EPA Science Forum 2003
Partnering to Protect Human Health and the Environment

Streams to Rivers: The Next Generation of Ecosystem Monitoring

Moving Science into Action

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Research Focus:

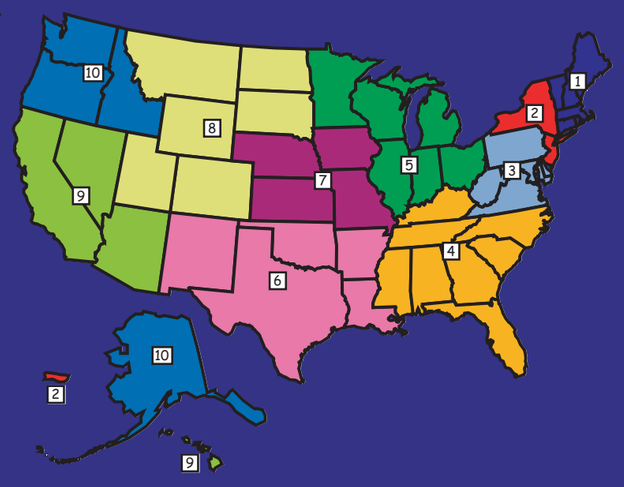
Historical focus in aquatic ecosystems has been on sampling methods for wadeable streams. However, to fully assess the condition of the nation's waters, methods are needed for systems above and below this scale.

Approach:

Through the Office of Research and Development's Regional Methods program (RM), ORD's National Exposure Research Laboratory (NERL) is currently engaged in collaborative research efforts with Regional Scientists to develop standardized bioassessment sampling methods for (1) intermittent streams and (2) large rivers that together comprise > 60% of the total stream miles in the United States.

Impact:

Regions, States, and Tribes are provided the tools needed to assess and monitor currently under assessed ecosystem resources. These tools will be efficient, logistically feasible, and scientifically sound. Current regional partners include regions 1, 2, 3, 4, 5, 8, 9 and 10.



Research Area: Intermittent Streams

(Project Initiated 2003)

Headwater intermittent streams lie at the interface between the aquatic and terrestrial environments. The physical characteristics and extensive stream miles of headwater channels indicate that their function is likely critical and their condition may influence conditions downstream, and ultimately, the oceans.

1

Goal:

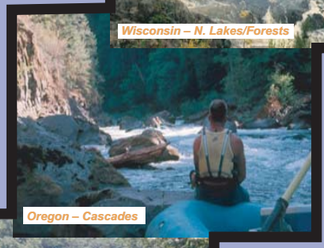
Once we more fully understand the extent and functions of intermittent streams, this information will be used to develop useful assessment and monitoring methods that will be used to make meaningful management decisions.

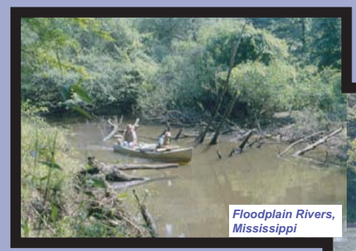
Research Area: Large Rivers

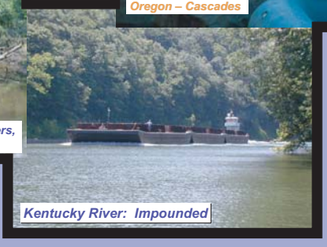
(Project Initiated 1999)

As streams transition into rivers, the physical nature and the aquatic life that inhabits these systems change. Many of these systems have been highly modified for socioeconomic reasons. Assessment of the biological and physical health of these systems requires methods that embrace these changes.

2







Goal:

To develop assessment and monitoring methods for use in large rivers that are clear, consistent, cost effective and reproducible.

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