Appendix C: Wetland Statement of Findings

This Wetland Statement of Findings is included in this document for public review to meet the obligations of Executive Order 11990 (Protection of Wetlands) and National Park Service *Procedural Manual 77-1: Wetland Protection*.

Purpose of this Statement of Findings

The purpose of this Wetland Statement of Findings is to review the Badger Pass Ski Lodge Rehabilitation Project area (Figure C-1) in sufficient detail to:

- Avoid, to the extent possible, the short-and long-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative
- Describe the effects on wetland values associated with the proposed action
- Provide a thorough description and evaluation of mitigation measures developed to achieve compliance with Executive Order 11990 (Protection of Wetlands) and National Park Service *Director's Order 77-1: Wetland Protection*
- Ensure "no net loss" of wetland functions or values

Affected Wetlands

Wetland Extent

Wetlands and deepwater habitats within the delineation area include palustrine scrub-shrub wetlands, palustrine emergent wetlands and the lower perennial, riverine habitat of Grouse Creek. To facilitate discussion, the delineation area is divided into three zones: Monroe Meadow, the Grouse Creek outfall area, and a vegetation island within the ski area parking lot (Figure C-2).

The delineation area within Monroe Meadow is located within a topographical depression with side slopes ranging between 1 and 5 percent, and is bounded by the steeper slopes of the Badger Pass Ski Area to the south and the elevated paved Badger Pass Ski Area parking area to the north.

The Grouse Creek outfall delineation area is located to the northwest of the lodge. This area is deeply incised with a steep slope of 5 to 40 percent.

The vegetation island delineation area is an isolated stand of vegetation within the southernmost tree island of the ski area parking lot, located northeast of the ski lodge. The vegetation island has localized south-facing slopes of 1 to 10 percent and is bounded on all sides by pavement.

Ground surface elevations within the entire delineation area range from approximately 7,210 to 7,270 feet above mean sea level. The delineation area is bisected by Grouse Creek, which originates east of Monroe Meadow. As it approaches the ski lodge, Grouse Creek appears to be diverted below grade (Figure C-2, point 19) via a culvert system of unknown age, construction, condition, and configuration, and is discharged to the downgradient surface expression of the creek at a culvert outfall located southwest of the retail addition (west building) (Figure C-2, point 21). During wet periods of the year, other minor tributaries exist south of Grouse Creek.

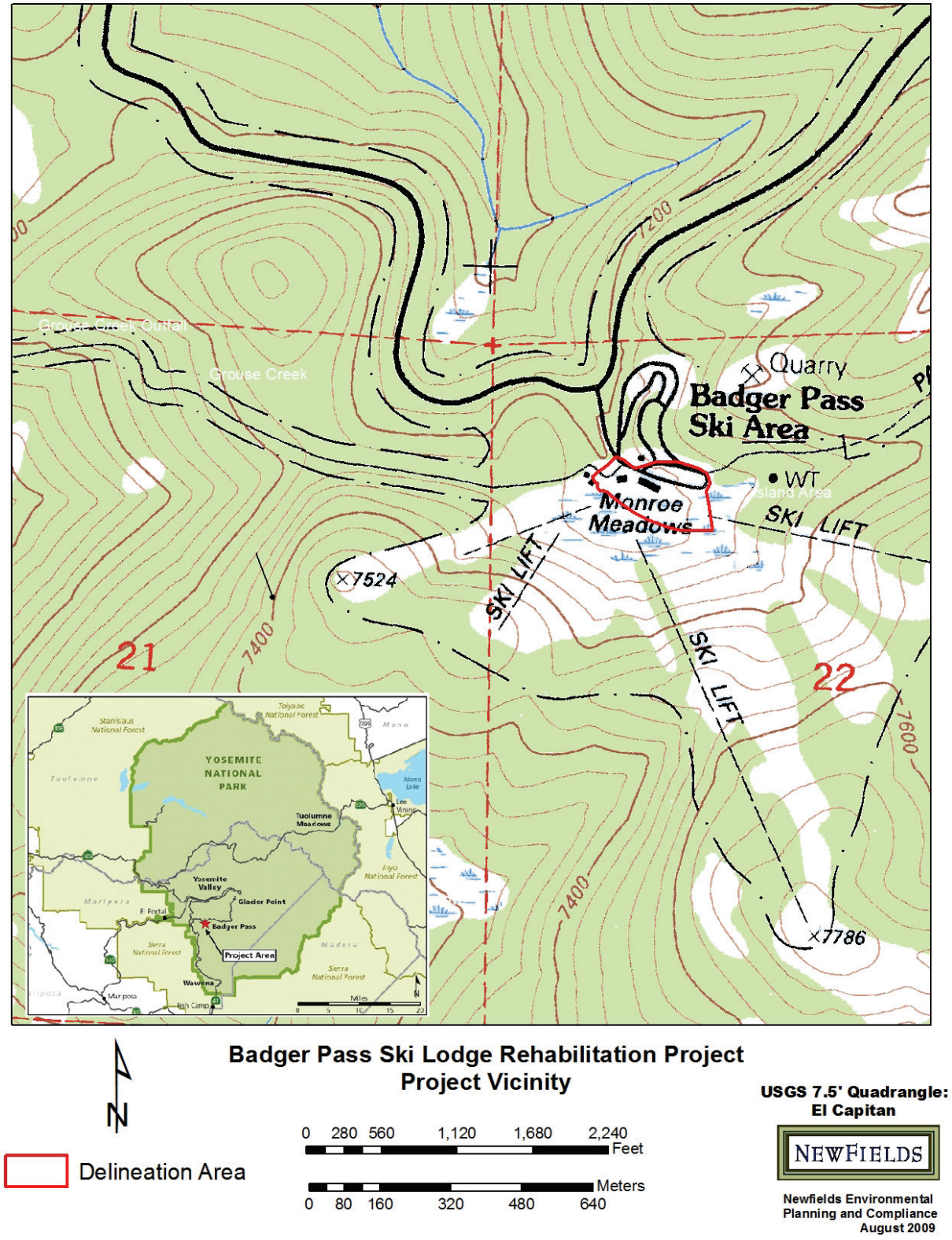

Figure C-1 Project Vicinity.

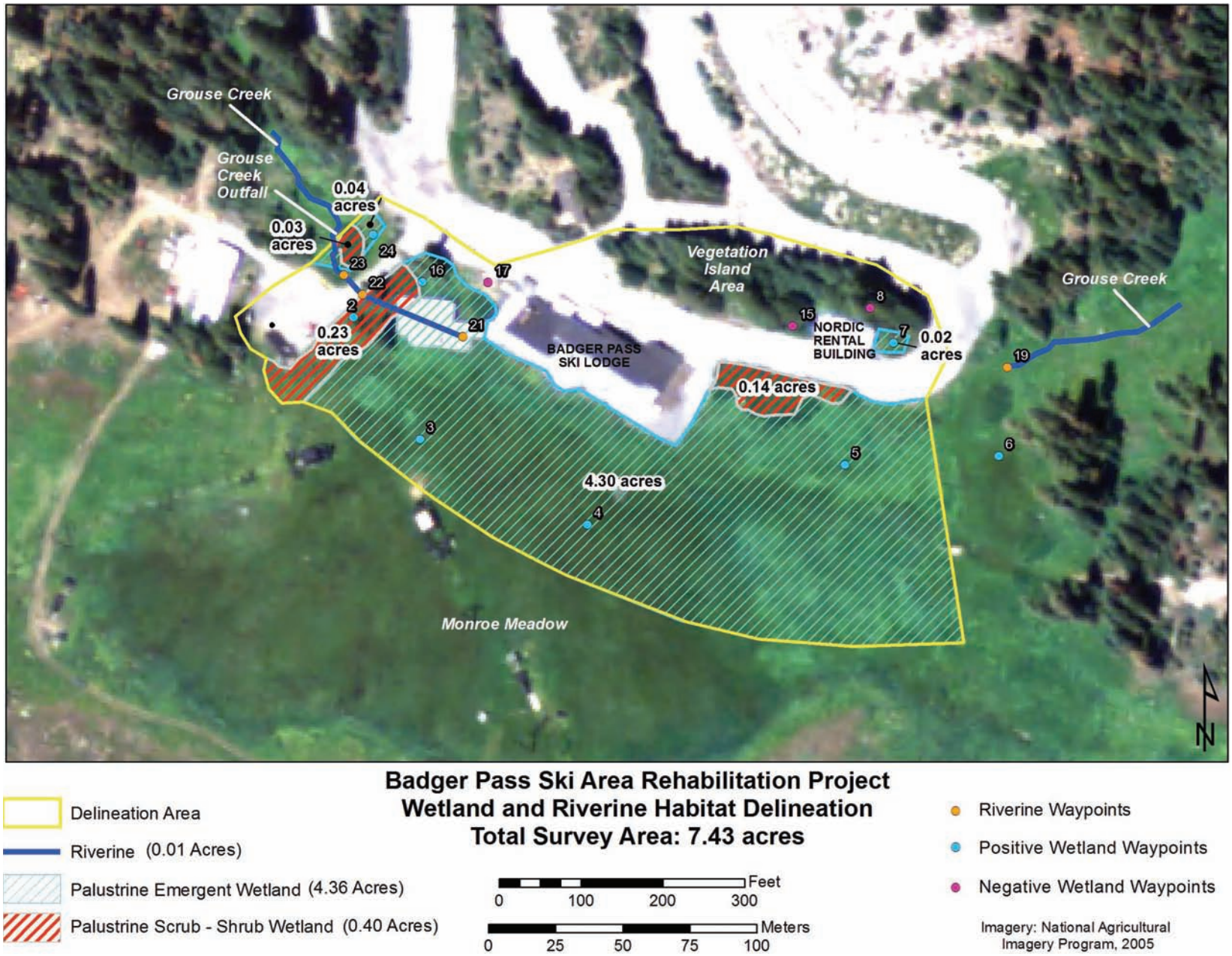

Figure C-2 Wetland and Riverine Habitat Delineation.

Wetland Characteristics

Specific wetland classes identified within the project area are limited to riverine (rivers, creeks, and streams) and palustrine (shallow ponds, marshes, swamps, and sloughs). Wetlands delineated in the project area meet both National Park Service and U.S. Army Corps of Engineers (USACE) wetland classifications. A summary of the conclusions of the jurisdictional delineation are as follows:

- Approximately 4.36 acres of palustrine emergent wetland were delineated within the delineation area
- Approximately 0.40 acre of palustrine scrub-shrub wetland were delineated within the delineation area
- Approximately 0.01 acre of lower perennial, riverine system were delineated within the delineation area

Existing Structures in Wetlands

The Badger Pass Ski Lodge was constructed in 1935 within Monroe Meadows, a potentially jurisdictional wetland and wetland as defined by the National Park Service (NPS). At the present time, east and west additions to the main lodge, a temporary Nordic center, the pups hut, the turtle rope tow, the eagle lift and the bruin lift are structures that exist within wetlands in the project area or immediately adjacent.

Environmental Consequences of the Proposed Action on Wetlands

Analysis

There would be no permanent reduction in the size of wetland and aquatic habitats related to implementation of Alternative 3 (Preferred): Rehabilitation and Improvements.

Potential short-term impacts on wetlands would occur from construction activities during rehabilitation of the ski lodge and the west building, drainage and foundation improvements, infrastructure upgrades, and demolition and replacement of the Nordic and Alpine rental buildings. It is anticipated that construction would be executed over the course of four summer seasons.

The construction zone for this project extends into approximately 0.38 acre of palustrine emergent wetlands to the east, south, and west of the ski lodge to accommodate building reconstruction/rehabilitation, utility upgrades, and site drainage improvements. The construction buffer for utility upgrades and site drainage improvements on the east side of the Alpine rental buildings includes approximately 0.07 acre of palustrine scrub shrub (willow thicket). The replacement of the temporary Nordic rental building with a permanent structure would require a construction zone that may enter a small isolated palustrine emergent wetland approximately 950 square feet (0.02 acre) in size located to the east of the existing building. These action may result in a local, short-term, minor adverse impact to wetlands. Adherence to mitigation measures described in Appendix B of the *Badger Pass Ski Lodge Rehabilitation Environmental Assessment* and avoidance of wetlands where possible would minimize these impacts.

Dewatering activities and water runoff from impermeable surfaces could potentially cause sediment-laden and/or contaminated water to enter Grouse Creek along the west end of the facility during construction and potentially result in adverse impacts to wetlands. Implementation of standard mitigation measures and those recommended in Chapter 3, Hydrology in the *Badger Pass Ski Lodge Rehabilitation Environmental Assessment*, as well as following avoidance procedures should reduce impacts to localized, adverse, short-term and negligible to minor.

Cumulative Impacts

Cumulative effects to wetlands are based on analysis of past, present and reasonably foreseeable future actions within the project area in combination with the potential effects of the proposed action.

Past projects which contributed to adverse impacts to wetlands within the project area include the construction, modification, and expansion of the ski lodge and parking areas, construction of the access road, ski runs, lifts and associated infrastructure; the diversion of Grouse Creek in the vicinity of the ski lodge, past and present routine maintenance activities, demolition of the Alpine rental shop and subsequent natural resource restoration, installation of temporary rental facilities, emergency stabilization measures, and the replacement of the Badger, Bruin, and Eagle ski lifts. The interception and redirection of runoff from the ski lodge and parking areas would continue to have a long-term adverse effect on wetlands, although this situation has been recently improved by the Glacier Point Road rehabilitation project improvements to the Badger Pass Ski Area parking lot.

Wetlands on the west side of the ski lodge would benefit from remediation of the residual fuel-oil contamination as part of a state-approved corrective action plan. In addition, actions potentially undertaken under the *High-Elevation Aquatic Ecosystem Recovery and Stewardship Plan* would result in the protection and enhancement of wetlands within the project area. In combination with construction-related activities and long-term site drainage improvements under the proposed action, there would be an overall localized, long-term, negligible, adverse cumulative impact on wetlands.

Conclusion

The adherence to mitigation measures and avoidance of wetlands where possible should reduce potential construction related effects to localized, short-term, minor adverse impacts to wetlands. Implementation of the proposed action would not further disrupt the continuity or integrity of the native plant communities in the project area.

Alternatives Considered

Alternatives considered in the Badger Pass Lodge Rehabilitation Project include Alternative 1 (the No Action Alternative), Alternatives 2 and 4.

Alternative 1: No Action

Under this alternative, emergency repairs and routine maintenance would continue to take place as needed, but no comprehensive, long-term rehabilitation, restoration, or renovation would occur. This alternative would result in the continuation of the current conditions.

Alternative 2: Essential Repairs and Upgrades

The central objective of Alternative 2 is to repair and upgrade the Badger Pass Ski Lodge to meet essential project requirements. The existing buildings would be maintained with minor physical alteration, while comprehensively addressing critical life-safety, code, accessibility, drainage and systems improvements. The upgrades are intended to bring the facility to an acceptable level of safety and code compliance. Building systems with deficiencies that compromise the ski lodge structure or visitor services would be addressed. Failing systems would be repaired or replaced with new systems meeting industry building standards as appropriate, without compromising the historic character of the site. The ski lodge operations would be maintained in their current configuration, with minor improvements where code-compliance and building repairs are necessary.

Alternative 4: Emphasize Historic Character

The objective of Alternative 4 is to solve project requirements, restore primary features of the main lodge that contribute to the historic character of the site, and provide the optimal level of visitor service within the overall confines of the project site. Physical alterations would be made to all portions of the facility. Construction dating from after the historic period of significance of the site would be removed, including the second floor deck and south dining room extension (window wall) at the main lodge. The south façade of the main lodge would be restored, as would be the interior lounge and its direct relationship to the deck. New construction would be added both east and west of the main lodge, incorporating ski operations and visitor services in an efficient manner responsive to the site parameters.

Best Management Practices and Resource-Specific Mitigation Measures

Best Management Practices and resource-specific mitigation measures would be implemented, as appropriate, prior to, during, and/or after construction.

Best Management Practices During Construction Activities

The National Park Service (and its contractors) would implement the following Best Management Practices, as appropriate, prior to, during, and/or after construction activities. Specific tasks would include, but are not limited to, the following:

- Prior to entry into the park, steam-clean heavy equipment to prevent importation of non-native plant species, tighten hydraulic fittings, ensure hydraulic hoses are in good condition and replace if damaged, and repair all petroleum leaks. Implement compliance monitoring to ensure the project remains within the parameters of National Environmental Policy Act and National Historic Preservation Act compliance documents, USACE Section 404 permits, etc. Compliance monitoring would ensure adherence to mitigation measures and would include reporting protocols.
- Inspect the project to ensure that impacts stay within the parameters of the project area and do not escalate beyond the scope of the environmental assessment, as well as to ensure that the project conforms with all applicable permits or project conditions. Store all construction equipment within the delineated work limits. Confine work areas within creek channels to the smallest area necessary.

- Steam-clean heavy equipment prior to its entry into the park to prevent importation of non-native plant species, and repair all petroleum leaks prior to work. Tighten hydraulic hoses and ensure they are in good condition.
- Provide a project orientation for all construction workers to increase their understanding and sensitivity to the challenges of the special environment in which they will be working. project area. Ensure equipment allowed within the river channel is equipped with a hazardous spill containment kit. Ensure that personnel trained in the use of hazardous spill containment kits are on site at all times during construction activities.
- A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the Construction Contractor and implemented for construction activities to control surface run-off, reduce erosion, and prevent sedimentation from entering water bodies during construction. The SWPPP shall be submitted for park review and approval prior to construction. Store all construction equipment within the delineated work limits.
- Supervisory construction personnel shall attend an Environmental Protection briefing provided by the park prior to working on site. This briefing is designed to familiarize workers with statutory and contractual environmental requirements and the recognition of and protection measures for archeological sites, sensitive habitats, water resources, and wildlife habitats. The park shall develop a Communications Strategy Plan to alert necessary NPS and concessioner employees, residents, and visitors to pertinent elements of the construction work schedule.
- Develop an emergency notification plan that complies with park, federal, and state requirements and allows contractors to properly notify park, federal, and/or state personnel in the event of an emergency during construction activities. This plan will address notification requirements related to fire, personnel, and/or visitor injury, releases of spilled material, evacuation processes, etc. The emergency notification plan will be submitted to the park for review/approval prior to commencement of construction activities.
- Notify utilities prior to construction activities. Identify locations of existing utilities prior to removal activity to prevent damage to utilities. The Underground Services Alert and NPS maintenance staff will be informed 72 hours prior to any ground disturbance. Construction-related activities will not proceed until the process of locating existing utilities is completed (water, wastewater, electric, communications, and telephone lines). An emergency response plan will be required of the contractor.
- Avoid damage to natural surroundings in and around the work limits. Provide temporary barriers to protect existing trees, plants, and root zones, if necessary, as determined by vegetation management staff. Trees and other vegetation shall not be removed, injured, or destroyed without prior written approval. Ropes, cables, or fencing shall not be fastened to trees. All existing resource protection fencing (post and rope) shall be left in place and protected from heavy equipment.
- Remove all tools, equipment, barricades, signs, surplus materials, and rubbish from the project work limits upon project completion. Repair any asphalt surfaces that are damaged due to work on the project to original condition. Remove all debris from the project site, including all visible concrete, timber, and metal pieces. Grade disturbed areas and rake them smooth to eliminate tire tracks and tripping hazards.
- Locate, contain, and stabilize excavated and stored materials within upland staging areas and prevent re-entry into wetland or aquatic habitats.
- Use approved siltation and sediment control devices appropriate to the situation in grading areas to capture eroding soil before discharge to riparian channels.
- Delineate wetlands and apply protection measures during construction. Wetlands shall be delineated by qualified National Park Service staff or certified wetland specialists and clearly

marked prior to work. Perform activities in a cautious manner to prevent damage caused by equipment, erosion, siltation, etc.

Resource-Specific Measures

Hydrology, Floodplains, and Water Quality

Prepare an erosion control plan specifying measures to prevent erosion/sedimentation problems during project construction. Include a map of the project site delineating where erosion control measures will be applied. Include the following minimum criteria, adapted from the *Guidelines for Protection of Water Quality During Construction and Operation of Small Hydro Projects* (CVRWQCB 1983):

- Where working areas are adjacent to or encroach on live streams, barriers shall be constructed that are adequate to prevent the discharge of turbid water in excess of specified limits.
- Material from construction work shall not be deposited where it could be eroded and carried to the stream by surface runoff or high stream flows.
- All disturbed soil and fill slopes shall be stabilized in an appropriate manner.
- Surface drainage facilities shall be designed to transport runoff in a non-erosive manner.
- Wastewater contaminated with by-products from construction activities shall be contained in a holding or settling tank to prevent contaminated material from entering watercourses or wetlands.
- Waters shall be free of changes in turbidity that cause a nuisance or adversely affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits, as described in *The Water Quality Control Plan* for the Central Valley Regional Water Quality Control Board (CVRWQCB 1998). In determining compliance with the limits below, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected:
  - Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.
  - Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20%.
  - Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.
  - Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10%.
- Implement stormwater management measures to reduce nonpoint-source pollution discharge. This could include measures such as oil/sediment containment or street sweeping.
- Remove hazardous waste materials generated during implementation of the project from the project site immediately.
- Dispose of volatile wastes and oils in approved containers for removal from the project site to avoid contamination of soils, drainages, and watercourses. Keep absorbent pads, booms, and other materials onsite during projects that use heavy equipment to contain oil, hydraulic fluid, solvents, and hazardous materials spills.
- Final design and installation of site drainage improvements will be closely coordinated with the park's Resources Management and Science Division.
- Salvage hydric soils and use them as fill in wetland excavations to the maximum extent possible. Minimize use of fill materials with high permeability in wetland areas to prevent development of unnatural groundwater conduits.

- Incorporate trench plugs into new and abandoned utility corridors through wetland areas where required to prevent formation or continuation of groundwater conduits.

Vegetation

- The contractor will develop a Revegetation Plan in conjunction with the park's Resources Management and Science Division, to be approved prior to construction activities.
- Ensure that all earth moving equipment and hand tools enter the park free of mud or seed-bearing material to prevent the introduction of non-native plants. The NPS will inspect all equipment prior to use on the project.
- Map and treat noxious weeds prior to construction. Certify all seeds and straw material as weed-free. Ensure that imported top-soil is weed-free. The NPS will approve sources of imported fill material that will be used within the top 12 inches of the finished grade. Monitor and treat invasive plants for three years post-construction.
- Install temporary fencing (black silt fencing or orange construction fencing) around the entire project area to protect natural surroundings (including sensitive plants, trees, and root zones) from damage. Avoid fastening ropes, cables, or fences to trees.
- Use native seed mix or seed-free mulch to minimize surface erosion and the introduction of noxious weeds.
- If special-status plant species are identified within the construction disturbance zone, in particular within restoration and revegetation areas, avoid special-status plant populations during construction activities. If the project manager is unable to avoid adverse impacts to rare plants, immediately contact the Park Botanist prior to work. Adverse impacts to the Yosemite bog orchid, in particular, are not acceptable. The Park Botanist will work with the project manager to mitigate unavoidable impacts to other special-status plants in the vicinity.
- If it is not feasible for construction activities to avoid special-status plant species (with the exception of the Yosemite bog orchid, which must be avoided), species conservation measures will be developed in coordination with Yosemite National Park natural resources staff. Measures may include salvage of special-status plants for use in revegetating disturbed areas and transplantation of special-status plants wherever possible using methods and monitoring identified in the revegetation plan, monitoring to ensure successful revegetation, protection of plantings, and replacement of unsuccessful plant materials if practicable.
- Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns.
- Use silt fencing at drainages to prevent construction materials from escaping work areas.

Refer to the *Badger Pass Lodge Rehabilitation Project Environmental Assessment* Appendix B for a complete list of Best Management Practices and resource-specific mitigation measures applicable to the proposed action. The proposed action has been designed to avoid or mitigate harmful effects to wetlands.

Site Restoration

The last phase of the project is site restoration. Following construction activities, disturbed areas will be graded and recontoured, as necessary, to revegetate with appropriate wetland, riparian, and upland plant species. Ground surface treatment will include grading to natural contours, topsoiling, seeding, and planting. Accepted erosion protection measures, including jute mesh and hydro mulch, may be used, if necessary, to prevent soil loss. The National Park Service will prepare a prescription for revegetating any disturbed areas, including riverbanks, to be included in the

construction specifications. This prescription would comply with the Yosemite *Vegetation Management Plan* (NPS 1997) and the *Invasive Plant Management Plan* (2008). Revegetation of disturbed sites would be conducted by park staff immediately following construction to reduce the potential for non-native plant invasion. All plant materials will be from genetic stock indigenous to Yosemite National Park, including trees, shrubs, and forbs obtained from the construction site by salvage methods or by propagating container plants from seed or cuttings. Following restoration efforts, the reclaimed sites will be monitored to determine if reclamation efforts are successful or if additional remedial actions are necessary. Remedial actions could include the installation of erosion control structures, reseeding, and/or replanting the area, and controlling non-native plant species.

Proposed Compensation

Potential compensation for disturbance to wetlands, if any, will be agreed to by the National Park Service and the USACE, and implemented by the National Park Service.

Justification

Nonwetland Alternatives to the Proposed Action

The Badger Pass Lodge Rehabilitation Project would occur within lower perennial riverine, palustrine scrub-shrub and palustrine emergent wetland habitat. The purpose of the project is to meet the policy goals stated in the NPS *Management Policies 2006* by correcting structural and design deficiencies that are contributing to the deterioration of the Badger Pass Ski Lodge, a contributing feature to the Badger Pass Ski Area historic site, and/or are affecting visitor services, and to support the park management goals for Badger Pass, as identified in the Yosemite *General Management Plan*. The rehabilitation project would repair and stabilize deteriorated structural and exterior elements to prevent further damage, and contribute to full rehabilitation of the ski lodge and associated support facilities.

Due to the historic location of the existing structures, there are no alternatives to the proposed action that could be located outside wetland and aquatic habitat.

New Development

Alternative 3 would replace the temporary east building (Alpine rental building) and the temporary Nordic rental building with permanent buildings. There are wetlands to the east and south of the Alpine rental building, to the south of the original ski lodge, and to the south and west of the west building (Figure C-2). The Nordic rental building is also adjacent to wetlands. The new Alpine rental building and rehabilitated west building would maintain their existing square footage, but would be expanded into a previously developed and paved area. The new Nordic building would be slightly larger and shifted westward, away from existing wetlands. Proposed site drainage improvements along the east, south, and west side of the ski lodge complex are within wetland areas; they would be designed to redirect surface drainage away from the building towards the wetlands and Grouse Creek.

Existing Development

A number of structures exist within the proposed project area. Buildings within the project area include the west building, the main lodge, the east building (Alpine rental building) and the Nordic rental building.

Redevelopment

Alternative 3 would rehabilitate the west building and the main lodge.

Conclusion

Alternative 3 would likely have localized, adverse, direct, short-term, minor impacts to wetlands within the project vicinity. No permanent adverse impacts to wetlands would occur from implementation of the proposed action. The National Park Service has determined that there is no practicable alternative that could be located outside of the wetland habitat and meet the stated goals of the Badger Pass Ski Lodge Rehabilitation Project.

Individual permits with other federal and cooperating state and local agencies will be obtained or updated as appropriate prior to construction and removal activities. There would be no change to the natural and cultural integrity of the park, or discernable effects to resource values identified in the 1980 *Yosemite General Management Plan*. Therefore, the National Park Service finds the proposed action to be acceptable under Executive Order 11990 for the protection of wetlands.

References

Central Valley Regional Water Quality Control Board (CVRWQCB)

1998. *The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board, Central Valley Region*. Sacramento River Basin and San Joaquin River Basin. Fourth Edition.

National Park Service (NPS)

1997 *Vegetation Management Plan*, Yosemite National Park, California

NewFields (NewFields Environmental Planning and Compliance, LLC)

2009 "Badger Pass Ski Lodge Rehabilitation Project Delineation of Jurisdictional Waters, Including Wetlands." Prepared by: Adam Hamburg, NewFields Environmental Planning and Compliance, LLC, Las Vegas, Nevada. Prepared for: National Park Service, Yosemite National Park, California.

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