



**CITY OF ORANGE
LOCAL IMPLEMENTATION PLAN (LIP)**

**SECTION A-6
PUBLIC EDUCATION**



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A-6.0 PUBLIC EDUCATION

A-6.1 Introduction

The City has incorporated the DAMP Model Public Education Program as the basis for this section of its LIP. Public education is an essential part of the City's municipal storm water program. Developing programs to inform and involve the public can be an effective method for controlling urban runoff and storm water pollution. Emphasizing the relevant impacts of urban runoff and storm water pollution to each particular target audience increases the likelihood that the messages will be noticed and that the audience will support and participate in the program implementation.

The City recognizes that when a community has a clear idea of where the pollution comes from, how it directly affects them and what they can do to prevent those effects, the community will be more willing to support and participate in the pollution prevention program. The City also recognizes that the Fourth Term Permits set a higher expectation for the performance of an effective public education component of the storm water program by setting the following goal:

- Target 100% of the residents, including businesses, commercial and industrial establishments. Through the use of the local print, radio and television, the Permittees must ensure that the public and business education program makes a minimum of 10 million impressions per year and that those impressions measurably increase the knowledge and measurably change the behavior of the targeted groups.

A-6.2 Countywide Public Education Program

The City has, and continues to support, a strong countywide public education program – *Project Pollution Prevention* - as the principal means of ensuring compliance with the public education and outreach elements of the permit. This program provides the common message and theme for the overall program, coordinates that message with neighboring counties to ensure that media overflow messages are compatible and provides combined media buying power that could not be achieved by the City and the other Permittees individually. City programs to supplement the countywide effort are discussed in Section A-6.3.

The major program commitments of the Countywide Model Program are noted below and described in detail.

- Multi-media outreach
- Non-media outreach
- School outreach
- Pollutant-specific educational materials
- Business-specific educational materials



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- Mobile businesses outreach
- Residential outreach
- CIA/HOA outreach and

A-6.2.1 Multi-media Outreach Plan

A strategic media relations campaign is developed annually to reach a majority of the selected target groups with sufficient frequency (three or more times) to measurably increase their knowledge and measurably change their behavior. A cost-efficient and strategic media plan for print, theater, cable, and radio advertising based on market research, program effectiveness assessment, and results of the 2009 Public Awareness Survey is updated annually.

The media plan includes the following criteria:

- Uses targeted ad placement. Places print ads in sections or features that have a high probability of being read by the target audience;
- Takes advantage of seasonal behaviors and activities. Schedules paid media and non-media activities to coincide with the seasonal nature of certain behaviors and activities associated with storm water pollution;
- Uses geographic targeting. Focuses paid media and non-media activity in areas that have particular relevance;
- Takes advantage of media spill from neighboring programs. Plans and schedules paid media to take advantage of media from neighboring programs that reach Orange County particularly those from Los Angeles and San Diego counties;
- Coordinates paid media and non-media activities to maximize their impact and effectiveness; and
- Identifies the expected number of impressions that may be achieved for each event.

In addition to the countywide multi-media campaign, the City targets 100 percent of residents and commercial and industrial businesses within its inventory.

A-6.2.2 Non-media Outreach Plan

A cost effective and strategic non-media outreach plan is implemented in conjunction with and in compliment to the multi-media outreach campaign. Non-media outreach refers to activities that are free or low cost media advertisements. Combined with paid advertising, free or low cost outreach efforts reach selected target audiences with sufficient frequency to increase their awareness and motivate them to change their polluting behaviors.



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Project Pollution Prevention will continue to utilize “quads” comprised of a newsletter article, press release, fact sheet and billing insert on various pollution prevention topics. A speakers bureau will continue to provide presentations on storm water issues to organizations such as Kiwanis Clubs, Chambers of Commerce, Toastmasters and other associations.

A-6.2.3 School Outreach

Project Pollution Prevention uses agreements and relationships with organizations that outreach to school-aged children to deliver messages on pollution prevention. These organizations, such as the Orange County Department of Education (OCDE), Discovery Science Center (DSC) and the Ocean Institute, provide various materials and programming focused on identifying pollution causing activities and encouraging pollution preventative behaviors.

A-6.2.4 Pollutant-specific Outreach

Outreach materials are developed and revised as needed by *Project Pollution Prevention* to reach residents and businesses in Orange County regarding specific pollutants of concern. City-specific materials supplement these efforts ensuring that pollution issues specific to the city are adequately addressed. Pollutant-specific outreach include proper use and disposal of pesticides and fertilizers, proper disposal of pet waste, residential auto washing and proper disposal of household hazardous waste. Pollutant-specific outreach to businesses will focus on water conservation, reduction of metals in runoff and proper use and disposal of chemicals and other hazardous wastes.

A-6.2.5 Business-specific Outreach

In addition to the pollutant-specific outreach materials noted above, the City will continue to utilize materials previously developed for food service establishments (FSEs), automotive service centers and detailing establishments, gasoline service stations and the construction industry. A more detailed description of the FSE Program can be found in **DAMP Section 9.3** and **Section A-9.3** of this LIP.

Previously developed outreach to the construction industry will be supplemented by materials promoting residential and commercial implementation of LID techniques, retrofitting of existing development and encouragement of infiltration.

A-6.2.6 Mobile Business Program

Project Pollution Prevention will develop materials on BMP implementation for mobile businesses as described in the **DAMP and Section A-9.4** of this LIP. BMP factsheets already developed are made available to mobile businesses operating within the City.



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A-6.2.7 Residential Program

Project Pollution Prevention will develop materials for the Residential Program described in the **DAMP** and **Section A-9.5** of this LIP. The Residential Program includes recommendations ("Tips") for pollution-prevention methods for residential areas. Specific pollution prevention practices that are recognized as being effective and economically advantageous for each residential activity with a high potential threat to water quality, are provided in the activity fact sheets presented in **Exhibit A-9.IV**. The City uses the implementation strategies discussed in **Section A-9.5.4** to encourage pollution prevention in residential areas.

In addition, the City will facilitate proper management and disposal of used oil, toxic materials and other household hazardous wastes (HHWs) by providing educational materials describing the operation of the County's principal Household Hazardous Waste Collection Centers.

A-6.2.8 Common Interest Areas/Homeowner Association Activities Program

The Common Interest Area (CIA) / Homeowner Association Area (HOA) Activities Program includes specifications for pollution-prevention methods for CIA/HOA areas and is described in the **DAMP** and LIP **Section A-9.6**.

A-6.2.9 Countywide Products and Accomplishments

To date the countywide program has resulted in the following products and accomplishments:

1. Collective preparation and distribution of hundreds of thousands of brochures, magnets, flyers and/or bookmarks. The current materials are listed below:
 - "The Ocean Begins at Your Front Door" Brochure
 - "Keeping Pest Control Products Out of Creeks, Rivers and the Ocean" Brochure
 - "Help Prevent Ocean Pollution: Pool Maintenance" Brochure
 - "Help Prevent Ocean Pollution: Waste Oil Collection Centers – North, Central and South Orange County
 - "Help Prevent Ocean Pollution: Food Service Facilities" Brochure
 - "Help Prevent Ocean Pollution: Pet Care Tips" Brochure
 - "Help Prevent Ocean Pollution: Carpet Cleaning" Brochure
 - "Help Prevent Ocean Pollution: Residential Pool, Landscape and Hardscape Drains" Brochure
 - "Help Prevent Ocean Pollution: Car Wash Fundraisers" Brochure
 - "Help Prevent Ocean Pollution: Septic Tank Maintenance" Brochure
 - "Help Prevent Ocean Pollution: Household Tips" Brochure
 - "Help Prevent Ocean Pollution: Proper Disposal of Household Hazardous Materials" Brochure
 - "Help Prevent Ocean Pollution: Tips for Landscape and Gardening" Brochure
 - "Help Prevent Ocean Pollution: Business Maintenance Activities" Brochure



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- "Help Prevent Ocean Pollution: Auto Repair Industry" Brochure
 - "Help Prevent Ocean Pollution: Tips for Using Concrete and Mortar" Brochure
 - "Help Prevent Ocean Pollution: Home Improvement Projects" Brochure
 - "Help Prevent Ocean Pollution: Projects Using Paint" Brochure
 - "Help Prevent Ocean Pollution: Sewage Spill Reference Guide" Brochure
 - "Children's Activity Book" Activity Brochure
 - "Mobile Detailing and the Water Quality Act" Brochure
 - "Food/Restaurant Industry" BMP Reference Poster
 - "Auto Repair Industry" BMP Reference Poster
 - "Gas Station Operations" BMP Reference Poster
 - "Food Service Facilities" BMP Reference Poster
 - "Overwatering" Kiosk Poster
 - "Get your (Cigarette) Butts Out of the Water" Kiosk Poster
 - "The Ocean Begins at Your Front Door" Kiosk Poster
 - "Restaurant/ Kitchen BMP Procedures" CD/ DVD
 - "Proper Waste Disposal and Keep Lids Closed" Trash Bin Stickers
 - "Multiple Storm water Pollution Prevention Messages" Bus Bench Kiosk Posters
 - "No Dumping-Drains to Ocean" Bookmarks
 - "No Dumping-Drains to Ocean" Magnets
 - "877-89-SPILL: 24 Hour OC Emergency Spill Response Number" Magnets
 - "No Dumping...; The Ocean Begins..." Dustpans
 - "Project Pollution Prevention Logo and Website" Rubber Ducks
 - "No Dumping...; The Ocean Begins..." Pens/ Pencils
 - Enviroscope Model- Inland and Coastal models
2. Participation in numerous large scale community events such as the Children's Groundwater Festival, Festival of the Whales/Ocean Awareness Day, Earth Day, the Trails 4 All Inner Coastal and Watershed Clean Up Day, among others. The Principal Permittee also provides materials, Enviroscope displays and Trivia Prize Wheels for the City to use at local events.
 3. Coordinating with the American Oceans Campaign storm water resources web page at www.americanoseans.org/runoff/epa.htm.
 4. Publicizing the countywide 24-hour water pollution reporting hotline number (877) 89-SPILL, capable of handling water pollution complaints, as well as inquiries about storm water and public education materials. The hotline is staffed after normal business hours, on weekends and holidays by a live bilingual operator (Spanish and English).
 5. Providing model storm water website materials located on the County website, www.ocwatersheds.com and available to the City and other Permittees. The materials include a site map, web pages with assembled photomontages, site buttons, navigation buttons, and copy text. The additional pages are comprised of a home page; general



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information page; pollution prevention for residents, businesses, and property owners; household hazardous waste and oil recycling locations; pollution reporting; educational materials, kid's corner; and other links.

6. Developing a model, watershed specific, public education program to increase public awareness about the concept of watersheds, specific pollutants of concern (primarily bacteria and toxicity caused by pesticides), their sources, and the solutions.
7. Developing pollutant specific educational materials including a pet care activities brochure, a horse and livestock activities brochure, a car wash fundraiser brochure, a sewage spill reference guide, etc.
8. Developing business specific education materials including BMP posters for the automotive repair industry, gasoline stations, and the food/restaurant industry; and brochures for general business practices, carpet cleaning, landscaping and gardening, and concrete and mortar work. As part of the new food facility inspection program (see DAMP, Section 9) the following information has been incorporated into revised materials and distributed as part of a focus on almost 9500 of these facilities countywide:
 - Appropriate cleaning of dumpster and grease bin areas;
 - Replacement of leaking or dirty dumpsters;
 - Reducing liquid waste in trash and double bagging trash to prevent leaks;
 - Encouraging dry sweeping;
 - Using covers and berms to prevent wash water from entering the storm drain system;
 - Disposing of wash water to the sanitary sewer rather than the storm drain system;
 - Stopping spills at their source; and
 - Proper maintenance of outdoor grease interceptors
9. Conducting public opinion surveys in an effort to better understand the public's awareness regarding water quality issues. The surveys conducted include:
 - The 1994 Storm Water Pollution Prevention and Flood Awareness Survey by the University of California at Irvine (UCI);
 - An informal survey at the 2000 Orange County Fair;
 - An informal survey through the Los Angeles Times Education Program of secondary school students on pesticide/herbicide issues;
 - The 2001 Orange County Public Awareness Survey; and
 - The 2008 Orange County Public Awareness Survey.

The primary objectives of the 2001 and 2008 surveys were 1) to provide a baseline measure of residents' awareness, attitudes, practices and habits related to storm water



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pollution, against which future outreach efforts can be measured, and 2) to provide an additional program development tool, for identifying target audiences and key messages, developing strategies and confirming underlying assumptions.

10. Coordinating with other statewide, regional and Orange County public education groups and programs related to surface water quality including the California Stormwater Quality Association Public Information/Public Participation Sub-Committee, the Orange County Health Care Agency's hazardous waste reduction, food protection and animal services programs, the Orange County Integrated Waste Management Department's household hazardous waste program and the County of Orange Public Library Department.

A-6.3 City Public Education Focus

The City's public education focus is intended to support the countywide effort through financial contributions, participation in the Public Education Committee and the use of countywide materials, thematic messages and common look. The City supplements the countywide campaign at a local level to address City specific issues and target constituencies that are best reached through a local rather than a countywide effort.

The City does this through the following actions:

1. Public Education Material Distribution

The City makes educational materials available to its residents and businesses at high-traffic City facilities. The City facilities and materials available at each facility, as space permits, are shown in the following table.



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City Facility	Materials Available
City Hall 300 East Chapman Ave.	• <i>"The Ocean Begins at Your Front Door" Brochure</i> • <i>"Help Prevent Ocean Pollution: Pool Maintenance" Brochure</i> • <i>"Help Prevent Ocean Pollution: Waste Oil Collection Centers" Brochure</i> • <i>"Help Prevent Ocean Pollution: Pet Care Activities" Brochure</i> • <i>"Help Prevent Ocean Pollution: Sewage Spill Reference Guide" Brochure</i> • <i>"Help Prevent Ocean Pollution: Landscape and Gardening" Brochure</i> • <i>"Help Prevent Ocean Pollution: Concrete and Mortar" Brochure</i> • <i>"Help Prevent Ocean Pollution: Pet Care Tips" Brochure</i> • <i>"Help Prevent Ocean Pollution: Household Tips" Brochure</i> • <i>"Keeping Pest Control Products Out of Creeks, Rivers and the Ocean" Brochure</i>
Economic Development/Community Services 230 East Chapman Ave.	• <i>"The Ocean Begins at Your Front Door" Brochure</i> • <i>"Help Prevent Ocean Pollution: Pool Maintenance" Brochure</i> • <i>"Help Prevent Ocean Pollution: Waste Oil Collection Centers" Brochure</i> • <i>"Help Prevent Ocean Pollution: Pet Care Activities" Brochure</i> • <i>"Help Prevent Ocean Pollution: Sewage Spill Reference Guide" Brochure</i> • <i>"Help Prevent Ocean Pollution: Landscape and Gardening" Brochure</i> • <i>"Help Prevent Ocean Pollution: Concrete and Mortar" Brochure</i> • <i>"Help Prevent Ocean Pollution: Pet Care Tips" Brochure</i> • <i>"Help Prevent Ocean Pollution: Household Tips" Brochure</i> • <i>"Keeping Pest Control Products Out of Creeks, Rivers and the Ocean" Brochure</i>
Orange Public Library Main Branch 101 North Center El Modena Branch 380 South Hewes Taft Branch 740 East Taft	• <i>"The Ocean Begins at Your Front Door" Brochure</i> • <i>"Help Prevent Ocean Pollution: Pool Maintenance" Brochure</i> • <i>"Help Prevent Ocean Pollution: Pet Care Activities" Brochure</i> • <i>"Help Prevent Ocean Pollution: Household Tips" Brochure</i> • <i>"Activity Booklet" Kids Activity Book</i> • <i>"No Dumping Drains To Ocean" Bookmarks</i> • <i>'All the Way to the Ocean' Harper, J. - Juvenile Books</i>



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2. Employee Training and Outreach

The City provides and encourages educational activities and training for its direct employees. The City employs individuals with a wide range of education, job responsibilities and skills that, through their direct actions or interface with the public, have an affect on water quality. Some of these include: planning and zoning officials, plan reviewers, emergency crews (police, fire and public works), construction site inspectors, road crews, elected officials, etc.

There are also a variety of City facilities and activities that can have an adverse impact on water quality. Examples include everything from large impervious parking areas to City vehicle repair garages or maintenance crew base stations. Due to the diversity of the target audiences and the potential impacts, the Principal Permittee has taken the lead in coordinating, developing and presenting a number of different training modules (**DAMP Appendix B**). The City supports this effort by requiring the appropriate employees to attend the training sessions and then conducting any supporting train-the-trainer efforts that may be necessary. The following table identifies some of the staff training conducted on implementation of the LIP:

LIP Section	Target Audience	Training Module
A-5	Facility Managers/Supervisors and facility staff	Fixed Facility Model Maintenance Procedures
A-5	Field Managers/Supervisors and field staff	Field Program Model Maintenance Procedures
A-7	Planners, Plan Checkers and Engineers	New Development Project Planning and Design
A-8	Construction Site Inspectors	Construction Site Inspection and BMPs
A-9	Industrial Facility Inspectors	Existing Development – Industrial Facility Inspection and Monitoring
A-10	Fire and Police Personnel, Authorized Inspectors	Illegal Discharge/Illicit Connection Program Implementation
All LIP Sections	Department Heads	Program overview

In addition, the City also conducts broad educational outreach on water quality issues to all its employees:

- Providing information to new employees to inform them of water quality issues and the City's responsibilities.
- Participating in annual City events.
- Placing information on the City's internal website; and



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- Routing relevant newspaper and magazine articles to specific departments or personnel.

3. Outreach to Construction Site Contractors/Developers

Mismanagement of construction projects can have severe impacts on water quality if issues such as runoff, sediment control and waste materials are not properly controlled. The City, through its permitting process, targets builders, developers, contractors and property owners in the construction process.

The following approaches are used:

- Distributing informational material to developers, contractors, residential owners and construction companies when City permit application forms are provided;
- Maintaining a supply of information materials at selected City offices and facilities for interested parties to obtain during business hours throughout the year.
- Requiring that companies submitting construction bids for City Requests For Proposals (RFPs) include language agreeing to follow BMPs.

4. Outreach to Industrial Site Owners and Operators

The chemicals and materials used at industrial sites, and the wastes produced by them, can cause water quality impacts if not handled properly. The City has opportunities to supplement the countywide effort through its activities of inspecting these facilities and issuing business licenses. Educating industrial owners and operators about BMPs will help to change behaviors at these sites.

The following approaches are used:

- Distributing information and educating owners and operators during inspections or other interactions with City staff.
- Providing information when industrial companies apply for and/or renew business licenses or permits.
- Delivering brochures with information about regulations, requirements and industry-specific BMPs to industrial site owners/operators.

5. Outreach to Commercial Site Owners and Operators

Like industrial sites, commercial sites can produce large amounts of runoff containing pollutants. Without proper management, water quality impacts can occur. The City has opportunities to supplement the countywide effort through its activities of inspecting these facilities and issuing business licenses. Educating commercial site owners and operators about BMPs will help to change behaviors at these sites.



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The following approaches are used:

- Distributing information and educating owners and operators during inspections or other interactions with City staff.
- Providing information when commercial operators apply for and/or renew business licenses or permits.
- Delivering brochures with information about regulations, requirements and industry-specific BMPs to industrial site owners/operators;

6. Workshops

The City promotes County administered regional workshops for the following public sectors:

- Manufacturing Facilities
- Mobile Service Industry
- Commercial, Distribution and Retail Sales Industry
- Residential/Commercial Landscape Construction and Services Industry
- Residential and Commercial Construction Industry
- Residential and Community Activities

7. Outreach to Residential Community, General Public, and School Children

Educating the general public and school children is 'key' to a successful outreach plan. The City has opportunities to supplement the countywide effort through its daily interactions with its citizenry.

Residents engage in numerous activities that can affect storm water quality, including washing cars, disposing of pet waste, handling hazardous substances and maintaining their lawns. Educating children and adults about these matters can have a tremendous impact on changing behaviors. It is very important that people understand not just what to do or what not to do, but *why* it is important. When people understand the impact of their actions, they will be more likely to change. Because members of the general public are also the same people who own, work at or patronize commercial or industrial sites, the heightened awareness gained through general public outreach will also assist in those other areas.

Reaching school children is important for two reasons. First, it educates the next generation of adults at an early age and increases the likelihood that they will engage in responsible behavior in the future. Secondly, children are able to influence their parents by asking for assistance with storm water projects for school, sharing brochures or repeating information they have learned.



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The following approaches are used:

- Participating in the Countywide Program to develop a comprehensive school program in conjunction with the Principal Permittee and other Permittees, water agencies and school districts.
- Developing educational public service announcements and airing these on the City local cable access channel.
- Providing information about urban runoff and storm water pollution issues by including a link to the Principal Permittee's website, www.ocwatersheds.com, on the City's website at www.cityoforange.org.
- Maintaining a supply of brochures at public buildings including City Hall, Economic Development/Community Services, and City of Orange libraries.
- Participating in community events such as Treats in the Streets to provide urban runoff and storm water pollution prevention information.
- Participating in and promoting clean-up events or other special events such as Coastal Cleanup.
- Stenciling storm drains to remind residents that materials entering the storm drain system can drain to the ocean.
- Working with other jurisdictions, including the Principal Permittee on joint outreach programs such as O.C. Water Camp, Water Festival, Discovery Science Center, OC Outdoors, The Ocean Institute, etc.
- Sharing and utilizing the countywide materials and those developed by other jurisdictions, and maintaining a common theme among all materials used and produced by the City.
- Mailing information to Common Interest Area/Homeowner Associations.

A-6.4 Public Participation

Public participation allows the public to be directly involved with the storm water program. The City has opportunities to supplement the countywide effort by encouraging and supporting public participation at a local level.

In addition to the positive results of people changing their behaviors to reduce urban runoff and storm water pollution, public involvement benefits the education program in several ways. Many of the public participation elements involve direct interaction with City staff that is knowledgeable about water quality issues. People are able to ask questions and receive immediate answers. Extra time can be taken to explain issues in more depth. The City can learn what topics people have the most interest in, what approaches work best, and what approaches might not be effective, helping us fine-tune our educational efforts. Also, direct interaction can make people excited and confident about information they have learned, and they will be likely to share that information with their family, neighbors, friends and co-workers.



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The following approaches have been identified to enhance public participation:

- **Daily Activities**
Through the public education program, residents will be asked to make adjustments to their activities to reduce the impact to the storm drains and water quality. Issues to be addressed include washing cars, cleaning oil leaks, disposing of waste and pet care. By following guidelines, the public will be helping to solve the problems caused by the improper management of common house and work activities.
- **Asking for Feedback**
The City provides opportunities for residents to ask questions and give comments about the storm water program. City newsletters and the website include contact information people can use to communicate with municipal staff. Staff will be encouraged to spend time talking with businesses or residents they encounter in their daily jobs, and will be encouraged to record questions and comments they hear.
- **Speakers Bureau**
City staff will be available to speak to organizations such as the Chamber of Commerce, business groups, homeowners associations and social clubs like Lions, Kiwanis and Soroptimist.
- **Community Events**
By sponsoring or staffing tables at community events, the City can directly communicate with residents about important water quality issues. The one-on-one contact will allow the City to address specific questions and issues an individual might have.
- **Hotline**
The City maintains a 24-hour hotline number (714) -538-1961 that residents can use to report pollution problems, as well as a form that can be completed and returned to Public Works for incidents. In addition, the educational materials will include the Principal Permittee's pollution reporting hotline number (877) 89-SPILL and the City website will contain a link to the Principal Permittee website at www.ocwatersheds.com, which includes an on-line complaint form.

A-6.5 Program Effectiveness Assessment

The Public Education Program's goal is to increase knowledge and change potential polluting behavior by implementing a comprehensive public and business education program. Information on program effectiveness will be tracked by the number of impressions recorded (See **DAMP Appendix C, Section C-6**) and, on a longer term, by the changes in attitudes during public awareness surveys.