



## Letter of Compliance Completion

A PDF text file of the project's approved environmental compliance package containing the letter of compliance completion, categorical exclusion form, environmental screening form, and any other associated environmental clearance forms, as applicable (e.g., Wilderness Minimum Requirement Analysis, Wild and Scenic River Section 7 Analysis). The signed originals of the package are on file in the Environmental Planning and Compliance Office at Yosemite National Park.

**To:** Catherine Fong

**From:** Cicely Muldoon

**Subject:** NEPA and NHPA Clearance: Installation of automated weather station near Vogelsang High Sierra Camp (PEPC: 92894)(PMIS: )

**NEPA and NHPA Compliance Complete.** For complete compliance information see PEPC Project 92894.

The Superintendent and park interdisciplinary team have reviewed the proposed project and completed an impact analysis and documentation, and have determined the following:

- There will not be any effect on threatened, endangered, or rare species and/or their critical habitat.
- There will be no adverse effect to historic properties.
- 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.

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

- Project proponent shall submit a Job Hazard Analysis and Safety Plan for review and approval by the Park Safety Office.
- We do not expect Yosemite toads to be burrowing in the project site. That said, the project is near occupied habitat, so we ask the project lead to learn how to recognize a Yosemite toad before leaving for the field and once there, so a full inspection of the site and any potential burrows before beginning work. If toads are present, they cannot be disturbed. Please contact Rob Grasso with any questions.
- Compliance with food-storage and garbage disposal requirements must be achieved at all times.
- Prior to entering the backcountry, all workers shall check boots, backpacks, and tools for weed seeds, mud that could harbor weed seeds, and plant parts to prevent the spread and introduction of non-native plants.  
*Comment:* Equipment brought into backcountry by helicopter should be checked and cleaned for mud, seeds, and plant parts.

There are no NHPA Recommendations for Conditions or Stipulations identified.

Superintendent: \_\_\_\_\_ **Cicely Muldoon** \_\_\_\_\_ Date: \_\_\_\_\_ **9/15/2020** \_\_\_\_\_  
Cicely Muldoon

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Yosemite National Park.*



## Categorical Exclusion Documentation Form (CE Form)

**Project:** Installation of automated weather station near Vogelsang High Sierra Camp  
**PEPC Project Number:** 92894

### Description of Action (Project Description):

This project will install an automated snow pillow and weather station within the footprint of the Vogelsang High Sierra Camp. The installation will consist of a snow pillow, a 25-foot tall Rohn tower, a 20-foot tall storage precipitation gage and sensors measuring net radiation, incoming solar radiation, air temperature, relative humidity, barometric pressure, wind speed, wind direction, snow depth, soil moisture and temperature at three depths ranging from ~5-25cm, and a tipping bucket. The installation would be powered by a solar panel and rechargeable battery, and data would be stored and collected by a data logger located in a weatherproof enclosure and transmitted via a GOES (Geostationary Operational Environmental Satellite) transmitter. A geotechnical investigation would occur prior to work to determine the suitability of granite bedrock in the project areas to act as the foundation for the Rohn tower.

The geotechnical investigation would likely consist of hand digging utilizing a small pick and shovel to estimate the soil cover where the soil cover is thin (less than 12 inches). Excavations would not exceed 4 square feet in area and would be backfilled upon completion of excavation. It is anticipated that estimation of the rock properties would be performed using a field rock hammer (hand held geologist hammer) coupled with detailed mapping of discontinuities, including fractures, cracking, contact between rock units and planes of weakness, and weathered zones, and other types of dissimilar materials that provide information regarding weathering, rock hardness, strength, and rock quality. Disturbance will be limited to indentations by the manual rock hammer and scooping of the rock surface, and possible splaying of rock surfaces where weak rock is broken from the rock mass. Exploration will not include coring, mechanical drilling, or such disturbance. Any disturbed surface will be limit of a few inches of broken surficial rock in isolated locations, typically less than 1 foot by 1 foot.

Justification: Thirteen remote weather stations in Yosemite National Park provide hourly real time data that is used to inform a variety of park operations related to visitor safety, road openings, wildfire management, and to monitor extreme weather events such as winter storms, floods, and drought. Weather station data is also used to understand and track changes in the park ecosystem, such as the impacts of warming temperatures on forests, meadows, and wildlife populations. Park staff, Department of Water Resources, and the National Weather Service also use these data to forecast and monitor flooding during spring-snowmelt runoff, and snowline elevation during major winter storms.

In 1979 the Yosemite Superintendent signed a memo allowing 10 snow pillows in the park. The 1989 Yosemite Wilderness Management Plan allowed for the continuation of existing meteorological installations but prohibited new installations except those proposed and approved in 1979. The last undeveloped site in wilderness referenced by these documents is Moraine Meadows at 8700 feet. This site was never installed; at this time we propose to install the remaining automated snow sensor site within proposed wilderness at Vogelsang High Sierra Camp at 10,100 feet. This site will better represent the higher elevations of the Merced watershed; currently the highest elevation station in the Merced is 8,199 feet.

The components of the system consist of the following:

- 1 - Snow pillow composed of 4 stainless steel pads containing a solution of propylene glycol-ethanol covering an area of approximately 8 feet x 10 feet. The pillow will be plumbed to measure pressure with a pressure transducer.
- 2 - 25-foot tall Rohn tower with base bolted to an existing granite slab. Tower is a maximum distance of two feet from the edge of the snow pillow. Tower supports meteorological instrumentation as well as the solar panel, satellite transmitter, and datalogger.
- 3 - Installation of a 20-foot tall storage precipitation gage adjacent to the Rohn tower. Base rests on railroad ties.
- 4 - Three soil moisture sensor installed to a depth of 30 centimeters.
- 5 - Lightning ground buried horizontally or at an angle into the ground surface.

The geotechnical investigation will occur before the installation commences. The two activities may not occur in the same year. It is anticipated that installation of this equipment would require helicopter flights to bring in the snow pillow, tower sections, and storage precipitation gage. No more than three helicopter flights are allowed per the MRA. Mule teams could bring in additional equipment.

**Mitigation(s):**

- Project proponent shall submit a Job Hazard Analysis and Safety Plan for review and approval by the Park Safety Office.
- We do not expect Yosemite toads to be burrowing in the project site. That said, the project is near occupied habitat, so we ask the project lead to learn how to recognize a Yosemite toad before leaving for the field and once there, so a full inspection of the site and any potential burrows before beginning work. If toads are present, they cannot be disturbed. Please contact Rob Grasso with any questions.
- Compliance with food-storage and garbage disposal requirements must be achieved at all times.
- Prior to entering the backcountry, all workers shall check boots, backpacks, and tools for weed seeds, mud that could harbor weed seeds, and plant parts to prevent the spread and introduction of non-native plants. Equipment brought into backcountry by helicopter should be checked and cleaned for mud, seeds, and plant parts.

**CE Citation:** E.6 Designation of environmental study areas and research natural areas.

**Decision:** I find that the action fits within the categorical exclusion above. Therefore, I am categorically excluding the described project from further NEPA analysis. No extraordinary circumstances apply.

**Signature**

**Acting**

**Superintendent:** Cicely Muldoon

**Date:** 9/15/2020

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Cicely Muldoon

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**Extraordinary Circumstances:**

If implemented, would the proposal...	Yes/No	Notes
<b>A.</b> Have significant impacts on public health or safety?	No	
<b>B.</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	
<b>C.</b> Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA section 102(2)(E))?	No	
<b>D.</b> Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?	No	
<b>E.</b> Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?	No	
<b>F.</b> Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?	No	
<b>G.</b> 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	
<b>H.</b> 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	
<b>I.</b> Violate a federal, state, local or tribal law or requirement imposed for the protection of the environment?	No	
<b>J.</b> Have a disproportionately high and adverse effect on low income or minority populations (EO 12898)?	No	
<b>K.</b> Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)?	No	
<b>L.</b> 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	



## ENVIRONMENTAL SCREENING FORM (ESF)

Updated Sept 2015 per NPS NEPA Handbook

### A. PROJECT INFORMATION

**Project Title:** Installation of automated weather station near Vogelsang High Sierra Camp  
**PEPC Project Number:** 92894  
**Project Type:** Other Natural/Cultural Resource Activities (NCR)  
**Project Location:**  
**County, State:** Mariposa, California **Other:** -119.347134, 37.794661  
**Project Leader:** Catherine Fong

### B. PROJECT DESCRIPTION

See Categorical Exclusion form

### C. RESOURCE IMPACTS TO CONSIDER:

Resource	Potential for Impact	Potential Issues & Impacts
Air Air Quality	None	
Biological Nonnative or Exotic Species	Potential	Issue: Invasive species may be introduced during construction by contaminated equipment or clothing.  Impact: Introduction of invasive species will have deleterious effects on the environment. Mitigations to reduce the chances of unintentional introductions should be followed.
Biological Species of Special Concern or Their Habitat	Potential	Issue: Yosemite toads can be found in a nearby meadow  Impact: Although highly unlikely, toads may be harmed during implementation if participants do not know what to look for to avoid them should they be present in the work area. Work with a biologist to learn how to spot them.
Biological Vegetation	None	
Biological Wildlife and/or Wildlife Habitat	None	

<b>Resource</b>	<b>Potential for Impact</b>	<b>Potential Issues &amp; Impacts</b>
<b>Cultural</b> Archeological Resources	None	See assessment of effect form.
<b>Cultural</b> Cultural Landscapes	None	See assessment of effect form.
<b>Cultural</b> Ethnographic Resources	None	See assessment of effect form.
<b>Cultural</b> Museum Collections	None	
<b>Cultural</b> Prehistoric/historic structures	None	See assessment of effect form.
<b>Geological</b> Geologic Features	None	
<b>Geological</b> Geologic Processes	None	
<b>Lightsapes</b> Lightsapes	None	
<b>Other</b> Human Health and Safety	None	
<b>Other</b> Operational	None	
<b>Other</b> Other	None	
<b>Socioeconomic</b> Land Use	None	
<b>Socioeconomic</b> Minority and low- income populations, size, migration patterns, etc.	None	
<b>Socioeconomic</b> Socioeconomic	None	

<b>Resource</b>	Potential for Impact	Potential Issues & Impacts
<b>Soundscapes</b> Soundscapes	Potential	Issue: Sounds produced during project implementation may affect the soundscape  Impact: Sounds produced by the implementation of this project may temporarily affect the local soundscape
<b>Viewsheds</b> Viewsheds	None	
<b>Visitor Use and Experience</b> Recreation Resources	None	
<b>Visitor Use and Experience</b> Visitor Use and Experience	Potential	Issue: The meteorological tower, once completed, will be visible to hikers along the trail.  Impact: The tower may affect the visitors' sense of being in a remote location.
<b>Water</b> Floodplains	None	
<b>Water</b> Marine or Estuarine Resources	None	
<b>Water</b> Water Quality or Quantity	None	
<b>Water</b> Wetlands	None	
<b>Water</b> Wild and Scenic River	None	
<b>Wilderness</b> Wilderness	Potential	Issue: The tower will be located in potential wilderness  Impact: The tower may affect the perception of the five qualities of wilderness character, but the installation will provide information that could help to protect the ecosystems that wilderness also protects. A programmatic MRA has been completed as part of this project.





## ASSESSMENT OF ACTIONS HAVING AN EFFECT ON HISTORIC PROPERTIES

### A. DESCRIPTION OF UNDERTAKING

1. **Park:** Yosemite National Park

2. **Project Description:**

**Project Name:** Installation of automated weather station near Vogelsang High Sierra Camp

**Prepared by:** Ninette Daniele **Date Prepared:** 02/11/2020 **Telephone:** (209) 379-1457

**PEPC Project Number:** 92894

**Locations:**

**County, State:** Mariposa, CA

**Other:** -119.347134, 37.794661

**Describe project:**

See Categorical Exclusion form

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

Vogelsang High Sierra Camp surrounding area, tower and snow pillow would be installed 200 meters to the west of the High Sierra Camp. The above ground vertical APE is 25 feet for the tower and 4 feet below grade for installation. The tower would not be visible from the High Sierra Camp.

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 Present:** No

**Archeological Resources Notes:** The project area is not located within known archeological sites.

**Historical Structures/Resources Present:** Yes

**Property Name:** Vogelsang High Sierra Camp **LCS:**

**Historical Structures/Resources Notes:** The tower would not be visible from Vogelsang High Sierra Camp and is not within the boundary of the High Sierra Camp, but is located 200 meters adjacent to the property.

**Cultural Landscapes Present:** No

**Ethnographic Resources Present:** Yes

**Ethnographic Resources Notes:** Project was included on the August 2019 tribal spreadsheet for 30 day tribal review. No comments or concerns were received.

**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:

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[ X ] 106 Advisor

Name: Madelyn Ruffner

Date: 02/25/2020

*Check if project does not involve ground disturbance* [    ]

Assessment of Effect:   \_\_\_No Potential to Cause Effect   \_\_\_X\_\_\_No Historic Properties Affected   \_\_\_No  
Adverse Effect   \_\_\_Adverse Effect   \_\_\_X\_\_\_Streamlined Review

**Recommendations for conditions or stipulations:**

**Doc Method:** Park-Specific Programmatic Agreement (PA)

**Streamlined Activity:**

7. Installation of Monitoring Units

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**X ] Anthropologist**

**Name:** Liz Williams

**Date:** 02/11/2020

**Comments:** Project was included on the August 2019 tribal spreadsheet for 30 day tribal review. No comments or concerns were received.

*Check if project does not involve ground disturbance* [ ☐ ]

**Assessment of Effect:** ☐ No Potential to Cause Effect ☒ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect ☒ Streamlined Review

**Recommendations for conditions or stipulations:**

**Doc Method:** Park-Specific Programmatic Agreement (PA) **Streamlined Activity:**

7. Installation of Monitoring Units

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**[ X ] Archeologist**

**Name:** Wesley Wills

**Date:** 02/11/2020

**Comments:** The area has been archeologically surveyed with good ground visibility and no sites have been identified.

*Check if project does not involve ground disturbance* [ ☐ ]

**Assessment of Effect:** ☐ No Potential to Cause Effect ☒ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect ☒ Streamlined Review

**Recommendations for conditions or stipulations:**

**Doc Method:** Park-Specific Programmatic Agreement (PA)

**Streamlined Activity:**

7. Installation of Monitoring Units

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**[ X ] Historian**

**Name:** Scott Carpenter

**Date:** 02/11/2020

**Comments:** No review by Historic Architect or Historic Landscape Architect needed because tower/snow pillow located out of the boundary of the historic High Sierra Camp and not within its view.

*Check if project does not involve ground disturbance* [ ☐ ]

**Assessment of Effect:** ☐ No Potential to Cause Effect ☒ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect ☒ Streamlined Review

**Recommendations for conditions or stipulations:**

**Doc Method:** Park-Specific Programmatic Agreement (PA)

**Streamlined Activity:**

7. Installation of Monitoring Units

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**No Reviews From:** Curator, Historical Architect, Other Advisor, Historical Landscape Architect

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## C. PARK SECTION 106 COORDINATOR'S REVIEW AND RECOMMENDATIONS

### 1. Assessment of Effect:

	No Potential to Cause Effects
X	No Historic Properties Affected
	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. Undertaking Related to Park Specific or Another Agreement

The proposed undertaking is covered for Section 106 purposes under another document such as a park, region or statewide agreement established in accord with 36 CFR 800.7 or 36 CFR 800.14.

#### ☐ D. Combined NEPA/NHPA Process

Process and documentation required for the preparation of an EA/FONSI or an EIS/ROD to comply with Section 106 is in accord with 36 CFR 800.8.c.

#### ☐ E. Memo to Project File

### 3. Consultation Information

**SHPO Required:** No

**SHPO Sent:**

**SHPO Received:**

**THPO Required:** Yes

**THPO Sent:** Aug 2019

**THPO Received:** No comments received

**SHPO/THPO Notes:**

**Advisory Council Participating:** No

**Advisory Council Notes:**

**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 mitigations specified

**6. Assessment of Effect Notes:** YOSE PA #7 Installation of Monitoring Units

**D. RECOMMENDED BY PARK SECTION 106 COORDINATOR:**

**NHPA Specialist** Madelyn Ruffner

**Date:** 7/13/2020

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**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.

**Acting Superintendent:** Cicely Muldoon

**Date:** 7/14/2020

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