

## SECTION II

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### CHOOSING THE RIGHT APPROACH

#### SUMMARY OF SECTION II

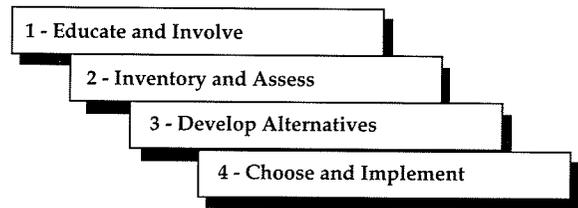
- Discusses how each community can choose the NPS pollution control procedures, facilities, and practices that work best for it

Section III identifies the various management processes that can be used to control NPS pollution. Section IV identifies the facilities and practices that can be applied to NPS pollution problems. Together, these provide a basic “toolchest” of alternatives, which communities can evaluate and implement as appropriate. This section discusses how each community can choose the processes, facilities, and practices that work best for it.

#### THE FOUR-STEP PROCESS

A general four-step approach can be used to determine how the community’s NPS pollution control needs can best be met.

FOUR STEP PROCESS



**Step 1: Educate staff, local officials, and citizens about NPS pollution issues and involve them in the solutions.**

It is important to establish a shared body of knowledge and to educate people about the issues and terminology. It is then possible to move on to involving the public in solutions to the existing problems. The political environment and level of current public knowledge should be considered in determining the best education and involvement methods.

**Step 2: Inventory and assess NPS pollution problems and the related environmental, political, and social conditions in the area.**

This can be done by answering a series of questions, such as the following:

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- What problems exist with surface water or groundwater quality, stormwater runoff, erosion-prone areas, or chemical contamination of streams?
- What are the designated beneficial uses for the streams in the planning area?
- Do nonpoint sources exist that are likely to be contributing pollutants to surface water or groundwater? Are the sources from residential, commercial, industrial, agricultural, or forestry areas?
- Does the community have special areas of concern (such as estuaries, wellheads, or wetlands) that are sensitive to water quality?
- What is the capacity of the local waters to assimilate likely pollutants?
- How effective are the community's regulations and policy documents in addressing NPS pollution? Can specific examples of regulatory and policy deficiencies be identified?
- Does the community need to prepare an updated drainage master plan, which could be developed to include NPS pollution controls and become a surface water management plan?
- How has the community been involved with environmental issues in the past, and who would be currently interested?
- Is it possible to determine the costs and benefits of NPS pollution control in this community?



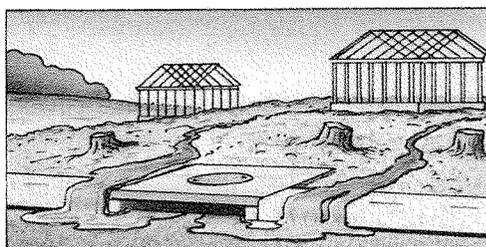
**Step 3: Develop alternatives for NPS pollution control (including funding) that are appropriate for the community, as part of the comprehensive planning and surface water planning processes.**

These alternatives should include management processes, as well as facilities and practices. (See Sections III and IV.)

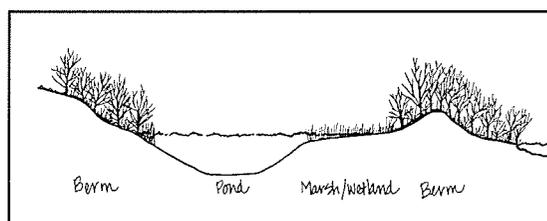
**Step 4: Choose and implement the control measures that will efficiently solve the problems, fulfill state and federal water quality goals, and best fit the community's needs and conditions.**

- Are regulations for development or land use necessary? If so, what regulations should be added? (See Section III.)

- How can coordination between the various local, state, and federal agencies be improved?
- How can facilities and practices be brought into the regulations? (See Section IV.)
- Are the problems primarily in future development or use areas (which would suggest the need for development regulations and better management practices); existing developments and past use areas (which would suggest the need for NPS control facilities); or both?



- What are the local agencies, districts, or other entities that can be used to address these issues?
- Would a pilot project be useful to demonstrate the issues and possible benefits?
- Are outside experts needed, or can the issues be handled by existing staff?



- What financial resources are available? Is there a willingness to establish new funding mechanisms, such as stormwater utility fees and charges?
- What measurement/monitoring program will be needed to gauge the needed improvement, and who will be responsible for the reporting duties?

This may seem like a lot of questions. However, each one provides an answer that will help define the best approach and the proper set of regulatory tools to use in the community.

For example, a community may have an involved public that is knowledgeable about NPS pollution. In that case, little need will exist for an extensive new citizen involvement process, and it is likely that the basic policy framework is in place. More effort can then be focused on inserting the control measures into the development regulations and initiating a surface water management plan that leads to capital improvements and water quality facilities. In addition, it is likely that a more regulatory approach and capital improvements will be supported. Further, it will probably be acceptable to use public information and existing planning commissions or other citizen committees, rather than forming special committees and developing multiple workshops as part of the startup process.

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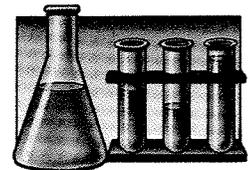
Some communities, however, may have a substantial number of sensitive areas, such as coastal areas where estuaries and wetlands are common. In that case, it may be advisable to expend more effort to educate and involve property owners and the building community. This can be coupled with advisory committees, which can recommend the best course of action and identify regulations and capital improvements based on the alternative management processes and facilities/practices. Where activities of special concern are likely to occur in sensitive areas, it may be necessary to impose increased protection quickly.

If most of the NPS pollution problems exist now, regional NPS control facilities are probably needed. On the other hand, regulations and better management practices will be effective if it is anticipated that future land use or development will affect future water quality conditions.

### MONITORING

An important feature of local NPS pollution control programs is monitoring the water quality of the streams and lakes affected by NPS pollution. Such monitoring should use a system that can help determine the location of NPS problems. All land uses, particularly those that involve soil exposure or impervious cover, should be included. Section IV contains additional monitoring information.

All local programs that address nonpoint sources associated with commercial and industrial sites should include monitoring and maintenance as high-priority budget items. The recommended monitoring should include priority pollutant scans, monitoring for the chemicals that may be present within and below each specific site, and tissue and sediment sampling below the site. The monitoring program should include systemwide surface water and groundwater components, as well as grab sample sites above and downgradient from each facility location. Sediment samples and fish tissue sampling can indicate whether occasional releases have occurred that would not be detected in systemwide water quality monitoring.



The systemwide monitoring should include standard parameters such as nutrients and suspended solids. However, the more important parameters are priority pollutants, metals, oil and grease, and the chemicals expected at the specific industrial site for industrial, commercial, agricultural, and forest harvest areas.

The primary alternative to public monitoring and maintenance is to legally require the site owners to provide monitoring and maintenance for their site, and also possibly for the water systems potentially affected by their site. If site owners do not have this capability, public agencies can sometimes provide this service under contract.

While volunteer monitoring is possible, the jurisdiction must eventually define and fund a monitoring program. Whatever program is chosen should be coordinated with state monitoring activities.

## COORDINATION

Coordination among existing organizations and programs is an essential component of any NPS control approach. This important tool will help educate planners, elected officials, public works officials, and others about the realities and opportunities provided by NPS pollution control. New regulations are often more likely to be accepted if they are integrated into existing programs.



Coordination can be used effectively in rural areas, where the County Extension Service can help create educational programs. Irrigation districts and soil and water conservation districts can help train land owners and monitor many activities. State agency regional offices can provide technical assistance. The existing county land use and building permit system can be augmented with more effective processes and alternative control measures, which can be achieved through cooperative efforts.

### *TILLAMOOK RURAL CLEAN WATER PROJECT*

This is a joint project of the Agricultural Stabilization and Conservation Service and the Soil Conservation Service, in cooperation with the Oregon Department of Environmental Quality and Oregon State University. The Rural Clean Water Program is a federally sponsored program to control agricultural nonpoint source pollution in rural watersheds. The Tillamook area is one of 21 watershed projects in the country participating in this program.

Activities associated with the project include:

- Using a rating system to identify critical farm operations
- Establishing a regular monitoring program
- Helping create manure storage and holding facilities
- Educating a large number of local farmers about NPS pollution and helping create a local group of peer leaders to help the project go forward
- Developing a report that identifies progress made and additional work that is needed

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In agricultural and forestry areas, local governments can participate in DEQ's establishment of load allocations (LA) under the total maximum daily load (TMDL) process and in the groundwater and the nonpoint source programs. They should also work with other agencies (the Oregon Department of Agriculture, Oregon Department of Forestry, and U.S. Forest Service) to implement NPS pollution control measures. In the case of federal lands, local NPS pollution control requirements can be established through the Federal Clean Water Act (Section 313).

This coordinated management system can create effective NPS pollution control programs in many areas of the state. To be effective, the programs must contain local agency commitment and broadly based coordination among all affected agencies.

### PILOT PROJECTS

Pilot projects that actually apply control techniques can be used to demonstrate a program's effectiveness. The standards and criteria developed for the project can then serve as a model for others seeking to perform similar work.

Public construction projects can be a valuable source for such demonstrations. These may include new park projects, construction of new public buildings, special standards for constructing roads in sensitive areas, or other typical public developments. The local capital improvement program (CIP) process can be used to identify appropriate projects. The responsible parties can then develop the necessary information and standards before construction begins, as part of the pilot project process. Cooperative public/private projects are also possible.

#### *DEVILS LAKE WATER IMPROVEMENT DISTRICT*

Devils Lake has received NPS pollution from human activities in the watershed for the past 100 years. Sediment and nutrient inputs have changed the lake's chemical balance and increased the eutrophication process. NPS sources include sediments from urban development, logging roads and skid trails, and agriculture. Nutrient inputs in the past included a sewage treatment plant, dairy farm, agricultural farmland, and fish poisonings. Septic drainfields and urban runoff are currently the largest sources of NPS nutrients.

The result is a reduction in lake volume because of sedimentation (6 percent between 1920 and 1965). The NPS pollution has also resulted in increased growth of aquatic weeds and high coliform bacteria counts in some areas, thereby reducing recreational use.

To counter this situation, the citizens of Lincoln City have worked with local and federal funds to spend over \$1 million to build sewers and take other actions to help Devils Lake recover. A strong erosion control ordinance is currently being prepared for use by local governments.

## PUBLIC INVOLVEMENT

No program will be successful unless it involves the public and reflects the character of the community. It is essential to educate the public about NPS pollution and solicit their involvement in identifying appropriate solutions. The community will then feel more committed to the solutions and will be more supportive of regulations and funds required to support the final program.



The public involvement program should include a variety of techniques and activities. That approach will involve more people and will keep the issues accessible to the community over a longer period of time. Working with local environmental groups or education programs (e.g., schools, community colleges, extension service) can often provide needed resources and opportunities. Programs that help children (and, consequently, their families) become better informed can make a real difference over time.

Additional information is provided in Section III under "Public Involvement and Stewardship Opportunities."

## TYING IT TOGETHER

The four-step process outlined in this section should be used in developing a local program. It is important to create an educated and involved public if the overall program is to be supported and successful. An inventory of existing conditions and rational decisions based on local conditions, processes, and political characteristics are essential. By considering the questions posed under "The Four-Step Process," above, communities can understand their situation and design effective programs.

Coordination of NPS pollution control activities between the various local agencies and organizations can substantially reduce costs and improve the effectiveness of the programs and projects that are developed. The case studies in this guidebook (set off in boxes) are examples of effective and efficient programs that relied greatly or entirely on coordination.

As part of the coordination activities, it is important to recognize the relationship with federal and state programs, mandates, and resources before determining what the local program will be. Federal and state agencies should be contacted early in the process. The regional offices of DEQ are a useful source of information and materials for help in developing the local program. They can provide inventories of pollutants and water bodies, access to models used elsewhere, and technical advice. One of the most useful and readable sources of information is the *305b Report* prepared by DEQ to meet federal requirements. This document contains a wealth of information and useful descriptions of state and federal programs.

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Many of the management processes, facilities, and practices identified in Sections III and IV of this guidebook are only starting points, which can be further explored with the help of DEQ and DLCD staff. EPA also has a variety of documents that can help explain NPS pollution and pollution control to the community.

### **ADDITIONAL INFORMATION**

Additional information about NPS pollution and its regulation can be obtained from:

- Oregon Department of Environmental Quality (Surface Water Program)  
811 SW Sixth Avenue  
Portland, OR 97204  
(503) 229-6121
- Oregon Department of Land Conservation and Development  
(Coastal-Ocean Management Program)  
800 NE Oregon Street, #18  
Portland, OR 97232  
(503) 731-4065
- A variety of federal agencies, particularly the U.S. Environmental Protection Agency and National Oceanic and Atmospheric Administration