

Invasive Species Early Detection Monitoring Protocol for Klamath Network Parks

Standard Operating Procedure (SOP) #2: Field Work Preparation

Version 2025Jun09

Citation for this SOP:

Klamath Network. 2025. Standard Operating Procedure 2: Field Work Preparation: 2025Jun09. Klamath Network Invasive Species Early Detection Monitoring Protocol. Unpublished National Park Service Standard Operating Procedure, Klamath Inventory and Monitoring Network, Ashland, Oregon.

Citation for the original protocol:

Odion DC, Sarr DA, Mohren SR, Klinger RC. 2010. Invasive Species Early Detection Monitoring Protocol for Klamath Network Parks. Natural Resource Report. NPS/KLMN/NRR—2010/227. National Park Service. Fort Collins, Colorado <https://irma.nps.gov/DataStore/Reference/Profile/2124867>

(Note that updated versions of the protocol are linked from the original IRMA record.)

To create a new version of this SOP, carefully follow the instructions for the KLMN (caves) SOP: Revising the Protocol (<https://irma.nps.gov/DataStore/Reference/Profile/2238840>). Use the Revision History Log below to describe the revisions:

- Populate the top table of the revision history log, providing the previous version date, author of the change, a specific but concise description of the changes made, the footnote number associated with change details, and a new version date.
- In the bottom table, add a footnote and as much text as needed to describe in detail the reasons for and implications of the change.
- Replace en dashes with text.

Previous Version Date	Author of Change	Changes Made	Footnote #	New Version Date
02/2010	LNy, AS	Continued ISED protocol update	1	4/18/2025
4/18/2025	T. Berrian	Formatted to adhere to 508 compliance standards.	–	6/09/2025
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–	–	–	–	–

Footnote #	Detailed Reasons for and Implications of the Changes
1	Incorporated protocol changes, mainly pertaining to field equipment.
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–	–
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This SOP explains procedures that will be completed prior to implementing the field season, including reviewing the budget, hiring and scheduling the field crew, and preparing site description forms and maps, as well as preparing data forms, obtaining GIS layers, meeting park requirements, planning the training, and setting up equipment and the database.

Reviewing the Budget

The Protocol Lead will work with the Program Manager prior to each field season to review the budget for this project's work plan and ensure that it meets salary, equipment, mileage, and miscellaneous field expenses.

Hiring the Crew Lead

It is the Protocol Lead's responsibility to hire the Crew Lead. Recruitment for the Crew Lead should begin in late November or early December of the year preceding a field season. Candidate evaluation and interviews should occur in mid Jan-Feb. Hiring should ideally be completed by early March, a minimum of 8 weeks before the start of the season. This is because background checks typically need up to 8 weeks to complete. Qualities to seek in potential Crew Leads include:

1. Proficiency at identifying both native and non-native plants. A completed or in-progress botany degree is preferred.
2. Outdoor hiking and camping experience.
3. Moderate or preferably high level of physical fitness.
4. Familiarity with one or more of the KLMN parks.
5. Familiarity with plant communities in the Klamath Region.
6. Leadership experience.
7. Strong organizational skills.
8. Knowledge of, or preferably certification in, wilderness first aid.
9. Ability to work in the field with another crew member for long periods of time.

Once selected, the Crew Lead should review the protocol and discuss any questions with the Protocol Lead.

Hiring the Field Crew

Recruitment of the field crew member(s) should begin by January of the year preceding field work. Hiring should be completed by March. As with hiring the Crew Lead, initiating the recruitment process early is critical for ensuring that well qualified candidates can be found, background checks can be completed, and hiring paperwork can be processed. Although the field crew member(s) do not need to have the same level of experience, nor all the required skills as the Crew Lead, similar qualities should be sought. While the first three of the above qualities should be considered mandatory, the others are desirable but not strictly required.

Preparing Data Forms, Databases, and GIS Layers

The Data Manager will update electronic forms and load these onto the field tablet. The Crew Lead will test the forms to make sure they are functioning properly prior to going into the field (SOP #6: Data Collection and Entry).

GIS Layers and Maps

The Data Manager should obtain the most up-to-date baseline GIS layers (roads, trails, streams, lakes, park boundary, imagery, etc.) from park staff prior to field season.

The Data Manager will create Avenza maps that crews can use to navigate around the parks.

MapProject

The Protocol Lead will work with park staff to create a list of all species that will be monitored or recorded under this protocol. Once the Data Manager has the species list and GIS layers, he/she can prepare the map project that will be used that year (SOP #4: Field Map Preparations for Data Collection).

Preparing Equipment

Equipment will need to be checked before visiting the field to provide sufficient time for needed repairs or replacement. All equipment should be provided by the KLMN. The following equipment and data are needed:

- Waterproof map of the park with search units or line transects
- Radios for communication among observers and with the parks
- Hardcopy guides needed to identify exotic plants, including photographs of plants and look-alike species
- Hand lens
- Compass
- Field notebook to record field observations and press temporary plant specimens
- Plant press (optional)
- Backpacks
- Binoculars
- Clipboard
- Chargers/batteries for electronic equipment
- Watch

Miscellaneous items

- First aid kit
- Sunscreen
- Insect repellent
- Water
- Standard camping gear (if housing is not available)

Park Requirements

As early as possible after being hired (e.g., March), the Crew Lead should communicate with the Project Lead to determine the contact person for each park. The Crew Lead should contact each park to inform them of the survey schedule and to determine:

1. Whether housing or campground sites are available.
2. Whether keys are needed to access survey sites.
3. Whether permits are needed to conduct research in the parks.
4. Whether there are any safety procedures to follow. For example, whether areas to be sampled need to be checked by law enforcement for safety concerns. This may hamper sampling at Whiskeytown.
5. To determine if there are any road or trail closures that may limit areas available for sampling.

In addition, the Crew Lead should work with each park to ensure the Network radios have been properly configured to work with the communication system at each park.

Scheduling Field Work

Prior to beginning fieldwork, crew training sessions should be scheduled, and any training materials should be prepared as detailed in SOP #3: Observer Training.

By sampling the Network's low elevation sites first during the season, then the mid elevation sites, and finally the high elevation sites, crews can ensure that sampling coincides with the optimum time for observing invasive plants (Figure 1). It is the Crew Leader's responsibility to develop a tentative schedule for the entire season at the beginning of the season. However, it is subject to change and only the work assigned for a single field trip should be completed before further instruction from the Crew Lead. Late May through mid-June is a time when sampling is optimal in multiple parks. If necessary, monitoring at Redwood that could be done during this time may be postponed until the end of the field season to allow more flexibility in scheduling.

	April..... May..... June..... July..... August..... Sept.....
Habitats	
< 1000m WHIS	_____
REDW All	_____
LABE All	_____
ORCA All, > 1000 m WHIS	_____
< 2000 m LAVO, CRLA	_____
> 2000 m CRLA, LAVO	_____

Figure 1. Timing for invasive species sampling in different elevation zones in Klamath Network parks.