



1995 Ambient Biological Assessment Monitoring Implementation Plan

Field Work

The Ambient Biological Assessment Monitoring Program is focusing collection effort in the Upper Columbia, Pend O'Reille, Stillaguamish, and Skagit WRIA's during late summer 1995. Benthic invertebrate samples will be collected from riffle and pool habitats in addition to quantitative physical characterization of the stream reach and limited chemical characterization of surface water. Detailed descriptions of methods can be found in Plotnikoff (1994) and Plotnikoff (1995).

The following changes have been made to the biological assessment protocols. Physical descriptions of the stream reach will no longer include quantification of "woody debris." Brief qualitative descriptions of wood accumulation will be recorded on the field forms. Current velocity will be measured at each riffle location where benthic collections are made (four sites within the stream reach). An additional estimate of "shear stress" will be incorporated for stream reaches. Shear stress is an estimate of the transportability of stream substrate at higher flows. Minimum stream reach lengths were formerly 150 meters. There will no longer be a minimum stream reach length requirement, but the maximum stream reach length surveyed will remain at 500 meters. Stream reach lengths are defined as 40 times the average stream width.

Site Selection

Personnel from the Mt. Baker/Snoqualmie National Forest and from Ecology's Eastern Regional Office and Northwest Regional Office were consulted for site monitoring suggestions. The criteria used in selecting sites within the WRIA's were:

1. to adequately represent typical land use impacts on streams (e.g., agriculture and forestry),
2. to choose reference sites for comparison to degraded streams in the watershed, and
3. to evaluate specific stream sites that would be used to identify watershed condition in the evaluation process of Ecology's Watershed Planning Process.

Ecology is an affirmative action employer

Table 1 identifies sites that will be monitored in summer 1995 and reports the suspected source of degradation.

Table 1. Site selection for the 1995 Ambient Biological Assessment Monitoring Program.

Site No.	WRIA	Site Name	Land Use
62CR001	Pend O'Reille	LeClerc Creek	Forest Practices
62CR002	Pend O'Reille	Pass Creek	Previous Landslide
62CR003	Pend O'Reille	Muddy Creek	Forest Practices
62CR004	Pend O'Reille	Upper Slate Creek	Reference
62CR005	Pend O'Reille	North Fork Sullivan Creek	Reference
59CR001	Upper Columbia	Huckleberry Creek	Agriculture
61CR001	Upper Columbia	North Fork Deep Creek	Mining
59CR002	Upper Columbia	Chewelah Creek	Development/Forest Practices
61CR002	Upper Columbia	O'Hare Creek	Mining
59CR003	Upper Columbia	Deer Creek	Forest Practices
04CR001	Upper Skagit	Finney Creek	Forest Practices
04CR002	Upper Skagit	Illabot Creek	Forest Practices
04CR003	Upper Skagit	Jackman Creek	Forest Practices
04CR004	Upper Skagit	Diobsud Creek	Reference
03RV001	Lower Skagit	Sammish River	Development
05CR001	Stillaguamish	Deer Creek	Forest Practices
05CR002	Stillaguamish	Portage Creek	Agriculture
05CR003	Stillaguamish	Long Creek	Forest Practices
05CR004	Stillaguamish	Jim Creek	Reference
05CR005	Stillaguamish	Grant Creek	Reference

Coordination with R-EMAP

The regional environmental monitoring and assessment program (R-EMAP) is currently collecting biological, physical, and chemical information from streams in the Coast Range and Yakima Basin. Although geographical focus for assessing streams can be different between R-EMAP and the Ambient Biological Assessment Monitoring Program, assistance and collaboration has occurred in several laboratory and analytical components.

1. R-EMAP and ambient database fields have been coordinated for consistency.
2. Similar field and laboratory equipment has been purchased by both programs.

3. Benthic laboratory procedures have been coordinated for the processing and taxonomic analysis of biological samples.
4. Both Programs are currently collaborating on a guide for uniform taxonomic analysis of benthic macroinvertebrate samples.

Further evaluation for the specific use of biological information and comparison of the products using the study designs of R-EMAP and the Ambient Biological Assessment Monitoring Program will be examined. The Ambient Monitoring Program has already reported analyses and data from recent biological surveys and begun to define specific information uses.

Literature Cited

- Plotnikoff, R.W., 1994. Instream Biological Assessment Monitoring Protocols: Benthic Macroinvertebrates. Ecology Publication No. 94-113, 27 pp.
- Plotnikoff, R.W., 1995. Ambient Monitoring Instream Biological Assessment: Progress Report of the 1993 Pilot Survey. Ecology Publication No. 95-333, 31 pp.