



Focus on Stormwater Public Education and Outreach

from Ecology's Water Quality Program



Ecology's Stormwater Education and Outreach Resources:

http://www.ecy.wa.gov/programs/wq/stormwater/municipal/pub_outreach.html



EPA Nonpoint Source Outreach Toolbox:

<http://www.epa.gov/nps/toolbox/>



Puget Sound Partnership:

http://www.psp.wa.gov/our_work/stormwater/stormwater_resources.htm



What do the municipal stormwater permits require?

The permits require Phase I and II permittees to develop and implement a public education and outreach program. The requirements differ among the Phase I, Western Washington Phase II, and Eastern Washington Phase II permits. The goal of these programs is to reduce or eliminate behaviors and practices that cause or contribute to stormwater pollution. Refer to the Stormwater Management Program (Condition S5) in the permit that applies to your community for more specific requirements.

Generally, the permits require you to:

- Target outreach efforts to specific audiences listed in the permit. These include the general public, homeowners, property managers, businesses (including home-based and mobile businesses), contractors, developers, and engineers. The permit identifies specific subject areas of focus for these audiences.
- Work to achieve *measurable* improvements in the target audience's understanding of the problem and what they can do to solve it.

Build on existing successful programs

Ecology recognizes that many jurisdictions have established effective stormwater public education and outreach programs. Ecology requires permittees to assess the effectiveness of these education programs. To comply with the Phase I and Western Washington Phase II permits, permittees must document changes in audience understanding or behavior.

Customize education and outreach to your community

The population you serve should determine the messages you develop. Identify audiences for stormwater education in your community by using existing information:

- Demographic information, such as age, income, and education.
- Economic information, such as types of commercial or development activities.
- Land-use data, pet licenses, population density and home ownership statistics.

To identify behaviors to target, focus on specific local pollution problems. For example, if a stream flowing through your community has a bacteria pollution problem, you may choose to focus on encouraging pet owners to pick up their pet waste. For commercially zoned land areas and paved parking lots, you may target your efforts on reducing automotive fluid leaks on paved surfaces. In residential neighborhoods, education messages may emphasize natural yard care techniques.

Collaborate with other jurisdictions

Ecology encourages collaboration among communities that share audiences, geography, pollution problems, or natural resources. The benefits of sharing outreach materials and strategies with other communities include:

- Consistent messages across city and county boundaries.
- Shared access to media, including newspapers, radio and television.
- Shared costs and staff time—resources stretch farther.

Partnerships with non-permitted entities such as conservation districts, cooperative extensions, salmon recovery groups, watershed councils, and non-profit environmental organizations can provide the same benefits.

Evaluate your program's effectiveness

For each behavior you promote, set quantifiable, *measurable* goals.

Successful outreach programs use evaluation as a tool to measure effectiveness of the program and implement changes as needed. Ecology's Municipal Stormwater Permits require permittees to measure the public understanding and adoption of behaviors. This allows permittees to target outreach resources most effectively and make changes to the program if necessary.

Hierarchy of effectiveness measures

Good	Documentation of education and outreach activities	Count the number of natural yard care brochures distributed.
Better	Knowledge and awareness	Determine the percentage of homeowners who know that misused and over-applied pesticides and fertilizers pollute stormwater.
Best	Behavior change	Determine the percentage of homeowners who reduce their use of pesticides and fertilizers in response to your brochure.

The permit requires you to evaluate knowledge, awareness, and behavior changes in target audiences.

Develop an evaluation process *before* implementing your education and outreach program to set targets for measurable behavior change. To evaluate success, you must choose measurable behavior changes to promote before implementing the program.

For example:

Instead of:

- Reducing fertilizer use in streamside neighborhoods
- Encouraging pet owners to scoop and dispose of their pets' waste
- Discouraging residential car washing

Try this:

- Enlist at least X% of households in a residential neighborhood to sign a pledge to eliminate or reduce fertilizer application to once per year. (Follow up periodically to confirm ongoing adoption.)
- Achieve X% increase in use of pet waste bags in local dog parks
- Distribute 500 commercial car wash coupons that residents redeem at a rate of X% or greater

Choose appropriate methods to evaluate behavior change

Methods to evaluate behavior change can include direct surveys and latent data collection methods, both of which are described below:

Direct surveys may be the most effective method to determine baseline data before you begin your program. Some communities with existing stormwater outreach programs already have conducted baseline surveys. If your survey data accurately measure your target audience's understanding and behaviors, use this as your baseline. When using past survey results, describe in your permit annual report submittal how they remain relevant for your current program.

Formal telephone surveys require a greater investment of money or staff time to yield accurate results. You may wish to hire a professional who specializes in designing and conducting surveys. As a low-cost alternative, regular staff and volunteers may conduct informal surveys. For example, staff could randomly interview attendees at a fair or other community event and record their responses. Staff must use an unbiased sampling method such as a random or systematic selection of interviewees. For more information on this technique, called an intercept survey, refer to the Ecology publication, *Evaluating Environmental Outreach Programs*, by Pamela M.M. Jull, Ph.D., available on Ecology's website at: <http://www.ecy.wa.gov/pubs/0407017.pdf>. You may also use informal surveys to test messages on a small sample of the target audience if funding does not allow for formal focus groups.

Latent data collection involves setting up a system for collecting information that may indicate behavior change relevant to your program.¹ It can include counting the number of pet waste bags used at local parks or issuing discount coupons for commercial car washes or natural yard care products and tracking use during a specific length of time. These methods can be complex to set up and may only indirectly measure the behavior changes. For example, counting pet waste bags taken from a local dog park will not take into account dog owners who bring their own bags. However, if designed to eliminate multiple variables, latent data collection may be more accurate than surveys because it does not rely on self-reporting. When evaluating your program, latent data collected can complement survey results.

Each method of program evaluation has pros and cons. Ecology expects that many permittees will use a combination of direct and latent data collection to measure effectiveness.

How should I assess the adoption of targeted behaviors?

The stormwater education and outreach program should:

1. Establish a baseline *before* beginning the program.
2. Determine intervals to measure behaviors after implementing the program. This will depend on the behavior you target, the educational message you choose, and the method of message delivery. Document progress on achieving behavior change goals in the annual report you submit to comply with the permit.
3. If your measurements determine that no behavior change has occurred, *change your program*. Then continue to evaluate the program after implementing each change.
4. If your measurements indicate increased adoption of desirable behaviors in the target audience, continue the program at an appropriate level and focus on other behaviors identified for your target audiences.

¹ Evaluating Environmental Education and Outreach Programs: Workshop Materials Developed for the Washington State Department of Ecology Coordinated Prevention Grant Recipients, Pamela M.M. Jull, Applied Research Northwest, May 2003 available on Ecology's website at: <http://www.ecy.wa.gov/pubs/0407017.pdf>

How will Ecology evaluate my education and outreach efforts?

Ecology permit managers will use the following criteria to evaluate compliance with the permit's education and outreach requirements:

- How did you determine target audiences and what efforts have you made to reach out to them?
- What specific local pollution problems does your program address?
- Are you achieving behavior change and increasing knowledge and awareness? If not, how are you using the information you measured to improve your program?
- How does your program build on past education and outreach efforts?

Additionally, Ecology may consider the kinds of resources (staff time, materials, etc.) you have devoted to developing, implementing, and evaluating programs.

Ecology will also take into account your community's size and demographics as well as whether you have established a new program or are building on an existing effort.

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