

# Sierra Nevada Network Lake Monitoring Protocol

## SOP 3. Training

*Version 1.00, July 2010*

*Prepared by Andrea M. Heard*

### Revision History Log

Previous Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #

# SIEN Lake Monitoring Protocol

## Overview

This SOP describes field crew training requirements and logistics. The protocol lead is responsible for coordinating field training and should have an active training role, especially with field sampling, to maximize consistency. However, the lead may delegate some training responsibilities to knowledgeable crew leads or park staff, as s/he deems appropriate. The protocol lead documents and tracks training completions for their personnel. The training log is stored on the network: J:\sien\monitoring\_projects\water\admin\training\Lakes.

The timing of the training will vary by year depending on the snowpack and the experience of the crew. If there is an all new crew, training will likely have to occur in late June before the first index sampling. If there are enough returning crew members and park and network staff to cover the first index site sampling, the protocol lead has the flexibility of holding the training later in July. The advantage of a later training is that the crews will be trained closer to the extensive site sampling, when they do the bulk of the work. When trained early in the season, the crew then works on other projects between the training and sampling time and will not have the methods as fresh in their minds. Training typically takes 2.5 days, which includes 1.5 days in the office and one day in the field.

Previous field trainings have been conducted at Emerald Lake and timed so the first index sampling can occur as part of the training. Emerald Lake is a 10 mile round trip hike with ~ 2600 ft elevation gain. It is very beneficial to train at an index sampling site as it offers the crew a true sampling experience; however, it does make for a long and somewhat hectic day. Alternatively, we have also held training at Hume Lake, which you can drive to. This site doesn't provide as 'real' an experience, but is more convenient.

Training logistics and agenda will vary by year. However, a core set of training requirements must be covered each year:

### Required

- General orientation to the I&M program and lake monitoring protocol
- Lake sampling methods (*Refer to SOPs #5-10*)
- Quality assurance and quality control procedures (*Refer to SOP #4*)
- Data management (*Refer to SOP #12*)
- Wilderness and water safety (*Refer to SOP #2*)
- Backcountry communication protocols
- NPS required trainings—will vary by year (e.g., IT Security Training, Whistleblower)
- General NPS and administrative trainings (e.g., vehicle use, ethics, time sheets)

### Recommended (may not always be available at a convenient time)

- Driver safety
- Yosemite or Sequoia/Kings Canyon seasonal orientations
- CPR

## **SIEN Lake Monitoring Protocol**

This SOP includes several resources to assist the protocol lead in planning the training. The following pages include an example agenda, a list of the handouts to provide, Power Point presentations to prepare, and the locations where these resources can be found on the network or in the protocol.

# SIEN Lake Monitoring Protocol

## Example Agenda

### I&M Lake Monitoring Training Schedule

#### Monday July 12, 2010

Yosemite crew travels to SEKI

#### Tuesday July 13, 2010 - Office Training Day

- |               |  |
|---------------|--|
| 8:00 – 8:15   | Welcome and Introductions (Andi)                                     |
| 8:15 – 8:45   | Opening Remarks and I&M Overview (Alice)                             |
| 8:45 – 9:30   | Lake Protocol Presentation (Andi)                                    |
| 9:30 – 10:00  | Lake Sampling Methods (Andi)   |
| 10:00 – 10:20 | Break  |
| 10:20 – 11:15 | Lake Sampling Methods cont. (Andi)                                   |
| 11:15 – 12:00 | Amphibian Methods (Andi w/ assistance from experienced crew members) |
| 12:00 – 12:45 | Lunch  |
| 12:45 – 2:15  | Safety   |
| 2:15 – 2:35   | Break  |
| 2:35 – 3:00   | Backcountry Communication Protocols (Sandy)                          |
| 3:00 – 3:30   | Office duties (Andi)   |
| 3:30 – 4:00   | Approach to season (Andi)  |
| 4:00 – 4:30   | Clean-up and prep for tomorrow                                       |

#### Wednesday July 14, 2010 - Field Training at Hume Lake

8:00: Meet at RC and load gear. Leave by 8:30 to make the 9:00 traffic run. Plan for a full day in the field (pack a lunch, etc). We will drive to the training site so you will just need a day pack for personal gear.

After we return: Meet in town for dinner.

#### Thursday July 15, 2010 – Office Training and Field Season Prep

8:00 – 8:15: Administrative details (Jenny and Andi)

Rest of the day: Field season prep, including completing wilderness travel itineraries.

## SIEN Lake Monitoring Protocol

### Training Presentations and Handouts

Previous power point presentation can be found in the lakes training folder on the network: J:\sien\monitoring\_projects\water\admin\training\Lakes\presentations. Typical presentations during the training include:

- An introduction and overview of the I&M Program and Sierra Nevada Network by the Network Coordinator.
- An introduction to the lake monitoring project by the Protocol Lead, including background information, monitoring design, and results to date.
- Amphibian photographs to assist with identification training.
- An overview of the backcountry trips and itineraries by the Logistics Tech.

A list of training handouts and their locations are in Table 1. In addition the complete protocol and SOP's should be available to the crews.

**Table SOP 3.1.** Training handouts and locations.

<b>Document</b>	<b>Location</b>
Agenda	J:\sien\monitoring_projects\water\admin\training\Lakes\agendas
Water Sampling SOP	Lake Protocol, SOP #8
Amphibian Survey Methods	J:\sien\monitoring_projects\water\protocols\amphibians\SIEN_AmphibianFieldProtocol_20100723.doc
Equipment Disinfection SOP	Lake Protocol, SOP #7
Chain-of-Custody SOP	Lake Protocol, SOP #6
Safety SOP, including: <ul style="list-style-type: none"><li>• Job Hazard Guidelines</li><li>• Emergency contact sheets</li><li>• Safety tailgates</li></ul>	Lake Protocol, SOP #2
SIEN staff contact numbers	J:\sien\monitoring_projects\water\admin\forms\safety\LakeMonitoringContactInfo_heard_20100708.doc
Wilderness travel itinerary	J:\sien\monitoring_projects\water\admin\forms\safety\wilderness_travel\WildernessTravelPlan.xls
Office Tasks	J:\sien\monitoring_projects\water\operations\crews