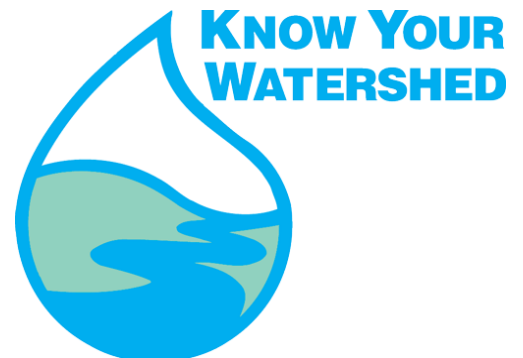


PUTTING TOGETHER A WATERSHED MANAGEMENT PLAN

A GUIDE FOR WATERSHED PARTNERSHIPS



SO YOU'RE READY TO PUT TOGETHER A PLAN.

IS YOUR GROUP READY TO PLAN?

You're ready to begin the planning process if....

- Most interested stakeholders are involved and all have been invited.
- The group has map(s) and information detailing...
 - Boundaries
 - Terrain
 - Water bodies
 - Soil types
 - Roads
 - Land uses
 - Recreational uses
 - Fish and game surveys
 - Development trends
 - Employment trends
 - Education trends
- The group has a technical advisory team to assist them.
- The group has committed to meet regularly at a neutral location and agreeable time.

OVERVIEW.

The goal of watershed management is to plan and work toward an environmentally and economically healthy watershed that benefits all who have a stake in it. By now you and your partners have taken this into consideration in the development of the purpose statement for your group's watershed efforts. (See *Building Local Partnerships* guide for more information on developing a purpose statement.)

Your watershed partnership probably has a good feel for the watershed including maps and other information. See (left).

STAGE-BY-STAGE.

Once you and your partners have pulled together as much information as possible about your watershed, you're ready to start putting together a plan. This process can be broken into three stages:

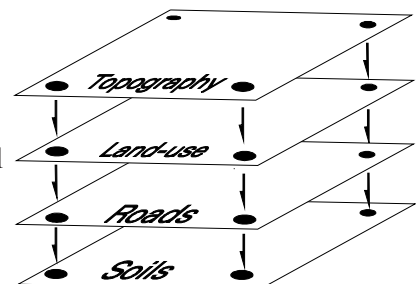
- ◆ **The first stage** includes uncovering concerns, gathering and analyzing information and data, defining challenges/opportunities, developing objectives, and documenting data and decisions.
- ◆ **The second stage** includes developing a game plan for addressing the objectives, selecting the best watershed management alternative(s), listing ways (strategies) for implementing the selected alternative(s), and determining how to measure progress.
- ◆ **The third stage** includes implementing and evaluating efforts.

Remember, your group's efforts will be based on the best available assessment of the natural, economic and social features of your watershed. It's unrealistic to hope to have all the information you'll need. Be sure to recognize, note and weigh missing information throughout the planning process.

Another key point to remember is that these stages are not always done in this order. For instance, a youth group may want to monitor (evaluate) a stream while the watershed partnership continues to determine objectives or develop other strategies.

GEOGRAPHIC INFORMATION SYSTEM*

Maps containing the information your group may need can be obtained from your local Natural Resources Conservation Service, planning and zoning, Department of Transportation, environmental consultants and others. Maps can show multiple items by using an overlapping technique. If your local technical team (see page 4) has access to a Geographic Information System (GIS), this "overlapping" may be done for you.



*Geographic Information System (GIS): A computerized system designed to support the compiling, storing, retrieving, analyzing and display of data for addressing planning, management and environmental decision making.

STAGE 1: CHALLENGES AND OBJECTIVES

During this first stage the group will go back and forth between identifying concerns/problems, seeking data, analyzing data and establishing objectives.

IDENTIFY CONCERNS.

Your watershed partnership will need to identify and address concerns about the water and other natural resource systems, local economy and social structure. Some concerns will be based on perceptions and others will be based on science. Since it is difficult to separate perceptual from scientific concerns, all concerns need to be addressed by the group.

All concerns will need to be explored to see if there is, in fact, a real problem. Sometimes what you and/or your neighbor may think is a problem (concern), isn't a natural resource issue and thus, needs to be addressed in another way. Or when researching perceived problems, you may discover a new problem that the group will want to address.

When developing the list of concerns to be explored, be sure everyone with a stake in the watershed is involved from the beginning (see *Building Local Partnerships* guide for more information on who to involve).

Getting everyone around the same table takes more than a simple announcement in the paper (although reporters from the local media -- newspapers and stations -- can help bring others to the group by covering your group's activities). You and others from your group will need to make some phone calls and personal visits to explain the purpose of a watershed man-

agement plan and how the individual will benefit from getting involved.

Your group may also want to consider how the group envisions future generations using the natural resources within the watershed. You may want to check with your state water quality agency to determine the designated water uses for your watershed. (Most bodies of water in the United States have been designated for a specific type of use.) This information can be used to begin discussion of water and other natural resources.

Other key aspects to consider are some of the major economic forces. Who are the major employers? Where are they located? What are the trends? How can your group affect their future? How can your group impact the economic future of the watershed? How do the economic, social and natural resources impact each other? What is the role of education now and in the future?

During this phase all concerns, regardless how minor, need to be surfaced. Only in this way will all concerns be addressed. Everyone needs to list their concerns. This list should be compiled for all to see. It's important that debate on the merits of the concerns be held for later discussion. The objective is to get all concerns on paper at this point.

WATER USE DESIGNATIONS

Most water bodies (stream, lake, estuary, wetland, aquifer*) have been designated for a specific use(s) by the state's water quality agency. Uses include:

- ◆ Aquatic life
- ◆ Fish for consumption
- ◆ Drinking water supply
- ◆ Swimming and other high contact recreation
- ◆ Boating and other minimal contact recreation
- ◆ Agricultural (irrigation/livestock)
- ◆ Industrial

*Aquifer: A geologic formation of porous rock, gravel or sand containing groundwater.

STAGE 1: CHALLENGES AND OBJECTIVES (CONTINUED)

SEEKING AND ANALYZING DATA.

Once stakeholders have listed all concerns, you and your group will need to combine similar subjects. The next step is to seek information and data about the concerns.

Many watershed partnerships have a team of advisors (technical team) who assists the group with technical questions. Other groups select a subcommittee to research the concern and report back to the larger group. Some groups bring in consultants for this purpose.

Regardless of which way your group decides to go about it, be sure to seek and use any existing monitoring data. This can serve as a baseline for comparison later. The data available will vary considerably from watershed to watershed depending on the extent of past monitoring efforts and resources.

TECHNICAL TEAM

Your group might ask for technical assistance from a team of experts including representatives of ...

- ◆ Water departments
- ◆ Conservation districts
- ◆ Planning and zoning departments
- ◆ Fish and game departments
- ◆ Universities
- ◆ Forestry agency
- ◆ Science teachers
- ◆ Conservation groups
- ◆ Chambers of commerce
- ◆ Bank officials
- ◆ Economics teachers
- ◆ Natural resource agencies
- ◆ Industrial leaders
- ◆ Realtors
- ◆ Others

PRIORITIZE CHALLENGES/ OPPORTUNITIES.

After listing concerns and exploring them by gathering and analyzing data, challenges and opportunities will surface. Unfortunately, there are not enough funds or time to address all potential watershed management needs. Priorities must be set that target efforts to the most critical problems/opportunities.

This is why your group will need to strive for consensus on prioritizing which problems/opportunities to pursue. (See *Managing Conflict* and *Building Local Partnerships* guides for more information.)

Many groups begin prioritizing problems by establishing criteria. This might include:

Ability to influence change. Ask yourselves if there is anything the group can do to influence the changes needed to overcome the challenges.

Delay between actions and results. Checking with your advisory team, try to determine the amount of time between when changes occur and when results can be seen. For example, it may take decades to see results from changes on the land that ultimately affect a deep aquifer, but changes near a stream bank may quickly affect the quality of the stream's water.

Willingness to change. Ask yourselves if the reasons are strong enough to motivate and if those who will need to change would be willing to do so.

Cost/benefit ratio. Are the costs going to outweigh the benefits or are the benefits going to outweigh the costs?

Now is the time to weigh these important factors.

DETERMINE CRITICAL AREAS.

Critical areas within a watershed have the greatest impact. Determining critical areas can be done by looking at the landscape. Areas next to a stream or lake can be critical. Or a critical area might be determined by major water uses such as water supply locations, recreational areas and fragile wildlife habitats. Or your group may identify areas with vulnerable characteristics (unstable streambanks or shallow groundwater).

Water quality in critical areas may be affected by "point source" and/or "non-point source" discharges. Point source discharges can come from a pipe or ditch connected to an industrial facility, storm sewer or feedlots.

Your goal in determining critical areas is to match resource needs with targeted efforts to get the greatest benefits. These will depend on the watershed and the consensus of the partners.

DOCUMENTING CHALLENGES AND OPPORTUNITIES.

One of the most important steps in watershed protection is to correctly identify and document challenges and opportunities.

A challenge is an obstacle that prevents positive changes on parts of society, the economy, or the environment. In contrast, an opportunity is a condition that can be created to make a positive affect on society, the economy, or the environment.

By now your group has probably identified several problems and/or opportunities. These will need to be written down so future partners and prospective financial supporters will understand the situation.

It may be helpful to document both the resource being affected and the existing condition (quantity or quality). It also helps to describe damage in both economic (\$20,000 annual loss) and resource terms (30 acres or 750 fish). The statement should also include who, how, where and what is being affected.

EXAMPLES: CHALLENGE & OPPORTUNITY STATEMENTS.

- ◆ Trout in Blue Creek has been reduced to an annual catch of XXX per season due to turbid waters resulting from streambank erosion. Reduced tourism has resulted in \$XX,000 annual loss in income.
- ◆ The city of Metropolis issued XX water alerts warning the young, elderly and others with weak immune systems. The cost of issuing the alerts was \$XX,000. In addition, area hospitals report six cases of people seeking medical attention at the time the alerts were issued.
- ◆ The Plenti-Good lake currently is the home to more than ten species of migratory ducks including three that are on the endangered list. According to the last five surveys, the population is staying level. The watershed is comprised of landowners nearing retirement. The group wants to prevent changes in the watershed which would negatively affect the migratory ducks.

STAGE 1: CHALLENGES AND OBJECTIVES (CONTINUED)

OTHER DOCUMENTATION.

In addition to problem/opportunity statements, all data and other information gathered during this initial phase needs to be recorded. Maps will also need to be included.

WHY DOCUMENT?

- ◆ Makes it easier to obtain funding.
- ◆ Useful for creating informational brochures and other educational materials
- ◆ Background for new partners
- ◆ Ideal for reporters and others from the media developing stories about the group's efforts.

Basically, be sure anything that would help a new partner understand how and why the group has made the decisions is included.

The maps and other data will probably be needed later when you are developing brochures and other educational tools for implementing your group's plan. In addition, if the group tries to obtain

outside financial assistance, the documentation will be needed to support the request for funding.

Having documentation makes it easier to put together a proposal on short notice. Either when a new funding source is located or when "opportunity knocks" with a short time for getting the application or grant request submitted.

ESTABLISHING OBJECTIVES.

Once your problems/opportunities have been defined and documented, establishing objectives is relatively easy. The main purpose for establishing objectives is to clarify the goals of the group. Remember these points when establishing objectives.

- ◆ All views of those with a stake in the watershed must be considered and consensus reached on how the group envisions the health of the watershed to be in the future.
- ◆ Existing legal constraints need to be considered.
- ◆ Describe the objective in measurable terms (ie. Increase number of wild turkeys by 25% or reduce soil erosion on forested land by 60%).
- ◆ Recognize the objective may change later as more information becomes available. For instance, an initial objective may be to simply "increase trout population." Later your group will have the necessary information to refine the objective to "increase trout population by 225%."
- ◆ Keep objectives acceptable and achievable. Partners need to ask themselves if they can live with the objective and if they think it is achievable.

STAGE 2: DEVELOPING THE PLAN.

The emphasis during this stage is to develop and analyze alternatives, then come to consensus on a game plan that everyone in the partnership can live with.

There are three parts of the game plan your group will need to consider. They are:

Selecting management alternatives. These are some watershed management alternatives your partners will explore with the goal of selecting one or more to implement. Examples include:

- ◆ Contour strips
- ◆ Conservation tillage
- ◆ Construction site erosion control
- ◆ Filter or buffer strips
- ◆ Reduced dumping of oil and/or chemicals in storm sewers
- ◆ Terraces
- ◆ Nutrient management
- ◆ Pest management
- ◆ Tree plantings
- ◆ Irrigation water conservation
- ◆ Home water conservation
- ◆ Septic system maintenance
- ◆ Alternative livestock watering sources
- ◆ Roadside erosion control
- ◆ Enterprise zones
- ◆ Prime farmland protection
- ◆ Private/rural road maintenance
- ◆ Storm water management
- ◆ Streambank stabilization
- ◆ Constructed wetlands
- ◆ Rotational grazing
- ◆ Riparian zone management

Developing the Action Plan. These are the ways the partnership will promote the use of the management alternative(s) selected (see above). Examples include:

- ◆ Demonstration plots
- ◆ Watershed tour
- ◆ Workshops
- ◆ Information campaign
- ◆ Local ordinances or zoning
- ◆ Cost sharing

Determining how to measure progress. This will enable the group to measure progress toward the objective(s). Obviously a baseline for comparing progress will be needed.

Examples:

- ◆ Secchi disc readings*
- ◆ Nitrate strip tests
- ◆ Stream inventory
- ◆ Wildlife inventory
- ◆ Fishing/hunting licenses
- ◆ Acres managed in a specific way
- ◆ Bacterial surveys
- ◆ Land use inventory

The following pages describe the process for selecting the best management alternatives for your watershed as well as how to develop the action plan.

*Secchi Disc readings: Flat disc lowered into lake or still water until it just disappears from sight. The distance it is lowered is the reading. Usually in inches.

STAGE 2: DEVELOPING THE PLAN. (CONTINUED)

SELECTING MANAGEMENT ALTERNATIVES.

The first step in selecting management alternatives is to develop a "long list" of management alternatives that could help achieve the objective(s). Many watershed partnerships rely on their advisory team to assist them with this. It's important to list as many alternatives as possible. Do not try to rank them at this point.

Next, using your advisory team, try to determine the effectiveness of each of the alternatives. Be sure to consider economic, social, and environmental factors.

WATERSHED COMPUTER MODELS*

Your advisory team may use a watershed model. A model is a tool that watershed planners use to help them understand the cause and effect relationships within a watershed.

Just like a model plane is a representation of the real plane, a watershed model can represent a real watershed. Different types of models allow you to study different aspects.

For example, one model may look at surface runoff of nutrients and pesticides

while another might compare the economics of management practices.

The advisory team might have to use several models to address both economic and environmental concerns within your watershed.

MODELS ARE JUST THE BEGINNING....

Watershed models aren't an end product, they allow you to compare differing strategies to see what might be the most economically and environmentally effective. They provide you with information to make decisions on what alternatives to consider. The partnership must use the results of the models plus the social acceptability of those results. Only after all factors are taken into account will a decision be acceptable.

DON'T FORGET TO DOCUMENT

Be sure to document the alternatives and corresponding advantages/disadvantages by adding this information to the other watershed plan documents.

The information will probably be needed later when you are developing brochures and other educational tools for implementing your group's plan. In addition, if the group tries to obtain outside financial assistance, the documentation will be needed to support the request for funding.

**Watershed computer model: A tool that represents, through a set of rules and procedures, a view of reality to depict watershed management alternatives.*

GROUP EXERCISE:

SELECTING MANAGEMENT ALTERNATIVES

1. List an alternative on a sheet of paper and tape to the wall. Do this for each of the alternatives.

Example:

No Further
Construction

Prime Farmland
Protection

No Change

2. Below each alternative, list advantages/disadvantages. The partnership may want to consider the following factors: economic, environmental, social.

Example:

No Further
Construction

Prime Farmland
Protection

No Change

3. Using consensus, rate each alternative giving consideration to the likelihood of its success. (You may wish to list some implementation strategies for several of the top alternatives before you do this.)

Example:

No Further
Construction

Prime Farmland
Protection

No Change

STAGE 2: DEVELOPING THE PLAN. (CONTINUED)

DEVELOPING AN ACTION PLAN.

By now you and your partners have a vision of the watershed in the future (purpose statement). The watershed partnership also has set objectives and selected management alternatives for achieving those objectives. Now attention needs to be focused on how to make the selected alternatives a reality. Most watershed partnerships begin this process with an Action Plan.

WHAT IS AN ACTION PLAN?

An Action Plan is simply a list of the actions the group decides to do, who is responsible and when it's to be done. Chances are local businesses and government agencies already use a similar plan for organizing their actions. They may call it something else, but most plans use the same format.

| Objective | Selected Alternative | Action | Responsible | Time Frame | Cost |
|--|----------------------------------|--|-------------------------|-----------------|-------|
| Reduce sediment and improve habitat for trout and other sport fish in the area | Establish buffer strips | Involve FFA in buffer strip establishment throughout watershed | B. Greene | June 199X-9X | \$XXX |
| | | Develop brochure to show benefits and explain cost share | Ed Author | April-May, 199X | \$XXX |
| | | Using computer-aided graphics, depict before and after appearance | Community College | June 199X-9X | \$XXX |
| | Reduce cropland erosion 4 T/acre | Involve local ag retailers in developing no-till demonstration plot | N. Tillus | Dec-Mar 199X | \$XXX |
| | | Conduct field day | Local Vo-Ag instructors | June 199X | \$XXX |
| | | Apply for equipment buydown funds through water quality agency | R. Coulter | Summer 199X | \$XX |
| | | Secure rental equipment through local cons. districts and/or dealers | U. Plant | Nov-May 199X | \$XXX |
| | Establish vegetation -- SE shore | Secure willows and other native plants/seeds for shoreline. | W. Branch | Summer 199X | \$XXX |
| | | Involve youth and civic groups in weekend watershed festival. | Al B. Wett | June-Oct 199X | \$XXX |

PUTTING TOGETHER AN ACTION PLAN.

To put together an Action Plan, first list all objectives. Under each objective, list the selected management alternatives.

Once all the selected alternatives have been listed, leave blanks for actions, responsibilities and time periods. Make copies for each partner. Brainstorm action items as a group. This will get partners thinking about ways to get the job done. Partners may want to take the papers home and fill in the blanks. Set a time for the partnership to get back together to share their thoughts. When the group gets back together, one person needs to record all the action ideas in one place.

Partners then combine similar actions and select the top three to five choices for each of the selected alternatives. These actions become the partnership's focus.

Next, an individual or small group needs to become responsible for the action. This is a good time to look around the watershed for groups who haven't been as involved as they would like to be and get them involved. (See *Building Local Partnerships* guide for ideas.)

After responsibilities have been determined, a realistic time period for completing the action can be set. Be sure all groups involved understand their responsibilities and the time frame.

| Objective | Selected Alternative | Action | Responsible | Time Frame | Cost |
|--|-----------------------------------|--|------------------------|---------------|--------|
| Reduce sediment | Reduce construction erosion | Work with developers to plan for erosion control methods | T Simon | Summer 199X | \$--- |
| and improve habitat for trout and other sport fish in the area | | Conduct demonstration of erosion control methods | City of Greenville | June-Oct 199X | \$XXXX |
| | | Explore county-wide construction ordinances | Local official | Summer 199X | \$--- |
| | | Find sponsor for watershed contractor of the year award | Contractor Association | Winter 199X | \$--- |
| | | Invite media to cover award and distribute press release | P.R. Kitt | Winter 199X | \$--- |
| | | Develop display for local fairs and mall shows. | JC Lyon | Fall 199X | \$XXX |
| | Construct wetland at creek inlet. | Apply for funding plan development. | Advisory Team | Summer 199X | \$--- |
| | | Explore possibilities with J Moore, landowner. | T Hindle | Spring 199X | \$XXX |

STAGE 2: DEVELOPING THE PLAN. (CONTINUED)

TYPES OF ACTIONS.

There are four main types of actions that most watershed partnerships consider.

- ◆ Information/education
- ◆ Technical assistance
- ◆ Funding
- ◆ Regulatory

Most groups use a combination of the first two types of actions (information/education and technical assistance). Some groups also use funding. Few use regulatory approaches. Very few use all four types.

Information/education. Few people will make changes without understanding what changes need to occur, why change is needed, how to make the change, and how the change will affect the individual.

Technical assistance. Many people need more than just information about the change, but also require some type of assistance. This may take many forms including one-on-one discussion, demonstration, drawings and plans, implementation instruction and/or oversight.

Funding. In some cases change will cause an economic hardship. This is when many watershed partnerships include cost-share and other forms of financial assistance in action plans.

Regulatory. Occasionally local ordinances, zoning or other types of regulation are necessary. Partnerships are strongly encouraged to explore other options before recommending this action. Rarely is this a positive action for all stakeholders which makes consensus very difficult to reach.

| Selected Alternative | Action | Responsible | Time Frame | Cost |
|---|---|--------------------|----------------|-------|
| Reduce phosphorous runoff from cropland | Use demonstration field to show the economic benefits of annual soil tests | R. Greene Farms | Feb - Oct 199X | \$XXX |
| | Conduct field day at demonstration field to see differences in rates | Farm Sales Inc. | Aug 199X | \$XXX |
| | Explore a group discount for soil and manure nutrient tests | G Runne | June-Aug 199X | \$--- |
| | Develop fact sheets on relationship between phosphorous and pH | Advisory team | June-Aug 199X | \$XXX |
| | Conduct seminar using university and other crop/nutrient/soil specialists | Advisory team | Jan 199X | \$XXX |
| | Explore possibility of manure brokerage service | Local Bank & Trust | Nov-Mar 199X | \$XXX |
| Reduce phosphorous runoff from suburban areas | Develop and distribute brochure for retailers to use with fertilizer displays | Garden Club | Nov - Apr 199X | \$XXX |
| | Promote washing cars on lawn instead of driveway | Scouts | Mar-May 199X | \$XX |

STAGE 3: IMPLEMENTING & EVALUATING.

FUNDING YOUR ACTIONS.

Some of the actions your group has selected will require little, if any, money to do. Often actions require donated time or materials from local individuals, organizations, businesses or industry.

Some actions--like cost-share incentives or compensation--do require funding. This is when your group will need to explore funding options. In fact, many watershed partnerships make obtaining financial assistance an action. Responsible individuals or groups are assigned and a time frame agreed upon.

Due to the time and paperwork associated with federal and state funding, most groups start by looking for funding locally.

"Most groups start by looking for funding locally."

Local utilities, non-profit organizations, and others have funded watershed management actions.

This is also a good time to ask for assistance in putting

together a workshop on grant proposals. Invite local and state specialists to inform your partnership on the art of grant writing. Many organizations conduct workshops specifically on this topic.

| Selected Alternative | Action | Responsible | Time Frame | Cost |
|--|--|-------------------------|------------|-------|
| Use secchi disc method of monitoring turbidity in lake | Involve Lake Association in weekly monitoring and progress reports | S. Hubble | All year | \$XXX |
| | Include periodic progress reports in watershed newsletter | S. Hubble | All year | \$--- |
| | Present report for annual meeting and through the local news media | S. Hubble & Lake Assoc. | Feb 199X | \$XX |
| Use strips to monitor phosphorous in lake and creek | Involve Grenville Highschool science classes in weekly monitoring | R Clark | All year | \$XXX |
| | Include periodic progress reports in watershed newsletter | R Clark | All year | \$--- |
| | Present report at annual meeting and through the local news media | R Clark & students | Feb 199X | \$XX |
| Track number of fishing and hunting licenses sold | Present report at annual meeting and through the local news media | Conservation Club | Feb 199X | \$XX |

STAGE 3: IMPLEMENTING & EVALUATING (CONTINUED)

PRIORITIZE ACTIONS.

It won't take long to list more actions than your group can possibly do. This is why the group will need to prioritize the actions. When prioritizing, be sure to consider the following.

- ◆ Funds available
- ◆ Return on funds to be invested
- ◆ Time and other non-financial resources
- ◆ Ability to get the action done
- ◆ Early successes motivate more action
- ◆ Some actions rely on other actions for success

Be sure to include your advisory team in this process. They may have experience in determining which actions depend on others and how to get the most return on your investment. For example, it's important to get preventive actions (such as erosion control practices) underway before taking restoration actions (such as dredging a lake).

MEASURE & REPORT

PROGRESS.

In addition to establishing a baseline prior to implementation, the partnership needs to consider how to evaluate the effectiveness of the plan and the progress toward the objective. This need not be expensive and should be included in the Action Plan.

For instance, turbid* water can be measured with a simple secchi disc, pH can be measured with a pH strip, nitrates and phosphorous can also be measured with a simple indicator strip. Wildlife can be measured by an annual count or survey.

Another good barometer is the number of hunting and fishing licenses issued.

The method used for measuring change should be determined by the watershed partnership. Again, partners may want to ask for technical assistance from local conservation groups or science teachers.

You may also wish to enlist a youth group, lake association, conservation group or other group to measure the partnership's progress.

Regardless of the measurement, it's very important to report progress back to both the partnership and to the press. Only by everyone seeing progress will they continue to work toward making the plan a success.

REVIEW THE PLAN.

As seasons go by, the watershed partnership will need to review the plan. Be sure to ask the tough questions like, do we still need to do this? Why? What else can we do? Has our vision changed? Do we have new or additional information that will change the objectives or selected alternatives? What has been successful? Why? What could have been improved? How?

CELEBRATE SUCCESS.

Whether it's the 500th fishing license or the 20th mile of buffer or the sighting of the 50th wild turkey or the first 24" secchi disc measurement; it's important to celebrate.

This gives the partnership a feeling of accomplishment. But probably more importantly, it gives credit to everyone who did their part in managing the watershed for the benefit of all.

*Turbid: Water that is cloudy or difficult to see through due to stirred up sediment.

SOURCES OF INFORMATION.

This guide is one of a series of publications developed and distributed by the Conservation Technology Information Center pertaining to water quality, agricultural and natural resource management and watershed management. Please call 317-494-9555 for the latest listing. A \$2.00 fee is charged to cover postage and handling.

The author acknowledges the following sources of information that were used in developing this guide. You may also find these publications helpful.

A Model Lake Plan for a Local Community.

Lowell Klessig, Buzz Sorge, Robert Korth, Michael Dresen, Jeff Bode, 1994, Madison, WI: University of Wisconsin Extension Tel: 608-262-3346

Clean Water in Your Watershed: A Citizen's Guide to Watershed Protection.

Terrene Institute Tel: 202-833-8317

Managing Nonpoint Pollution: An Action Plan for Puget Sound Watersheds.

Puget Sound Water Quality Authority Tel: 206-464-7320

ABOUT THIS GUIDE....

This guide is one of a series for people who want to organize a local partnership to protect their watershed. The guides will not solve all your problems. They were designed to provide guidance for going through the process of building a voluntary partnership, developing a watershed management plan and implementing that plan. Because the characteristics of each watershed are unique; you may wish to select and use the portions of this guide that are applicable to your particular situation.

Although the series is written for watershed-based planning areas, the ideas and process can be used for developing other types of plans (such as wildlife areas) to match the concerns of the partnership. Regardless of the area, remember a long-term, integrated perspective — based on a systematic, scientific assessment — can be used to address more than one concern at a time.

SPECIAL THANKS...

Special thanks to the following professionals who carefully reviewed this guide. Their experience and thoughtful guidance enriched it. Their time and insight is deeply appreciated.

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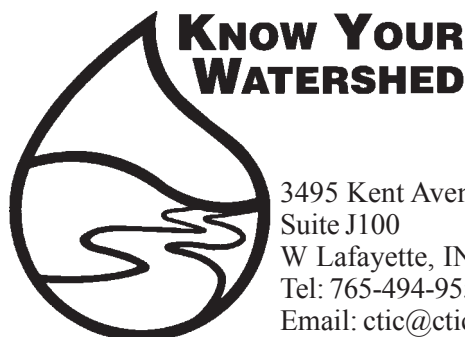
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