



Standard Operating Procedure (SOP) 2:

Site Visits and Field Safety V1.2

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Revision History Log

Prev. Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #
1.0	6/2009	Marcus Koenen	Minor formatting and editing. Added field safety.	To meet NRR guidelines	1.1
1.1	Dec 2018	M. Dettling, D. Humple	Updated contact info, URL, and clarity of some short passages.	Accuracy and clarity	1.2

This Standard Operating Procedure is available in digital format from [San Francisco Bay Area Network website](#) and the [NPS Data Store](#).

Purpose

This SOP provides guidelines that should be followed before, during, and after all site visits. Field safety procedures are also discussed.

Scope and Applicability

All park researchers are required to report to NPS staff regarding activities and itinerary within the parks for monitoring biologists' safety and that of others. Especially, in these times of heightened national security, your itinerary is critical to NPS staff. Park staff may need to contact you while you are in the field and may need to provide assistance in case of emergency. In addition, park researchers will need to be aware of any recent access restrictions.

Park rangers need to be aware of research activities because you may be conducting activities that regular park visitors are not allowed. Informing park staff can minimize information stops by park rangers and can provide interpretive opportunities to park visitors. In addition, many parks have staff and seasonal employees that would like to accompany you in the field and help in any way they can.

This SOP provides a checklist of activities that must occur in order to streamline site visits and ensure appropriate communication with parks has occurred

Procedures and General Requirements

Permit

Field staff, if cooperators, need to make sure that all permits are on hand. For reference, the NPS permit application form can be accessed online: <https://irma.nps.gov/rprs/>. Scientific Research and Collecting Permit Number PORE-2017-SCI-0045 has been completed for years 2017-2022. Point Blue is authorized to capture and mark birds by the U.S. Department of Interior, U.S. Geological Survey Biological Resources Division Bird Banding Laboratory (permit Number 09316), and Point Blue applies for subpermits for all banders once their training is sufficient to allow them to band independently.

Site visit notification

Prior to conducting site visits, field staff should review the Site Visit Checklist (Table 1). Contacting park staff should be done at least one day before heading into the field (Table 2) as a matter of courtesy and safety. This gives park staff an opportunity to pass on important safety considerations. In some areas, you may also need to arrange for access to study sites. E-mail notification is generally acceptable. Follow up phone calls may be needed if changes take place.

Table 1. Site Visit Checklist

Check	Required Action
☐	Copy of permit is on hand.
☐	Contact indicated on permit has been informed regarding your site visit including sampling locations, mode of transportation, number of field technicians, and expected sampling times.

Check	Required Action
☐	I & M Staff has been cc'd with same information to the park.
☐	Park and I & M Staff has your contact information
☐	Your cell phone or radio is fully charged.
☐	All field technicians have reviewed SOP Field Safety or taken equivalent Field Safety training and know how to contact emergency personnel or park staff if needed

Table 2. I&M Contacts for the following parks

Park	Contact	Number	Email
GOGA	Bill Merkle	415-289-1843	bill_merkle@nps.gov
PORE	Dave Press	415-464-5202	dave_press@nps.gov

Environmental Precautions

Sudden Oak Death

When sampling in areas known to carry *Phytophthora ramorum*, the organism responsible for causing Sudden Oak Death, you must disinfect yourself, your vehicle, and your gear to avoid spreading the infection.

The Crew Leader should familiarize herself with known infection sites, and sites where infection is possible due to presence of potential host plants. To minimize the risk of spread, the following measures should be incorporated into field surveys:

- avoid parking in mud;
- do not transport water, soil or plant material;
- carry cleaning materials in your vehicle; use an old screwdriver, stiff brush, and towel for removing mud and other debris, then rinse with water and spray with a disinfectant, such as Lysol or a 10% bleach solution;
- consider having separate sets of footwear for infected and non-infected sites; and
- if you suspect you have found a new infestation site, record the location and symptomatic hosts and report to Vegetation Management for the site's park.

Marijuana Cultivation

Marijuana cultivation has been an increasing problem at both Golden Gate and Point Reyes. Tens of thousands of plants have been removed at these parks in recent years. Marijuana fields were often found by field technicians who came across them accidentally. Fields are often in the understory and include infrastructure such as water pipes, small ponds, sheds, and other obvious signs of activity. Guns and ammunition have also been found and these areas are considered dangerous with High Risk to personnel. If field staff accidentally enter a marijuana field, they MUST leave immediately. These incidents must be reported to law enforcement at either GOGA or PORE immediately. Location information including maps or GPS are valuable to law enforcement staff for relocating fields.

Safety Precautions

Weather and Field Attire

Summer conditions are often mild (between 60 - 80°F), but when conducting fieldwork along the coastal environment, it is important to dress appropriately for a range of weather conditions. Because of the possibility of encountering poison oak and general uneven terrain found off-trail, field personnel should wear long pants and high-topped hiking boots. Leg gaiters are also recommended to reduce the exposure to poison oak and the risk of tick bites during surveys. Since surveys can last longer than anticipated, field personnel are encouraged to take extra food and drinking water into the field.

Field Hazards

Biting or stinging invertebrates (wasps, spiders, ticks) may be encountered. The bites or stings from these animals can be painful, but usually not fatal. If bitten or stung and painful swelling or an allergic reaction occurs, seek medical attention immediately. Check your clothing and exposed skin frequently when in the field for ticks and upon returning from the field, do a more thorough body search for ticks.

Poison oak is found throughout the study area. Before doing any fieldwork personnel should become familiar with the dangers associated with exposure to this native plant and ways to reduce exposure or effect. If exposure occurs, apply Tecnu® (provided at headquarters), rinse with cold water, then wash thoroughly with soap and rinse with plenty of water upon returning from the field. If a strong reaction occurs, seek medical attention and alert your supervisor as soon as possible.

Job hazard analysis (JHA) for landbird monitoring activities.

Table 3 is excerpted from the Job Hazard Analysis (JHA) developed for landbird monitoring at Point Reyes National Seashore. The JHA analyzes the duties, tasks, and potential hazards associated with the program, and addresses the hazards through safe work behaviors and procedures.

Table 3. Excerpt from landbird Job Hazard Analysis.

Work activities	Hazards	Controls and Safe Behaviors
Office Work- Computer use for email and data entry	Muscle and eye strain, repetitive stress injury	• Proper posture and use of ergonomic furniture • Take breaks every hour

Work activities	Hazards	Controls and Safe Behaviors
Travel to Field Locations in Vehicle	Driving hazards such as accident	• Use defensive driving techniques • Expect oncoming traffic on one-lane roads in park • Be alert for foggy conditions • Watch for deer, elk and other wildlife, and adjust speeds to safely operate around areas of high use • Obey traffic laws and wear seatbelt at all times • Do not drive when fatigued, be familiar with route or prepare for unknown route • Do not talk on radio or cell phone while driving • Do not put hot drinks on your lap • Be familiar with the vehicle and its operation • Check gauges, tires, wipers, fluids and replace when necessary • Check vehicle has spare tires, jumper cable and jack with all parts.
Hiking to work areas on trails, routes or off trail navigation	Getting lost or confused as a group	• Have map, compass, GPS and other navigational aids and know how to use them.

Table 3 (continued). Excerpt from landbird Job Hazard Analysis.

Work activities	Hazards	Controls and Safe Behaviors
Hiking to work areas on trails, routes or off trail navigation (cont.)	Losing a crew member	• Travel together when off-trail • Make sure both members of the team are aware of location, and can find route out if they are separated. • When trail hiking, plan stops at trail junctions to regroup. • Arrange meeting places and times -- all crewmembers must wear a watch. • Have a travel plan for each day and make sure it is understood by all crewmembers • Stay in communication via radio or stay in sight • Cell phone and/or radio and spare batteries • If lost or disorientated, stay calm, assess location by consulting map and landmarks, and proceed to nearest road or trail. • Do not panic -- Have a mental plan for what to do if lost • If injured, stay put and radio dispatch.
	Loose footing	• When traveling in areas with steep or unstable terrain, stagger your positions so that you are not immediately below someone, yell "rock" if you dislodge one.
	Lightning storms	• In the event of a lightning storm, turn your radio off, if near a vehicle, get entirely inside. If in the out of doors try to do the following: separate the group, get off ridge tops and away from trees, get as low as possible and if possible lie on non-conductive material.
	Wind storms	• If it is windy enough to blow small twigs and branches out of the trees, try to get out of the woods or find an area away from hazard trees
	Exposure to cold, wet conditions	• Wear proper equipment- and bring extra layers. • Recognize the signs of hypothermia in yourself and others • Carry and eat high-calorie foods, stay well-hydrated
	Exposure to heat and sun	• Have hat, sunscreen and sunglasses
	Overexertion and dehydration	• Recognize the signs of dehydration • Take frequent rest stops (15 min per every two hours) and stay hydrated
	Injuries due to hiking (aches, sprains and blisters)	• Pay attention to footing- plan ahead for the route to avoid steep, unstable terrain • Use appropriate footwear, boots and socks. • Prevent blisters and have blister treatments (moleskin, tape etc.) accessible.
	Injuries due to falling (lacerations, broken bones, head injuries)	• Pay particular attention to traveling on steep slopes, unstable terrain, through dense vegetation, and in foggy conditions. Practice fall- arrest techniques (roll on to stomach, dig elbow, feet and knees in). • Have first aid kit, stabilize injured person, treat for shock and know how to initiate rescue via radio

Table 3. Excerpt from landbird Job Hazard Analysis.

Work activities	Hazards	Controls and Safe Behaviors
Hiking to work areas on trails, routes or off trail navigation (cont.)	Injuries due to carrying a heavy pack	• Reduce pack weights when possible • Pay attention to how you put your pack on (avoid twisting motions- get help or place pack on surface or against tree) • Make sure your pack is properly fitted and balanced
Hiking to work areas- Stream and river crossings	Exposure, sprains, broken bones, drowning	• Avoid swift or deep water crossings by using foot or automobile bridges. • Be careful on slippery logs and watch footing on either side of stream crossing.
Working in the outdoors	Exposure to allergy-causing plants and insects	• Alert crew members to possible problems with allergens. Be alert for toxic plants and alert to common bee and wasp nesting habitat and activity-especially the person in front. • Carry Benadryl, epi-pen or other antihistamine
	Exposure to toxic plants	• Avoid poison oak when possible. Wear long-sleeved shirts, long pants, and hiking boots. Wash skin exposed to poison oak with Tecnu or other appropriate cleaner and change clothes if necessary at end of day/survey. • Do not eat any fungus or plant unless you are 100% sure it is edible.
	Exposure to ticks	• Wear proper attire (long-sleeved shirts and long pants) and do frequent tick checks. If bitten by black legged tick, properly remove tick and monitor general health condition.
	Exposure to giardia, E. coli and other pathogens	• Do not drink any water unless it has been filtered, boiled or treated in some fashion • Do not create more contaminated areas- urinate away from streams and water, dig a cathole for solid waste and bury toilet paper. • Wash hands when possible and carry hand cleaner
	Improper nutrition due to inappropriate food choices	• Bring a variety of healthy, nutritious food that will give you good energy during travel and work. Do not rely on sugar snacks.
	Loss of food to ravens, raccoons, small animals	• Prevent animals from getting into your food by not leaving you backpack open or accessible to animals.
	Cougar attack	• If approached by cougar make yourself large and noisy, wave arms, yell, grab a stick. Back away from cougars but do not turn and run, ever. If attacked, fight back.
	Strange or aggressive human interactions	• Terminate contact with visitor and leave the area, contact dispatch (GOGA: 415-561-5656; PORE: 415-464-5170 or emergency numbers (911)