Standard Operating Procedure (SOP) 3: Training

Protocol for Monitoring Small Mammals

Central Alaska (CAKN) Inventory and Monitoring Network

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The main Narrative for the Protocol for Monitoring Small Mammals in Central Alaska (CAKN) Inventory and Monitoring Network is available from the NPS Inventory and Monitoring Central Alaska Network website (http://science.nature.nps.gov/im/units/CAKN/) and the Natural Resource Publications Management website (http://www.nature.nps.gov/publications/nrpm/

SOP 3 – Training

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SOP 3.0 – Introduction

This SOP describes the annual training procedures required for personnel involved with Small Mammals monitoring for the Central Alaska Inventory and Monitoring Network (CAKN) conducted at the Rock Creek legacy plots in Denali National Park and Preserve (DENA). Training is carried out well in advance of the upcoming field season and should be completed by the middle of June prior to field work in August. Survey and data processing/management personnel will be familiar with the Small Mammals protocol narrative and SOPs. Survey personnel will complete National Park Service (NPS) safety training as well as data collection training to comply with quality assurance protocols. Safety is the most important aspect of conducting live-trapping and mark-recapture studies for monitoring Small Mammals, as working in the wilderness and in bear country can be dangerous. With this in mind, survey operations will be conducted with safety as the top priority in decision making processes. Yukon-Charley Rivers National Preserve and Gates of the Arctic National Park and Preserve (YUGA) have backcountry safety policies that must be followed for all backcountry operations. This guidance can be found on the YUGA intranet page at: https://sites.google.com/a/nps.gov/yuga-admin-handbook/yuga/safety

SOP 3.1 – Safety Training

To ensure crew safety, the NPS requires a high degree of training before crew members are allowed into the field. Each crew member must be able to show that they possess current certification and/or training in the classes listed under SOP 3.1.1.

SOP 3.1.1 – Required Safety Training

1) Bear and Firearms Safety Training (4 hours, annually provided by YUGA, usually within the last two weeks of May). A second bear behavior training in DENA, taught by the bear biologist or bear technicians, is also provided (2 hours annually). The bear safety portion of the class is required of all NPS field personnel and volunteers. This training can be obtained by local vendors in the spring, several months prior to field work (e.g. Joe Nava's Firearms Instruction) or by NPS or other DOI agencies (e.g. BLM, FWS, etc.). Per YUGA's backcountry policies, the firearms (shotgun) training is not required of personnel who are not required (or allowed) to carry firearms in the field (volunteers, SCAs and anyone who has not had firearms training cannot carry or handle firearms). However, it is useful for the crew members to take the training to understand and maintain firearm safety when one is present. Field crew members on the Small Mammals surveys are not required to carry firearms but are required to carry pepper spray at all times and will be trained in its use. However, a firearm may be carried by senior personnel during Small Mammals surveys.

2) Satellite phone use, SPOT, communications and safety check-ins in the field (1 hour annually). All field crew members will be taught how to use the satellite phone and SPOT, and how and when to make twice daily safety check-in with the Alaska Regional Communications Center (ARCC) in DENA. This training will occur the Friday prior to the start of field work, the following Monday and again reviewed in the field.

3) Backcountry Orientation Training (2 hour annually). Conducted in DENA at the Backcountry Orientation Center prior to hauling our gear into Rock Creek camp, this training teaches crew member about bear safety, Leave-no-Trace camping and hiking in the park, staying warm and dry, using layered clothing, safe river crossings, smart communication planning and awareness of other backcountry hazards.

4) CPR/First Aid (4 hours annually). Basic CPR and First Aid is required for all NPS staff personnel going into the field (it is highly recommended for volunteers). A wilderness first aid course is even better.

5) Personal Protective Equipment (PPE) and field clothing (1 hour annually). The crew members must have a basic understanding of the use of personal protective equipment (PPE). PPE, including nitrile gloves for handling small mammals and warm, wicking layers, rain gear, rubber knee boots, sunglasses, etc. for working in the backcountry in inclement weather.

6) Operational Leadership (16 hour initial training-8 hour class for employees, 4 hour class for VIPs; 2 hour annual refresher). This training for all permanent, term, seasonal crew members (highly recommended for volunteers) is essential to empower staff to be assertive about their safety, the team's safety, risk management and the decision-making process. More information can be found at: https://www.nps.gov/training/nrs/academy/G_both_graphic/operational_leadership.html

SOP 3.1.2 – Required Communications Training

Communications will comply with all applicable policies and regulations issued by the Department of the Interior (DOI), National Park Service YUGA (Yukon-Charley Rivers National Preserve and Gates of the Arctic National Park and Preserve) backcountry and safety policies, DENA backcountry and safety policies and the Alaska Regional Communications Center (ARCC) communications and safety policies (https://sites.google.com/a/nps.gov/arcc-region/home).

The ARCC requires twice daily check-ins with two-way communication devices. The Small Mammals crew will call in each morning from the Rock Cree camp at 10 am (after the first trapping session) and at 6 pm (prior to the 8 pm trapping session). Calls will be made by either cell phone, satellite phone or park radio. We will use the project manager (Melanie Flamme) YUGA Radio Number to identify our project: **349**. ARCC DENA Radio Number is: **700**. When making a call to ARCC, it should go something like this:

- **Radio Calls to ARCC**
  (example: Radio: "700 (seven hundred=ARCC), this is YUGA 349 (three-hundred forty-nine) at Rock Creek checking in for the Small Mammals crew (you may also need to say the PIs name, "Flamme," to provide more detail to the dispatcher if they don't seem to recognize the project).

-**Satellite or cell phone check in:**
  (example: "Hello, this is YUGA 349 (three-hundred forty-nine) at Rock Creek checking in for the Small Mammals Crew.

Our SPOT device is programmed with the ARCC email address as well as the CAKN Program Manager, YUGA Chief of Resources and DENA liaison email addresses. Each night after we return from the 8 pm trapping session, we will send a SPOT message to ARCC signaling we are all ok and back in camp for the evening.

SOP 3.2 – Survey Technique and Protocol Review

Effective training of crew members is the single most important component of maintaining a viable and effective long-term monitoring program. Having properly trained personnel reduces observer error, helps to streamline sampling in the field, enhances safe and gentle handling of wildlife, provides consistent implementation of field methods, reduces sampling errors and ensures that the assumptions of live-trapping and mark-recapture sampling are met. Being able to properly collect data, use equipment, troubleshoot equipment malfunctions and complete the data collection are essential to the Small Mammal monitoring effort. The project managers are committed to developing a high-quality training program that ensures observers are competent and confident during survey trapping and data collection and understand the objectives of the project and will guarantee the safety and success of the project. Having a solid grasp of survey techniques improves efficiency of data collection, safe animal handling and ensures quick removal of animals from traps. All crew members will review the Small Mammals protocol narrative and Standard Operating Procedures (SOPs) prior to field work. They can be found at: https://irma.nps.gov/App/Reference/Profile/2219630.



SOP 3.2.1 – Pre-survey Small Mammal Methods Training

The project manager will conduct a pre-survey training (usually on the Friday prior to the Monday when field work begins) for all field crew members participating in the survey, both new and experienced. The project manager(s) should distribute copies of SOPs 2, 5 and 7 to all crew members. The training is scheduled for a full day and conducted in person or via video conference (Appendix 3.1). It includes a presentation about the Small Mammals project objectives, methods, procedures for live-trapping, species and sex identification and reproductive status (Appendix 3.2) and species (Appendix 3.2), animal handling, PIT tagging, zoonotic disease risks, data collection, data downloading, sample and specimen collection, backcountry safety, Leave-no-Trace camping, backcountry orientation and communications. Required field gear (including warm clothing and PPE), and the need for PPE to mitigate zoonotic disease risks, backcountry food and the use of bear resistant food containers will be discussed (see SOP 5). Information on sex and species identification is provided in Appendices 3.1 and 3.2 and in the "Small Mammals of Alaska" field handbooks (MacDonald 2003).

SOP 3.2.2 – Camping Equipment Training

Field crew members will be issued all of their field gear and the crew has the option to go shopping for backcountry food and pack their bear barrels as a team (this is helpful for new crew members who may not have experience). Crew members not related to NPS employees are entitled to reimbursement of food at backcountry per diem rate (currently $25/day). All food is purchased and packed into bear barrels prior to the field work. All food is hiked into camp. Cooking stoves include Jetboils and MSR Reactor stoves that quickly heat water for food and drinks.



When packing bear barrels, remove as much packaging as possible, line with a small trash bag and pack food in plastic zip baggies (this will reduce food odors and keep food dry). All food and toiletries with odors (soap, toothpaste, toothbrush, etc.) must be kept in a bear barrel. Assume it will be cold so bring enough food for seven breakfasts, lunches and dinners and ample snacks.

A copy of the annual training schedule can be found in Appendix 3.3. A Microsoft PowerPoint presentation for Small Mammals methods training can be found via the following link, and can be modified to meet the project manager's purposes for a particular survey:

J:\Monitoring\Small_Mammals\Training\SmallMammalsCAKNOverviewTraining2017FlammeCompressed.pptx.

SOP 3.2.3 – Use of Data Notebooks, Data Recoding and Data Entry

Training in the use of data notebooks details required data fields, and how and when to use these them (SOPs 2 and 7). Data entry instructions are provided in SOPs 2, 6 and 7.

Appendix 3.1 – Example: Small Mammals Training Agenda

Central AK Network Small Mammal Training Agenda 2016

Friday, August 5thth:

9 am- Introduction and treats

9:15 am- PowerPoint
"Introduction to CAKN Denali Small Mammal Project" and "Voles: Vital Vittles"

10:00 am- NPS Training Video
"Leave no Trace" camping techniques and backcountry orientation for GAAR

10:45 am-Communications training

11:00 am-Notebook data entry training demonstration with Sarah, Patrick, Tristan and Delaney

11:45-Field gear lists

12:00 Lunch at Coffee Roasters for the crew

1:30 am-Trapping practice with readers/Sherman traps/PDAs-exercise in warehouse area

2.30pm -Meet in the warehouse-issue crew field gear:
-pepper spray
-backpack
-bear barrel with bag liner
-tent
-sleeping bag
-sleeping pad
-potty kits
-tarps (for over your tent-keeps you nice and dry and give you additional places to put your wet gear)
-day packs (if you'd like them)

3-5 pm- shopping and packing of bear barrels

Meet at FAC Monday, August 10th, 7 am with your backpacks to pack gear in trucks

Mel's cell 907-978-9340 call or text if you need anything or have questions!