

Planning a Watershed Assessment

An Overview



Overview of a Watershed Assessment

- Bring the assessment team together
- Identify purpose & scope and develop a “plan of attack” (analysis plan). This involves developing a conceptual model.
- Collect and analyze existing and new data
- Synthesize data
- Prepare a report

Step 1: Organize the Assessment Team

- Goal of the Assessment Team
 - Develop a plan for the assessment
 - Identify consultants to help carry out work
- Who should be on the assessment team:
 - Any stakeholder with an interest in the watershed
 - Concerned citizens
 - Representatives from local/regional government
 - Business, ag, development community

Importance of the Assessment Team

- Those that develop the plan will have an interest in implementing it
- Two types of actions typically result from an assessment:
 - Restoration goals and activities
 - Changes in land use and business practices



Importance of the Assessment Team

- Land use decisions are made by local/regional government and land owners
- Without their cooperation and engagement, unlikely any relevant recommendations in management plan will be implemented.

Step 2: Lay out the scope of the work

- Identify the issues of importance
 - Focus is determined by values of the stakeholders. These are the 'ecological endpoints' of the assessment....
 - Valued fish
 - Water supply
 - Trails and open space
 - Improved water quality
 - Fishability



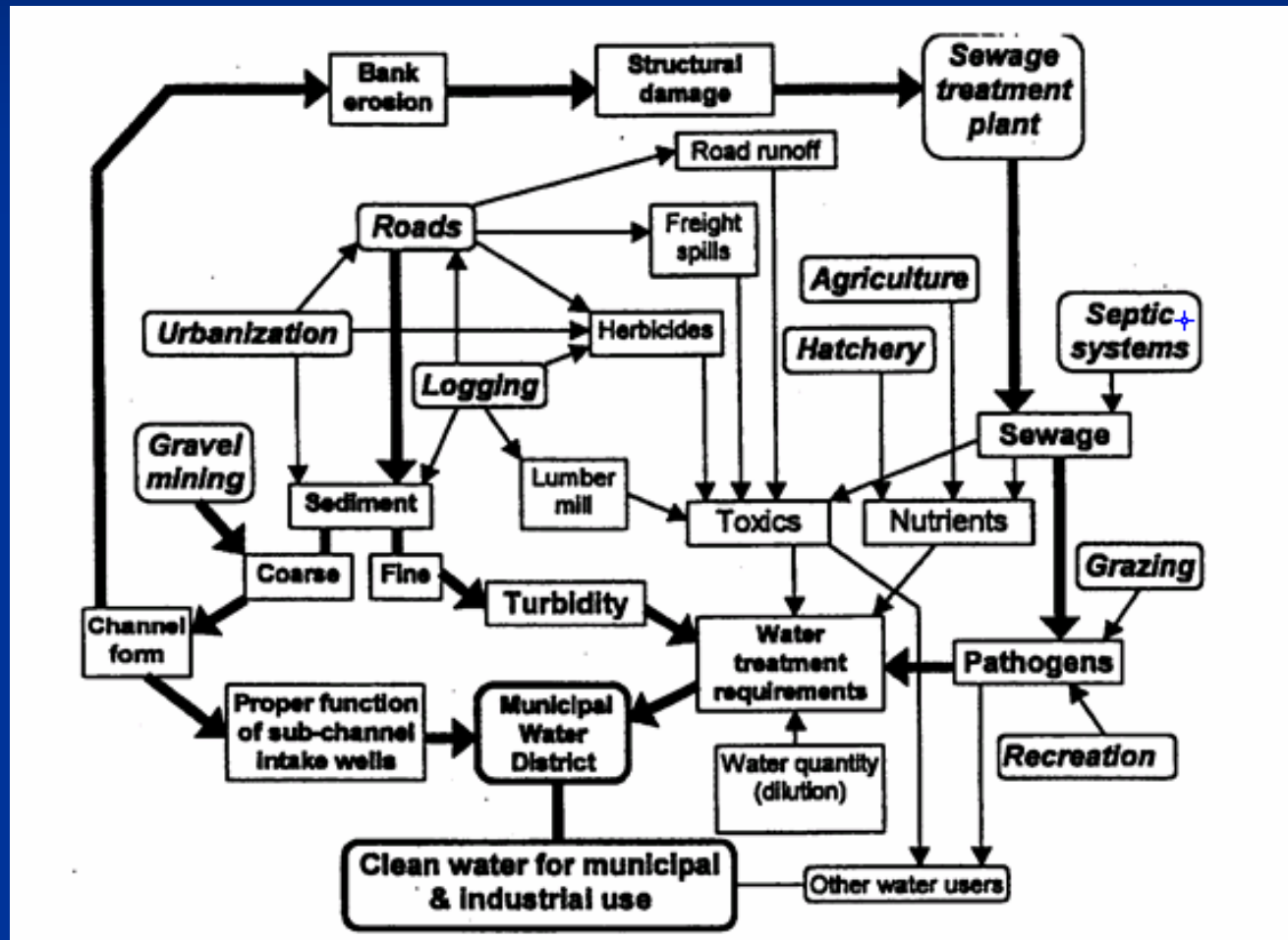
Step 2: Lay out the scope of the work

- Define the temporal and spatial scale of the assessment
 - Identify the boundaries of the watershed
 - Decide on an area that is workable for your group
 - Working watershed – <100 sq. miles
- Over what period of time will you collect data



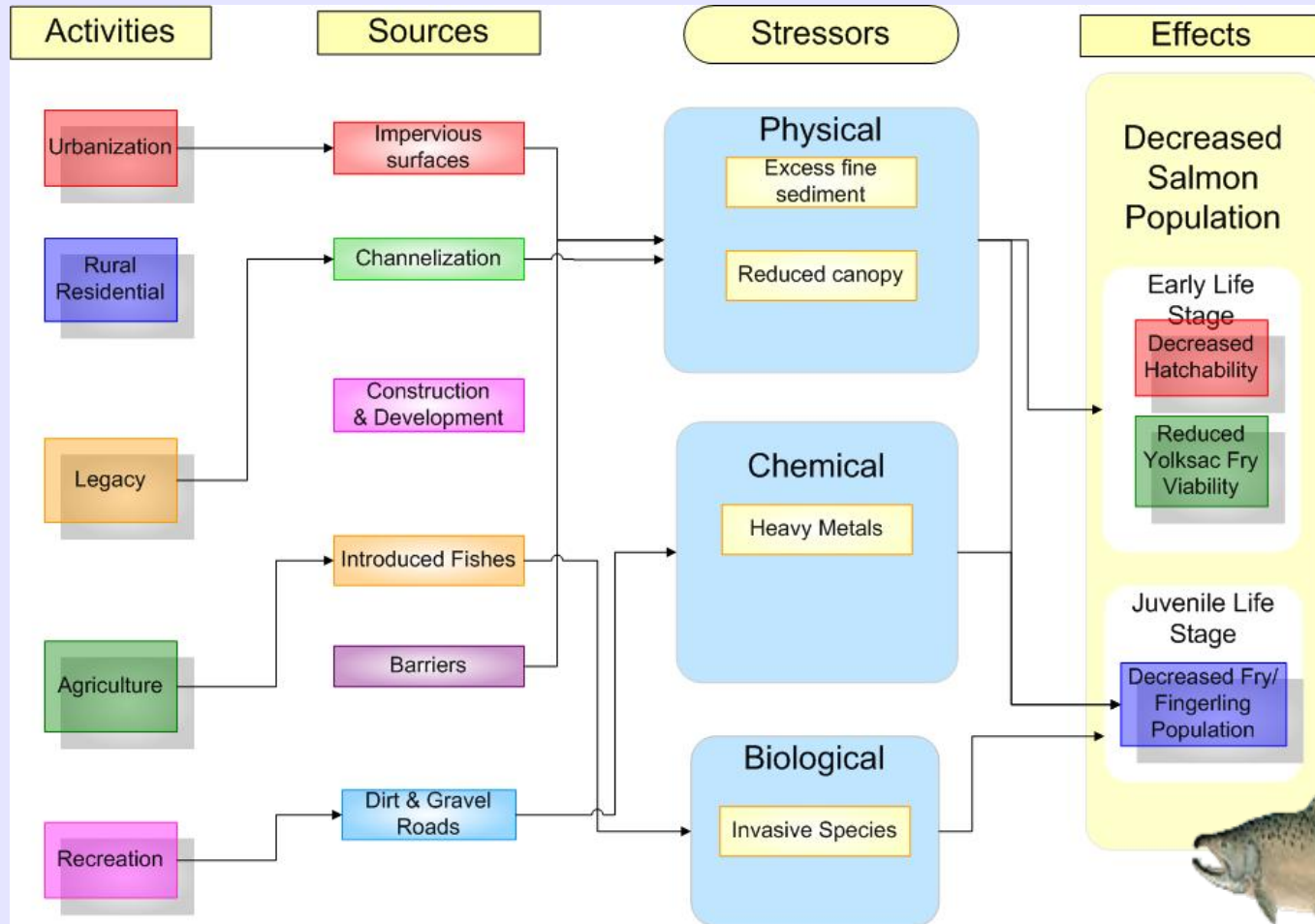
Part of the Scoping: Developing a conceptual model

A. Process-based Conceptual Model



Conceptual Models

b. Management oriented models

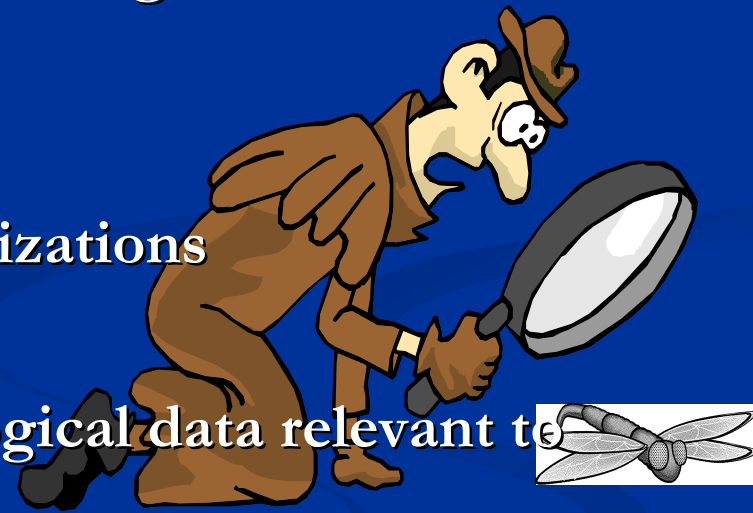


Step 3: Develop a Formal Assessment Plan

- Plan should include:
 - Goals and focus of the assessment, including definition of the time and areal extent of the project. What questions you will answer?
 - Type of data you plan to collect
 - New and existing data
 - How the data will be analyzed
 - Summary & analysis of watershed data
 - Data integration that will support a management plan
 - Arrangements for preparation of a report

Step 4: Collect and Analyze the Data

- Sources of existing data
 - Government: NPDES permit-related, SWAMP, wastewater treatment plant monitoring
 - Watershed council monitoring
 - EIR-related from consultants
 - RCD, other regional/local organizations
- New data
 - Chemical, physical habitat, biological data relevant to goals of the assessment
- Analyze data using informal or formal statistical methods



Step 5: Synthesize & Integrate Information

- What does the data mean?
- How can it be used to guide the development of a management plan?
- Data integration usually involves some type of risk analysis....
 - Key concept: those factors that pose the greatest risk are likely targets for future actions
 - Limiting factors analysis
 - Watershed risk assessment

Step 6: Prepare a Report

- What you did
- How you did
- What you found
- Identify key limiting factors or stressors, & less important factors as well.
- Presented in an easy to understand fashion
 - Figures and graphs
- This lays the basis for developing a watershed plan based on sound science, not a 'best guess'

