

Standard Operating Procedure 4: Locating Sites in the Field, version 1.0

Monitoring protocols involve revisiting specific sites during each sampling event, and locating those sites quickly and efficiently is critical to a functional program. This SOP outlines methods of locating specific sampling sites in the field. Sites are generally 100m long, with actual site lengths established to include multiple fish habitat types, and to allow for the start and end point of the reach to occur at geomorphic breaks that limit fish movement during sampling. All site lengths are documented in the fisheries database. Tables 1 and 2 include a list of sites and additional sampling information.

- 1) Specific site directions to each site are on file and electronic copies are available on the O:drive (O:\WORKING\AQUATIC\Site_Directions). Additionally, site directions are included in the Fish and Aquatic Macroinvertebrate Database. Site directions include a written description of the location of each site by number and contain information on tag trees (see step #2), including species, diameter, and tag tree locations. Upper (UTT) and lower (LTT) tag trees are further referenced in the directions as left-hand side (LHS) or right-hand side (RHS) and direction facing up (U) or downstream (D) (e.g. UTT RHSD means that the upper tag tree is on the right hand bank as you're looking downstream). Site directions also include written descriptions of specified road and trail routes and a U.S. Geological Survey (USGS) topographic map of the stream with clearly marked site locations. In the event that access to the stream changes or tags and/or tag trees are lost, the associated site directions need to be revised accordingly. All missing or replaced tags should be noted on the datasheets.
- 2) The start and endpoints of all fish monitoring sites are referenced by tagged live trees located on the stream bank. Site tags are 1 ½" X 6" yellow metal strips that have "SNP Fish Transect" and the specific site number stamped on them. All tags face the stream and are generally located approximately five feet above the ground on prominent live trees. To facilitate the location of tag trees in the field, tags also face the direction of most likely approach, except in high use areas. In these areas, tags may be more discreetly hidden from view of trails. When suitable tag trees are not located at the exact start or end points, a written description will reference what portions of the stream are included in the transect (e.g. "start at tail-crest of largest pool...end at 2 ft. bedrock step").
- 3) Unless otherwise noted in the site directions, start and end points occur directly next to associated tag trees, usually at a geomorphic habitat break that limits fish movement (see SOP 6).
- 4) If needed, UTM's (NAD 83) marking all start and endpoints for monitoring sites have been collected and are on the site direction sheets as well. Additionally, all UTM's can be found in the fisheries database (see SOP 5, for use of GPS units). Coordinates are named by the site number followed by an "A" for the bottom of the site or a "B" for the top of the site.

SOP Revision History

All protocols, regardless of how sound they are originally, require modification as new and different information becomes available. SOP version numbers increase incrementally by tenths (e.g. version 1.1, version 1.2...etc.) for minor changes. Major revisions should be designated with the next whole number (e.g., version 2.0, 3.0, 4.0 ...). Small changes or additions to existing methods will be reviewed in-house by Shenandoah or Mid-Atlantic Network staff. However, if a complete change in methods is sought, an outside review is required.

Revision History Log:

Prev. Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #