Chapter 5 - Local Public Education

This SBR consists of a requirement for a Local Public Education Program that applies to colleges, universities, and military bases only, and a requirement for a storm drain inlet labeling program that applies to all Public Complexes.

Informational brochures educate users and residents of a Public Complex on what they can do to improve water quality.

The Local Public Education Program component of this SBR requires certain Public Complexes to educate their users and/or residents on the impact of their day to day activities on stormwater quality. Topics include things such as proper use and disposal of fertilizers and pesticides, using native or well-adapted vegetation that requires little or no fertilization, and properly disposing of pet wastes, used motor oil and household hazardous wastes. In addition, the Local Public Education Program may include information on how users and/or residents can become involved in local stream and/or shoreline restoration activities, as well as activities that are coordinated by local youth service and conservation corps or other citizen groups. The Division of Watershed Management, Office of Outreach and Education offers numerous materials and programs that can assist Public Complexes in developing and implementing a Local Public Education program. Information on these programs and educational materials can be found on the Department's Division of Watershed Management website at www.state.nj.us/dep/watershedmgt. The Department will also provide supplemental educational information on a compact disk supplied to each Public Complex that can be used to expand the Local Public Education Program. All other Public Complexes satisfy this educational component of the permit through the implementation of an employee training program pursuant to Part I, Section F.9 of the permit.

Local Public Education Program

(Colleges, Universities, and Military Bases only)

WHAT IS REQUIRED?

Minimum Standard

The Local Public Education Program for colleges, universities, and military bases shall describe how those entities will distribute educational information to appropriate users and employees of the Public Complex and specifics on how educational activities will be conducted, including the educational event (colleges and university only), to satisfy this minimum standard. The following SBR and/or BMP topics shall be included in the Local Public Education Program:

- Stormwater/Nonpoint Source Education – impact of stormwater discharges on surface and ground waters of the State and steps that the public can take to reduce pollutants in stormwater runoff.
- Storm Drain Inlet Labeling – hazards of dumping materials into the storm drain, and fact

that storm drains are usually connected to water bodies and do not receive treatment.
- Fertilizer/Pesticide Education –proper application, storage and disposal of pesticides and fertilizers, and the benefits of using native or well adapted vegetation that requires little or no fertilization.
- Waste Disposal Education – identification, proper handling and proper disposal of wastes (including the locations of hazardous waste collection facilities in the area) and the hazards associated with illicit connections and improper disposal of waste.
- Pet Waste Control – information regarding the pet waste control mechanism and the benefits of proper disposal of pet waste.
- Litter Control - information regarding litter control and fines associated with littering.
- Improper Disposal of Waste Control - information regarding the improper disposal of waste control mechanism.
- Wildlife Feeding Control - information regarding the wildlife feeding prohibition.
- Vegetative Waste - information regarding home composting and yard waste recycling.

Colleges, universities, and military bases shall provide for the duplication and annual mailing (or other means of delivery) to all users and employees of the Public Complex of the informational brochure provided by the Department. The Department will provide each college, university, and military base with a brochure each year. The informational brochure covers all the topics above. The Department may periodically provide the Public Complex with an updated brochure for duplication and distribution.

As part of this program, colleges and universities shall also conduct each year, at minimum, one education effort in the form of an "event." An event may be an activity established primarily to satisfy this requirement or may be part of a bigger existing event such as homecoming celebration, fairs, or an Earth Day celebration. During this event, the informational brochure shall also be made available to the users and employees of the Public Complex.

All other Public Complexes satisfy the educational component of the permit through the implementation of an employee training program pursuant to Part I, Section F.9 of the permit.

Measurable Goal

Public Complexes (if applicable) shall certify annually that they have met the Local Public Education Program minimum standard, and if applicable, shall provide the date that the annual event was held and a description of the event.

Implementation Schedule

Within 12 months from the effective date of permit authorization, Public Complexes (if applicable) shall have developed and begun implementing the Local Public Education Program minimum standard.

WHAT DOES THIS MEAN?

Certain Public Complexes shall develop and implement a Local Public Education Program that includes all of the SBRs that have an educational message. The annual distribution of information is only required for colleges, universities and military bases. The annual event is only required for colleges and universities. All other Public Complexes satisfy the educational component of the permit through the implementation of an employee training program.

Annual Distribution of Information

Colleges, universities and military bases are required to duplicate and mail (or otherwise distribute) the educational brochure (provided by the Department and found at the end of this Chapter) annually to their users and employees. (Guests and visitors are not considered "users" for purposes of this requirement.) The Department may choose to periodically provide an updated version of this brochure, which shall then be duplicated and distributed annually.

Annual Event

As a part of the Local Public Education Program, colleges and universities are required to conduct or participate in an annual event during which educational materials are to be distributed. The annual event may be its own event or it can be a part of an existing event, for example, an Earth Day, Arbor Day or Fourth of July celebration. Or the annual event may be part of a larger event conducted by another entity in the area like a county fair or Agricultural Field Day, as long as users, residents, and employees are welcome to attend. During this event, the educational brochure provided by the Department shall be made available to the public.

Your annual event can be part of an existing Earth Day celebration.

WANT TO KNOW MORE?

It is estimated that up to 60% of our existing water pollution problems are attributable to **stormwater/nonpoint pollution**. This pollution can often be linked to our daily activities and lifestyles - things like walking pets, washing cars, changing motor oil, fertilizing the lawn, and littering. When it rains, pollutants from these activities can be washed into storm drains and eventually flow into New Jersey's surface and ground waters. These pollutants can contaminate our drinking water, as well as degrade aquatic populations and habitats and beaches.

Many people and institutions use fertilizers and pesticides to enhance their lawns and gardens. However, if they are not careful, such use can contaminate stormwater through pesticide (including herbicide and insecticide) and fertilizer runoff, and soil erosion. In many cases, this stormwater flows directly or indirectly into local rivers, lakes, reservoirs, streams, and coastal water bodies. When pesticides are introduced into an aquatic ecosystem they can harm or kill aquatic life, cause population decreases by damaging the food chain, decreasing reproductive success, or reduce the oxygen levels in the water by destroying plant populations and by plant decomposition. When used improperly, pesticides can also denude an area of vegetation, which can result in soil erosion. Overfertilization can also have adverse effects on an ecosystem. As surface runoff carries excess fertilizer into the water, the nutrient levels increase, leading to excessive plant and algal growth which is directly related to a loss of habitat and wildlife, including fish kills, and eutrophication. Eutrophication is water pollution caused by excessive plant nutrients. High nutrient concentrations can stimulate blooms of algae (e.g., phytoplankton) eventually causing some species to be choked out. Eutrophication can permanently change the character of a lake by increasing the organic content, eventually converting it into marsh and land areas.

One way to help prevent overfertilization and excessive pesticide use is to educate the people on how to properly store, handle and apply fertilizers and pesticides, and to make them aware of the need for soil testing and how to do it properly. Soil testing is a very important step in responsible fertilizer application to determine what nutrients, if any, are needed.

For more information on fertilizer use, pest identification and soil testing, contact your local agriculture extension service. A copy of the *Citizen's Guide to Pest Control and Pesticide Safety,* and other information on pesticide control and use can be found on the Pesticide Control Program of New Jersey's website at www.pcpnj.org.

The **improper disposal of hazardous wastes** can also impact stormwater, ground water and surface water quality. Many of the products found in homes, institutions, and businesses (including automotive wastes) contain chemicals that are harmful to people and the environment. These can include things like oven cleaners, floor care products, drain cleaners, spot removers, paint, solvents, fluorescent lights, motor oil, battery acid and lead, engine cleaner, antifreeze, rust preventative, and degreasers. These products may contain petroleum hydrocarbons, lye, phenols, trichlorobenzene, and other toxic, flammable, or corrosive chemical components, all of which may be introduced into the environment if not properly disposed. When such wastes are deliberately or inadvertently discharged into the storm drain (e.g., dumping of used motor oil, flushing of radiator coolant) they can have a significant impact on stormwater quality. Disposing these wastes directly onto the ground can impact ground water quality and disposing of them into a septic system can impact ground water quality and destroy helpful bacteria in the septic system. When hazardous wastes are discharged into the sewer system they may destroy bacteria used for treatment at the sewage treatment plant (STPs). In addition, STPs are not designed to treat hazardous wastes, which pass through the plant, and are consequently discharged to surface water. Additional information on household hazardous wastes (including information on each county's hazardous waste collection programs) may be found at the Association of New Jersey Household Hazardous Waste Coordinators website at:

http://www.njhazwaste.com/index.htm

Recommendations

Listed below are some activities and resources that can be used to assist in developing a Local Public Education Program. These resources are not required to be used by the permit, however, the colleges, universities or military bases may choose to use them, or encourage users, residents and employees to use them, to enhance the success of their Local Public Education Programs.

Public Complex Level

- Develop and maintain a web page containing appropriate downloadable information regarding required public education aspects of the stormwater program.
- Make information sheets available year-round at appropriate facilities.
- Conduct appropriate workshops, seminars, and/or presentations at the annual event and/or at other events (e.g., student assemblies, meetings, etc.).
- At the annual event and/or at other events, provide appropriate magnets, bookmarks, pencils, buttons, t-shirts, etc. to the users and employees of the Public Complex.

Individual Level

- Wash your vehicle only when necessary – consider using a commercial car wash that recycles its wash water. If you wash your car at home use a non-phosphate detergent and wash it on the lawn. This will help prevent detergents and car grime from entering the drain and ending up in our waterways.

- Service your vehicle regularly – this will prevent oils and other fluids from leaking onto the pavement so they don't wash into the storm drains.
- Don't pour motor oil, antifreeze or other chemicals down the sink or on the ground – dispose of them on collection days or recycle them by taking them to a local public or private recycling center. One quart of motor oil dumped down a storm drain can create a two-acre oil slick.
- Compost leaves and grass clippings, or leave them on the lawn – this will return valuable nutrients to the soil and result in lower fertilization requirements (see Chapter 6 – Yard Waste Collection Program – Want to Know More?). Fact sheets and Bulletins on composting are available at the Rutgers Cooperative Extension website at:

  http://www.rce.rutgers.edu/pubs/subcategory.asp?cat=5&sub=36
- Use environmentally responsible, phosphate free cleaning products (e.g., baking soda, vinegar, etc.).

Education Resources

Project WET is a nationally renowned program that offers teachers a better understanding about the world's water resources through hands-on, multi-disciplinary lessons. Project WET teaches the importance and value of water in our everyday life with formal and non-formal educators while offering specialized programs about New Jersey's water resources and watersheds. NJ Project WET focuses on water supply, nonpoint source education, water conservation, watershed management, land use planning and wetlands. Additionally, the program offers a Water Festival Grant Program. The festivals offer participants a series of learning stations that examine water use over time, water's role in shaping our country, what a watershed is, how water is cleaned and used again, etc. The festivals involve both the community and schools. Finally, NJ Project WET offers a Watershed Stewards Program for high school students. This program prepares young people to initiate and implement a community watershed service project that will address an environmental concern. More information on NJ Project WET can be found on the Department's website (Division of Watershed Management) at http://www.state.nj.us/dep/watershedmgt.

New Jersey Watershed Ambassadors Program is a community-oriented Americorps environmental program designed to raise awareness about watershed issues in New Jersey. Through this program, Ambassadors are placed in watershed management areas across the state to serve their local communities. The program works to improve water quality by exploring the relationship between people and the environment, nurturing community-based environmental activities and empowering residents to make responsible and informed decisions regarding their watershed. Ambassadors conduct water quality monitoring, initiate community-based nonpoint source service projects and conduct nonpoint source education programs using hands-on activities and models such as Enviroscape.

NJ Watershed Ambassadors can help organize and implement:

- Stream or Shoreline Cleanups – to remove trash and debris from in and around the stream. These items are not only potential pollution sources, but they can also block the flow of the stream, which can increase flooding and erosion.
- Stream or Shoreline Surveys – walk or boat the waterway to identify potential problems along the shoreline or stream channel. While surveying the stream or shoreline look for

things like fish and wildlife present, visible erosion, sewage overflow points, fish migration barriers, etc.

- Volunteer Plantings – plant native or well-adapted trees and shrubs in a watershed to help restore a healthy stream environment. Plantings will help to improve local water quality by preventing erosion, slowing stormwater runoff, and by providing food and shelter for wildlife.

More information on the NJ Watershed Ambassador program may be found at http://www.nj.gov/dep/watershedmgt/ambassadors_index.htm.

Storm Drain Inlet Labeling

WHAT IS REQUIRED?

Minimum Standard

Public Complexes shall establish a storm drain inlet labeling program and label all storm drain inlets within the Public Complex that are along streets with sidewalks. Public Complexes shall also label all storm drain inlets within plazas, parking areas, or maintenance yards that are operated by the Public Complex. The program shall establish a schedule for labeling, develop a long term maintenance plan, and when possible, coordinate efforts with users of the Public Complexes, watershed groups and volunteer organizations.

Examples of appropriate storm drain inlet labels

Measurable Goal

Public Complexes shall certify annually that a storm drain inlet labeling program has been developed or is being implemented, and shall identify the number of storm drain inlets labeled within the year.

Implementation Schedule

Within 12 months from the effective date of permit authorization, Public Complexes shall develop a labeling program for the storm drain inlets identified in the minimum standard. Public Complexes must either:

- Label a minimum of 50% of the storm drain inlets within 36 months from the EDPA; and label all remaining storm drain inlets on or before 60 months from EDPA; or
- Divide the Public Complex into two sectors for the purposes of storm drain inlet labeling and include a map of the two sectors in the SPPP. Label the storm drain inlets in one sector within 36 months from the EDPA; and label all remaining storm drain inlets on or before 60 months from EDPA.

WHAT DOES THIS MEAN?

The storm drain inlet labeling program, generally undertaken by local volunteer groups in cooperation with the Public Complex, involves labeling storm drain inlets with a cautionary message about dumping pollutants. The Public Complex is responsible for placing a label with such a message on or adjacent to all of the storm drain inlets that are along streets with sidewalks, and all

storm drains within plazas, parking areas, or maintenance yards that are operated by the Public Complex. The message may be a short phrase such as "The Drain is Just for Rain," "Drains to [Local Waterbody]," "No Dumping. Drains to River," "You Dump it, You Drink it. No Waste Here," or it may be a graphic such as a fish. Although a stand-alone graphic is permissible, the Department strongly recommends that a short phrase accompany the graphic. These labels serve as a reminder to individuals that the storm sewer system connects to local surface and/or ground water bodies and that pollutants that enter via this pathway will ultimately end up in those water bodies.

WANT TO KNOW MORE?

People may not be aware that water in storm sewers is not treated at sewage treatment plants before it reaches its ultimate destination. Additionally, some individuals view storm sewers as trash receptacles for general trash, used oil from automobiles, leftover paint and herbicides, and various other pollutants. The storm drain inlet labeling program provides an opportunity to educate the public about the connection between storm sewers and local water bodies.

A key factor in the success of this program is visibility. Publicity can play a major role in bringing the issue of nonpoint source pollution into light by announcing and covering the labeling event. Another effective device is to place signs and door hangers within the Public Complex announcing the event and explaining its objectives.

Public participation, through volunteer groups such as environmental organizations, or school groups, is beneficial to the program and shall be used when possible. However, since storm drains are Public Complex property, an alternative could be for the Public Complex to perform the labeling work, although, this lacks the public participation element which lends itself to education. Another option is to have the work overseen by the Public Complex but carried out by volunteers to ensure adherence to permit and safety requirements.

Most people, when informed that the storm sewer discharges to the surface or ground water, will not use the storm sewer as a trash can. Education, especially of young children, continues to pay benefits into the future. The storm drain inlet label stimulates interest in the subject matter of stormwater quality and nonpoint pollution control. Once there is that interest, the rest of the message is easier to convey. Surveys continue to show that the environment, and especially water quality, is a top concern of New Jersey residents. The storm drain inlet labeling program addresses those residents' concerns, shows an effort to improve water quality, and starts the education process that will last a lifetime. For more information on how to plan and implement a Storm Drain Inlet Labeling program, go to the Department's website (Division of Watershed Management) at www.state.nj.us/dep/watershedmgt. The Division of Watershed Management has produced a manual that will assist you in planning your storm drain inlet labeling program.

Recommendations

The following recommendation may be beneficial, but is not required by the permit.

- Since storm drain inlet labeling is an effective educational tool, and due to the relatively low cost involved, it is recommended that all storm drain inlets operated by the Public Complex be labeled. Keep in mind that the labeling can be completed by volunteers.