



Hozomeen Mountain from Desolation Peak.

---

---

# WELCOME

**Y***ou are now in the Foundation for Planning Chapter. Here are the topics you can read about:*

---

**Purpose of Ross Lake NRA**

**Significance, Fundamental Resources and Values, and Primary Interpretive Themes**

**Guiding Principles for Management**

**Special Congressional Designations, Authorizations, and Mandates**

**Desired Conditions and Potential Management Strategies Derived from Laws, Regulations, and Policies**

---

# CHAPTER 2: FOUNDATION FOR PLANNING AND MANAGEMENT

---

*This chapter contains two distinct components that provide a foundation for this general management plan: the foundation statement and the desired conditions derived from law and policy. The foundation statement documents a shared understanding of Ross Lake NRA’s purpose, significance, resources and values, primary interpretive themes, and special mandates. These statements identify Ross Lake NRA’s unique characteristics and what is most important about Ross Lake NRA. The desired conditions explained in this chapter provide the broadest level of direction for management of Ross Lake NRA and are based on laws and policies that guide the NPS. Together, these two elements provide basic guidance for decision-making and management of Ross Lake NRA. Each element is described in further detail below.*

---

The foundation for future planning and management is generally developed early in the general management planning process as part of the initiation of a GMP. It is a process of extensive public meetings, internal and external scoping, literature, policy, and legislative review, and more. The results of these efforts guide the rest of the process by producing the two major products: a “foundation statement” and the park’s “desired conditions.”

A foundation statement is comprised of several components, including discussion of the purpose, significance, interpretive themes, resources, and values of the park. The second component presents the desired conditions for resources, facilities, and experiences within the park as they are set forth by various laws, regulations, and policies pertaining specifically to Ross Lake NRA, or to the North Cascades NPS Complex, the NPS, or more broadly to all federal lands and assets.

A foundation statement can be used in all aspects of park management to ensure that the most important objectives are accomplished before turning to items that are also important but not directly critical to achieving the park purpose and maintaining its significance. Components of a foundation statement include the legislated purpose of the park, the significance it holds, what the focus of its interpretation and education program should be, and its fundamental resources and values. Special congressional designations, authorizations, and mandates are also fundamental to guiding management and are included as useful points of reference to augment the foundation statement.

The foundation statement for the North Cascades NPS Complex was developed during a planning team workshop held in the spring of 2006. The foundation statement elements included in this GMP are those that relate primarily to Ross Lake NRA. A full copy of the foundation statement for North Cascades

NPS Complex is available on the park website upon request.

## PURPOSE OF ROSS LAKE NRA

A park purpose is a statement of why Congress and/or the President established a unit of the National Park System. A purpose statement provides the most fundamental criteria against which the appropriateness of all planning recommendations, operational decisions, and actions are tested. The purpose of the park is grounded in a thorough analysis of the park’s legislation (or executive order) and legislative history. A park purpose statement goes beyond a restatement of the law and details shared assumptions about what the law means in terms specific to the park. Listed below are the purpose statements developed for Ross Lake NRA as well as North Cascades National Park, the latter providing broader but applicable guidance.

### **Purpose Statement: Ross Lake NRA**

“The purpose of Ross Lake National Recreation Area is to complement North Cascades National Park and conserve the scenic, natural, and cultural values of the Upper Skagit River Valley and surrounding wilderness, including the hydroelectric reservoirs and associated developments, for outdoor recreation and education.”

### **Purpose Statement: North Cascades NP**

“The purpose of North Cascades National Park is to preserve a dynamic wilderness landscape of dramatic alpine scenery including a vast expanse of glaciated peaks, countless cascading creeks, and deep forested valleys for the benefit and inspiration of all.”

# SIGNIFICANCE, FUNDAMENTAL RESOURCES AND VALUES, AND PRIMARY INTERPRETIVE THEMES

Significance statements and related primary interpretive themes, resources, and values make up the largest portion of the foundation statement after the park purpose has been stated. Herein they have been organized thematically into a total of 11 statements and supporting statements for clarity and ease of reference.

## Significance

Park significance statements express why the park's resources and values are important enough to warrant national park designation. Statements of the park's significance describe why an area is important within a global, national, regional, or system-wide context and are directly linked to the purpose of the park. A park's significance statements are substantiated by data or consensus and reflect the most current scientific or scholarly inquiry and cultural perceptions, which may have changed since the park's establishment.

## Fundamental Resources and Values

Fundamental resources and values are the most important elements, ideas, or concepts to be communicated to the public about a park. They warrant primary consideration during planning and management because they are critical to achieving the park's purpose and maintaining its significance. They provide a valuable focus throughout the planning process and the life of the plan and may include systems, processes, features, visitor experiences, stories, scenes, sounds, or other resources and values. They are the reasons for data collection, planning issues, management prescriptions, impact assessments, and value analyses. Other important resources and values or secondary significance statements are those that may not be fundamental to the park's purpose and significance but are nevertheless determined to be particularly important in general management planning.

## Primary Interpretive Themes

Primary interpretive themes connect park resources to relevant ideas, meanings, concepts, contexts, beliefs, and values. They support the

desired interpretive outcome of increasing visitor understanding and appreciation of the significances of the park's resources. Primary interpretive themes are based upon park purpose and significance. They provide the foundation on which the park's educational and interpretive programs are based.

The significance statements, fundamental resources and values, and primary interpretive themes for Ross Lake NRA are as follows:

### 1. North Cascades Landscapes

**Significance:** The North Cascades range reaches its finest expression in North Cascades NPS Complex, where a dense concentration of jagged glaciated peaks towers above alpine meadows and deep valleys and results in supremely majestic scenery.

#### *Fundamental Resources and Values:*

- 1.1 Scenery – Majestic mountain scenery includes alpine meadows, countless cascades, towering mountains, and forested valleys.
- 1.2 Viewpoints – Majestic mountain scenery is observed from trails, overlooks, and viewpoints.
- 1.3 Night Sky – The general absence of artificial light ensures preservation of majestic night-time views.
- 1.4 Ecology and Geology – Dynamic ecological and geologic systems and processes that created this scenery are active in Ross Lake NRA today.

**Primary Interpretive Themes:** Geologic and ecological processes have created a “sea of peaks” that reaches its finest expression in



*Majestic mountain scenery characterizes the North Cascades landscape.*

the North Cascades resulting in majestic mountain scenery that provides opportunities for inspiration and personal reflection.

## 2. Glaciers

**Significance:** The North Cascades NPS Complex contains more glaciers than any other protected area outside Alaska, representing one quarter of all the glaciers in the lower forty-eight states, and supporting ecosystems, communities, and industries in the Puget Sound and lower Columbia River basins.

### *Fundamental Resources and Values:*

- 2.1 Glaciers – The complex contains 312 active glaciers, including icefields, cirque glaciers, and hanging glaciers which create unique microclimates and habitat and are dramatic indicators of climate change.
- 2.2 Glacial and Hydrologic Processes – Glacial and hydrologic processes that shaped the mountains in the past are still active today.

**Primary Interpretive Themes:** The over 300 glaciers of the North Cascades NPS Complex continue to shape the landscape, feed waterways connecting wilderness to the sea, and ensure adequate flows of water that sustain wild and human life.

## 3. Ecosystem & Biodiversity

**Significance:** From deep forested valleys to alpine peaks, the North Cascades NPS Complex encompasses extreme gradients of climate and topography that contribute to an impressive diversity of habitats and species.

This area is the core of a vast mountainous ecosystem of protected public lands spanning the border of the United States and Canada. The ecological integrity of the North Cascades NPS Complex and the greater North Cascades ecosystem depend on one another.

### *Fundamental Resources and Values:*

- 3.1 Climate Variability – Dramatic range in weather and climate contribute to a diversity of habitats and biological communities.
- 3.2 Diverse and Extensive Tracts of Unfragmented Habitat – These areas provide for a diversity of life forms and are essential for native species, especially those with large home ranges, such as wolves, wolverines, and grizzly bears.
- 3.3 Ecosystem Processes – Dynamic influences such as fire, flooding, mass-wasting and avalanches generally occur unimpeded.
- 3.4 Diversity of Old-Growth Forest Types – The low-elevation forests associated with all major drainages in the complex provide distinctive habitats.
- 3.5 Water Resources – Abundant glaciers, snowfields, lakes, ponds, tarns, wetlands, rivers, and streams of exceptional quality support ecological integrity.
- 3.6 High-Elevation Meadows – Extensive alpine meadows exist and are maintained by heavy snowfall.
- 3.7 Plant Communities – The complex contains one of the most diverse arrays of plants, including rare and listed species.
- 3.8 Fish Communities – The complex's ecosystems support viable populations of resident and anadromous fish species that



View of Nohokomeen Glacier from Ross Lake NRA.



A chipmunk perches in a tree near Colonial Creek.

are found in their native habitats and the complex's lakes, streams and reservoirs.

- 3.9 Wildlife Communities – The complex contains a diversity of wildlife communities that are found in their native habitats, including rare and listed species.
- 3.10 Air Quality – The complex's generally excellent air quality contributes to ecological integrity and beneficial air quality related values such as outstanding visibility.

**Primary Interpretive Themes:** The great range of elevations and the large variability in precipitation in the North Cascades create many different habitats to which thousands of plant and animal species have adapted, inspiring human curiosity and wonder at the diversity of life.

#### 4. Wilderness

**Significance:** Envisioned as a wilderness park from its inception, the North Cascades NPS Complex is part of more than 2 million acres of federally designated wilderness, which is one of the largest such areas in the lower 48 states.

#### *Fundamental Resources and Values:*

- 4.1 Solitude – Outstanding opportunities exist for visitors to experience solitude and the natural sights and sounds that come from this wilderness. Opportunities exist for visitors

to be removed from the sights and sounds of other humans and their influences.

- 4.2 Natural Setting – Earth and its community of life and associated processes are free from human intervention.
- 4.3 Wilderness Character – The viewsheds, scenery, air quality, night sky, natural processes, and minimal human intrusions create the primeval wilderness character of the North Cascades.
- 4.4 Natural Soundscapes – Natural sounds predominate, supporting natural ecosystem function and providing an unrivaled wilderness experience.

**Primary Interpretive Themes:** The Stephen Mather Wilderness is part of a national and international resource that is essential to our spirit and health as a nation, a critical anchor to the past and the natural world, and a refuge for native species, present and future.

#### 5. Culture & History

**Significance:** Preserved within North Cascades NPS Complex is abundant evidence of over 9,000 years of cultural and technological development. This long history reveals a range of human adaptations to changing climates and environments at all elevations of the North Cascades.



View of Hozomeen Peak.

### *Fundamental Resources and Values:*

- 5.1 Pre and Post-Contact Archeological Resources – These resources preserve evidence of the utilization and exploitation of the landscape in the form of pre-contact tool stone quarries, campsites, resource use areas, rock art, and historic period sites at areas such as Cascade Pass, the Horseshoe Basin mines, and the Newhalem Rockshelter.
- 5.2 Cultural Landscapes – Cultural landscapes embody evidence of post-contact exploration, resource extraction and utilization, transportation, federal and tribal land management, and tourism and recreation, at sites such as High Bridge Ranger Station, Buckner Homestead, and Golden West Lodge.
- 5.3 Historic Resources – Historic resources chronicle early utilization and exploration of the landscape by homesteaders, miners, trappers, tourism, and industry, and the protection and management of forest lands by the federal government.
- 5.4 Ethno-historic Resources – Human connections to, and experiences in, the North Cascades have been expressed through a variety of means which have created the history, legends, and cultural traditions associated with the North Cascades.
- 5.5 Collections – The complex’s collections include cultural objects, photographs, oral histories, historic resource maps, archives, and biological specimens.



*The North Cascades has a rich history of cultural and technological development.*

**Primary Interpretive Themes:** Today we continue a long history of humans who for thousands of years have found refuge, sustenance, challenge, tragedy, and inspiration in the North Cascades.

### **6. Research & Education**

**Significance:** North Cascades NPS Complex provides educational and scientific opportunities that support the understanding and preservation of park resources and values while contributing to public enjoyment and understanding.

### *Fundamental Resources and Values:*

- 6.1 Access to Authentic Resources for Education – The complex provides a diverse array of access to authentic resources, including the Environmental Learning Center, staffed interpretive and educational facilities, publications, waysides and signs, museum collections, interpretive programs, and physical access.
- 6.2 Access to Authentic Resources for Science – The complex provides a diverse array of access to authentic resources. These include five Research Natural Areas, the research station, museum collections, and the Environmental Learning Center.
- 6.3 Partnerships – The complex maintains partnerships with public, private, and other non-profit groups for education and scientific research.



*North Cascades Institute's Environmental Learning Center at Diablo Lake.*

**Primary Interpretive Themes:** The North Cascades NPS Complex is a library, laboratory, and classroom which invites us to explore the natural world and our place within it.

**Primary Interpretive Theme on Climate Change:** Amidst the unequivocal scientific evidence that the planet's climate system is changing, Ross Lake NRA and its partners monitor resources (such as glaciers and wildlife populations) and ecosystem processes (such as climate and vegetation change) to identify trends that can help inform park management decisions in an uncertain future.

## 7. Wilderness Recreation

**Significance:** North Cascades NPS Complex provides the wilderness traveler great challenges of physical endurance, route-finding, and navigation through on- and off-trail hiking. The park contains climbing routes of high quality and aesthetic appeal guarded by remote, rugged terrain and volatile weather, resulting in mountaineering experiences of solitude, mental and physical challenge, and fulfillment.

### *Fundamental Resources and Values:*

7.1 Trails – A variety of trails with a range of challenges provide access to peaks and a diversity of wildland recreation opportunities, including the Pacific Crest National Scenic Trail and the Pacific Northwest National Scenic Trail.



Hikers walk the Panther Creek Trail.

7.2 Trailless Areas – Much of the complex is trailless, providing opportunities for wilderness exploration and solitude.

7.3 Variable Terrain – The mixed terrain of the complex, from flat valley floors and subalpine meadows to glaciers, snowfields, couloirs, and rock routes of solid gneiss and granite enriches mountaineering experiences.

**Primary Interpretive Themes:** Whether climbing the precipitous peaks or exploring the glacially carved valleys, travel in the Stephen Mather Wilderness provides superlative opportunities for personal challenge, exploration, and renewal in a setting where outcomes are uncertain.

## 8. Skagit River

**Significance:** The Skagit is the largest river draining into Puget Sound. Stable flows help make it the only Puget Sound tributary to host all native species of anadromous salmonids and one of the highest concentrations of wintering Bald Eagles in the lower 48 states.

### *Fundamental Resources and Values:*

8.1 Water Quality and Quantity – Fresh cold water is fed by glaciers, snowfields, groundwater, and seasonally abundant rainfall in the complex.

8.2 In-Stream and Riparian Habitat – In-stream and riparian habitats support an assemblage of terrestrial and aquatic species.

**Primary Interpretive Themes:** The mighty Skagit, a life sustaining river for native species and people, links the jagged peaks of the North Cascades to the lowlands of the Puget Sound.

## 9. Recreation

**Significance:** Ross Lake National Recreation Area provides a variety of high quality outdoor recreation opportunities, accommodating people with a wide range of interests and abilities.

### *Fundamental Resources and Values:*

9.1 Visitor Resources and Opportunities – The reservoirs, highway, wilderness, recreational infrastructure, cultural resources, and educational services provide diverse

experiences for visitors of different interests and abilities.

9.2 Accessible Opportunities – High quality opportunities for visitors with a range of abilities and diverse needs are provided that complement the natural setting, including trails, overlooks, campsites, and fishing platforms.

**Primary Interpretive Themes:** Ross Lake National Recreation Area offers inviting corridors for visitors to experience the grandeur and diversity of the North Cascades.

## 10. Water-Based Recreation

**Significance:** Ross Lake provides diverse water-based opportunities where visitors can experience the scenic reservoir amidst a mountain wilderness where small or non-motorized watercrafts characterize recreation in this serene setting.

### *Fundamental Resources and Values:*

- 10.1 Undeveloped Setting – Above Green Point, visitors experience a lake setting characterized by an undeveloped shoreline and surrounded by majestic mountain scenery that is almost entirely designated wilderness.
- 10.2 Limited Motorized Access – A primitive road minimizes vehicular access to the reservoir.
- 10.3 Lake Recreation – Ross Lake has high water quality and is a clear lake that has attracted generations of visitors for primitive, dispersed lakeshore camping, boating, and fishing.

**Primary Interpretive Themes:** The mountain wilderness serenity of Ross Lake attracts visitors to this unique, largely undeveloped reservoir.

## 11. Hydropower Landscape

**Significance:** Ross Lake NRA offers a relatively seamless transition between a utilitarian landscape and a remote wilderness.

### *Fundamental Resources and Values:*

11.1 Scale and Style of Development - The architectural style and scale of infrastructure that began with Seattle City Light's projects allowed for engineering accomplishments but also left a relatively undeveloped footprint beyond the hydroelectric infrastructure, enabling future development that would provide a national park experience in the North Cascades.

**Primary Interpretive Themes:** The story of creating one of the last great wilderness parks in the lower 48 states and the ongoing struggle about how to provide for wilderness preservation, a national park experience, and Seattle City Light's needs for hydropower development began with the creation of North Cascades NPS Complex and continued through the landmark FERC negotiation and settlement. The story continues today, as the needs for electricity, heritage preservation, and recreation evolve.



Ross Lake NRA provides diverse opportunities for water-based recreation.

## GUIDING PRINCIPLES FOR MANAGEMENT

The following principles are important in guiding the management of resources and values within the North Cascades NPS Complex:

1. Stewardship – North Cascades NPS Complex strives to use science in making informed decisions. This science-based stewardship advances our knowledge and appreciation of the North Cascades.
2. Partnerships – North Cascades NPS Complex views partnerships as integral for achieving the purposes of North Cascades National Park, Ross Lake NRA, and Lake Chelan NRA.
3. Trans-boundary Ecosystem Management – Through its relationship with the Skagit Environmental Endowment Commission and interactions with British Columbia Ministry of the Environment and other parties, the North Cascades NPS Complex is dedicated to the pursuit of cooperative trans-boundary activities focused on a wide range of visitor, resource, and operational issues.



View from Gorge Dam hydropower facility toward Newhalem.

# SPECIAL CONGRESSIONAL DESIGNATIONS, AUTHORIZATIONS, AND MANDATES

Special congressional designations, authorizations, and mandates are legal requirements and administrative commitments that apply to a specific unit of the National Park System. They are mandated by Congress or by signed agreements with other

entities that add another dimension to the park’s purpose and significance. Mandates include the designation of an area in the park as wilderness or as an area that is managed by another entity. Mandates may also commit park managers to specific actions and limit their ability to modify land use in the park, such as long-term cooperative agreements or easements. Special congressional designations, authorizations, and mandates for Ross Lake NRA are listed in Table 2.1.

**Table 2.1 Special Congressional Designations, Authorizations, and Mandates**

<b>Hunting and Fishing in Recreation Areas</b>	
<i>Public Law 90-544. Sec. 402 (d) dated 2 October 1968</i>	“The Secretary shall permit hunting and fishing on lands and waters under his jurisdiction within the boundaries of the Ross Lake National Recreation Area in accordance with applicable laws of the United States and of the State of Washington, except that the Secretary may designate zones where, and establish periods when, no hunting or fishing shall be permitted for reasons of public safety, administration, fish and wildlife management, or public use and enjoyment. Except in emergencies, any regulations of the Secretary pursuant to this section shall be put into effect only after consultation with the Department of Game of the State of Washington.”
<b>Road Construction</b>	
<i>Public Law 90-544. Sec. 402 (e) dated 2 October 1968</i>	The construction of roads for vehicular access along the east side of Ross Lake shall not be permitted.
<b>North Cascades Highway</b>	
<i>Public Law 90-544. Sec.503 dated 2 October 1968</i>	The State of Washington maintains rights and privileges over property within the Ross Lake National Recreation Area which is being utilized for the North Cascades Highway, also known as State Route 20 and the North Cross State Highway.
	The North Cascades Scenic Highway was designated a National Forest Byway in 1984 and a Washington State Scenic Byway in 1984.
<b>Federal Energy Regulatory Commission Authority</b>	
<i>Public Law 90-544. Sec.505 as amended by Public Law 100-668. Sec. 202 dated 16 November 1988</i>	The Federal Energy Regulatory Commission (formerly the Federal Power Commission) maintains jurisdiction for power production purposes over the lands and waters within the Skagit River Hydroelectric Project, FERC Project 553, including the proposed Copper Creek, High Ross Dam, and Thunder Creek elements of the Project; and the Newhalem Project, FERC Project 2705 within the Ross Lake National Recreation Area; and existing hydrologic monitoring stations necessary for the proper operation of the hydroelectric projects listed herein.
<b>Wilderness Designation</b>	
<i>Public Law 100-668. Sec. 201 dated 16 November 1988</i>	The Stephen Mather Wilderness was established to include approximately 635,000 acres of designated wilderness in the North Cascades National Park, Ross Lake National Recreation Area, and Lake Chelan National Recreation Area. Within Ross Lake NRA, over 80,000 acres are designated wilderness.
<b>Potential Wilderness Designation</b>	
<i>Public Law 100-668. Sec. 201 dated 16 November 1988</i>	Over 5,000 acres within Ross Lake NRA in the Big Beaver (1,554 acres) and Thunder Creek (3,559 acres) areas are designated potential wilderness.

**Table 2.1 Special Congressional Designations, Authorizations, and Mandates**

<b>Pacific Northwest National Scenic Trail</b>	
<i>Public Law 111-11, Omnibus Public Land Management Act of 2009, Title V, Subtitle C, Section 5205</i>	This section of the Act amends the National Trails System Act to designate the 1200 mile trail extending from the Continental Divide in Glacier National Park, Montana to the Pacific Coast in Olympic National Park. The trail is to be administered by the Secretary of Agriculture. A 60-mile segment of the Pacific Northwest Trail passes through North Cascades National Park and Ross Lake National Recreation Area.
<b>Research Natural Areas</b>	
<i>Director of the National Park Service to the Pacific West Regional Director, memo dated 22 May 1990</i>	<p>Research natural areas (RNAs) are administratively designated areas identified for prime examples of natural resources and processes.</p> <p>Two research natural areas have been designated with Ross Lake NRA. They include the Pyramid Lake RNA (164 acres) established in 1972 and the Big Beaver RNA (3356 acres) established in 1990.</p>
<b>High Ross Dam and Skagit Environmental Endowment Commission</b>	
<i>Skagit River Treaty dated 2 April 1984</i>	The Skagit River Treaty, also known as the High Ross Dam Treaty, solidified an agreement between Canada and the United States not to engage in construction of High Ross Dam, which would have raised the water level 125 feet and flooded large parts of British Columbia. The treaty was signed in 1984 and expires in 2066. In exchange for this, Seattle City Light was given the right to purchase electricity from British Columbia hydroelectric sources in amounts equal to the power that would have been generated by a higher Ross Dam. The treaty further bonded the two countries in the protection of this parkland by establishing the Skagit Environmental Endowment Fund of \$5 million for the enhancement of recreational opportunities in, and environmental protection of, the area above Ross Dam. The fund would be administered by a joint commission, known as the Skagit Environmental Endowment Commission.
<b>Skagit River Hydroelectric Project Settlement Agreement</b>	
<i>Federal Energy Regulation Commission Project Number 553, Settlement Agreement issued 16 May 1995</i>	The Skagit River Hydroelectric Project re-license was completed in accordance with a settlement agreement between Seattle City Light, the National Park Service, and others. The agreement allowed continued operations for Ross, Diablo, and Gorge hydroelectric projects and decided upon measures and appropriate funding to lessen environmental impacts resulting from these operations. The agreement provided \$11.5 million to the NPS for actions for fisheries, recreation and aesthetics, erosion control, wildlife, and cultural resources. To date, Seattle City Light has transferred approximately \$4 million to the NPS. The license is for 30 years.
<b>Newhalem Creek Hydroelectric Project</b>	
<i>Federal Energy Regulation Commission Project Number 2705-003, Order issuing new license 7 February 1997</i>	<p>The Newhalem Creek Hydroelectric Project occupies 6.56 acres in Ross Lake NRA. Infrastructure includes a small dam, tunnel, penstock, and powerhouse. The Newhalem Creek Project began operation in 1921 to provide power for construction of the Skagit River Hydroelectric Project and the company town at Newhalem. The Federal Energy Regulatory Commission issued Seattle City Light a new operating license for the Newhalem Creek Hydroelectric Project in 1997 for 30 years.</p> <p>The license includes many provisions and details regarding operation, maintenance, and mitigation for erosion control, anadromous fish, historic resources, and recreational facilities.</p>
<b>North Cascades Institute and Environmental Learning Center</b>	
<i>Skagit River Hydroelectric Project</i>	Under the conditions of the FERC re-license and settlement agreement for the Skagit River Hydroelectric Project, Seattle City Light would partner with the NPS and the

**Table 2.1 Special Congressional Designations, Authorizations, and Mandates**

<p><i>No. 553, Settlement Agreement on Recreation and Aesthetics, April 1991</i></p>	<p>North Cascades Institute to construct an environmental education facility as part of the mitigation package. As a result, North Cascades Institute, the National Park Service, and the City of Seattle joined together in a unique partnership. Seattle City Light funded the majority of construction completed in 2007 and owns the buildings. The campus exists on public lands managed by the National Park Service.</p> <p>Under terms of the agreement, North Cascades Institute outfits, maintains and operates the facility and offers Environmental Learning Center programs for all ages.</p>
<p><b>Ownership of the Skagit River Bed</b></p>	
<p><i>Washington State Constitution, Article XVII Tide Lands, Section 1.</i></p> <p><i>Office of the Regional Solicitor, Pacific Northwest Region, memo dated 23 March 2009</i></p>	<p>Title to the beds of navigable bodies of water passes to a state upon its admission to the Union. The Washington State Department of Natural Resources contends the Skagit River is a navigable river and therefore asserts title to the bed of the Skagit River within the boundaries of Ross Lake NRA. The NPS, however, retains the authority over control of the uses along the river.</p>
<p><b>Renewable Natural Resource Use in Recreation Areas</b></p>	
<p><i>Public Law 100-668. Sec. 205 dated 16 November 1988</i></p>	<p>“Within the Ross Lake National Recreation Area the removal and disposal of trees within power line rights-of-way are authorized as necessary to protect transmission lines, towers, and equipment; Provided, That to the extent practicable, such removal and disposal of trees shall be conducted in such a manner as to protect scenic viewsheds.”</p>
<p><b>Mineral Resource Use in Recreation Areas</b></p>	
<p><i>Public Law 100-668. Sec. 206 dated 16 November 1988</i></p>	<p>Lands within Ross Lake National Recreation, “subject to valid existing rights, are hereby withdrawn from all forms of appropriation or disposal under the public land laws, including location, entry, and patent under the United States mining laws, and disposition under the United States mineral leasing laws.”</p>
<p><b>Land Acquisition</b></p>	
<p><i>Public Law 90-544. Sec. 301 dated 2 October 1968</i></p>	<p>“Within the boundaries of the park and recreation areas, the Secretary of Interior may acquire lands, waters, and interests therein by donation, purchase with donated or appropriated funds, or exchange, except that he may not acquire any such interests within the recreation areas without the consent of the owner, so long as the lands are devoted to uses compatible with the purposes of this Act.”</p> <p>“Lands owned by the State of Washington or any political subdivision thereof may be acquired only by donation.”</p>
<p><i>Public Law 90-544. Sec. 302 dated 2 October 1968</i></p>	<p>“In exercising his authority to acquire property by exchange, the Secretary may accept title to any non-Federal property within the boundaries of the park and recreation areas and in exchange therefore he may convey to the grantor of such property any federally owned property under his jurisdiction in the State of Washington which he classifies as suitable for exchange or other disposal.”</p>
<p><i>Public Law 100-668. Sec. 203 dated 16 November 1988</i></p>	<p>“The Secretary is hereby authorized to acquire, with the consent of the owner, lands outside of the authorized boundaries of the North Cascades NPS Complex for the purpose of construction and operation of a backcountry information center not to exceed five acres. The Secretary of the Interior is further authorized to acquire with the consent of the owner, lands for the construction of a headquarters and administrative site or sites, for the North Cascades National Park, Ross Lake National Recreation Area, and Lake Chelan National Recreation Area not to exceed ten acres. The lands so acquired shall be managed as part of the park.”</p>

## DESIRED CONDITIONS AND POTENTIAL MANAGEMENT STRATEGIES DERIVED FROM LAWS, REGULATIONS, AND POLICIES

To fully understand the implications, limitations, or requirements of an alternative proposed in this general management plan and environmental impact statement, it is important to compare the servicewide laws and policies with the management actions described in the alternative. To facilitate this process, this section identifies what must be done at Ross Lake National Recreation Area to comply with applicable laws, regulations, and the policies. Management directives derived from these sources are summarized in two ways: as the desired conditions they set forth, and the potential management strategies park managers may employ to achieve them. ~~These are then used to assess the merits of alternatives during the planning process.~~

Many management directives for Ross Lake NRA are specified in laws, regulations, and policies guiding the National Park Service and therefore are not subject to alternative approaches. For example, there are laws and policies about managing environmental quality, such as the Clean Air Act and the Endangered Species Act; laws governing the preservation of cultural resources and cultural values, such as the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act; and laws about providing public services, such as the Americans with Disabilities Act—to name only a few. In other words, a general management plan is not needed to decide, for instance, that it is appropriate to protect endangered species, control non-native species, protect archeological sites, conserve artifacts, or provide for universal access— laws and policies already require the National Park Service to fulfill these mandates. The National Park Service would continue to strive to implement these requirements with or without a new general management plan.

Some laws and executive orders are applicable solely or primarily to units of the National Park System. These include the 1916 Organic Act that created the National Park Service; the General Authorities Act of 1970; the National Parks and Recreation Act of 1978, relating to the management of the National Park System; and the National Parks Omnibus Management Act (1998). Other laws and executive

The NPS Organic Act provides the fundamental management direction for all units of the National Park System. It states, “The National Park Service shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations... by such means and measure as conform to the fundamental purpose of said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

orders, such as those addressing environmental quality, have much broader application.

The National Park System General Authorities Act affirms that while all National Park System units remain “distinct in character,” they are “united through their interrelated purposes and resources into one National Park System as cumulative expressions of a single national heritage.” The act makes it clear that the NPS Organic Act and other protective mandates apply equally to all units of the system. Further, the Redwood Act of 1978 states that NPS management of park units should not “derogat[e]...the purposes and values for which these various areas have been established.” The National Park Service also has established policies for all units under its stewardship. These are identified and explained in a guidance manual entitled *NPS Management Policies 2006*. The alternatives considered in this document incorporate and comply with the provisions of these mandates and policies.

The most pertinent servicewide laws and policy topics related to planning and managing Ross Lake NRA are examined below. For each topic there are a series of desired conditions that the Ross Lake NRA staff is achieving, and will continue to strive to achieve, for that topic. The law or policy behind these desired conditions is cited, and examples of the types of actions being pursued by NPS staff are given. The alternatives in this general management plan and environmental impact statement address the desired future conditions that are not mandated by law and policy and must be determined through a planning process.

## Natural Resources

### Ecosystem Functions and Processes

*Law and Policy Source* — NPS *Management Policies 2006* (§1.5, 4, 4.1, 4.1.4, 4.4.1) provides general direction for managing park units from an ecosystem perspective.

#### *Desired Conditions:*

- Ross Lake NRA is managed holistically, as part of a greater ecological, social, economic, and cultural system.
- Ross Lake NRA develops and maintains a current land protection plan that identifies means of protection available to achieve the purposes for which Ross Lake NRA was created.
- Managers seek to maintain all components and processes of naturally evolving park ecosystems. Natural disturbance and change are recognized as an integral part of the functioning of natural systems.
- Through partnerships and cooperative agreements, Ross Lake NRA staff works with other land managers in the greater North Cascades ecosystem to accomplish mutual objectives for providing wildlife corridors, protecting biodiversity and key habitats, etc.
- In collaboration with landowners inside and outside Ross Lake NRA, viewsheds within and adjacent to the park are protected.
- Ross Lake NRA provides benchmarks or “control” conditions for studies of ecosystem processes in (largely) unmanipulated landscapes, helping to determine Ross Lake NRA’s own resource preservation goals and those of adjacent lands.
- Natural processes of ecosystem disturbance and change function unimpeded and are altered only as needed to provide for visitor and staff safety and access, to protect park facilities in developed areas, and to maintain cultural landscapes.
- “Purification services” provided by park ecosystems are protected and maintained, thus helping to provide clean air and water for park resources and the surrounding area; soil and water resources are free of contaminants.
- Ecosystems and habitats damaged by human activities or non-native species are restored; future development avoids sensitive habitats and dynamic areas prone to natural disturbances, if possible.

### *Potential Management Strategies:*

- Participate in collaborative planning efforts with adjacent land managers and tribal governments to identify common goals, pursue solutions, and build joint data sets through information sharing.
- Prepare a land protection strategy for Ross Lake NRA.
- Maintain intact ecological functions in keystone habitats.
- Restore habitats and disturbance regimes that have been altered in Ross Lake NRA while balancing needs to conserve threatened and endangered species, maintain existing critical facilities and road access, and provide for public safety.
- Protect and, as necessary, restore the natural cycling of nutrients in damaged ecosystems and habitats.
- Provide interpretive and educational programs about ecosystem processes, “ecological services,” and methods to sustain these.

### Fire Management

*Law and Policy Source* — NPS *Management Policies 2006* (§4.5); Federal Wildland Fire Management Policy; Director’s Order 41, “Wilderness Preservation and Management;” and Director’s Order 18, “Wildland Fire Management” and accompanying Reference Manual 18 provide guidance on the basic principles and strategic guidelines governing the management of wildland fire by the NPS.

#### *Desired Conditions:*

- Fire management programs are designed to meet resource management objectives prescribed for the various areas of Ross Lake NRA and to ensure that the safety of firefighters and the public are not compromised.
- All wildland fires are effectively managed, considering resource values to be protected and firefighter and public safety, using the full range of strategic and tactical operations as described in an approved fire management plan.
- Natural fire regimes are restored and maintained but will be modified to comply with air quality regulations and/or to protect listed species, cultural resources, and the safety of life and property.

- The best available technology and scientific information are used to manage fire within Ross Lake NRA, to conduct routine monitoring to determine if objectives are met, and to evaluate and improve the fire management program.
- Hazard fuel reduction efforts protect structures, wildland-urban interface areas, and cultural resources where appropriate and necessary.
- Ross Lake NRA managers develop a comprehensive cross-boundary fire management plan with adjacent land managers, recognizing fire as a natural process that does not acknowledge administrative boundaries.
- Minimum requirement methods and tools are used to manage fires in wilderness.
- Other fire management program goals and objectives from the 2007 Fire Management Plan for North Cascades NPS Complex include: the natural role of fire is maintained to the maximum extent possible in designated zones; unplanned, human caused ignitions are suppressed; and forest composition in selected areas where natural ecosystems have been altered by fire suppression and other human activities are restored and maintained.

#### *Potential Management Strategies:*

- Maintain a current fire management plan to reflect the most recent wildland fire policy, managed fire applications, and the body of knowledge on fire effects within the unit's vegetation types.
- Maintain cooperative agreements for fire suppression with appropriate federal, tribal, state, and local agencies and organizations.
- Monitor individual prescribed fires to provide information on whether specific objectives regarding smoke behavior, fire effects, etc. are met.
- Conduct fire history research and other studies to describe Ross Lake NRA's natural fire regime.
- Conduct research and monitor the effects of fires in Ross Lake NRA to ensure that long-term resource objectives are met.
- Use fire as a management tool to maintain native plant communities and control invasive, non-native species.
- Provide information to visitors about the role of fire in northwest ecosystems.

## **Air Quality**

*Law and Policy Source* — The Clean Air Act (42 USC 7401 et seq.) gives federal land managers the responsibility for protecting air quality and related values, including visibility, plants, animals, soils, water quality, cultural resources, and public health, from adverse air pollution impacts. *NPS Management Policies 2006* (§4.7) and “Natural Resource Management Reference Manual #77” provide further direction on the protection of air quality and related values for park units. Ross Lake NRA is a Class II air quality area under the Clean Air Act.

#### *Desired Conditions:*

- Air quality in Ross Lake NRA meets national ambient air quality standards for specified pollutants; air quality is maintained or improved with little or no deterioration.
- Visibility is excellent, such that scenic views, including integral vistas and views of landscapes within and outside Ross Lake NRA are clear and meet visibility standards.
- Ross Lake NRA management and visitor service activities promote preservation of excellent air quality, including healthful indoor air quality in NPS and concession facilities.
- Views from Ross Lake NRA overlooks, integral vistas, and scenic stops are not obstructed or marred by air pollution for most of each year.
- Air quality monitoring within or near Ross Lake NRA is able to verify whether trends are improving or deteriorating, and whether Class II air quality standards are met within Ross Lake NRA.

#### *Potential Management Strategies:*

- Cooperate with local air pollution control authorities, the Washington Department of Ecology, and EPA to monitor air quality and visibility and ensure that these authorities maintain high-quality characteristics consistent with EPA, state, and local standards.
- Inventory and monitor air quality-related values associated with Ross Lake NRA. Establish baseline conditions for and monitor native plants or other species that may be sensitive indicators of air pollution.
- Evaluate air pollution impacts, and identify causes.

- Participate in federal, regional, and local air pollution control plans and drafting of regulations, and review permit applications for major new air pollution sources that may affect Ross Lake NRA.
- Through timing and appropriate equipment, minimize air quality pollution emissions associated with Ross Lake NRA operations and visitor use activities. Use and demonstrate sustainable practices and pollution prevention measures in operations. Use best available practices and technologies to provide healthful indoor air quality at NPS and concession facilities.
- Form regional partnerships to develop alternative transportation systems and promote clean fuels.
- Provide information regarding air quality and related values to visitors.
- Conduct and assist research on air quality to learn about effects of local and long-range atmospheric deposition on plants, soils, and wetlands within Ross Lake NRA. Determine changes in ecosystem function caused by atmospheric deposition and assess the resistance and resilience of native ecosystems to the effects of air pollution.

## Natural Soundscapes

*Law and Policy Source* — NPS *Management Policies 2006* (§4.9) and NPS Director’s Order 47, “Sound Preservation and Noise Management” require park managers to strive to preserve the natural soundscape associated with the physical and biological resources, such as the sounds of the wind in the trees.

### *Desired Conditions:*

- The National Park Service preserves the natural ambient soundscapes, restores degraded soundscapes to the natural ambient condition wherever possible, and protects natural soundscapes from degradation due to human-caused noise.
- Noise from management or recreational uses is minimized to provide a high-quality visitor experience and protect biological resources and processes that involve natural sounds (for example: species that use sound to attract mates, protect territories, locate prey, navigate, or avoid predators).
- Park and concession facilities use best available technology and methods to minimize or mitigate artificial noises

produced by equipment and management activities.

- Visitors have opportunities to experience and understand natural soundscapes.
- Ross Lake NRA maintains an inventory of ambient sound levels and, as feasible, monitors key locations for maintaining natural soundscapes.
- Ecological interactions that depend upon or are affected by sound are protected.

### *Potential Management Strategies:*

- Monitor and prevent or minimize unnatural sounds that adversely affect resources or values or visitors’ enjoyment of them.
- Require NPS staff, concessioners, contractors, and tour bus companies to comply with measures designed to reduce noise levels.
- Minimize noise generated by NPS management activities by moderating administrative functions such as the use of motorized equipment.
- Use best technologies and methods to minimize noise when procuring or using equipment.
- Encourage visitors to avoid unnecessary noise, such as minimizing the use of generators and maintaining quiet hours in the campgrounds.
- Provide interpretive programs and materials to help visitors understand the role and value of natural soundscapes and the current adverse noise levels associated with motor vehicle use along the North Cascades Highway.

## Lightscaapes and Night Skies

*Law and Policy Source* — NPS *Management Policies 2006* (§4.10) recognizes that natural lightscaapes are natural resources and values that contribute to the visitor experience. The policy further states that the NPS staff will seek to minimize the intrusion of artificial light into the night scene. In natural areas, artificial outdoor lighting will be limited to meet basic safety requirements and will be shielded when possible.

### *Desired Conditions:*

- Natural darkness and other components of the natural lightscape in Ross Lake NRA are protected.

- The National Park Service will seek the cooperation of park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial light into the night scene within Ross Lake NRA.
- Ross Lake NRA's inventory of natural resources identifies ecological processes or components that uniquely depend upon or are affected by nighttime light.
- Artificial light sources in developed areas are designed to prevent light pollution.
- Throughout a majority of Ross Lake NRA, visitors have opportunities to experience dark night skies free of light pollution.

#### *Potential Management Strategies:*

- Cooperate with park visitors, neighbors, and local government agencies to find ways to prevent or minimize the intrusion of artificial light into the night scene in Ross Lake NRA.
- In developed areas, artificial outdoor lighting will be limited to basic safety requirements and will be designed to minimize impacts on the night sky.
- NPS staff will evaluate the impacts on the night sky caused by NPS operations. If light sources in Ross Lake NRA are affecting night skies, the staff will consider alternatives such as shielding lights, changing lamp types, or eliminating unnecessary sources.
- Interpretive programs and materials will be provided to help visitors understand the role and value of natural lightscape.

#### **Scenic Resources**

*Law and Policy Source* — NPS Organic Act and *NPS Management Policies 2006* (§1.4, 1.6, 3.1) call for the NPS to conserve and protect scenery and scenic vistas.

#### *Desired Conditions:*

- The scenic views at Ross Lake NRA continue to stir imaginations, inspire, and provide opportunities for visitors to understand, appreciate, and forge personal connections to the North Cascades.
- Intrinsically important scenic vistas and scenic features are not significantly diminished by development.

#### *Potential Management Strategies:*

- NPS staff will work with adjacent and nearby landowners to minimize any visual impacts from nearby developments and to ensure that developments do not encroach on Ross Lake NRA.

#### **Water Resources**

*Law and Policy Source* — *NPS Management Policies 2006* (§4.6.1, 4.6.2) calls for the NPS to perpetuate surface and groundwater as integral components of park aquatic and terrestrial ecosystems. “Natural Resource Management Reference Manual #77” provides further direction on the management of water quantity on parks, stating the NPS will manage and use water to protect resources, accommodate visitors, and administer park units within legal mandates. The Clean Water Act strives to restore and maintain the integrity of U.S. waters, which includes waters found in the recreation area. Other law and policy guidance includes the Rivers and Harbors Act; Executive Order 11514, “Protection and Enhancement of Environmental Quality;” and Executive Order 12088, “Federal Compliance with Pollution Control Standards.”

#### *Desired Conditions:*

- Surface water and groundwater are protected, and water quality meets or exceeds all applicable water quality standards.
- NPS and NPS-permitted programs and facilities are maintained and operated to avoid pollution of surface water and groundwater.
- Water resources in Ross Lake NRA meet or exceed all federal and state water quality standards for temperature, bacteria, dissolved oxygen, turbidity, toxic substances, pH, and nutrients.
- Pollution prevention and protection of water quality to meet the needs of aquatic organisms are priorities.
- Almost all NRA water resources meet state criteria for “outstanding resource waters.”

#### *Potential Management Strategies:*

- For waters in Ross Lake NRA, or affecting resources, work with appropriate agencies and partners to determine minimum flow needs and to attain the highest possible water quality standards available under the Clean Water Act.

- Develop and implement an environmental management plan, which includes pollution prevention and environmental best management practices.
  - Promote water conservation by the National Park Service, partners, visitors, and park neighbors.
  - Apply best management practices to all pollution-generating activities and facilities in Ross Lake NRA. Take positive steps to reduce such activities.
  - Minimize the use of pesticides, fertilizers, and other chemicals, and manage them in keeping with NPS policy and federal regulations.
  - Monitor water flows and water quality in selected areas.
  - In selected NRA waters, conduct water quality monitoring and research to target detection of change from atmospheric input.
  - Manage stormwater runoff appropriately.
  - Promote greater public understanding of water resource issues at Ross Lake NRA, and encourage public support for and participation in protecting watersheds.
- ♦ uses nonstructural measures as much as practicable to reduce hazards to human life and property while minimizing impacts on the natural resources of floodplains
  - ♦ ensures that structures and facilities are designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR 60)
- The most current engineering methods and techniques that minimize adverse effects on natural river processes are used to protect roads and facilities located in floodplains.
  - Visitors understand the dynamic nature of Ross Lake NRA's river systems, and the variability and cycles of river flow, flooding, etc.

#### *Potential Management Strategies:*

- Identify 100-year and 500-year floodplains and any administrative, maintenance, operational, or visitor facilities located within them.
- Inventory flood-prone areas near facilities and roads, and develop a program to protect these using the most current techniques that minimize adverse effects on aquatic and riparian habitats and fluvial processes.
- Work with area partners, including tribes, federal, state, and county agencies, and others, to develop restoration plans for at risk river systems. Use current technologies, over time, to restore or improve floodplain and riparian functions altered in the past by bank-hardening techniques.
- In wilderness, natural river processes will be allowed, insofar as possible, to shape and control wilderness ecosystems, and management intervention should only be undertaken to the extent necessary to correct past mistakes, the impacts of human use, and influences originating outside of wilderness boundaries, using the minimum requirement concept.
- If facilities are damaged or destroyed by a hazardous or catastrophic natural event, thoroughly evaluate options for relocation or replacement by new construction at a different location. If a decision is made to relocate or replace a severely damaged or destroyed facility, it will be placed, if practicable, in an area believed to be free from natural hazards.

### **Wild and Scenic Rivers, Rivers and Floodplains**

*Law and Policy Source* — The Wild and Scenic Rivers Act (Act), passed in 1968, protects the free-flowing waters of many of our nation's greatest rivers, while also recognizing the potential for appropriate use and development. The Act ensures the public's enjoyment of the river and its resources for present and future generations. Floodplains are protected and managed in accordance with Executive Order 11988, "Floodplain Management;" NPS Director's Order 77-2 and its accompanying procedural manual; and NPS *Management Policies 2006* (§4.6.4).

#### *Desired Conditions:*

- Natural floodplain conditions are preserved or restored.
- Long-term and short-term environmental effects associated with the occupancy and modification of floodplains are avoided when practicable.
- When it is not practicable to locate or relocate development or inappropriate human activities to a site outside the floodplain, the National Park Service :
  - ♦ prepares and approves a statement of findings in accordance with Director's Order #77-2

- Prepare evacuation plans for facilities in flood hazard areas.
- Protect shoreline areas that provide spawning, feeding, and rearing habitats for fish, and support rare aquatic plant species. During drought or other conditions warranting greater resource protection, this may involve occasional seasonal closures of specific areas.
- Provide information to visitors regarding river processes and natural flooding regimes.
- When emergency situations occur, consult with traditionally associated tribes to evaluate the potential impact of the proposal and consider tribal views in the decision-making process. Protocols for consultation would be developed when needed.
- Manage significant historic properties to protect cultural and scientific values and to educate the public about the river's cultural history.
- “Keystone” species (such as beavers) that sustain and depend upon wetland habitats occur in natural distribution and sustainable numbers.
- Park visitors have the opportunity to learn about and understand the unique services and functions provided by wetlands.
- Wetlands near developed areas remain unaffected by maintenance of park or concession facilities or management or recreational activities.
- Wetlands adversely affected by prior human activity are restored where feasible.

#### *Potential Management Strategies:*

- Wetlands within Ross Lake NRA are inventoried and their conditions monitored. The distinct functions they perform are identified.
- Locate any new facilities, or relocate existing facilities, to avoid or restore wetlands if feasible. If avoiding wetlands is not feasible, undertake other actions to comply with Executive Order 11990, “Protection of Wetlands;” the Clean Water Act; and Director’s Order 77-1, “Wetland Protection,” such as compensation.
- Prepare a statement of findings if proposed actions would result in adverse impacts on wetlands, including an analysis of alternatives, delineation of the wetland, a wetland restoration plan, mitigation, and a functional analysis of the impact site and restoration sites.
- Conduct systematic surveys of watersheds within Ross Lake NRA to complete wetland inventories and include this information in the planning, management, and protection of wetlands.
- Encourage the use of wetlands for educational and scientific purposes that do not disrupt natural wetland functions.
- Participate in collaborative planning efforts with adjacent land managers and tribal governments to protect and restore wetlands within and outside the boundaries through cooperative conservation strategies.

## **Wetlands**

*Law and Policy Source* — Wetlands are protected and managed in accordance with the Clean Water Act; Rivers and Harbors Act; Executive Order 11514, “Protection and Enhancement of Environmental Quality;” Executive Order 11990, “Protection of Wetlands;” NPS-77, “Natural Resource Management Guidelines;” NPS Director’s Order 77-1, “Wetland Protection” and its accompanying procedural manual; and NPS *Management Policies 2006* (§4.6.5).

#### *Desired Conditions:*

- Natural and beneficial conditions of wetlands are preserved and enhanced.
- The National Park Service implements a “no net loss of wetlands” policy and strives to achieve a longer-term goal of net gain of wetlands across the National Park System through the restoration of previously degraded wetlands.
- To the extent possible, the National Park Service avoids long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoids direct or indirect support of new construction in wetlands wherever there is a practicable alternative.
- The National Park Service compensates for remaining unavoidable adverse impacts on wetlands by restoring wetlands that have been previously degraded.

## **Geologic and Soil Resources**

*Law and Policy Source* — NPS *Management Policies 2006* (§4.8) and NPS-77, “Natural Resources Management Guidelines” provide general direction on the protection of geologic and soil resources,

including geologic features and geologic processes. Other pertinent laws and policies include the 1988 Federal Cave Resources Protection Act and 1976 Mining in the Parks Act.

***Desired Conditions:***

- Ross Lake NRA’s geologic resources are preserved and protected as integral components of its natural systems.
- The National Park Service actively seeks to understand and preserve the soil resources of Ross Lake NRA, and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or the soil’s contamination of other resources.
- Natural soil resources and processes function in as natural a condition as possible, except where special considerations are allowable under policy.
- Monitoring and research programs assess conditions and trends in Ross Lake NRA’s geoindicators, particularly those that are both important to Ross Lake NRA’s ecosystem and management and subject to human influence (such as glaciers, sea level and shoreline position, groundwater chemistry, streamflow, stream channel morphology, sediment load, slope failures, and erosion).
- Surficial geology is mapped for priority areas and critical habitats.

***Potential Management Strategies:***

- Assess human impacts to geologic and soil resources and restore as warranted.
- Monitor and inventory geologic hazards for Ross Lake NRA.
- Develop and maintain staff to inventory, monitor, and manage geologic resources.
- Implement the Natural Resource Challenge (a NPS initiative to enhance natural resource stewardship for national park units) and obtain soils and surficial geology inventories.
- Develop long-range plans that minimize infrastructure–resource conflicts (e.g. roads and rivers).
- Protect natural erosion rates as a key to the creation of new riparian habitat.
- Develop interpretation and management plans to address geologic and soil research and monitoring.
- Update geologic history of Ross Lake NRA, using modern theory and techniques.

- Update geologic interpretations at interpretive stops or displays.
- Identify interpretive themes or other opportunities for interpreting the notable geologic events or processes that are preserved, exposed, or occur in Ross Lake NRA.
- Prevent or minimize adverse, potentially irreversible impacts to soils from pollutants, compaction, etc. Possibly implement soil conservation and soil amendment practices to reduce impacts, and import clean off-site soil, or use soil amendments, as necessary to restore damaged sites.
- Minimize soil excavation, erosion, and off-site soil migration during and after any ground-disturbing activity.
- Consider agreements with the Washington State Department of Transportation and Seattle City Light for best management practices.
- Survey areas of Ross Lake NRA with soil resource problems and take actions appropriate to the management prescription to prevent or minimize further erosion, compaction, or deposition. See Skagit Project Erosion Control Plan.
- Apply effective best management practices to problem soil erosion and compaction areas in a manner that stops or minimizes erosion, restores soil productivity, and reestablishes or sustains a self-perpetuating vegetative cover.
- Limit construction in previously undisturbed locations in Ross Lake NRA.

**Native Species**

*Law and Policy Source* — NPS *Management Policies 2006* (§4.4) calls for the National Park Service to maintain natural ecosystems in parks and to restore native plant and animal populations. “Natural Resource Management Reference Manual #77” also provides general direction on the restoration of natural resources for Ross Lake NRA.

***Desired Conditions:***

- The National Park Service maintains, as parts of the natural ecosystem, all native living organisms within Ross Lake NRA, including all five of the commonly recognized kingdoms of living things (encompassing flowering plants, ferns, mosses, lichens, algae, fungi, bacteria, mammals, birds, reptiles, amphibians, fishes, etc.).

- The National Park Service strives to protect the full range of genetic types (genotypes) of native plant and animal populations by perpetuating natural evolutionary processes and minimizing human interference with evolving genetic diversity.
- The National Park Service strives to restore extirpated native plant and animal species to parks when specific criteria are met regarding habitat availability, safety, genetic type, and reason for extirpation.
- Ross Lake NRA provides naturally evolving examples of plant and animal communities.
- Animal and plant populations in Ross Lake NRA are managed to promote long-term viability, including maintaining diverse age-structures, abundance, density and distributions within normal ranges, and a full range of natural genetic variability.
- Effects of native diseases and pests are within normal range of variation and are not worsened by human-caused factors.
- In cooperation with other agencies and tribal governments, preserve healthy populations and provide safe migratory corridors for wide-ranging wildlife populations such as black bear, grizzly bear, wolves, wolverines, and fisher.
- Protect Ross Lake NRA's biotic communities from impacts due to human activities and facilities while ensuring that visitors have ample opportunity to visit and enjoy these ecosystems.

### **Invasive, Non-native Species**

*Law and Policy Source* — *NPS Management Policies 2006* (§4.4) calls for the National Park Service to maintain natural ecosystems in parks and to restore native plant and animal populations. “Natural Resource Management Reference Manual #77” also provides general direction on the restoration of natural resources for Ross Lake NRA. Executive Order 13112, “Invasive Species” provides direction for the management of invasive, non-native species.

### **Potential Management Strategies:**

- Complete inventory of the plants and animals in Ross Lake NRA; regularly monitor the distribution and condition of selected species that indicate ecosystem condition and diversity.
- Develop and implement restoration plans for extirpated species (such as grizzly bear and fisher), subject to meeting all five criteria required by *NPS Management Policies 2006* for restoring native species (§ 4.4.2.2).
- Restore native biological communities and habitats. Minimize human impacts on native species, ecosystems, and the processes that sustain them.
- Review Washington State Department of Fish and Wildlife fishing regulations annually, and recommend revisions as necessary to protect fish and wildlife populations.
- Continue to prohibit stocking of invasive, non-native fish species or enhancement of non-native fish populations.
- Preserve genetic diversity by maintaining the abundance of unique populations at or above levels necessary for genetic variability.
- Promote harvest and management practices that protect wild salmonids. Work with area fisheries managers to implement escapement levels necessary to achieve the full role of anadromous fish in the ecosystem.

### **Desired Conditions:**

- Populations of invasive, non-native plant and animal species are managed, including eradication wherever such species threaten park resources or public health and when control is prudent and feasible.
- Ecosystems are free of non-native species where feasible, with the exception of noninvasive species that are documented as innocuous, and are a contributing element of a cultural landscape (as defined by the Secretary of the Interior's Standards).
- Particularly sensitive habitats in Ross Lake NRA, including those containing endemic or rare species, are maintained free of non-native species.

### **Potential Management Strategies:**

- Complete an inventory of plants, animals, and, as feasible, other organisms in Ross Lake NRA, and regularly monitor the distribution and condition of selected species, including invasive, non-native species.
- Participate in regional efforts to assess threats and develop mitigation strategies for aquatic invasive species, such as quagga and zebra mussels.
- Study the environmental and ecological effects of non-native species to assess threats,

prioritize management actions, and prevent introduction and establishment of non-native species.

- Monitor the condition of native species, populations, and communities that may be vulnerable to non-native and potentially catastrophic diseases or organisms such as West Nile virus, whitebark pine blister rust, balsam and hemlock woolly adelgid, etc. Implement management programs to prevent, and develop a long-term program to reverse, the destructive effects of invasive, non-native species.
- Manage exclusively for native plant species in wilderness management zones; in other management zones, limit planting of non-native species to non-invasive, innocuous plants that are justified by the historic scene or operational needs.
- Control or eliminate invasive non-native plants, animals, diseases, and pest species where there is a reasonable expectation of success and sustainability. Base control efforts on:
  - ♦ the potential threat to legally protected or uncommon native species and habitats
  - ♦ the potential threat to visitor health or safety
  - ♦ the potential threat to scenic and aesthetic quality
  - ♦ the potential threat to common native species and habitat
- Implement management actions in Ross Lake NRA in a manner that minimizes the introduction or increase in invasive non-native species, both number and type.
- Work in cooperation with agencies, tribes, and local communities on invasive, non-native species control.
- Provide interpretive and educational programs on the preservation of native species.

### Rare, Threatened and Endangered Species

*Law and Policy Source* — Under the Endangered Species Act, the National Park Service is mandated to promote the conservation of all federal threatened and endangered species and their critical habitats within park unit boundaries. *NPS Management Policies 2006* (§ 4.4.2.3) also calls for the agency to survey, protect, and strive to recover all species native to park units that are listed under the Endangered Species Act. In addition, the National Park Service

is directed to inventory, monitor, and manage state-listed species in a manner similar to the treatment of federally listed species, to the greatest extent possible.

### *Desired Conditions:*

- Federally listed and state-listed threatened and endangered species and their habitats are protected and sustained.
- Native threatened and endangered species populations that have been severely reduced in or extirpated from the unit are restored where feasible and sustainable.
- Threatened, endangered, or otherwise imperiled species in Ross Lake NRA show increasing trends in their population, leading to improvement in the species' status and ultimately, to recovery. State and federally listed wildlife populations are stable or increasing, as measured by recovery goals outlined in species recovery plans required for all listed species.
- Habitats that support or are suitable for sensitive, rare, endemic, or listed species are protected.
- Visitors learn about species in Ross Lake NRA that are listed under the Endangered Species Act as well as actions that may assist their recovery.

### *Potential Management Strategies:*

- Support research that contributes to knowledge of rare and listed species and their habitat. Incorporate findings in interpretive and education programs.
- Inventory rare or listed species in Ross Lake NRA and regularly monitor their distribution, condition, and population trends; modify management plans to be more effective based on the results of monitoring.
- Manage designated critical habitat, essential habitat, and recovery areas to maintain and enhance their value for listed species.
- Consult with the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA) Fisheries to ensure that NPS actions comply with the Endangered Species Act.
- Implement management actions in Ross Lake NRA in a manner that minimizes the potential adverse effect on listed species and their habitat.
- Participate in the recovery planning process when appropriate. Cooperate with the U.S.

Fish and Wildlife Service and NOAA Fisheries to implement recovery plans approved by those agencies for listed species found in Ross Lake NRA.

- To the greatest extent possible, inventory, monitor, and manage state and locally listed species in a manner similar to federally listed species.
- Work with neighboring land and resource managers to obtain information on status and trends of little known, but potentially at-risk wildlife species, such as wolf, wolverine, fisher, lynx, peregrine falcon, and common loon.
- Provide information to visitors regarding listed species that occur in Ross Lake NRA and measures to promote their recovery.

## Cultural Resources

### Archeology

*Law and Policy Source* — The Antiquities Act of 1906; Historic Sites Act of 1935; National Historic Preservation Act; Archeological Resources Protection Act; Executive Order 11593, “Protection and Enhancement of the Cultural Environment;” *Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation*; Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act (2008); NPS *Management Policies 2006* (§5.3.5.1); and Director’s Order 28, “Cultural Resource Management Guideline” call for the National Park Service to manage archeological resources in situ unless physical disturbance is justified and mitigated by data recovery or other means in concurrence with the Washington State Historic Preservation Officer. (See also 36 CFR Part 79 and the *Secretary of the Interior’s Standards and Guidelines for Archeological Documentation*.) In addition, management of archeological sites along the reservoirs is conducted in partnership with the City of Seattle, pursuant to conditions specified in the City’s 30-year license issued by the Federal Energy Regulatory Commission (FERC project No. 553), set to expire in 2025. Ross Lake archeological resources are currently managed in compliance with the Archeological Resources Mitigation and Management Plan which is in the stages of final approval and has been reviewed by the Skagit River tribes.

### *Desired Conditions:*

- Archeological sites are identified and inventoried, and their significance is determined and documented.
- Archeological sites are protected in an undisturbed condition unless it is determined through formal processes that disturbance or natural deterioration is unavoidable.
- When disturbance or deterioration of an eligible property is unavoidable, the site is professionally documented and excavated, and the resulting artifacts, materials, and records are curated and conserved in consultation with the Washington State Historic Preservation Office, the three Skagit River tribes (Upper Skagit, Sauk-Suiattle, and Swinomish), and Seattle City Light (the latter only in those sites managed under FERC relicense No. 553).
- Some archeological sites that can be adequately protected may be interpreted to the visitor.
- Archeological site baseline data are available. Site conditions are monitored to record changes in resource conditions as a result of environmental conditions or visitor use impacts.
- To the extent feasible, archeological resources degraded from environmental conditions and visitor impacts are mitigated through data recovery or other appropriate site treatment techniques.
- Archeological resources threatened by project development are mitigated first through avoidance or secondly through other preservation strategies such as data recovery.

### *Potential Management Strategies:*

- Manage archeological properties in compliance with the Ross Lake Archeological Resources Mitigation and Management Plan for the effective period of the FERC No. 553 license issued to the City of Seattle.
- Gather field data regarding rock shelters, lithic scatters, hunting camps, and other resource types to develop an accurate predictive model of prehistoric site distribution and to address related research questions.
- Inventory, evaluate, and manage archeological resources that reflect late 19th and early 20th century activities. These could include mining sites, homestead sites, resort sites,

cabin remains, associated trash dumps, as well as forest and NPS developments. National Register-eligible resources will be documented and listed.

- As needed on a case by case basis, monitor sites monthly, annually, or biannually.
- Educate visitors on regulations governing protection and conservation of archeological resources.
- Document, track, and prosecute for violations of cultural resource laws.
- Survey and inventory archeological sites throughout Ross Lake NRA; determine and document their significance.
- Treat all archeological resources as eligible for listing on the National Register of Historic Places pending a formal determination of eligibility.
- Maintain new site data and update in the Archeological Sites Management Information System and assess site eligibility according to National Register criteria.

## Historic Structures

*Law and Policy Source* —The Antiquities Act of 1906; National Historic Preservation Act; Executive Order 11593, “Protection and Enhancement of the Cultural Environment;” *Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation*; Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act (2008); and The National Historic Preservation Act call for analyzing the effects of possible federal actions on historic structures on, or eligible for, the National Register and for inventorying and evaluating their significance and condition. *NPS Management Policies 2006* (§5.3.5.4) calls for the treatment of historic structures, including prehistoric ones, to be based on sound preservation practice to enable the long-term preservation of a structure’s historic features, materials, and qualities. (See also the *Secretary of the Interior’s Standards for the Treatment of Historic Properties* and Director’s Order 28, “Cultural Resource Management Guideline.”)

### *Desired Conditions:*

- Historic structures are inventoried and their significance and integrity are evaluated under National Register of Historic Places criteria.

- The qualities that contribute to the listing or eligibility for listing of historic structures on the National Register are protected in accordance with the *Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation*, unless it is determined through a formal process that disturbance or natural deterioration is unavoidable.
- Laws pertaining to historic preservation remain applicable within wilderness but must be generally administered to preserve the area’s wilderness character.
- The historic character of historic structures are managed in accordance with Section 5.3.5.4 of *NPS Management Policies 2006*.
- Historic structure inventories and reports are prepared, and existing reports are amended as needed. Actions identified in historic structure reports are implemented, and a record of treatment are added to the reports.
- Identified and evaluated historic structures are monitored, inspected, and managed to enable the long-term preservation of a resource’s historic features, qualities, and materials.

### *Potential Management Strategies:*

- Employ the comprehensive maintenance, protection, and preservation measures in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties*. For properties lacking specific plans, preservation actions would be based on the Secretary’s Standards and NPS policy and guidelines. Treat all historic structures as eligible for listing on the National Register of Historic Places pending formal determination (by National Park Service and Washington State Historic Preservation Officer).
- Consider frontcountry historic structures not actively being used in Ross Lake NRA for adaptive reuse by other public and private entities to assist in preservation of the structures.
- Create design guidelines and/or historic structure/cultural landscape reports for all developed areas in Ross Lake NRA to preserve the architectural and landscape-defining features. Include design review oversight to ensure the compatibility of new planning, design, and construction.
- Pursue basic preservation maintenance activities to avoid reconstruction of historic structures or cultural landscapes.

- Comply with cultural resource protection and preservation policies and directives, and the wilderness minimal requirement concepts in wilderness areas, for the maintenance of historic structures and cultural landscapes.
- Before modifying any historic structure listed or eligible for the National Register of Historic Places, consult with the Washington State Historic Preservation Officer, cultural resource advisors, and the Advisory Council for Historic Preservation, as appropriate.
- The cultural landscapes of Ross Lake NRA retain a high degree of integrity.
- Identified and evaluated cultural landscapes are monitored, inspected, and managed to enable the long-term preservation of a resource's historic features, qualities, and materials.
- Actions identified in cultural landscape reports are implemented, and a record of treatment is added to the reports.

## Cultural Landscapes

*Law and Policy Source* — The Antiquities Act of 1906; Historic Sites Act of 1935; National Historic Preservation Act; Executive Order 11593, “Protection and Enhancement of the Cultural Environment;” *Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation*; Programmatic Agreement among the National Park Service (U.S. Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act (2008); and NPS *Management Policies 2006* (§ 5.3.5.2) call for the preservation of the physical attributes, biotic systems, and uses of cultural landscapes that contribute to historical significance.

### *Desired Conditions:*

- Cultural landscape inventories are conducted to identify landscapes potentially eligible for listing in the National Register and to assist in future management decisions for landscapes and associated resources, both cultural and natural.
- The management of cultural landscapes focuses on preserving the landscape’s physical attributes, biotic systems, viewshed, and use when that use contributes to its historical significance.
- The preservation, rehabilitation, restoration, or reconstruction of cultural landscapes is undertaken in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties* with Guideline’s for the Treatment of Cultural Landscapes.
- Laws pertaining to historic preservation remain applicable within wilderness but must be generally administered to preserve the area’s wilderness character.

### *Potential Management Strategies:*

- Treat cultural landscapes that are potentially eligible for listing in the National Register as eligible until a formal determination is made (by the National Park Service and Washington State Historic Preservation Office).
- Comply with cultural resource protection and preservation policies and directives, and the wilderness minimal requirement techniques in wilderness areas, for the maintenance of cultural landscapes and their associated viewsheds.
- Create design guidelines and/or cultural landscape reports for all developed areas in Ross Lake NRA to ensure that the landscape-defining features of these areas are preserved. These guidelines would include provisions for design review oversight to ensure the compatibility of new planning, design, and construction.

## Ethnohistory

*Law and Policy Source* — The Antiquities Act of 1906; American Indian Religious Freedom Act; Native American Graves and Repatriation Act; Executive Order 13007, “Indian Sacred Sites Act;” and NPS *Management Policies 2006* (§ 5.3.5.3) call for gathering ethnographic information through anthropological and collaborative community research that recognizes the sensitive nature of such cultural data and documents the meanings that traditionally associated groups assign to traditional natural and cultural resources and the landscapes they form. In accordance with the National Historic Preservation Act, the purpose is to preserve, conserve, and encourage the continuation of the diverse traditional prehistoric, historic, ethnic, and folk cultural traditions that underlie, and are a living expression of, American heritage as manifested in the traditional use of ethnographic resources in park units. Executive Order 13007 also calls for NPS managers to accommodate the access to and the ceremonial use

of American Indian sacred sites by practitioners and to preserve the sites' physical integrity.

***Desired Conditions:***

- Appropriate cultural anthropological research is conducted in consultation with groups traditionally associated with Ross Lake NRA.
- To the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, the National Park Service accommodates access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoids adversely affecting the physical integrity of these sacred sites.
- All executive agencies are required to consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments before taking actions that potentially affect federally recognized tribal governments. Native Americans and other individuals and groups linked by ties of kinship or culture to ethnically identifiable human remains, sacred objects, objects of cultural patrimony, and associated funerary objects are consulted when such items may be disturbed or are encountered on park lands.
- All ethnographic resources determined eligible for listing or listed in the National Register are protected. If disturbance of such resources is unavoidable, formal consultation with the Washington State Historic Preservation Officer and the Advisory Council on Historic Preservation, and with Native American tribes as appropriate, is conducted.
- The identities of community consultants and information about sacred and other culturally sensitive places and practices are kept confidential according to protocols established in consultation with the affected tribal governments.
- Potentially sensitive natural and cultural resources and traditional cultural properties (ethnographic resources eligible for the National Register of Historic Places) are identified, recorded, and evaluated through consultation with affected tribes. The integrity of traditional cultural properties is preserved and protected.
- Government-to-government consultation is conducted and maintained with each of the tribes traditionally associated with the Skagit River watershed.

***Potential Management Strategies:***

- Survey and inventory ethnographic resources and assess their significance.
- Treat all ethnographic resources as eligible for listing in the National Register of Historic Places pending a formal determination by the National Park Service.
- Continue to encourage the employment of Native Americans in the NPS to improve communications and working relationships and encourage cultural diversity in the workplace.
- Conduct consultation with affiliated tribes throughout the course of the planning process for this and other documents.
- Continue to work collaboratively with the tribes when conducting research related to the resources they value.
- NPS staff will conduct government-to-government relations with each of the three Skagit River tribes that have traditionally associated with the Skagit Watershed.

**Tribal Issues**

*Law and Policy Source* — The Presidential Memorandum of April 29, 1994; Executive Order 13175; Executive Order 13007, “Indian Sacred Sites;” a variety of federal statutes (such as the National Historic Preservation Act); and NPS *Management Policies 2006* (§1.11.1) call for the National Park Service to maintain a government-to-government relationship with federally recognized tribal governments.

***Desired Conditions:***

- The National Park Service and three tribes culturally affiliated with Ross Lake NRA (Upper Skagit, Sauk-Suiattle, and Swinomish) maintain on-going government-to-government consultation. NPS managers and staff respect the viewpoints and needs of the tribes, continue to promptly address conflicts that occur, and consider American Indian values in management and operation of Ross Lake NRA.

***Potential Management Strategies:***

- NPS staff would continue to meet and communicate with tribal officials to identify problems and issues of mutual concern and

interest and work together to take actions to address these concerns.

- Tribal officials would continue to be kept informed of planning and other actions in Ross Lake NRA that could affect the tribes.
- Upon request, NPS staff would provide technical assistance to the tribes, including sharing information and resources, to address problems and issues of mutual concern.
- NPS staff would continue to recognize the past and present existence of native peoples in the region and the traces of their land use and occupation as an important part of the cultural environment to be researched, preserved, and interpreted, as appropriate.
- NPS staff maintain and promote consultation protocols established with the three Skagit River tribes. Protocols include NPS staff attendance at tribal council or cultural committee meetings and other meetings involving NPS and tribal staff, maintaining agreed-upon tribal contacts in case of unanticipated discoveries, continuing to host project area tours for tribal staff, and seeking tribal involvement in cultural resource management efforts.
- NPS staff would accommodate access to traditionally used areas; in ways that are consistent with NRA purposes and American Indian values; and that avoid adversely affecting the physical integrity of such sites and resources.
- NPS staff would conduct appropriate ethnographic, ethnohistorical, or cultural anthropological research in conjunction with, and in consultation with, American Indian tribes traditionally associated with Ross Lake NRA.

## Museum Collections

*Law and Policy Source* — The Antiquities Act of 1906; Historic Sites Act of 1935; American Indian Religious Freedom Act; Archeological Resources Protection Act; Native American Graves and Repatriation Act; National Historic Preservation Act; Executive Order 11593, “Protection and Enhancement of the Cultural Environment;” *Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation*; Programmatic Agreement among the National Park Service (U.S. Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act

(2008); and *NPS Management Policies 2006* (§5.3.5.5) state that the NPS “. . .will collect, protect, preserve, provide access to, and use objects, specimens, and archival and manuscript collections. . . in the disciplines of archeology, ethnography, history, biology, geology, and paleontology to aid understanding among park visitors, and to advance knowledge in the humanities and sciences.” Directors Order #24, “NPS Museum Collection Management,” and its corresponding handbook provide additional guidance and direction for ensuring that NPS managers and staff have information on standards and actions for successfully managing museum collections and providing a means of measuring and evaluating progress in preserving, protecting, documenting, accessing, and using museum collections.

### *Desired Conditions:*

- All museum collections (objects, specimens, and manuscript collections) are identified and inventoried, catalogued, documented, preserved, and protected.
- Provision is made for access to and use of Ross Lake NRA’s museum collections for exhibits, research, and interpretation.
- The qualities that contribute to the significance of collections are protected in accordance with established standards.
- Research and development projects include plans for the curation of collected objects and specimens.
- Ross Lake NRA’s museum collections are housed in appropriate facilities that provide protection for current collections and allow for future collection expansion.
- Museum collections provide documentation of Ross Lake NRA’s natural and cultural resources.

### *Potential Management Strategies:*

- Inventory and catalog all museum collections in accordance with standards in the NPS Museum Handbook.
- Develop and implement a collection management program according to NPS standards to guide the protection, conservation, and use of museum objects.
- Continue outreach efforts to visitors, provide access to and give tours of the collections to the community, and provide field assistance with research projects as needed.

- Collections facilities would be upgraded, improved, and expanded according to the recommendations of the North Cascades NPS Complex Museum Management Plan 2004.
- Provide efficient access to reference materials and information.

## Wilderness and Backcountry

### Wilderness Resources, Character, and Values

*Law and Policy Source* — Wilderness Act of 1964; National Historic Preservation Act; Archeological and Historic Preservation Act; NPS *Management Policies 2006* (§6.3, 6.4); Director’s Order 41, “Wilderness Preservation and Management” and corresponding Reference Manual 41; and Director’s Order 28, “Cultural Resource Management Guideline” provide guidance and direction for the management of wilderness areas and the preservation of wilderness character and wilderness resources.

#### *Desired Conditions:*

- The National Park Service will manage wilderness areas including those proposed for wilderness designation “for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness” (16 USC 1131 Section 2(a)).
- The NPS ensures that the land’s “primeval character and influence” is retained and protected, that visitors continue to find “outstanding opportunities for solitude or a primitive and unconfined type of recreation,” and that the landscape “generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable” (16 USC 1131 Section 2(c)).
- The Wilderness Act specifies that “each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character” (16 USC 1131 Section 4(b)).
- The Wilderness Act specifies that the designation of any area of the national park system as wilderness “shall in no manner lower the standards evolved for the use and

preservation of such park, monument, or other unit of the national park system” under the various laws applicable to that unit (16 USC 1133 Section 4(a)(3)).

- Cultural resources that have been included within wilderness will be protected and maintained according to the pertinent laws and policies governing cultural resources using management methods that are consistent with the preservation of wilderness character and values.
- Natural processes, native components, and the interrelationships among them are protected, maintained, and/or restored to the extent possible, while providing opportunities for their enjoyment as wilderness.
- Present and future visitors enjoy the unique qualities offered in wilderness. These include the experiences of solitude, remoteness, risk, challenge, self-sufficiency, discovery, and observation of an untrammeled ecosystem.
- Wilderness management is based on the minimum requirement concept, allowing only those actions necessary and appropriate for administration of the area as wilderness and that do not cause a significant impact to wilderness resources and character. Implementation of such actions is done using techniques and types of equipment necessary to ensure that impacts on wilderness resources and character are minimized.
- The values of the wilderness in Ross Lake NRA are understood by the public and staff through education in wilderness ethics, use, and using management skills and techniques to promote and preserve these values.
- Operations and wilderness functions are coordinated in Ross Lake NRA to manage and protect natural and cultural resources in wilderness and preserve wilderness character.
- On-going communication about wilderness management policies and projects is maintained with the U.S. Forest Service, and work will continue to be done with other local and regional groups, communities, agencies, and tribal governments to preserve wilderness values.
- The primary elements that define wilderness character (Untrammeled, Undeveloped, Naturalness, and Solitude or Primitive and Unconfined Recreation) are protected and managed for through a monitoring program.

### *Potential Management Strategies:*

- Maintain a current wilderness management plan.
- Develop and implement research programs related to the wilderness ecosystem and key natural resources and visitor experiences.
- Inventory wilderness resources, facilities, and operational activities.
- Define a range of desired conditions for wilderness resources, visitor wilderness experiences, wilderness character, and management and operational techniques.
- Develop and implement a program to restore conditions that are outside the range of desired conditions for wilderness resources, visitor wilderness experiences, and wilderness character.
- Manage activities to maintain and restore resource conditions, to protect visitor experiences, and to protect and restore wilderness character.
- Develop an educational program for visitors, staff, and local community members, and others that enhances the appreciation of wilderness resources.
- Monitor the wilderness resources and incorporate the results of monitoring to refine management programs.
- Develop and implement a wilderness character monitoring program based on interagency guidelines.

## **Recreation**

### **Visitor Opportunities**

*Law and Policy Source* — The NPS Organic Act; NPS General Authorities Act; Code of Federal Regulations, Title 36; Americans with Disabilities Act; Architectural Barriers Act; Rehabilitation Act; and NPS *Management Policies 2006* (§1.4, 8.1) all address the importance of park units being available to all Americans to enjoy and experience. Current laws, regulations, and policies leave considerable room for judgment about the best mix of types and levels of visitor use activities, programs, and facilities. For this reason, most decisions related to visitor experience and use are addressed in the alternatives. However, all visitor use of the National Park System must be consistent with the following guidelines.

### *Desired Conditions:*

- Ross Lake NRA's resources are preserved unimpaired for the enjoyment of future generations. Visitors have opportunities for forms of enjoyment that are uniquely suited and appropriate to the superlative natural and cultural resources found in Ross Lake NRA. No activities occur that would cause derogation of the values and purposes for which Ross Lake NRA has been established.
- Visitors will have opportunities to understand and appreciate the significance of Ross Lake NRA and its resources, and to develop a personal stewardship ethic.
- To the extent feasible, programs, services, and facilities in Ross Lake NRA are accessible to, and usable by, all people, including those with disabilities.
- For all zones or districts in Ross Lake NRA, the types and levels of visitor use are consistent with the desired resource and visitor experience conditions prescribed for those areas.
- Visitors to Ross Lake NRA are able to obtain visitor orientation and trip-planning information through a variety of media; educational programs are available.
- Frontcountry day use visitation and overnight facilities are provided in some developed areas. Roads, trails, campgrounds, and related facilities are provided, but locations and numbers may be modified for resource protection, restoration, visitor experience, or increased visitation.
- The level and type of commercial guided activities is managed to protect resources and the visitor experience.

### *Potential Management Strategies:*

- For all zones, districts, or other logical management divisions in Ross Lake NRA, identify visitor carrying capacities for managing public use and ways to monitor for and address unacceptable impacts on resources and visitor experiences.
- Monitor visitor comments on issues such as crowding, encounters with other visitors in the backcountry, availability of campsites at busy times of the year, and availability of parking.
- Conduct periodic visitor surveys to stay informed of changing visitor demographics

and desires to better tailor programs to visitor needs and desires.

- Develop outreach programs for and with schools, tribes, and community organizations.
- Provide a variety of educational opportunities in Ross Lake NRA with continued facility-based contacts and guided activities. Web-based education would be provided. Some activities could be for a fee.
- Coordinate education programs with partners and focus on improving the general understanding of Ross Lake NRA's natural and cultural resources, biodiversity, the protection of resources and natural processes, research, stewardship, wilderness, values, and recreational and visitor opportunities.

## Public Health and Safety

Law and Policy Source — NPS *Management Policies 2006* (§8.2.5) states that the saving of human life would take precedence over all other management actions as the National Park Service strives to protect human life and provide for injury-free visits. Other federal statutes and regulations that apply to the protection of public health and safety include Director's Order 50 and RM-50, "Safety and Health;" Director's Order 58 and RM-58, "Structural Fire Management;" Director's Order 83 and RM-83, "Public Health;" Director's Order 51 and RM-51, "Emergency Medical Services;" Director's Order 30 and RM-30, "Hazard and Solid Waste Management;" and OSHA 29CFR.

### *Desired Conditions:*

- While recognizing that there are limitations on its capability to totally eliminate all hazards, the National Park Service and its partners work cooperatively to provide a safe and healthful environment for visitors and employees. The NPS staff strive to identify recognizable threats to safety and health and protect property by applying nationally accepted standards. Consistent with mandates and nonimpairment, the NPS staff reduces or removes known hazards or applies appropriate mitigating measures, such as closures, guarding, gating, education, and other actions.

### *Potential Management Strategies:*

- A documented safety program would be maintained for Ross Lake NRA to address

health and safety concerns and identify appropriate levels of action and activities.

- Maintenance efforts would continue to ensure that all potable water systems and waste water systems in Ross Lake NRA would continue to meet state and federal requirements.
- Interpretive signs and materials would be provided as appropriate to notify visitors of potential safety concerns, hazards, and procedures to help provide for a safe visit to Ross Lake NRA and to ensure visitors are aware of possible risks of certain activities. NPS staff would continue to work with local emergency and public health officials to make reasonable efforts to search for lost persons and rescue sick, injured, or stranded persons.

## Transportation to and within Ross Lake NRA

Law and Policy Source — NPS *Management Policies 2006* (§9.2) calls for NPS managers to identify solutions to transportation issues that preserve natural and cultural resources while providing a high-quality visitor experience. Management decisions regarding transportation generally require a comprehensive alternatives analysis and thorough understanding of natural systems and trends and their consequences. The location, type, and design of multimodal transportation facilities (such as roads, bridges, parking areas, sidewalks, bikeways, pedestrian trails, transit centers, and shelters) strongly influence the quality of the visitor experience and the preservation of park unit resources.

### *Desired Conditions:*

- Multimodal transportation facilities in Ross Lake NRA provide access for the protection, use, and enjoyment of Ross Lake NRA's resources. They preserve the integrity of the surroundings; respect ecological processes; protect natural, cultural and scenic resources; and provide the highest visual quality and a rewarding visitor experience.

### *Potential Management Strategies:*

- NPS staff would participate in transportation studies and planning processes that may result in links to Ross Lake NRA or impacts to resources. NPS managers would work closely with other federal agencies (such as the U.S. Department of Transportation, Federal

Highway Administration), tribal, state and local governments (such as the Washington State Department of Transportation), regional planning bodies, citizen groups; and others to enhance partnering and funding opportunities, and to encourage effective regional transportation planning.

- In general, the preferred modes of transportation would be those that contribute to maximum visitor enjoyment of, and minimum adverse impacts to, resources and values. Before a decision is made to design, construct, expand, or upgrade transportation access to or within Ross Lake NRA, non-construction alternatives—such as distributing visitors to alternative locations—would be fully explored. If non-construction alternatives would not achieve satisfactory results, then a development solution should consider whether the project:
  - ♦ is appropriate and necessary to meet management needs
  - ♦ is designed with extreme care and sensitivity to the landscape through which it passes
  - ♦ would not cause adverse impacts to natural and cultural resources, and would minimize or mitigate those impacts that cannot be avoided
  - ♦ reduces traffic congestion, noise, air pollution, and adverse effects on resources and values
  - ♦ would not violate federal, state, or local air pollution control plans or regulations
  - ♦ would not cause use in the areas to exceed the areas' user capacity
  - ♦ incorporates the principles of energy conservation and sustainability
  - ♦ is able to demonstrate financial and operational sustainability
  - ♦ incorporates universal design principles to provide for accessibility for all people, including those with disabilities
  - ♦ takes maximum advantage of interpretive opportunities and scenic values
  - ♦ is based on a comprehensive and multi-disciplinary approach that is fully consistent with Ross Lake NRA's general management plan and asset management plan
  - ♦ enhances the visitor experience by offering new or improved interpretive

or visitor opportunities, by simplifying travel within Ross Lake NRA, or by making it easier or safer to see features within Ross Lake NRA.

## Operations

### Utilities and Communication Facilities

*Law and Policy Source* — The Telecommunications Act of 1996 directs all federal agencies to assist in the national goal of achieving a seamless telecommunications system throughout the United States by accommodating requests by telecommunication companies for the use of property, rights-of-way, and easements to the extent allowable under each agency's mission. The National Park Service is legally obligated to permit telecommunication infrastructure in park units if such facilities can be structured to avoid interference with park unit purposes. Rights-of-way for utilities to pass over, under, or through NPS property may be issued only pursuant to specific statutory authority and generally only if there is no practicable alternative to such use of NPS lands. Statutory authorities in 16 USC 5 and in *NPS Management Policies 2006* (§8.6.4) provide guidance on these rights-of-way. Seattle City Light has powerline rights-of-way in Ross Lake NRA including an underwater powerline to Colonial Creek Campground. Additionally, they maintain a communications tower at the Babcock Creek site and fiber optic cables to support telecommunications.

### *Desired Conditions:*

- Ross Lake NRA resources or public enjoyment are not degraded by nonconforming uses. Telecommunication structures are permitted in Ross Lake NRA to the extent they do not jeopardize Ross Lake NRA's mission and resources. No new nonconforming use or rights-of-way are permitted through Ross Lake NRA without specific statutory authority and approval by the director of the National Park Service or his/her representative and are permitted only if there is no practicable alternative to such use of NPS lands.

### *Potential Management Strategies:*

- NPS staff would work with service companies, local communities, and the

public to locate new utility lines and maintain existing lines so that there is minimal effect on resources.

- If necessary, and there are no other options, new or reconstructed utilities and communications infrastructure would be placed in association with existing structures and along roadways or other established corridors in developed areas. For reconstruction or extension into undisturbed areas, routes would be selected that minimize impacts on Ross Lake NRA's natural, cultural, and visual resources. Utility lines would be placed underground to the maximum extent possible, away from sensitive resources.
- NPS policies would be followed in processing applications for commercial telecommunications facilities.

### **Relations with Private and Public Organizations, Owners of Adjacent Land, and Governmental Agencies**

*Law and Policy Source* — The *NPS Management Policies 2006* (§1.6) stresses the need for cooperative conservation beyond park boundaries. This cooperation is necessary in order for the National Park Service to fulfill its mandate to preserve the natural and cultural resources unimpaired for future generations. Local and regional cooperation may involve other federal agencies, tribal, state, and local governments, neighboring landowners, and nongovernmental and private sector organizations.

#### ***Desired Conditions:***

- Ross Lake NRA is managed as part of a greater ecological, social, economic, and cultural system.
- Good relations are maintained with adjacent landowners, such as the U.S. Forest Service, BC Parks, surrounding communities, and private and public groups that affect, and are affected by, Ross Lake NRA.
- Ross Lake NRA is managed proactively to resolve external issues and concerns and ensure that the resources and values of Ross Lake NRA are not compromised.
- Because Ross Lake NRA is an integral part of a larger regional environment, the National Park Service works cooperatively with others to anticipate, avoid, and resolve potential conflicts, protect Ross Lake NRA resources, and address mutual interests in the quality of life for community residents. Regional

cooperation involves federal, state, and local agencies, American Indian tribes, neighboring landowners, and all other concerned parties.

#### ***Potential Management Strategies:***

- NPS staff would continue to establish and foster partnerships with public and private organizations to achieve the purpose of Ross Lake NRA. Partnerships would continue to be sought for resource protection, research, education, and visitor enjoyment purposes.
- To foster a spirit of cooperation with neighbors and encourage compatible adjacent land uses, NPS staff would continue to keep landowners, land managers, local governments, and the public informed about management activities. Periodic consultations would continue with landowners who might be affected by visitors and management actions.
- NPS staff would continue to respond promptly to conflicts that arise over NPS activities, visitor access, and proposed activities and developments on adjacent lands that could affect Ross Lake NRA.
- NPS staff may provide technical and management assistance to landowners to address issues of mutual interest. NPS staff would continue to work closely with adjacent landowners, local, state, and federal agencies, and tribal governments whose programs affect, or are affected by, activities in Ross Lake NRA.
- NPS managers would continue to pursue cooperative regional planning whenever possible to integrate the unit into issues of regional concern.

### **Climate Change and Sustainability**

*Law and Policy Source* — The Energy Independence and Security Act of 2007; Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management;" Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance;" DOI Secretarial Order 3226, "Evaluating Climate Change Impacts in Management Planning;" DOI Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources;" and the NPS Climate Change Response Strategy 2010 guide NPS actions surrounding climate change and sustainability.

### ***Desired Conditions:***

- The NPS would utilize environmentally preferable materials, products, and services to design, construct, maintain, and operate high performance sustainable buildings.
- The NPS would work together with other federal, state, tribal and local governments, and private landowner partners to develop strategies at multiple scales, including landscape-level strategies, for understanding and responding to climate change impacts.
- The NPS would consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, and/or when making major decisions affecting natural and cultural resources.
- The NPS would engage in partnerships to implement projects and activities that contribute to the conservation of species, natural communities, and lands and waters placed at risk by changing climate conditions.
- The NPS would continue to provide and foster state-of-the art science to better understand the impacts of climate change and to develop science-based adaptive management strategies for natural and cultural resource managers.
- The NPS would continue to minimize the park's contributions to climate change, implement strategies to improve sustainability and energy efficiency, and decrease the park's carbon footprint and consumption of resources.

### ***Potential Management Strategies:***

- Engage in the Climate Friendly Parks program.
- Use the best available scientific data and knowledge to inform decision-making in regard to climate change.
- Collaborate with partners to develop, test, and distribute the best results from climate change models.
- Inventory and monitor key attributes of the natural resources, cultural resources, and visitor experiences likely to be impacted by climate change.
- Use best available science to evaluate and manage greenhouse gas storage and emissions in North Cascades NPS Complex.

- Incorporate climate change considerations and responses in all levels of planning.
- Implement adaptation strategies that promote ecosystem resilience and enhance restoration, conservation, and preservation of park resources.
- Develop, prioritize, and implement management strategies to preserve climate-sensitive cultural resources.
- Enhance the sustainable maintenance, design, and construction of park infrastructure.
- Substantially reduce the park's carbon footprint from 2008 levels by 2016 through aggressive commitment to environmentally preferable operations.
- Integrate climate change mitigation into the park's business practices.
- Promote biological carbon sequestration as a function of healthy ecosystems.
- Coordinate and distribute climate change information throughout the park.
- Increase climate change knowledge and understanding within the park.
- Provide external communications about the implications of climate change and the NPS response.
- Model and communicate sustainable practices that lead by example.

### **Other Values, Contributing Statements, or Information**

The following information includes a legislated dedication of North Cascades National Park and guiding principles established for long-term management. These are included here as further reference and guidance.

#### **Legislated Dedication**

North Cascades National Park, Washington is dedicated to Senator Henry M. Jackson in recognition of his leadership

1. in establishing the North Cascades National Park;
2. his outstanding contributions to the National Park System, the National Wilderness Preservation System; and
3. to the protection and preservation of our great natural resources for the benefit of the United States for all time (Public Law 100-85 August 10, 1987).

## Guiding Principles

The following principles are important in guiding the management of resources and values within the North Cascades NPS Complex:

1. Stewardship – North Cascades NPS Complex strives to use science in making informed decisions. This science-based stewardship advances our knowledge and appreciation of the North Cascades.
2. Partnerships – North Cascades NPS Complex views partnerships as integral for achieving the purposes of North Cascades National Park, Ross Lake NRA, and Lake Chelan NRA.
3. Trans-boundary Ecosystem Management – Through its relationship with the Skagit Environmental Endowment Commission and interactions with British Columbia Ministry of the Environment and other parties, the North Cascades NPS Complex is dedicated to the pursuit of cooperative trans-boundary activities focused on a wide range of visitor, resource, and operational issues.

