

Land and Water Management for Nonpoint Source Pollution: Learning Methods and Their Effectiveness

FACT SHEET - AUTUMN 2002

What is Nonpoint Source Pollution?

Nonpoint source (NPS) pollution is widely accepted as the greatest remaining threat to water quality in the United States. NPS pollution is generated from numerous sources (people, animals, or businesses), the combined effects of which can be significant in a particular body of water or watershed. Natural factors affecting NPS pollution include rainfall, soil type, topography, and location. Human factors at the urban-wildland interface include land management practices (e.g., pesticide application, irrigation, livestock access to water bodies), and land use (e.g., amount of land under production, location of production). The diffuse nature of NPS pollution creates challenges for programs or policies that seek to address it.

Land and Water Management for Nonpoint Source Pollution

Federal and local regulations may affect activities in or near the water, but few are directed solely at NPS pollution. Local ordinances might require landowners to develop a Farm Plan, keep livestock away from streams, and manage manure, but such ordinances are not in widespread use. Thus, the crux of managing individual private land use impacts lies in voluntary programs. The goal of such programs is to enable participants make informed decisions and alter their behavior to conform more closely to policy objectives. These programs are limited to those who voluntarily decide to participate, and incentives such as subsidies, tax reductions, low interest loans and labor assistance are often used to encourage participation.

The Study — Learning Methods and Effectiveness

As programs to manage NPS pollution are designed and implemented, it is important to know what different learning methods (e.g. brochures, tours, or classes) are most effective in communicating information and motivating people to adopt recommended practices. The objectives of this study were to identify how landowners learned about different management activities, and how effective they thought those methods were. These questions were investigated using a mail survey. In the spring of 2001 the survey was administered to 1,867 landowners in 16 counties of Western Washington State. Participants were asked about what management activities they conduct on their land, how they learned about the activities and how effective the learning methods were. 26% percent of those contacted responded.

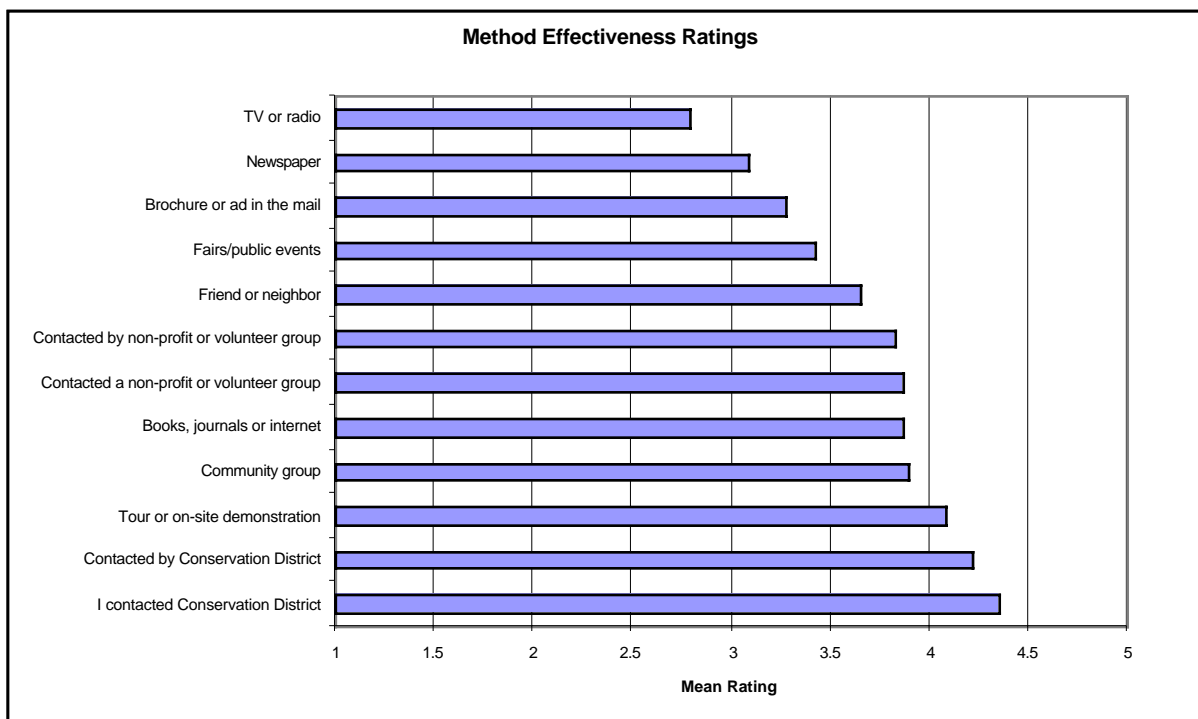
Learning about Land and Water Management Activities

There are many ways to learn about different management activities. Landowners reported that they most often learned about activities by

- 1) directly contacting the Conservation District or other organization to get information,
- 2) seeking information from books, journals, or the Internet,
- 3) attending an on-site tour or demonstration,
- 4) receiving a brochure or ad in the mail,
- 5) getting information at fairs or other events, and
- 6) being contacted directly by a representative from the Conservation District or other agency.

How Effective are Different Learning Methods?

Landowners were asked to rank the effectiveness (1=not at all, 3=somewhat, 5= very much) of different learning methods. Those methods that involve personal contacts or “hands on” learning situations were ranked most effective, as shown below:



Implications for NPS Pollution Management and Programs

Although landowners experience a wide variety of learning methods, the most effective appear to be related to interpersonal contacts. While many land and water management programs are already heavily oriented towards personal contacts, this finding underscores the need to explore ways to incorporate interpersonal contacts and field activities into new or existing programs in a cost-effective manner.

One approach might be to shift scarce resources away from the less effective methods (brochures, ads, radio and TV) and to invest them in the more effective interpersonal and hands-on techniques. In addition, the initial contact and response between landowners and the sponsoring organization is an important component of learning method effectiveness. Organizations will want to ensure that a timely contact and response system is in place and functioning.

More Information:

The U.S.EPA website at www.epa.gov/ebtpages/watwatnonpointsources.html has more information on water quality and nonpoint source pollution.

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