United States Department of the Interior

NATIONAL PARK SERVICE

Yosemite National Park
P. O. Box 577
Yosemite, California 95389

IN REPLY REFER TO:
L7615(YOSE-PM

Memorandum

To: Kimball Koch, Project Manager, Yosemite National Park

From: Superintendent, Yosemite National Park

Subject: NEPA and NHPA Clearance: 2013-010 Mariposa Grove Geotech Testing (46715)

The Executive Leadership Team has reviewed the proposed project/action and completed its environmental assessment documentation, and we have determined the following:

- There will not be any effect on threatened, endangered, or rare species and/or their critical habitat.
- There will no historical properties affected.
- There will not be serious or long-term undesirable environmental or visual effects.

The subject proposed project, therefore, is now cleared for all NEPA and NHPA compliance requirements as presented above. Project plans and specifications are approved and construction and/or project implementation can commence.

For the proposed project actions to be within compliance requirements during construction and/or project implementation, the following mitigations must be adhered to:

- Follow specific stipulations outlined in the Assessment of Effect. Contact Barbara Bane or Sonny Montague at least four weeks in advance of geotechnical boring to avoid possible effects for proposed future bores at the South Entrance and Lower Grove.
- South Entrance: Tribal cultural monitoring may be required. Coordinate all phase two work with the Anthropology Branch and American Indian Liaison. Lower Grove: Tribal cultural monitoring may be required. Coordinate all future work with the Anthropology Branch and American Indian Liaison.

For complete compliance information see PEPC Project 46715.

//Don L. Neubacher//
Don L. Neubacher

Enclosure (with attachments)

cc: Statutory Compliance File

The signed original of this document is on file at the Environmental Planning and Compliance Office in Yosemite National Park.

National Park Service
U.S. Department of the Interior

Yosemite National Park
Date: 05/03/2013

Categorical Exclusion Form

Project: 2013-010 Mariposa Grove Geotech Testing
PEPC Project Number: 46715
Project Description:

This project would investigate percolation rates and feasibility of septic leach field locations proposed in the Restoration of the Mariposa Grove of Giant Sequoias DEIS. The project would also test the seismic and soil bearing capacity for structural components of the plan. Geotechnical work would consist of exploratory borings, installing piezometers, and digging test pits. Work would take place at the South Entrance, the Lower Mariposa Grove, and the Upper Mariposa Grove.

There would be an estimated 11 borings and 24 test pits, in total. The borings would be 8 inches in diameter, and up to 25 feet deep. The test pit excavations would be approximately 2 feet wide and up to 9 feet deep. Phase I testing (May and June 2013) includes 4 borings with piezometers and 12 test pits for soil evaluation and percolation tests. Phase II (fall 2013 or spring/summer 2014) includes an estimated 7 additional borings and up to 12 additional test pits in the Grove. Investigations in Phase II would be based on Phase I findings.

An all-terrain track-mounted drill rig and rubber tire backhoe would drill the borings and excavate the test pits. This rig would travel about 1,000 feet off the paved road on the abandoned Washburn Wagon Road to access the sites at the South Entrance. The Upper Grove sites would be accessed off a trail. A water truck would likely be used to provide water for percolation tests. Equipment would be staged at the South Entrance parking area.

Contracted work would be as follows:

- Obtain clearance with Underground Service Alert
- Prepare a Site-Specific Health and Safety Plan
- Excavate and sample 12 test pits in May of 2013 to a depth of about 9 to 10 feet by using rubber-tired backhoe. In fall 2013 or spring/summer 2014, conduct up to 12 additional test pits and 7 borings.
- Drill and sample 4 test borings to a maximum depth of 25 feet below existing grades or to practical refusal. Drill the borings with an all-terrain track-mounted drill rig equipped with 8-inch-diameter, hollow-stem augers.
- Construct one 2-inch-diameter piezometer (aka monitoring well) in each borehole that encounters water. The 25-foot-deep, piezometer would be constructed with 15 feet of non-perforated, polyvinyl chloride (PVC) piping and 10 feet of 0.01-inch, machined slotted, PVC for the screen interval. The filter pack around the screened interval would consist of clean sand. A sanitary seal consisting of a one to two foot plug of bentonite chips would be placed above the sand filter pack. The remainder of the borehole would be grouted with a slurry of neat-cement, bentonite, and water in accordance with Mariposa County Environmental Health Department (MCEHD) requirements.

- Perform two percolation tests at each of the four potential disposal areas, in the test pits. Percolation tests also may be required in shallow borings, per MCEHD requirements.
- Protect pits that need to be open overnight with fencing or covers so that animals will not fall into them.
- Backfill and tamp test pits with excavation soils and restore to grade after testing. Spills or hydraulic leaks are not anticipated; however, if observed, these affected soils along with soil cuttings from the drilling activities would be placed in metal drums for disposal.
- Use on-site pine needles and surface organics to recover test pit locations and areas disturbed by the equipment.
- Phase II explorations would be based on the results of Phase I explorations. It is estimated that Phase II may include up to 6 test pits and 5 borings at the South Entrance area, three test pits and two borings at the Lower Grove area and 3 test pits in the Upper Grove.

Project Locations:

Mariposa County, CA

Mitigations:

- Follow specific stipulations outlined in the Assessment of Effect. Contact Barbara Bane or Sonny Montague at least four weeks in advance of geotechnical boring to avoid possible effects for proposed future bores at the South Entrance and Lower Grove.
- South Entrance: Tribal cultural monitoring may be required. Coordinate all Phase II work with the Anthropology Branch and American Indian Liaison. Lower Grove: Tribal cultural monitoring may be required. Coordinate all future work with the Anthropology Branch and American Indian Liaison.

Describe the category used to exclude action from further NEPA analysis and indicate the number of the category (see Section 3-4 of DO-12):

C.15 Installation of underground utilities in previously disturbed areas having stable soils, or in an existing utility right-of-way.

On the basis of the environmental impact information in the statutory compliance file, with which I am familiar, I am categorically excluding the described project from further NEPA analysis. No exceptional circumstances (e.g. all boxes in the ESF are marked "no") or conditions in Section 3-6 apply, and the action is fully described in Section 3-4 of DO-12.

//Don L. Neubacher// 5/16/13

Don L. Neubacher Date

The signed original of this document is on file at the Environmental Planning and Compliance Office in Yosemite National Park.

National Park Service
U.S. Department of the Interior

Yosemite National Park
Date: 05/03/2013

ENVIRONMENTAL SCREENING FORM (ESF)

DO-12 APPENDIX 1

Date Form Initiated: 05/02/2013

Updated May 2007 - per 2004 Departmental Manual revisions and proposed Director's Order 12 changes

A. PROJECT INFORMATION

Park Name: Yosemite National Park
Project Title: 2013-010 Mariposa Grove Geotech Testing
PEPC Project Number: 46715
Project Type: Special Resource Study/New Area Study (SRS)
Project Location:
County, State: Mariposa, California **District:** Wawona
Project Leader: Kimball Koch

Is project a hot topic (controversial or sensitive issues that should be brought to attention of Regional Director)? No

B. RESOURCE EFFECTS TO CONSIDER:

Identify potential effects to the following physical, natural, or cultural resources	No Effect	Negligible Effects	Minor Effects	Exceeds Minor Effects	Data Needed to Determine/Notes
1. Geologic resources – soils, bedrock, streambeds, etc.		Negligible			There would be 11 borings and 24 test pits in total. Phase I testing (May and June 2013) includes four borings with piezometers and 12 test pits for soil evaluation and percolation tests. Phase II (fall 2013 or spring/summer 2014) includes an estimated 7 additional borings and 12 additional test pit excavations.
2. From geohazards	No				
3. Air quality		Negligible			The testing will produce temporary, minor air emissions.
4. Soundscapes		Negligible			There will be temporary heavy

Identify potential effects to the following physical, natural, or cultural resources	No Effect	Negligible Effects	Minor Effects	Exceeds Minor Effects	Data Needed to Determine/Notes
					machinery sounds.
5. Water quality or quantity	No				
6. Streamflow characteristics	No				
7. Marine or estuarine resources	No				
8. Floodplains or wetlands	No				
9. Land use, including occupancy, income, values, ownership, type of use	No				
10. Rare or unusual vegetation – old growth timber, riparian, alpine	No				
11. Species of special concern (plant or animal; state or federal listed or proposed for listing) or their habitat	No				Vegetation and wildlife surveys have been completed.
12. Unique ecosystems, biosphere reserves, World Heritage Sites	No				Yosemite National Park is a World Heritage Site.
13. Unique or important wildlife or wildlife habitat	No				
14. Unique or important fish or fish habitat	No				
15. Introduce or promote non-native species (plant or animal)	No				Park staff will inspect heavy equipment for invasive plant propagules prior to beginning work.

Identify potential effects to the following physical, natural, or cultural resources	No Effect	Negligible Effects	Minor Effects	Exceeds Minor Effects	Data Needed to Determine/Notes
16. Recreation resources, including supply, demand, visitation, activities, etc.	No				
17. Visitor experience, aesthetic resources	No				
18. Archeological resources		Negligible			Historic Washburn Road, South Entrance, Upper and Lower Grove. Archeological resource concerns have been mitigated, see Assessment of Effect.
19. Prehistoric/historic structure					
20. Cultural landscapes	No	Negligible			South Entrance Historic District
21. Ethnographic resources	No				
22. Museum collections (objects, specimens, and archival and manuscript collections)	No				
23. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure	No				
24. Minority and low income populations, ethnography, size, migration patterns, etc.	No				
25. Energy resources	No				
26. Other agency or tribal land use plans	No				

Identify potential effects to the following physical, natural, or cultural resources	No Effect	Negligible Effects	Minor Effects	Exceeds Minor Effects	Data Needed to Determine/Notes
or policies					
27. Resource, including energy, conservation potential, sustainability	No				
28. Urban quality, gateway communities, etc.	No				
29. Long-term management of resources or land/resource productivity	No				
30. Other important environment resources (e.g. geothermal, paleontological resources)?	No				

C. MANDATORY CRITERIA

Mandatory Criteria: If implemented, would the proposal:	Yes	No	N/A	Comment or Data Needed to Determine
A. Have significant impacts on public health or safety?		No		
B. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas?		No		
C. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available		No		

Mandatory Criteria: If implemented, would the proposal:	Yes	No	N/A	Comment or Data Needed to Determine
resources (NEPA section 102(2)(E))?				
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		No		
E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		No		
F. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?		No		
G. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office?		No		
H. Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?		No		
I. Violate a federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment?		No		
J. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898)?		No		
K. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)?		No		
L. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)?		No		

D. OTHER INFORMATION

1. Are personnel preparing this form familiar with the site? Yes

1.A. Did personnel conduct a site visit? No

2. Is the project in an approved plan such as a General Management Plan or an Implementation Plan with an accompanying NEPA document? No

3. Are there any interested or affected agencies or parties? Yes

4. Has consultation with all affected agencies or tribes been completed? Yes, this project was on the April tribal spreadsheet.

5. Are there any connected, cumulative, or similar actions as part of the proposed action? *(e.g., other development projects in area or identified in GMP, adequate/available utilities to accomplish project)* No

E. INTERDISCIPLINARY TEAM SIGNATORIES

Interdisciplinary Team	**Field of Expertise**
Don L. Neubacher	Superintendent
Michael Gauthier	Chief of Staff
Kathleen Morse	Chief of Planning
Randy Fong	Chief of Project Management
Teri Austin	Chief of Administration Management
Ed Walls	Chief of Facilities Management
Linda C. Mazzu	Chief of Resources Management & Science
Kris Kirby	Chief of Business and Revenue Management
Tom Medema	Chief of Interpretation and Education
Kevin Killian	Acting Chief of Visitor and Resource Protection
Kimball Koch	Project Leader
Madelyn Ruffner	Acting Environmental Planning and Compliance Program Manager
Renea Kennec	NEPA Specialist

F. SUPERVISORY SIGNATORY

Based on the environmental impact information contained in the statutory compliance file and in this environmental screening form, environmental documentation for this stage of the subject project is complete.

Recommended:

Compliance Specialists	Date
//Renea Kennec// Compliance Specialist – Renea Kennec	5/7/13
//Madelyn Ruffner// Acting Compliance Program Manager – Madelyn Ruffner	5/9/13
//Randy Fong// Chief, Project Management – Randy Fong	5/13/13

Approved:

Superintendent	Date
//Don L. Neubacher// Don L. Neubacher	5/16/13

The signed original of this document is on file at the Environmental Planning and Compliance Office in Yosemite National Park.

PARK ESF ADDENDUM

Today's Date: May 3, 2013

PROJECT INFORMATION

Park Name: Yosemite National Park
Project Title: 2013-010 Mariposa Grove Geotech Testing
PEPC Project Number:

Project Type: Special Resource Study/New Area Study (SRS)
Project Location:
County, State: Mariposa, California **District:** Wawona
Project Leader: Kimball Koch

PARK ESF ADDENDUM QUESTIONS & ANSWERS

ESF Addendum Questions	Yes	No	N/A	Data Needed to Determine/Notes
SPECIAL STATUS SPECIES CHECKLIST				
Listed or proposed threatened or endangered species (Federal or State)?		No		Wildlife and vegetation survey have been completed. The work site is clear of proposed threatened or endangered species.
Species of special concern (Federal or State)?		No		
Park rare plants or vegetation?		No		
Potential habitat for any special-status species listed above?	Yes			Work site has been cleared of special status species. Critical habitat will not be altered or destroyed.
NATIONAL HISTORIC PRESERVATION ACT CHECKLIST				
Entail ground disturbance?	Yes			There would be 11 borings and 24 test pits in total. Phase I testing (May and June 2013) includes four borings with piezometers and 12 test pits for soil evaluation and percolation tests. Phase II (fall 2013 or spring/summer 2014) includes an estimated 7 additional borings and 12 additional test pit excavations.
Are any archeological or	Yes			Historic Washburn Road, South Entrance, Upper and

ESF Addendum Questions	Yes	No	N/A	Data Needed to Determine/Notes
ethnographic sites located within the area of potential effect?				Lower Grove. Archeological resource concerns have been mitigated, see Assessment of Effect.
Entail alteration of a historic structure or cultural landscape?		No		
Has a National Register form been completed?		No		
Are there any structures on the park's List of Classified Structures in the area of potential effect?		No		
WILD AND SCENIC RIVERS ACT CHECKLIST				
Fall within a wild and scenic river corridor?		No		
Fall within the bed and banks AND will affect the free-flow of the river?		No		
Have the possibility of affecting water quality of the area?		No		
Remain consistent with its river segment classification?			N/A	
Fall on a tributary of a Wild and Scenic River?		No		
Will the project encroach or intrude upon the Wild and Scenic River corridor?		No		
Will the project unreasonably diminish scenic, recreational, or fish and wildlife values?		No		
Consistent with the provisions in the Merced River Plan Settlement Agreement?			N/A	
WILDERNESS ACT CHECKLIST				

ESF Addendum Questions	Yes	No	N/A	Data Needed to Determine/Notes
Within designated Wilderness?		No		
Within a Potential Wilderness Addition?		No		

ASSESSMENT OF ACTIONS HAVING AN EFFECT ON CULTURAL RESOURCES

A. DESCRIPTION OF UNDERTAKING

1. Park: Yosemite National Park

2. Project Description:

Project Name: 2013-010 Mariposa Grove Geotech Testing
Prepared by: Renea Kennec
Date Prepared: 05/03/2013
Telephone: 209-379-1038
PEPC Project Number: 46715

Area of potential effects (as defined in 36 CFR 800.16[d])

3. Has the area of potential effects been surveyed to identify historic properties?

___ No
X Yes
Source or reference:

4. Potentially Affected Resource(s):

Archeological Resources Notes: Archeological resources are located within the Historic Washburn Road, South Entrance, Upper and Lower Grove.

Historical Structures/Resources Affected:
Name and numbers: Historic Washburn Road
Location: South Entrance

Cultural Landscapes Affected:
Name and numbers: South Entrance Historic District
NR status: 8 - Within a Register-eligible district

5. The proposed action will: (check as many as apply)

No Destroy, remove, or alter features/elements from a historic structure
No Replace historic features/elements in kind
No Add non-historic features/elements to a historic structure
No Alter or remove features/elements of a historic setting or environment (inc. terrain)

No	Add non-historic features/elements (inc. visual, audible, or atmospheric) to a historic setting or cultural landscape
No	Disturb, destroy, or make archeological resources inaccessible
No	Disturb, destroy, or make ethnographic resources inaccessible
Yes	Potentially affect presently unidentified cultural resources
No	Begin or contribute to deterioration of historic features, terrain, setting, landscape elements, or archeological or ethnographic resources
No	Involve a real property transaction (exchange, sale, or lease of land or structures)
	Other (please specify):

6. Supporting Study Data:
(Attach if feasible; if action is in a plan, EA or EIS, give name and project or page number.)

B. REVIEWS BY CULTURAL RESOURCE SPECIALISTS

The park 106 coordinator requested review by the park's cultural resource specialist/advisors as indicated by check-off boxes or as follows:

[X] Archeologist
Name: Sonny Montague
Date: 04/30/2013
Comments: Historic Washburn Rd: NPS sawyers and subcontractor will delay ground disturbance until after archeological documentation is completed during the week of April 29-May 3. Archeological crew will flag sensitive areas/features for protection and provide NPS sawyers and subcontractor a rough field map showing protected areas. Contractors/sawyers should avoid flagged areas and contact Yosemite Archeology Office for conflicts/inadvertent artifact discoveries.

There are no archeological concerns regarding proposed test pit and bore locations (Fig. 2) shown north of the Washburn Rd, per recent surveys (2005LL; 2011G).

South Entrance There are no archeological concerns regarding proposed test pit and bore locations (Fig. 2) shown north of Four Mile Rd/ south of Wawona Rd, per recent surveys (2005LL; 2011G).

Future test pit and bore locations shown on same map at proposed S. Entrance parking areas south of Washburn Rd intrude into boundaries of CA-MRP-660/H, considered eligible for the NRHP. Coordinate boring and heavy equipment access for this work with the Archeology Office.

Lower Grove There are no archeological concerns regarding proposed test pit and bore locations (Fig. 3) shown west of the existing Lower Grove parking lot, per surveys (2011G, 1975A; 1984B).

Future bore locations shown on same map at proposed new development northeast of existing gift shop appear to be within or near current boundaries of CA-MRP-661/H, considered eligible for the NRHP. Heavy equipment access for this work will need to be coordinated/staged to avoid site damage and/or monitored.

Upper Grove Proposed test pit and bore locations (Fig. 4) shown southwest of the existing septic tank are clear of archeological concerns. Heavy equipment access to the locations should not pass through site

CA-MRP-1614H, flagged on 4-25-13. Use alternate route around site, an existing two-track to the north, for access. Contact Archeology Office for map showing access route.

Check if project does not involve ground disturbance [ ]
Assessment of Effect: __ No Potential to Cause Effect __ No Historic Properties Affected
_X_ No Adverse Effect __ Adverse Effect __ Streamlined Review
Recommendations for conditions or stipulations: Follow specific stipulations outlined in the Comments section above. Contact Barbara Bane or Sonny Montague at least four weeks in advance of geotechnical boring to avoid possible effects for proposed future bores at the South Entrance and Lower Grove.

Doc Method: Park Specific Programmatic Agreement

[X] Anthropologist
Name: Jennifer Hardin
Date: 05/01/2013
Comments: Proposed future bore and test pit locations have the potential to affect historic properties with traditional cultural or religious significance for American Indian tribes and groups. Tribal cultural monitoring may be required. Future work should be coordinated with Anthropology and allow for sufficient time for tribal consultation and negotiation of monitoring services.

Check if project does not involve ground disturbance [ ]
Assessment of Effect: __ No Potential to Cause Effect __ No Historic Properties Affected
_X_ No Adverse Effect __ Adverse Effect __ Streamlined Review
Recommendations for conditions or stipulations: South Entrance: Future test pit and bore locations shown on same map at proposed S. Entrance parking areas south of Washburn Rd intrude into boundaries of CA-MRP-660/H, considered eligible for the NRHP. Tribal cultural monitoring may be required. Coordinate all phase two work with the Anthropology Branch and American Indian Liaison. Lower Grove: Future bore locations shown on same map at proposed new development northeast of existing gift shop appear to be within or near current boundaries of CA-MRP-661/H, considered eligible for the NRHP. Tribal cultural monitoring may be required. Coordinate all future work with the Anthropology Branch and American Indian Liaison.

[X] Historical Landscape Architect
Name: Kevin McCardle
Date: 04/16/2013

Check if project does not involve ground disturbance [ ]
Assessment of Effect: __ No Potential to Cause Effect __ No Historic Properties Affected
_X_ No Adverse Effect __ Adverse Effect _X_ Streamlined Review
Recommendations for conditions or stipulations:

Doc Method: Streamlined Review (PA)
Streamlined Activity:
8. Installation of Environmental Monitoring Units

No Reviews From: Curator, Historical Architect, Historian, 106 Advisor, Other Advisor

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C. PARK SECTION 106 COORDINATOR'S REVIEW AND RECOMMENDATIONS

1. Assessment of Effect:

_____ No Potential to Cause Effects
_____ No Historic Properties Affected
__X__ No Adverse Effect
_____ Adverse Effect

2. Documentation Method:

[ ] A. STANDARD 36 CFR PART 800 CONSULTATION
Further consultation under 36 CFR Part 800 is needed.

[ ] B. STREAMLINED REVIEW UNDER THE 2008 SERVICEWIDE PROGRAMMATIC AGREEMENT (PA)

The above action meets all conditions for a streamlined review under section III of the 2008 Servicewide PA for Section 106 compliance.

APPLICABLE STREAMLINED REVIEW Criteria
(Specify 1-16 of the list of streamlined review criteria.)

[ ] C. PLAN-RELATED UNDERTAKING

Consultation and review of the proposed undertaking were completed in the context of a plan review process, in accordance with the 2008 Servicewide PA and 36 CFR Part 800.
Specify plan/EA/EIS:

[**X**] D. UNDERTAKING RELATED TO ANOTHER AGREEMENT
The proposed undertaking is covered for Section 106 purposes under another document such as a statewide agreement established in accord with 36 CFR 800.7 or counterpart regulations.
Specify: **1999 Programmatic Agreement**

[ ] E. COMBINED NEPA/NHPA Document
Documentation is required for the preparation of an EA/FONSI or an EIS/ROD has been developed and used so as also to meet the requirements of 36 CFR 800.3 through 800.6

[ ] G. Memo to SHPO/THPO

[ ] H. Memo to ACHP

3. Additional Consulting Parties Information:

Additional Consulting Parties: No

4. Stipulations and Conditions:

Following are listed any stipulations or conditions necessary to ensure that the assessment of effect above is consistent with 36 CFR Part 800 criteria of effect or to avoid or reduce potential adverse effects.

5. Mitigations/Treatment Measures:

Measures to prevent or minimize loss or impairment of historic/prehistoric properties: (Remember that setting, location, and use may be relevant.)

No Assessment of Effect mitigations identified.

D. RECOMMENDED BY PARK SECTION 106 COORDINATOR:

Acting Historic Preservation Officer

//Kimball Koch// Date: 5/7/13

Kimball Koch

E. SUPERINTENDENT'S APPROVAL

The proposed work conforms to the NPS *Management Policies* and *Cultural Resource Management Guideline*, and I have reviewed and approve the recommendations, stipulations, or conditions noted in Section C of this form.

Superintendent: *//Don L. Neubacher//* Date: 5/16/13

Don L. Neubacher

The signed original of this document is on file at the Environmental Planning and Compliance Office in Yosemite National Park.

NATURAL, CULTURAL & PHYSICAL RESOURCES PROTECTION

PART 1 GENERAL

1 .1 DESCRIPTION

A. Yosemite National Park (YNP) contains areas of significant natural and cultural resources that must be protected during construction of improvements within the park boundary. The Contractor shall conform to the requirements set forth in this section to protect identified, suspected, or discovered natural and cultural resources within the project limits. Additional requirements may be described in other specification sections and shall be coordinated with the requirements of this Section.

B. The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources, including natural, cultural and physical resources, within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for compliance with this section by its employees and its subcontractor employees. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

C. This section includes environmental procedures broadly identified as protection of natural, cultural and physical resources. The intention of this section is to ensure those involved with the project act positively to protect the environment, both on-site and off-site, during all construction operations. All activities and requirements of a general nature are applicable to all areas within the Yosemite National Park boundary.

1 .2 DEFINITIONS

A. Archeologically Sensitive Areas: Areas that have been determined to contain, or have the potential to contain, archaeological deposits eligible for listing on the National Register of Historic Places.

B. Biological Resources: All native and non-native plants and wildlife, the habitats where they are found, and the communities they form.

C. Class III Landfill: Landfill that accepts non-hazardous waste such as household, commercial and industrial waste, including construction, remodeling, repair, and demolition operations.

D. Contractor Generated Hazardous Waste: Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste materials would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

E. Contractor Generated Solid Waste: Solid wastes such as building materials, packaging, rubbish, debris, rubble, food waste, wrappers, spent disposable utensils, leaves, weeds, grass, and other organic materials resulting from construction, remodeling, repair, and demolition operations.

1. Rubbish/Debris: Combustible and non-combustible wastes such as paper, boxes, glass, crockery, tin cans, metal, and lumber scrap.

2. Green Waste: Combustible and non-combustible wastes such as leaves tree trimmings, and other organic materials that result from construction or maintenance and repair work.

3. Sanitary Waste: Refuse and scraps resulting from preparation, cooking, distribution, or consumption of food.

F. Culturally Sensitive Areas: Areas that have been determined to contain, or have potential to contain, Native American traditional resources, or resources to which Native Americans attach cultural and religious significance, and which are eligible for listing on the National Register of Historic Places. Most culturally sensitive areas are delineated on the Construction Drawings; however, the Senior Park Archeologist shall be consulted to identify culturally sensitive areas that are not identified on the Drawings.

G. Environmental Pollution and Damage: Presence of chemical, physical, or biological elements or agents which could:

1. Adversely affect human health or welfare.

2. Unfavorably alter ecological balances important to human life, affect other species of importance to humanity.

3. Degrade the utility of the environment for aesthetic, cultural, or historical purposes.

H. Environmental Protection: Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

I. Exotic Species: Species of plants or animals that do not naturally occur in a particular area and often interfere with natural biological systems. Also known as alien, introduced, invasive, or non-native species.

J. Hazardous Materials: Any material that can be defined as an explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful substance that could lead to death or injury.

K. Hazardous Waste: A hazardous material becomes a hazardous waste if the material has no safe end use in the project.

L. Inert Solids/Inert Waste: Non-liquid solid waste including, but not limited to soil and concrete that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by local, state, or federal regulatory agencies, and which does not contain significant quantities of decomposable solid waste.

M. Land Application for Discharge Water: The term "Land Application" for discharge water implies that the Contractor shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with all applicable Federal, State, and local laws and regulations.

N. Natural Resources: All biological and physical resources and their associated processes.

O. Non-Native: Species of plants or animals that do not naturally occur in a particular area and often interfere with natural biological systems. Also known as alien, introduced, invasive, or exotic species.

P. Nonsensitive Areas: Areas that have a low likelihood of containing significant in-the-ground archeological or cultural resources.

Q. Cultural Resources: Prehistoric, historic, and recent 20th century artifacts, including charcoal, human bones, ash, stone tools, debris and building materials that indicate the presence of past human occupation. Also including historic structures and features such as bridges, trails, buildings and rock alignments, places of spiritual and traditional importance, plant gathering areas, and historic Native American use areas.

R. Root Zones: Typical spread of the roots from the trunk of a tree; normally defined as in a vertical plane with the drip line of the tree branches.

S. Soils: Minerals deposited by geologic and natural processes, such as glaciations, erosion, inundation, and volcanism.

T. Surface Discharge: The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

U. Wildlife: Includes all fish, mammals, insects, birds, macro and micro-organisms, reptiles, amphibians, etc.

1 .3 SUBMITTALS

A. The following shall be submitted in accordance with Section 01330, Submittals.

1. Submittals:

a. Hazardous Materials Spill Prevention and Response Plan (see part 1.4 B)

1.4 ENVIRONMENTAL PROTECTION MEASURES

A. The Contractor shall comply with these comprehensive waste management measures and shall comply with all applicable Federal, State and local regulations and address all aspects related to the transportation, labeling, storage, handling and disposal of all construction-related hazardous and non-hazardous liquid and solid wastes.

1. Non-Hazardous Solid Waste:

a. Waste, trash, and debris shall be controlled at all times and disposed in authorized containers in the Contractor’s staging area.

b. All sanitary waste (garbage) must be disposed of in approved, bear-proof disposal bins. Provide lockable, bear-proof dumpsters with lids for waste (garbage) storage.

Lids shall be equipped with carabineers/heavy wire lid locks. Verify that dumpster lids are secure at close of work each day.

c. Construction debris (rubbish) may be stored in unlidded dumpsters or construction debris truck/trailers and removed on a regular basis. Do not mingle sanitary or green waste with construction debris.

d. All large, normally open top, waste bins or dumpsters shall be lidded and clearly marked “No Food or Trash”.

e. The Contractor shall designate an employee to police the work site daily for waste, wrappers, food packaging and the like. All waste shall be picked up and disposed of in lidded bear-proof dumpsters.

f. Green waste shall be segregated from other non-green waste for processing at disposal site.

g. Burying or burning of trash and debris on-site is not permitted. All un-used materials, trash, and debris shall be the property of the Contractor and shall be transported outside of the YNP boundary for disposal in accordance with law.

h. Remove debris from permanently closed spaces prior to enclosing them.

2. Non-Hazardous Liquid Waste:

a. Waste water from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. shall not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. The Contractor shall dispose of the construction related wastewater off-Government property in accordance with all Federal, State, Regional and Local laws and regulations.

b. Water contaminated with silt, grout, or other construction by-product must be pumped to a holding tank. Location of the holding tank will be proposed by Contractor and approved by Contracting Officer.

3. Hazardous Materials and Wastes:

a. Identify potentially hazardous substances to be used on the job site.

b. Identify handling procedures to ensure that hazardous substances are not released into the air, water, or ground.

c. Comply with Federal, State, and local laws and regulations for storage, handling, and disposal of these materials.

d. Storage of hazardous or flammable chemicals in the staging area or elsewhere on the site is prohibited except as approved by the Contracting Officer.

e. Hazardous materials shall not be discarded into the jobsite debris or waste-disposal facilities.

f. Empty containers shall be removed from the site and disposed of in a manner prescribed by law.

g. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations.

h. A copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time is to be maintained on site and submitted to the Contracting Officer.

i. Before new hazardous materials are brought on site or removed from the site, the MSDS file shall be updated and submitted to the Contracting Officer.

B. Contractor shall provide a Hazardous Materials Spill Prevention and Response Plan to address spill prevention and response measures for hazardous substances used on site, including fuels. Prior to the start of work, the Contractor shall submit a plan that complies with YNP, Federal and State requirements and allows contractors to properly notify officials in the event of an emergency occurring during construction activities. YNP requirements include at a minimum:

1. During non-work operations, stationary equipment shall be parked over specially prepared containment pads designed to trap any leaking oil, fuel, or hydraulic fluids.

2. Inspect construction site daily for proper storage of hazardous materials, proper parking of equipment on containment pads, and for hydraulic and oil leaks of equipment, tighten hoses, and ensure they are in good condition.

3. Routine oiling and lubrication shall be conducted in areas with secondary containment using Best Management Practices (BMPs) at all times. Refueling of equipment in wetlands or stream channel areas is not allowed at any time.

4. Contractor shall maintain secondary containment for all equipment operating with fluids (such as drilling) or when direct discharge of leakage, spills, or other source of construction or equipment fluids can flow directly to any streambed, whether flowing with water or dry. Containment shall be designed and installed so as to prevent accidental spills into streambeds in the event of mechanical failure or hose breakage.

5. Contractor shall maintain spill response materials on the project site when using heavy equipment to ensure rapid response to small spills. These materials shall include absorbent pads, booms, or other materials as appropriate to contain oil, hydraulic fluid, solvents, and hazardous material spills. A list of the spill response materials to be kept on site shall be submitted to the Contracting Officer.

6. Contractor shall provide names and phone numbers of appropriate contractor's personnel to be contacted at any time (24 hours per day) regarding accidental release of hazardous substances to air, soil or water. This list shall be submitted to the Contracting Officer and a copy visibly displayed in work areas on site.

7. Contractor shall have the Contracting Officer's and other appropriate Government emergency numbers posted and shall immediately notify the Contracting Officer or other Government representative on any accidental release of hazardous substances to air, soil or water.

C. The Contractor shall comply with these measures to protect cultural and natural resources. In addition, the Contractor must comply with all applicable Federal, State, and local regulations for the protection of these resources.

1. Cultural Resource Protection:

a. If cultural resources are discovered, stop work immediately and report the discovery to the Contracting Officer.

b. Stop Work: Cease all activities in the area of discovery and protect the resources discovered. In the event the discovery represents human remains or any objects subject to the Native American Graves Protection and Repatriation Act (NAGPRA), the NPS will follow procedures outlined in NAGPRA regulations. This will require a stoppage of work in the area of work for a minimum of 30 calendar days. In the event of an inadvertent discovery of Cultural Resources, be prepared to stop work and continue in other areas.

1) The Contractor shall plan, schedule, and execute the work to prevent stoppages at one area from stopping all work at the construction site.

2) Adjustments for Work Stoppage. See Federal Acquisition Regulations.

2. Natural Resource Protection:

a. Access to work sites requiring travel through undeveloped areas outside the work limits must be approved prior to project implementation.

b. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy resources including trees, shrubs, vines, grasses, topsoil, and landforms without approval. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized.

c. After tree removal, large roots may remain in the ground. Contractor shall be responsible for carefully removing in-ground tree roots of removed trees to permit excavation, drilling, or other ground penetrating construction activities. During tree root removal, do not use backhoes, chains, or other equipment in a manner that will harm roots of adjacent trees.

d. Minimize disturbance to tree trunks and root zones to prevent damage to trees.

e. Adjust trenches and other excavations to keep them beyond the drip line wherever possible.

1) Attempt to maintain the following minimum clearances between the edges of tree trunks and excavation:

for trees more than 30-inch-in-diameter	10 feet
for trees between 15-inch and 30-inch-in-diameter	8 feet
for trees less than 15-inch-in-diameter	5 feet

2) Adjust the survey line, as necessary to maintain required clearances.

a) Notify the Contracting Officer of any proposed trenches or other excavations within the drip line of trees.

f. Steps to Mitigate Damage to Roots Due to Excavation:

1) Take steps (as called for below) to mitigate damage to tree roots due to excavation, wherever the following circumstances apply:

a) Wherever excavation must take place within the drip line of giant sequoia trees

2) Following are the steps which are required to mitigate damage to roots due to excavation:

a) Excavate carefully where tree roots might be encountered. Where roots 2 inches and larger are encountered, hand excavate as required to prevent damage to roots. Tunnel under roots to be saved, hand excavating as necessary.

b) Do not cut roots over 2-inch-in-diameter without approval of Contracting Officer.

c) Cleanly saw-cut roots between 1-inch and 2-inch-in-diameter where they interfere with work; do not cut roots except as necessary. Roots between 1-inch and 2-inch-in-diameter which must be cut shall be cleanly saw-cut near the edge of trench closest to the tree to prevent roots from being dislodged from soil by equipment.

g. Avoid soil compaction within plant root zones with heavy equipment and vehicles within the project work limits.

h. Do not cut wheels or make sharp turns with wheeled or tracked equipment in root zones.

i. Do not pile excavated soil against tree trunks.

j. Do not mechanically compact soils in undeveloped areas except to meet minimum compaction requirements as approved by the contracting officer.

k. Maintain original soil topography in plant root zones whenever possible.

l. Preserve tree snags where feasible as potential bat or bird habitat.

3. Plant Appraisal:

a. If the Contractor destroys or injures trees and vegetation designated for protection or outside the work limits, the Contractor will be assessed damages prior to final progress payment.

b. Replacement costs for damaged vegetation will be computed according to the method described in the International Society of Arborculture's 1992 Guide for Plant Appraisal. This method is based on the cost of the largest commonly available tree or shrub, with modifications based on species value, condition, and location. A trained

arborist or professional plant appraiser from the California region will be hired by the NPS to make the damage appraisal. The arborist's fees will be included in the damage assessment.

4. Protection from Exotic Plant Species:

   a. Measures shall be taken to prevent the introduction of exotic species in the project area and staging areas. All earth moving equipment must enter the Park free of dirt, dust, mud, seeds, or other potential contaminant. Equipment exhibiting any dirt or other material attached to frame, tires, wheels, or other parts shall be thoroughly cleaned by the Contractor before entering the Park. All equipment will be directed to the El Portal Maintenance Facility for inspection prior to commencing work. Areas inspected shall include, but not be limited to, tracks, track guard/housings, belly pans/under covers, buckets, rippers, and other attachments. Equipment that does not pass inspection will be turned around to the nearest cleaning facility outside the park. If vehicles are unable to drive to El Portal due to size or load restrictions, vehicles will be inspected at a mutually agreed site by the Contracting Officer prior to entering the Park. The Contractor shall notify the Construction manager at least two work days (not including weekends) prior to bringing any equipment into the Park. Equipment found to have entered the Park with potential contaminants will be removed from the Park at the direction of the Contracting Officer at Contractor's sole expense.

   b. Minimize ground disturbance to the greatest extent possible.

   c. Fill materials used within the top 12 inches of finished grade are required to be free of exotic and noxious weed species and shall have the source locations approved by the Contracting Officer.

   d. Drain and flush all pumps, tanks, live wells, buckets and other containers that might carry water contaminated with exotic plants and animals, such as the zebra mussel, prior to bringing equipment into the park. Thoroughly wash all hauling tanks and equipment using a hard spray from a garden hose. If equipment was used in infested waters, use the following steps to clean the equipment:

      1) Wash with hot water (140 F or 40 C) or a high pressure washer (250 pounds per square inch). Remove all aquatic weeds -- they can carry zebra mussels.

      2) Disinfect equipment. Recent research shows that disinfection of nets and equipment with benzalkonium chloride at typical treatment rates (10 milligrams per liter for 24 hours, 100 milligrams per liter for 3 hours, or 250 milligrams per liter for 15 minutes) will effectively eliminate most exotic animals. Two other commonly used disinfectants, calcium hypochlorite and iodine, are ineffective against zebra mussels.

      3) Adult zebra mussels can live more than a week out of water in moist, shaded areas. Dry pumps, nets and other equipment used in infested waters in the sun for two to four days after cleaning. If adult mussels are present, dry equipment for two weeks.

5. Fish and Wildlife Protection:

a. Contractor shall fence or cover open pits that need to remain overnight to ensure that wildlife does not fall into pit. Maintain routes of escape from excavated pits and trenches for animals that might fall in. During construction activities, Contractor personnel shall maintain vigilance for animals caught in excavations and take appropriate action to free them.

    1) Excavation pits shall have a ramp or incline at either end to allow for human and wildlife escape.

    2) Each morning prior to commencing work activities, Contractor shall inspect construction site for trapped wildlife in excavation pits and carefully remove. If necessary, contact the Contracting Officer for assistance.

b. The Contractor and Contractor's employees shall not feed any animals within Yosemite National Park.

c. The Contractor shall make all reasonable efforts in accordance with the plans and specifications for the protection of threatened or endangered or candidate species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

d. Bear Precautions: Bears may be present at any location within the YNP boundaries, including at the project site. The Contractor shall incorporate the following precautions in all activities within the YNP boundary.

    1) All food, toiletries, and scented items (i.e., bug spray) shall be placed in bear boxes at the construction site provided by the Contractor. Bear boxes must remain closed and latched at all times, unless items are being retrieved. No food, toiletries, or scented items shall be stored in vehicles or left out.

    2) All food waste and food-related waste shall be disposed of in accordance with Non-Hazardous Solid Wastes requirements described elsewhere within this section.

    3) All vehicles shall be checked daily to ensure that no items that may attract bears remain inside an unattended vehicle. Items that shall not be left in vehicles include canned food, drinks, soap, cosmetics, toiletries, domestic trash, recyclable food containers, ice chests, grocery bags, and unwashed items used for preparing or eating meals.

    4) All windows and doors in recreational vehicles or trailers used for lodging or office space shall be closed and latched when not occupied.

    5) The Contractor shall walk the job site at the end of each day and check for trash, food, and food-related items remaining at the site and dispose of the items in a bear-proof receptacle.

    6) Proper food storage is important to the welfare of the Yosemite bear population and is required by law. The Contractor shall receive and all Contractor personnel shall read a brochure entitled, The Bears are not to Blame, provided by NPS staff as a courtesy. Contractor staff shall call the

Save-a-Bear hotline (209) 372-0322 to report overflowing trash containers, improperly stored food, or bear sightings.

6. Soil

   a. The Contractor shall confine all earth moving activities to within the work limits as defined in the drawings. The displacement of soil or other materials outside the defined limits shall be approved by the contracting officer.

7. Air

   a. Measures shall be taken to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

   b. Equipment operations shall be in accordance with all Federal and State air emission and performance laws and standards.

   c. Engines shall not be left running for more than 15 minutes while vehicles or other equipment are standing by.

   d. Vehicles or equipment with excessive emissions or discharging black smoke will be removed from operation immediately and may not be used until appropriate maintenance and repairs have corrected the emissions problem.

   e. Clearing of vegetation shall be minimized to the greatest extent possible to prevent creation of dust sources.

   f. Water or other approved compounds will be used to stabilize disturbed soils. Do not apply water when construction caused dust is not present.

   g. When hauling dry materials, truck beds will be securely covered to prevent blowing dust or loss of debris.

   h. When hauling wet materials, Contractor shall seal or screen truck beds to prevent soil leaks.

   i. Contractor shall not exceed a maximum of 15 mph within construction areas in the Park. Slower speeds shall be maintained if necessary to reduce dust formation.

   j. At construction zone access points, Contractor shall prevent paved areas from accumulation of mud, soils and other organic materials

8. Noise

   a. Construction noise shall be minimized through use of best available noise control techniques wherever feasible. Sound levels must be kept to a minimum at all times. Equipment and machinery shall not exceed 85 db when measured at 100 linear feet distance. Contractor shall use sound attenuated compressors and generators that comply with the most recent California Department of Transportation standards.

   b. Standard noise abatement measures shall include the following elements:

1) A construction schedule that minimizes impacts to adjacent noise-sensitive activities.

2) Use of hydraulically or electrically powered impact tools when feasible.

3) Location of stationary noise sources as far from sensitive activities as possible.

4) All motorized equipment is to have an exhaust muffler in good working order.

5) Engine braking ("jake" brakes) shall not be used in lodging, camping or residential areas. Engine brakes that are used shall be muffled.

6) Continuous noise abatement is required to prevent disturbance and nuisance to Park visitors and workers and to the occupants of adjacent premises and surrounding areas.

7) If the Contracting Officer determines excessive noise is emanating from the construction site, the Contractor may be required to provide sound barriers to deflect noise transmission from visitor areas or other areas impacted by noise.

9. Night Sky:

a. Minimize night lighting during work. If night lighting is necessary, design lighting to be minimal, directed downward, and shielded.

END OF SECTION