

Proposed Enhancements to SRBC's Lower Susquehanna Subbasin, Large River, and Interstate Streams Programs

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Interstate water quality monitoring

- Over 50 sites along PA/NY and PA/MD borders (20+ year database)
- Fish, macroinvertebrates, habitat, field and lab water quality sampling
- Incorporation of gas industry-related parameters (strontium, lithium, barium, TDS, bromide)
- Shift some water quality and fish sampling to alternating years
- Web portal

Lower Susquehanna Subbasin Studies (2011-2013)

- Year One study (2011 data collection)
 - Macroinvertebrates, habitat, field and lab water quality
 - Spring/Summer sampling of approximately 100 sites
 - Mainstem site sampling affected by Irene and Lee
 - Basic analysis consistent with past Year One studies (condition categories)
 - Use upcoming PA DEP IBI (watershed-size dependent) to enhance Lower Year One analysis
 - Use IBI to analyze historical Year One datasets and look for Basin-wide trends and patterns
 - Develop and test a biological stressor identification model with historical Year One datasets
- Year Two study (2012 data collection)
 - Focus on Lower Susquehanna Mainstem as a single hydrologic system
 - Biological and water quality analyses, still brainstorming and open to suggestions
 - Currently identifying and compiling existing data
 - Internal meeting in October 2011 to identify potential interests and needs
 - External meeting in November 2011 with resource agencies
 - Enhance other proposed projects within the Lower Susquehanna (SRBC, ACOE)
 - Complement Large River Assessment Project

Large River Assessment

- Site locations-
 - Currently 25 sites (23 on mainstem and north branch, one at mouth of Chemung, West Branch and Juniata River)
 - Keep 25 total sites but will be shifting some sites to encompass more of the large tributaries.
 - Align some site with SRBC Early Warning System (Kirkwood, Elmira, Milton, Columbia) for continuous monitoring of field parameters
- Macroinvertebrate collection-
 - Currently a multi-habitat 30 D-frame composite sample taken at 10 transects over 1km reach (adapted from EPA NRSA non-wadeable protocol)
 - Continue same protocol.
- Fish collection-
 - Currently in pilot stage of implementing electrofishing at 5-7 sites. Adapted from EPA NRSA protocol, 1km reach alternating banks every 200m.
 - Plan to expand- fish half sites even years, others odd years.
 - Looking to add other methods- seine fishing, electric trawling
- Water Chemistry-
 - Currently 26 parameters- ranging from nutrients to metals etc.
 - In process of revisiting parameters for all projects with a possible regional approach. (Gas industry-related parameters, drinking water parameters etc.)