

8. WATERSHED EDUCATION PROGRAM

Public education can be one of the most effective measures to address non-point source pollution. Educating the public about the impact of their daily activities on the health of our watersheds and receiving waters can help foster a general understanding of watersheds and water quality health. For the public to willingly change their behavior to prevent water quality degradation of watersheds, recognition of this issue’s importance is needed. Consistent public service messages will help people identify the issue and problems associated with polluted urban runoff.

This chapter describes the watershed education program developed for the Carlsbad Watershed to comply with the Municipal Permit requirements in Section J.2.g. The program was designed to achieve the Watershed URMP Objective #3; to increase and enhance public understanding of watershed issues and pollution prevention through a watershed-based education program.

8.a. Current Education Activities

Across San Diego County, storm water education is currently conducted on three levels: regional, watershed, and jurisdictional. All three levels strive to provide consistent messages to target audiences regarding storm water pollution prevention. The following is a table describing current educational efforts conducted on each level.

Area	Type	Description
Regional	Project Clean Water	This County of San Diego initiated effort provides the forum for information sharing to promote regional collaboration and consistency in outreach. The Education and Resource Development Technical Advisory Committee (TAC) has been meeting since November 1, 2000. This TAC, which broadly encompasses a variety of outreach topics, works closely with the Copermittees’ Education Technical Workgroup on storm water and urban runoff outreach activities.
	Think Blue Media Campaign	Bilingual (English/Spanish) television and radio Public Service Announcement advertising campaign airing on 33 local broadcast outlets. Campaign developed and administered by the City of San Diego with financial support from the County and Port of San Diego as well as California Department of Transportation – San Diego Office.
	Industrial/Commercial Workshops	Series of industry-specific workshops scheduled throughout the region under the leadership of County staff. Featured speakers and panelists provide attendees with the most up-to-date information about storm water requirements and Best Management Practices (BMP’s). Automotive, landscaping, mobile services and restaurant industries have been targeted to date.

Carlsbad Watershed Urban Runoff Management Plan
Section III: Plan of Action

Area	Type	Description
	School Presentations (Unincorporated County)	Bilingual (English/Spanish) water quality educational program for grades K-6: Participation at in High Schools by presenting at school-wide Environmental Wellness Fairs.
Watershed	North County Storm Water Program (NCSWP)	NCSWP is a collaboration between Carlsbad Watershed jurisdictional storm water programs. Meeting once a month, NCSWP has been exchanging information, gathering data and creating an education campaign for the Carlsbad Watershed on storm water and watershed awareness issues.
	Brochures and literature	NCSWP has developed a general information brochure on the causes and effects of storm water pollution. Additionally, an informational (bilingual-English/Spanish) doorhanger was created for dissemination by North County cities staffs.
	Informational Survey	A bilingual (English/Spanish) informational survey was developed and administered, via mail, to randomly selected residents within each of the jurisdictions in the Carlsbad Watershed. Information obtained from the survey was not statistically valid; however, it provided jurisdictions with a sense residential awareness of storm water quality issues.
Jurisdictional	General Public Presentations	Each jurisdiction hosts presentations to community planning groups, municipal employees and the general public. Content consists of general information about the current storm water regulations, municipal storm drain system, sources of non-point pollution, BMPs, as well as good housekeeping practices.
	Customized Public Presentations	Presentations are made to specific community businesses and trade associations. Content is tailored to meet the needs of the audience and specific pollution prevention (BMPs) are identified.
	School Districts – Water Quality and watershed education	All cities are working with local K-12 schools to educate students on watershed concepts and water quality issues. Presentations are tailored to the specific grade level and classroom audience.

8.b. Watershed-Based Education Program

The main objective of the watershed-based education component is to capture audience attention, impart messages that are understood, retained, and ultimately prompt behavioral changes. Establishing key messages – or succinct, attention-grabbing, easily understandable, and motivational information – is crucial to program success. It is important to note that successful communication campaigns begin with key, core messages, which are repeated often and given time to become “common knowledge” with target audiences. As time evolves, these

Carlsbad Watershed Urban Runoff Management Plan
Section III: Plan of Action

core messages are enhanced with new and more detailed information. In this manner, messages are not disseminated into the public arena simultaneously, possibly causing confusion and resulting in a lack of attention and recognition. This staged approach will be particularly important under the education program due to the extensive amount of information required to be covered and the long-term need to address watershed-specific issues as the program evolves.

While core program messages remain consistent throughout all communication vehicles, where appropriate, these messages are tailored for individual target audiences. For example, an overall message to “identify and isolate potential flows to a storm drain” is refined for homeowners to identify typical flow sources around the house. For the business community, the message is focused on typical commercial and industrial activities that result in potential flow to storm drains. These messages provide a baseline from which watershed concepts can be threaded into current educational efforts.

A strong watershed program element is important for establishing ownership in the minds of the target audience. Residents are more likely to respond to education when they understand the impacts of upstream activities on downstream areas. NCSWP will refine the current baseline education program to integrate watershed-based components as described below:

8.b.1 Strategy

Watershed education will be focused in order to meet the needs of different sub-regions and associated land uses within the watershed. For example, the areas within the watershed under the jurisdiction of the County of San Diego contain primarily very low-density residential development with limited industrial and commercial development. Meanwhile, areas within the cities of Carlsbad, Encinitas, Escondido, San Marcos, Solana Beach, Oceanside and Vista are generally developed with a wide variety of land uses. As such, the County will mostly target the residential community within the watershed, while industrial/commercial sites are addressed by the jurisdiction in which they are located. On the other hand, the cities will target all land uses by incorporating watershed-specific principles into their jurisdictional programs.

Over the short-term, the education program will focus on three basic principles:

- (1) What is a watershed?
- (2) We all live in and impact a watershed.
- (3) Watershed stewardship (individual actions within our watersheds accumulate to influence the health of our water resources).

Suitable Best Management Practices (BMPs) will be incorporated into the short-term education program as appropriate to the target audience. Over the long term, the watershed message will be further developed to address other specific constituents of concern within the watershed. Watershed message development will be based on the yearly water quality assessment performed as part of the annual reports associated with the overall Watershed Urban Runoff Management Program. The watershed education strategy will be built as a multi-phased approach that is driven by the achievement of above stated objectives, as determined through annual assessments.

8.b.2 Implementation

The North County Storm Water Program (NCSWP) will be the mechanism in the Carlsbad Watershed to implement this strategy. NCSWP utilizes the following Mission Statement:

“North County Storm Water Program is collaboration between North County Watershed Jurisdictions that strives to educate the public on the inter-relationship between human activities and their subsequent water quality impacts.”

The Goal of the North County Storm Water Program is to improve the water quality of the Carlsbad Watershed.

In order to achieve this goal, the North County Storm Water Program is striving to meet the following objectives:

- 1. Develop materials for public distribution providing a consistent message to all residents in the North County Watershed.*
- 2. Develop a primary school education program focusing on watershed awareness and storm water pollution prevention.*
- 3. Seek funding for projects involving multi-agency participation that assist us in raising watershed and storm water pollution prevention awareness.*
- 4. Maintain inter-jurisdictional collaboration focused on the creation and implementation of cost-effective watershed awareness and storm water pollution prevention education projects.*

The following table identifies the objectives of the Carlsbad Watershed education effort, as well as the tasks that will be undertaken to meet these objectives.

Carlsbad Watershed Urban Runoff Management Plan
Section III: Plan of Action

Education Objective 1: <i>Develop materials for public distribution providing a consistent message to all residents in the North County Watershed.</i>				
Task	Description	Target audience(s)	Responsible party	Schedule
Determine baseline residential awareness of water quality and watershed issues to develop effective materials	Conduct a baseline residential water quality awareness survey to measure current levels of knowledge pertaining to the causes and effects of storm water pollution and understanding of the three basic principles	General public	All jurisdictions	July 2002- July 2003
Development of an Integrated Pest Management Material	Assist in the development and outreach of an Integrated Pest Management Material to educate residents and businesses.	Residential, and commercial	All jurisdictions	July 2004- July 2005
San Diego Regions Watershed Web Site	Pursue funding opportunities and broad partnerships to develop a comprehensive and interactive educational website which provides up to date information about the region's watersheds and related activities, including volunteer opportunities	General Public	All jurisdictions	2004- ongoing
Watershed Brochure	Tailor messages based upon data/information gathered and create a unified information piece, such as a brochure, which includes a map, and highlights targeted messages, as determined by water quality assessment and other available information. Jurisdictions can highlight programs, services, and regular activities as well as feature practices which address the watershed's critical needs.	General Public	All jurisdictions	July 2004- June 2005 (distribution would be an ongoing task)

Carlsbad Watershed Urban Runoff Management Plan
Section III: Plan of Action

Education Objective 2: Develop a primary school education program focusing on watershed awareness and storm water pollution prevention.				
Task	Description	Target Audience(s)	Responsible Party	Schedule
Establish a relationship with the local school districts by conducting classrooms education	Incorporate watershed education in the K-12 schools following current water quality/water cycle curriculum guidelines by hosting classroom presentations and/or field trips	K-12 schools/ students	All jurisdictions	July 2002- July 2005
Develop a water quality/watershed awareness education program for K-12 classrooms	Understand the current curriculum for water quality/water cycle and develop an education program tailored to meet teachers needs based on information gathered from classroom education	K-12 schools/ students	All jurisdictions	July 2003- July 2005
Conduct School Presentations in the unincorporated county	Bilingual (English/ Spanish) water quality educational program for grades K-6 : Participation at the High School by presenting in school-wide Environmental Wellness Fairs	K-6 schools/ students	County of San Diego	July 2002- July 2005

Education Objective 3: Seek funding for projects involving multi-agency participation that assist us in raising watershed and storm water pollution prevention awareness.				
Task	Description	Target Audience(s)	Responsible Party	Schedule
Identify grant opportunities for water quality and watershed awareness education programs	In order to increase the magnitude and exposure of NCSWP education efforts, additional money is needed. Therefore, grants will be sought to expand current education efforts.	General public	All jurisdictions	July 2002- ongoing

Carlsbad Watershed Urban Runoff Management Plan
Section III: Plan of Action

Education Objective 4: *Maintain inter-jurisdictional collaboration focused on creation and implementation of cost effective watershed awareness and storm water pollution prevention education projects.*

Tasks	Description	Target Audience(s)	Responsible Party	Schedule
Partners in Clean Waters	Identify and evaluate efforts by others in the region which support the goals of the storm water program (e.g., water conservation, citizen monitoring efforts, clean-up events, non-profit environmental organizations, Carlsbad Watershed Network, etc.) and pursue partnerships as appropriate.	General Public	All jurisdictions	Jan 03- June 05
Continue the NCSWP as a forum for Carlsbad Watershed education	By meeting monthly or bi-monthly, the NCSWP provides a forum for all Carlsbad Watershed co-permittees to exchange information and work on a watershed level to create cost-effective education campaigns and materials	Jurisdictions	All jurisdictions	July 2002- ongoing

8.c. Final Outreach Strategy

The North County Storm Water Program seeks to develop a final outreach strategy in order to more effectively organize current education efforts with planned activities and programs. This outreach strategy will include jurisdictional water quality and watershed awareness education, services and regular activities as they relate to the Carlsbad Watershed and will more broadly determine future programs and efforts as subsequent Municipal Storm Water permits are issued to the San Diego Region. By creating a broad vision, the NCSWP is able to utilize existing resources for more effective program development, as well as identify areas and issues which have been overlooked or underemphasized. Such a broadly encompassing outreach strategy will be updated regularly to reflect new programs and projects, achievement of stated tasks and objectives and current regulatory requirements.