to the Center would not make a difference in the impacts to land use and adding conditions to the transfer of the Center may not result in additional beneficial impacts. Short- and long-term, minor, beneficial impacts on land use would result under any scenario if existing structures were removed that are not currently in conformance.

Summary – Land Use Impact. Impacts to land use under preferred alternative D would be short and long-term, minor, and beneficial, as described for all scenarios under alternative B because all scenarios appear to be consistent with existing area land uses; the entity making changes to the Center would not make a difference in the impacts to land use and adding conditions to the transfer of the Center may not result in additional beneficial impacts.

Public Use and Experience Impact

The Center, which is open to the public, has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. During the time that the Center was operating in its official capacity (until 1995), it was not open for general public use and visitation. The Center is now used by the public on a frequent basis as an extension of the open space present in the surrounding parks and open areas. The area around Camp Coldwater Spring is viewed by some members of the public as being spiritually important and is used for meditation and a source of inspiration. Many groups of people have a special fondness for the Center property. Visitors to the Center include American Indians, spiritualists, environmentalists, and residents of the nearby neighborhoods. The alternatives presented in this EIS along with the scenarios present differing levels of access to the Center by the public for continuing the personal rituals and meditations as they currently exist.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-

type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance.

Impacts. Under alternative D, the federal government would manage and bear the costs for modification of all or part of the land, structures, or other improvements prior to transfer of the Center to a university or nonfederal government entity for use as open space or a park.

Modification prior to transfer could expand the area available for public use and would result in short-term, negligible to minor, adverse impacts during the demolition process due to equipment operation and activity. If the Center is transferred without conditions and no changes are made to the hours the Center is open to the public, long-term moderate beneficial impacts would result as the changes would be prominent and the area available for public use expanded.

If conditions could be placed on the transfer requiring the hours the Center could be open to the public to be expanded, beneficial impacts to public use and experience would be expected. Long-term impacts would be moderate to major and beneficial as the visibility of the changes to the Center may be prominent and hours and area available for use could be expanded.

The impact of this scenario would be similar to alternatives B or C depending on if and what conditions were placed on the eventual transfer. The most significant difference with this alternative is that by renovating and/or clearing buildings and completing remediation of the site prior to disposition, the government could be more likely to find a willing transferee because they would then be spared the cost and risk of such activities. Clearing the buildings would also likely result in a larger area devoted to public use and access. Impacts on access to the Camp Coldwater Spring area may be regional, long-term, moderate, and adverse.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired.

Impacts. Under alternative D, the federal government would manage and bear the costs for modification of rehabilitation of one or more structures, or new construction in an existing building location, in conjunction with demolition of all remaining unused structures and site rehabilitation prior to transfer. These modifications would result in short-term, negligible to minor, adverse impacts due to construction work on-site and long-term, moderate, beneficial impacts to public use and experience through prominent visibility of the changes and expanded public use of the Center.

Similarly this scenario could be more easily implemented and result in a larger public-use area if the site were cleared. Otherwise the impacts to public use and experience would be the same

as alternative B or C, depending on whether conditions are placed on the transferee. Impacts on access to the Camp Coldwater Spring area may be regional, long-term, and moderate. The impacts would be adverse or beneficial, depending on any conditions or conditions of the transfer.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required.

Impacts. Under alternative D, the federal government would manage and bear the costs for modification of rehabilitation of one or more structures, or new construction in an existing building location, resulting in some or all of the existing structures being rehabilitated or new construction at existing building sites taking place on the Center prior to transfer to a university or nonfederal government entity for a training center / office park. These modifications would result in short-term, minor, adverse impacts to public use and experience due to construction activity. If the Center were subsequently transferred with no conditions, this approach could significantly reduce or eliminate public use of the Center, depending on the policies of the recipient. This would have a long-term, major, adverse impact on public use and experience.

If a restriction on the transfer could be put in place requiring continued public access to areas of current public use and expansion of hours would result in long-term, negligible to minor, beneficial impacts.

Alternative D could provide the most flexibility and the least cost and risk to the eventual developer of the Center under this scenario. However, that could only accelerate, not avoid, any adverse consequence if the Center were eventually transferred without conditions. Impacts on access to the Camp Coldwater Spring area would likely be regional, long-term, major, and adverse.

This scenario perhaps benefits the most from alternative D, because it would provide the most flexibility and the least cost and risk to the eventual developer of the Center. However, that would only accelerate, not avoid, any adverse consequence if the Center were eventually transferred without conditions. Therefore without conditions, impacts under this alternative and scenario would be regional, major and adverse. With public access to the Camp Coldwater Spring area assured, through conditions on the transfer or continued federal ownership, impacts would be regional, moderate, and beneficial.

Summary – Public Use and Experience Impact. Under preferred alternative D, short-term adverse impacts to public use and experience ranging from negligible to minor in intensity would result from demolition/construction activity under the management of the federal government prior to transfer. Long-term impacts to public use and experience would depend on the use and policies of the recipient. Moderate to major adverse impacts to public use and

experience would result in the long-term should the recipient reduce or eliminate the area or hours the Center is available for public use. Conditions placed on the transfer that could require future public access and restrict development from current open space would result in long-term impacts that range from no change to moderately beneficial.

Overall impacts to the ability to visit the Camp Coldwater Springs area could be preserved under preferred alternative D. Access and the nature of public visitation would be provided through a conservation easement or the federal government could retain ownership and management of that portion of the Center. If no conditions are placed on the disposition after clearing and cleaning the site, there would be the possibility of denied public access, or even removal of the spring and reservoir altogether as posed by alternative B.

Visual Resources Impact

The visual characteristics of the Center include a relatively limited viewshed (less than 1,000 feet and not expansive), dense woods and bluffs, nonnative vegetation and landscaping, driveways and parking lots, the Center buildings, and the Camp Coldwater Spring and Reservoir. Characteristics along the Center boundaries include views of an urban setting with commercial and residential buildings and SH 55 and SH 62. The existing overall visual quality is average to below average because of lack of vividness and distinctiveness. The deteriorating conditions of the buildings and the lack of grounds maintenance are the primary contributing factors.

Open Space / Park Scenario

Assumptions. Under this preferred Alternative D scenario, the Center would be converted to open space and natural areas where the focus would be on restoration and use of the natural environment. The Center would become a park or be used as open space. This could be accomplished by removing some or all of the buildings, structures, and roadways. Nonnative plant species would be identified and removed. Native vegetation would then be planted and the site naturalized to recreate the historical characteristics of an open oak savanna, prairie-type setting. After conveyance, the USDI would have no control over any landscaping plans or other measures to modify the land, meaning all surfaces and subsurfaces would be subject to disturbance. This scenario is expected to have the lowest density of buildings and the greatest open/nature space. No development is expected along the wooded, bluff portion east of and adjacent to the Center, therefore the wooded screen of the Center from the east is expected to remain.

Impacts. The federal government could modify the Center under this alternative prior to disposition. Short-term minor to moderate adverse impacts on visual quality from demolition or other related work would result from modification activities, and would depend on the degree of modification undertaken by the federal government. This is because from one to all of the buildings at the Center could be demolished prior to disposition under this alternative, resulting in a wide range of potential impacts.

Upon disposition, impacts to visual resources at the Center would be the same as under alternative B if the Center were transferred with no conditions. Similarly, impacts to visual resources at the Center upon disposition would be the same as under alternative C if the Center were transferred with conditions.

Interpretive / Nature / History Center Scenario

Assumptions. Under this conceptual scenario, some portion of the Center would represent a natural environment, while development and structures would be used in conjunction with the natural environment for learning and interpretation. It is assumed that new structures would be built at the Center, and that all or a portion of the existing structures would be demolished. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements may be required if reuse is desired. This scenario is expected to have a balance between building density and open/nature space. No development is expected along the wooded, bluff portion east of and adjacent to the Center, therefore the wooded screen of the Center from the east is expected to remain.

Impacts. The federal government could modify the Center under this alternative prior to disposition. Short-term minor to moderate adverse impacts on visual quality from demolition or other related work would result from modification activities, and would depend on the degree of modification undertaken by the federal government. This is because from one to all of the buildings at the Center could be demolished prior to disposition under this alternative, resulting in a wide range of potential impacts.

Upon disposition, impacts to visual resources at the Center would be the same as under alternative B if the Center were transferred with no conditions. Similarly, impacts to visual resources at the Center upon disposition would be the same as under alternative C if the Center were transferred with conditions.

Training Center / Office Park Scenario

Assumptions. Under this scenario, the focus of the Center would be the built environment and active reuse of the Center. Use would include total reuse of existing structures, reuse of as few as one building, and all new construction. Most existing buildings have the potential for reuse; however, some are in better condition and more readily lend themselves to reuse. Most of the infrastructure is not reusable in its current form; improvements would be required. This scenario is expected to have the highest density of buildings and the least amount of open / nature space. No development is expected along the wooded, bluff portion east of and adjacent to the Center, therefore the wooded screen of the Center from the east is expected to remain.

Impacts. The federal government could modify the Center under this alternative prior to disposition. Short-term minor to moderate adverse impacts on visual quality from demolition or other related work would result from modification activities, and would depend on the degree of modification undertaken by the federal government. This is because from one to all of the buildings at the Center could be demolished prior to disposition under this alternative, resulting in a wide range of potential impacts.

Upon disposition, impacts to visual resources at the Center would be the same as under alternative B if the Center were transferred with no conditions. Similarly, impacts to visual resources at the Center upon disposition would be the same as under alternative C if the Center were transferred with conditions.

Summary – Visual Resources Impact. Overall impacts to visual resources under the open space/ park scenario would be beneficial in the long-term. The existing buildings and structures create a low to medium visual experience. With each scenario, as more buildings are removed from the Center, the greater the beneficial effect would be. Long-term impact would be localized, beneficial and range from negligible to major. Removal of the Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center, but could be mitigated by placing conditions on the property transfer. Short-term impacts due to construction activities would be localized, short-term, adverse, and minor. Additional short-term, minor to moderate, adverse impacts would result under this alternative due to federal government modification activities prior to disposition.

CUMULATIVE IMPACTS

Cumulative impacts on the environment result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

To determine potential cumulative impacts, projects and past actions within the area surrounding and contiguous to the Center, and in and near the MNRRA were identified. The area included lands administered by the USFWS, the State of Minnesota, and the Minneapolis Parks and Recreation Board. Projects were determined by meetings and phone calls with area land managers. The cumulative impact scenario includes any planning or development activity that has been or is currently being implemented, or that would be implemented in the reasonably foreseeable future.

These cumulative actions are evaluated in the cumulative impact analysis in conjunction with each individual alternative to determine if they would have any additive effects on a particular natural resource, cultural resource, visitor use, or the socioeconomic environment. Because some of the actions that make up the cumulative impact scenario are in the early planning stages, the evaluation of cumulative effects was based on a general description of each project.

PROJECTS AND PAST ACTIONS CONSIDERED

Fort Snelling State Park, Removal of Medical Waste Dump and Establishment of Wetlands

In 2004, Fort Snelling State Park partnered with the MAC in implementing this project. Approximately 90% of a medical waste dump was removed and the remaining was capped. The project, located at the north end of Snelling Lake, south of SH 55, and east of the airport, involved 2.5 acres of excavation, and was revegetated to create 5.0 acres of wetlands.

Fort Snelling State Park's partnership with the MAC to clean up the medical waste site results in localized long-term, negligible to minor, beneficial impact on health and safety through elimination of potentially hazardous materials that could come into contact with the public. Because approximately 2.5 acres were excavated in conjunction with this project, short-term, negligible to minor, adverse impacts to soils, vegetation, and water quality would result. Disturbed soils would be subject to erosion and compaction associated with equipment use. Soil disturbance would also likely disturb native plants in the area. Soil disturbed through the excavation could be eroded and affect water quality. Long-term, minor, beneficial impacts to wildlife, wetlands, and water quality resulting from creation of 5 acres of new wetlands would result. Establishment of new wetlands would likely attract and provide habitat for wildlife such as water fowl. In addition, wetlands play an important role in water quality by providing a place for particulate matter to settle, among other things.

Current actions and those projected for the future could also contribute to cumulative effects. These include:

Minnesota Valley National Wildlife Refuge, Installation of Water-Control Structure

A culvert currently providing drainage from Long Meadow Lake in the Minnesota Valley National Wildlife Refuge would be replaced with a water control structure. The structure would allow the lake to be drawn down to simulate natural drought conditions and enhance existing wetlands through improvements to aquatic vegetation.

Installation of a water-control structure within Minnesota Valley National Wildlife Refuge would result in short-term, negligible, adverse impacts to soils and water quality from disturbance and compaction of soils associated with equipment operation. Long-term, minor to moderate, beneficial impacts to wetlands would result as the water in Long Meadow Lake would be drawn down to simulate drought conditions, allowing wetlands vegetation to flourish. Long-term, negligible to minor, beneficial impacts to wildlife, hydrology, and public use and experience would result. Wildlife, such as migratory water fowl, would benefit from the enhanced wetlands environment. Hydrology would be somewhat improved with greater control over the outflow from the lake through the use of the new water-control structure. Public use and experience of the area would be benefited by enhanced habitat attracting and/or retaining wildlife.

Fort Snelling Upper Bluff Property and Historic Structures

The Federal Government does not own the land known as the Fort Snelling Upper Bluff (Upper Bluff). The Federal Lands to Parks Program of the U.S. Department of the Interior, on behalf of the United States Government, transferred the 141-acre Upper Bluff to the State of Minnesota, Department of Natural Resources (DNR) in 1971 for public recreation uses. The National Park Service (NPS) continues to oversee program compliance and perpetual recreational use of the property through required compliance reports and site visits.

While the Minnesota DNR, in partnership with the Minneapolis Park and Recreation Board, over the years developed extensive recreational amenities on the property, the historic buildings were neglected because recreational uses for them could not be found. In 2005, the State of Minnesota DNR concluded that restoration and reuse of the historic structures at the Upper Bluff was no longer within the mission of the agency. As a result, the DNR, NPS and the General Services Administration (GSA) began exploring potential solutions for the future of the property. Currently an interagency task force of federal, state, local government, interest groups and airport commission are preparing a master plan and design guidelines for redevelopment of the property. Physical property improvements led by Hennepin County, the NPS, and the State of Minnesota include re-roofing and stabilization of numerous historic buildings on the Upper Post. These activities have been occurring since 2008 and are continuing as funding becomes available.

Under Section 203 (k)(2) of Public Law 91-485, as amended (40 U.S.C. 484 (k)(2)), the National Park Service's Federal Lands to Parks Program conveys surplus Federal land to communities, usually at no cost, for public park and recreation purposes. Under this program only states, counties, municipalities, and similar government entities may acquire surplus Federal land for parks and recreational areas through an approved application by the Federal Lands to Parks Program.

If the State of Minnesota decides to voluntarily revert the Upper Bluff back to the United States, the Federal Property and Administrative Services Act of 1949, as amended, would provide the authority for the Federal Government to dispose of excess or surplus federal property. The GSA is the Federal agency usually responsible for disposal of surplus Federal property. Any disposal of surplus Federal property would need to comply with other applicable laws as well, including but not limited to the National Environmental Policy Act (NEPA) and the National Historic Preservation Act.

Fort Snelling State Park, Trail Construction

A small section of the Dakota County Trail (approximately 300 yards) is planned to be replaced and the old trail section eliminated in 2006-2007.

An existing trail on Pike Island is being undercut by the river and is planned to be rebuilt in 2008. A new route has not been determined, but may follow an existing powerline right-of-way.

A 7-mile trail State Corridor Trail is planned to be constructed across the Minnesota Valley National Wildlife Refuge, connecting to 4 miles of existing trail in the state park. The new trail will cross a waste area of sand and gravel under Interstate 494, access the refuge via a dredge soil berm, and continue to Interstate 35 West. The trail will mostly follow existing service roads within the refuge, and new disturbance would be minimal.

Trail construction by Fort Snelling State Park in various locations would result in short-term, negligible to minor, adverse impacts to soils, vegetation, wildlife, water quality, and public use and experience; a long-term, negligible, beneficial impact on health and safety; a long-term, negligible to minor, beneficial impact to soils and vegetation; and a long-term, minor to moderate, beneficial impact on public use and experience.

Soils, vegetation, and wildlife would be somewhat disturbed during construction of the trails. Disturbance of soils would result in erosion of particles into the water affecting, water quality. Public use and experience could be adversely affected in the areas of trail construction as the construction activity would detract from the experience of the natural setting. Moving the trail away from an undercut area along the river on Pike Island would result in beneficial impacts to health and safety as trail users would be protected from trips, falls, and possible inadvertently coming into contact with the river. Long-term beneficial impacts to soils and vegetation would result because trail users would be less likely to walk off trail and create social trails avoiding the area where the trail is undercut by the river. Substantial beneficial impacts to public use and experience would be realized through construction of the new 7-mile section of trail

through the national wildlife refuge, offering new opportunities for hiking in the natural setting, and extending existing trail systems.

Minneapolis Parks and Recreation Board, Rehabilitation within the Wabun Picnic Area of Minnehaha Park

The Wabun portion of Minnehaha Park is located south of 46th Street in Minneapolis, approximately 1 ½ miles north of the Center. Phase I renovation, completed in 2008, included four new picnic shelters, a new restroom, a wading pool, rehabilitation of a parking lot with pervious surfacing, a new bike/pedestrian trail along the river bluff connecting to existing trails on the river bluff, a disc golf course and a volleyball court. Phase II includes an additional picnic shelter, access road improvements, and bike/pedestrian trail extensions in the western portion of the Wabun Picnic Area.

Trail construction in the Waban portion of Minnehaha Park would result in similar impacts to those described for trail work by Fort Snelling State Park above. Rehabilitation of the parking lot and construction of additional picnic shelters would have negligible short-term adverse impacts to soils and vegetation as the park setting is already modified from native vegetation and receives a certain amount of trampling from public use. Long-term impacts to public use and experience would be minor and beneficial as two new picnic shelters would enhance recreational use.

CUMULATIVE IMPACTS

ALTERNATIVE A – NO ACTION

The Secretary of the Interior is authorized, but not directed, to convey the Center under the closure legislation, Pub. L. 104-134 (1996). Accordingly, the Center could be retained by the federal government. The no-action alternative would continue the existing conditions for the Center. Disposition of the Center to a university or nonfederal government entity would not occur.

Archeological Resources – Cumulative Impact

Based on the 2001 study, the Center was organized into five distinct zones based on their potential to yield archeological information. Zones III, IV, and V were found to contain no important cultural materials and warrant no further archeological study. Zone I was recommended for further testing to determine if the area contains cultural materials that would contribute to the Fort Snelling National Historic Landmark and National Historic District. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the national historic landmark and national historic district. The 2001 study also recommended a revision to the boundaries of the Fort Snelling National Landmark to include Zones I and II (Clouse 2001). That revision is currently in process; for purposes of this EIS, it is assumed the boundaries include Zones I and II.

Cumulative Impacts. Management of archeological resources would continue according to current policies. Impacts would be long-term, site specific, minor, and adverse. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and the no-action alternative would result in long-term, negligible, adverse impacts.

Summary. Impacts related to visitor use and lack of regular monitoring of site conditions would continue to be long-term, site specific, minor, and adverse. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and the no-action alternative would result in long-term, negligible, adverse impacts.

Historic Structures and Districts – Cumulative Impact

There are no individually NRHP-eligible structures within the Center. Eleven of the buildings and structures at the Center are contributing elements to the USBM TCRC Historic District. Coldwater Spring reservoir and spring house are considered contributing structures to the Fort Snelling NHL and Historic District, but are not contributing elements of the USBM TCRC Historic District. Coldwater Spring itself is a contributing element to the Fort Snelling

NHL and Historic District. Approximately half of the land within the Center falls within the boundaries of the Fort Snelling National Historic Landmark. Resources within the Center of significance to the national historic landmark include Coldwater Spring and Reservoir (Henning 2002). Archeological resources exist at the Center that are considered contributing elements to the Fort Snelling National Historic District and Fort Snelling National Historic Landmark.

Cumulative Impacts. The potential for impacts to historic structures and districts from implementation of the no-action alternative are adverse, and would range from minor to moderate as a result of continued deterioration of the structures on the Center. These impacts, in conjunction with the potential adverse impacts to the Fort Snelling Upper Bluff property historic structures, would result in long-term, moderate to major, adverse, cumulative impacts to historic structures and districts.

Summary. Impacts from the no-action alternative, in conjunction with the potential adverse impacts to the Fort Snelling Upper Bluff property historic structures, would result in long-term, moderate to major, adverse, cumulative impacts to historic structures and districts.

Ethnographic Resources – Cumulative Impact

Although no historical documentation of American Indian use of Camp Coldwater Spring has been found, the oral traditions and histories collected during investigation suggest that natural springs, like Camp Coldwater Spring, are associated with sacred healing ceremonies. Camp Coldwater Spring is currently used by some members of the federally recognized Dakota and Ojibwe communities, and other American Indians as a source of water for ceremonies. The confluence of the Minnesota and Mississippi rivers is not located within the area of the proposed action, but Camp Coldwater Spring should be considered within this larger context. Many American Indian communities have a traditional association with the area surrounding the spring.

Cumulative Impacts. Because no changes would be made under the no-action alternative, access to and the integrity of Camp Coldwater Spring would remain the same. Therefore, no contribution to cumulative impacts would be expected from implementation of the no-action alternative.

Summary. Because no changes would be made under the no-action alternative, access to and the integrity of Camp Coldwater Spring would remain the same. Therefore, no contribution to cumulative impacts would be expected from implementation of the no-action alternative.

Soils – Cumulative Impact

The Center site contains the following soil series and types: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. It is important to note that recent

archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads.

Cumulative Impacts. Because no changes would be made under the no-action alternative, impacts to soils at the Center would remain short and long-term, negligible, and adverse, largely as a result of erosion associated with social trails. Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Under the cumulative impact scenario the long-term impacts to soils would be negligible to minor and adverse since none of the projects would result in large amounts of soil disturbances or mass wastage.

Cumulative short- and long-term impacts to soils under the no-action alternative would be negligible to minor and adverse.

Summary. Cumulatively, short- and long-term impacts to soils under the no-action alternative would be negligible to minor and adverse when the effects of the existing conditions at the Center are combined with the effects of construction activities associated with projects in the cumulative impacts scenario.

Vegetation – Cumulative Impact

Natural vegetation exists on the site's bluff slope, toe slope, and on the Mississippi River floodplain terrace. The bluff slope located on the eastern boundary of the project site supports a maple – basswood forest community. The toe slope, maintained in a saturated condition by natural groundwater seepage, supports a black ash swamp community. Occupying the Mississippi River floodplain adjacent to the toe slope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm, green ash, black willow, and eastern cottonwood. Currently, the Center is occupied by business infrastructure and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from the natural, pre-settlement condition or have become established on sites disturbed by development.

Removal of trees from the project site, particularly buckthorn (an aggressive nonnative shrub) and species of elm (to control the spread of Dutch elm disease), has occurred in recent years. This practice is anticipated to continue under the no-action alternative.

Cumulative Impacts. Because no changes to current practices would be made under the no-action alternative, impacts to vegetation at the Center would be short and long-term, minor, and adverse. Short-term impacts to vegetation resulting from construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be minor and adverse. Cumulatively, short-term impacts to vegetation would be minor and adverse, and long-term impacts would be minor and adverse.

Summary. Cumulatively, short-term impacts to vegetation would be minor and adverse resulting from the combination of existing impacts at the Center and short-term impacts

resulting from construction projects in the cumulative impacts scenario. Long-term impacts would be minor and adverse.

Wildlife – Cumulative Impact

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 birds species are common to this area, and of these, 120 are known to nest in this part of Minnesota. At least 50 mammals occur within the Mississippi River corridor and some are likely visitors on the Center.

Cumulative Impacts. Because no changes would be made under the no-action alternative, existing impacts to wildlife at the Center would remain short and long-term, negligible, and adverse. Impacts to wildlife from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. Enhancements to wetlands wildlife habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would result in long-term, minor beneficial impacts to wildlife that would offset existing adverse impacts at the Center. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, short-term impacts to wildlife would be minor and adverse, and long-term impacts would be minor and beneficial.

Summary. Short-term cumulative impacts to wildlife would be minor and adverse resulting from existing impacts at the Center combined with effects of construction associated with projects in the cumulative impacts scenario. Long-term impacts would be minor and beneficial, as the beneficial effects of the cumulative impacts projects would offset the proportionally small existing adverse impacts to wildlife at the Center.

Hydrology – Cumulative Impact

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, just south of the intersection of the east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. The main drainage from the site is from Camp Coldwater Spring and the associated reservoir. Groundwater can be found within about 20 feet of the land surface in most places within the Minnehaha Creek watershed, including the Center.

Camp Coldwater Spring is fed by groundwater from an area above the Center. The spring is protected under state law if it is under the administration of a state entity, but if the Center were transferred to a private university, for example, this law would not be applicable.

Cumulative Impacts. Because no changes would be made under the no-action alternative, impacts to hydrology at the Center would remain short and long-term, negligible, and adverse. Enhancements to wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would result in long-term minor beneficial cumulative impacts to hydrology. Cumula-

tive impacts to hydrology would be short-term, negligible, and adverse, and long-term, negligible to minor, and beneficial.

Summary. Cumulative impacts to hydrology would be short-term, negligible and adverse due to short-term impacts associated with construction under the cumulative impact scenario in conjunction with existing impacts. Long-term, negligible to minor, beneficial impacts would result from improvements to wetland resources that would also beneficially impact hydrology.

Water Quality – Cumulative Impact

The outflow from Camp Coldwater Reservoir is measured for water quality along with the flow rate. The water quality measurements include temperature and specific conductivity.

Cumulative Impacts. Because no changes would be made under the no-action alternative, impacts to hydrology at the Center would remain short and long-term, negligible, and adverse. Short-term, minor, adverse impacts to water quality would also occur as a result of construction activity at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. Long-term, minor, beneficial impacts to water quality would result from enhancement and expansion of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Cumulatively, these projects would result in short-term, minor, adverse, and long-term, minor, beneficial impacts to water quality.

Summary. Short-term, minor, adverse, and long-term, minor, beneficial cumulative impacts to water quality would result from the short-term effects of construction under the cumulative impacts scenario, and the long-term improvements to wetlands.

Wetlands – Cumulative Impact

The *National Wetlands Inventory* map that includes the Center site shows a single wetland within the Center boundaries: Camp Coldwater Reservoir. An onsite delineation also revealed the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

Impacts. Because no changes would be made under the no-action alternative, impacts to wetlands at the Center would be considered short and long-term, major, and adverse. Structures have been built in existing wetlands, destroying some habitat. Long-term, minor to moderate beneficial effects from the construction of wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the existing impacts at the center, would result in short- and long-term, moderate, adverse cumulative impacts to wetlands.

Summary. Beneficial impacts to wetlands resulting from expansion/enhancements under the cumulative impacts scenario would offset the major adverse impacts under existing conditions

at the Center to result in short- and long-term, moderate, adverse, cumulative impacts to wetlands.

Health and Safety – Cumulative Impact

In anticipation of divestiture of the Center in the late 1990s, the TCRC Closure Team conducted an extensive environmental cleanup. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings.

A recent safety evaluation (USFWS 2005) determined that "break-ins" into the Center grounds and buildings continue to occur, and potential intruders could be exposed to electrical hazards, fall hazards, and physical hazards (such as broken windows). Aging and weathering of the buildings over time would result in increased incidence of hazardous conditions, which, if encountered by potential intruders would result in a localized long-term, negligible, adverse impact to health and safety.

Cumulative Impacts. Because no changes would be made under the no-action alternative, aging and weathering of the buildings would result in localized long-term adverse impacts to health and safety to a negligible level. The Fort Snelling State Park partnership with the MAC to clean up the medical waste site resulted in a localized, long-term, negligible to minor, beneficial impact on health and safety. The impacts to health and safety from the no-action alternative would be localized, long-term, negligible, beneficial impacts.

Summary. Cumulative impacts to health and safety under the no-action alternative would be localized, long-term, negligible, and beneficial.

Public Use and Experience – Cumulative Impact

The Center, which is open to the public, has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. During the time that the Center was operating in its official capacity (until 1995), it was not open for general public use and visitation. The Center is now used by the public on a frequent basis as an extension of the open space present in the surrounding parks and open areas. The area around Camp Coldwater Spring is viewed by some members of the public as being spiritually important and is used for meditation and a source of inspiration. Many groups of people have a special fondness for the Center property. Visitors to the Center include American Indians, spiritualists, environmentalists, and residents of the nearby neighborhoods. The alternatives presented in this EIS along with the scenarios present differing levels of access to the Center by the public for continuing the personal rituals and meditations as they currently exist. American Indian, spiritual, environmental, and neighborhood groups who now visit the site would continue as they do now.

Cumulative Impacts. Public scoping comments indicated the public would like access to the Center on evenings and weekends. However, no changes to public use would be made under the no-action alternative. Existing impacts to public use and experience at the Center would be considered short and long-term, moderate to major, and adverse. Long-term minor to moderate, beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with the existing impacts at the Center to result in long-term, minor to moderate beneficial impacts. Cumulative impacts to public use and experience would be short-term, moderate to major, and long-term, minor to moderate, and adverse.

Summary. Long-term, minor to moderate, beneficial impacts to public use and experience resulting from improvements made under the cumulative impacts scenario could offset existing moderate to major adverse impacts at the Center to result in short-term, moderate to major, and long-term, minor to moderate, adverse cumulative impacts.

Visual Resources – Cumulative Impact

The visual characteristics of the Center include a relatively limited viewshed (less than 1,000 feet and not expansive), dense woods and bluffs, nonnative vegetation and landscaping, driveways and parking lots, the Center buildings, and Camp Coldwater Spring and Reservoir. Characteristics along the Center boundaries include views of an urban setting with commercial and residential buildings and SH 55 and SH 68. The overall scenic quality is average to below average as a result of the lack of vividness and distinctiveness. This is due to lack of coordinated or harmonious design, and deteriorating condition of the buildings and grounds.

Cumulative Impacts. The no-action alternative would not change the characteristics of the Center, nor would minimal maintenance of the center improve visual quality. Impacts to visual resources under the no-action alternative would, therefore, be localized, continue to be long-term, minor to moderate, and adverse. Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, therefore would minimally impact visual resources resulting in short-term, negligible adverse, and long-term, negligible beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff would result in similar effects to visual resources as those experienced at the Center under the no-action alternative, and short- and long-term, minor to moderate adverse impacts would occur. Therefore cumulative impacts to visual resources under the no-action alternative would be short and long-term, moderate, and adverse.

Summary. The continued deterioration of historic structures on the Fort Snelling Upper Bluff property would combine with impacts to visual resources at the Center resulting in short- and long-term, moderate, adverse impacts to visual resources.

CUMULATIVE IMPACTS

ALTERNATIVE B – CONVEYANCE WITH NO CONDITIOINS

Under alternative B, the Center would be conveyed to a university or nonfederal government entity with no conditions imposed on the future use of the Center, or the land, except for those restrictions on use that currently exist for the Center and arise from applicable laws and regulations. The university or nonfederal government entity that receives the Center would have no restrictions on its subsequent transfer or sale. Therefore, any future owner under this alternative would be free to subsequently use, sell, and transfer the Center to a private entity for various uses or development.

Archeological Resources – Cumulative Impact

Based on the 2001 study, the Center was organized into five distinct zones based on their potential to yield archeological information. Zones III, IV, and V were found to contain no important cultural materials and warrant no further archeological study. Zone I was recommended for further testing to determine if the area contains cultural materials that would contribute to the Fort Snelling National Historic Landmark and National Historic District. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the national historic landmark and national historic district. The 2001 study also recommended a revision to the boundaries of the Fort Snelling National Landmark to include Zones I and II (Clouse 2001). That revision is currently in process; for purposes of this EIS, it is assumed the boundaries include Zones I and II.

Cumulative Impacts. Analysis by land use scenario is not presented in this section because the impacts would be the same for all scenarios. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete the section 106 process to properly consider the effects of the transfer on archeological resources. Regardless of any of the land use scenarios, the overall impact on the resource would be long-term, moderate, and adverse because the resource would be permanently removed from context, but the information available in the data recovered would be available for future research. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative B would result in long-term, minor, adverse impacts.

Summary. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative B would result in long-term, minor, adverse impacts.

Historic Structures and Districts – Cumulative Impact

There are no individually NRHP-eligible structures within the Center. Eleven of the buildings and structures at the Center are contributing elements to the USBM TCRC Historic District. The Coldwater Spring reservoir and spring house are considered contributing structures to the Fort Snelling NHL and Historic District, but are not contributing elements of the USBM TCRC Historic District. Coldwater Spring itself is a contributing element to the Fort Snelling NHL and Historic District. Approximately half of the land within the Center falls within the boundaries of the Fort Snelling National Historic Landmark. Resources within the Center of significance to the national historic landmark include Camp Coldwater Spring and Reservoir (Henning 2002). Archeological resources exist at the Center that are considered contributing elements to the Fort Snelling National Historic District and Fort Snelling National Historic Landmark.

Factors affecting historic structures and districts at the Center under the following scenarios could include repair, rehabilitation, renovation, or demolition of structures.

Open Space / Park Scenario

Cumulative Impacts. Impacts to historic structures and districts under this scenario would be long-term, moderate and adverse because the loss of some or all structures and associated documentation of structures would be assumed. Continued deterioration of historic structures on the Fort Snelling Upper Bluff property would adversely impact the historic character of this area and the national historic landmark status. However, removal of some of the buildings at the Center which are non-contributing elements to the Landmark, would have a long-term minor beneficial impact. However, taken together, the loss of some or all structures would result in long-term, moderate to major, adverse impacts to historic structures and districts.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Impacts to historic structures and districts under this scenario would be much the same as those under the previous scenario.

Training Center / Office Park Scenario

Cumulative Impacts. Impacts to historic structures and districts under this scenario would be much the same as those under the previous scenario.

Summary – Historic Structures and Districts Cumulative Impact. Cumulative impacts to historic structures and districts under alternative B and under all the scenarios would be long-term, moderate to major, and adverse because of the potential for continued deterioration of the structures on the Fort Snelling Upper Bluff property and the continued deterioration or loss of structures at the Center.

Ethnographic Resources – Cumulative Impact

Although no historical documentation of American Indian use of Camp Coldwater Spring has been found, the oral traditions and histories collected during investigation suggest that natural springs, like Camp Coldwater Spring, are associated with sacred healing ceremonies. Camp Coldwater Spring is currently used by some members of the federally recognized Dakota and Ojibwe communities, and other American Indians as a source of water for ceremonies. The confluence of the Minnesota and Mississippi rivers is not located within the area of the proposed action, but Camp Coldwater Spring should be considered within this larger context. Many American Indian communities have a traditional association with the area surrounding the spring.

Open Space / Park Scenario

Cumulative Impacts. Overall impacts to ethnographic resources under the open space / park scenario would be long-term, range from negligible to minor and beneficial, and long-term, major, and adverse. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative B would result in long-term, major, adverse impacts.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Overall impacts to ethnographic resources under the interpretive / nature / history center scenario would be long-term, range from negligible to minor and beneficial, and moderate to major and adverse. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative B would result in long-term impacts ranging from negligible to minor and beneficial, and moderate to major and adverse.

Training Center / Office Park Scenario

Cumulative Impacts. Overall impacts to ethnographic resources under the training center /office park scenario would be long-term, moderate to major, and adverse. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative B would result in long-term, moderate to major, adverse impacts.

Summary – Ethnographic Resources Cumulative Impact. Cumulative impacts range widely depending on the scenario that is implemented. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative B would result in long-term, minor to major, adverse impacts.

Soils – Cumulative Impact

The Center site contains the following soil series and types: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. It is important to note that recent archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads.

Factors that could affect soils at the Center under the following scenarios include disturbance, erosion potential, and increases or decreases in impermeable surfaces associated with rehabilitation or new construction of structures.

Open Space / Park Scenario

Cumulative Impacts. Should the recipient of the Center elect not to implement mitigation measures to reduce possible adverse effects such as soil erosion from construction or related activities, short-term impacts to soils would be negligible to minor and adverse. Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Cumulatively, short-term impacts to soils would be minor and adverse.

Long-term impacts to soils at the Center under the open space / park scenario would be minor to moderate and adverse if no mitigation measures were implemented to reduce the effects of removing buildings. Under the cumulative impact scenario the long-term impacts to soils would be negligible to minor and adverse because none of the projects would result in large amounts of soil disturbances or mass wastage.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under the interpretive / nature / history center scenario, short-term adverse impacts to soils at the Center would be minor due to disturbance that would result in soil erosion. Construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would result in short-term, minor to moderate, adverse impacts to soils. Cumulatively, short-term impacts to soils would be moderate and adverse.

Long-term impacts to soils under the interpretive / nature / history center scenario wouldrange from negligible to minor and adverse should the recipient of the Center elect not to implement mitigation measures that would reduce adverse impacts such as erosion and destruction of plant cover from any construction activity undertaken. Under the cumulative impact scenario the long-term impacts to soils would be negligible to minor and adverse because none of the projects would result in large amounts of soil disturbances or mass wastage.

Training Center / Office Park Scenario

Cumulative Impacts. Under the training center / office park scenario, should the recipient of the Center elect to expand the development and density of structures at the Center without mitigation measures to protect soils, short- and long-term impacts to soils would be minor and adverse. Construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would result in minor to moderate adverse impacts to soils in the short-term. Cumulatively, the projects would result in short-term minor adverse impacts and long-term, minor to moderate, adverse impacts to soils.

Summary – Soils Cumulative Impact. Adverse short-term impacts to soils at the Center would be accentuated cumulatively by the projects at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park, but none of these projects would result in large amounts of disturbed or eroded soils. Short-term impacts would be adverse and range from minor to moderate in intensity. Long-term impacts to soils would result in cumulative, long-term, negligible to minor, adverse impacts.

Vegetation – Cumulative Impact

Natural vegetation exists on the site's bluff slope, toe slope, and on the Mississippi River floodplain terrace. The bluff slope located on the eastern boundary of the project site supports a maple – basswood forest community. The toe slope, maintained in a saturated condition by natural groundwater seepage, supports a black ash swamp community. Occupying the Mississippi River floodplain adjacent to the toe slope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm, green ash, black willow, and eastern cottonwood. Currently, the Center is occupied by business infrastructure and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from the natural, pre-settlement condition or have become established on sites disturbed by development.

Factors affecting native vegetation at the Center under the following scenarios could include disturbance due to rehabilitation and construction, and potential for revegetation with native species. The airport zoning ordinance could require that a university or nonfederal governmental entity manage trees on the Center such that no new trees would be allowed to grow in the portion of the Center that lies in Safety Zone A, and trees in all other areas of the Center could be required to be maintained at designated height requirements or perhaps removed.

Open Space / Park Scenario

Cumulative Impacts. Should the recipient of the Center elect not to implement measures to reduce adverse effects to native vegetation, short-term impacts to vegetation at the Center would be negligible to minor and adverse. Short-term impacts to vegetation resulting from construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be minor and adverse. Cumulatively, short-term impacts to vegetation would be minor to moderate and adverse.

Long-term impacts to vegetation at the Center would range from negligible and adverse to minor and beneficial under this scenario depending on the level of human activity, which can result in trampling vegetation, and on whether buildings are removed and areas revegetated. Effects to vegetation from the other projects would combine with the effects from the Center, largely from efforts in revegetation, to result in long-term minor beneficial impacts to vegetation.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under the interpretive / nature / history center scenario, short-term adverse impacts to native vegetation at the Center would be minor. Construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would result in short-term, minor to moderate, adverse impacts to vegetation. Cumulatively, short-term impacts to soils would be minor to moderate and adverse.

Long-term impacts to vegetation at the Center under the interpretive / nature / history center scenario would be negligible to minor and adverse should the recipient of the Center elect not to implement measures to reduce adverse impacts to native plants from any construction activity undertaken. Effects to vegetation from the other projects would combine with the effects from the Center, largely from efforts in revegetation, to result in long-term, minor, beneficial impacts to vegetation.

Training Center / Office Park Scenario

Cumulative Impacts. Impacts to vegetation from development of the Center as a training center or office park without conditions on the transfer would result in short- and long-term, negligible to moderate, adverse impacts from disturbance associated with construction. This wide variance in intensity range is because development could include just a small portion of the center or all it. Short-term, minor, adverse impacts to vegetation would result from disturbance associated with construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. Long-term, negligible to minor, beneficial impacts to vegetation would result from projects at Fort Snelling State Park and Minnehaha Park, and from enhanced and expanded wetlands habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Effects to vegetation from the other projects would combine with the effects from the Center to result in long-term, minor, beneficial impacts to vegetation.

Summary – Vegetation Cumulative Impacts. Adverse short-term impacts to vegetation at the Center would combine with those of projects at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park to produce resulting in short-term adverse impacts that would be minor in intensity. However, long-term beneficial impacts to vegetation realized from all other projects would offset potential long-term adverse impacts to vegetation at the Center, resulting in cumulative long-term impacts that are mostly beneficial and negligible to minor in intensity.

Wildlife – Cumulative Impact

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 birds species are common to this area, and of these, 120 are known to nest in this part of Minnesota. At least 50 mammals occur within the Mississippi River corridor and some are likely visitors on the Center.

Factors that could affect wildlife under the following scenarios include increased public use and amount of habitat.

Open Space / Park Scenario

Cumulative Impacts. Should the recipient of the Center elect not to implement mitigation measures to reduce possible adverse effects, such as destruction of wildlife habitat, short-term impacts to wildlife would be negligible to minor and adverse. Impacts to wildlife from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, short-term impacts to wildlife would be minor and adverse.

The open space / park scenario would result in long-term impacts to wildlife at the Center that range from negligible to minor and adverse resulting from destruction of habitat. Enhancements to wetlands wildlife habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would combine with the impacts to wildlife at the Center from the open space / park scenario to result in long-term, minor to moderate, beneficial, cumulative impacts to wildlife.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under the interpretive / nature / history center scenario, short-term impacts to wildlife would be negligible due to disturbance that would result in reduction in wildlife habitat. Minor adverse effects to wildlife would result from construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, these projects would result in short-term, minor, adverse impacts to wildlife. Minor beneficial long-term impacts to wildlife would result from expanding and enhancing wetlands wildlife habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Long-term minor adverse impacts to wildlife at the Center under the interpretive / nature / history center scenario would result from destruction of some habitat. The long-term cumulative effect of all these actions on wildlife would be negligible and beneficial.

Training Center / Office Park Scenario

Cumulative Impacts. Impacts to wildlife from development of the Center as a training center or office park without a covenant or easement (conservation or other) would result in short- and long-term, minor to moderate, adverse impacts from disturbance associated with construction. Short-term, minor, adverse impacts to wildlife at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would result from disturbance associated with construction. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, taken together, these projects would result in short-term, minor to moderate, adverse cumulative impacts to wildlife. Long-term, negligible to minor beneficial impacts to wildlife would result from enhanced and expanded wetlands habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Cumulatively, all these projects would have long-term negligible adverse cumulative impacts on wildlife.

Summary – Wildlife Cumulative Impact. Adverse short-term impacts to wildlife at the Center in combination with the projects at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would result in short-term adverse impacts that would range from minor to moderate in intensity. However, long-term beneficial impacts to wildlife realized from the projects in the cumulative impacts scenario may partially offset any potential long-term adverse impacts to wildlife at the Center (particularly those of an office park or training center), resulting in cumulative long-term impacts that are beneficial and would range from negligible to moderate in intensity.

Hydrology – Cumulative Impact

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, just south of the intersection of the east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. The main drainage from the site is from Camp Coldwater Spring and the associated reservoir. Groundwater can be found within about 20 feet of the land surface in most places within the Minnehaha Creek watershed, including the Center.

Camp Coldwater Spring is fed by groundwater from an area above the Center. The spring is protected under state law if it is under the administration of a state entity, but if the Center were transferred to a private university, for example, this law would not be applicable. Factors that could affect the hydrologic features of the Center under the following scenarios include the amount of impermeable surface area and the maintenance of Camp Coldwater Reservoir.

Open Space / Park Scenario

Cumulative Impacts. The open space / park scenario would result in a continuance of localized, short- and long-term, negligible, adverse impacts to hydrology at the Center with no change to the existing developments. Enhancements to wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would result in long-term minor beneficial cumulative impacts to hydrology.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Construction of a new structure at the Center for use as an interpretive / nature / history center in a new location without removal of any existing structures would result in localized long-term minor adverse impacts to hydrology due to a reduction in permeable surfaces. Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts could reduce the adverse effects to hydrology at the Center from the interpretive / nature / history center scenario such that long-term negligible adverse cumulative impacts would result.

Training Center / Office Park Scenario

Cumulative Impacts. New construction that would increase building density at the Center would result in localized short- and long-term, minor to moderate, adverse impacts to hydrology. Long-term, negligible to minor, beneficial impacts to hydrology would result from an improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts could partially reduce the adverse effects to hydrology at the Center from the training center / office park scenario such that long-term, negligible to minor, adverse, cumulative impacts would result.

Summary – Hydrology Cumulative Impact. There would be long-term adverse impacts to hydrology at the Center under the interpretive / nature / history center and training center / office park scenarios. Long-term beneficial impacts would occur at Minnesota Valley National Wildlife Refuge from the improved ability to control the flow from Long Meadow Lake. Therefore, based largely on the extent of development at the Center, overall long-term cumulative impacts to hydrology would be adverse, ranging from negligible to minor in intensity.

Water Quality – Cumulative Impact

The outflow from the Camp Coldwater Reservoir is measured for water quality along with the flow rate. The water quality measurements include temperature and specific conductivity. The main factors that could affect water quality on the Center would be sediment loads in the short-term, and nonpoint source pollution, such as contaminants from vehicles and potentially use of fertilizer, insecticides or herbicides in the long-term.

Open Space / Park Scenario

Cumulative Impacts. Short-term localized minor adverse impacts to water quality would result from implementation of the open space / park scenario, due to disturbance associated with construction causing erosion of soils into surface water. Short-term minor adverse impacts to water quality would also occur as a result of construction activity at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. Long-term minor beneficial impacts to water quality would result from enhancement and expansion of

wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Cumulatively, these projects would result in short-term, minor, adverse impacts, and long-term, negligible, beneficial impacts to water quality.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under the interpretive / nature / history center scenario short-term impacts to water quality would be minor due to disturbance that would result in sedimentation affecting water quality. Similar effects would result from construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. In the cumulative impact scenario, there would be short-term, minor to moderate, adverse impacts to water quality. Minor beneficial long-term impacts to water quality would result from the expansion and enhancement of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Long-term adverse impacts to water quality at the Center under the interpretive / nature / history center scenario would result from nonpoint source pollution. The long-term cumulative effect of these actions on water quality would be negligible and beneficial.

Training Center / Office Park Scenario

Cumulative Impacts. Short- and long-term localized minor adverse impacts to water quality at the Center would result from the training center / office park scenario should the Center be developed by a recipient without regard for mitigation measure to protect water quality from factors such as soil erosion and nonpoint source pollution. The effects to water quality from construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. Long-term, minor, beneficial impacts to water quality would result from enhancement and/or expansion of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Cumulatively, these projects would have short-term, minor to moderate, adverse impacts and long-term negligible beneficial cumulative impacts on water quality.

Summary – Water Quality Cumulative Impact. Short-term adverse impacts to water quality at the Center resulting from construction activities would combine with similar short-term impacts from the other projects, resulting in cumulative short-term adverse impacts to water quality that range from minor to moderate in intensity. Expansion and enhancement of wetlands under the cumulative impact scenario would result in beneficial long-term impacts to water quality, possibly offsetting the potential adverse impacts at the Center from nonpoint source pollution. Long-term cumulative impacts to water quality would be negligible and beneficial.

Wetlands – Cumulative Impact

The *National Wetlands Inventory* map that includes the Center site shows a single wetland within the Center boundaries: Camp Coldwater Reservoir. An onsite delineation also revealed

the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

The main factor that would potentially impact wetlands on the Center would be construction work that would damage, alter or destroy wetland resources. Work affecting the course, current, or cross-section of a wetland would require a permit from the appropriate federal, state, or local agencies.

Open Space / Park Scenario

Cumulative Impacts. Should the recipient of the Center choose to remove structures and expand the area available for use as open space or as a park, operation of vehicles or demolition work could damage the wetland resources on the Center, resulting in short- and long-term adverse impacts ranging from negligible to moderate depending on the extent of damage. If any buildings were to be removed from wetlands, there is a possibility of a long-term, minor to moderate, beneficial impact on wetlands. Mitigation requirements by the USACE would ensure no net loss of wetlands, at a minimum. Beneficial effects from the construction of wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the impacts under the open space / park scenario, would result in a long-term, minor to moderate, beneficial cumulative impact to wetlands.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Moderate long-term beneficial impacts to wetlands would result from enhancement and expansion of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. The interpretive / nature / history center scenario would result in long-term, minor to moderate, adverse impacts to wetlands at the Center should they be damaged or destroyed. Mitigation requirements by the USACE would ensure no net loss of wetlands, at a minimum. The combination of projects would result in cumulative long-term negligible to minor beneficial impacts to wetlands.

Training Center / Office Park Scenario

Cumulative Impacts. Under the training center / office park scenario, increased density of buildings and damage to, or loss of, wetlands would result in long-term moderate adverse impacts. Mitigation requirements by the USACE would ensure no net loss of wetlands, at a minimum. Enhancement and/or expansion of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would result in long-term minor beneficial impacts to wetlands. Cumulatively, these beneficial impacts could offset the potential adverse impacts to wetlands at the Center such that cumulative impacts to wetlands would be long-term, negligible to minor, and adverse.

Summary – Wetlands Cumulative Impact. All scenarios for the Center have the potential to result in adverse impacts to wetlands, depending on the actions taken and level of disturbance. Projects at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge are anticipated to result in enhanced and expanded wetlands. The beneficial effects of the

cumulative impacts scenario could offset some of the potential adverse effects to wetlands at the Center, resulting in long-term cumulative impacts that may be beneficial or adverse, and negligible to minor in intensity.

Health and Safety – Cumulative Impact

In anticipation of divestiture of the Center in the late 1990s, the TCRC Closure Team conducted an extensive environmental cleanup. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings.

Under alternative B, the Center would be transferred with no restrictions, and there would be no requirement that the existing structures and fences be maintained to protect health and safety.

Open Space / Park Scenario

Cumulative Impacts. The open space / park scenario would result in long-term impacts to health and safety at the Center that range from negligible to minor from the retention of the deteriorating structures. Beneficial impacts to health and safety resulting from the elimination of the medical waste dump at Fort Snelling State Park would combine with the impacts from the open space / park scenario to result in long-term, minor to moderate, beneficial, cumulative impacts to health and safety.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Long-term negligible adverse impacts to health and safety at the Center would result from the interpretive / nature / history center scenario should the existing structures remain and continue to deteriorate. If any were removed or their associated wastes cleaned up, long-term minor to moderate beneficial impacts would result. Beneficial impacts to health and safety under the cumulative impact scenario would result from elimination of the medical waste dump at Fort Snelling State Park. Long-term cumulative impacts to health and safety would therefore be negligibly adverse to minor and beneficial, largely based on the extent of building removal and clean up at the Center.

Training Center / Office Park Scenario

Cumulative Impacts. Long-term negligible adverse impacts to health and safety at the Center would result from the training center / office park scenario should the existing structures remain and continue to deteriorate. If any were removed or their associated wastes cleaned up, long-term minor to moderate beneficial impacts would result. Beneficial impacts to health and safety under the cumulative impact scenario would result from elimination of the medical waste dump at Fort Snelling State Park. Long-term cumulative impacts to health and safety

would therefore be negligibly adverse to moderately beneficial, largely based on the extent of building removal and clean up at the Center.

Summary – Health and Safety Cumulative Impact. Potential long-term adverse impacts to health and safety would arise from retention of existing deteriorating structures under all scenarios. Cleanup of the medical waste dump at Fort Snelling State Park results in long-term beneficial impacts to health and safety that would offset any potential adverse impacts at the Center. Cumulative impacts to health and safety would be beneficial and would range from negligible to moderate depending on the actions taken at the Center, largely removal or cleanup of contaminated buildings.

Public Use and Experience – Cumulative Impact

The Center, which is open to the public, has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. During the time that the Center was operating in its official capacity (until 1995), it was not open for general public use and visitation. The Center is now used by the public on a frequent basis as an extension of the open space present in the surrounding parks and open areas. The area around Camp Coldwater Spring is viewed by some members of the public as being spiritually important and is used for meditation and a source of inspiration. Many groups of people have a special fondness for the Center property. Visitors to the Center include American Indians, spiritualists, environmentalists, and residents of the nearby neighborhoods. The alternatives presented in this EIS along with the scenarios present differing levels of access to the Center by the public for continuing the personal rituals and meditations as they currently exist.

Open Space / Park Scenario

Cumulative Impacts. Should some or all of the structures at the Center be removed, short-term impacts to public use and experience would be negligible to minor and adverse during demolition due to equipment operation and activity. Impacts related to Camp Coldwater Spring access would possibly be regional, long-term, moderate, and adverse should future access be denied for habitat conservation. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with the open space / park scenario impacts to result in long-term moderate beneficial impacts to public use and experience, but this is highly dependent on access to Camp Coldwater Spring.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under the interpretive / nature / history center scenario, short-term impacts to public use and experience at the Center would be negligible to minor and adverse due to construction activity. Similar construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would result in short-term,

minor to moderate, adverse impacts to public use and experience. Cumulatively, these projects would result in short-term moderate adverse impacts to public use and experience due to construction activity. Moderate long-term beneficial impacts to public use and experience would result from construction of new trails and extension of existing trails offering greater opportunity for outdoor recreation at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. Cumulative impacts to public use and experience under this scenario would be long-term, minor to moderate, and beneficial, depending on the management of public access to the Center.

Training Center / Office Park Scenario

Cumulative Impacts. Impacts to public use and experience from development of the Center as a training center / office park would be short-term, minor to moderate, and adverse during construction and long-term, major, and adverse should the area available for public recreation diminish or be closed to public access. Construction restricting or impinging on recreation at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would result in short-term minor adverse impacts to public use and experience and long-term moderate beneficial impacts due to the expansion of available trails for recreation. Taken together these projects would have short-term moderate adverse impacts and long-term, minor to moderate, adverse impacts on public use and experience.

Summary – Public Use and Experience Cumulative Impact. Impacts to public use and experience at the Center under the scenarios would vary depending on the level of public use allowed by the recipient. Short-term impacts from construction or demolition would be adverse and minor to moderate. Similar short-term impacts from construction under the cumulative impact scenario would result in overall moderate adverse impacts to public use and experience.

Long-term impacts to public use and experience at the Center would be moderate to major and beneficial should the recipient expand hours the Center is open to the public, or adverse should the recipient curtail or eliminate public access to the Center. Improvements to public use and experience under the cumulative impacts scenario would contribute long-term moderate beneficial impacts. Overall cumulative impacts to public use and experience would be minor to major and adverse or beneficial, largely dependent on access to the Center, particularly Camp Coldwater Spring.

Visual Resources – Cumulative Impact

The visual characteristics of the Center include a relatively limited viewshed (less than 1,000 feet and not expansive), dense woods and bluffs, nonnative vegetation and landscaping, driveways and parking lots, the Center buildings, and the Camp Coldwater Spring and Reservoir. Characteristics along the Center boundaries include views of an urban setting with commercial and residential buildings and SH 55 and SH 68. The existing overall visual quality is average to below average because of lack of vividness and distinctiveness. The deteriorating conditions of the buildings and the lack of grounds maintenance are the primary contributing factors.

Open Space / Park Scenario

Cumulative Impacts. Removal of some or all of the existing structures from the Center under this scenario would result in short-term, negligible to minor, adverse impacts. In the long-term, removal of the unused structures and rehabilitation of the building sites would result in moderate to major beneficial impacts to visual resources. Removal of the Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Views of the Center from outside would not be expected to change from the current condition, and therefore result in negligible, long-term impacts, if any.

Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, therefore would minimally impact visual resources resulting in short-term negligible adverse impacts and long-term negligible beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff property would result in similar effects to visual resources as those experienced at the Center, and short- and long-term, minor to moderate, adverse impacts would occur.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Rehabilitation of some existing structures for use as an interpretive / nature / history center in conjunction with removal of all remaining unused structures and rehabilitation of the building sites would result in improved visual character and quality. Short-term impacts would be negligible to minor, adverse impacts due to equipment and activity associated with rehabilitation work. Long-term impacts would be minor to moderate and beneficial due to the removal of some structures and improved appearance of remaining structure(s) and increased natural areas. Removal of the Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Because viewers outside the Center are in motion or from a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in negligible, long-term impacts, if any.

Training Center / Office Park Scenario

Cumulative Impacts. Reuse of many or all existing structures on the Center for training enter / office park in conjunction with removal of any unused structures and rehabilitation of building sites would result in short-term minor adverse impacts to visual resources due to construction equipment and activities. Long-term impacts would be minor and beneficial as the outward appearance of the rehabilitated structures could detract less from the visual resources than the unused structures. It is assumed that new construction and design for a training center or office park scenario would be more visually and stylistically cohesive than the collection of existing Modern style primary buildings and vernacular, utilitarian support structures, also resulting in long-term, localized, minor, beneficial impacts. Removal of Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Because viewers outside the Center are in motion or from a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in negligible, long-term impacts, if any.

Summary – Visual Resources Cumulative Impact. Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, therefore would minimally impact visual resources resulting in short-term, negligible, adverse impacts, and long-term, negligible, beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff property would result in similar effects to visual resources as those experienced at the Center, and short- and long-term, minor to moderate, adverse impacts would occur. Because viewers outside the Center are in motion or from a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in no to negligible, long-term impacts.

CUMULATIVE IMPACTS

ALTERNATIVE C – CONVEYANCE WITH CONDITIONS

Under alternative C, the Center would be conveyed to a university or nonfederal government entity with conditions (retention of property or a conservation easement) imposed on the future use of the Center that would limit the recipient's use or create affirmative obligations to be carried out by the recipient. The university or nonfederal government entity that receives the Center would have conditions on subsequent transfer or sale of the Center. Affirmative obligations that may be placed on the transfer include those that create a duty in the recipient to manage or maintain the Center or its resources in a specific way. For example, the federal government could convey with conditions (retention of property or a conservation easement) that would be designed to protect natural, historical, and cultural resources. Methods by which conditions on use of the Center may be imposed by the transfer agreement include the use of a conservation easement or by retaining a portion of the Center.

Archeological Resources – Cumulative Impact

Based on the 2001 study, the Center was organized into five distinct zones based on their potential to yield archeological information. Zones III, IV, and V were found to contain no important cultural materials and warrant no further archeological study. Zone I was recommended for further testing to determine if the area contains cultural materials that would contribute to the Fort Snelling National Historic Landmark and National Historic District. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the national historic landmark and national historic district. The 2001 study also recommended a revision to the boundaries of the Fort Snelling National Landmark to include Zones I and II (Clouse 2001). That revision is currently in process; for purposes of this EIS, it is assumed the boundaries include Zones I and II.

Open Space / Park Scenario

Cumulative Impacts. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete a section 106 process to properly consider the effects of the transfer on archeological resources and possibly apply conservation easements on land containing eligible or listed resources. Under the open space / park scenario, this would result in long-term, minor, beneficial impacts because the resource would be protected. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative B would result in long-term, minor, beneficial impacts.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete a section 106 process to properly consider the effects of the transfer on archeological resources and possibly apply conservation easements on land containing eligible or listed resources. Under the interpretive / nature / history center scenario, this would result in long-term, minor, beneficial impacts because the resource would be protected. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative B would result in long-term, minor, beneficial impacts.

Training Center / Office Park Scenario

Cumulative Impacts. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete a section 106 process to properly consider the effects of the transfer on archeological resources and possibly apply conservation easements on land containing eligible or listed resources. Under the training center / office park scenario, it is assumed that the resource would be impacted due to development plans and result in a long-term, moderate, and adverse impact because the resource would be permanently removed from context, but the information available in the recovered data would be available for future research. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative B would result in long-term, moderate, adverse impacts.

Summary – Archeological Resources Cumulative Impact. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative C would result in long-term impacts that would range from minor and beneficial to moderate and adverse.

Historic Structures and Districts – Cumulative Impact

There are no individually NRHP-eligible structures within the Center. Eleven of the buildings and structures at the Center are contributing elements to the USBM TCRC Historic District. Coldwater Spring reservoir and spring house are considered contributing structures to the Fort Snelling NHL and Historic District, but are not contributing elements of the USBM TCRC Historic District. Coldwater Spring itself is a contributing element to the Fort Snelling NHL and Historic District. Approximately half of the land within the Center falls within the boundaries of the Fort Snelling National Historic Landmark. Resources within the Center of significance to the national historic landmark include Camp Coldwater Spring and Reservoir (Henning 2002). Archeological resources exist at the Center that are considered contributing elements to the Fort Snelling National Historic District and Fort Snelling National Historic Landmark.

Cumulative Impacts. Analysis by land use scenario is not presented in this section because the impacts would be the same for all scenarios. Use of the Center under any of the scenarios by a university or nonfederal government entity under alternative C would be result in long-term, minor to major, beneficial impacts. These impacts would result from the potential requirement

for the new university or nonfederal governmental owner of the Center to adaptively reuse the existing structures in accordance with the Secretary of the Interior's Standards for Rehabilitation (36 C.F.R. 67); complete HABS recordation of the structures within the USBM TCRC Historic District in the event of demolition of some or all of the structures; or design new construction to minimize potential impacts on the viewsheds of the three historic districts and national historic landmark.

Continued deterioration of historic structures on the Fort Snelling Upper Bluff property would adversely impact the historic character of this area and the national historic landmark status, resulting in long-term, minor to moderate, adverse impacts to historic structures and districts. Theses impacts combined with the potential beneficial impacts under alternative C would result in long-term, negligible to moderate, beneficial cumulative impacts to historic structures.

Summary. Continued deterioration of historic structures on the Fort Snelling Upper Bluff property combined with potential requirements affording protection to historic structures and districts at the Center would result in long-term, negligible to moderate, beneficial cumulative impacts to historic structures.

Ethnographic Resources – Cumulative Impact

Although no historical documentation of American Indian use of Camp Coldwater Spring has been found, the oral traditions and histories collected during investigation suggest that natural springs, like Camp Coldwater Spring, are associated with sacred healing ceremonies. Camp Coldwater Spring is currently used by some members of the federally recognized Dakota and Ojibwe communities, and other American Indians as a source of water for ceremonies. The confluence of the Minnesota and Mississippi rivers is not located within the area of the proposed action, but Camp Coldwater Spring should be considered within this larger context. Many American Indian communities have a traditional association with the area surrounding the spring.

Cumulative Impacts. Analysis by land use scenario is not presented in this section because the impacts would be the same for all scenarios. Under alternative C, conditions on the transfer of the Center to a university or nonfederal government entity could be used to require preservation of and provide access by American Indian communities to Camp Coldwater Spring or associated resources. Overall impacts to ethnographic resources under this alternative would be long-term, minor to moderate, and beneficial. Other past, present, and future projects in the area would not impact ethnographic resources at the Center; cumulatively, these projects and alternative C would result in long-term, minor, adverse impacts.

Summary. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative C would result in long-term, minor, adverse impacts.

Soils – Cumulative Impact

The Center site contains the following soil series and types: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. It is important to note that recent archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads.

Open Space / Park Scenario

Cumulative Impacts. Under alternative C, should the recipient opt to manage the Center as open space or a park without removal of any existing structures, there would be a continuance of localized, short- and long-term, negligible, adverse impacts to soils. With removal of some or all structures, and with conditions (retention of property or a conservation easement) placed on the transfer of the Center requiring the recipient to take steps to avoid adverse impacts to soils, impacts would be short-term, minor to moderate, and adverse.

Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Cumulatively, short-term impacts to soils would be moderate and adverse. Long-term impacts to soils would be minor to moderate and beneficial.

Cumulatively, the short-term impacts to soils would be negligible to minor and adverse since none of the projects would result in large amounts of soil disturbances or mass wastage. Taken together the long-term cumulative impacts to soils would be negligible to minor and beneficial.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under alternative C, conditions (retention of property or a conservation easement) could be placed on the transfer of the Center requiring the recipient to take steps to avoid adverse impacts to soils. Impacts to soils would be short-term, negligible to minor, and adverse and long-term, minor, and beneficial if new construction takes place in an area where human-made structures currently exist and other structures are removed from the Center.

Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Cumulatively, short-term impacts to soils would be minor and adverse. Under the cumulative impact scenario the long-term impacts to soils would be negligible to minor and adverse since none of the projects would result in large amounts of soil disturbances or erosion. Taken together the long-term cumulative impacts to soils would be negligible and beneficial.

Training Center / Office Park Scenario

Cumulative Impacts. Impacts to soils from the training center / office park scenario would be short and long-term, minor, and adverse with construction in new locations and an increase in the total number of structures on the Center. Impacts would be short and long-term, negligible, and adverse with complete reuse or new construction in existing structure locations and no reduction in overall number of structures, and with appropriate mitigation. Impacts would be short-term negligible, and adverse and long-term, negligible to minor, and beneficial with complete reuse or new construction in existing structure locations, with reduction in the total number of structures, and rehabilitation of soils in those locations.

Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Under the cumulative impact scenario the long-term impacts to soils would be negligible to minor and adverse since none of the projects would result in large amounts of soil disturbances or mass wastage. Cumulatively, short-term impacts to soils would be negligible to minor and adverse. Taken together the long-term cumulative impacts to soils would be negligible to minor and adverse.

Summary – Soils Cumulative Impact. Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse and long-term impacts to soils would be minor to moderate and beneficial.

Cumulatively, short-term impacts to soils would be moderate and adverse. Cumulatively, long-term impacts to soils would be negligible to minor and adverse since none of the projects would result in large amounts of soil disturbances or mass wastage.

Vegetation – Cumulative Impact

Natural vegetation exists on the site's bluff slope, toe slope, and on the Mississippi River floodplain terrace. The bluff slope located on the eastern boundary of the project site supports a maple – basswood forest community. The toe slope, maintained in a saturated condition by natural groundwater seepage, supports a black ash swamp community. Occupying the Mississippi River floodplain adjacent to the toe slope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm, green ash, black willow, and eastern cottonwood. Currently, the Center is occupied by business infrastructure and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from the natural, presettlement condition or have become established on sites disturbed by development.

Factors affecting native vegetation at the Center under the following scenarios could include disturbance due to rehabilitation and construction, and potential for revegetation with native species. The airport zoning ordinance could require that a university or nonfederal governmental entity manage trees on the Center such that no new trees would be allowed to grow in

the portion of the Center that lies in Safety Zone A, and trees in all other areas of the Center could be required to be maintained at designated height requirements or perhaps removed.

Cumulative Impacts. Analysis by land use scenario is not presented in this section because the impacts would be the same for all scenarios. Long-term, minor, beneficial impacts to vegetation would result under any of the scenarios by a university or nonfederal government entity under alternative C. The new university or nonfederal governmental owner of the Center could be required to restore the sites of existing structures to native vegetation, remove existing nonnative vegetation and/or control the spread of invasive species (such as buckthorn) in the future (see discussion of "Tree Management," chapter 3).

Short-term impacts to vegetation resulting from construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be minor and adverse. Cumulatively, short-term impacts to vegetation would be minor and adverse. Effects to vegetation from the other projects would combine with the effects from the Center, largely from efforts in revegetation, to result in long-term, minor, beneficial cumulative impact

Summary – Vegetation Cumulative Impacts. Short-term cumulative impacts to vegetation would be minor and adverse resulting from disturbance associated with construction. Long-term cumulative impacts to vegetation would be minor and beneficial, largely resulting from efforts in revegetation.

Wildlife – Cumulative Impact

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 birds species are common to this area, and of these, 120 are known to nest in this part of Minnesota. At least 50 mammals occur within the Mississippi River corridor and some are likely visitors on the Center.

Factors that could affect wildlife under the following scenarios include increased public use and amount of habitat.

Open Space / Park Scenario

Cumulative Impacts. Conditions (retention of property or a conservation easement) could be placed on the transfer under alternative C that would result in short-term impacts to wildlife that are negligible and adverse resulting from demolition activity. Under these conditions, long-term impacts would range from negligible and adverse with increased public use; to negligible to minor and beneficial with revegetation in support of wildlife habitat.

Impacts to wildlife from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, short-term impacts to wildlife would be minor and adverse. Enhancements to wetlands wildlife habitat at Fort Snelling State Park and Minnesota Valley

National Wildlife Refuge would combine with the impacts to wildlife at the Center from the open space / park scenario to result in long-term, minor to moderate, and beneficial cumulative impacts to wildlife.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under alternative C, the impacts to wildlife would be short-term, negligible, and adverse as rehabilitation and demolition activity would disrupt existing wildlife. Impacts in the long-term range from negligible and adverse due to potentially increased public use of the Center to negligible to minor and beneficial if the area available for wildlife habitat could be expanded.

Impacts to wildlife from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, short-term impacts to wildlife would be minor and adverse. Enhancements to wetlands wildlife habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would combine with the impacts to wildlife at the Center from the open space / park scenario to result in long-term, minor, beneficial cumulative impacts to wildlife.

Training Center / Office Park Scenario

Cumulative Impacts. Under alternative C, construction in new locations with no elimination of existing structures on the Center would result in short- and long-term, minor to moderate, adverse impacts. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures and revegetation with species to support wildlife habitat in those locations would result in short-term, negligible, adverse impacts due to rehabilitation, demolition, and/or construction activity. Long-term minor beneficial impacts to wildlife would occur assuming some rehabilitation of space to support wildlife habitat.

Impacts to wildlife from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, short-term impacts to wildlife would be short-term, minor, and adverse. Enhancements to wetlands wildlife habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would combine with the impacts to wildlife at the Center from the open space / park scenario to result in long-term, minor to moderate beneficial cumulative impacts to wildlife.

Summary – Wildlife Cumulative Impact. Impacts to wildlife from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, short-term impacts to wildlife would be short-term, minor, and adverse. Enhancements to wetlands wildlife habitat

at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would combine with the impacts to wildlife at the Center from the open space / park scenario to result in long-term, minor to moderate, beneficial cumulative impacts to wildlife. Conversion of wildlife habitat, for example into a parking lot under the training center / office park scenario, would decrease this beneficial cumulative impact.

Hydrology – Cumulative Impact

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, just south of the intersection of the east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. The main drainage from the site is from Camp Coldwater Spring and the associated reservoir. Groundwater can be found within about 20 feet of the land surface in most places within the Minnehaha Creek watershed, including the Center.

Camp Coldwater Spring is fed by groundwater from an area above the Center. The spring is protected under state law if it is under the administration of a state entity, but if the Center were transferred to a private university, for example, this law would not be applicable. Factors that could affect the hydrologic features of the Center under the following scenarios include the amount of impermeable surface area and the maintenance of Camp Coldwater Reservoir.

Open Space / Park Scenario

Cumulative Impacts. Future operation of the Center with continued use of the existing open space as open space or a park without removing any existing structures would result in localized, short- and long-term, negligible, adverse impacts to hydrology. Impacts to hydrology under this scenario would be localized, long-term, minor to moderate, and beneficial with removal of some or all structures.

Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts would combine with the impacts of this scenario such that long-term, moderate, beneficial cumulative impacts to hydrology would result.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under alternative C, construction of a new structure at the Center for use as an interpretive / nature / history center in a location of an existing structure without removal of any other existing structures would result in a continuance of localized, short- and long-term, negligible, adverse impacts to hydrology because there would be no change in the amount of impermeable surfaces. Construction of a new structure in a location of an existing structure, along with removal of some or all unused structures would result in localized long-term, minor to moderate, beneficial impacts to hydrology due to a decrease in impermeable surfaces.

Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife

Refuge. These beneficial impacts would combine with the effects to hydrology at the Center from the interpretive / nature / history center scenario such that long-term cumulative impacts would be moderate and beneficial.

Training Center / Office Park Scenario

Cumulative Impacts. Development of a training center / office park using a combination of building reuse and new construction in existing building locations with no reduction in the total number of structures would result in localized, short- and long-term, negligible, adverse impacts to hydrology. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with no change of the Camp Coldwater Reservoir, would result in localized long-term, minor, beneficial impacts to hydrology.

Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts would combine with the effects to hydrology at the Center from the interpretive / nature / history center scenario such that long-term, minor to moderate, beneficial cumulative impacts to hydrology would result.

Summary – Hydrology Cumulative Impact. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with no change of the Camp Coldwater Reservoir, would result in localized long-term minor beneficial impacts to hydrology. Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts would combine with the effects to hydrology at the Center from the open space /park and interpretive / nature / history center scenarios such that long-term, minor to moderate, beneficial cumulative impacts to hydrology would result. The training center / office park scenario would likely lessen this beneficial impact.

Water Quality – Cumulative Impact

The outflow from the Camp Coldwater Reservoir is measured for water quality along with the flow rate. The water quality measurements include temperature and specific conductivity. The main factors that could affect water quality on the Center would be sediment loads in the short-term, and nonpoint source pollution, such as contaminants from vehicles and potentially use of fertilizer, insecticides or herbicides in the long-term.

Open Space / Park Scenario

Cumulative Impacts. Under alternative C, short-term impacts to water quality would range from no impact if none of the existing structures are removed to localized negligible adverse impacts should structures be removed with mitigation. The potential long-term impacts to water quality would range from localized negligible adverse impacts with no demolition, construction or changes in visitor use to localized long-term minor adverse impacts to water quality with changes in structures and visitor use, and implementation of mitigation measures.

Short-term minor adverse impacts to water quality would occur as a result of construction activity at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. Long-term minor beneficial impacts to water quality would result from enhancement and expansion of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Cumulatively, these projects would result in short-term, minor, adverse, cumulative impacts. Long-term cumulative impacts would range from negligible and adverse to negligible and beneficial.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Impacts under this scenario would be short-term, localized, negligible, and adverse, and localized long-term, minor, and adverse, because structures may or may not be constructed or demolished.
Short-term, minor, adverse impacts to water quality would occur as a result of construction activity at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. Long-term, minor, beneficial impacts to water quality would result from enhancement and expansion of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Cumulatively, these projects would result in short-term, minor to moderate adverse impacts. Long-term cumulative impacts would range from negligible and adverse to negligible and beneficial.

Training Center / Office Park Scenario

Cumulative Impacts. Potential cumulative impacts of this scenario would be anticipated to be similar to those described in the scenarios above.

Summary – Water Quality Cumulative Impact. Long-term minor beneficial impacts to water quality would result from enhancement and expansion of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Cumulatively, these projects and those at the Center would result in short-term, minor, adverse, cumulative impacts. Long-term cumulative impacts would range from negligible and adverse to negligible and beneficial, depending largely on any increase in nonpoint source pollution.

Wetlands – Cumulative Impact

The *National Wetlands Inventory* map that includes the Center site shows a single wetland within the Center boundaries: Camp Coldwater Reservoir. An onsite delineation also revealed the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

The main factor that would potentially impact wetlands on the Center would be construction work that would damage, alter or destroy wetland resources. Work affecting the course, current, or cross-section of a wetland would require a permit from the appropriate federal, state, or local agencies.

Open Space / Park Scenario

Cumulative Impacts. Under alternative C, impacts to wetlands would be long-term, major, and adverse if existing structures remained in the wetlands. Removal of existing structures eliminating existing adverse impacts, and restoration of wetlands would result in short-term, minor to moderate, adverse impacts and long-term, moderate to major, beneficial impacts to wetlands. Beneficial effects from the construction of wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the impacts under the open space / park scenario, would result in cumulative impacts that are short-term, moderate, and adverse; and long-term, minor to major, and beneficial.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under alternative C, short-term impacts to wetlands would range from negligible to moderate and adverse; and long-term impacts would range from negligible and adverse to moderate to major and beneficial. Beneficial effects from the construction of wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the impacts under the open space / park scenario, would result in short-term cumulative impacts that range from negligible to moderate and adverse; and long-term, minor to major, beneficial cumulative impacts.

Training Center / Office Park Scenario

Cumulative Impacts. Under alternative C, complete reuse or new construction in existing tructure locations, in combination with mitigation measures to minimize impacts to wetlands and revegetation efforts to restore any damage, would result in short-term, minor to moderate, and long-term, negligible, adverse impacts to wetlands. Removal of existing structures eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major beneficial impacts to wetlands.

Beneficial effects from the construction of wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the impacts under the open space / park scenario, would result in short-term, minor to moderate, adverse cumulative impacts; and long-term, minor to major, beneficial cumulative impacts.

Summary – Wetlands Cumulative Impact. Removal of existing structures eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major beneficial impacts to wetlands. Beneficial effects from wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the impacts under the open space / park and interpretive / nature / history center scenarios, would result in short-term cumulative impacts that range from negligible to moderate and adverse and long-term, minor to major, beneficial cumulative impacts.

Health and Safety – Cumulative Impact

In anticipation of divestiture of the Center in the late 1990s, the TCRC Closure Team conducted an extensive environmental cleanup. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings.

Under alternative B, the Center would be transferred with no restrictions, and there would be no requirement that the existing structures and fences be maintained to protect health and safety.

Open Space / Park Scenario

Cumulative Impacts. Under alternative C, impacts to health and safety would range from localized, long-term, negligible, and adverse; to long-term, minor and beneficial with elimination of potential hazardous situations for workers and potential intruders. Beneficial impacts to health and safety resulting from the elimination of the medical waste dump at Fort Snelling State Park would combine with the impacts from the open space / park scenario to result in long-term, negligible to minor, beneficial cumulative impacts to health and safety.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Cumulative impacts to health and safety under this scenario would be the same as described for the open space / park scenario.

Training Center / Office Park Scenario

Cumulative Impacts. Cumulative impacts to health and safety under this scenario would be the same as described for the open space / park scenario.

Summary – Health and Safety Cumulative Impact. Beneficial impacts to health and safety resulting from the elimination of the medical waste dump at Fort Snelling State Park would combine with the impacts from the open space / park scenario to result in long-term, negligible to minor, beneficial cumulative impacts to health and safety under all scenarios.

Public Use and Experience – Cumulative Impact

The Center, which is open to the public, has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. During the time that the Center was operating in its official capacity (until 1995), it was not open for general public use and visitation. The Center is now used by the public on a frequent basis as an extension of the open space present in the surrounding parks and open areas. The area around Camp Coldwater Spring is viewed by some members of the public as being spiritually important and is used for meditation and a source of inspiration. Many groups of

people have a special fondness for the Center property. Visitors to the Center include American Indians, spiritualists, environmentalists, and residents of the nearby neighborhoods. The alternatives presented in this EIS along with the scenarios present differing levels of access to the Center by the public for continuing the personal rituals and meditations as they currently exist.

Open Space / Park Scenario

Impacts. Under alternative C, short-term impacts would be negligible to minor and adverse during the demolition process due to equipment operation and activity. Long-term impacts would be moderate to major and beneficial as the visibility of the changes to the Center may be prominent and the area and hours available for public use would be expanded. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with the open space / park scenario impacts to result in long-term, major, beneficial cumulative impacts to public use and experience.

Interpretive / Nature / History Center Scenario

Impacts. Under this scenario, impacts to public use and experience would be short-term, negligible to minor adverse impacts due to construction work on-site, and long-term moderate beneficial impacts to public use and experience could be expected through expanded area and hours available for public use of the Center. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with the open space / park scenario impacts to result in short-term, negligible to minor, adverse and long-term, moderate to major, beneficial cumulative impacts to public use and experience.

Training Center / Office Park Scenario

Impacts. Under this scenario, impacts to public use and experience would be short-term, negligible to minor, adverse impacts due to equipment activity associated with construction work and long-term, minor to moderate, beneficial, impacts due to expanded hours of availability of the Center for public use, and revitalization of the structures that are currently decaying and not in use. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with the open space / park scenario impacts to result in short-term, negligible to minor, and adverse; and long-term, moderate, beneficial cumulative impacts to public use and experience.

Summary – Public Use and Experience Cumulative Impact. Beneficial impacts to public use and experience would be expected through expanded area and hours available for public use of the Center. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with impacts of the open space / park and interpretive / nature / history center scenarios resulting in short-term,

negligible to minor, adverse and long-term, moderate to major, beneficial cumulative impacts to public use and experience. The training center / office park scenario would likely lessen this beneficial impact.

Visual Resources – Cumulative Impact

The visual characteristics of the Center include a relatively limited viewshed (less than 1,000 feet and not expansive), dense woods and bluffs, nonnative vegetation and landscaping, driveways and parking lots, the Center buildings, and Camp Coldwater Spring and Reservoir. Characteristics along the Center boundaries include views of an urban setting with commercial and residential buildings and SH 55 and SH 68. The existing overall visual quality is average to below average because of lack of vividness and distinctiveness. The deteriorating conditions of the buildings and the lack of grounds maintenance are the primary contributing factors.

Open Space / Park Scenario

Cumulative Impacts. Under alternative C, impacts to visual resources would range from no to negligible long-term impacts, to moderate to major, and beneficial if all existing structures are removed. Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, therefore would minimally impact visual resources resulting in short-term, negligible adverse, and long-term, negligible beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff property would result in long-term, minor to moderate, adverse impacts, similar effects to visual resources as those experienced at the Center under the no-action alternative. Combined, the cumulative impacts would be short-term, negligible and adverse. Long-term cumulative impacts to visual resources would range from minor to moderate, and adverse; to negligible to minor, and beneficial.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under alternative C, impacts to visual resources would be short-term, negligible to minor, adverse impacts due to equipment and activity associated with rehabilitation work; and long-term, minor to moderate, beneficial impacts to visual resources due to the removal of some structures and improved appearance of remaining structure(s). Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, and therefore, would minimally impact visual resources resulting in short-term, negligible adverse, and long-term, negligible beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff property would result in long-term, minor to moderate, adverse impacts, similar effects to visual resources as those experienced at the Center. Combined, the cumulative short-term impacts to visual resources would be short-term, negligible to minor, and adverse. Long-term cumulative impacts would be negligible and beneficial.

Training Center / Office Park Scenario

Cumulative Impacts. Under alternative C, impacts to visual resources would be short-term, minor, and adverse due to construction equipment and activity. Long-term impacts would be

negligible to minor beneficial as the outward appearance of the rehabilitated or new structures would detract less from the visual resources than the unused structures. Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, therefore would minimally impact visual resources resulting in short-term, negligible adverse, and long-term, negligible beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff would result in long-term, minor to moderate, adverse impacts, similar effects to visual resources as those experienced at the Center. Combined, the cumulative short-term impacts would be minor and adverse. Long-term cumulative impacts would be negligible to minor, and adverse.

Summary – Visual Resources Cumulative Impact. Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, therefore would minimally impact visual resources resulting in short-term, negligible adverse, and long-term, negligible beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff would result in long-term, minor to moderate, adverse impacts, similar effects to visual resources as those experienced at the Center. Long-term cumulative impacts would be negligible to minor, and adverse.

CUMULATIVE IMPACTS

ALTERNATIVE D

SITE MODIFICATION; CONVEYANCE OR RETENTION

Under preferred alternative D, the federal government would manage and bear the cost for modification of all or part of the land, structures, or other improvements prior to conveyance or retention of the Center. Following completion of the modifications, the Center would be disposed through transfer to a university or nonfederal government entity without conditions (retention of property or a conservation easement) (alternative B), transfer to a university or nonfederal government entity with conditions (alternative C), or retention by the federal government. Open space/park is the preferred land use scenario

Archeological Resources – Cumulative Impact

Based on the 2001 study, the Center was organized into five distinct zones based on their potential to yield archeological information. Zones III, IV, and V were found to contain no important cultural materials and warrant no further archeological study. Zone I was recommended for further testing to determine if the area contains cultural materials that would contribute to the Fort Snelling National Historic Landmark and National Historic District. Zone II was found to contain in situ cultural deposits that correspond to the period of significance of the national historic landmark and national historic district. The 2001 study also recommended a revision to the boundaries of the Fort Snelling National Landmark to include Zones I and II (Clouse 2001). That revision is currently in process; for purposes of this EIS, it is assumed the boundaries include Zones I and II.

Open Space / Park Scenario

Cumulative Impacts. Upon completion of federal government modifications to the Center, it is assumed that the archeological resources would not be adversely impacted. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete the section 106 process to properly consider the effects of the transfer on archeological resources. If the Center is transferred without conditions, the impacts would be long-term, moderate, and adverse because the resource would be permanently removed from context, but the information available in the data recovered would be available for future research. If the Center is transferred with conditions, under the preferred open space / park scenario, this would result in long-term, minor, beneficial impacts because the resource could be protected. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative D would result in impacts that could either be long-term, moderate, and adverse or long-term, minor, and beneficial, depending on whether conditions are placed on the transfer.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Upon completion of federal government modifications to the Center, it is assumed that the archeological resources would not be adversely impacted. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete the section 106 process to properly consider the effects of the transfer on archeological resources. If the Center is transferred without conditions, the impacts would be long-term, moderate, and adverse because the resource would be permanently removed from context, but the information available in the data recovered would be available for future research. If the Center is transferred with conditions, under the interpretive / nature / history center scenario, this would result in long-term, minor, beneficial impacts because the resource could be protected. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative D would result in impacts that could either be long-term, moderate, and adverse or long-term, minor, and beneficial, depending on whether conditions are placed on the transfer.

Training Center / Office Park Scenario

Cumulative Impacts. Upon completion of federal government modifications to the Center, it is assumed that the archeological resources would not be adversely impacted. Prior to transfer of ownership to a university or nonfederal government entity, the USDI would complete the section 106 process to properly consider the effects of the transfer on archeological resources. If the Center is transferred without conditions, the impacts would be long-term, moderate, and adverse because the resource would be permanently removed from context, but the information available in the data recovered would be available for future research. If the Center is transferred with conditions, under the training center / office park scenario, it is assumed that the resource would be impacted due to development plans and result in long-term, moderate, and adverse impacts because the resource would be permanently removed from context, but the information available in the recovered data would be available for future research. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative D would result in long-term, moderate, adverse impacts.

Summary – Archeological Resources Cumulative Impact. Other past, present, and future projects in the area would not impact archeological resources; cumulatively, these projects and alternative D would result in long-term impacts that could be moderate and adverse or minor and beneficial.

Historic Structures and Districts – Cumulative Impact

There are no individually NRHP-eligible structures within the Center. Eleven of the buildings and structures at the Center are contributing elements to the USBM TCRC Historic District. Coldwater Spring reservoir and spring house are considered contributing structures to the Fort Snelling NHL and Historic District, but are not contributing elements of the USBM TCRC Historic District. Coldwater Spring itself is a contributing element to the Fort Snelling NHL and Historic District. Approximately half of the land within the Center falls within the

boundaries of the Fort Snelling National Historic Landmark. Resources within the Center of significance to the national historic landmark include Camp Coldwater Spring and Reservoir (Henning 2002). Archeological resources exist at the Center that are considered contributing elements to the Fort Snelling National Historic District and Fort Snelling National Historic Landmark.

Cumulative Impacts. Analysis by land use scenario is not presented in this section because the impacts would be the same for all scenarios. The impacts from any federal government modification of the Center would be short-term, minor (if minimized or mitigated), and adverse; or long-term, minor to major, and beneficial (if structures are adaptively reused). Continued deterioration of historic structures on the Fort Snelling Upper Bluff property would adversely impact the historic character of this area and the national historic landmark status, resulting in long-term, minor to moderate, adverse impacts to historic structures and districts. Short-term cumulative impacts would be minor and adverse. Long-term impacts would combine to result in minor to moderate, beneficial cumulative impacts to historic structures and districts.

If the Center is conveyed to a university or nonfederal government entity without conditions, and historic structures and districts remain within the Center after any federal modifications have been completed; use of the Center under any of the scenarios (open space / park; interpretive / nature / historic center; training center / office park) would have the same cumulative impacts as described under alternative B.

If the Center is conveyed to a university of nonfederal government entity with conditions or affirmative obligations, and historic structures and districts remain within the Center after any federal modifications have been completed; use of the Center under any of the scenarios (open space / park; interpretive / nature / historic center; training center / office park) would have the same cumulative impacts as described under alternative C.

If the federal government retains the Center, use of the Center under any of scenarios (open space / park; interpretive / nature / historic center; training center / office park) would have cumulative impacts similar to those described under alternative C, because the protections mandated under federal law, (and implemented through conditions or affirmative obligations under alternative C) would apply to the Center as long as it remained under federal control.

Summary. The cumulative impacts under alternative D would be the same as those under alternatives B or C, depending on the nature of the modifications made by the federal government prior to conveyance or retention, and whether the Center was conveyed with or without conditions to a university or nonfederal government entity.

Ethnographic Resources – Cumulative Impact

Although no historical documentation of American Indian use of Camp Coldwater Spring has been found, the oral traditions and histories collected during investigation suggest that natural springs, like Camp Coldwater Spring, are associated with sacred healing ceremonies. Camp Coldwater Spring is currently used by some members of the federally recognized Dakota and

Ojibwe communities, and other American Indians as a source of water for ceremonies. The confluence of the Minnesota and Mississippi rivers is not located within the area of the proposed action, but Camp Coldwater Spring should be considered within this larger context. Many American Indian communities have a traditional association with the area surrounding the spring.

Open Space / Park Scenario

Cumulative Impacts. Under preferred Alternative D, open space/park scenario, if conditions are not placed on the transfer there would be no guarantee of preservation of or access by American Indian communities to the Camp Coldwater Spring area. Overall impacts to ethnographic resources under the open space / park scenario would be long-term, negligible to minor, and beneficial, or long-term, moderate to major, and adverse. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative D would result in impacts that are long-term, negligible to minor, and beneficial, or long-term, moderate to major, and adverse.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. If conditions are not placed on the transfer under alternative D, there would be no guarantee of preservation of or access by American Indian communities to the Camp Coldwater Spring area. Overall impacts to ethnographic resources under the interpretive / nature / history center scenario would be long-term, range from negligible to minor and beneficial; and negligible to major, adverse. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative D would result in impacts that are long-term, and range from negligible to minor and beneficial; and negligible to major, adverse.

Training Center / Office Park Scenario

Cumulative Impacts. If conditions are not placed on the transfer under alternative D, there would be no guarantee of preservation of or access by American Indian communities to the Camp Coldwater Spring area. Overall impacts to ethnographic resources under the training center / office park scenario would be long-term, range from moderate to major, adverse; and minor, beneficial impacts. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative D would result in impacts that are long-term, and range from moderate to major, adverse; and minor, beneficial.

Summary – Ethnographic Resources Cumulative Impact. Impacts range widely under alternative D because the Center could be transferred either with or without conditions after modification. Other past, present, and future projects in the area would not impact ethnographic resources; cumulatively, these projects and alternative D would result in long-term, minor to moderate, adverse impacts or long-term, negligible, beneficial impacts.

Soils – Cumulative Impact

The Center site contains the following soil series and types: Dorset, Forada, Sandberg, Urban Land-Hubbard, and Urban Land-Udipsamments (NRCS 2005). Platteville limestone underlies surficial soils 10 to 50 feet below the ground surface. It is important to note that recent archeological testing suggests that soils over much of the Center site have been disturbed (buried, cut and filled, etc.) during construction of facilities and roads.

Open Space / Park Scenario

Cumulative Impacts. Under preferred alternative D, open space / park scenario, short-term impacts would be negligible to minor and adverse with mitigation. If the Center is then transferred with no covenant or easement (conservation or other), it would result in long-term, minor to moderate, adverse impacts to soils. If the transfer of the Center includes conditions, the long-term impacts to soils would be minor to moderate and beneficial.

Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Long-term impacts to soils under these projects would be negligible to minor and adverse since none of the projects would result in large amounts of soil disturbances or mass wastage.

For all projects and scenario activities, cumulative short-term impacts to soils would be minor and adverse. Cumulative long-term impacts to soils would range from moderate and adverse, to negligible to minor and beneficial, depending on any conditions placed on the transfer

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under alternative D short-term adverse impacts to soils ranging from negligible to minor would result from modifications prior to transfer. If the Center is transferred to the recipient without conditions, long-term impacts to soils would be minor to moderate and adverse, depending on the extent of the modification prior to transfer. If the transfer of the Center includes conditions, the long-term impacts to soils would be minor to moderate and beneficial.

Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Cumulative impacts for these projects in the long-term would be negligible to minor and adverse since none of the projects would result in large amounts of soil disturbances or mass wastage.

For all projects and scenario activities, cumulative short-term impacts to soils would be minor and adverse. The long-term cumulative impacts to soils would range from moderate and adverse, to negligible to minor and beneficial with mitigation.

Training Center / Office Park Scenario

Cumulative Impacts. Under alternative D, short-term, adverse impacts to soils ranging from negligible to minor in intensity would result from modification of the Center prior to transfer. Should the Center transfer without the benefit of conditions, long-term impacts to soils would be minor to moderate and adverse. Conditions could be placed on the transfer of the Center requiring the recipient to take steps to avoid adverse impacts to soils, resulting in long-term beneficial impacts that would be negligible to minor with mitigation directed by conditions on the transfer.

Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Cumulative impacts for these projects in the long-term would be negligible to minor and adverse since none of the projects would result in large amounts of soil disturbances or mass wastage.

For all projects and scenario activities, the cumulative short-term impacts to soils would be minor and adverse. The long-term cumulative impacts to soils would range from minor to moderate and adverse to minor to moderate and beneficial with mitigation.

Summary- Soils Cumulative Impact. Short-term impacts to soils from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be negligible to minor and adverse. Cumulatively, short-term impacts to soils would be moderate and adverse. Long-term impacts to soils under this alternative would be minor to moderate and beneficial. Cumulatively, the long-term impacts to soils would range from negligible to minor and adverse to minor to moderate and beneficial with mitigation.

Vegetation – Cumulative Impact

Natural vegetation exists on the site's bluff slope, toe slope, and on the Mississippi River floodplain terrace. The bluff slope located on the eastern boundary of the project site supports a maple – basswood forest community. The toe slope, maintained in a saturated condition by natural groundwater seepage, supports a black ash swamp community. Occupying the Mississippi River floodplain adjacent to the toe slope and to the river's edge is a relatively unaltered forest community characterized by silver maple, American elm, green ash, black willow, and eastern cottonwood. Currently, the Center is occupied by business infrastructure and open areas that were constructed or planted following land-leveling activities. In addition, wetlands and successional deciduous woodlands remain from the natural, pre-settlement condition or have become established on sites disturbed by development.

Factors affecting native vegetation at the Center under the following scenarios could include disturbance due to rehabilitation and construction, and potential for revegetation with native species. The airport zoning ordinance could require that a university or nonfederal governmental entity manage trees on the Center such that no new trees would be allowed to grow in the portion of the Center that lies in Safety Zone A, and trees in all other areas of the

Center could be required to be maintained at designated height requirements or perhaps removed.

Cumulative Impacts. Analysis by land use scenario is not presented in this section because the impacts would be the same for all scenarios. Modification of the Center prior to transfer, followed by use of the Center by a university or nonfederal government entity under any of the scenarios under alternative D would result in short-term, negligible to minor, adverse and long-term, moderate to major, beneficial impacts. Short-term impacts to vegetation resulting from construction at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be minor and adverse. Cumulatively, short-term impacts to vegetation would be minor and adverse. Effects to vegetation from the other projects would combine with the effects from the Center, largely from efforts in revegetation, to result in long-term, moderate to major, beneficial cumulative impacts. Under the preferred alternative, short-term effects on vegetation would be minor and adverse. Long-term effects would be moderate to major and beneficial.

Summary. Short-term cumulative impacts to vegetation would be minor and adverse resulting from disturbance associated with construction. Long-term cumulative impacts to vegetation would be minor and beneficial, largely resulting from efforts in revegetation.

Wildlife – Cumulative Impact

The Mississippi River valley and its tributaries in east-central Minnesota attract an array of wildlife that use diverse habitats. Over 260 birds species are common to this area, and of these, 120 are known to nest in this part of Minnesota. At least 50 mammals occur within the Mississippi River corridor and some are likely visitors on the Center.

Factors that could affect wildlife under the following scenarios include increased public use and amount of habitat.

Open Space / Park Scenario

Cumulative Impacts. Under alternative D, in the short-term, wildlife would be adversely impacted by the demolition activity performed prior to transfer; however, those impacts are anticipated to be negligible. If the Center were transferred without conditions, long-term, negligible to minor, adverse impact on wildlife due to the reduction in habitat would result. If the Center is transferred with conditions protecting wildlife and their habitat, the long-term impacts would be negligible to minor and beneficial.

Impacts to wildlife from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, short-term impacts to wildlife would be minor and adverse. Enhancements to wetlands wildlife habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would combine with the impacts to wildlife at the Center from the

open space / park scenario to result in long-term cumulative impacts that are negligible to minor and beneficial. Under the preferred alternative, short-term impacts from demolition activity would be negligible and adverse. Long-term impacts would be moderate and beneficial.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Cumulative impacts to wildlife would be the same as those described for the open space / park scenario above.

Training Center / Office Park Scenario

Cumulative Impacts. Cumulative impacts to wildlife would be the same as those described for the open space / park scenario above.

Summary – Wildlife Cumulative Impacts. Impacts to wildlife from construction activities at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would be short-term, minor, and adverse. The contribution of the potential adverse impacts to wildlife on the Center to cumulative impacts would be minimal because the proportion of habitat involved would be relatively small. Therefore, cumulatively, short-term impacts to wildlife would be short-term, minor, and adverse. Enhancements to wetlands wildlife habitat at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge would combine with the impacts to wildlife at the Center from the open space / park scenario to result in long-term, minor to moderate, beneficial cumulative impacts to wildlife. Conversion of wildlife habitat, for example into a parking lot under the training center / office park scenario, would decrease this beneficial cumulative impact.

Hydrology – Cumulative Impact

The 27.32-acre Center is located on the eastern boundary of the Minnehaha Creek watershed, just south of the intersection of the east-flowing Minnehaha Creek with the Mississippi River, on the west bank of the river. The main drainage from the site is from Camp Coldwater Spring and the associated reservoir. Groundwater can be found within about 20 feet of the land surface in most places within the Minnehaha Creek watershed, including the Center.

Camp Coldwater Spring is fed by groundwater from an area above the Center. The spring is protected under state law if it is under the administration of a state entity, but if the Center were transferred to a private university, for example, this law would not be applicable. Factors that could affect the hydrologic features of the Center under the following scenarios include the amount of impermeable surface area and the maintenance of Camp Coldwater Reservoir.

Open Space / Park Scenario

Cumulative Impacts. Localized long-term, minor to moderate, beneficial impacts to hydrology would result as the local hydrologic processes would be positively affected by

reductions in impermeable surfaces. Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts would combine with the impacts of this scenario such that long-term, moderate, beneficial cumulative impacts to hydrology would result.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under alternative D, construction of a new structure at the Center for use as an interpretive / nature / history center in a location of an existing structure without removal of any other existing structures would result in localized, short- and long-term, negligible adverse impacts to hydrology because there would be no change in the amount of impermeable surfaces. Construction of a new structure in a location of an existing structure, along with removal of some or all unused structures would result in localized long-term, minor to moderate, beneficial impacts to hydrology due to a decrease in impermeable surfaces.

Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts would combine with the impacts of this scenario such that long-term, minor to moderate, beneficial cumulative impacts to hydrology would result.

Training Center / Office Park Scenario

Cumulative Impacts. Under alternative D, development of a training center / office park using a combination of building reuse and new construction in existing building locations with no reduction in the total number of structures would result in localized, short- and long-term, negligible adverse impacts to hydrology. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with elimination of the Camp Coldwater Reservoir, would result in localized long-term, minor to moderate, adverse impacts to hydrology. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with no change of the Camp Coldwater Reservoir, would result in localized long-term, minor, beneficial impacts to hydrology.

Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts would combine with the impacts of this scenario such that long-term cumulative impacts would range from minor and adverse to minor and beneficial.

Summary – Hydrology Cumulative Impact. Complete reuse or new construction in existing structure locations with a reduction in the total number of structures, with no change of the Camp Coldwater Reservoir, would result in localized long-term minor beneficial impacts to hydrology. Long-term, negligible to minor, beneficial effects to hydrology would result from improved ability to control the flow from Long Meadow Lake at Minnesota Valley National Wildlife Refuge. These beneficial impacts would combine with the effects to hydrology at the Center from the open space /park and interpretive / nature / history center scenarios such that long-term, minor to moderate, beneficial cumulative impacts to hydrology would result. The training center / office park scenario would likely lessen this beneficial impact.

Water Quality – Cumulative Impact

The outflow from the Camp Coldwater Reservoir is measured for water quality along with the flow rate. The water quality measurements include temperature and specific conductivity. The main factors that could affect water quality on the Center would be sediment loads in the short-term, and nonpoint source pollution, such as contaminants from vehicles and potentially use of fertilizer, insecticides or herbicides in the long-term.

Open Space / Park Scenario

Cumulative Impacts. Under alternative D, short-term impacts to water quality resulting from federal modifications to the Center prior to transfer would be minor and adverse. Long-term impacts to water quality would depend on the actions of the recipient after transfer of the Center, and would be localized long-term, minor, and adverse. Short-term minor adverse impacts to water quality would occur as a result of construction activity at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park. Long-term minor beneficial impacts to water quality would result from enhancement and expansion of wetlands at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge. Cumulatively, these projects would result in short-term, minor, adverse, cumulative impacts. Long-term cumulative impacts would range from negligible and adverse to negligible and beneficial. Under the preferred alternative, short-term impacts to water quality would be minor and adverse. Long-term impacts would be minor and beneficial.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Cumulative impacts to water quality would be the same as those described for the open space / park scenario above.

Training Center / Office Park Scenario

Cumulative Impacts. Cumulative impacts to water quality would be the same as those described for the open space / park scenario above.

Summary – Water Quality Cumulative Impact. Cumulative impacts to water quality would be short-term, minor, and adverse and long-term impacts would range from negligible and adverse to negligible and beneficial, regardless of scenario.

Wetlands – Cumulative Impact

The *National Wetlands Inventory* map that includes the Center site shows a single wetland within the Center boundaries: Camp Coldwater Reservoir. An on-site delineation also revealed the presence of additional wetlands that are not shown on the *National Wetlands Inventory* map.

The main factor that would potentially impact wetlands on the Center would be construction work that would damage, alter or destroy wetland resources. Work affecting the course, current, or cross-section of a wetland would require a permit from the appropriate federal, state, or local agencies.

Open Space / Park Scenario

Cumulative Impacts. Under alternative D, short-term minor and long-term negligible adverse impacts to wetlands would result from modifications made prior to transfer. Under alternative D, the Center could be transferred to a nonfederal government or university entity with or without a covenant or easement (conservation or other). Because wetlands could be considered a valuable element of open space or a park, protection of wetlands from future impacts through conditions on the transfer may not change the future impacts. Beneficial effects from the construction of wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the impacts under the open space / park scenario, would result in cumulative impacts that are short-term, minor and adverse, and long-term, minor and beneficial. Under the preferred alternative, short-term impacts during structure removal would be moderate and adverse. Long-term impacts would be moderate and beneficial.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Cumulative impacts to wetlands would be the same as those described for the open space / park scenario above.

Training Center / Office Park Scenario

Cumulative Impacts. Impacts to wetlands from new construction and building reuse under the training center / office park scenario would be short-term, minor, and long-term, negligible, and adverse. Without conditions on the transfer, future development at the Center could destroy wetlands, possibly resulting in long-term moderate adverse impacts. Placing restrictions on the transfer that would protect wetlands would result in short-term, minor to moderate, adverse impacts and long-term negligible adverse impacts.

Beneficial effects from the construction of wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the impacts under this scenario, would result in cumulative impacts that are short-term, minor to moderate, and adverse; and long-term cumulative impacts that would range from negligible and adverse, to long-term, negligible to minor, and beneficial.

Summary – Wetlands Cumulative Impact. Removal of existing structures eliminating existing adverse impacts, and restoration of wetlands would result in long-term, moderate to major beneficial impacts to wetlands. Beneficial effects from wetlands expansion/enhancement at Fort Snelling State Park and Minnesota Valley National Wildlife Refuge, in conjunction with the impacts under the open space / park and interpretive / nature / history center scenarios, would result in short-term cumulative impacts that range from negligible to moderate and adverse and long-term, minor to major, beneficial cumulative impacts.

Health and Safety – Cumulative Impact

In anticipation of divestiture of the Center in the late 1990s, the TCRC Closure Team conducted an extensive environmental cleanup. Although many potentially hazardous materials, such as chemicals and wastes associated with laboratories, were removed, others (e.g., asbestos, mold) remain in some buildings.

Under alternative D, all unused buildings could be removed, and any remaining buildings could be rehabilitated prior to transfer to a university or nonfederal government entity.

Open Space / Park Scenario

Cumulative Impacts. With mitigation measures the federal government managing and bearing the costs for modification of all or part of the land, structures, or other improvements would result in short-term negligible adverse impacts to workers during the demolition and rehabilitation process. Long-term minor beneficial impacts to health and safety would result from elimination of hazardous conditions that could be encountered by workers or potential intruders in the future, regardless of any conditions placed on the transfer.

Short-term cumulative impacts to health and safety would be negligible and adverse. Beneficial impacts to health and safety resulting from the elimination of the medical waste dump at Fort Snelling State Park would combine with the impacts from the open space / park scenario to result in long-term, minor, beneficial cumulative impacts to health and safety.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Cumulative impacts to health and safety would be the same as those described for the open space / park scenario above.

Training Center / Office Park Scenario

Cumulative Impacts. Cumulative impacts to health and safety would be the same as those described for the open space / park scenario above.

Summary – Health and Safety Cumulative Impact. Beneficial impacts to health and safety resulting from the elimination of the medical waste dump at Fort Snelling State Park would combine with the impacts from the open space / park scenario to result in long-term, negligible to minor, beneficial cumulative impacts to health and safety under all scenarios.

Public Use and Experience – Cumulative Impact

The Center, which is open to the public, has a park-like setting, with grassy lawn areas and occasional shade trees surrounding vacant buildings and the Camp Coldwater Spring area. During the time that the Center was operating in its official capacity (until 1995), it was not

open for general public use and visitation. The Center is now used by the public on a frequent basis as an extension of the open space present in the surrounding parks and open areas. The area around Camp Coldwater Spring is viewed by some members of the public as being spiritually important and is used for meditation and a source of inspiration. Many groups of people have a special fondness for the Center property. Visitors to the Center include American Indians, spiritualists, environmentalists, and residents of the nearby neighborhoods. The alternatives presented in this EIS along with the scenarios present differing levels of access to the Center by the public for continuing the personal rituals and meditations as they currently exist.

Open Space / Park Scenario

Cumulative Impacts. Under alternative D, short-term impacts would be negligible to minor and adverse during the demolition process due to equipment operation and activity. Long-term impacts would be moderate to major and beneficial as the visibility of the changes to the Center may be prominent and the area and hours available for public use would be expanded. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with the open space / park scenario impacts to result in long-term, major, beneficial cumulative impacts to public use and experience.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Under this scenario, impacts to public use and experience would be short-term, negligible to minor, adverse impacts due to construction work on-site, and long-term moderate beneficial impacts to public use and experience could be expected through expanded area and hours available for public use of the Center. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with the open space / park scenario impacts to result in short-term, negligible to minor, adverse and long-term, moderate to major, beneficial cumulative impacts to public use and experience.

Training Center / Office Park Scenario

Cumulative Impacts. Under this scenario, impacts to public use and experience would be short-term, negligible to minor, adverse impacts due to equipment activity associated with construction work and long-term, negligible to minor, beneficial, impacts due to expanded hours of availability of the Center for public use, and revitalization of the structures that are currently decaying and not in use. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with the open space / park scenario impacts to result in short-term, negligible to minor, and adverse; and long-term, moderate, beneficial cumulative impacts to public use and experience.

Summary – Public Use and Experience Cumulative Impact. Beneficial impacts to public use and experience would be expected through expanded area and hours available for public use of the Center. Long-term minor to moderate beneficial impacts to public use and experience from trail construction and habitat enhancements at Fort Snelling State Park, Minnesota Valley National Wildlife Refuge, and Minnehaha Park would combine with impacts of the open space / park and interpretive / nature / history center scenarios resulting in short-term, negligible to minor, adverse and long-term, moderate to major, beneficial cumulative impacts to public use and experience. The training center / office park scenario would likely lessen this beneficial impact.

Visual Resources – Cumulative Impact

The visual characteristics of the Center include a relatively limited viewshed (less than 1,000 feet and not expansive), dense woods and bluffs, nonnative vegetation and landscaping, driveways and parking lots, the Center buildings, and the Camp Coldwater Spring and Reservoir. Characteristics along the Center boundaries include views of an urban setting with commercial and residential buildings and SH 55 and SH 68. The existing overall visual quality is average to below average because of lack of vividness and distinctiveness. The deteriorating conditions of the buildings and the lack of grounds maintenance are the primary contributing factors.

Open Space / Park Scenario

Cumulative Impacts. Removal of some or all of the existing structures from the Center under this scenario would result in short-term, negligible to minor, adverse impacts. In the long-term, removal of the unused structures and rehabilitation of the building sites would result in moderate to major beneficial impacts to visual resources. Removal of Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Views of the Center from outside would not be expected to change from the current condition, and therefore, result in no to negligible, long-term impacts.

Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, therefore would minimally impact visual resources resulting in short-term negligible adverse impacts and long-term negligible beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff property would result in similar effects to visual resources as those experienced at the Center, and short- and long-term, minor to moderate, adverse impacts would occur. Under the preferred alternative, removal of the buildings and associated non-native vegetation would have short-term, minor adverse impacts. Long-term impacts would be moderate to major and beneficial.

Interpretive / Nature / History Center Scenario

Cumulative Impacts. Rehabilitation of some existing structures for use as an interpretive / nature / history center in conjunction with removal of all remaining unused structures and rehabilitation of the building sites would result in improved visual character and quality. Short-term impacts would be negligible to minor, adverse impacts due to equipment and activity associated with rehabilitation work. Long-term impacts would be minor to moderate and

beneficial due to the removal of some structures and improved appearance of remaining structure(s) and increased natural areas. Removal of the Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Because viewers outside the Center are in motion or from a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in negligible, long-term impacts, if any.

Training Center / Office Park Scenario

Cumulative Impacts. Reuse of many or all existing structures on the Center for training center / office park in conjunction with removal of any unused structures and rehabilitation of building sites would result in short-term, minor, adverse impacts to visual resources due to construction equipment and activities. Long-term impacts would be minor and beneficial as the outward appearance of the rehabilitated structures could detract less from the visual resources than the unused structures. It is assumed that new construction and design for a training center or office park scenario would be more visually and stylistically cohesive than the collection of existing Modern style primary buildings and vernacular, utilitarian support structures, also resulting in long-term, localized, minor, beneficial impacts. Removal of Camp Coldwater Spring and Reservoir, a unique visual feature, would result in a long-term, localized, moderate, adverse impact to the visual quality and character of the Center. Because viewers outside the Center are in motion or from a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in negligible, long-term impacts, if any.

Summary – Visual Resources Cumulative Impact. Most of the projects under the cumulative impacts scenario may or may not be visually noticeable, therefore would minimally impact visual resources resulting in short-term negligible adverse impacts and long-term negligible beneficial impacts. Continued deterioration of the historic structures on the Fort Snelling Upper Bluff property would result in similar effects to visual resources as those experienced at the Center, and short- and long-term, minor to moderate, adverse impacts would occur. Because viewers outside the Center are in motion or from a distance, and the wooded screen on the east side is not expected to change, views of the Center from outside would not be expected to change from the current condition, and therefore result in negligible, long-term impacts, if any.

SUSTAINABILITY AND LONG-TERM MANAGEMENT

This section discusses the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity. It describes the effects of the short-term use of the Center and whether the immediate use under each alternative is (1) likely to adversely affect productivity of resources and (2) be sustainable without significant degradation of the environment.

Alternative A

Short-term use under alternative A would include continued public access to the Center Monday through Friday from 9:00 a.m. to 3:00 p.m., and occasional special uses permitted at the Center outside of those hours. Because no changes would be made under alternative A, there would be no changes to either the short-term use or the long-term productivity of the Center.

Alternative B

In the long-term, under the open space / park scenario, removal of the structures would expand and enhance the open space, which would enhance the long-term productivity of the Center as open space or a park by the public. However, long-term productivity of the Center in terms of historic structures and districts would be adversely impacted by removal of the structures that comprise the district. In addition, the long-term productivity of the Center in terms of archeological resources would also be adversely impacted should archeological resources be encountered during building demolition. The long-term productivity of natural resources would be enhanced. Individual public use of the open space / park would be short in duration. Assuming no significant increases in volume of use, public use would result in no changes to the long-term productivity of the Center.

Under the interpretive / nature / history center scenario, should the recipient of the Center elect to remove some or all of the existing structures, the impacts would be the same as those discussed under the open space / park scenario. Should the recipient choose to leave all existing structures in place and construct an additional structure, some natural resources would be temporarily adversely impacted in the short-term by construction activities. The long-term productivity of the Center in terms of historic structures and districts, and archeological resources would be impacted in the same manner as described under the open space / park scenario. Individual public use of the interpretive / nature / history center would be individually short in duration, and would be assumed to increase the volume of use. Depending on how use of the site would be managed, increased volume of use would result in adverse impacts to long-term productivity through trampling of native vegetation, compaction of soils, and increased noise that would disturb and reduce the frequency of wildlife at the Center.

Under the training center / office park scenario, the natural resources would be temporarily adversely impacted in the short-term by construction and/or demolition activities associated with demolition or rehabilitation of existing structures, and/or new construction. Should the overall density of structures on the Center increase (new construction in addition to the existing structures, whether used or unused) long-term productivity would be adversely impacted. Should the recipient elect to remove some or all of the existing structures such that the overall density of structures on the Center is reduced, the long-term productivity of natural resources would be beneficially impacted. However, removal of some or all of the structures would adversely impact the long-term productivity of the Center in terms of historic structures and districts and archeological resources. Use of the Center for a training center or office park would result in long-term, minor to moderate beneficial impacts to socioeconomics, which would enhance the long-term socioeconomic productivity of the Center. Long-term productivity of the Center for public use and experience would be either beneficially or adversely impacted depending on the recipient's decision regarding allowing public access and use.

Alternative C

Under the open space / park scenario, should some or all of the existing structures be removed, most aspects of the open space resource would be temporarily adversely impacted by demolition. However, in the long-term, removal of the structures would expand and enhance the open space, which would enhance the long-term productivity of the Center as open space or a park by the public. Restrictions requiring the replacement of topsoil with locally acquired topsoil, replacement of vegetation with native vegetation, and protection of wildlife habitat and wetlands would beneficially impact the productivity of natural resources in the long-term. Individual public use of the open space / park would be short in duration. Assuming no significant increases in volume of use, public use would result in no changes to the long-term productivity of the Center.

Under the interpretive / nature / history center scenario, should the recipient of the Center remove some or all of the existing structures the impacts would be the same as those discussed under the open space / park scenario. An easement requiring the replacement of topsoil with locally acquired topsoil, replacement of vegetation with native vegetation, and protection of wildlife habitat and wetlands would beneficially impact the productivity of natural resources in the long-term. Individual public use of the interpretive / nature / history center would be short in duration, and would be assumed to increase the volume of use. Depending on how use of the site would be managed, increased volume of use would result in adverse impacts to long-term productivity of the resources through trampling of native vegetation, compaction of soils, and increased noise that would disturb and reduce the frequency of wildlife at the Center.

Under the training center / office park scenario, some resources would be temporarily adversely impacted in the short-term by construction and/or demolition activities associated with demolition or rehabilitation of existing structures, and/or new construction. Should the recipient remove some or all of the existing structures such that the overall density of structures on the Center is reduced, the long-term productivity of natural resources would be beneficially impacted. Long-term socioeconomic productivity would only be minimally enhanced under alternative C as a conservation easement could limit the extent of

development. Long-term productivity of the Center for public use and experience would be beneficially impacted if the recipient continues to allow public access and if availability is expanded.

Alternative D

Under alternative D, the federal government would manage and bear the cost for modification of all or part of the land, structures, or other improvements prior to conveyance of the Center. Most aspects of the Center would be temporarily adversely impacted by demolition; however, long-term productivity would be beneficially impacted. In the long-term, removal of structures would expand and enhance open space, which would enhance the long-term productivity of the Center as open space or a park, or as an interpretive / nature / history center. Rehabilitation of existing structures or construction of new structures increases the probability of the site being a viable training center or office park because usable infrastructure would already be in place.

Should the center be transferred without an easement, the long-term productivity of natural resources of the Center under all three scenarios would be adversely impacted. Long-term productivity of the Center for public use and experience under the training center / office park scenario would be either beneficially or adversely impacted depending on the recipient's decision regarding allowing public access and use.

Under all three scenarios, an easement on the transfer requiring the replacement of topsoil with locally acquired topsoil, replacement of vegetation with native vegetation, and protection of wildlife habitat and wetlands would beneficially impact the productivity of natural resources in the long-term. Individual public use of the open space / park or interpretive / nature / history center would be short in duration. Assuming no significant increases in total volume, public use would result in no changes to the long-term productivity of the Center. However, public use of the interpretive / nature / history center would be assumed to increase the volume of use, which, depending on how use would be managed, would result in adverse impacts to long-term productivity through trampling of native vegetation, compaction of soils, and increased noise that would disturb and reduce the frequency of wildlife at the Center. Long-term productivity of the Center for public use and experience under the training center / office park scenario would be beneficially impacted if the recipient is required to continue to allow public access and use, or if the availability is expanded.

IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IF THE ALTERNATIVE WERE IMPLEMENTED

This section describes irreversible and irretrievable commitments of resources at the Center. An irreversible commitment of resources occurs if the commitment cannot be changed once made throughout the lifespan of the action. Irretrievably committed resources are used, consumed, destroyed, or degraded during implementation of the alternative and could not be reused or recovered.

Alternative A

Because impacts to archeological resources related to visitor use and lack of regular monitoring of site conditions would continue to be site-specific, adverse, and minor, the no-action alternative would result in some archeological resources being irretrievable. The potential impacts to historic structures and districts from implementation of the no-action alternative are adverse, and would range from minor to moderate; therefore, impacts to historic structures or district resources would be irreversible. Because there would be no changes to use or management under alternative A, there would be no change to the existing commitment of the rest of the resources at the Center.

Alternative B

Under the open space / park scenario, should the recipient of the Center elect to remove some or all of the existing structures in conversion of the Center to open space or a park, historic structures would be irretrievably committed and lost. Should archeological resources be encountered in the process of removing the buildings, those resources would also become irretrievably committed. In addition, should the recipient not elect to recycle any of the building materials from the existing structures, materials could be disposed of in a landfill resulting in an irreversible commitment of resources.

Under the interpretive / nature / history center and training center / office park scenarios, should the recipient of the Center elect to remove some or all of the existing structures in conversion of the Center, those structural resources (and thus the historic structure resources) would be irretrievably committed. Should archeological resources be encountered in the process of removing the buildings, those resources would also become irretrievably committed and lost. In addition, should the recipient not elect to salvage any of the building materials from the existing structures, the materials could be disposed of in the landfill resulting in an irreversible commitment of resources. Should the recipient construct a new structure, the materials such as wood, concrete, steel, etc., would be irretrievably committed. Materials would also be irreversibly committed should the recipient elect to rehabilitate any of the existing structures.

Alternative C

Under the open space / park scenario, should the recipient of the Center remove some or all of the existing structures in conversion of the Center to open space or a park, those structural resources would be irretrievably committed. Under alternative C, a conservation easement could be placed on the transfer requiring salvage of the materials from the removed structures, which would reduce the amount of resources irreversibly committed (as compared to alternative B). A small amount of materials (such as gasoline) would be used in the conversion of the space for use as open space or a park.

Under the interpretive / nature / history center and training center / office park scenarios, should the recipient of the Center remove some or all of the existing structures in conversion of the Center, those structural resources would be irretrievably committed. Under alternative C, a conservation easement could be placed on the transfer requiring the salvage of the materials from the removed structures, which would reduce the amount of landfill resource irreversibly committed (as compared to alternative B). Should the recipient construct a new structure, or rehabilitate any of the existing structures the materials such as wood, concrete, steel, etc. would be irretrievably committed.

Alternative D

Under alternative D, the existing structures at the Center would be demolished or rehabilitated, and new construction, if any would be completed prior to transfer of the Center. Because this work would be federally directed, a maximum amount of materials could be retrieved from any demolition of existing structures and recycled. In addition, materials used in new construction could include recycled and “green” products. Together these efforts would reduce the amount of materials that would be irretrievable, and use of landfill space that would be irreversible.

Should existing structures be rehabilitated, or new structures constructed prior to transfer, materials (such as wood, concrete, and steel) would be irretrievably committed.

Should the recipient construct a new structure after a transfer, with or without associated restrictions, materials such as wood, concrete, steel, etc. would be irretrievably committed. Materials would also be irreversibly committed should the recipient elect to rehabilitate any of the existing structures.

SUMMARY OF ENVIRONMENTAL IMPACTS BY ALTERNATIVE

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts	Alternative C: Transfer With Restrictions Impacts	Alternative D: Modify Prior to Transfer Impacts
Archeological Resources				
Long-term, negligible, beneficial impacts	*Open Space / Park*	Long-term moderate adverse impacts	Long-term minor beneficial impacts	Same as alternatives B or C, depending on the nature of the modifications made by the federal government prior to conveyance or retention, and whether the property was conveyed with or without restrictions
	Interpretive / Nature / History Center	Long-term moderate adverse impacts	Long-term minor beneficial impacts	Same as alternatives B or C, depending on the nature of the modifications made by the federal government prior to conveyance or retention, and whether the property was conveyed with or without restrictions
	Training Center / Office Park	Long-term moderate adverse impacts	Long-term minor beneficial impacts	Same as alternatives B or C, depending on the nature of the modifications made by the federal government prior to conveyance or retention, and whether the property was conveyed with or without restrictions
Historic Structures and Districts				
Minor to moderate, adverse impacts	*Open Space / Park*	Long-term moderate to major adverse impacts	Long-term minor to major, adverse to long-term, minor beneficial impacts.	Same as alternatives B or C, depending on the nature of the modifications made by the federal government prior to conveyance or retention, and whether the property was conveyed with or without restrictions

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts	Alternative D: Modify Prior to Transfer Impacts
	Interpretive / Nature / History Center	Long-term moderate to major adverse impacts		Long-term minor to major, adverse to long-term, minor beneficial impacts	Same as alternatives B or C, depending on the nature of the modifications made by the federal government prior to conveyance or retention, and whether the property was conveyed with or without restrictions
	Training Center / Office Park	Long-term moderate to major adverse impacts		Long-term minor to major, adverse to long-term, minor beneficial impacts.	Same as alternatives B or C, depending on the nature of the modifications made by the federal government prior to conveyance or retention, and whether the property was conveyed with or without restrictions
Ethnographic Resources					
No Impacts	*Open Space / Park*	*From:* Long-term , moderate to major, adverse impacts	*To:* Long-term, negligible to minor, beneficial impacts	Long-term, minor to moderate beneficial.	Long-term, moderate to major, adverse impacts to long-term, negligible to moderate, beneficial impacts
	Interpretive / Nature / History Center	*From:* Long-term, moderate to major, adverse impacts	*To:* Long-term, negligible to minor, beneficial impacts	Long-term, minor to moderate, beneficial impacts	Long-term, moderate to major, adverse impacts to long-term, negligible to moderate, beneficial impacts
	Training Center / Office Park	Long-term, moderate to major, adverse impacts		Long-term, minor to moderate, beneficial impacts	Long-term, moderate to major, adverse impacts to long-term, negligible to moderate, beneficial impacts

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts		Alternative D: Modify Prior to Transfer Impacts	
Soils							
Short- and long-term, negligible, adverse impacts	*Open Space / Park*	*From:* Short-term, negligible to minor, adverse impacts, and long-term, minor to moderate, adverse impacts	*To* Short-term, negligible, adverse impacts, and long-term, minor to moderate, beneficial impacts	Short-term, minor to moderate, adverse impacts and long-term, minor to moderate, beneficial impacts		*From:* Short-term, negligible to minor adverse impacts, and long-term, minor to moderate adverse impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term, minor to moderate, beneficial impacts
	Interpretive / Nature / History Center	*From:* Short- and long-term, minor, adverse impacts	*To:* Short-term, minor, adverse impacts and long-term, minor beneficial impacts	Short-term, negligible to minor, adverse and long-term, minor, beneficial impacts		*From:* Short-term, negligible to minor, adverse impacts, and long-term minor to moderate adverse impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term, minor to moderate, beneficial impacts
	Training Center / Office Park	*From:* Short-and long-term, minor to moderate, adverse impacts	*To:* Short-term negligible, adverse impacts and long-term, negligible to minor, beneficial impacts	*From:* Short-and long-term negligible to minor, adverse impacts	*To:* Long-term, negligible to minor, beneficial impacts	*From:* Short-term, negligible to minor, adverse impacts, and long-term minor to moderate, adverse impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term negligible to minor, beneficial impacts

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts	Alternative D: Modify Prior to Transfer Impacts	
Vegetation						
Short- and long-term, minor, adverse impacts	*Open Space / Park*	*From:* Short-term, negligible to minor, adverse, and long-term, minor, adverse impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term, moderate to major, beneficial impacts	Short-term, negligible to minor, adverse impacts and long-term, moderate to major, beneficial impacts	*From:* Short-term, negligible to minor and long-term, minor adverse impacts	*To:* Short-term, negligible to minor and long-term moderate to major beneficial impacts
	Interpretive / Nature / History Center	*From:* Short- and long-term, negligible to minor, adverse impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term, moderate, beneficial impacts	Short-term, negligible to minor, adverse impacts and long-term, moderate to major, beneficial impacts	*From:* Short- and long-term, negligible to minor adverse impacts	*To:* Short-term, negligible to minor, adverse and long-term, moderate beneficial impacts
	Training Center / Office Park	*From:* Short- and long-term, negligible to minor, adverse impacts	*To:* Short-term negligible, adverse, and long-term, negligible to minor, beneficial impacts	Short-term, negligible, adverse impacts and long-term, negligible to minor, beneficial impacts	*From:* Short- and long-term, negligible to minor, adverse impacts	*To:* Short-term negligible, adverse, and long-term, negligible to minor, beneficial impacts

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts		Alternative D: Modify Prior to Transfer Impacts	
Wildlife							
Short- and long-term, minor, adverse impacts	*Open Space / Park*	*From:* Short- and long-term, negligible to minor, adverse impacts	*To:* Short-term, negligible, adverse impacts, and long-term, minor to moderate, beneficial impacts	Short-term, negligible, adverse, and long-term, negligible to minor, beneficial impacts		*From:* Short-term, negligible, adverse impacts and long-term, negligible to minor, adverse impacts	*To:* Short-term, negligible, adverse impacts and long-term, negligible to minor, beneficial impacts
	Interpretive / Nature / History Center	*From:* Short-term, negligible, adverse, and long-term, minor, adverse impacts	*To:* Short-term negligible adverse impacts, and long-term, minor to moderate, beneficial impacts	*From:* Short- and long-term, negligible, adverse impacts	*To:* Short-term, negligible, adverse, and long-term, negligible to minor, beneficial impacts	*From:* Short-term, negligible, adverse impacts and long-term, negligible to minor, adverse impacts	*To:* Short-term, negligible, adverse impacts and long-term, negligible to minor, beneficial impacts
	Training Center / Office Park	*From:* Short-and long-term, minor to moderate, adverse impacts	*To:* Short-term negligible, adverse impacts, and long-term, minor, beneficial impacts	*From:* Short- and long-term, minor to moderate, adverse impacts	*To:* Short-term, negligible, adverse impacts, and long-term, minor, beneficial impacts	*From:* Short-term, negligible, and long-term, minor, adverse impacts	*To:* Short-term, negligible, adverse impacts, and long-term, negligible to minor, beneficial impacts

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts		Alternative D: Modify Prior to Transfer Impacts	
Hydrology							
Short- and long-term, negligible, adverse impacts	*Open Space / Park*	*From:* Short- and long-term negligible, adverse impacts	*To:* Localized long-term, minor to moderate, beneficial impacts	*From:* Short- and long-term negligible, adverse impacts	*To:* Localized long-term, minor to moderate, beneficial impacts	Localized long-term, minor to moderate, beneficial impacts	
	Interpretive / Nature / History Center	*From:* Localized long-term, minor, adverse impacts	*To:* Localized long-term, minor to moderate, beneficial impacts	*From:* Short- and long-term negligible, adverse impacts	*To:* Localized long-term, minor to moderate, beneficial impacts	*From:* Short- and long-term negligible to minor, adverse impacts	*To:* Localized long-term, minor to moderate, beneficial impacts
	Training Center / Office Park	*From:* Localized long-term, minor to moderate, adverse impacts	*To:* Localized long-term, minor, beneficial impacts	*From:* Long-term, negligible to moderate. Adverse impacts	*To:* Localized long-term, minor, and beneficial impacts	*From:* Localized short-term negligible adverse impacts to localized, long-term, minor to moderate, adverse impacts	*To:* Localized long-term, minor, beneficial impacts
Water Quality							
Short- and long-term, negligible, adverse impacts	*Open Space / Park*	*From:* Short-term minor adverse, and localized, long-term, minor, adverse impacts	*To:* Short-term, minor, adverse, and long-term, negligible to minor, beneficial impacts	*From:* Short- and long-term, minor, adverse impacts	*To:* Short- and long-term negligible adverse impacts	Short-term, minor, adverse, and localized, long-term, minor, adverse impacts	

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts		Alternative D: Modify Prior to Transfer Impacts	
Short- and long-term, negligible, adverse impacts	*Interpretive / Nature / History Center*	*From:* Short- and long-term, localized, minor, adverse impacts	*To:* Short-term, minor, adverse, and long-term, negligible to minor, beneficial impacts	*From:* Short- and long-term, localized, minor, adverse impacts	*To:* Short-term, minor, adverse, and long-term, negligible to minor, beneficial impacts	Short-term, minor, adverse, and localized, long-term, minor, adverse impacts	
	Training Center / Office Park	*From:* Short- and long-term, localized, minor, adverse impacts	*To:* Short-term, minor, adverse, and long-term, negligible to minor, beneficial impacts	*From:* Short- and long-term, localized, minor, adverse impacts	*To:* Short-term, minor, adverse, and long-term, negligible to minor, beneficial impacts	*From:* Short-term, minor, adverse impacts, and localized, long-term, minor, adverse impacts	
Wetlands							
Short- and long-term, major, adverse impacts	*Open Space / Park*	*From:* Long-term major adverse impacts	*To:* Short-term, negligible to moderate, adverse impacts and long-term, moderate to major, beneficial impacts	*From:* Short- and long-term, major, adverse impacts	*To:* Short-term, minor to moderate, and long-term, moderate to major, beneficial impacts	Short-term, minor to moderate, adverse and long-term, moderate to major, beneficial impacts	
Short- and long-term, major, adverse impacts	*Interpretive / Nature / History Center*	*From:* Long-term major adverse impacts	*To:* Short- and long-term, minor to moderate, adverse impacts and long-term, moderate to major, beneficial impacts	*From:* Short-term, minor to moderate, and long-term, major, adverse impacts	*To:* Short-term, minor to moderate, adverse and long-term, moderate to major, beneficial impacts	*To:* Short-term minor adverse impacts and long-term major adverse impacts	*From:* Short-term, minor to moderate, and long-term, moderate to major, beneficial impacts
	Training Center / Office Park	*From:* Short- and long-term, major, adverse impacts	*To:* Short-term, minor to moderate, adverse impacts and long-term,	*From:* Short-term, minor to moderate,	*To:* Short-term, minor to moderate, adverse, and	*From:* Short-term, minor to moderate, and	*To:* Short-term, minor to moderate,

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts		Alternative D: Modify Prior to Transfer Impacts	
			moderate to major, beneficial impacts	and long-term major adverse impacts	long-term, moderate to major, beneficial impacts	long-term, major, adverse impacts	adverse, and long-term, moderate to major, beneficial impacts
Socioeconomics							
No Impacts	*Open Space / Park*	Local, long-term, minor, and beneficial		Local, long-term, moderate, and beneficial		Local, long-term, moderate, and beneficial	
	Interpretive / Nature / History Center	Regional, long-term, minor, and beneficial		Regional, moderate, and beneficial		Regional, long-term, moderate, and beneficial	
	Training Center / Office Park	Regional, long-term, moderate, and beneficial; some possible local minor adverse impacts		Regional, minor, and beneficial		Regional, long-term, moderate, and beneficial	
Health & Safety							
Localized, long-term, negligible and adverse impacts	*Open Space / Park*	*From:* Localized, long-term, negligible and adverse impacts	*To:* Short-term, negligible, adverse, and long-term, negligible, beneficial impacts	*From:* Localized, long-term, negligible, and adverse	*To:* Short-term, negligible, adverse impacts, and long-term, minor, beneficial impacts	Short-term, negligible, and adverse impacts, and long-term, minor, beneficial impacts	
	Interpretive / Nature / History Center	*From:* Short- and long-term, negligible, adverse impacts	*To:* Short-term, negligible, adverse, and long-term, minor, beneficial impacts	*From:* Localized, long-term, negligible, and adverse	*To:* Short-term, negligible, adverse impacts, and long-term, minor beneficial impacts	Short-term, negligible, adverse impacts, and long-term, minor, beneficial impacts	
	Training Center / Office Park	*From:* Short- and long-term, negligible, adverse impacts	*To:* Short-term, negligible, adverse, and long-term, minor, beneficial impacts	*From:* Localized, long-term, negligible, and adverse	*To:* Short-term, negligible, adverse impacts, and long-term, minor,	Short-term, negligible, adverse impacts, and long-term, minor, beneficial impacts	

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts		Alternative D: Modify Prior to Transfer Impacts	
					beneficial impacts		
Land Use							
No impact	*Open Space / Park*	*From:* No impact	*To:* Short- and long-term, minor, beneficial impacts	*From:* No impact	*To:* Short- and long-term, minor, beneficial impacts	*From:* No impact	*To:* Short and long-term, minor, beneficial impacts
No impact	*Interpretive / Nature / History Center*	*From:* No impact	*To:* Short- and long-term minor beneficial impacts	*From:* No impact	*To:* Short- and long-term, minor, beneficial impacts	*From:* No impact	*To:* Short and long-term, minor, beneficial impacts
	Training Center / Office Park	*From:* No impact	*To:* Short- and long-term, minor, beneficial impacts	*From:* No impact	*To:* Short- and long-term, minor, beneficial impacts	No impact	
Public Use and Experience							
Short- and long-term, moderate to major, adverse impacts	*Open Space / Park*	*From:* Short- and long-term, moderate to major, adverse impacts	*To:* Short-term, negligible to minor, adverse impacts and long-term, moderate beneficial impacts	Short-term, negligible to minor, adverse impacts and long-term, moderate to major, beneficial impacts		*From:* Short-term, negligible to minor, adverse impacts, and long-term moderate beneficial impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term, moderate to major, beneficial impacts
	Interpretive / Nature / History Center	*From:* Short-term, negligible to minor, adverse impacts, and long-term negligible beneficial impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term moderate, beneficial impacts.	Short-term, negligible to minor adverse impacts, and long-term, moderate beneficial impacts		*From:* Short-term, negligible to minor, adverse impacts, and long-term, moderate, beneficial	*To:* Short-term, negligible to minor, adverse impacts, long-term, moderate to major, beneficial

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	Land Use Scenarios: Alternatives B, C, D	Alternative B: Transfer Without Restrictions Impacts		Alternative C: Transfer With Restrictions Impacts		Alternative D: Modify Prior to Transfer Impacts	
						impacts	impacts
Short- and long-term, moderate to major, adverse impacts	*Training Center / Office Park*	*From:* Short-term, minor to moderate, adverse impacts and long-term, major, adverse impacts	*To:* Short-term, negligible to minor adverse impacts and long-term, negligible to minor, beneficial impacts	Short-term, negligible to minor, adverse impacts, and long-term, negligible to minor beneficial impacts		*From:* Short-term, minor, adverse impacts, and long-term, major, adverse impacts	*To:* Short-term, minor, adverse impacts, and long-term, negligible to minor, beneficial impacts
Visual Resources							
Localized, long-term, minor to moderate adverse impacts	*Open Space / Park*	*From:* Short-term, negligible to minor, adverse impacts and long-term, moderate, adverse impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term, moderate to major, beneficial impacts	*From:* Short-term, negligible to minor, adverse, and long-term, negligible to minor beneficial	*To:* Short-term, negligible to minor, adverse, and long-term, moderate to major, beneficial impacts	*From:* Short-term, minor to moderate, adverse, and long-term, moderate adverse impacts	*To:* Short-term, minor to moderate, adverse, and long-term, moderate to major, beneficial impacts
	Interpretive / Nature / History Center	*From:* Short-term, negligible to minor, adverse impacts and localized long-term moderate adverse impacts	*To:* Short-term, negligible to minor, adverse impacts and long-term, minor to moderate, beneficial impacts	*From:* Short- and long-term, negligible to minor, adverse impacts	*To:* Short-term, negligible to minor, adverse impacts, and long-term, minor to moderate, beneficial impacts	Without conditions, impacts would be the same as Alternative B	With conditions, impacts would be the same as Alternative C

TABLE 9. SUMMARY OF ENVIRONMENTAL IMPACTS

Alternative A No-Action Impacts	**Land Use Scenarios: Alternatives B, C, D**	**Alternative B: Transfer Without Restrictions Impacts**		**Alternative C: Transfer With Restrictions Impacts**		**Alternative D: Modify Prior to Transfer Impacts**	
Localized, long-term, minor to moderate adverse impacts	*Training Center / Office Park*	*From:* Short-term, minor, adverse impacts and localized long-term moderate adverse impacts	*To:* Short-term, minor, adverse impacts, and long-term minor beneficial impacts	*From:* Short- and long-term, minor, adverse impacts	*To:* Short-term, minor, adverse impacts, and long-term, negligible to minor, beneficial impacts	Without conditions, impacts would be the same as Alternative B	With conditions, impacts would be the same as Alternative C

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CHAPTER FIVE

Twin Cities Research Center Campus, 2008
Photo Credit: USDA, Farm Service Agency, NAIP

CONSULTATION AND COORDINATION

EIS SCOPING PROCESS AND PUBLIC INVOLVEMENT

On January 28, 2005, a Notification of Intent (NOI) to prepare an EIS on the disposition of the Center property was published the *Federal Register*. Information for the Center EIS process was launched on the MNRRA website on January 18, 2005 (http://www.nps.gov/miss/bom).

A newsletter was distributed on March 11, 2005, inviting public participation in the scoping process on the Center EIS. The newsletter was also posted on the MNRRA Web site (www.nps.gov/miss) and made available at public meetings. The newsletter provided background on the planning process; the dates, locations, and time of the public scoping meetings; and included an opportunity to provide comment via a self-addressed comment card. Legal notices announcing the start of the public scoping meetings were printed in the *St. Paul Pioneer Press* and the *Minneapolis Star Tribune* on March 21, 2005.

Open public scoping meetings were held on March 30 and 31, 2005, to provide information on the Center EIS planning process. The public scoping meetings were held in an open house format. The National Park Service provided four different information stations with background and information on NEPA and the EIS planning process, details of the Center, the MNRRA and the National Park Service, and cultural and historic resources. Handouts and maps were made available at each station and on the Web site. USFWS and NPS personnel and NPS contractor representatives participated in the open house meetings.

The public scoping meetings were attended by federal agency officials, local government representatives, neighborhood organization representatives, elected officials, organizations, tribal members, developers, and the general public. A total of 70 people attended the public scoping meetings over the two-day period.

A total of 107 comments were received during the scoping period, including 24 letters, 37 e-mails, and 46 comment cards. In general, comments received fell into three broad categories—ownership/stewardship, values, and amenities/uses. Many respondents suggested potential parties as owners or stewards of the Center as part of their overall site concept. Values included aspects, features, or qualities of the Center that respondents indicated were worthy of protection or restoration. Although a large number of respondents expressed a desire to protect the site, particularly the Camp Coldwater Spring area, letters indicated a desire for some type of site development or use ranging from recreational use to light manufacturing to a museum and cultural center. The scoping comments provided input in evaluating the range of potential alternatives for the Center. A copy of the scoping report describing the range of comments is included as appendix D. Copies of the consultation letters sent to various federal, state, and local agencies and to American Indian tribes are included in appendix E.

Scoping Process Media Contacts and Publications

- January 18, 2005. The Web page for this EIS was launched on the MNRRA Web site (http://www.nps.gov/miss/bom).

- January 28, 2005. The *Federal Register* "Notice of Intent to Prepare an EIS" was published.

- January 31, 2005. The National Park Service distributed a news release.

- February 2005: news article published in Upper Mississippi Waterway Association entitled, "NPS Looks for Input on Historic Property".

- February and March 2005: two news articles published in the *Minneapolis Star Tribune* entitled: "Park Service Seeks Advice on Closed Research Center" and "U.S. to Seek Public's Ideas for Bureau of Mines Land".

- March 11, 2005. The National Park Service distributed a newsletter inviting public participation in the scoping process for this EIS. The newsletter provided background on the planning process; the dates, locations, and times of the public scoping meetings; and included an opportunity to provide comment via a self-addressed comment card.

- March 21, 2005. Legal notices announcing the start of the public scoping meetings were printed in the *St. Paul Pioneer Press* and the *Minneapolis Star Tribune*.

- March 28, 2005. The National Park Service distributed a news release.

- March 30–31, 2005. A total of four separate public scoping meetings were held on March 30 and 31, 2005, from 1:00 p.m. until 3:00 p.m. and from 6:00 p.m. until 9:00 p.m. each day at the Four Points Sheraton Hotel in St. Paul, Minnesota. The public scoping meetings were held in an open house format. Four different information stations provided background and information on NEPA and the Center planning process; details of the Center, the MNRRA, and the National Park Service; and cultural and historic resources. Handouts and maps were available at each station.

- April 2005: news article published in Southside Pride local newspaper – Nokomis Edition entitled "Coldwater to Change Hands".

DRAFT EIS AND PUBLIC INVOLVEMENT

Preparation for data collection, analysis and alternative formation to complete a draft EIS on the Center property began in April 2005. A consultant assisted the NPS in managing the workload and producing a draft document. A draft EIS was completed in July 2006 with a Notice of Availability published in the Federal Register on August 23, 2006. Public open house meetings on the draft EIS were held on September 24 and 25, 2006.

Requests to extend the NPS 60 day official comment period, set to expire on October 24, 2006, were made by the Shakopee Mdewakanton Sioux Community and other interested parties. The NPS notified the USEPA that the comment period would be extended 30 days through November 27, 2006.

At the close of the official comment period, a total of 509 responses on the draft EIS were received via oral comments, written letters, email and through the NPS Planning, Environment, an d Public Comment (PEPC) internet-based system for project coordination and public involvement.

Respondents provided comment on future management authorities, addressing impacts to cultural and historical resources, interpretation of the site's history, and restoration of the site to more natural conditions as well as pointing out factual errors and short-comings of the draft EIS.

A *Comment Analysis Report – Comments Received on the Draft EIS, Disposition of Bureau of Mines Property, Twin Cities Research Center and Main Campus* (Appendix I) summarizes and categorizes all public comment received on the draft EIS.

Request for Proposals for Transfer of Center Property

The Notice of Availability in the Federal Register for the draft EIS also solicited written proposals for the future use of the Center property. Public Law 104-134 addressed the disposition of Bureau of Mines properties across the United States and included provisions which would allow the transfer of the Center property to a state, local or tribal government or university entity. State, local and tribal governments and universities within the immediate Center region were notified by letter.

At the close of the comment period, six written proposals were received for the transfer of the Center property. Responding were the USFWS, the Minnesota Department of Natural Resources, the Lower Sioux Indian Community, the Prairie Island Indian Community, the Shakopee Mdewakanton Sioux Community, and the Minnehaha Creek Watershed District (Appendix K).

The Minnesota Department of Natural Resources (DNR) initially considered accepting the Center property provided the transfer was made without enumeration, all existing buildings were removed, environmental clean-up was completed, cultural resource issues addressed and the site graded and made ready for restoration to a natural condition. In a letter received

September 4, 2007 the DNR rescinded its initial consideration and confirmed it "had no interest in acquiring and managing the property."

The USFWS on November 27, 2006, in conjunction with its official comments on the draft EIS, reiterated its interest in maintaining its current use of Building 11 through retention of the building and access road by the federal government.

The Prairie Island Indian Community requested in its comment letter on the draft EIS, dated November 27, 2006, that "an additional alternative be considered involving conveyance to the Prairie Island Indian Community individually or jointly with other federally recognized Mdewakanton Dakota tribes." Additionally, the Prairie Island Community noted that it would "support development of the site as a Dakota historical and cultural center open to the general public" and recommended "returning most or all of the site to its original, pre-treaty and pre-Fort Snelling condition."

The Lower Sioux Indian Community, on October 31, 2006, requested the Center property be conveyed to them provided that the property was restored to a natural condition before the transfer. The Lower Sioux Community also stated it would maintain the property "to permit access to it by all interested parties, including Indian tribes for ceremonial, cultural and educational purposes."

The Shakopee Mdewakanton Sioux Community, in a letter dated November 27, 2006, would "restore the center to its natural ecological condition, and to construct interpretive facilities" after transfer. The Shakopee Mdewakanton Community requested the federal government to demolish and remove all buildings and any hazardous materials prior to transfer. They also noted that the airport zoning ordinance would continue to limit structure height on the property and that gaming laws would "prohibit a gaming facility on the Center property."

The Minnehaha Creek Watershed District (MWCD) offered to "assist with the protection and restoration" of the Center property in a letter dated November 17, 2006; offering to partner with another managing agency(s). The MWCD outlined the conditions necessary for the District to take any real estate interests in the land. Those conditions included removal of all buildings and the site graded to allow planting to natural conditions, abatement of all hazardous materials, assessment of cultural resources, and consultation with interested tribes. These actions would need to occur at no cost to the MWCD.

Individual members of the Sisseton and Wahpeton Sioux Tribe submitted a proposal on October 20, 2006 identifying their interest to assume ownership. The proposal was not submitted under the elected Tribal Council's approval and signature and hence the proposal, while informative, could not be entertained under the terms of Public Law 104-134.

Copies of consultation and coordination letters for the draft EIS are included in Appendix G.

Draft EIS Coordination; Media Contacts and Publications Chronology

- April 2005. News article published in the *Highland Villager* entitled "New Uses Sought for Old Bureau of Mines Site"

- April 15, 2005. The NPS sent letters to 12 different universities and colleges in the Minneapolis-St. Paul metropolitan area inquiring about interest in acquisition of the Center

- April 25, 2005. The NPS hosted a site visit and meeting with vice president of Minneapolis Colleges and University System

- May 20, 2005. The NPS met with real estate staff of Minnesota State Colleges and Universities

- November 2005. News article published in *Minnesota Monthly Magazine* entitled "Sacred Spring."

- March 17, 2006. News release issued by NPS announcing that preparation of draft EIS originally scheduled for release in the first quarter of 2006 has been changed to the second quarter of 2006.

- July 5, 2006. News article published in the *Pulse of the Twin Cities*, "Is Coldwater for Sale?"

- July 13, 2006. News article published in *Finance and Commerce,* "Coldwater Spring: Sacred land or Potential Office Park?"

- July, 2006. *Southside Pride*, Phillips/Powderhorn, Nokomis, Riverside edition, publishes a guest editorial, "Is Coldwater for Sale?"

- August 18, 2006. News release issued by the NPS announcing the availability of a draft EIS and the beginning of a 60 day public comment period scheduled to end October 24.

- August 18, 2006. Letter sent by NPS to a all interested parties on the current distribution list for the Center disposition announcing the availability and comment period for the draft EIS.

- August 23, 2006. A Notice of Availability (NOA) for the draft EIS is published in the Federal Register. A request for American Indian tribes, universities and government entities to submit written proposals for their interest in obtaining the Bureau of Mines property was also published in the NOA. A 60 day comment period was established through October 24, 2006.

- September 18, 2006. The NPS issues a news release announcing the dates and location of public open house meetings to address the alternatives for future disposition of the Center property as described in the draft EIS.

- September 18, 2006. Legal Notices are published in the St. Paul Pioneer Press and the Star Tribune advertising public open house meetings on the draft EIS on September 25 and 26, 2006.

- September 20, 2006. *Highland Villager* publishes a news article, "Study Digs Deeper into Selling Off Former Bureau of Mines".

- September 24, 2006. Pioneer Press publishes news article, "Officials Seek a Buyer – and a Vision – for a Storied Spring Near Fort Snelling".

- September 25 and 26, 2006. Open houses to solicit public comment on the draft EIS were held each day from 1-4 p.m. and 6-9 p.m. at the Minnesota Valley Wildlife and Fish Refuge Visitor Center, Bloomington, MN. Court reporters were used to record oral comment given at each of the 4 open house sessions. Additionally, NPS, USFWS and consultant staff were on hand to answer questions.

- September 25, 2006. Minnesota Public Radio airs a news program, "Historic Camp Coldwater Spring and Government Buildings on the Sales Block".

- October 4, 2006. *Pulse of the Twin Cities* publishes a news article, "Don't Sell Coldwater, Keep It a Protected Federal Green Space".

- October 4, 2006. The NPS forwards comments to Minnesota State Historic Preservation Officer regarding the NPS review of the ethnographic studies completed for Coldwater Spring.

- October 17, 2006. The NPS receives a request to extend original comment period another 30 days from the Shakopee Mdewakanton Sioux Community.

- October 23, 2006. At the request of interested parties, the NPS Midwest Regional Director notifies the U.S. EPA that the 60 day deadline for receiving comments would be extended to November 27, 2006.

- October 24, 2006. The NPS issues a news release extending the draft EIS comment period to November 27, 2006.

- January 8, 2007. The NPS completes a *Comment Analysis Report – Comments Received on the Draft EIS, Disposition of Bureau of Mines Property, Twin Cities Research Center and Main Campus* summarizing and categorizing all comments received on the draft EIS (Appendix I).

PREFERRED ALTERNATIVE SELECTION AND COORDINATION

After reviewing the public comments received on the draft EIS and considering the findings of the draft EIS, the Department of Interior selected Alternative D, Open Space/Park as the preferred alternative in September of 2008 and further clarified the alternative selection in November 2008.

Preferred Alternative and Section 106 Open House Meeting

NPS and USFWS personnel hosted a public open house on February 23, 2009, at the VA Medical Auditorium in Minneapolis. The primary purpose of the meeting was to receive public comment on how implementing the preferred Alternative D, open space / park scenario could affect cultural and natural resources on the former Bureau of Mines property. In part, this information helped the NPS draft a Memorandum of Agreement to comply with provisions of Section 106.

At the open house, staff from the NPS and USFWS provided information at four areas within the VA Medical Auditorium. Staff members took comments on environmental restoration, ideas concerning appropriate activities and access to the site, and the treatment of historic resources including the spring. Staff also addressed policy and management issues regarding the EIS process and directed participants to information available during preparation of the draft EIS.

Over 142 attendees comprised of individuals, elected officials, tribal representatives and representatives of various interest groups attended the open house. Attendees were able to speak directly with agency representatives, leave verbal comment with recorders, provide written comment on cards for posting at the meeting, and provide written comment via email, fax or letter during a 30 day comment period following the open house.

While not the express purpose of the meeting, some attendees verbally expressed their opinion on the future ownership of the property. A special interest group of individuals representing the rights of American Indian peoples and more specifically the Dakota, commandeered a two hour segment of the open house event and presented their viewpoints that the property should be restored to a natural condition by the federal government and then ownership and control granted to the Dakota. During the comment period, a letter writing and internet petition campaign resulted in a large volume of comments directing the NPS to return the land and rights to the Dakota as future sole owners of the Center property. When asked which Dakota tribe the property should go to, some said all of them and some suggested specific tribes.

Individuals and interest groups provided significant verbal and written comment at the meeting and during the comment period supporting the DOI selection of the preferred alternative D, Open Space/Park and their views on how historic properties could be treated under this alternative. Appendix O provides a generalized summary and categorization of comments received during the meeting and over the comment period.

Coordination and Media Contact Chronology

- August 13, 2008. NPS responds to request for information on the status of the Center draft EIS from Senator Klobuchar.

- December 3, 2008. A news release is issued by the NPS outlining the Department of Interior's selection of Alternate D, Open Space/Parks scenario as its preferred alternative. Simultaneously, the MNRRA Park Superintendent forwards a letter with similar content to all tribal governments, interest groups and individuals who have asked to be included on an email list for the disposition of the Center.

- December 5, 2008. *Minneapolis Star Tribune* publishes a news article, Coldwater Spring to Become Parkland.

- January 22, 2009. The NPS announces through letters to tribal governments, interest groups and individuals on its mailing list an open house meeting on Monday February 23, 2009 from 5 p.m. to 9 p.m. at the VA Hospital in Minneapolis. The meeting's purpose is to collect public comment on reuse and restoration of the Center site under the selected, preferred alternative and its impacts on the Center's historic properties.

- January 23, 2009. Correspondence from the Minnesota Historical Society concurs with the NPS that building removal constitutes an adverse effect on the historic property and supports continued coordination between agencies as landscape treatment for the property is advanced.

- February 9, 2009. The NPS issues a news release inviting the general public to an Open House on February 23, 2009, 5 p.m. to 9 p.m. to provide comment on planning for the reuse and restoration of the Center site and discuss the potential impacts on the cultural and historical resources under the selected, preferred alternative

- February 11, 2009. A second letter from the NPS to tribal governments reminding them of the DOI selection of the preferred alternative and inviting them to participate in the February 23 open house is sent.

- February 23, 2009. News article published in the *Star Tribune*, "Coldwater Spring Restoration to be Discussed".

- February 23, 2009. The NPS, in partnership with the U.S. Fish and Wildlife Service (FWS), Region 3, hosted a public open house at the VA Medical Auditorium in Minneapolis to receive public comment on how implementing the Preferred Alternative could affect cultural and natural resources on the former Bureau of Mines property.

- March 11, 2009. *Highland Villager* publishes a news article, Planning Begins for Restoring Bureau of Mines/Coldwater Site.

- March, 2009. March edition of the *Southside Pride*, publishes a news article, NPS Unveils Park Plan for Coldwater Spring to Mixed Reviews.

ETHNOGRAPHY

An ethnographic resources study was conducted at the Center to document tribal use and perceptions of the Center, and to assess whether Camp Coldwater Spring constituted a Traditional Cultural Property under NHPA section 106 (16 U.S.C. 470f) or a sacred site under Executive Order 13007 (*Indian Sacred Sites*). The study consisted of consultation, archival research, and interviews. Consultation specific to this study was conducted with the four federally recognized Dakota communities in Minnesota (Lower Sioux Indian Community, Prairie Island Indian Community, Shakopee Mdewakanton Sioux Community, Upper Sioux Indian Community). In addition, other tribes that participated in the study included the Sisseton-Wahpeton Sioux Tribe and the White Earth Band of Chippewa. Twenty three individuals were interviewed for the study including 11 official federally recognized tribal representatives, seven key cultural experts (six Dakota and one Ojibwe), and five others with knowledge of the history and past use of the Center.

COORDINATION WITH FEDERALLY RECOGNIZED INDIAN TRIBES

Coordinating with interested federally recognized American Indian tribes has been on on-going effort throughout the EIS process. A total of 20 federally recognized American Indian tribes have been contacted. The 4 recognized tribes in Minnesota; Lower Sioux Indian Community, Lac Courte Oreilles Community, Prairie Island Indian Community, Shakopee Mdewakanton Sioux Community, and Upper Sioux Indian Community; as well as the Iowa Tribe of Oklahoma and the Sisseton Wahpeton Sioux Tribe; have been the most active in expressing their interests in the Center property. Early coordination regarding the EIS process is outlined below with additional coordination occurring during the Section 106 review process. Copies of early coordination letters are included in Appendix E.

- February 18, 2005. National Park Service mailed letters to the four federally recognized Dakota Tribes of Minnesota: Upper Sioux Indian Community, Lower Sioux Indian Community, Prairie Island Sioux Community and the Shakopee Mdewakanton Sioux Community as well as the Iowa Tribe of Oklahoma inviting participation in the Center EIS planning process.

- March 15, 2005. National Park Service delivered the scoping newsletter/comment card via telefax and U.S. Mail to 20 federally recognized Indian tribes.

- April 6, 2005. National Park Service mailed letters to 11 federally recognized throughout Minnesota inviting participation in the Center EIS / section 106 process.

- April 11, 2005. National Park Service mailed letters to 16 federally recognized tribes inviting participation in the ethnographic study including TCP and sacred site analysis at the Center. Contacts included: Winnebago Tribe of Nebraska, Sisseton Wahpeton Sioux Tribe, Ho-Chunk Nation, Bois Forte Reservation, Fond du Lac Reservation, Grand Portage Reservation, Leech Lake Reservation, Mille Laces Band of Ojibwe, Red

Lake Band of Chippewa, White Earth Reservation, Iowa Tribe of Oklahoma, Lower Sioux Indian Community, Lac Courte Oreilles Community, Prairie Island Indian Community, Shakopee Mdewakanton Sioux Community, and Upper Sioux Indian Community.

- April 26, 2005. National Park Service met with the Minnesota Indian Affairs Council.
- April 29, 2005. National Park Service met with members of the Shakopee Mdewakanton Sioux Community and participated in a site visit.
- May 18, 2005. National Park Service mailed letters to federally recognized Sioux tribes outside Minnesota inviting participation in the Center EIS process including: Santee Sioux Tribe, Spirit Lake, Flandreau, and Crow Creek.
- May 5, 2005. National Park Service hosted members of three federally recognized Dakota tribes and the Minnesota Indian Affairs Council on a site visit.
- August 2005. National Park Service met with chairman of the Upper Sioux Indian Community.

CULTURAL RESOURCES CONSULTATION AND SECTION 106

The NPS used comments received at or as a result of the open house to write a Draft Memorandum of Agreement (MOA). The NPS then sent the Draft MOA to all the consulting parties for their review and comment. The NPS provided comments from the public meeting and on the Draft MOA to the Minnesota SHPO and met with the SHPO to discuss further revisions to the MOA. The final MOA reflects this consultation process. The final MOA presumes that the Preferred Alternative, with the land coming to the Mississippi National River and Recreation Area, NPS, will be implemented. Copies of coordination and consultation letters for cultural resources and Section 106 are included in Appendix H.

Section 106 Coordination Chronology

- September 21, 2006. The Minnesota SHPO provided comments on the Draft EIS alternatives as they related to cultural resources.
- December 23, 2008. MNRRA notified the Minnesota SHPO of the preferred alternative and its potential impacts to cultural resources and requested the SHPO's comments on the undertaking.
- January 22, 2009. The NPS announced through letters to the Minnesota SHPO, tribal governments, interest groups and individuals on its mailing list an open house meeting on Monday February 23, 2009 from 5 p.m. to 9 p.m. at the VA Hospital in Minneapolis. The meeting's purpose was to collect public comment on reuse and restoration of the

Center site under the selected, preferred alternative and its impacts on the Center's historic properties.

- January 23, 2009. The Minnesota Historical Society sent a letter concurring with MNRRA that removing the buildings would constitute an adverse effect on the Bureau of Mines Historic District and supported continued coordination between agencies as demolition work and landscape treatment for the property became more defined.

- February 26, 2009. MNRRA notified the Advisory Council on Historic Preservation (ACHP) of the preferred alternative and its potential impacts to cultural resources per Sec. 800.6(a)(1) of the ACHP's regulations. MNRRA requested ACHP participation in addressing how to resolve those adverse effects. The ACHP has not responded. Therefore, MNRRA has proceeded per Section 800(b)(1) of those regulations, which provides for proceeding without ACHP involvement.

- February 27, 2009. MNRRA sent a letter to Turkiya Lowe, NPS, National Register of Historic Places requesting help with interpreting the National Register requirements for sites of religious and cultural significance to American Indian tribes. This letter included as an attachment the Ethnographic Study and MNRRA's comments on it.

- April 28, 2009. MNRRA sent the Draft MOA and supporting documentation to the Minnesota SHPO and consulting parties requesting their comments.

- May 11 and 12, 2009, MNRRA sent the Draft MOA to all the tribes and interested parties participating in the Section 106 process and requested their comments on it. MNRRA also offered to meet with the tribes to walk through the document. MNRRA follow up with phone calls to each tribe to reiterate its willingness to meet with them. No tribes have sent comments on the MOA.

- May 15, 2009. Susu Jeffrey, of the Friends of Coldwater, sent comments on the Draft MOA.

- May 28, 2009. Friends of Fort Snelling sent comments to MNRRA on the Draft MOA.

- June 1, 2009. The Minnesota SHPO provided comments on the Draft MOA to MNRRA.

- June 5, 2009. Thomas Casey, attorney, sent a letter to MNRRA on the Draft MOA on the behalf of the Preserve Camp Coldwater Coalition. Mr. Casey provided comments on the Draft MOA.

ENDANGERED OR THREATENED SPECIES CONSULTATION

In accordance with section 7 of the Endangered Species Act (16 U.S.C. 1531 *et seq.*), the National Park Service contacted the USFWS by letter on April 21, 2005 to initiate informal consultation. A response letter of June 8, 2005 was received stating that:

"Because of the location and type of activity proposed, we concur with your determination that this project is not likely to adversely affect any federally listed or proposed threatened or endangered species or their critical habitat."

WETLANDS AND FLOODPLAINS CONSULTATION

In June 2005, wetlands on the Center site were delineated using the routine methodology described in the USACE *Wetlands Delineation Manual* (USACE 1987). A panel of 18 technical experts in wetlands delineation conducted onsite field review of the delineation. In June 2005, the USACE responded to the National Park Service confirming the wetlands report performed at the Center site.

CONTACTS

During the preparation of this EIS, the National Park Service contacted and conducted numerous meetings with interested federal, tribal, state, and local government entities, as well as other interested parties. In general, a mailing list of over 500 contacts included:

- Federally recognized Indian tribes
- Colleges and universities in the Twin Cities area
- U.S. Senators Mark Dayton and Norm Coleman
- U.S. Representatives Martin Sabo and Betty McCollum
- Various National Park Service offices
- General Services Administration
- Other federal agency offices
- Friends groups and organizations
- Members of the public
- Other elected state and local officials.

Federal Elected Officials

- U.S. Senator Amy Klobuchar
- U.S. Senator Al Franken
- Former U.S. Senator Norm Coleman
- Former U.S. Senator Mark Dayton
- U.S. Representative Betty McCollum (4th District)
- Former U.S. Representative Martin Sabo (5th District)
- U.S. Representative Keith Ellison (5th District)

Tribal Governments

Dakota Tribes

- Lower Sioux Indian Community, President
- Prairie Island Indian Community, President
- Shakopee Mdewakanton Sioux Community, Chair
- Shakopee Mdewakanton Sioux Community, Land & Natural Resources Manager
- Shakopee Mdewakanton Sioux Community, Office of Staff Legal Counsel
- Shakopee Mdewakanton Sioux Community, Cultural Chair
- Sisseton Wahpeton Oyate, Chairman
- Sisseton Wahpeton Oyate, THPO

- Upper Sioux Community, Chair, Board of Trustees
- Upper Sioux Community, Cultural Chair
- Fort Peck Assiniboine and Sioux
- Flandreau Santee Sioux Tribe, President
- Spirit Lake Dakotah Nation, Chair
- Crow Creek Sioux Tribe, Chair
- Santee Sioux Tribe of Nebraska, Chair

Other Tribes

- Iowa Tribe of Oklahoma, Chair
- White Earth Band of the Chippewa, Chair
- White Earth Band of the Chippewa, Biology Department, Tribal Archaeologist
- Bois Forte Band of Chippewa, THPO
- Bois Forte Band of Chippewa, Chair
- Fond du Lac Band of Lake Superior Chippewa, Chair
- Grand Portage Band of Chippewa Indians, Chair
- Leech Lake Band of Ojibwe, Chair
- Leech Lake Band of Ojibwe, THPO
- Mille Lacs Band of Ojibwe, Executive Officer
- Mille Lacs Band of Ojibwe, THPO
- Red Lake Band of Chippewa Indians, Chair
- Red Lake Band of Chippewa Indians, Archaeologist/Natural Resource Specialist
- Lac Courte Oreilles Band of Lake Superior Chippewa Indians, Chair
- Ho-Chunk Nation, President
- Winnebago Tribe of Nebraska, Chair

Federal, State and Local Government Agencies and Elected Officials

- Federal Aviation Administration
- Hennepin County, Community Works
- Metropolitan Council, Council Chair and Staff
- Minneapolis City Council
- Minnesota Colleges and Universities
- Minnesota Department of Natural Resources
- Minnesota Department of Transportation, Aeronautics Division
- Minnesota Historical Society

- Minneapolis Park and Recreation Board of Commissioners
- Minnesota State Historic Preservation Office
- Minnesota State Representative Dan Larson – House District 63
- Minnesota State Senator Sat veer Chuddar
- Minnesota State Senator Jane Regnum
- Ramsey County
- U.S. Army Corps of Engineers, St. Paul District
- U.S. Department of Homeland Security Administration
- U.S. Department of Veterans Affairs, Director of Engineering and Facilities

Other Organizations

- Friends of Coldwater
- Friends of the Mississippi River
- Preserve Camp Coldwater Coalition
- Minnesota Indian Affairs Council
- Mississippi River Fund of the National Park Foundation
- Friends of Fort Snelling
- Nokomis East Neighborhood Association

University and College Organizations

- Augsburg College
- St. Catherine University
- Metropolitan State University
- University of St. Thomas
- Concordia University of St. Paul
- University of Minnesota
- Hamline University
- Macalester College
- Carlton College
- Gustavus Adolphus College
- St. Olaf College

Neighborhood Associations

- Longfellow Neighborhood Association
- Nokomis East Neighborhood Association
- Standish Ericsson Neighborhood Association

LIST OF RECIPIENTS

The following agencies, tribes, groups, and organizations have been identified as having an interest in this EIS and the NEPA decision-making process and are on the list to receive a copy of the EIS. Interested individuals and private business entities not listed here, but who have also expressed an interest in the EIS process and requested to be on the NPS mailing list, will be notified of the availability of the EIS .

Federal Agencies

- Advisory Council on Historic Preservation
- Federal Aviation Administration
- General Services Administration
- National Park Service
- U.S. Air Force, Fort Snelling
- U.S. Army Corps of Engineers
- U.S. Army, 88th Regional Command, Fort Snelling
- U.S. Department of Homeland Security
- U.S. Department of Veterans Affairs
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency

Elected Officials

- U.S. Senator Al Franken
- U.S. Senator Amy Klobuchar
- U.S. Representative Betty McCollum (4th District)
- U.S. Representative Keith Ellison (5th District)
- Minnesota State Senator Satveer Chaudhary – District 50
- Minnesota State Representative Jean Wagenius – District 62B
- Minneapolis City Council members, Sandy Colvin Roy and Barbara Johnson

University and Educational Organizations

- Augsburg College
- St. Catherine University
- Metropolitan State University
- University of St. Thomas
- Concordia University of St. Paul

- University of Minnesota
- Hamline University
- Macalester College
- Carlton College
- Gustavus Adolphus College
- St. Olaf College

State of Minnesota

- Minnesota Department of Natural Resources
- Minnesota Department of Transportation, Aeronautics Division
- Minnesota Historical Society
- Minnesota Pollution Control Agency
- Minnesota Legislative Reference Library
- Minnesota Board of Water and Soil Resources

Regional and Local Governments and Agencies

- Metropolitan Council
- Metropolitan Airports Commission
- City of Minneapolis
- City of St. Paul
- Hennepin County
- Ramsey County
- Minnehaha Creek Watershed District
- Minneapolis Park and Recreation Board
- Lower Minnesota Watershed District
- Minneapolis Police Department

Tribal Governments

Dakota Tribes

- Lower Sioux Indian Community, President
- Prairie Island Indian Community, President
- Shakopee Mdewakanton Sioux Community, Chair
- Shakopee Mdewakanton Sioux Community, Land & Natural Resources Manager
- Shakopee Mdewakanton Sioux Community, Office of Staff Legal Counsel
- Shakopee Mdewakanton Sioux Community, Cultural Chair

- Sisseton Wahpeton Oyate, Chairman
- Sisseton Wahpeton Oyate, THPO
- Upper Sioux Community, Chair, Board of Trustees
- Upper Sioux Community, Cultural Chair
- Fort Peck Assiniboine and Sioux
- Flandreau Santee Sioux Tribe, President
- Spirit Lake Dakotah Nation, Chair
- Crow Creek Sioux Tribe, Chair
- Santee Sioux Tribe of Nebraska, Chair

Other Tribes

- Iowa Tribe of Oklahoma, Chair
- White Earth Band of the Chippewa, Chair
- White Earth Band of the Chippewa, Biology Department, Tribal Archaeologist
- Bois Forte Band of Chippewa, THPO
- Bois Forte Band of Chippewa, Chair
- Fond du Lac Band of Lake Superior Chippewa, Chair
- Grand Portage Band of Chippewa Indians, Chair
- Leech Lake Band of Ojibwe, Chair
- Leech Lake Band of Ojibwe, THPO
- Mille Lacs Band of Ojibwe, Executive Officer
- Mille Lacs Band of Ojibwe, THPO
- Red Lake Band of Chippewa Indians, Chair
- Red Lake Band of Chippewa Indians, Archaeologist/Natural Resource Specialist
- Lac Courte Oreilles Band of Lake Superior Chippewa Indians, Chair
- Ho-Chunk Nation, President
- Winnebago Tribe of Nebraska, Chair

Libraries

- Hennepin County Public Library
- Nokomis Community Library
- Ramsey County Public Library
- St. Paul Public Library
- Minneapolis Public Library

Interest Groups and Organizations

- Center for Criminal Justice and Law Enforcement
- Friends of Coldwater
- Friends of the Mississippi River
- Longfellow Neighborhood Association
- Minnesota Center for Environmental Advocacy
- Minnesota Indian Affairs Council
- Mississippi River Fund of the National Park Foundation
- Nokomis East Neighborhood Association
- Preserve Camp Coldwater Coalition
- Standish Ericsson Neighborhood Association
- Tree Trust
- Minnesota Parks and Trails Council
- Great River Greening
- Friends of Ramsey County Parks and Trails
- Audubon Minnesota
- Friends of Fort Snelling
- The Nature Conservancy

Other

Interest groups, organizations and/or individuals who provided substantive comment on the Draft EIS but who are not represented in the lists above.

- Mendota Mdewakanton Dakota Community
- Jim Anderson
- William Barton
- Minnesota Sacred Places
- Friends of the Sibley Historic Site
- Edna Brazaitis
- Barb Marmet
- Dave Fudally
- Tom Holtzleiter
- Diane Steen-Hinderlie

- Howard J. Vogel
- Susu Jeffrey
- Brian Eggenberg
- Robert P. Mosedale
- Tim Boyle

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CHAPTER SIX

Photo Credit: National Park Service, MNRRA, 2009

COMMENTS AND RESPONSES
DRAFT ENVIRONMENTAL IMPACT STATEMENT

INTRODUCTION

The draft EIS was available for public review and comment from August 22 to November 27, 2006. In addition, four public meetings were conducted in an open house format at the Minnesota Valley National Wildlife Refuge Visitor Center in Bloomington, Minnesota where comments were solicited. A total of 509 responses on the draft EIS were received via oral comments, written letters, e-mails, and Web responses during the public comment period. These responses were entered into the NPS Planning, Environment, and Public Comment (PEPC) system either from direct entry by the commenter, or uploading of emails, faxes, and hard copy by NPS staff.

Comment Analysis Report

The five hundred nine public responses were reviewed. PEPC was used to analyze the comments and to compile and correlate similar public comments into a format that can be used by decision makers and the EIS team. Comment analysis assisted the team in organizing, clarifying, and addressing technical information pursuant to National Environmental Policy Act (NEPA) regulations. It also aids in identifying the topics and issues to be evaluated and considered throughout the planning process.

All comments were read and analyzed, including those of a technical nature; opinions, feelings, and preferences of one element or one potential alternative over another; and comments of a personal or philosophical nature. Although the analysis process attempts to capture the full range of public concerns, the content analysis report should be used with caution. Comments from people who chose to respond do not necessarily represent the sentiments of the entire public. Furthermore, this was not a vote-counting process, and the emphasis was on the content of the comment rather than the number of times a particular opinion was expressed.

The PEPC database was used for capturing all correspondence, and identification and management of the comments. The database stores the full text of all correspondence and allows each comment to be coded by topic and issue. Numeric codes were assigned to comments as they were sorted into logical groups by topic and/or issue.

A summary report, *Disposition Of Bureau Of Mines Property,Twin Cities Research Center Main Campus Hennepin County, Minnesota; Comment Analysis Report – Comments Received on the Draft EIS* (Appendix I) was generated from the public comment coded in the PEPC database. This report provides a summary of the number of comments coded under each topic as well as generalized demographic information. The report analyzed all public comment received and determined which comments would be categorized as substantive.

Substantive Comments

Substantive comments raise debate, or question a point of fact or policy. Comments in favor of or against the proposed action or alternatives, or comments that only agree or disagree with NPS/DOI policy, are not considered substantive. Substantive comments are defined as those that do one or more of the following:

- Question, with reasonable basis, the accuracy of information in the EIS.
- Question, with reasonable basis, the adequacy of information in the EIS.
- Present reasonable alternatives other than those presented in the EIS.
- Cause changes or revisions in the proposal.

Agencies preparing an EIS are required to respond to all substantive written and oral comments raised by the public or by commenting agencies as part of finalizing the EIS, and to make every reasonable attempt to consider the issues or alternatives raised.

Table 10: NPS Responses to Substantive Comments Received from Governmental Agencies, American Indian Tribes, Interest Groups and Individuals contains only those comments received on the draft EIS which have been determined by the EIS planning team to be considered substantive for which an NPS response is required.

The PEPC numeric comment codes listed under the header "PEPC ID", in the first column of Table 10 were assigned during the comment analysis process described above. Comments in Table 10 that have not been assigned a PEPC numeric code are comments considered substantive during a second-round analysis of the substantive comment letters that were not included in the summary report, *Comment Analysis Report – Comments Received on the Draft EIS* (Appendix I).

The following agencies, American Indian tribes, interest groups and individuals have submitted comment that have been determined to be substantive for which responses are recorded in Table 10. Full text of these comment letters is contained in Appendix L.

- United States Environmental Protection Agency
- U.S. Fish and Wildlife Service
- Shakopee Mdewakanton Sioux Community
- Lower Sioux Indian Community, September 25, 2006
- Lower Sioux Indian Community, October 13, 2006
- Lower Sioux Indian Community, October 31, 2006
- Prairie Island Indian Community
- Minnesota Historical Society
- Metropolitan Council
- Mendota Mdewakanton Dakota Community
- Mendota Dakota Community (Jim Anderson, oral testimony)
- Friends of the Mississippi River
- Friends of Fort Snelling
- William Barton
- Minnesota Sacred Places

- Friends of the Sibley Historic Site
- Preserve Camp Coldwater Coalition
- Edna Brazaitis
- Barb Marmet
- Dave Fudally
- Tom Holtzleiter
- Diane Steen-Hinderlie
- Howard J. Vogel
- Susu Jeffrey
- Brian Eggenberg
- Robert P. Mosedale
- Tim Boyle

Additional public agency comment letters not containing substantive comment are included in Appendix M.

Table 10: NPS Responses to Substantive Comments Received from Governmental Agencies, American Indian Tribes, Interest Groups and Individuals

PEPC ID	AGENCY/TRIBE/INTEREST GROUP/INDIVIDUAL COMMENT	RESPONSE
	United States Environmental Protection Agency	
	Given the Center's location within the boundaries of MNRRA and because of the existence of Coldwater Spring and associated wetlands on the property we believe the disposition of the Center would provide an ideal opportunity to enhance and restore natural resources. This restoration could be done in a manner that would also enhance cultural and aesthetic values. The Open Space/Park and Interpretive/Nature/History Center scenarios appear more consistent with restoring natural resources on the site than the Training Center/Office Park scenario.	The preferred alternative would maximize the restoration of natural resource values on the site and ensure their future protection under federal ownership.
37757	*In order to properly consider historic properties on this site, we believe remediation plans need to be integrated with historic preservation plans in a comprehensive plan. Alternative D is the most consistent with this approach. For this reason, EPA has identified Alternative D as the environmentally preferred alternative. This alternative would address the safety hazards associated with the existing structures, address remaining chemical and biological hazards (lead, asbestos, mold) associated with remaining infrastructure, and allow for restoration of sensitive resources such as wetlands, seeps, and streams. We believe that this alternative will allow activities to be done in a more comprehensively and integrative way than what might otherwise occur under the otter alternatives. If another alternative is selected as a preferred alternative, the Record of Decision should include appropriate conditions protecting historic, cultural, and Natural resources.*	Alternative D was selected as the preferred alternative. Implementing this alternative will ensure appropriate cleanup of hazards on the site, restoration of natural resource values and protecting them in perpetuity under federal ownership and management.
	U.S. Fish and Wildlife Service	
	Under Alternative A, the Center would remain under DOI ownership and current maintenance practices at the Center would continue, not including rehabilitation, renovation, or stabilization of the structures, which would continue to deteriorate. This assumes the DOI would not remove any of the buildings and restore the native vegetation. We question this assumption. Even without removal of the buildings, some areas of the Center may be appropriate for restoration of natural plant communities, should funding become available.	Since Alternative A was the no-action alternative, it assumed no changes would be made in management of the site, including no change in vegetation management.
	Under Alternative D, DOI would manage and bear the costs of modification for all or a part of the land, structures or other improvements prior to conveyance or retention of the Center. Again it was not explicitly stated in the DEIS that this alternative require restoration of native vegetation, removal of existing non-native vegetation, and/or control of the spread of exotic vegetation. Should this alternative be selected, we recommend that DOI be required to restore native	Alternative D was selected as the preferred alternative and will include native plant restoration, removal of non-native vegetation and control of exotic plant species.

PEPC ID	AGENCY/TRIBE/INTEREST GROUP/INDIVIDUAL COMMENT	RESPONSE
	vegetation, remove non-native vegetation, and control the spread of exotic vegetation including common buckthorn.	
37605	*The FWS currently uses Building 11, which has 14,000 square feet, for storage of important equipment used in biological field work. Various federal, state, and county partners have indicated interest in using this building for similar purposes. If FWS loses the use of Building 11, we will be hard-pressed to locate and acquire a suitable replacement facility. Such space, even if available, would be very costly to lease or purchase. Building 11 is located on the periphery of the USBM property, and is conveniently accessed by an existing road skirting the southwestern edge of the property. The building itself lies near a busy highway, and is situated between the highway and Camp Coldwater Spring, such as to arguably provide some level of noise abatement for the spring site. Thus, we recommend consideration be given to retaining Building 11 and its existing access road in federal ownership, for continued use by FWS and its partners.*	Building 11 lies in close proximity to Coldwater Spring, an important cultural feature on the site. The building's visual presence negatively impacts this important cultural resource. Runoff from Building 11 is contributing to accelerated erosion upslope of the pond at Coldwater Spring. For these reasons, the building will not be retained on the site.
	Shakopee Mdewakanton Sioux Community	
35513	*The Draft EIS states that the legislation authorizing the Center's conveyance allows the Secretary to convey only to universities or other government entities. The Draft EIS fails to address adequately the possibility that an Indian Tribe is a government the Secretary could deem appropriate to receive the Center. For example, the Draft EIS repeatedly assumes that certain Minnesota laws and regulations would apply to a nonfederal government entity that receives the Center. This assumption is incorrect when applied to an Indian Tribe acquiring land in Minnesota to be held in trust by the United States Government for the tribe ("Trust Land"). The Final EIS should address the potential for an Indian Tribe to receive and use the Center as the SMSC proposes to do.*	The draft EIS did make clear that the land could be held in trust for a tribe by the federal government. Since the land would remain in federal ownership, certain state laws and Regulations would not apply.
35515	*4. Chapter 1, Background On The Center, p. 4. This section should indicate that the land on which the Center is located was obtained from the Dakota people by treaty in 1805.*	A discussion of the Treaty of 1805 has been added to Chapter 3, Affected Environment.
35516	*5. Chapter 1, Relationship With Other Laws . . . , Mississippi River Corridor Critical Area . . . , p. 14. In discussing the Mississippi River Corridor Critical Areas statutes and regulations, the Draft EIS states, ". . . the executive order's interim development regulations would have jurisdiction of future land uses by any nonfederal owner." This conclusion is incorrect for an Indian Tribe occupying Trust Land. Laws of the State and its various political entities and subdivisions, with certain limited exceptions, do not have any force on Trust Land. Since the SMSC proposes to acquire the Center in trust, the Final EIS should discuss this important distinction.*	See response to PEPC ID 35513.

PEPC ID	AGENCY/TRIBE/INTEREST GROUP/INDIVIDUAL COMMENT	RESPONSE
35517	*6. Chapter 1, Relationship With Other Laws. . . , MNRRA Enabling Legislation.. . , p. 14-16. In discussing the Mississippi National River and Recreation Area Comprehensive Management Plan ("MNRRA CMP), the Draft EIS does not address whether or how the MNRRA CMP would apply to the Center site if it were Trust Land. For federal laws of general applicability, the general rule is that, unless Congress expressly exempts Indian Tribes from their reach, those statutes apply to the tribes. Since the SMSC proposes to acquire the Center in trust, the Final EIS should discuss how Public Law 100-696 would apply under this general rule if the SMSC acquires the Center in trust.*	Actions on federal lands within the MNRRA must be evaluated for consistency with the MNRRA CMP.
	7. Chapter 1, Relationship with Other Laws. . .,Minneapolis-St. Paul International Airport. . .Zoning Ordinance, p.16. In discussion of the adoption of the Minneapolis-St. Paul International Airport (Wold-Chamberlain Field) Zoning Ordinance ("MSP Zoning Ordinance"), the Draft EIS contains minor factual errors. First the word "Airport" has been omitted from the name of the adopting body; the proper name is the Wold-Chamberlain Field Joint Airport Zoning Board. Second, the Draft EIS refers to all members of the Board as municipal corporations. Hennepin County is a Minnesota county; the Commission is a metropolitan regional agency established by State statute. These errors should be corrected in the Final EIS.	These errors are corrected in the final EIS.
35520	*8. Chapter 1, Relationship With Other Laws., Minneapolis-St. Paul International Airport. Zoning Ordinance, Airspace Obstruction Zone, p. 17. In discussing the Minneapolis-St. Paul International Airport ("Airport") and the MSP Zoning Ordinance, the Draft EIS states, "The airspace obstruction zone identifies airspace lying beneath precision instrument approach zones for each runway, and the height at which this approach zone projects outward from the runway." The Draft EIS then assumes that the entire Center is subject to the height limitations related to the precision instrument approach zone for the 22-End of Runway 4-22 at the Airport. Both the statement and the assumption are incorrect. The MSP Zoning Ordinance establishes height limitations related to five airspace surfaces - the Primary Surface, the Horizontal Surface, the Conical Surface, the Precision Instrument Approach Surface, and the Transition Surface. Three airspace surfaces that project out from Runway 4-22 overlie portions of the Center - the Horizontal Surface, the Precision Instrument Approach Surface, and the Transition Surface. Figure 4 shows and correctly identifies all three. The Draft EIS fails to distinguish among the three airspace surfaces and does not describe how each affects the portion of the center directly under that specific airspace surface. The Draft EIS only discusses the Precision Instrument Approach Surface. This oversight should be corrected in Final EIS.*	These errors are corrected in the final EIS.

PEPC ID	AGENCY/TRIBE/INTEREST GROUP/INDIVIDUAL COMMENT	RESPONSE
35521	*9. Chapter 1, Relationship With Other Laws.. . , Minneapolis-St. Paul International Airport. . . Zoning Ordinance, Airspace Obstruction Zone, p. 17. In discussing the practical effect of the airspace height imitations, the Draft EIS concludes that new structure height on the Center site would be limited "to an elevation of no more than approximately 872 feet at the highest point of the building." The Draft EIS further concludes. "this - - translates to limiting new building construction to no greater than 40 to 60 feet depending on the existing topography." Both conclusions are incorrect. Both the Precision Instrument . . . Approach surface and the Transitional Surface are sloped surfaces that rise as they project out from the end of Runway 4-22. Figure 4 shows that the Precision Instrument Approach Surface crosses the westerly boundary of the Center site at heights ranging from approximately 872 to 885 feet above mean sea level ("MSL) and rises until it ranges from approximately 885 to over 895 feet MSL along the eastern and northern boundaries of the property. Figure 4 also shows that the Transition Surface ranges from approximately 872 to 970 feet MSL along the westerly boundary of the site and from approximately 885 to 990 feet MSL along the easterly boundary. A very small portion of the site's southeast corner lies under the Horizontal Zone whose height limitation is 994 feet MSL. The Final EIS should accurately discuss the height limitations and recalculate the allowable construction heights at various locations on the site under the MSP Zoning Ordinance.*	The draft EIS used rough approximations for allowable structure height. The comments are correct and the final EIS has been modified accordingly.
35522	*10. Chapter 1, Relationship With Other Laws . . . , Minneapolis-St. Paul International Airport. . . Zoning Ordinance, Land-use Safety Zoning, p. 17. It would be helpful if the Final EIS briefly described the portions of the Center site and acreages within each State safety zone and then referred to Figure 19, which accurately depicts the three safety zones established by the MSP Zoning Ordinance.*	The depiction of these zones as they appear on Figure 5: Airport Safety Zones on page 15 of the final EIS adequately illustrate the portions of the property that underlie these safety zones. Describing the zones in text would not add significantly to the understanding of where these zones lie.
35523	*11. Chapter 1, Relationship With Other Laws . . . , Minneapolis-St. Paul International Airport. . . Zoning Ordinance, Land-use Safety Zoning, p. 17. The discussion of Safety Zone B in the Final EIS should emphasize the acceptable uses in terms of the three conceptual land-use scenarios used in the Draft EIS. For example, Safety Zone B would permit open space and parks but not a campground. An interpretive, nature, or history center would be permitted, but not an amphitheater. And a training center or office park would be permitted.*	Text has been added to demonstrate the types of land uses allowed in each zone.
35524	*12. Chapter 1, Relationship With Other Laws.. . , Minneapolis-St. Paul International Airport. . . Zoning Ordinance, Permitting Requirements, p. 20. The Draft EIS uses the term "maximum construction height" from the MSP Zoning Ordinance without the qualifying words "without a permit." This leaves*	This text has been clarified in the final EIS.

PEPC ID	AGENCY/TRIBE/INTEREST GROUP/INDIVIDUAL COMMENT	RESPONSE
	the incorrect impression that some of thc Center site is subject to a maximum new building height limitation of 30 feet. The "maximum construction height without a permit" for any property subject to the MSP Zoning Ordinance was calculated using the lowest point of any airspace surface above that property minus a margin related to ground level mapping accuracy. Larger properties like the Center site, where the sloping airspace surfaces rise considerably across the property, may be able to build structures of much greater height than the "maximum construction height without a permit" simply by applying for the permit. This should be clarified in the Final EIS.	
35525	*13. Chapter 1, Relationship With Other Laws.. . , Minneapolis-St. Paul International Airport. . . Zoning Ordinance, Permitting Requirements, p. 20. The Draft EIS states, "Therefore, any future owner of the Center would have to comply with all applicable airport zoning ordinance and permit requirements." This conclusion is incorrect for an Indian Tribe occupying Trust Land, since the MSP Zoning Ordinance is a local, not a federal, regulation. Since the SMSC proposes to acquire the Center in trust, the Final EIS should discuss this important distinction.*	FAA Circular 150/5300-13 establishes dimensions for a "Object Free Zone" that does not include any of the Center property, as well as a "Runway Protection Zone" that includes what MAC has designated Safety Zone A. Safety Zone A includes most of Buildings 4 and 11, along with Coldwater Spring and pond and a portion of the property to the northwest that contains trees but no buildings (see Figure 5). The FAA recommends, but does not require, that an airport owner acquire and clear all of the Runway Protection Zone. "It is desirable to clear the entire RPZ of all aboveground objects. Where this is impractical, airport owners, as a minimum, shall maintain the RPZ clear of all facilities supporting incompatible activities. Incompatible activities include, but are not limited to, those which lead to an assembly of people." The EIS has been modified to clarify this requirement. While MAC's airport zoning would not apply to a federal owner, FAA rules would. However, FAA standards here appear to be advisory and not mandatory.
35519	*14. Chapter 1, Relationship With Other Laws . . . , Minneapolis-St. Paul International Airport. . . Zoning Ordinance, Airport Zoning and the Center, p. 20-21. The Draft EIS correctly states the "maximum height without a permit" for new buildings on most of the site is 30 feet. In later paragraphs, this changes to "maximum construction height" without the qualifying words "without a permit." This leaves the incorrect impression that some of the site is subject to a maximum new building height limitation of 30 feet. See Comment 12. For the Center, which is subject to two sloping surfaces - the Precision Instrument Approach Surface and the Transition Surface, this means that much of the property can accommodate buildings considerably over 30 feet in height provided a permit is obtained. This should be explained in the Final EIS.*	This text has been clarified in the FINAL EIS.

PEPC ID	AGENCY/TRIBE/INTEREST GROUP/INDIVIDUAL COMMENT	RESPONSE
35527	*15. Chapter 1, Relationship With Other Laws . . . , Minneapolis-St. Paul International Airport.. . Zoning Ordinance, Airport Zoning and the Center, p. 20. The Draft EIS discussion of the Federal Aviation Administration ("FAA) rules relating to navigable airspace around airport runways makes the blanket statement, "Any future owner of the Center must comply with the FAA notice requirements prior to beginning any alteration or construction project that may fall under FAA review authority." This is correct but falls short of a full discussion of FAA authority over an Indian Tribe occupying the Center as Trust Land. The Federal Aviation Act is a statute of general applicability that affects Indian Tribes. Thus, the FAA regulations that define a runway protection zone identical to State Safety Zone A in the MSP Zoning Ordinance would apply to an Indian Tribe occupying the Center as Trust Land. And the FAA regulations that define Horizontal, Precision Instrument Approach, and Transition Surfaces identical to those in the MSP Zoning Ordinance would also apply. The Final EIS should include a separate subsection on FAA rules and how they apply to and Indian Tribe occupying the Center as Trust Land.*	See response to PEPC ID 35525.
35526	*16. Chapter 1, Relationship With Other Laws. . . , Camp Coldwater Spring Protection Legislation . . . , p. 22-23. In the Final EIS, the discussion of the Camp Coldwater Spring protection legislation should note that these State laws do not apply to an Indian Tribe occupying Trust Land.*	See response to PEPC ID 35513.
35528	*17. Chapter 1, Relationship With Other Laws . . . ,National Historic Preservation Act, p. 23-27. The Draft EIS discussion of the National Historic Preservation Act ("NHPA") makes no mention of its applicability to an Indian Tribe occupying Trust Land. Since the SMSC proposes that the Center become Trust Land, the Final EIS should describe whether and how the NHPA, as a federal law of general applicability that applies to Indian Tribes, would affect activities at the site under those circumstances.*	As the Bureau of Indian Affairs (BIA) would hold the land in Trust for an Indian tribe and is a federal agency, the BIA would have to comply with the National Historic Preservation Act.
35530	*19. Chapter 1, Relationship With Other Laws . . . , p. 13-29. In this section on Relationship With Other Laws . . ., the Draft EIS makes no mention of the federal and State laws controlling activities in wetlands. They are presented and discussed in Chapter 3, Wetlands, on pages 99-100. Given the number of wetlands shown in the Center site wetland delineation, a review of the Clean Water Act, the Minnesota Wetland Conservation Act, and the applicable regulations under both should also be included in the Final EIS. This discussion should include an analysis of applicability to an Indian Tribe that acquires the Center in trust.*	Federal regulations regarding wetlands must be complied with in the process of removing structures, roads and other infrastructure on the site. State requirements are not binding on a federal owner.
35531	*20. Chapter 1, Relationship With Other Laws.. . , p. 17. Since the SMSC is*	It is true that federally recognized tribes would be eligible to

PEPC ID	AGENCY/TRIBE/INTEREST GROUP/INDIVIDUAL COMMENT	RESPONSE
	proposing to acquire the Center and have the land placed in trust, two other statutes relating to Indian matters should be discussed in the Final EIS in this section on Relationship With Other Laws. First the Indian Reorganization Act of 1934, which sets the criteria for what Indians groups will be considered sovereign tribes, should be presented. Second the Indian Gaming Regulatory Act controls whether gaming could be conducted on the Center if held in trust for an Indian Tribe. Under the Act, gaming can occur on land acquired in trust after October 17, 1988, only if the Indian Tribe for whom the land is acquired has been recently restored to federal recognition, does not have a reservation, has a reservation contiguous to acquired land, or receives state approval for gaming. In its proposal to acquire the Center, the SMSC states it will not conduct gaming on the Center site. And because the SMSC has a reservation, the Center is not contiguous to the SMSC's reservation, and the SMSC was not recently restored to federal recognition, it would require State approval before the SMSC could conduct gaming there.	acquire the property, and the Indian Gaming Regulatory Act would allow Indian gaming on the site contingent upon certain conditions. However, an analysis of this specific kind of use is not the intent of this EIS. The intent is to disclose the likely environmental impacts of the transfer of the property to some undetermined "university or governmental entity" without regard to any specific entity. To that end, the EIS properly considers the impacts associated with the possibility of the property being converted to some commercial activity, including tribal gaming.
35532	*21. Chapter 1, Impact Topics Dismissed From Further Analysis, Hazardous Materials and Waste Management, p. 38. The Draft EIS dismisses Hazardous Materials and Waste Management from further analysis based in part on its "previous efforts to identify and abate hazardous materials at the Center and the substantial reports produced incident to those efforts . . . ." The SMSC disagrees with the dismissal because the work done by the NPS does not: (a) analyze the implications and impacts of transferring buildings which contain or are constructed of hazardous materials to a new owner or occupier, including determining whether the hazards are likely to increase (for example, more mold growth or increased friability of asbestos containing materials), estimating the costs to maintain the buildings, addressing potential liability to a new owner or occupant of leaving the buildings in their present state of disrepair (for example, the potential liability should people inadvertently enter Building 9 which has been determined unsafe for entry), assessing whether maintenance and removal costs would escalate over time, etc.; or (b) analyze the implications and impacts of hazardous materials and wastes if buildings are reused, including which buildings could and could not be reused, whether the costs to manage or remove hazardous materials and wastes would be higher than demolition costs, whether those costs would escalate over time, potential reuse liability, etc. The Final EIS should include the topic of Hazardous Materials and Waste Management to address these impacts.*	Language has been added to the Health and Safety impacts section of all alternatives to better address the impacts of mold on workers or intruders. In regards to the work that may be associated with removal of the known hazardous materials at the Center, the EIS discloses what materials are present at the property and that the information will be supplied to the demolition contractor. There are no other impacts associated with the presence of these hazardous materials.
35533	*22. Chapter 2, Conceptual Land-use Scenarios, Interpretive/Nature/History*	See response to PEPC ID 35513.

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	Center, p. 42. The Draft EIS states that, under the interpretive/Nature/History Center conceptual scenario, new construction would be limited by various State and local laws and regulations. This conclusion is incorrect for an Indian Tribe occupying Trust Land. Since the SMSC proposes to acquire the Center in trust, the Final EIS should expand this discussion to address this important distinction.	
35534	*23. Chapter 2, Conceptual Land-use Scenarios, Interpretive/Nature/History Center, p. 42, and Training Center/Office Park, p. 42 & 43. In discussing the Interpretive/Nature/ History Center and the Training Center/Office Park conceptual scenarios, the Draft EIS asserts that the Center buildings have reuse potential without discussing which buildings and for what uses in the context of each scenario. For example, it seems unlikely that Building 1, given its size and layout, would work for the interpretative/nature/history center scenario. However, it could be reused for the training center/office park scenario. The Final EIS should include a building reuse analysis for each scenario either in Chapter 2 or in Chapter 3 where the buildings are described.*	Because of the amount of speculation required in any determination of use or reuse of specific buildings under any scenario, the results would be less than meaningful. The point of the land use scenarios was to apply a likely range of uses for the property for each of the differing alternatives so that the public would be better able to understand the likely environmental impacts from each. It was not intended to either discuss or decide which specific structures may or may not be retained by an unknown party.
35535	*24. Chapter 2, Alternative A, p. 46. The SMSC questions how long the Center could be maintained "as is" as proposed in Alternative A. Will maintenance costs escalate as the buildings age? Will the costs to contain hazardous materials and contaminants escalate as the buildings age? Can Building 9 with its severe mold problem remain indefinitely? Is there contamination at the Center that is migrating, or could migrate, onto more of the Center land or adjoining lands? The Final EIS should address the long-term impacts of this alternative more completely and realistically.*	The Draft EIS tried to convey the actions necessary under the "no-action" alternative to maintain the site as is. This may not be a viable alternative because of some of the very factors raised in the comments, but the one of the reasons for including the no-action alternative is to provide a baseline comparison with the other alternatives. For the purposes of comparison, we assume that maintenance "as is" will continue in perpetuity. And while the cost of actions is important in the decision-making process, an EIS typically focuses on an analysis of environmental impacts to resources that may be affected by the actions. In addition, at the time the documentation was being developed, the cost estimates for the wide range of potential actions under these alternatives were so variable and speculative that it was decided to focus on the environmental impacts in the Draft EIS.
35536	*25. Chapter 2, Alternative B, p. 47. The SMSC submits that the Alternative B analysis here and throughout the Final EIS should be expanded to discuss an Indian Tribe acquiring the Center in trust without conditions. Expanding the Alternative C analysis is not appropriate because the Bureau of Indian Affairs will not approve taking land into trust with conditions as proposed in Alternative C.*	Alternatives B and C both would involve transfer of the property to a university or nonfederal government entity. Since holding the site in trust for an Indian Tribe would involve retention of the site by the federal government, such action would not be consistent with either Alternative B or C.
35537	*26. Chapter 2, Alternative B, p. 47. The Final EIS should discuss the advantages*	The opportunity for having an American Indian tribe tell or

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	of protecting Indian cultural and natural resources through tribal sovereignty. This allows an Indian perspective on the birth of the State at the confluence of the Minnesota and Mississippi Rivers. Currently, the only historical perspective on this area as the birthplace of the State comes from the Fort Snelling historical site and the Minneapolis Park Board's preservation of early Minneapolis buildings at Minnehaha Park.	help in telling the American Indian story at the Bureau of Mines site does not depend upon Indian ownership. Depending upon the scenario, American Indians could play a significant role in telling their stories, regardless of who owns the land.
35538	*27. Chapter 2, Alternative B, p. 47. The Draft EIS states that because there would be no restrictions on subsequent transfer or sale under Alternative B, any future owner would be free to sell or transfer the Center to a private entity for use or development. This conclusion is incorrect for land acquired and conveyed into trust for an Indian Tribe. Trust Land can only be removed from trust with the Secretary's approval. Since the SMSC proposes that the Center become Trust Land, the Final EIS should discuss this important distinction.*	See response to PEPC ID 35536.
35539	*28. Chapter 2, Alternative B, Laws, Regulations . . . , MNRRA Enabling Legislation . . . , p. 47. Whether and how the MNRRA CMP applies to Trust Land should be discussed. See Comment 6.*	See response to PEPC ID 35517.
35543	*29. Chapter 2, Alternative B, Laws, Regulations.. . , Mississippi River Corridor Critical Area, p. 47. The Draft EIS incorrectly concludes that the State's Mississippi River Critical Area statute and Executive Order apply to an Indian Tribe occupying Trust Land. Since the SMSC proposes that the Center become Trust Land, the Final EIS should discuss this important distinction. See Comment 5.*	See response to PEPC ID 35513.
35545	*30. Chapter 2, Alternative B, Laws, Regulations . . . , Minneapolis-St. Paul International Airport Zoning Ordinance, p. 47. The Draft EIS incorrectly concludes that any transferee of the Center would have to comply with the MSP Zoning Ordinance. This conclusion in incorrect as it applies to an Indian Tribe occupying Trust Land. See Comment 13.*	See response to PEPC ID 35513.
35546	*31. Chapter 2, Alternative B, Laws, Regulations . . . , Minneapolis-St. Paul International Airport Zoning Ordinance, p. 48. The discussion of maximum structure heights for new construction should be revised to accurately portray the impact of the MSP Zoning Ordinance and its permitting requirements. See Comments 13 and 15.*	The text has been corrected. Also, see response to PEPC ID 35525.
35547	*32. Chapter 2, Alternative B, Laws, Regulations . . . , Minneapolis-St. Paul International Airport Zoning Ordinance, p. 48. The Final EIS should note that the FAA regulations governing land use and height limitations around airports would apply to an Indian Tribe occupying Trust Land. See Comment 15.*	See response to PEPC ID 35525.
35548	*33. Chapter 2, Alternative B, Laws, Regulations.. . , Camp Coldwater Spring*	See response to PEPC ID 35513.

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	Protective Legislation . . . , p. 47- 48. The Final EIS should note that the Camp Coldwater Spring protection legislation and the Minnesota Historic Sites Act do not apply to an Indian Tribe occupying Trust Land. See Comment 5.	
35549	*34. Chapter 2, Alternative B, Laws, Regulations.. . , National Historic Preservation Act, p. 49. The discussion of the NHPA's application should be expanded to address the extent to which an Indian Tribe acquiring the Center site in trust would be subject to the Act. See Comment 17.*	See response to PEPC ID 35528.
35550	*35. Chapter 2, Alternative C, p. 50. The discussion of Alternative C should indicate that an Indian Tribe would not acquire the Center site in trust under this alternative. The Bureau of Indian Affairs will not approve taking land into trust with conditions as proposed in Alternative C. See Comment 25.*	See response to PEPC ID 35536.
35552	*36. Chapter 2, Alternative C, Conditions, Conservation Easement, p. 51. The Final EIS should note that the State conservation easement statute does not apply to an Indian Tribe occupying Trust Land.*	See response to PEPC ID 35513.
35553	*37. Chapter 2, Alternative C, Conditions, Covenants and Easements, p. 51-52. The Final EIS should note that State laws governing easements and covenants do not apply to an Indian Tribe occupying Trust Land.*	See response to PEPC ID 35513.
35554	*38. Chapter 2, Alternative C, Laws, Regulations . . . , MNRRA Enabling Legislation . . . , p. 53. In discussing the MNRRA CMP the Draft EIS does not address the application of MNRRA to the Center site if it were Trust Land. See Comment 6.*	See response to PEPC ID 35517.
35555	*39. Chapter 2, Alternative C, Laws, Regulations . . . , Mississippi River Corridor Critical Area Legislation, p. 53. The fact that the Mississippi River Corridor Critical Area laws would not apply to an Indian Tribe occupying Trust Land should be discussed. See Comment 5.*	See response to PEPC ID 35513.
35557	*40. Chapter 2, Alternative C, Laws, Regulations . . . , Minneapolis-St. Paul International Airport Zoning Ordinance, Open Space/Park Scenario, Interpretive/Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 53. The Final EIS should note that the MSP Zoning Ordinance does not apply to an Indian Tribe occupying Trust Land. See Comment 13 and note that the FAA regulations governing land use and height limitations around airports would not apply to an Indian Tribe occupying Trust Land. See Comments 13 and 15.*	See responses to PEPC ID 35513 and 35525.
35558	*41. Chapter 2, Alternative C, Laws, Regulations . . . , Camp Coldwater Springs Protection Legislation . . . , p. 53-54. The Final EIS should note that the Camp Coldwater Spring protection legislation does not apply to an Indian Tribe occupying Trust Land. See Comment 16.*	See response to PEPC ID 35513.
35559	*42. Chapter 2, Alternative C, Laws, Regulations . . . , National Historic*	See response to 35549.

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	Preservation Act, p. 54. The discussion of the NHPA's application should be expanded to address the extent to which an Indian Tribe acquiring the Center site in trust would be subject to the Act. See Comment 17.	
35560	*43. Chapter 3, Buildings And Other Structures, p. 60-69. This section on Buildings And Other Structures is the alternate location for a discussion of each building's reuse suitability under the three conceptual land-use scenarios. See Comment 23.*	See response to PEPC ID 35534.
35561	*44. Chapter 3, Other Infrastructure, p. 70. No mention is made of current or past wells on the Center site. The Final EIS should indicate the history of any wells, including the locations, depths, aquifer tapped, past or present rates of draw, and, if any wells were closed, when and how.*	There is no record of any wells on the site. Historic uses utilized Coldwater Spring as a water source. Once the water works was abandoned there was little use of the site until construction of the Bureau of Mines buildings, which were connected to the Minneapolis water system.
35770	*47. Chapter 3, Natural Resources, Rare Plant Species, p. 93. The discussion under Rare Plant Species is inadequate. The central question that must be addressed is - are any federal or State threatened or endangered plant species present on the Center site? (See Draft EIS page 94 under Wildlife where the United States Fish and Wildlife Service answers this very question with respect to fauna.) Given the presence of so many rare and native plant species within one mile, a biological survey to answer this question is needed for the Final EIS.*	The EIS will be revised to clarify that a survey of the site found no federal or state-listed plant or animal species. Minnesota DNR has identified state-listed plants within a mile of the site, but a Minnesota DNR survey of the site found no listed plants. Even though they are not federally listed, NPS would consider state-listed species to be "Species of Management Concern" and would seek to protect them. An NPS plant survey of the site in 2008 also did not find any state-listed species. A federally-endangered mussel, the Higgins Eye Pearly Mussel, has been reintroduced in the Mississippi River a quarter-mile east of the property. Erosion-prevention activity will be needed on the site to protect the mussel bed. Bald eagles have been delisted since publication of the Draft EIS, but bald eagles remain protected. There were two bald eagle nests within two miles of the site in 2009, but neither nest is within a mile and bald eagles should not be affected by removal of the Center's buildings and some of its trees. Bald eagles are known to roost in trees right along the river's shore a quarter-mile east of the Center property, but not at the Center itself.
35771	*48. Chapter 3, Natural Resources, Rare Plant Species, p. 93. Under Rare Plant Species, the Draft EIS states, "According to the Natural heritage Program, disposition of the Center alone should not affect any know occurrences of rare plant species." The Draft EIS does not contemplate "disposition alone." It also contemplates reuse under three conceptual land-use scenarios. The presence on the Center site of threatened or endangered species and the need to protect their*	See response to PEPC ID 35570.

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	habitat, if present, could affect how reuse can occur on the Center site. Based on the outcome of a biological study, this should he addressed in the Final EIS.	
35772	*49. Chapter 3, Natural Resources, Hydrology, Surface Water Resources, p. 94-95. The Draft EIS discusses the Minnehaha Creek Watershed District in some detail. However the Center Site is not within that watershed as later stated, "Rain water that falls on the Center does not flow into Minnehaha Creek, but rather flows eastward. . . to the Mississippi River. The Draft EIS does not identify the watershed district or watershed management organization, if any, in which the Center lies. The Final EIS should determine if the Center Site is within a watershed district or management organization's jurisdiction and, if so, discuss the applicable regulations in Chapter 3 and in Chapter 1.*	The EIS correctly states that the Center property lies within the jurisdiction of the Minnehaha Creek Watershed District. Groundwater sources for Coldwater Spring are under lands partly within that district and partly within the jurisdiction of the Lower Minnesota River Watershed District. The center property itself is physically not in either watershed, since water on the center property flows directly to the Mississippi River. The NPS will consult with both the Lower Minnesota River Watershed District and the Minnehaha Creek Watershed District concerning any future activities that could affect Coldwater Spring.
35773	*Chapter 3, Natural Resources, Hydrology, Comment 50: Groundwater Resources, p 95-97. If the Center site has or had wells, this should be discussed. See Comment 44.*	See response to PEPC ID 35561.
35774	*51. Chapter 3, Natural Resources, Water Quality, Surface Water Quality, p. 97-98. As in Surface Water Resources, the Draft EIS discusses water quality in the Minnehaha Creek Watershed District even though the Center is not in that watershed. No mention is made of surface water quality in the Center's watershed. Either surface water quality in the Center's watershed should be discussed in the Final EIS, some connection should be made between surface water quality in the Minnehaha Creek Watershed District and the Center or Camp Coldwater Spring, or some other reasons must be presented for using data only from the Minnehaha Creek Watershed District.*	Surface water quality at the Center is discussed on pages 87-88 of the final EIS.
35775	*52. Chapter 3, Natural Resources, Water Quality, Groundwater Quality, p. 98. As in Surface Water Quality, the Draft EIS discusses water quality in aquifers underlying the Minnehaha Creek Watershed District even though the Center is not in that watershed. No mention is made of groundwater quality in aquifers under the Center's watershed or the Center. Either ground water quality in the Center's watershed should be discussed in the Final EIS, some connection should be made between groundwater quality in the Minnehaha Creek Watershed District and the Center or Camp Coldwater Spring, or some other reasons must be presented for using data only from the Minnehaha Creek Watershed District.*	The quality of groundwater in aquifers under the Center property has not been assessed. Coldwater Spring is fed by a groundwater source and its water quality is discussed on pages 87-88 of the final EIS.
35777	*53. Chapter 3, Natural Resources, Wetlands, Regulatory Background, p. 99-*	In the Final EIS, the regulatory background discussion has

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	101. It appears that most of the discussion under Wetlands, Regulatory Background, should occur in Chapter 1 under Relationship With Other Laws . . . . See Comment 19. Either there or here, the Final EIS should discuss whether and how these laws and regulations apply to universities, nonfederal government entities, and Indian Tribes.	been moved to Chapter 1.
35779	*54. Chapter 3, Health and Safety, Mold, p. 108. The Final EIS should repeat here the information on page 65 of the Draft EIS that Building 9 "has been determined unsafe for entry without protective equipment due to the presence of mold . . ."*	Text has been added to the Final EIS as suggested.
35780	*55. Chapter 3, Health and Safety, Lead-based Paint, p. 110. If the last inspection of lead based paint was between six and ten years ago as suggested in the section on Lead-based Paint, a further inspection should be made to determine the current condition. The results of this inspection should be reported in the final EIS.*	No paint has been introduced to the site since it was last inspected in 2000. Some peeling and deterioration of lead-based paint is presumed to be occurring now and will need to be addressed during demolition.
35782	*56, Chapter 3, Health and Safety, Other Hazards, p. 110-111. The Other Hazards section states that break-ins at the Center "could expose individuals to hazards with serious potential injury potential." The Final EIS should discuss whether it is realistic to dispose of the Center with buildings and structures intact given these dangers. This discussion might be appropriate in connection with Alternative D.*	The purposes of alternatives C and D are to consider the possibility of putting either conditions on the transfer of the property, perhaps to provide some mitigation for such situations; to modify the property before transfer, perhaps to provide mitigation; or to retain portions in federal ownership where there may be no need for mitigation. Alternative B is a situation where a recipient would take the property with no conditions or no modifications, knowing the extent of existing conditions at the property. Each of these situations is a reasonable alternative for disposing of the property, though some have advantages over others.
35785	*57. Chapter 3, Land Use, p. 111. The Draft EIS states, "Critical Area plans are required for communities that manage land within the Critical Area." The Final EIS should note that an Indian Tribe occupying Trust Land would not be required to produce a Critical Area Plan. See Comment 5.*	See response to PEPC ID 35513.
35791	*60. Chapter 3, Public Use And Experience, Public Experience and Values, p. 114. The Final EIS should discuss the advantages of protecting Indian cultural and natural resources through tribal sovereignty. The Final EIS should note that tribal sovereignty allows an Indian perspective on the birth of the State at the confluence of the Minnesota and Mississippi Rivers. Currently, the only historical perspective comes from the Fort Snelling historical site and the Minneapolis Park Board's preservation of early Minneapolis buildings at Minnehaha Park. See Comment 26.*	See response to PEPC ID 35537.
35795	*61. Chapter 4, Alternative A, Laws, Regulations . . ., p. 135. The Draft EIS*	See response to PEPC ID 35525.

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	indicates a federal agency might not be required to comply with the MSP Zoning Ordinance pending a determination of the federal basis of such regulations. This response in the Final EIS should be expanded to indicate the federal agency would be subject to FAA land use and airspace rules.	
35801	*62. Chapter 4, Alternative A, Historic Structures and Districts, Section 106 Assessment of Effect, p. 137. The Draft EIS states the structures at the Center would be mothballed to "ensure that the structures do not deteriorate through neglect." What maintenance activities would be undertaken to prevent deterioration, what is their expected cost, and will these activities, in fact, prevent deterioration of the structures? How will maintenance activities address the hazardous materials and mold at the Center? The Final EIS should address these questions. See Comment 21.*	In the three years since preparation of the Draft EIS, there has been considerable deterioration of several of the buildings at the Center and they could no longer be effectively mothballed. This is especially true of Buildings 1, 2 and 9. Maintenance of the Center since closure was not at a level that could address mold issues or replace roofs before they began leaking. The Section 106 Assessment of Effect for Alternative A has been rewritten for the Final EIS to recognize this change and the resulting adverse effect on USBM Twin Cities Research Center Historic District.
35815	*64. Chapter 4, Alternative A, Hydrology, p. 139. Under Hydrology, the Final EIS should state the watershed district or management organization in which the Center lies. See Comments 51 and 52.*	Text has been added to the Final EIS in the hydrology discussion of Chapter 3, Affected Environment, clarifying that while the Center property is physically in neither watershed, it lies within the administrative jurisdiction of the Minnehaha Creek Watershed District and immediately east of lands lying within the administrative jurisdiction of the Lower Minnesota River Watershed District.
35820	*65. Chapter 4, Alternative A, Health and Safety, p. 140. On page 108, the Draft EIS describes the mold infestations at two buildings on the Site. Therefore, the Impacts section under the Health and Safety heading should discuss mold among the contaminants that could adversely affect workers or intruders.*	Under all four alternatives, the Health and Safety discussion has been revised to discuss mold as one of the contaminants that could adversely affect workers or intruders.
35837	*67. Chapter 4, Alternative B, p. 142. The Draft EIS incorrectly states that "any future owner under this alternative would be free to subsequently use, sell, and transfer the Center to a private entity for various uses or development." This is not correct with respect to Indian Tribes occupying Trust Land. Trust Land can only be removed from trust with the Secretary's approval. Since the SMSC proposes that the Center become Trust Land, the Final EIS should discuss this distinction. See comment 27.*	See response to PEPC ID 35536.
35843	*68. Chapter 4, Alternative B, Laws, Regulations . . . , MNRRA Enabling Legislation . . . , p. 142. The Draft EIS states the NPS would review federally funded or permitted activities. The Final EIS should also discuss how MNRRA applies to an Indian Tribe occupying Trust Land. See Comment 6.*	See response to PEPC ID 35517.
35849	*69. Chapter 4, Alternative B, Laws, Regulations.. . , Mississippi river Critical*	See response to PEPC ID 35513.

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	Area, p. 142. The Draft EIS states that a new owner of the Center would be required to comply with the Critical Areas Act of 1973, State Executive Order 79-19. This is incorrect for an Indian Tribe occupying Trust Land. The Final EIS should address this distinction. See Comment 5.	
	70. Chapter, Alternative B, Laws, Regulations…Minneapolis-St. Paul International Airport Zoning Ordinance, p. 143. The Final EIS should note that the MSP Zoning Ordinance does not apply to an Indian Tribe occupying Trust Land and that the FAA regulations governing land use and height limitations around airports would apply to an Indian Tribe occupying Trust Land. See comments 13 and 15.	See responses to PEPC ID 35513 and 35525.
35857	*71. Chapter 4, Alternative B, Laws, Regulations.. . , Minneapolis-St. Paul International Airport Zoning Ordinance, p. 143. The Draft EIS states that because Buildings 4 and 11 are existing, "they could be rehabilitated or repaired . . ." This is correct under the MSP Zoning Ordinance but incorrect under FAA rules. Buildings must be removed from the FAA mandated Runway Protection Zone. The Final EIS should describe the application of FAA rules on existing buildings. See Comment 15.*	See response to PEPC ID 35525.
35861	*72. Chapter 4, Alternative B, Laws, Regulations.. . , Camp Coldwater Spring Protection Legislation . . . , p. 143-144. The Draft EIS states that any recipient of the Center must abide by the Camp Coldwater Spring protection legislation and regulations and the Minnesota Historic Sites Act. This is incorrect for an Indian Tribe occupying Trust Land. The Final EIS should address this distinction. See Comment 16.*	See response to PEPC ID 35513.
35868	*73. Chapter 4, Alternative B, Laws, Regulations . . . , National Historic Preservation Act, p. 144. The Draft EIS states that, once the Center is conveyed to a nonfederal entity, no federal protections under the NHPA would be available unless an action affecting the Center site was a federal action. The Final EIS should discuss the application of the NHPA to an Indian Tribe occupying Trust Land. See Comment 17.*	See response to PEPC ID 35528.
35872	*74. Chapter 4, Alternative B, Archeological Resources, p. 144-145. The Draft EIS discussion for all three conceptual land-use scenarios states that, after conveyance, "the new owner could undertake actions that impact archaeological sites." The Final EIS should discuss the application of the NHPA to an Indian Tribe occupying Trust Land where archeological resources are concerned. See Comment 17.*	See response to PEPC ID 35868.

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35873	*75. Chapter 4, Alternative B, Historic Structures and Districts, p. 146-148. The Draft EIS discussion for all three conceptual land-use scenarios assumes that, after conveyance, the new owner could take actions that alter or eliminate some or all the structures at the Center with consequent adverse effects. The Final EIS should discuss the application of the NHPA to an Indian Tribe occupying Trust Land where historic structures and districts are concerned. See Comment 17.*	See response to PEPC ID 35868.
35877	*77. Chapter 4, Alternative B, Ethnographic Resources, Open Space/Park Scenario, Interpretive/Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 148-150. The Final EIS should note for all three conceptual land-use scenarios that an Indian Tribe occupying Trust Land, like a private university, would not he required to comply with the Camp Coldwater Spring protective legislation or the Minnesota Historic Sites Act. See Comment 16.*	See response to PEPC ID 35513.
35878	*78. Chapter 4, Alternative B, Ethnographic Resources, Summary, p. 150. The Summary will need to be rewritten in the Final EIS to describe the effect that various federal statues of general applicability would have on an Indian Tribe occupying the Center site as Trust Land.*	See response to PEPC ID 35536. The text of Alternative D has been modified to clarify that if the land were held in trust for an Indian Tribe, federal laws and rules would still apply on the property.
35879	*79. Chapter 4, Alternative B, Soils, Open Space/Park Scenario, Interpretive/Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 151-153. The Draft EIS for all three conceptual land-use scenarios assumes that a new owner could remove existing structures, construct new structures, and alter infrastructure "without regard to impacts to soils," that building sites could he left to revegetate on their own," or that owners "could elect to implement mitigation measures." The federal Clean Water Act and rules, State water quality laws and rules, the Critical Area rules, and local erosion control ordinances and rules all require that construction activities (including demolition of buildings) be conducted in a manner that minimizes soil erosion. Under these laws, building sites cannot be left to revegetate on their own, property owners do not get to elect whether they implement mitigation measures. Rather specific mitigation measures must be employed to protect surface waters. The Final EIS should discuss in Chapter 1 and Chapter 4 how these laws protect surface waters, how the Clean Water Act applies to an Indian Tribe occupying Trust Land, and why the State and local laws would not govern an Indian Tribe occupying Trust Land.*	It is correct that state and local standards would require a future owner to take actions to limit soil erosion.
35881	*80. Chapter 4, Alternative B, Vegetation, p. 153. The Final ElS should note that an Indian Tribe occupying Trust Land would not he required to comply with the MSP Zoning Ordinance as it applies to vegetation management and that the FAA regulations governing land use and height limitations around airports*	See response to PEPC ID 35525.

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	would apply to an Indian Tribe occupying Trust Land. See Comments 13 and 15.	
35882	*81. Chapter 4, Alternative B, Vegetation, Open Space/Park Scenario, p. 154. The Draft EIS states that a recipient might elect to allow disturbed areas to revegetate on their own. This would not be pernitted under federal, State, or local regulations. The final EIS should correct this. Sec Comment 79.*	See response to PEPC ID 35879.
35885	*83. Chapter 4, Alternative B, Hydrology, p. 158. The Final EIS should state the watershed district or management organization in which the Center lies. See Comments 51 and 52.*	See response to PEPC ID 35772.
35886	*84. Chapter 4, Alternative B, Hydrology, p. 158. The Final EIS should note that an Indian Tribe occupying Trust Land, like a private university, would not be required to comply with the Camp Coldwater Spring protective legislation or the Minnesota Historic Sites Act. See Comment 16.*	See response to PEPC ID 35513.
	85. Chapter 4, Alternative B, Hydrology, Interpretive/Nature/History Center Scenario, Impacts, p. 159. The Draft EIS refers to construction of a new building at the Center without removal of an existing structure as a "reduction in impermeable surfaces that would increase the surface flow." This word "reduction" should be "increase". The Final EIS should correct this error.	The two wording errors have been corrected.
35889	*86. Chapter 4, Alternative B, Hydrology, Interpretive/Nature/History Center Scenario and Training Center/Office Scenario, p. 159-160. In both these scenarios, the Draft EIS indicates that an increase in impervious surfaces would lead to adverse impacts on hydrology due to increased runoff. However, under State laws and local ordinances, new development must address increases in impervious surface by controlling increased storm water runoff. Typically, runoff rates after development must not exceed predevelopment runoff rates based on a specific storm event cited in the applicable law. The Final EIS should identify the applicable State and local storm water regulations in Chapter 1 and Chapter 4 and discuss their applicability to new construction at the Center. The Final EIS should also note that State and local storm water laws would not apply to an Indian Tribe occupying Trust Land, determine if any federal laws would apply, and if so, describe the application.*	Under Alternatives B or C, new development on the site would be required to control stormwater runoff. Under the Preferred Alternative, all buildings on the site, including asphalt and concrete parking lots, would be removed and replaced with native vegetation. This would greatly reduce stormwater runoff from the site. Some shallow depressions would be created where building foundations are removed and they would also serve to catch surface runoff and provide filtration. No nutrients, fertilizers, herbicides or pesticides would be used on the property.
35891 35892	*87. Chapter 4, Alternative B, Water Quality, Open Space/Park Scenario, Interpretive/ Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 160-162. In all three scenarios, the Draft EIS discussion is inadequate. First the discussion addresses only three of four potential water quality impacts - sedimentation from construction including demolition, fluid leakage on parking lots, and increased use of fertilizers, herbicides, and*	The EIS has been modified to clarify that under the Training Center/Office Park Scenario of Alternative B, there would be an increase in impervious surface, and that in turn could increase runoff and impacts to water quality unless actions were taken to reduce those impacts.

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	pesticides at the Center. The fourth, increased nutrient loading from increases in impervious surfaces, is not discussed. Second the Draft EIS does not the federal, State and local laws designed to protect water quality. As noted in Comment 79, the Clean Water Act and State and local laws require erosion control measures to prevent sedimentation of surface waters due to construction including demolition. *87 (con't): State and local laws and ordinances also require water quality treatment which typically includes* *ponds to allow the deposition of particles carrying nutrients, fertilizers, herbicides, and pesticides. Pond inlets have skimmers to address runoff from parking lots, and in some cases, sumps are required in the parking lots to trap vehicle fluids. The Final EIS should describe all potential sources of water quality impacts and the federal, State, and local laws that address them. The Final EIS should also note that State and local storm water quality laws would not apply to an Indian Tribe occupying Trust Land, determine if any federal laws would apply, and if so, describe the application.*	
35894	*88. Chapter 4, Alternative B, Wetlands, Open Space/Park Scenario, Interpretive/Nature/ History Center Scenario, and Training Center/Office Park Scenario, p. 162-164. In all three scenarios, the Draft EIS correctly concludes no conditions would be imposed by the Department of the Interior to protect wetlands and EIS indicates that wetlands could be adversely affected under all three scenarios. Missing, however, is a description of wetland protection under federal and State wetland laws, which are described in Chapter 3, Wetlands on pages 99-100. Chapter 4 should apply the laws to the three conceptual land-use scenarios, determine the degree of protection afforded by the laws, and reconsider the intensity of the probably impacts. This discussion should include an analysis of applicability to an Indian Tribe that acquires the Center in trust.*	Text has been added to the EIS to clarify that the potential negative impacts to wetlands would be mitigated by compliance with state and local requirements as discussed in Chapter 3.
35895	*89. Chapter 4, Alternative B, Health and Safety, Open Space/Park Scenario, Impacts, p. 167. On page 108, the Draft EIS describes the mold infestations at two buildings on the Site. Therefore, the Final EIS should discuss mold among the contaminants that could adversely affect workers or intruders. See Comment 65.*	See response to PEPC ID 35820.
35896	*90. Chapter 4, Alternative B, Open Space/Park Scenario, Interpretive/Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 168-169. In all three scenarios, the Draft EIS states, "All existing easements, licenses, rights-of-way and leases, and other land interests could be honored while the land is being used as open space or a park." However, the Draft EIS on page 113 notes that the University of Minnesota leases part of*	This lease was never signed or implemented and the EIS has been corrected to clarify that.

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	Building 1 and all of Building 2 for research purposes. The Final EIS should address this apparent contradiction.	
35900	*92. Chapter 4, Alternative C, p. 174. The Final EIS should note that conveyance with conditions does not work for an Indian Tribe asking to acquire the Center and place it into trust. The Bureau of Indian affairs will not approve taking land into trust with conditions. See Comment 35.*	See response to PEPC ID 35536.
35902	*93. Chapter 4, Alternative C, Laws, Regulations . . . , MNRRA Enabling Legislation . . ., p. 174-175. The Draft EIS states the NPS would review federally funded or permitted activities. The Final EIS should also discuss how MNRRA applies to an Indian Tribe occupying Trust Land. See Comment 6.*	See response to PEPC ID 35517.
35903	*94. Chapter 4, Alternative C, Laws, Regulations . . . , Mississippi River Corridor Critical Area Legislation, p. 174-75. The Draft EIS states that a new owner of the Center would be required to comply with the Critical Areas Act of 1973, State Executive Order 79-19, including implementation of zoning ordinances and plans. This is incorrect for an Indian Tribe occupying Trust Land. The Final EIS should address this distinction. Sec Comment 5.*	See response to PEPC ID 35513.
35904	*95. Chapter 4, Alternative C, Laws, Regulations . . . , Minneapolis-St. Paul International Airport Zoning Ordinance, p. 175. The Final EIS should note that the MSP Zoning Ordinance does not apply to an Indian Tribe occupying Trust Land and note that the FAA regulations governing land use and height limitations around airports would apply to an Indian Tribe occupying Trust Land. See Comments 13 and 15.*	See response to PEPC ID 35525.
35906	*96. Chapter 4, Alternative C, Laws, Regulations . . . , Camp Coldwater Spring protective Legislation. . . , p. 175. The Final EIS should note that the Camp Coldwater Spring protection legislation and the Minnesota Historic Sites Act would not apply to an Indian Tribe occupying Trust Land. See Comment 5.*	See response to PEPC ID 35513.
35909	*97. Chapter 4, Alternative C, Laws, Regulations . . . , National Historic Preservation Act, p. 175-176. The discussion of the NHPA's application should be expanded to address the extent to which an Indian Tribe acquiring the Center site in trust would be subject to the Act. See Comment 17.*	See response to PEPC ID 35528.
35912	*99. Chapter 4, Alternative C. Soils, Open Space/Park Scenario, Interpretive/Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 182-84. The Final EIS's discussion of soil impacts in all three land-use scenarios should address the applicability of federal, State, and local critical area regulations and the mitigation measures that would be required by these regulations. See Comment 79. The Final EIS should then determine whether additional conditions are needed to protect soils given the existing laws.*	Federal and state standards that impact soil erosion are described in Chapter 3. Other than that, there are generally no state or federal regulations that affect soils.

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35914	*100. Chapter 4, Alternative C, Vegetation, Assumptions, p. 184. The Final EIS should note that the MSP Zoning Ordinance, and its attendant limitations on vegetation, is not applicable to an Indian Tribe occupying Trust Land, note that the FAA regulations governing land use and height limitations around airports would apply to an Indian Tribe occupying Trust Land, and determine if vegetation would be controlled in the federal Runway Protection Zone. See Comments 13 and 15. The Final EIS should then determine whether additional conditions are needed to protect airspace over the Center.*	See response to PEPC ID 35525.
35916	*101. Chapter 4, Alternative C, Hydrology, Description, p. 187. The Final EIS should state the watershed district or management organization in which the Center lies. See Comments 51 and 52.*	See response to PEPC ID 35815.
35917	*102. Chapter 4, Alternative C, Hydrology, Open Space/Park Scenario, Interpretive/Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 187-189. In all three conceptual land-use scenarios, the Final EIS should indicate that State laws and local ordinances require new development to address increases in impervious surface by controlling increased storm water runoff. See Comment 86. The Final EIS should then determine whether additional conditions are needed to protect Center hydrology given the existing laws.*	Existing state and local regulations concerning impervious surface are discussed in Chapter 3. Any additional protection would need to be described in an easement, which would be negotiated prior to conveying the land. The content of that easement cannot be predicted.
35919	*103. Chapter 4, Alternative C, Water Quality, Open Space/Park Scenario, Interpretive/ Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 189-191. In all three land-use scenarios, the Final EIS should address all four potential water quality impacts, the federal, State, and local laws designed to protect water quality. See Comment 87. The Final EIS should then determine whether additional conditions are needed to protect Center water quality given the existing laws.*	See response to PEPC ID 35917.
35920	*104. Chapter 4, Alternative C, Wetlands, Open Space/Park Scenario, Interpretive/Nature/ History Center Scenario, and Training Center/Office Park Scenario, p. 191-193. In all three conceptual land-use scenarios, the Final EIS should describe the protection afforded wetlands under federal and State wetland laws. See Comment 88. The Final EIS should then determine whether additional conditions are needed to protect Center wetlands given the existing laws.*	See response to PEPC ID 35917.
35925	*108. Chapter 4, Alternative D, Soils, Opens Space/Park Scenario, Interpretive/Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 209-211. The Final EIS's discussion of soil impacts in all three land-use scenarios should address the applicability of federal, state, and local critical area regulations and the mitigation measures that would be required by these*	See response to PEPC ID 35879.

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	regulations. See Comment 79. The Final EIS should then determine whether additional conditions are needed to protect soils given the existing laws.	
	109: Chapter 4, Alternative D, Soils, Training Center/Office Park Scenario, Impacts, p. 211. The Draft EIS contains a mistake when it indicates that increasing the density of structures will reduce the impermeable surfaces. This error should be corrected in the Final EIS, and the conclusion about impact may need to be altered also.	While increased development on the site would mean an increase in impervious surface, an increase in density (buildings that have a smaller footprint but are taller) would lead to a comparable reduction in impervious surface. This somewhat confusing statement is clarified in the Final EIS.
35927	*110. Chapter 4, Alternative D, Hydrology, Open Space/Park Scenario, Interpretive/Nature/History Center Scenario, and Training Center/Office Park Scenario, p. 214-217. In all three conceptual land-use scenarios. The Final EIS should indicate that State laws and local ordinances require new development to address increases in impervious surface by controlling increased storm water runoff. See Comment 86. The Final EIS should then - determine whether additional conditions are needed to protect Center hydrology given the existing laws.*	See response to PEPC ID 35917.
35929	*111. Chapter 4, Alternative D, Water Quality, Open Space/Park Scenario, Interpretive/ Natnre/History Center Scenario, and Training Center/Office Park Scenario, p. 217-219. In all three land-use scenarios, the Final EIS should address all four potential water quality impacts, the federal, State, and local laws designed to protect water quality. See Comment 87. The Final EIS should then determine whether additional conditions are needed to protect Center water quality given the existing laws.*	See responses to PEPC ID 35891, 35917, and 35892.
35931	*112. Chapter 4, Alternative D, Wetlands, Open Space/Park Scenario, Interpretive/Nature/ History Center Scenario, and Training Center/Office Park Scenario, p. 219-221. In all three conceptual land-use scenarios, the Final EIS should describe the protection afforded wetlands under federal and State wetland laws. See Comment 88. The Final EIS should then determine whether additional conditions are needed to protect Center wetlands given the existing laws.*	See responses to PEPC ID 35894 and 35917.
35936	*116. Chapter 4, Sustainability and Long-Term Management, Alternative A, p. 283-284. The discussion of Alternative A in this section does not analyze the long-term implications of the no-action alternative. What are the real maintenance costs as the buildings continue to deteriorate? What health and safety effects can be expected to result from leaving the hazardous materials on-site?*	See response to PEPC ID 35535.
35938	*11. Chapter 4, Sustainability and Long-Term Management, Alternatives B, C, and D, p. 284-286. The SMSC does not agree that increased volume of use under the interpretive/nature/history center scenario under any alternative would*	While increased human use of the site could lead to negative impacts on native vegetation, trampling of soils, etc., the way in which use is managed could avoid, minimize or mitigate

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	result in impacts to long-term productivity through trampling of native vegetation, compaction of soils, and increased noise that would disturb and reduce the frequency of wildlife at the Center. Rather, combining an interpretive history center with restoration of the native ecology, as the SMSC proposes, would increase long-term productivity.	many of those impacts. The text has been revised to clarify that.
35939	*118. Chapter 4, Irreversible or Irretrievable Commitments of resources . . . , Alternative B, p. 287. The Draft EIS suggests the use of a conservation easement could require the salvage of materials from removed structures. The Final EIS should note that the State conservation easement statute does not apply to an Indian Tribe occupying Trust Land. See Comment 36.*	See response to PEPC ID 35536.
	119. Chapter 4, Summary of Environmental Impacts by Alternative, p. 289-94. The Final EIS should update this chart based on the SMSC's comments and changes to the Final EIS that result from our comments.	The chart has been updated in the Final EIS.
	Lower Sioux Indian Community, September 25, 2006	
	Letter transmitted Resolution No. 06-144. *NOW THEREFORE BE IT RESOLVED, The Community Council hereby declares that Coldwater Spring and the land that surrounds it, is defined by the Treaty with the Sioux Nation of Indians-1805 and is part of the ancestral lands of the MN. Mdewakanton people.* *NOW THEREFORE BE IT RESOLVED, The Lower Sioux Indian Community demands that the United States uphold their "promise"…to permit the Sioux to pass, repass, hunt or make other uses of the said districts, as they have formerly done, without any other exception…" and recognize the cultural nexus that the Lower Sioux Indian Community has with Coldwater Springs and the lands that surrounds it.* *NOW THEREFORE BE IT FINALLY RESOLVED, The Community Council hereby requests that the United States restore to it's natural state-Coldwater Springs and the land that surrounds it and recognize the cultural and religious significance to the Lower Sioux Indian Community and that Coldwater Springs site be protected as a traditional cultural property.*	This letter conveyed the tribe's declaration that contains three resolutions that: (1) Coldwater Spring and the land around it were part of the Dakota people's ancestral lands. (2) The Treaty of 1805 granted the Dakota certain rights that are still relevant today, and the tribe has "a nexus" with Coldwater Spring and the land around it; and (3) Ask the federal government to: restore Coldwater Spring and the land around it to a natural state, recognize the cultural and religious significance of Coldwater Spring to the Lower Sioux Community, and protect Coldwater Spring as a traditional cultural property. Response to: (1) The Bureau of Mines land was once part of lands occupied by the Dakota. 2) The rights asserted under the 1805 Treaty would have to be evaluated in a court of law, and the NPS cannot comment on them. (3) The NPS evaluated restoring the land to a natural landscape in some of the alternatives and scenarios. The NPS is complying with the provisions of E.O. 13007 with regard to access and protection. The NPS evaluated Coldwater Spring as a traditional cultural property under the National Register of Historic Places' criteria and found that it did not qualify.

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	Lower Sioux Indian Community, October 13, 2006	
	Letter transmitted Resolution No. 06-146. *NOW THEREFORE BE IT RESOLVED, The Community Council hereby declares that Coldwater Spring and the land that surrounds it, is defined by the Treaty with the Sioux Nation of Indians-1805 and is part of the ancestral lands of the MN. Mdewakanton people.* *NOW THEREFORE BE IT RESOLVED, The Lower Sioux Indian Community demands that the United States uphold their "promise"…to permit the Sioux to pass, repass, hunt or make other uses of the said districts, as they have formerly done, without any other exception…" and recognize the cultural nexus that the Lower Sioux Indian Community has with Coldwater Springs and the lands that surrounds it.* *NOW THEREFORE BE IT RESOLVED, The Community Council hereby requests that the United States restore to it's natural state-Coldwater Springs and the land that surrounds it and recognize the cultural and religious significance to the Lower Sioux Indian Community and that Coldwater Springs site be protected as a traditional cultural property.* *NOW THEREFORE BE IT FINALLY RESOLVED, The Community Council does hereby request the United States Department of the Interior to transfer Department of Interior lands constituting the former Bureau of Mines property inclusive of Coldwater Spring to the Lower Sioux Indian Community, and that the Lower Sioux Community does assert its commitment to maintain the property in a natural state as to Coldwater Spring and to permit access to it by all interested parties, including Indian tribes for ceremonial, cultural, and educational purposes.*	This letter conveyed an amended version of the tribe's declaration that contains four resolutions. (1) Coldwater Spring and the land around it were part of the Dakota people's ancestral lands. (2) The Treaty of 1805 granted the Dakota certain rights that are still relevant today, and the tribe has "a nexus" with Coldwater Spring and the land around it. (3) Ask the federal government to: restore Coldwater Spring and the land around it to a natural state, recognize the cultural and religious significance of Coldwater Spring to the Lower Sioux Community, and protect Coldwater Spring as a traditional cultural property; (4) the federal government give the Bureau of Mines land to the Lower Sioux. Response to: (1) The Bureau of Mines land was once part of lands occupied by the Dakota. (2) The rights asserted under the 1805 Treaty would have to be evaluated in a court of law, and the NPS cannot comment on them. (3) The NPS evaluated restoring the land to a natural landscape in some of the alternatives and scenarios. The NPS is complying with the provisions of E.O. 13007 with regard to access and protection. The NPS evaluated Coldwater Spring as a traditional cultural property under the National Register of Historic Places' criteria and found that it did not qualify. (4)The preferred alternative recommends that the land be retained by the federal government. An official declaration on the disposition of the Center will be made by the DOI at the time the Record of Decision is signed.
	Lower Sioux Indian Community, October 31, 2006	
	Letter transmittal of *"a specific request for a response and/or for a call for action by the Department of Interior concerning our referenced Resolution."*	Comment and request noted.
	Prairie Island Indian Community	
35431	*We believe that the original Native American occupiers and owners of the property should at this time be given due consideration for the disposition of the Center property. Their governmental status should not be disregarded by giving more consideration to other governmental bodies and their priorities should not*	The importance of the site to American Indians has been noted.

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	be disregarded in favor of private or nonprofit entities. In this regard, the federally recognized tribes now representing the Dakota people whose ancestors allowed the United States government to use the Center should now be given due consideration for the return of the property. It has always and continuously been recognized as Dakota property. If not in the sense of fee ownership, always in the sense of right of use	
35432	*As part of the Draft Environmental Impact Statement, several alternatives for disposition of the Bureau of Mines Property were included. However, the federally recognized Indian tribes did not receive consideration at all as a dispositional alternative. Based upon the location of the Center within original native lands, such lands being ceded to the United States by treaty and with such treaty providing a continuing right of access and use by Native Americans, the federally recognized tribes neighboring the site are the most logical alternative for disposition of the site. Being aware of the kind of minimal care and limitations on access and use of the site at the present time, the Prairie Island Indian Community as a representative of some of the Dakota peoples with a historical, cultural and religious connection to the site, would respectfully request an additional alternative be considered involving conveyance to the Prairie Island Indian Community individually or jointly with the other federally recognized Mdewakanton Dakota tribes.*	The Final EIS has been clarified to note the site could be transferred to the Bureau of Indian Affairs to be held in trust for a federally recognized tribe.
35434	*Alternative B is conveyance to a university or nonfederal government entity with no conditions imposed on future use. Except for a Minnesota state recipient, and even then with only limited restrictions on use, this alternative leaves available the opportunity for use of the property in a manner which is detrimental to the historical, cultural and designated rights of the Native Americans. This alternative is not acceptable.*	The Final EIS has been clarified to note that conveyance to an entity that did not keep the property open to public use would be detrimental to use by American Indians.
35436	*Alternative D is leaving the site in federal management with modifications to the site and then with subsequent conveyance to a university or nonfederal government entity. This conveyance could be with or without conditions. While the modifications are a nice enticement for this alternative, they are not complete unless the property is conveyed to the Prairie Island Indian Community individually or jointly with other federally recognized Mdewakanton Dakota tribes, for the reasons above stated.*	Comment and request noted.
	Minnesota Historical Society	
37577	*There appears to be a discrepancy between the EIS and the Archaeological Research report regarding Zone V. The EIS indicates that Zone V was found to contain no important cultural materials, while the Archaeological Research report indicates that Zone V includes a military railroad grade that is a*	The report does not treat the military railroad grade as an archeological resource. For clarification on the various railroad grades on the Campus, we offer the following: The Minnesota & Cedar Valley Railroad graded a bed

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	contributing element of the Ft. Snelling Historic District.	through the Camp Coldwater area east of the spring in 1858. The M & CV Railroad was among the first important land grant railroads in the state. After the Civil War, in 1865, the Chicago Milwaukee & St. Paul Railroad built its line on the 1858 grade. This line is now a bike trail lying below the main portion of the Campus. No land restoration work will affect this railroad grade under the Preferred Alternative. By 1882, a short railroad spur had been built off the Chicago Milwaukee & St. Paul Railroad to a point just below the spring and reservoir (see Henning Figures 6 & 7). The purpose of this spur is not clear, but it may have been to deliver water to the Lower and Upper Posts. This spur does not appear in the 1927 and 1934 maps and was probably made obsolete by the Upper Post Spur, which ran directly past the reservoir to the Upper Post. No land restoration work will affect this railroad grade under the Preferred Alternative By 1902, a spur was built from the Chicago Milwaukee & St. Paul Railroad to the Fort Snelling Upper Post. This spur branched off the Chicago Milwaukee & St. Paul near the north end of the Bureau of Mines campus and angled up near the spring and reservoir and then over to the Upper Post. As with the earlier short spur, the railroad bed for the spur would be associated with the water works and could be interpreted as part of the water works history. The alignment of this spur as it rose from below the bluff to run through the south half of the campus has been significantly changed by construction for the Bureau of Mines. It might be possible to restore the alignment through the Campus at some point.
37579	*A Phase II archaeology survey should be completed for Zones I and II as part of this planning process, before any property transfer takes place. Then, a comprehensive map of historic contributing properties including all identified archaeological sites, the spring, the reservoir, the spring house, and the military railroad grade can be prepared to serve as a basis for a specific treatment/mitigation strategy under any alternatives. In addition to the Phase II archaeology survey, an evaluation of the Camp Coldwater summer camp*	This comment requires three separate responses. First, Ms. Bloomberg suggests a Phase II survey of Zones I and II prior to any transfer. The NPS has addressed the need for additional archeological surveys in the Memorandum of Agreement that has been negotiated under the provisions of Section 106 of the National Historic Preservation Act with

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	(1820-c. 1823) should be completed to assess if it is a contributing site to the Ft. Snelling Historic District (more associative significance than for archaeological information potential). If it is contributing, it should be included on the comprehensive map.	Ms. Bloomberg's office (MNSHPO) and others. Second, Ms. Bloomberg recommends that the NPS prepare a map showing all the contributing properties. For the Section 106 review process, the NPS provided the MNSHPO with extensive maps and photos of the site along with a more detailed discussion of known and potential cultural resources on the TCRC. Third, Ms. Bloomberg suggests that the NPS evaluate the Camp Coldwater summer camp to determine whether it should be considered a contributing site the Ft. Snelling Historic District. A large portion of the BOM property is already within the Ft. Snelling NHL and National Register District. The three studies the NPS prepared for the Draft EIS all made recommendations on how to expand the two boundaries, and it will be up to the MNSHPO to decide how to adjust the boundaries. Coldwater Spring is clearly a contributing feature to the summer camp story and is already a contributing feature to the NHL and Historic District. Beyond the spring, however, no other features that can be directly tied to the summer camp are known.
37580	*The Ethnographic Resources Study (Terrell et. Al., 2005) concludes that the Coldwater Spring meets the National Register criteria as a traditional cultural property (TCP). However the EIS indicates that the National Park Service has determined that the spring does not meet TCP criteria. We believe that it is important to consider the views of interested parties as well as more information on the NPS evaluation as part of our assessment of this aspect of the spring's significance.*	While Bulletin 38 does not mandate a decision based on the presence or absence of supporting documentation, Bulletin 38 and other National Register guidance clearly establish the basis from which to make decisions about what merits inclusion on the National Register and what does not. As stated in the NPS analysis of the Terrell study, the authors did not present enough evidence to support their conclusions, and they misinterpreted the guidance provided in Bulletin 38. At the time of the report and the preparation of the draft EIS, the tribes had been asked to comment but had not made any statements concerning the TCP status. They still have not. The NPS forwarded the Terrell study and the NPS comments to the MNSHPO as part of the Section 106 consultation process.

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		TCP status. The NPS has continued to work with the SHPO and interested parties on the TCP analysis. If those who comment offer new and substantive information to support consideration of Coldwater Spring as a TCP, in a way that meets the National Register criteria, the NPS will reconsider its position. The NPS is working closely with the federally-recognized tribes to ensure their concerns regarding the spring are considered in the FINAL EIS and Section 106 processes.
37581	*We have some concerns regarding the use of the three tables (pages 124-126) to assess effects for Section 106 purposes. The tables establish a relationship between impact intensity and effect determination/mitigation that is more specific than the effect definition in the Section 106 regulations. As a result, the effect determinations as proscribed in the table may not hold true in all cases. For example, a minor adverse effect on the overall integrity of a historic property could still be adverse (such as a case where certain elements of work on a historic building do not meet the Secretary of the Interior's Standards). On the other hand, major adverse effects do not always result in a situation where a mitigation agreement cannot be achieved. Since these tables could be misleading, it may be less confusing to simply use the assessment of effect presented in 36 CFR 800. We note that the table for ethnographic resources is presented only for NEPA assessments. Should additional consideration of Coldwater Spring establish that it is eligible as a TCP (see comment 1.E., above), the table may need to be revised for 106 purposes.*	There may be specific situations where the thresholds in the table may not result in the given determination under Section 106 of the NHPA. The point of the thresholds table is first to recognize that there are impacts to resources that are to be considered under NEPA as well as under Section 106. The thresholds tables give likely scenarios to guide the general public, as well as content experts, in understanding the meaning and severity of impacts to resources under these differing alternatives. This document is not intending to imply that where a minor impact is identified, the agency determination of effect under Section 106 is no adverse effect.
37582	*As we stated above, all four alternatives have the potential for adverse effects to historic properties. (Again, should additional consideration of Coldwater Spring establish that it is eligible as a TCP, the comments below may need to be expanded.* *A. Alternative B, or the version of Alternative D with no use restrictions, would seem to have the potential for the highest level of adverse effects, since the property would transfer out of the federal government, with no Section 106 review of future projects, and with no restrictions. Mitigation would focus on data recovery and recordation so that a record of the historic properties would be made before the transfer is completed.* *B. Alternative C, or the version of Alternative D with use restrictions, could offer much better protection of historic properties by including restrictions in the*	This comment provides useful analysis and suggests ways to complete the Section 106 process.

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	transfer. These could establish a process for review of future actions, maintenance thresholds, and other preservation measures. (We note that even under these alternatives it is quite possible that there would be some level of adverse effect. Certain uses may be more compatible with the historic properties form certain periods, leading to choices for removal of some elements. In addition, the cost of renovating all of the historic buildings associated with the Bureau of Mines is expected to be quite high.) *C. Alternative A could result in continued deterioration of historic properties, with accompanying adverse effects. However, under continued federal ownership, the federal agency would presumably have responsibility for stewardship of the historic properties under Section 110 of the National Historic Preservation Act.*	
	Metropolitan Council	
37897	*The DEIS stales that the USBM site would be governed by Executive Order 79-19 Interim Development Regulations. The DEIS docs not address how these regulations would be implemented or how proposed development would be reviewed and regulated.*	Because the property lies within an unincorporated portion of Hennepin County, administration of Executive Order 79-19 is the responsibility of Hennepin County. Since the county has not adopted an ordinance, the Interim Development Regulations of the Executive Order would apply to the property and the county would be responsible for their enforcement.
37898	*MNRRA. The DEIS, p. 16, states that the Committee understands that Mississippi National River Recreation Area (MNRRA) ownership of land in the MNRRA corridor is inconsistent with the MNRRA comprehensive management plan (CMP). The CMP plan does not seem to exclude the possibility of MNRRA land ownership, but seeks to limit it. The plan states that the "NPS should own minimal land in the corridor." In addition, the CMP states that the "NPS will develop .. smaller interpretive centers in the Hastings area, at Fort Snelling Stale Park.. ." It does not seem inconsistent with the CMP that MNRRA own and/or manage the USBM Campus site.*	Public Law 100-696, which created MNRRA, does not preclude NPS from acquiring, owning or managing land. In fact, it provides specific authority for acquisition by adverse possession in certain circumstances. Nevertheless, Congress did not appear to have expected significant NPS acquisition in a corridor that is so heavily developed. The CMP does not anticipate significant NPS land ownership, but NPS management of the Center property, which is already in federal ownership, would be consistent with the enabling legislation, other NPS authorities and the MNRRA CMP. The relevant text in the EIS has been clarified.
37899	*Please be aware of potential changes to airspace rules. The DEIS preparers should review the Federal Register - Vol. 71, No. 113. of Tuesday June 13,2006 for Notice of Proposed Rulemaking (NPRM) by the U.S. Department of Transportation. This NPRM concerns regulations regarding "Safe, Efficient Use and Preserving Navigable Airspace." The potential changes to these rules (14 CFR Pan 77) are found in FAA Docket No. 2006-25002; Notice No. 06-06.*	FAA airspace rules (14 CFR Part 77) would likely prohibit structures on the Center property over 200 feet tall. Such construction is unlikely under any alternative.

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37905	*Aircraft noise impacts will need to be addressed If the site becomes privately owned or if the site is developed When the USBM site ownership is transferred, and/or if development occurs on the site, conditions need to be in place requiring the new owner/developer to address potential aircraft noise impact' for land uses. Such conditions need to address notification of prospective owners and tenants of potential aircraft noise and provide assurance that structures will have acoustical integrity through appropriate design or mitigation measures,*	Aircraft noise exists at the Center and will continue. Any future use of the property must adapt to that existing condition.
37900	*The USBM Campus site contains regionally significant natural resources identified for protection by the Minnesota Department of Natural Resources (MN DNR). The northeast portion of the USBM Campus site is within an area identified by the MN DNR as a Regionally Significant Natural Resource Area, The greater parcel within which the USBM Campus lies (from the eastern property line of the USBM Campus site) is designated by the MN DNR as II Regionally Significant Ecological Area. These designations/resources do not appear to be noted m the DEIS, Chapter 3: Affected Environment Natural Resources, and should be added 10 the final EIS. It is the Metropolitan Council's policy (through the 2030 Regional Development Framework and the 2030 Regional Parks Policy Plan) to work with other regional partners to protect such regionally important natural resources.*	The vicinity shows up on this list only because of a rare plant that is actually not on the Center property. See also response to PEPC ID 35770 to the Shakopee Mdewakanton Sioux Community.
	Mendota Mdewakanton Dakota Community	
37247	*The Mendota Mdewakanton Dakota Community Tribal Council supports the Lower Sioux Community in their resolution for the Bureau of Mines Property (Coldwater Springs or Camp Coldwater is located on this property). The Mendota Mdewakanton Dakota Community Tribal Council additionally supports the Coldwater Coalition letters of support for the Lower Souix Community. We, MMDC, firmly believe the Dakota Communities should have a say in the future of the property as it is a significant sacred place for prayer and meditation for many native and nonnative peoples. Our ancestors gathered there. Our people are connected to this sacred land.*	Comment and request noted.
	Mendota Dakota Community (Jim Anderson, oral testimony)	
37847	*That's part of the story that we need to have told here because the evidence for that, I guess, isn't as widespread as someone would like it to be. But a lot of times our oral traditions and our stories essentially about spirits weren't told by our elders just to anybody. That probably wouldn't be something they would do. But now is a different time that we have to tell these stories as best we know to try to preserve them because if it isn't written down like you are doing for us they don't*	We are not requesting the name of the specific spring or the deities and stories associated with it in order just to have that information. Tribes can declare sites sacred under E.O. 13007, without providing detailed information. However, if a tribe thinks that added protection for a site would be appropriate by determining the site eligible for or getting it

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	consider it as evidence and that's I think wrong but we still have to do it. So we have to name the specific spring and we have to name the specific deity for them to believe us which I think is wrong. There is not many other cultures that have to pour out what they think about every spirit and everything they believe in but we have to get them to listen. That is an important story because that spring don't have do be written about. It was used. There is an ancient village site there where I have an axe from right by that spring too and to us that's about all the evidence you need that our people had been using that spring as a sacred site for all these thousand of years.	listed on the National Register, they can pursue a National Register evaluation. However, information on why the property is historically significant would be required by the National Register process. As the NPS found the Ethnographic Study did not provide enough documentation to determine Coldwater Spring eligible for the National Register, the NPS sent a letter to the federally-recognized Dakota tribes that showed an interested in the project asking for more information about Coldwater Spring. To date, we have received no replies.
	Friends of the Mississippi River	
37736	*Coldwater Spring is also a significant resource that should be protected for both cultural and ecological purposes. Public access to the Spring for people of all abilities is also essential.* *The Minnehaha Creek Watershed District and the Minnesota State Legislature have both identified Coldwater Spring as a significant water resource. Flows from the spring and adjacent aquifers must be carefully monitored during any changes to the property, including demolition and ecological restoration.*	Preservation of Coldwater Spring and its continued accessibility to the public is part of the preferred alternative.
	Friends of Fort Snelling	
37746	*Fort Snelling State Park directly adjoins the Bureau of Mines Property. Any change in the Bureau of Mines Property would have an impact on the State Park.*	As discussed in the EIS, there are a wide range of potential impacts from the various alternatives and potential uses. The EIS examines the effects to the Fort Snelling NHL and Historic District of the various alternatives, including those portions of the State Park in the NHL and Historic District. The treatment of Coldwater Spring and Reservoir will be thoroughly examined through the Section 106 process prior to any final decisions about their treatment. There are no anticipated impacts to adjacent lands in Fort Snelling State Park, including the state park trail that abuts the Center property.
37747	*The Draft is deficient in that it is limited to impacts that will occur only on the Bureau of Mines Property. There is absolutely no mention of potential impacts outside of that specific parcel of land. To ignore the surrounding area including Fort Snelling and Fort Snelling State Park is to ignore very significant aspects of the historical and recreational values of the State of Minnesota. The Draft needs to be revised to report in detail the impact that the ultimate disposition of the Bureau of Mines Property would have on the surrounding area including in*	See response to comment to PEPC ID 37746.

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	particular the Fort and the Park .In addition. the Historic Fort and the Sibley Historic Site are linked because of their historic importance in the creation of the State of Minnesota. Because the disposition of the Bureau of Mines Property would involve the disposition of Coldwater Spring that would have a significant impact upon the ability of both the Historic Fort and the Sibley Site to provide a meaningful interpretation of the history of the creation of the State of Minnesota. Similarly; the ultimate disposition of the entire Bureau of Mines Property could have a significant impact upon the preservation of the area encompassed by Fort Snelling State Park and the recreational benefits that the Park provides.	
37752	*In terms of the portion of the Bureau of Mines Property that includes Coldwater Spring, the Draft fails to address both the need for preservation and the need for safe and ADA-compliant access to all members of the public because of Coldwater Spring's historic connection to the building of Fort Snelling and ultimately to the creation of the State of Minnesota, and the fact that Coldwater Spring is a sacred place for many Native Americans.*	See response to PEPC ID 37736 to Friends of the Mississippi. No decisions about possible trail or other recreational facilities have been made, but could be addressed in future planning.
37753	*There is extensive documentation about the historic importance of Coldwater Spring that can be found at www.minnesotahistory.net. The Draft is deficient in not addressing the historical importance of Coldwater Spring and the negative impact that could occur if the disposition of the Bureau of Mines Property had an adverse effect upon Coldwater Spring itself as well as the ability of the public, and especially the Native Americans, to have access to it.*	In preparing the Draft EIS, the NPS conducted three studies to determine the historical importance of Coldwater Spring, and these were included as part of the Draft EIS. The significance of the spring as part of the Fort Snelling National Historic Landmark and National Register site is discussed in the Draft EIS. We believe the analysis correctly identifies impacts, under certain scenarios under some of the alternatives, that could have serious impacts on the spring itself and on access to the spring by persons who feel a connection to it. Other scenarios under other alternatives provide mitigation for some of these impacts, or improve conditions over the present day situation.
	William F. Barton	
35332	*I question the conclusion in Table 9 of Chapter 4 on page 292 which indicates that no-action would have major adverse impacts on wetlands when the no-action alternative does not appear to be addressed, presented or documented in any detail or included in the analysis of effects. This is supported by the fact that the report concludes that the main factor that would potentially impact wetlands on the Center would be construction work that would damage, alter or destroy wetland resources (Pages 250, 264, & 278) Wetland stewardship by the National Park Service would most likely exceed the expected of or required by*	The analysis of impacts of the no action alternative can be found in Chapter 4, page 139. Here, the impacts are analyzed as major and adverse, primarily because of the historic construction of buildings within existing wetlands. The Draft EIS assumes that the impacts to wetlands occurred when the Center was constructed by the Bureau of Mines, and that all wetlands on the property at that time were changed and/or modified by that construction, a major

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	any other federal, state, and local agencies or regulations. *I offer that all of the beneficial impacts identified by the Disposition of Bureau of Mines property, Twin Cities Research Center Main Campus Hennepin County, Minnesota Draft Environmental Impact Statement would be most likely realized under continued federal government control and management by the National Park Service.*	adverse impact. The purpose of the no action alternative is to present the current conditions of wetlands at the Center and analyze the effects of leaving things as they are. The NPS does not now own or manage the Center property.
	Minnesota Sacred Places	
37913	*In regard to the conclusions of Robert Clouse in his archaeological report, the fact that soils in the north end of the Bureau of Mines property may have been waterlogged does not exclude their potential for containing archaeological resources, especially in an area once known for wetlands where Dakota people may have carried on ceremonies and harvested aquatic plants. Given the cursory nature of the Clouse archaeological survey at the north end of the property, further archaeological testing should be done to determine the adequacy of his survey in that area.*	MNRRA will conduct an archaeological survey of the Bureau of Mines property targeted to those areas that have integrity, archaeological potential and would be impacted by building or infrastructure removal.
37915	*The TCP-Ethnographic study provides a convincing case for the TCP status of Coldwater Spring. However, given the insistence of the Park Service in opposing TCP status, opinions and an eventual determination of eligibility should be sought from the Minnesota State Historic Preservation Office and the Keeper of the National Register and this should be presented to the public prior to the finalizing of the BOM EIS, so as to provide an opportunity for public comment.*	See response to PEPC ID 37850 to Minnesota Historical Society.
37916	*The treatment by the Park Service of the testimony Reverend Gary Cavender a well known Dakota elder and expert on Dakota traditions-whose knowledge has already provided a basis for the nomination and placement on the Register of another Dakota traditional cultural property-raises many questions about the bias of the Park Service in regard to the TCP status of Coldwater Spring. To my knowledge, no one has until this moment questioned the cultural credentials of Gary Cavender as an expert on Dakota traditions. The questions posed by the Park Service in regard to Cavender raise important issues about just what testimony the Park Service would be prepared to accept as convincing in regard to the traditional cultural importance of Coldwater Spring to the Dakota people. If the testimony of such an important expert as Cavender is found to be suspect by the Park Service, just what testimony would it be willing to accept?*	Comment noted.
37917	*Available evidence suggests that the Henning report is neither complete nor accurate. It fails to make use of important historical information about Coldwater Spring and it draws faulty conclusions based on this incomplete*	Comment noted.

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	information. The Henning Historical Study is an inadequate description of the historical record of Coldwater Spring. As shown in my attached Affidavit, one major source of information completely ignored in the report-the diary of Indian Agent Lawrence Taliaferro provides a wealth of additional information about the historical use and meaning of Coldwater for the Dakota and Ojibwe. The inadequacy of the historical record compiled by the Park Service must be remedied prior to the issuance of a final EIS, and a revised DEIS should be issued to allow comment by the public. Had the Historical Study been released to the public when it was finished, in 2002, the public would have informed the agency of the inadequacy of the report. As it stands now, until that inadequacy is remedied no conclusions whatever can justifiably be drawn from the historical record that the Park Service has assembled.	
37918	*In historical sections of his report Clouse puts the history of the site in the military context of Fort Snelling, as the place where soldiers first camped in 1819 and as the source of water for the soldiers throughout the 19th century. He also writes a little about the civilians who were living around Coldwater Spring in the 1830s. As to the Indian history of Coldwater, Clouse did not cover this aspect of the property in much detail. Clouse did state that "no material cultural assignable to an American Indian occupation was discovered." But this is a matter of interpretation. As 1stated above, Clouse found a bone comb, and other manufactured goods. Many of the people who lived around Coldwater Spring were of Dakota and Ojibwe ancestry and as noted in the Clouse report (page 43), they described the Dakota as their "relatives and friends" and noted that the Dakota "have always found a friendly resting place at our firesides" when they came to Coldwater. In a document from 1835 not cited by Clouse, the settlers who lived in the area of Coldwater Spring stated that "they are all, with one exception, connected with the Sioux & Chippewa Indians, either by marriage or ties of blood," and that they were "friends of the Indians inhabiting this region. When they visit this Post they warm themselves and smoke by our fires, and share our scanty Stock of Provisions.,,2 Since manufactured goods were a common trade item with Dakota and Ojibwe people for hundreds of years, how would one know whether the bone comb, for example was used by Indians, people of mixed ancestry, or non-Indians?*	Comment noted.
37919	*One major unanswered question in the Clouse report has to do with the a map drawn by Lieutenant E. K. Smith of the Fort Snelling area in 1837 that showed the location of the settlers around Coldwater Spring. Many people have puzzled over this map for many years. When Clouse began his work on the survey he announced that he would find these locations on the modern landscape. He*	See response to PEPC ID 37918.

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	described plans to use ground-penetrating radar and other remote-sensing methods to help do this. Although the Smith map is mentioned in the Clouse report, no effort to locate the residences shown on the map is described, suggesting that Clouse was not given the resources necessary to carry out the examination.	
37914	*The Park Service apparently does not consider its TCP analysis to be part of the its DElS, or at least have provided it to all recipients of the DEIS or notified these individuals of its existence once it was released to the public DElS, or at least have provided it to all recipients of the DEIS or notified these individuals of its existence once it was released to the public on October II, 2006. The Park Service did none of these things. However, since the TCP analysis does amplify and explain the reasons why the Park Service chose to reject the findings of its own consultant, it does provide information missing from the DEIS. The release by the Park Service on October II, 2006 of its TCP Analysis must be considered a revision of the EIS, but one which the wider public was not properly informed about, thus interfering with the public's right to comment in an informed way during the DEIS comment period.*	Comment noted.
37920	*It is not my purpose here to engage in a argument about the adequacy or inadequacy of the National Register analysis in the Ethnographic Study or the TCP Analysis. I happen to believe that the Ethnographic Study presented a convincing case about the TCP eligibility of Coldwater Spring for the Dakota. But the proper arbiters for issues like this are the experts in the Minnesota State Historic Preservation Office and in the office of Keeper of the National Register in Washington, D.C. Opinions and an eventual determination of eligibility should be sought from these agencies and it should be presented to the public prior to the finalizing of the BOM EIS, so as to provide an opportunity for public comment.*	Comment noted.
37922	*As suggested by the Park Service letter to Stanley Crooks, the Park Service might be willing to accept the testimony of Cavender if the Stanley Crooks and the Shakopee Community if Shakopee or another Dakota community in Minnesota were willing to state that Gary Cavender speaks for them on this matter. On this point, it must be noted that the opinion of a tribal government about the cultural testimony of a spiritual leader is not a determining factor in relation to that testimony. In posing the question Park Service officials have confused the government-to-government relationship of the federal government to the tribes with the information-gathering under NEPA and under Section 106. In neither case is the validity of testimony a matter for exclusive tribal-government*	Comment noted.

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	decision-making.	
37926	*Perhaps the most glaring omission from this account is any use at all of the journal of the Indian Agent Lawrence Taliaferro, who was located at Fort Snelling from 1820 to 1839. As stated in my attached Affidavit, no study of the Fort Snelling area in that period is complete without making use of the Taliaferro journal. The information relating to Coldwater cited in my affidavit suggests the extensive record of the use of Coldwater by Dakota and Ojibwe during this period, for trade, diplomacy, and ceremony, contrary to some of the statements quoted above. This information and other information not found in the Historical Study must be made part of the EIS record for the Bureau of Mines Site.*	See response to PEPC ID 37917.
37927	*In the case of Native use of the Coldwater area, additional information relating to the Native use of Coldwater Spring might make a lot of difference in determining the National Register eligibility of the area as a TCP or as a place of historical importance. If additional historical information were able to demonstrate the satisfaction of even skeptical Park Service employees that Coldwater Spring and surrounding area was a TCP, it could make a great difference in the boundaries of the Fort Snelling Historic District, since the question of boundary of the Coldwater Spring TCP was expected to be determined during further consultation with the Dakota. It could also affect the nature of any mitigation required for use of the Bureau of Mines property.*	See response to PEPC ID 37850 to Minnesota Historical Society.
	Friends of the Sibley Historic Site	
37889	*Because of that historical perspective, the Friends has a vested interest in the ultimate disposition of the Bureau of Mines Property. It is with that background in mind that we submit these comments on the Draft. The Draft is deficient in that it is limited to impact that will occur only on the Bureau of Mines Property. There is absolutely no mention of potential impact outside of that specific parcel of land. To ignore the surrounding area, including Fort Snelling and the Sibley Site is to ignore a very significant part of the history of the State of Minnesota. The Draft needs to be revised to report in detail the impact that the ultimate disposition of the Bureau of Mines Property would have on the surrounding area, including in particular Fort Snelling and the Sibley Site. Fort Snelling includes both the Historic Fort and Fort Snelling State Park. The Historic Fort and the Sibley Site are linked because of their historic importance in the creation of the State of Minnesota. Because the disposition of the Bureau of Mines Property would involve the disposition of Coldwater Spring, that would have a significant impact upon the ability of both the Historic Fort and the Sibley Site to*	See response to PEPC ID 37746 to Friends of Fort Snelling.

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	provide a meaningful interpretation of the history of the creation of the State of Minnesota. Similarly, the ultimate disposition of the entire Bureau of Mines Property could have a significant impact upon the preservation of the area encompassed by Fort Snelling State Park and the recreational benefits that the Park provides.	
37894	*In terms of the portion of the Bureau of Mines Property that includes Coldwater Spring, the Draft fails to address both the need for preservation and to provide safe access to all members of the public because of Cold Water Spring's historic connection to the building of Fort Snelling and ultimately to the creation of the State of Minnesota and the fact that Coldwater Spring is a sacred place for many Native Americans.*	
37895	*The Draft is deficient in not addressing the historical importance of Coldwater Spring and the negative impact that could occur if the disposition of the Bureau of Mines properly has an adverse effect upon Coldwater Spring itself as well as the ability of the public, and especially the Native Americans, to have access to it.*	See response to PEPC ID 37753 to Friends of Fort Snelling.
	Preserve Camp Coldwater Coalition	
37328	*The Draft EIS (page 114 - "Public Experience and Values") purports to provide a brief history of activism to protect Coldwater Spring. Preserve Camp Coldwater Coalition has asked me to provide the following information from their records - to correct the draft EIS and to explain more carefully the activities of Preserve Camp Coldwater Coalition to date. Please insert this information in the final Environmental Impact Statement. While it is true that the Highway 55 protests focused attention on the general area, the protests were almost entirely about the highway reroute. The protests resulted in virtually no protection for Coldwater Spring itself, especially since the Minnesota Department of Transportation (M n/DOT) gave repeated assurances from 1981 on that Coldwater Spring would remain unharmed by the highway construction. (Note: an especially strong statement that there ". . . will be No Impact on the springs . . . " was given by MnDOT on record at the Lower Minnesota River Watershed District meeting on November 15,2000.) In fact, almost no protests occurred after the clearing for the Highway 55 reroute took place in December, 1999. Most of the Coldwater Spring legal protections occurred after that time. Preserve Camp Coldwater Coalition formed entirely after the Highway 55 reroute protests and is the oldest of the active community groups dealing with Coldwater Spring. One of my client's first actions occurred in May of 2000, when they presented a 1000-signature petition to the Minnesota Board of Soil and Water Resources (BWSR) to secure watershed district protection for Coldwater Spring. As a result of my client's efforts, BWSR granted watershed district protection to*	Comments and additional information were provided concerning the history of activism surrounding the Preserve Camp Coldwater Coalition. While the section of the Draft EIS (Public Experience and Values) was not intended to provide a history of activism connected to this property, nor did it make such a claim, it is useful to have this additional information in the record of this project. This provides more information on the public's connection to and deep feelings for this property.

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	Coldwater Spring and the Minneapolis-St. Paul International Airport - for the first time ever.	
37329	*CONTINUED Preserve Camp Coldwater Coalition then put pressure on the Lower Minnesota River Watershed District and the Minnehaha Creek Watershed District, as well as the MnDOT, to begin studies of the area's hydrology. This three-year effort resulted in multiple independent hydrological studies of Coldwater Spring as well as a multi-million dollar redesign for the Highway 55/62 interchange, containing among other things, an unprecedented liner under a highway solely to protect Coldwater Spring. Almost solely through the efforts of Preserve Camp Coldwater Coalition, in alliance with legislators and watershed, the following laws were enacted by the Minnesota Legislature, much to the surprise of MnDOT and other state agencies who fought it: 1. The Coldwater Spring protection law, enacted in 2001 [Chapter 101; (S.F. 2049)l; and 2. Legislation enacted in 2002 that allowed for the Highway 55/62 re-design and affirmed the "stipulation agreement" between MnDOT and the Minnehaha Creek Watershed District [Chapter 364, Sec. 33; (Senate File 3298)]. Without these efforts, Coldwater Spring would have been largely rerouted down a storm sewer with the remaining water draining through sandstone, thereby completely drying up the spring. Furthermore, it is largely the actions of Preserve Camp Coldwater Coalition that convinced Congressman Martin Sabo to obtain the $750,000 appropriation for the Coldwater Spring area, which is why the EIS is being written now. These results didn't happen because of media attention or protests, as suggested in the Draft EIS, but rather by, quite literally, many thousands of volunteer hours spent by Preserve Camp Coldwater Coalition members - often at the Minnesota State Capitol and meetings of the Minnehaha Creek Watershed District and Lower Minnesota River Watershed District.*	See response to comment to PEPC ID 37328.
37330	*[Note: The final EIS should state that Chapter 101, Section 1 of the 2001 Session Laws was superceded by the "stipulation agreement" between the Minnehaha Creek Watershed District and MnDOT, cited in Chapter 364, Sec. 33 of the 2002 Session Laws. Because the "stipulation agreement" is not easily obtained by the general public, it should be attached as an exhibit to the final EIS.]*	Clarification has been added to the final EIS. Appendix J, Minnesota Laws, Statutes and Agreements Affecting Coldwater Spring has been added to the final EIS.
37331	*CONTINUED While Preserve Camp Coldwater Coalition's efforts have been usually under the radar of other louder groups, no one else has had better results. Moreover, the Coalition's efforts have spun off other efforts that resulted in liners being constructed around the tunnels under the north-south runway at the Minneapolis-St. Paul International Airport to protect the groundwater - with the hope of helping to protect Coldwater Spring. Preserve Camp Coldwater*	See response to comment to PEPC ID 37328.

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	Coalition has a website at www.preservecampco~dwater.org, which contains the largest single on-line library of history and information about Camp Coldwater Given *Preserve Camp Coldwater Coalition's success and easy internet access to information about the Coalition and Camp Coldwater in general, it is a substantial omission that Preserve Camp Coldwater Coalition wasn't even mentioned as a reference in the Draft EIS.*	
37332	*The draft EIS (page 95) states that MnDOT is required to monitor groundwater flows through May, 2006. As a condition of ownership transfer, it is very important that an appropriate government entity continue to assume responsibility to monitor the groundwater outflow from the Highway 55/62 interchange and its potential to adversely impact Coldwater Spring. The final EIS should discuss monitoring frequency and other parameters. (My client recommends groundwater testing on at least a monthly basis.)*	The Minnesota Department of Transportation (MnDOT) was required to monitor groundwater flow at the interchange for Highways 55 and 62 until the spring of 2006. The comments request that an appropriate government entity continue to assume that responsibility to monitor the groundwater flow and the Final EIS discuss monitoring frequency. Groundwater monitoring on the part of MnDOT was part of an agreement between MnDOT and Minnehaha Creek Watershed District over concerns the construction of the interchange would impact groundwater flows to Coldwater Spring. No other governmental agency has responsibility for that monitoring under the agreement that initiated the monitoring. The eventual owner of the property will have no obligation to monitor and cannot require any other agency to monitor. Minnehaha Creek Watershed District has continued to monitor spring flow since the MnDOT agreement expired in 2006.
37333	*The Draft EIS shows a fundamental lack of understanding of the connection between the Highway 55/62 interchange and Coldwater Spring. (Example: Draft EIS, page 95) The following are only two examples:* *1. Instead of referencing a pre-construction flow rate of approximately 85 gallons per minute (as measured by my client and is consistent with many MnDOT measurements), the Draft EIS states that the Coldwater Spring flow rate varies from 27 to 161 gallons per minute. However there is NO reference that such low flow rates happened exclusively as a result of clogged flow meters and mechanical pumping by MnDOT at the Highway 55/62 interchange. Note also: Minnehaha Creek Watershed District's studies show a post construction measurement indicating a 30% diminishment in the ground water flow rate at Coldwater Spring as a result of construction of the Highway 55/62 Intersection. (See February 5, 2002 press release. of the Minnehaha Creek Watershed*	Comment noted and information corrected in the final EIS.

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	District, attached as Exhibit 1.) *2. The Draft EIS fails to mention that the high figure of 16 gallons/minute flow is also highly suspect, likely resulting from a combination of water from Coldwater Spring and rainwater flowing to the Coldwater Spring pool outlet - before the total outflow is measured. In other words, the final EIS must contain an accurate statement of groundwater flow rates, leaving aside the "bounce" derived from rainwater and the artificially low flow rate resulting from pumping or a clogged flow meter.*	
37339	*The Draft EIS (page 52, paragraph 2) contains an incorrect legal statement: ". . . The use of conditions or restrictions in Minnesota such as covenants or easements is modified and limited by state statute. The relevant sections contained in Minn. Stat. fj500.20 .. ." Several other places in this paragraph also mention "easement" in the context of this statute. It must be clarified that a conservation easement is not subject to this statute. In fact, the word "easement" is not even found in this statute.*	The language has been corrected in the Final EIS. There are significant differences between covenants and easements under Minnesota law, and those distinctions were blurred in the Draft EIS.
37340	*The Draft EIS (page 52, paragraph 3) incorrectly states, ". . . any covenants or restrictions on real property, such as covenants or easements, may be disregarded automatically after 30 years . .." Again, Minn. Stat. 5 500.20 does not contain the word "easement." (However, the draft EIS does state in the same paragraph that conservation easements are not subject to this law.)*	The commenter is correct that covenants expire after 30 years and easements do not. The EIS has been corrected.
37341	*No matter who takes title to the property, it is vitally important that protection responsibilities not be in the hand of just one entity. Again, an unfavorable change in tribal politics could jeopardize protection efforts for Coldwater Spring. Moreover, laws protecting the Coldwater Spring area can be weakened by subsequent politicians. Furthermore, "Section 110" of the National Historic Preservation Act, states in part; "Prior to the approval of any federal undertaking . . . the agency shall, to the maximum extent possible, undertake such . . . actions as may be necessary to minimize harm . .. (16 U.S.C. 470h-2(f))." A properly drafted conservation easement, with a well-financed "holder" and several entities with "third party right of enforcement", would maximize the protection of the property under the National Historic Preservation Act. Therefore, a revised draft EIS and the final EIS should analyze the various terms to be included in the conservation easement for the 27-acre Bureau of Mines property - and the entities capable of assuming the responsibilities of "holder" and "3rd party right of enforcement."*	The purpose of the Draft EIS was not to determine how a conservation easement might be constructed or what entity should hold such an easement. The document instead was intended to assess potential impacts of various alternatives, some of which could provide for protection under a conservation easement.

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37342	*The title transfer must be subject to a well-defined perpetual Conservation Easement, which contains at minimum the following language: 1. North 1/4 of Coldwater area property: a. Complete removal of all buildings, except building #1, with all compliance of all legal requirements; b. The building #1 envelope shall be reduced in size to an area of no more than 1/2 of the area of the current building envelope; c. The building height (restored or new) shall be subject to current building height legal requirements, with no "grandfathering" under previous laws; d. The building use (new or remodeled) shall be as interpretative/cultural center, consistent with Native American spiritual heritage and the importance of Coldwater Springs; e. The building design (new or remodeled) shall be of the type that will receive "Leadership in Energy and Environmental Design (LEED)" certification and enhances the natural landscape; f. The parking size is consistent with expected visitor use and is designed according to the most up-to-date stormwater treatment standards; g. All building activities are consistent with other applicable laws; h. The remaining land is restored to a pre-European settlement vegetation condition; and i. If the interpretative/cultural center described above cannot be built, then the north 1/4 of the property shall be restored to pre-European settlement vegetation condition. 2. South 3/4 of property a. buildings removed; b. The entire portion shall restored to a pre-European settlement vegetation condition; c. No permanent structure shall be allowed; temporary structures may be allowed for purposes of conducting Native American ceremonial traditions; d. No motorized vehicles, except for emergency purposes; and e. A non-motorized access trail to Coldwater Spring is specifically allowed. 3. Language applicable to the entire property: a. All archaeological sites shall be protected. b. There shall be no removal of any water from the site by artificial means. c. The use of road salts and other de-icers shall be prohibited or restricted. d. The use of chemicals for fertilizer and pest control shall be prohibited.*	The purpose of this EIS was not to provide the mechanism for a transfer of property, but only assess the impacts associated with a transfer. An actual transfer would be negotiated should the decision on the recipient of the property require one
11 37347	*The Draft EIS (page 97, paragraph 1) states: "Camp Coldwater Spring is fed by groundwater originating upgradient of the Center property. The exact source of the spring water is subject to some debate; however, it is not expected that any of the alternatives proposed in this document would affect the source of the spring." As stated in Section III.C.3.f. and g. above, the transfer of ownership should be subject to the requirements that groundwater monitoring be continued and close attention paid to land alteration and construction activities that may affect Coldwater Spring. Particular attention should be paid to the Highway 55/62 interchange area; it has been artificially lowered by highway construction and poses a significant risk to the Coldwater Spring in the event of infrastructure*	The draft EIS acknowledged the association between the spring and the Highway 55/62 construction. The association is noted on page 85 of the final EIS. Minnesota Session Laws 2001, Chapter 101 - S.F. 2049 addresses and protects the groundwater flow to or from the spring (Appendix J).

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	failure of that interchange. Also, Highway 55 roadbed has been raised from 54" Street to Highway 62 to remain above the groundwater flow to the Coldwater Spring. In the likely event of reconstruction of the road, this height modification must remain.	
37349	*The Draft EIS (page 98, paragraph 1) discusses the poor water quality of Coldwater Spring. The National Park Service, in cooperation with other government agencies, should include a plan to address water quality issues as a condition of ownership transfer.*	As recommended by the Minnesota Department of Health, warning signs will be placed at Coldwater Spring identifying bacterial contamination of the water and recommending that water from the spring should not be used for cooking, culinary purposes or human consumption. The shallow aquifer that provides water to Coldwater Spring lies under a highly urbanized landscape with many potential sources of contamination, all of which are on lands west of the property and beyond the control of the property owner.
37350	*40 CFR, Section 1502.14, subparagraph (0 requires the agency to ". . . include appropriate mitigation measures not already included in the proposed action or alternatives." 40 CFR, Section 1502.9 states in part: " If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion." Although the draft EIS mentions a conservation easement in name as a mitigation measure, the draft EIS lacks specific language to be included in the conservation easement and. therefore. precludes the opportunity for "meaningful analysis" to determine , . . . - whether the conservation easement can "appropriately mitigate" impacts to the property's cultural and natural features. Moreover, as explained above, the conservation easement sections of the draft EIS contains confusing language. Therefore, for these reasons, Preserve Camp Coldwater Coalition requests that a revised draft of the EIS be prepared for the sections pertaining to the conservation easement, to enable my client and others to have a meaningful opportunity to comment on the conservation easement's adequacy.*	In order to issue a revised Draft EIS, the original has to be determined to be so inadequate as to preclude meaningful analysis. We dispute the assertion that the lack of the specifics of a conservation easement precludes meaningful analysis. There is sufficient information in the Draft EIS that would allow a reasonable person to contrast and compare the alternatives.
	Edna Brazaitis	
35321	*The EIS suggests that a public or private body could take over the property and that the United States could ensure that it's historic, cultural and natural resources are protected by a conservation easement. However, I practiced law in a corporate setting for many years and found that the problem with restrictions in any long-term transaction is having a mechanism to keep the parties aware of their responsibilities and a mechanism to enforce the restrictions. While conservation easements sound good, the problem is a practical one. Who is holding the big stick? Do they have the staff and resources to monitor the easement and make sure the parties know about the restrictions*	See response to PEPC ID 37341 to Preserve Camp Coldwater Coalition. The author points out some practical realities with respect to enforcing conservation easements over time, and the Final EIS has been revised to acknowledge them.

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	and that they are being obeyed? Do they have an easy way to enforce the restrictions? Can the restrictions be overridden by political pressure or changes in the law? If the Department of the Interior chooses to use an easement, they may decide to partner with a non-profit easement holding partner that has a long successful record of monitoring easements. Ideally the monitoring program would be funded with an endowment. Of course, the problem with this approach is that no matter how effective the group is now, it may be totally ineffective in 20 years. Therefore, the Department would need a way to monitor the partner and to replace them if necessary. Once again the practical aspect of this makes it difficult. Next, the easement has to provide for some easy low cost way of enforcement. An easement that has an expensive court action as the only enforcement mechanism will very seldom be enforced. The more parties that have the option of enforcing the easement will also give it a greater chance of success. In order for these parties to enforce the easement, they have to know about it. Ensuring that the appropriate parties know about the restrictions over a long period of time, perhaps hundreds of years, is very difficult if not impossible. While some legal protections seem attractive in the abstract, there is a high likelihood that they will be ineffective over the long-term.	
	Barb Marmet	
35668	*Furthermore, the treaty by which the United States acquired access to the land at the Coldwater Spring site guarantees unlimited access to the Dakota people. This treaty commitment has not always been honored, but it should be. In fact, the treaty only states that the land may be used by the federal government for the purpose of building a military base. Since the land is no longer being used for that purpose, there may be an obligation to restore the land to the heirs of the Dakota people. This treaty is still a valid obligation of our federal government today and should be considered relevant to decisions regarding the future of Coldwater Spring. It would appear to fall under the category of "Indian Trust Resources," which the Park Service describes as: "The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights..." Yet the Park Service includes Indian Trust Resources in its list of Impact Topics Dismissed from Further Review. This is a mistake and should be reconsidered.*	The resolution of treaty claims concerning this or any other property is beyond the scope of this study. While it may have bearing on the ultimate disposition of the property, treaty rights and resolution of claims have a long and complex history and do not appear to be close to a final solution. The intent of this study is to disclose the impacts associated with the transfer of the property. The intent is not to resolve these complex issues.
35669	*I suggest that the Park Service and the FINAL EIS consider another alternative for action: that Coldwater Spring be restored to the Dakota community. The Lower Sioux community could act in a representative function for Minnesota Dakota communities in taking control of the sacred site.*	See response to PEPC ID 35513 and 35432 to the Shakopee Mdewakanton Sioux Community. See also PEPC ID 35432 to the Prairie Island Indian Community.

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	Dave Fudally	
37323	*I am the person who discovered the existence of the complete village of Camp Coldwater in May 1986. I am extremely disappointed that my 20 plus years of research documents and knowledge are not a part of this EIS report. My documentation and copies were given over a year ago to be a part of the EIS process. Whether or not it makes a difference, the full and complete use of all historical documents available should have been entered in this report as it was available! The historical study is thus declared flawed and inadequate at best. I am greatly disappointed that my 20 some years of research and knowledge on the Camp Coldwater site has been ignored numerous times not because of the possibility of my information may be incorrect, rather because it flies against the agenda of those being paid to write their archeology reports. How can all the archeology reports done on CCW not use the 1837 map in their reports? All reports done on CCW were done with knowledge of the map either by contacting me or me contacting them. Yet none of any archeological studies done on BOM property looked for structures that are on the 1837 map. Knowing of this great map and not using it to locate structures within the property is extremely unethical if not criminal. ALL ARCHEOLOGICAL REPORTS done on CCW BOM property are inaccurate and incomplete. Archeology. a. All References to any archeological studies done in this EIS are inaccurate and incomplete because of tainted paid outcome determined. A new independent arch. study needs to be done searching for structures etc,. using the 1837 map within the boundary of BOM property! The missing history in this EIS is harmful to the preservation of Camp Coldwater. At least add the book known as the Bible of Camp Coldwater to this report. That book is, "A History of the City of Saint Paul to 1875" By J. Fletcher Williams. Camp Coldwater stands on it's documented history. Let it not be tarnished, but do add the known history of this historic place.*	This and related comments added detailed information on the history of the area. We appreciate the additional information, but the intent of the EIS is not to be an exhaustive treatment of the history of the property, but to provide enough history to determine what is eligible for listing on the National Register of Historic Places, and, therefore, subject to Section 106, and so that the general public can get a sense of the importance of the place over time. To that end, the description of the history of the Center provided on pages 71 – 82 of the Draft EIS serves that purpose. Fort Snelling is already a National Historic Landmark and a National Register site. Much of the information presented in these comments, if verified and put into proper historic context, could add to our overall understanding of Fort Snelling, early settlement around it, and American Indian relations. An intensive investigation into the history of the region is well beyond the scope of this study, however. The information presented in these comments do not establish the basis for a new National Register nomination, or cause changes in the designation of the site as eligible for the National Register. The Section 106 process will address the impacts to the site. The comments here reference the whole area once considered Camp Coldwater, not the spring specifically. The Camp Coldwater area encompassed far more the Bureau of Mines property and is beyond the scope of this analysis.
37324	*The focus of preservation of Camp Coldwater should be not of just the disposition of the BOM property, but rather of the joining together of the BOM property with all of the land Camp Coldwater is on. Camp Coldwater lately is being described as just the BOM property. I believe the EIS of the property of BOM fails to address this major reason for the preservation of Camp Coldwater. Each of the landowners of the sections of Camp Coldwater are looking out for their own piece of the pie, and not seeing the whole picture. For example, at FT. Snelling, what if MNDot owned the Round Tower, MN State park owned the Commanders house, MHS owned the North Barracks, National Park Service owned the south wall Barracks and towers, and MPLS Park*	It is not the objective or requirement of the EIS to figure out how to get all the land owners who have a piece of the former Camp Coldwater settlement to study, manage or interpret the whole. The NPS has addressed the impacts that could occur by the various alternatives and scenarios.

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	Board owned the Parade Grounds. How could anyone of these entities sell off or develop its own piece of the fort? Sheer nonsense!!!!!! With this in mind, someone needs to step up and put this Camp Coldwater puzzle together, as one, as this is the goal of the preservation of this Village of Camp Coldwater. BOM property cannot be separate from the rest of the Camp Coldwater Village.	
37326	*The Old Village.! Artifacts etc ..(Nearby villages that may be associated with CCW) Old Village. See Aborigines of Minnesota. And Warren Upham. 1750 ,Dakota attacked at Lake Mille Lacs by Ojibway and fled down Rum River and then down Nine mile creek. Village at Minn River and Mile Mile creek junction. Battled Iowa Indians on Pilot Knob Hill same year. It appears that Indian village sites moved every few years or so according to all of the numerous maps I have seen. The common thread among all is the need for fresh water. The nearests springs south of Ft Snelling are the spring below the bluff(Ft Snelling Lake/ State Park) and Lands end just 30 yards south of Old Post Road and hwy55. Small spring at the base of Dwelling place of the Gods hill was personally seen by myself until mid 60's.* *a. Paul Durand (famous Indian Historian) noted that as the freeway was being built by Old Post rd heading Northwards towards Ft Snelling, One of his history friends went daily to this area to pick up Indian artifacts plowed over by Mndot crew as they built the Highway. He described his friend as picking up shopping bags full each visit.* *b. Audrey Anderson lived at the Veterans Administration homes 1/4 mile W from CCW Spring when they were first built. Her Father was the V.A.Head of Administrations. She was my QRC for work comp claim. When she read of CCW in Paper and the 1991 Marker she told me she thought her and her friends picked up all the arrowheads and artifacts when they played there as children in the 20's.*	See response to PEPC ID 37323.
37327	*CONTINUED c. Indian artifacts witnessed and given to/by Dave Radford State Park Archeologist. Feb 1998/40 yards due south of BOM fence property line. Next to 400 year old oak tree. This is where I located two stone axes among bones etc on wash out hill erosion. Notified Bob Clouse and Steve Osman at Ft Snelling to come and check site out. They told me to bring stone ax to them. I did, ONE. Steve said yes definitely an Indian stone ax. Told me to keep it, and maybe in future to use it to help preserve CCW. I gave stone ax to Dave Radford Feb 1998, he witnessed bones etc at site and told his assistant to mark site and give it a site number as required by law. Said they were to test dig within a year. I kept calling for his dig time. Said he didn't know when he could ever check it out. In other words he was told not to do test dig at this site? Hands were tied*	The archaeological surveys by Clouse and Ollendorf are the only two professional surveys of the Bureau of Mines property, and they have not located the kinds of materials Mr. Fudally refers to in his comments. The Clouse report clearly shows there is the potential for archeological resources on the Bureau of Mines property. As to Mr. Fudally's assertions about the actions of others, the NPS has no comment.

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	Meanwhile artifacts were taken every year by people who know of site. NO REPORT EVER MADEl THEN ,NO ARTIFACTS FOUND. Pretending all of this discovery never happened. *d. Indian artifacts found at CCWA. Perry site 1986 ,By Dave Fudally. Pottery, copper piece, bones etc. See photos of A. Perry artifacts at MHS with artifacts, or photos from Dave Fudally. Bob Clouse had written a report saying nothing at CCW in 83. IF he acknowledged these or any artifacts anywhere on CCW site, it would go against his 1983 report of nothing there. However, in 1969 Close wrote a report to MHS of his possible discovery of the St Louis hotel site artifacts in CCW(stable site) which resulted in MHS buying all the land east of BOM property. Nothing there???? Also drained spring reservoir in 83 looking for artifacts, then denied he ever did. Verified by BOM property manager that he did. WHY LIE? Where is this report?* *e. Indian artifact/ CCW Louis Massey site. Arrowhead/spear point tip. Along with pioneer pottery and hand made nail. Indian artifact to Radford Mn State Archeologist. Feb 1998 Where is report?* *f. Indian skeleton found in 1820 on building of FT Snelling site. Post surgeon noted bones were from Indian about 8 It tall. (Hanson's Old FT. Snelling) g. Indian Village site 1843 next to Minnehaha Falls. Half breed son of Peter Quinn. Telling of his life story and witness to his fathers death at Redwood Ferry battle 1862 Indian War. MHS article. SEE Fudally Papers.*	
	Tom Holtzleiter	
34994	*I have been active with the Preserve Camp Coldwater Coalition, and I support their comments on the Draft EIS.* *However I want to impress upon the National Park Service the importance of including the liner under the Hwy 55/62 interchange. Not so much in maintenance and design, as that is the Minnesota Department of Transportation's (MnDOT) job, but in basic monitoring.* *The reason why is because when watershed protection was granted to the area, it wasn't granted on watershed boundaries, but rather political boundaries. Please see the Board of Soil and Water Resources decision of May 10th, 2000 if details are needed. But the main point I want to make is the source of the Coldwater Spring, and it's outflow are in two different watershed districts.* *Therefore whoever owns the Bureau of Mines/Coldwater Spring must be willing to work with both Minnehaha Creek Watershed and Lower Minnesota River*	See responses to PEPC ID 35772, 35774, 35775 and 35815to Shakopee Mdewakanton Sioux Community.

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	Watershed with the understanding that the resource of Coldwater Spring will be greatly effected by actions taken outside of the Bureau of Mines land, and because of the political decision to separate the watershed, the watershed districts may or may not see the effect. This is simply because if a permit is pulled in one watershed distinct, the effect may not be known to the other. *In other words, whoever owns the Bureau of Mines/Coldwater Spring, must be willing to look 1000 feet beyond the boundaries of the land boarder to really see the total effect to the Coldwater Spring.* *The situation really needs to be known to the future land owners of the area what the real impacts are. The EIS is a primary tool to that end, and I don't think mentioning something that significant well under 1000 feet away is any big stretch or special request.*	
	Diane Steen-Hinderlie	
35661	*The wetland description on pp.88 ff in the draft booklet was inspiring, but the end of paragraph 2 on p. 286 seemed implausible-that interpretive use would be "adverse" but training center use "beneficial"?!*	See response to PEPC ID 35938 to Shakopee Mdewakanton Sioux Community.
	Howard J. Vogel	
34976	*In the alternatives discussion, the EIS fails, to fully consider the possibility of transferring ownership and authority for the management of the site to one or more representatives of the Dakota Oyate.*	The commenter expressed concerns with the lack of specific information in the draft EIS concerning ownership by a tribe or tribes. We believe these concerns were adequately considered in the development of the alternatives. The alternatives development in the Draft EIS took into consideration that federally recognized tribes would be eligible to receive the property as governmental agencies. Unrecognized tribes or tribal groups do not meet the criteria and would not be eligible to receive the property. Therefore, the EIS properly considered the situation should any recognized tribe or tribes receive the property as fee land. However, land held in fee would be subject to all laws of the state as would any privately held property. This is the situation considered in Alternative B. Secondly, land held in trust for a tribe or tribes is a relationship in which the owner of the legal title, the tribe or tribes, does not hold the equitable title; the title to the land is held by the U.S. government in trust for the tribe or tribes. Alternatives C and D considered the retention of all or part of the property by

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		the federal government, which would be analogous to trust land (while ownership would remain with the tribe or tribes, the fiduciary responsibility for the property would remain with the federal government and the federal government would not be held to certain state statutes but would have federal responsibilities for management). It was not our desire to specify all types of ownership for the future property, only that any future ownership and use would be covered under one of our alternatives. We will note in the Final EIS that during the comment period on the Draft EIS several tribes expressed an interest in obtaining the property.
34977	*The EIS lacks imagination in failing to consider how the site may be transferred to one of the recognized tribal governments as trust land held by the tribe in trust for the tribe.*	See response to PEPC ID 34976.
34979	*The interpretation of the federal law governing the planning process for disposition of the Center, by the NPS, that led the NPS to reject its ethnographic consultants' conclusions represents a policy choice within the range of the discretion of the agency rather than the mandated choice claimed within the explanatory statement of the agency entitled "Sacred Site and Traditional Cultural Property Analysis" dated October 4, 2006.*	See response to PEPC ID37850 to Minnesota Historical Society.
34981	*The defects identified [in the DEIS]may be remedied by reopening the planning process in order to permit the application of a "narrative method" of inquiry in order to proceed in a way that faithfully and respectfully applies the principles of sympathetic interpretation in this matter as called for under the public policy set out in the American Indian Religious Freedom Act of 1978 (AIRFRA), the Presidential Executive Order 1307 of 1996, and the judicially developed principles of sympathetic interpretation developed by the federal courts in the context of treaty cases.*	See response to PEPC ID 34976.
34989	*EIS and the interpretation of the federal law applicable to its conclusions on whether the site includes a TCP, threatens to impair, and even destroy, rather than accommodate the cultural and spiritual significance of the site according to the master story and tradition of the Dakota people.*	See response to PEPC ID 37850 to Minnesota Historical Society.
	Susu Jeffrey	
37411	*Repeatedly in the DEIS the Coldwater campus was partitioned into significant (spring outflow) and other land. The Camp Coldwater Spring area begins uphill at the airport and ends at the bottom of the Mississippi River bluff. Coldwater Spring is the only natural spring of size in either Minneapolis or Saint Paul, and the last natural spring in all of Hennepin County. The 27.32-acre Coldwater*	See responses to PEPC ID 35772, 35774, and 35775 to Shakopee Mdewakanton Sioux Community.

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	property is already a "select portion" of the watershed. The spring is only as good as its groundwater source(s). The essence of Coldwater is not just Mississippi blufftop real estate, it's the water.	
	Brian Eggenberg	
35665	*For the disposition of the former Bureau of Mines Twin Cities research Center, I would suggest a 2 word phrase scire facias. Keeping it simple, the United States US Dept. of the Interior has a legal obligation to prove their legal rights to the title of lands of the late Ft. Snelling Reservation. Pushing the envelope of the law when enacting the legislation to reduce Ft. Snelling lands, MN made a practice of overstepping land laws to such as point, the added scrutiny of having the lands encompassing the inner boundaries of the Ft. Snelling Reservation to be ceded by the Sioux Nation, i.e. Dakota, lands within Indian Country & also within the Ft. Snelling have never been ceded by the Dakota nation. Treaties nor the act of congress Feb. 16, 1863 (12 Stat.L.,653) have no force on lands not ceded by First Nations (Dakotas)*	See response to PEPC ID 34976.
	Robert P. Mosedale	
37317	*HISTORY STUDY Your study is well written but so incomplete. For thousands of years natives from many cultures would have found there way to this spring and enjoyed the stunning waterfall that we all seem to forget about were. So in a comprehensive study we might learn more about the Natives and French traders here and the Spanish (evidenced by a large stele close-by) and see the many tribal groups that would have coursed by this area and stayed by the spring. And about Charlotte Clark and her brother Malcolm and the Snelling children who played about the spring and met Natives there . And how the Dakota ceded this land to Scott Campbell, our Irish kid with a Scottish and Dakota tinge, only to have Congress strike this part of a treaty. And they tried again to give it to his family in another treaty, and these efforts suggests the spring was of importance to them as was Pilot Knob that was granted to members of the Campbell family too - only to be struck down by Congress. And how the military built the Hotel/post for trade with the Ojibway and how the various traders lived in area, so a great many Ojibway and White and Mixed Blood people now trace their heritage to Coldwater. This trade was so very important in establishing American hegemony in northern areas from 1819 to well into the 1840s when Ojibway still favored the English. It seems sensible that the Post/Hotel was selected because Native people gather there and many Natives were about from various tribes as can be pieced together from sundry accounts, for example, the school there had English, French, Swede, Cree, Chippewa, Sioux and Negro brats in 1837.And Norman Kittson who lived there*	See response to PEPC ID 37323 to Dave Fudally Neither the archeological record nor the ethnographic study provided any evidence that American Indians used Coldwater Spring for thousands of years. American Indians most likely used the spring when in the area, but simple use of a spring would not give it any special significance. While the small waterfall formed as Coldwater Spring descends the bluff is beautiful, it is no match for Minnehaha Falls which lies a short distance upstream and has a far more powerful setting. Much of the information presented in this comment, if verifiable and put into proper historic context, could add to our overall understanding of Fort Snelling, early settlement around it, and American Indian relations. However, the information presented here is disconnected and lacking substantive context or analysis, and it does not establish the basis for a new or different National Register site. The Section 106 process will address the impacts to the site. The information gathered for the EIS and Section 106 process is substantive enough. The author refers to Coldwater as the whole area of Camp Coldwater, not the spring specifically. The Camp Coldwater area encompassed far more the Bureau

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	and brought James J. Hill the money to raise $$ for his railroads while acquiring a number of Ojibway wives. One Dakota lad said he was born at Coldwater and a map shows teepees there and on and on. Other folks of importance to Minnesota history lived here and visited too. I have much more history that I could regale you with, yet you need to select someone like Alan Woolworth to select scholars and oversee a proper study. Will you do this???? I have some info	of Mines property.
37320	*INDIANS Your report does not qualify folks questioned about their backgrounds and ability to speak for Native people, alas. Will you do this?? Long ago I heard Reverend Cavendar speak about Dakota religion, and he made the hair stand up on my neck, and some days later I happened to meet while walking a teacher who had once lived close to him, who said she had never met anyone who had such a holy presence. As an American Native heritage is my heritage too now, somehow. In early days at the Fort until now nobody in white culture cared or recorded much of anything about Native spiritual practices that are far older then main stream religions now. We all should heed the words of Dr. Charles Eastman: Our religion is the last thing about us that the person ofanother race will ever understand. We Indians do not speak ofthese deep matters so long as we believe in them and those ofus who have ceased to believe speak inaccurately and slightingly" A large bowlder with quartzite close to the spring also suggests sacred use, perhaps. Unktehi was recorded in Dakota tradition blocked the flow of River Warren/Minnesota River and then turned to a form caves; one under Pilot Knob where he stayed, one under Morgans Mound where he slept and his breath condensed and came out at the spring. These "stories" out lined in many volumes of the Golden Bough and elsewhere are important to all humans and guide their destinies, and so many "stories" have found to have some evidence of existence. Now, think of cave discovered when the LRT tunnel was dug at the airport. Before the great ado arose over Highway 55, I walked often with the great bloodhound Sherlock Holmes about Coldwater area and 1 day followed what appeared to be a deer trail to about where Seth Eastman kept his white Buffalo and there were several blue tarps and a number of water jugs and some other stuff and some cloth strips were tie on shrubs. I thought it might be a site for a homeless person, and I wondered why anyone would go thru a hole in the fence and get water from the "duck" pond. This site showed signs of presence for most of 2 seasons. I cannot prove sacredness of the spring, yet you cannot disprove - as is true for many sacred sites across the world, and you stop parsing rules and laws (that change) so you get an A+ in bureaucracy and accord Native leaders the respect that their position demands here .. So, what would Bishop Whipple do here?*	See response to PEPC ID 37916 to Minnesota Sacred Places.

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37318	*The NPS has authored some superb studies of historical sites ; this IS NOT ONE OF THEM. The various studies are flawed and incomplete and the over arching question is why and how they can be corrected.*	Noted. The author provides no substantive or specific remarks on how the EIS analysis or Section 106 evaluation need to be improved.
37319	*ARCHAELOGY Now we have 3 punk reports and holes dug everywhere but where common sense would direct one to look. The NPS has employed various contactors with GPR equipment looking for graves and artifacts and had good results. Will you provide their names??? Will you contact Hennepin County surveyor to get Seth Eastmans' line through the hotel checked??*	See the reply to comment to PEPC ID 37579, with regard to the archaeological survey and the use of GPR equipment. Mr. Mosedale does not say what he hopes to accomplish with his suggestion that the NPS should check "Seth Eastmans' line through the hotel…," or say what this line is.
	Tim Boyle	
35455	*I question the conclusion in table 9 of Chapter 4 on page 292 which indicates that no-action would have major adverse impacts on wetlands when the no-action alternative does not appear to be addressed, presented, or documented in any detail or included in analysis of effects. This is supported by the fact that the report concludes that the main factor that would potentially impact wetlands on the Center would be construction work that would damage, alter or destroy wetland resources (Pages 250, 264, & 278.) Wetland stewardship by the National Park Service would most likely exceed that expected of or required by any other federal, state, and local agencies or regulations.*	See response to PEPC ID 35332 to William F. Barton.

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As the nation's principal conservation agency, the Department of the Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. Administration.

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