

SVAP2: check small stream health with updated tool from NRCS

Conservationists now have a more accurate tool to help landowners check the health of streams on their property. SVAP2, an updated version of the Stream Visual Assessment Protocol (SVAP), can be used to evaluate the physical condition and habitat quality of any stream shallow enough to sample without the use of a boat.

Conservationists with basic training in aquatic biology and hydrology can use the tool successfully, according to Kathryn Boyer, fisheries biologist with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) in Portland, Oregon. Boyer led a multidisciplinary workgroup to revise the first SVAP to better meet the stream corridor assessment needs of NRCS.

SVAP was originally intended for use only with landowners, but SVAP2 is expected to be used more broadly to help with overall conservation planning, establish eligibility for Farm Bill programs, evaluate trends instream and riparian conditions, and identifying other problems or concerns.

Boyer explains that the assessment is a good “first look” at physical, chemical, and biological conditions of wadeable streams, their riparian areas, and in stream habitats.

As is the case with SVAP, the NRCS is encouraging each State office to modify SVAP2 for local conditions and to include it in its Field Office Technical Guide.

SVAP2 offers guidance on what to look for to complete a worksheet in which scores of 0 to 10 are assigned for up to 16 elements that contribute to stream health.

The elements with abbreviated primary assessment topics are:

- **Channel condition**—is the down-cutting or deposition of material?
- **Hydrologic alteration**—is natural stream flow variation, including bank full, overbank, and low flows?
- **Bank condition**—are banks stable, or eroding?
- **Riparian area quantity**—are the length and width of the vegetated transitional area between the stream and uplands?
- **Riparian area quality**—what are the species and ages of the vegetation?
- **Canopy cover**—how much of the stream is shaded?
- **Water appearance**—is turbidity high (cloudy) or low (clear)?
- **Nutrient enrichment**—is water clear, or greenish with algal growth or strong ammonia odor?
- **Manure or human waste**—do livestock have access to the stream, or is animal or human waste discharged into the stream?
- **Pools**—is there a mix of shallow and deep pools of water?
- **Barriers to movement**—are there structures or water management practices being used that limit the ability of fish to swim upstream?
- **Aquatic invertebrate habitat**—are substrates varied, free of sediment, abundant, and stable?
- **Fish habitat complexity**—is there a variety of water depths and velocities? Is there wood, large rocks, undercut banks, or other features that offer cover?
- **Aquatic invertebrates**—which types of aquatic “bugs”, crayfish, snails, or mussels are present?
- **Riffle embeddedness**—are bottom gravels and rocks buried by silt?

- **Salinity**—are salt levels high?

Partial funding for SVAP2 came from the NRCS Agricultural Wildlife Conservation Center (AWCC).

The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.

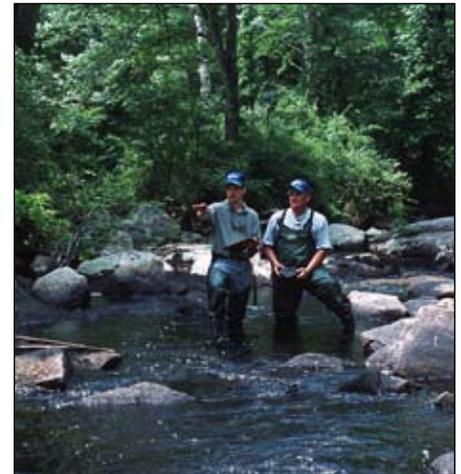


Photo by Paul Fusco

Checking small stream

Summary of:

Agricultural Wildlife Conservation Center
unnumbered project

For more information on wildlife conservation technology, contact:

Ed Hackett
NRCS AWCC
Phone: (601) 607-3131
E-mail: ed.hackett@ms.usda.gov
Web site: <http://www.whmi.nrcs.usda.gov>

For more information on this summary, contact:

Bruce Newton
USDA NRCS
West National Technology Support Center
Phone: (503) 273-2402
E-mail: bruce.newton@por.usda.gov

Kathryn Boyer
USDA NRCS
West National Technology Support Center
Phone: (503) 273-2412
E-mail: kathryn.boyer@por.usda.gov