

Finding of No Significant Impact
Expanded Park Housing/Utilities Plan
Environmental Assessment
Fort Union Trading Post National Historic Site

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) has prepared an Expanded Park Housing/Utilities Plan/Environmental Assessment for Fort Union Trading Post National Historic Site (park). The Environmental Assessment (EA) documents the results of the Expanded Park Housing/Utilities Plan and the potential environmental impacts associated with the preferred alternative.

There are three primary purposes of an EA: 1) To help determine whether the impact of a proposed action or alternative could be significant; 2) To aid in NEPA compliance when no environmental impact statement (EIS) is required by evaluating a proposal that will have no significant impact, but that may have measurable adverse impacts; and 3) To facilitate preparation of an EIS, if one is determined to be necessary.

The Council of Environmental Quality (CEQ) regulations specifically direct that "Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts" [40 CFR §1501.2]. Additionally, both CEQ regulations and NPS policies direct EAs to be prepared when compliance with NEPA can be achieved and environmental analysis is sufficient and preparation of an environmental impact statement is therefore not necessary.

The purpose of the park is to commemorate and interpret the significant role of Fort Union as the preeminent fur trading post on the Upper Missouri River, and to preserve its resources.

Purpose of Plan

The purpose of the Fort Union Trading Post National Historic Site Expanded Park Housing/Utility Plan is to:

- Address the critical shortage of employee housing that meets current NPS housing standards.
- Increase the housing capacity of the park to an adequate number of bedrooms as identified by the *Housing Needs Assessment*. This includes 11 bedroom units for park staff, volunteers, and researchers.
- Upgrade the existing wastewater treatment system as the sewer utilities are operating at or beyond design capacities (100 percent or more utilization). The addition of new housing will further strain the functionality of the system.
- Provide utility (potable water, electrical, and cable) connections to the proposed housing units, and provide effluent connection to the proposed drain field site.

Need for Plan

In order to uphold the purpose for which Fort Union Trading Post NHS was established, the park is in need of additional housing for park staff (seasonal and permanent). Due to the park's location and the regional economic environment, purchasing housing outside of the park is not feasible. Even rental properties are unattainable for park employees, as documented by the *Housing Assessment* and *State of*

the Park reports and highlighted in the *Williston Herald News*. Additional housing would need to be constructed in order to accommodate park employees. Additional housing would require an upgraded wastewater system. The existing mound system is currently operating at or beyond design capacities (100%+ utilization). Ancillary infrastructure requirements, including utility (electrical, potable water, and cable) connections to any proposed housing units, and effluent connection to the proposed drain field site, would also be needed.

Selection of the Agency Preferred Alternative

Action Alternative A is the Preferred Alternative. This Preferred Alternative would best address the purpose and need of the park for housing park staff, and would be the most economical and environmentally friendly alternative for a long-term solution to those needs. Under the action alternative, two components will be completed to meet the purpose and need; expanded Park housing and wastewater upgrades.

Housing

New park housing would be constructed within the vicinity of the existing housing area. New housing would include a configuration of housing units to accommodate up to an additional 11 bedroom units. The new configuration may include a dorm style configuration or a series of single family homes or duplexes. The exact configuration will be determined at the point at which funding is available to construct housing. Regardless of the final configuration, the housing will include an area of approximately 12.5 acres for construction staging activities. All permanent housing will be placed north of the access road, within the vicinity of the existing housing units. The existing housing units will be retained and used. The access road will not be altered; a roundabout, or a similar configuration intended to add access for larger vehicles like semi-tractor trailers at the Maintenance Shop, would allow for easier ingress/egress of large vehicles. Maintaining the two existing trailer pads will allow the park to place mobile homes or temporary RV trailers on pads on an as needed basis.

Wastewater Treatment System

A new wastewater treatment system will ensure the park's existing and proposed housing units properly dispose of and treat wastewater effectively, and in an appropriate location, while providing increased septic tank capacity. The proposed location for the septic drain field is south of North Dakota Highway 1804 and west of the housing/maintenance access road. This drain field is located well-above the existing 100 year flood plain; thus, reducing the potential for groundwater contamination. This location complies with the North Dakota State Administrative Code Title 62-03.1-03: Private Sewage Disposal Systems.

The proposed new wastewater system sized for existing and future housing at the park will include septic tanks, a dual pump lift station, sewer force main and a gravelless leach bed drain field chamber system. Construction of the force main from the new lift station to the proposed new drain field site will be completed using directional boring methods. The new drain field chamber system will disturb approximately 0.5 acre and will have a 20 to 30 year life expectancy. An adjacent area equal in size directly west of this proposed location would serve as a future back up drain field location. The total cost for design and construction of the wastewater system upgrade is approximately \$150,000 to \$200,000. The existing mound waste disposal system will be taken offline, but will remain in place for emergency/maintenance purposes only. All necessary permits/licenses from the North Dakota First District Health Unit will be obtained when design and funding are finalized.

Other Infrastructure

Other ancillary infrastructure will be required. This includes providing connections from the existing potable water, electrical, and cable lines to the new housing units. The connection to the proposed drain field site will utilize the right-of-way of the access road. Trenching from the existing main lines to the

housing and drain field will be conducted. Construction of driveways and a small parking lot will also be completed for occupants of the new housing units.

Other Alternatives Considered

No-Action Alternative (No additional housing units or upgrades to wastewater system.)

Under the No-Action Alternative, the park would not expand staff housing. The park would continue to have two permanent structures (each with three bedrooms), one temporary manufactured housing unit (temporary trailer), and one RV site. Existing wastewater treatment (septic tank, pumps, and mound system) which services sewage from the housing and adjacent maintenance facility would continue to function at or beyond design capacities (100 percent or more utilization). This system includes two mounds with perforated piping which is connected by piping from the lift station with one pump and septic tank. Currently, one of the two mound systems is no longer functioning and has been abandoned in place. The abandoned mound was installed in 1984, while the still-functioning mound was installed in 2004. The upgraded mound is approximately 3,200 sf and the older, no longer operating mound is approximately 2,400 sf.

Environmentally Preferable Alternative

According to the regulations implementing NEPA for the Department of the Interior (43 CFR 46.30), the environmentally preferable alternative is the alternative "...that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative".

Action Alternative A is the environmentally preferable alternative because it will ensure the park has adequate housing for staff to be stewards of the resources with minimal impact to those resources. The new drain field will ensure the park has a long-term solution for the proper treatment of sewage in an appropriate location.

Why the Agency Selected Alternative Will Not Have a Significant Effect on the Environment and Significance Criteria

As defined in 40 CFR 1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that, on balance, the effect will be beneficial:

The selected alternative has the potential for limited, inadvertent adverse impacts to archeological resources. However, prior geophysical and pedestrian surveys of the area were completed and no significant cultural resources were recorded. The possibility exists for archeological resources impacts during ground disturbing actions regardless of geophysical analysis. Qualified archeologists will monitor excavation activities to prevent impacts to archeological resources to the extent possible should they be discovered.

There could be slight to moderate alteration of a portion of the park's viewshed towards the housing development, especially from higher vantage points (Bodmer's Overlook and walkway along the

palisade), which may distract from the visual continuity of the landscape. However, development would utilize a harmonized color palette that blends into the landscape to minimize visual impacts. Height restrictions and harmonizing coloration schemes for the new housing construction will lessen the visual intensity of the impact on the landscape and viewshed. The viewshed to the west toward the housing area would allow a taller structure to be constructed if it is placed close to the base of the terrace. Structures placed further way from the terrace would need to be shorter in order to not protrude into the viewshed. Impacts to the viewshed would be short-term if housing units are placed in close proximity to the terrace, primarily during the winter months when it is not screened by trees. Impacts to the viewshed would be long-term if housing units are placed south of the access road. The intensity of this impact is subject to the final configuration of the housing. If all mitigation measures are implemented, most impacts to the viewshed would be short-term and occurring during construction activities.

This Alternative proposes to develop additional housing and related infrastructure in the vicinity of the existing housing area, believed to be at or just slightly above the 100-year floodplain, as discussed in the EA. Justification for this action is detailed in the Floodplain Statement of Finding. The floodplain of the Missouri River was mapped as extending into the housing/maintenance area of the park in 1987. However, the 2011 flood (which was considered a 100-year or greater event) did not reach the park housing units. Existing housing units are slightly elevated. Any new housing would be raised approximately 4-5 feet from the base elevation. This would provide the necessary protection for the occupants and property from future flooding events. Housing development and related infrastructure will not result in adverse impacts to the floodplain natural processes.

The degree to which the proposed action affects public health or safety:

As described in the EA, the selected Alternative will not cause adverse impacts to public health or safety. The selected Alternative identifies suitable locations for the development of new housing units and a new drain field site for the long-term treatment of wastewater.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:

There will be no impacts to prime or unique farmlands, scenic rivers, or ecologically critical areas. The potential exists for adverse impacts to archeological resources; however, prior geophysical and pedestrian surveys of the area have been completed and no significant cultural resources were recorded. The selected Alternative could have limited, inadvertent adverse impacts on archeological resources. The possibility exists for archeological resources impact during ground disturbing actions regardless of geophysical analysis. Qualified archeologists will monitor excavation activities to prevent impacts to archeological resources to the extent possible should they be discovered.

The degree to which the effects on the quality of the human environment are likely to be highly controversial:

There were no highly controversial effects on the quality of the human environment identified during either the preparation of the EA or the public review period.

The degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks:

No highly uncertain effects were identified during the planning for this project, and no effects associate with the selected Alternative involve unique or unknown risks.

The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:

The selected alternative does not establish a precedent for future actions with significant effects, nor does it represent decisions about future considerations. The purpose of this action is to identify appropriate locations for the development of a new drain field and new park housing.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:

Cumulative impacts were determined by combining the impacts of the Preferred Alternative with other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. The EA determined that there will be no significant cumulative impacts associated with the selected Alternative.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:

The park is a designated National Historic Landmark, and has a number of sites and contributing features eligible or listed on the National Register of Historic Places. The NPS consulted with the North Dakota State Historic Preservation Officer (SHPO) on April 28, 2015, regarding the proposed project. This letter initiated consultation under Section 106 of the National Historic Preservation Act, as amended. On May 4, 2015, the SHPO concurred with the NPS on the proposed percolation tests and appropriate mitigation techniques. On December 2, 2015, the NPS provided the EA to the SHPO for review and provided a determination of no adverse effect. On December 8, 2015, the SHPO concurred with the NPS determination of no adverse effect.

The degree to which the action may adversely affect an endangered or threatened species or its critical habitat:

The park consulted with the U.S. Fish and Wildlife Service (FWS) for compliance with Section 7 of the Endangered Species Act (16 U.S.C. 1531 et seq.) on April 28, 2015, to evaluate the potential impacts of the project on threatened or endangered species and their habitat. The NPS is unaware of the existence of any of these species or their habitat within the bounds of the project area. Based on the review of the species list and the lack of species likely to be affected by the project, the park believes the plans to expand park housing and upgrade the support infrastructure would likely result in no effects to listed species. On November 11, 2015, the FWS concurred with the NPS determination.

Whether the action threatens a violation of Federal, State, or local environmental protection law:

The selected alternative violates no Federal, State, or local laws, including environmental protection laws.

Public Involvement

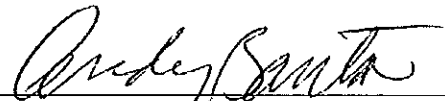
The environmental assessment was made available for public review from December 10, 2015, to January 11, 2016, and public comment was solicited during this period of time. Announcement of the review opportunity was made through a park press release, and copies were available on the Planning, Environment, and Public Comment (PEPC) website, and Park Headquarters. Hard copies of the EA were sent to potentially interested agencies including affiliated Tribes. During the review period for this proposed plan, one piece of correspondence was received.

Conclusion

Based on a review of the facts and analysis contained in this EA, which is incorporated herein, the Selected Alternative for the Expanded Park Housing/Utilities Plan/EA for the park will not have a significant impact either by itself or in consideration of cumulative impacts. Accordingly, the requirements of the National Environmental Policy Act, regulations promulgated by CEQ, the Department of the Interior, and provisions of the NPS Director's Order-12 and Handbook (Conservation Planning and Environmental Impact Analysis and Decision-Making) have been fulfilled.

I find that the preferred Alternative does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9), an EIS will not be prepared for the project.

Recommended:

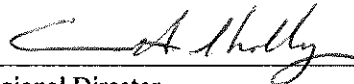


Superintendent, Fort Union Trading Post NHS

4-15-2016

Date

Approved:



Regional Director

4/22/16

Date

Fort Union Trading Post National Historic Site
Expanded Park Housing/Utilities and Environmental Assessment

Appendix 1: Determination of Non-Impairment

National Park Service's *Management Policies 2006* require analysis of potential effects to determine whether or not actions would impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the National Park Service the management discretion to allow adverse impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specially provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources and values. An impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- Identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

Park resources and values that are subject to the non-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The threshold for considering whether there could be impairment is based on whether an action will have significant effects. This

determination on impairment has been prepared for the preferred alternative described in Chapter 2 of this EA. An impairment determination is made for archeological resources, scenery/viewshed, and floodplains.

Archeological Resources

The majority of the Fort Union Trading Post National Historic Site (park) has had a reconnaissance level archeological inventory, which is essentially what can be seen on the surface. In addition to these surface visual observations, test excavations and geophysical surveying (remote sensing) methods have been utilized at the park. The park has a total of 19 archeological sites listed in the NPS Archeological Site Management Information System (ASMIS). Six of these sites have been determined eligible for or are listed on the National Register of Historic Places and have been identified as contributing to the National Historic Landmark.

The archeological content seen in these surface investigations includes material culture items from the fur trade era (1826–1867), as well as prehistoric (ca. 10,000 BP – 1860) and historic American Indian occupations (1860s–1884), and the early 20th-century community of Mondak. However, for projects such as the installation of a septic drain field, the reconnaissance level of investigation was inadequate to address subsurface remains and needed a more detailed investigation (geophysics and other methods) in order to better understand the extent and content of these sites. Geophysical and pedestrian surveys were completed by MWAC in July, 2015, of the area identified as the proposed location of the septic drain field for the Selected Alternative. No significant cultural resources were recorded in that area (NPS 2015b).

Under the selected alternative, the potential always exists for adverse impacts to archeological resources; however, prior geophysical and pedestrian surveys of the area were completed and no significant cultural resources were recorded. The possibility exists for archeological resources impacts during ground disturbing actions regardless of geophysical analysis, which means there is some potential, though not great, that the selected alternative could have limited, inadvertent adverse impacts on archeological resources. Therefore, qualified archeologists will monitor excavation activities to prevent impacts to archeological resources to the extent possible should they be discovered. Potential adverse impacts will not result in impairment to archeological resources.

Scenery/Viewshed

For the park, viewshed to and from the Fort is of particular importance because the primary reason for visitation to the historical site is to immerse oneself in the cultural history associated with the period of significance. The remoteness of the park has helped preserve the historic viewshed and invokes a sense of what the Fort might have looked like 200 years ago. The park intends to preserve the historical setting, feeling, and association as described in park's long-range interpretive plan, which indicates that visitors will have the opportunity to "discover the landscape - views, wildlife, fort, and river - the same way and in the same condition to the extent possible that Lewis and Clark, Catlin, and Bodmer did" (NPS 2010).

Under the selected alternative, there could be slight to moderate alteration on the park's viewshed from the development, especially from higher vantage points (Bodmer's Overlook and walkway along the palisade wall), which may distract from the visual continuity of the landscape. However, development would utilize a harmonized color palette that blends into the landscape to reduce visual impacts. Height restrictions and harmonizing coloration schemes for the new construction will lessen the visual intensity of the impact on the landscape and viewshed. The closer to the base of the terrace to the west of the housing area, the taller a structure can be. The further way from the terrace the shorter the structures must be in order to not protrude into the viewshed. Impacts would be short-term to the viewshed if housing units are placed in proximity to the terrace. Impacts would be long-term to the viewshed if housing units are constructed south of the access road. The intensity of this impact is subject to the final configuration of the housing. If all mitigation measures are implemented, impacts on the viewshed would be short-

term, limited to construction activities. Potential adverse impacts will not result in impairment to the park's viewshed.

Floodplains

Approximately 50 acres of the park lie on either side of the river. A floodplain delineation was conducted by Federal Emergency Management Agency (FEMA) in 1987 which showed the 100 year floodplain (simply, a flood that statistically has a 1-percent chance of occurring in any given year) would encompass much of the maintenance/housing area and some of the visitor's parking area west of the fort (FEMA 1987). The most recent flood event was in 2011 which, according to the North Dakota Investigations Division of the State Water Commission (N.D. State Water Commission, Email correspondence, January 2015), was estimated to be at least a 100-year flood event or greater. During the flood of 2011, the existing Park housing area did not flood, though water did rise to near the top of the bank. From that we understand the original floodplain delineation by FEMA used information that is now outdated. We now believe that the 100 year floodplain for the park is at or slightly below the bank where the maintenance building is located.

A rising water table in response to the 2011 flood likely caused the existing mound/leachate system to not function properly. The existing mound system is built in an area comprised of clay soils which are generally impermeable, and when the ground water rose to near the surface, the result was the mound system could not drain liquid waste properly. While relatively rare, these high water events put a strain on the existing park infrastructure.

This alternative proposes to develop additional housing and related infrastructure in the vicinity of the existing housing area which is believed to be at or just above the 100-year floodplain, as discussed in the EA. Justification for this action is detailed in the Floodplain Statement of Finding prepared under Director's Order 77-2. The floodplain of the Missouri River was mapped as extending into the housing/maintenance area of the Park in 1987. However, during the 2011 flood which was considered a 100-year or greater event, water did not reach park housing units. Existing housing units are slightly elevated. Any new housing would be raised (approximately 4-5 feet) from the base elevation. This would provide the necessary protection to the property and its occupants from future flooding events. Housing development and related infrastructure will not result in adverse impacts to the floodplain natural processes. The floodplain natural processes will not be impaired.