

Article 138

Technical Note #37 from *Wat. Prot. Techniques*, 1(3): 133-134

Milwaukee Survey Used to Design Pollution Prevention Program

by Jonathan Simpson, Tetra Tech, Inc., Fairfax, VA

The public needs to be educated about nonpoint source pollution!" cries the Urban Stormwater Manager. "Videos are hot — let's do a video, debut it at a public meeting, and then put a dozen copies in the library for people to check out."

How effective is this approach? Not very, according to a recent survey of over 3,000 residents in the lower Milwaukee River watershed. Researchers at the University of Wisconsin-Madison Environmental Resources Center report that people have a willingness to learn and make personal lifestyle changes to help the water environment, but they much prefer a passive approach to the education process (Nowak *et al.*, 1990). Television news reports, newspaper articles, and a community newsletter delivered to the home were cited as the best ways to get people to take notice of water resource issues (Figure 1).

Traditionally, citizens have been considered the weak link in nonpoint source pollution prevention pro-

grams. In spite of intensive education efforts, some unenlightened residents continue to exacerbate local water quality problems by overusing chemical fertilizers, improperly dumping yard wastes, exposing soil to erosion, and allowing litter and pet wastes to move off their property.

Even more striking is the public's ignorance about new advances in stormwater management that can result in better local stream and wetland protection. Consequently, local opportunities to install innovative stormwater practices or stormwater retrofits routinely pass by planning and zoning boards without much public comment or involvement. Is it that people are uninterested? ... uncaring? ... Or are they just not properly plugged into the pollution prevention process?

"The underlying goal of the Milwaukee River Program survey," says Carolyn Johnson, Urban Water Quality Educator for University of Wisconsin Exten-

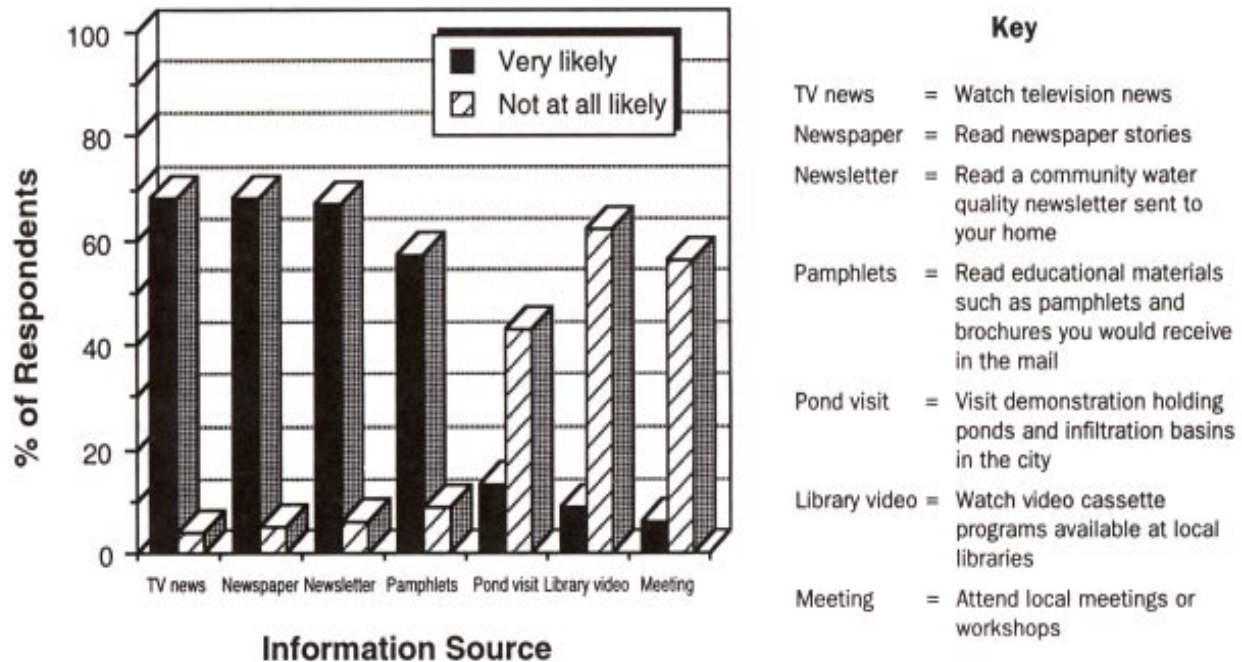


Figure 1: Comparative Effectiveness of Different Media in Engaging the Public in Milwaukee, WI

sion, "was to directly reach out to citizens to learn their views about water quality, the recreational use of area waters, and potential involvement in surface water protection." In 1989 a multi-page questionnaire was mailed to 5,500 residents in the lower Milwaukee River Basin to find answers. The pool was randomly selected from state driver's license files maintained by the Department of Transportation. A well-designed system of pre- and post-survey contact resulted in a response rate of 55%.

Recipients were asked to respond to questions in seven topic areas. Some of the significant results are discussed below.

1. Perception of Water Quality

Virtually all the local waters were rated poor to fair by respondents. Sixty percent of the people from the City of Milwaukee rated the quality of the Milwaukee River as poor. The primary reason for the negative attitude was that the water appeared "dirty".

2. Use of Lakes and Streams

The perception of poor water quality, coupled with limited knowledge of recreational opportunities in the basin, limits the number of people that use local water bodies for recreation. Instead, people seek their water recreation opportunities elsewhere. For example, 47% of the respondents from Milwaukee indicated that they fish, but only one to 2% fish in local waters other than the Milwaukee River, and only 5% use the Milwaukee River.

3. Knowledge of Causes of Water Quality Problems

Most urban residents (55%) believe that point sources such as sewage treatment plant outfalls and industrial discharges were the major cause of water quality problems in the watershed. Nonpoint source pollution sources such as construction sites and street runoff were not recognized as important.

4. Acceptance of Stormwater Practices

The design and function of grassed swales, stormwater ponds, and infiltration basins were briefly described in the survey form. Approximately 40 to 50% of survey participants thought that these stormwater practices should be required in new development. Only 10 to 25% opposed the requirement of these practices. The rest were unsure.

5. Preferred Format for Receiving Water Education

Of particular interest were questions regarding preferences on how the pollution prevention message should be delivered. Only 6% of the respondents said they were "very likely" to attend meetings or workshops on the subject. About 55% said they were "not at all likely" to attend. The information sources rated "most interest-

ing" were the television news and a community water quality newsletter delivered to the home.

6. Willingness to Take Action to Prevent Pollution

Over 90% of the respondents indicated that they are willing, or already do, a number of things to protect water quality. These include taking used automotive oil to a recycling center, separating household hazardous wastes and recyclable material from other trash, limiting use of chemical fertilizers and weedkillers to one application per year, and supporting an ordinance requiring dog owners to clean up their dog's waste.

7. Willingness to Pay for Improvement Efforts

More than half of the respondents said they were willing to pay \$50 or more per household per year for programs to protect and restore local lakes and streams within a time frame of eight to 10 years. Interestingly, they would be willing to pay even more (about \$75 per household per year) for more aggressive programs that would produce results in one to two years.

Much time, effort, and money is currently being invested in the production and distribution of watershed education materials to the public. Are these resources being spent wisely? The "cart is before the horse" if knowledge and behaviors of the targeted citizens are not assessed at an early stage.

The Environmental Resources Center at the University of Wisconsin-Madison, in cooperation with the Wisconsin Department of Natural Resources and the Milwaukee River Basin Citizen Advisory Committee, provided the foundation necessary for developing a successful pollution prevention campaign in the lower Milwaukee River basin. Watershed practitioners are now using the results for community outreach efforts. Elected officials have been enthusiastic about voter support for cleanup efforts. Most important, citizen opinions have been included upfront in water resource protection and restoration efforts.

Planning an effective outlet for the public educational message is critical. This survey provides evidence that traditional media used by agencies (meetings, brochures, fact sheets) are rejected by a large majority of respondents. Instead, people prefer the comfort and (perceived?) legitimacy of the mass media. Given this knowledge, watershed practitioners should work to increase access and use of local television, newspapers, magazines, and radio when establishing citizen outreach campaigns.

References

Nowak, P.J., J.B. Petchenik, D.M. Carman and E.B. Nelson. 1990. *Water Quality in the Milwaukee Metropolitan Area: The Citizens' Perspective*. Report submitted to WI Dept. of Nat. Res. and the Milwaukee River Basin Citizen Advisory Comm.