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HOW TO DEVELOP A WATER QUALITY MONITORING PLAN

Get to know your watershed! Determine how large of an area within your watershed that your group is going to work.

- ◆ **Get a map(s) of your watershed**, preferably a topographic map because it will indicate elevations, watershed boundaries, and land contours that are used to determine slope and flow patterns.
- ◆ **Determine major land uses in your watershed**—agricultural practices, sewer lines, new development, etc.
- ◆ **Conduct an inventory of the watershed** to help your group determine what locations are the best for monitoring. This will also help to determine the source of pollution when monitoring indicates a decline in water quality or a fish kill occurs.
- ◆ **Watershed watchdogs should observe the area of their watershed** one mile upstream and not just the land adjacent to the stream. Remember: “Everything flows down-stream.”

Create both short and long term goals. Try to create realistic goals and recognize that some goals may be continual throughout the life of your group’s monitoring project. The use of a timeline can be helpful here. Furthermore, the use of maps to create a monitoring plan will help the group to choose monitoring locations that best illustrates the health of your watershed. Some examples of long and short term goals:

- ◆ Inventory the water quality of your watershed.
- ◆ Locate pollution problems and initiate solutions.
- ◆ Educate community members about water pollution issues.
- ◆ Involve local businesses in the clean-up of the stream.
- ◆ Gather data to be used in land use decisions.
- ◆ Improve water quality through restoration and cleanup.

Include interested parties while developing your plan. Stakeholders may include:

- ◆ **Landowners along the river or stream** will be valuable for access to water quality monitoring sites.
- ◆ **Local and statewide government agencies** can share their data on specific parts of the watershed and they have valuable technical expertise.
- ◆ **Other groups in the community, conservation groups, fishing clubs, civic groups** can be useful as a source of volunteers and information.

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4. **Recruit volunteers.** Your group's volunteers should know their roles and responsibilities and why it is important in your community. This is also an opportunity to bring different parts of the community together—school age children, their parents, neighbors, etc. Make sure they know how this water quality monitoring project will benefit the whole community.
5. **Develop a “wish list” of targeted sites that need to be monitored.** When using biocriteria monitoring, stream monitoring stations should be spaced no closer than one-quarter mile apart to ensure that volunteers do not over-monitor the stream. Find monitoring stations that are easy to reach and meet the goals of your group's monitoring project. Once volunteers have identified their monitoring stations, they should indicate the location on a topographic or another map—also it is important for monitors to include a descriptive narrative of the site that they have chosen i.e. roads, bridges and significant landmarks.

Develop a set monitoring schedule that your group's watershed watchdogs can manage. For example, groups might conduct chemical monitoring twice a month at each site. Keep biocriteria/macroinvertebrate monitoring frequency no more than every two months to prevent undue scouring and disturbance of the stream bottom before aquatic insects have a chance to recolonize the site. However, chemical monitoring can be conducted at a greater frequency.

7. **It is critical that volunteers record their data immediately after they have collected it.** If a problem is detected—call your monitoring program coordinator and then contact the appropriate agency personnel. For more detailed information on how to use data for other purposes, the Izaak Walton League of America and Project WET can offer additional guidance.

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