

Protocol for Monitoring Fish Communities in Small Streams in the Heartland Inventory and Monitoring Network

SOP 1: Preparation for Field Sampling, Version 1.1

Revision History Log:

Previous Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #
1.0	4/5/2017	Dodd	Added information on number of crew needed for gear types; specified timeline needed for field preparations; moved equipment lists to respective SOPs	Clarify crew and time needed to prepare for fieldwork.	1.1

This SOP provides information to prepare for the field season, including number of crew needed and scheduling of field trips. It also provides information on keeping records of staff time spent on sampling trips, checking water levels at the parks, and obtaining collecting permits. A list of required data sheets with a brief explanation of their purpose is provided.

General Preparations

Prior to the field season all crew members should review the entire protocol, including SOPs. At least 2 months prior to fish community sampling for the season, a plan needs to be developed by the project lead or crew lead that includes details for personnel, equipment, time requirements, and the sample schedule necessary to complete sampling. All equipment should be gathered at least 1 month prior to the field season (see SOPs 3-6 for equipment lists) and checked to ensure that equipment is in working condition and that supplies such as paper for data sheets and preservative for specimens are available. All sampling gear should be inspected, particularly nets that tear frequently and electronic equipment such as backpack shockers, flow meters, and water-quality meters, to ensure there is no damage.

The project leader must prepare a field notebook for the survey year. The notebook should contain entries for observer names, field hours, and unique happenings that may influence how the data is reported. Information included in trip reports is based on what is recorded in field notebooks, so it is imperative that they are clearly organized for ease of field note entry. Notebook entries should be recorded daily to ensure accuracy.

Sampling Period

Inclement weather and personnel workloads will preclude the scheduling of sampling events to specific annual dates, although sampling must be conducted within the index period (see Table 5 in Protocol Narrative) to maintain data consistency. Sampling dates should be scheduled and logistics organized 2 months prior to the start of each field season. Monitoring efforts will require a three to six person crew depending on the gear necessary to sample fish at a park (see SOP 2 and 4). Two to three crewmembers are necessary for backpack electrofishing or seining. Five to six crewmembers are needed for tow barge electrofishing. Typically two to three reaches can be sampled in one day. Depending on the travel distance from HTLN offices to the park to be sampled, a day may be required for traveling to the park.

Agency Notifications and Collecting permits

State and Federal agencies are permitting authorities for the natural resources that they manage and oversee. To ensure that the equipment planned for sampling meets the requirements of permitting authorities and is best suited for the conditions that will be encountered, the project leader needs to determine if special regulations exist for any water body where sampling is planned. If threatened or endangered species are known or suspected to occur at any sampling site, the U.S. Fish and Wildlife Service (USFWS) must be contacted to determine specific stipulations associated with sampling within the species' respective range and any permit requirements, regardless of the specific location of the sampling sites. For sampling at PIPE and TAPR, a USFWS collector's permit is mandatory due to the presence of the endangered Topeka shiner (*Notropis topeka*). The project leader should contact state agencies at least 2 months prior to sampling and obtain collection permits. The project leader is also responsible for submitting sample results to these agencies to renew collection permits. In addition, the project leader should contact the park resource manager and the radio dispatcher of each park at least one week prior to sampling to make them aware that sampling is being conducted in the park. Although all sampling sites will be on NPS property, it may be necessary to cross private property to reach some sites, and permission from landowners needs to be acquired where appropriate.

Contact information for permit applications for each state:

Arkansas Game and Fish Commission, Attn: Scientific Collection Permit, #2 Natural Resources Drive, Little Rock, AR 72205.

Iowa Department of Natural Resources, Customer Service Bureau – Licensing Section, Wallace State Office Building, 502 East 9th Street, Des Moines, IA 50319-0034.

Kansas Department of Wildlife and Parks, Attn: Environmental Services Section, 512 SE 25th Avenue, Pratt, KS 67124

Minnesota Department of Natural Resources, 500 Lafayette Road, St. Paul, MN 55155-4020.

Missouri Department of Conservation, P.O. Box 180, Jefferson City, MO 65102-0180.

Nebraska Game and Parks Commission, 2200 N. 33rd Street, P.O Box 30370, Lincoln, NE 68847-6057.

US Fish and Wildlife Service. Region 3 (Minnesota), phone: 612-713-536, 1 Federal Drive, BHW Federal Building, Fort Snelling, MN 55111, and Region 6 (Kansas), phone: 303-236-7905, 134 Union Blvd., Lakewood, CO 80228.