

## **Appendix C: Historical Development of the Stormwater Pollution Prevention Public Education and Outreach Program**

San Luis Obispo (SLO) County Partners for Water Quality is an inter-agency coalition made up of fourteen agencies in San Luis Obispo County all seeking to comply with the NPDES stormwater regulations. The County, all seven incorporated cities, Templeton, Los Osos, Cambria, and Nipomo CSDs, Cal Poly, and Caltrans participate in the coalition.

SLO County Partners for Water Quality (“the Partners”) was formed to provide a forum for the regulated MS4 communities to share ideas and resources as they developed and implemented their SWMPs. The Partners soon realized that it was most cost effective and efficient to develop and implement a Stormwater Pollution Prevention (SWP2) Public Education and Outreach Plan on a regional basis rather than as individual agencies. The Partners found that it is highly desirable to send a clear and consistent SWP2 message that would reach audiences countywide.

The Partners developed the SWP2 Public Education and Outreach Plan using a 6-step process recommended in the U.S. EPA guidebook, “Getting In Step: A Guide to Effective Outreach In Your Watershed”. The Partners developed the Plan following these six steps: 1) Identify the priority pollutants in the community; 2) Identify the key audiences; 3.) Identify the key messages; 4.) Identify the most effective message formats and distribution modes; 5.) Prepare the plan including timetables and measurable goals; and 6) Implement the plan and provide a means to evaluate the program’s effectiveness and revise it as needed.

### **Step 1: Identifying the Most Important Stormwater Pollutants to Target**

The Partners used the Pollutant Prioritization Matrix tool shown below to determine the most important stormwater pollutants impacting water quality in San Luis Obispo County. Each pollutant was scored based on the following factors: 1) the number of water bodies CWA 303(d) listed as impaired by the pollutant; 2) the TMDL (Total Maximum Daily Load) priority established by the RWQCB; 3) the impact of the pollutant on the local economy (considering factors such as impacts on tourism, agriculture, fishing, clean up costs, etc.); 4) the pollutant’s impact on community health, cultural, aesthetic, recreational, and environmental values (considering factors such as impacts on public health, wildlife habitat, water sports, etc.); 5) the pollutant’s relationship to current and future land uses over the next 10 years (i.e., considering whether the pollutant would likely increase or decrease based on current and future land uses); 6) the pollutant’s relationship to projected population growth rate over the next ten years (i.e., considering whether the pollutant would likely increase or decrease considering future population growth; and 7) public awareness of the problems caused by the pollutant to determine how much public education and outreach would be needed.

## Stormwater Pollutant Prioritization Matrix

Criteria  Pollutants	2002 303(d) listed water bodies in County	TMDL Priority Rating	Impact on Local Economy (ie., tourism, agriculture, fishing, clean- up costs, etc.)	Impact on Community Health, Cultural, Aesthetic, Recreational, and Environmental Values (ie., public health, wildlife habitat, water sports, etc.)	Relationship to current and future land uses (next 10 years)	Relation- ship to Pop. Growth Rate (next 10 years)	Public aware- ness of problem	Total
<b>Sediment</b>	<b>3</b> Chorro Cr. Los Osos Cr  Morro Bay	<b>15</b> <b>High</b> <b>High</b>  <b>High</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>41</b>
<b>Nutrients</b>	<b>3</b> Chorro Cr. Los Osos Cr San Luis Obispo Cr.	<b>15</b> <b>High</b> <b>High</b>  <b>High</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>38</b>
<b>Fecal Coliforms/ Pathogens</b>	<b>16</b> Chorro Cr. Chumash Cr Atascadero Cr. Cholame Cr. Dairy Cr. Los Osos Cr Morro Bay Nipomo Cr Oso Flaco Cr Pennington Cr. San Bernardo Cr San Luis Obispo Cr. San Luisito Cr. Santa Maria River Walters Cr. Warden Cr.	<b>38</b> Low Low  Low  Low Low  <b>High</b> Low Low  Low  Low  <b>High</b> Low Low  Low Low	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>77</b>
<b>Oil and grease</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>20</b>
<b>Trash</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>19</b>

Criteria	2002 303(d) listed water bodies in County	TMDL Priority Rating	Impact on Local Economy (ie., tourism, agriculture, fishing, clean-up costs, etc.)	Impact on Community Health, Cultural, Aesthetic, Recreational, and Environmental Values (ie., public health, wildlife habitat, water sports, etc.)	Relationship to current and future land uses (next 10 years)	Relationship to Pop. Growth Rate (next 10 years)	Public awareness of problem	Total
<b>Pollutants</b>								
<b>Metals</b>	Las Tablas Cr./Lake Nacimiento Morro Bay	<b>High/High</b>  Medium						*N/S
<b>Pesticides</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>15</b>
<b>Low Dissolved Oxygen</b>	<b>5</b> Atascadero Cr. Chumash Cr Dairy Creek Los Osos Cr Warden Cr	<b>10</b> Low Low Low Low Low	<b>5</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>32</b>
<b>Nitrate</b>	<b>3</b> Oso Flaco Creek Oso Flaco Lake Santa Maria River	<b>6</b> Low Low Low	<b>2</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>25</b>
Chloride	<b>1</b> Salinas Riv.	<b>2</b> Low	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>13</b>
Sodium	<b>1</b> Salinas Riv.	<b>2</b> Low	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>13</b>
Priority Organics	<b>1</b> San Luis Obispo Cr.	<b>5</b> <b>High</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>23</b>

\* N/S Metals were not scored in this case because the pollutant source is related to abandoned mines rather than urban runoff.

**Scoring Rules:**

Score each pollutant as follows:

1 point for every CWA 303(d) listed water body

5 points, 3 points, and 2 points for every high, medium and low TMDL priority, respectively

Impact on Local Economy: Score 0-5 with 5 being severe

Impact on Community Health, Cultural, Aesthetic, Recreational, and Environmental Values: Score 0-5 with 5 being severe

Relationship to land uses over next 10 years: score 0 for no relationship to 5 for high relationship

Relationship to population growth over next 10 years: Score 0 for no relationship to 5 for high relationship

Public awareness of problem: Score 0 for public is highly aware to 5 for public has no awareness

The scores for each pollutant were totaled and the pollutants with “like” sources were consolidated resulting in the following list of the top five pollutant categories:

1. Nutrients (including Nutrients/Nitrates/Low Dissolved Oxygen)
2. Pathogens/Fecal Coliforms

- 3. Sediment
- 4. Toxics (priority organics, oil and grease, pesticides and herbicides, and heavy metals)
- 5. Trash

**Step 2: Identifying the Target Audiences**

Each Partner was asked to review the survey shown below before completing the next exercise.

**Identifying the Target Audiences Survey**

The key to successful public education and outreach is targeting your message to a specific audience and having them respond to your message. Based on the demographics of your community, identify the top three audiences that we need to target. Rank these potential audiences, based on the importance of their contribution to stormwater pollution in your community. (1 = most important)

- Commercial Businesses
- Manufacturing
- Construction industry
- Other industry (specify)
- Residences/Single Family Homeowners
- Residences/Multiple Family
- School children (K-6)
- School children (7-12 grade)
- Young adults (18-24)
- Adults (24-35)
- Middle age adults
- Senior citizens
- Pet owners
- Tourists
- Government agencies/institutions
- Large landowners
- Automobile drivers
- Agriculture
- Others: \_\_\_\_\_

Further segment each of the top three target audiences that you chose. Try segmenting them by demographics such as age, gender, recreational activities, business types, occupations, behavior patterns, etc. What segments of the population pose the greatest threat to stormwater pollution of the water bodies in your community?

**Examples:**

(1) To develop stormwater pollution prevention messages for sediment, the construction community is a prime target audience. Included within this category are architects, contractors, builders, developers, landowners, government planning and building departments, etc.

(2) To develop stormwater pollution prevention messages for nutrients, residential homeowners are a prime target audience. Included within this category are homeowners and lawn care companies that over-use fertilizers for lawn and landscape care, do not maintain their septic systems, and dispose of grass clippings near storm drains or water bodies.

Based on the target audiences you selected, what stormwater pollution prevention messages would be most important for your community? For the public education and outreach message to be effective, it must change the behavior of the target audience. See the list of existing stormwater pollution prevention messages (slogans, icons) to see what other communities have done.

Next the Partners brainstormed to determine the key target audiences for each of the top five stormwater pollutant categories. The results of the first round of brainstorming are shown below:

#1 Pollutant Category	#2 Pollutant Category	#3 Pollutant Category	#4 Pollutant Category	#5 Pollutant Category
<b>Nutrients (Nutrients, Nitrate Low D.O.)</b>	<b>Pathogens/ Fecal Coliforms</b>	<b>Sediment</b>	<b>Toxics: Priority Organics, Pesticides &amp; Herbicides, Oil &amp; Grease, and Metals</b>	<b>Trash</b>
Agriculture* Homeowners Pet owners Government* (sanitary sewers) Commercial Businesses	Agriculture* Homeowners Pet owners Government* (sanitary sewers)	Construction Government* Agriculture*	Mining* Commercial Businesses Manufacturing Agriculture* Auto drivers Homeowners	Young adults Children 6-12 grade Auto drivers Commercial Businesses

\*Note: agriculture, government, and mining were identified during the brainstorming session, but were later ruled out because they are not regulated as part of the MS4 General Permit Minimum Control Measure for Public Education and Outreach. They are, however, significant sources of point and nonpoint source water pollution and are regulated in other sections of the NPDES and nonpoint source pollution regulations.

After the first round of brainstorming, the target audiences were further segmented as follows:

<b>Nutrients (Nutrients, Nitrate Low D.O.)</b>	<b>Fecal Coliforms/Pathogens</b>	<b>Sediment</b>	<b>Toxics: Priority Organics, Pesticides &amp; Herbicides, Oil &amp; Grease, and Metals</b>	<b>Trash</b>
Homeowners – septic system maintenance, landscape maintenance over-fertilizers  Pet owners who don't pick up after their pets  Commercial Businesses – landscapers and lawn maintenance companies  Private golf courses	Homeowners – septic system maintenance  Pet owners who don't pick up after their pets	Construction industry – contractors, architects, landscapers, developers, builders, and landowners	Commercial Businesses – auto service, car washes, auto salvage, recyclers, restaurants Manufacturing Auto drivers - home auto maintenance and repair, motor oil recycling Homeowners – household haz waste/recycling, green household chemical substitutes, pesticide use (IPM), computer recycling	Young adults Children 6-12th grade Auto drivers Commercial Businesses – Fast food restaurants, supermarkets, big box retail, garbage companies and waste haulers

From this exercise, the group concluded that the key target audiences are:

1. **Homeowners** (septic tanks, pet waste management, landscaping and lawn care, auto repair and maintenance, and household hazardous waste)
2. **Construction industry** (contractors, architects, engineers, builders, developers)
3. **Commercial businesses** (auto maintenance and repair, auto salvage yards, restaurants, and landscaping services).
4. **School age children and young adults**

**Step 3: Identifying the Key Messages**

Next the Partners reviewed a collection of stormwater public education and outreach printed materials that are used by other communities to see if any of these existing materials would be effective in reaching the target audiences for the priority stormwater pollutants in San Luis Obispo County. The collection included materials from U.S. EPA, IWMA, Caltrans, and Phase I communities that have already been developed and can be used free of charge. The Partners concluded that existing materials can be used effectively. The most popular key message was: ***“You are the solution to stormwater pollution”*** which emphasizes the citizen’s role in stormwater pollution prevention.

**Step 4: Identify the most effective message formats and distribution modes for San Luis Obispo County**

Next the Partners reviewed a compilation of message packaging and distribution options as shown below. Various message formats were compared for effectiveness (reach and influence in the community), cost, availability, ease of development and distribution, and available distribution modes.

**Stormwater Message Packaging and Distribution Options**

Categories	Formats	Effectiveness (Reach & Influence)	Cost	Availability	Ease of New Development/ Distribution	Distribution Modes
<b>Print Materials</b>	Fact Sheets	Low	Low	High Free EPA	Easy	Website Handouts Mailers Postings
	Brochures	Low	Low	High Free EPA	Medium	Website Handouts Mailers
	Flyers	Medium	Low	Low	Easy	Website Handouts Mailers Postings Door to door
	Magazine Articles	Varies	Free	Low	Hard	Magazine circulation Reprints for handouts and

Categories	Formats	Effectiveness (Reach & Influence)	Cost	Availability	Ease of New Development/ Distribution	Distribution Modes
						displays Website
	Newspaper Articles	Varies	Free	Low	Hard	Newspaper circulation Reprints for handouts and displays Website
	Newsletters/ bulletins	Medium	Low	High (many communities and organizations already have these)	Medium	Mailers Website Handouts
	Posters	Varies	Low	Medium Free EPA	Hard	Postings Displays
	Transit bus placards	Low	High	Low	Hard	Drive by
	Billboards	Low	High	Low	Hard	Drive by
	Doorknob hangers	Medium	Low	High Free EPA	Easy	Mailers Door to Door Handouts Website
	Booklets	Low	Low	High Free EPA	Medium	Website Handouts Mailers
	Placemats	Varies	Low	High Free EPA	Easy	Corporate partners (restaurants) Handout at events Classroom presentations Website
	Bookmarks	Medium	Low	High Free EPA	Easy	Website Handouts Mailers Classroom presentations
	Surveys	Low	Low	Medium (samples from other communities)	Medium	Handout at events Mailers Website
	Before and after pollution prevention photo/placard	Varies	Low	High Free EPA	Easy	Displays Classroom education
	Mailers in utility bills	Varies	Low	High	Easy	Direct mail
	Signage	Varies	High	Low	Hard	Drive by/walk by
	Postcards	Low	Low	High	Easy	Mailers Handouts

Categories	Formats	Effectiveness (Reach & Influence)	Cost	Availability	Ease of New Development/ Distribution	Distribution Modes
	Display/poster in public places such as airports, government offices, libraries, school campuses, etc.	Varies	Low	High	Easy	Displays
	Display/poster in businesses	Varies	Low	High	Easy	Displays
<b>Media</b>	<b>Television public service announcement – public networks</b>	High Most Effective	Varies Can be free	Medium	Hard	TV viewership
	Television public service announcement – local cable	Low to medium	Varies Can be free	Low	Hard	Cable TV viewership
	Infomercials	Low	Very high	Low	Hard	Cable TV viewership
	<b>Radio public service announcement</b>	Medium to low	Varies Can be free	Medium	Medium	Radio listeners/computers
	Newspaper advertisements	Medium	High Some local papers may be less	Hard	Hard	Newspaper readership
	Newspaper articles	Medium	Free	Low	Hard	Newspaper readership
	<b>Website and links</b>	Medium	Varies - Less if already site exists	High Many communities already have a site to add on to	Medium	Internet
	Movie theatre slides	Not rated	High	Medium	Hard	Movie theatre viewership
	Media Kits	Varies	Varies depending on content	Varies depending on content	Varies depending on content	Media
	Press releases	Medium	Free	Medium	Medium	Media
	Documentary Video	Varies – depends on distribution medium	High	Low	Hard	Media Presentations Public event & displays

Categories	Formats	Effectiveness (Reach & Influence)	Cost	Availability	Ease of New Development/ Distribution	Distribution Modes
<b>Public Events &amp; Sponsorships</b>	Stormwater displays/booths/ kiosks at local events. See master list of local events	Not rated	Low	High	Easy	Event attendees
	Co-sponsor workshops with partners	Low	Low	High	Easy	Event attendees
	Co-sponsor contests	Not rated	Low	High	Easy	Participants
	Community awards programs	Not rated	Low	High	Easy	Participants
	Community Stormwater Month Designations and promotions	Not rated	Low	High	Easy	Participants
	Adopt-a-Highway	Not rated	Low	High	Easy	Participants
	Adopt-a-Stream	Not rated	Low	High	Easy	Participants
	Adopt-a-Watershed	Not rated	Low	High	Easy	Participants
	Adopt-a-Park	Not rated	Low	High	Easy	Participants
	Community Cleanup Days	Not rated	Low	High	Easy	Participants
	Corporate partnerships	Not rated	Low	High	Easy	Business patronage
	School and college events	Not rated	Low	High	Easy	Students and their families and friends
	Girls Scouts/Boys Scouts	Not rated	Low	High	Easy	Scouts and their families and friends
	Co-sponsorship with Natural History Museums and state and local parks	Not rated	Low	High	Easy	Visitors
SLO County Clean Business Partnerships/Awards	Not rated	Low	High	Easy	General Public	
Demonstration Projects	Not rated	Varies	Low	Hard	Visitors to project	
<b>Classroom education</b>	Enviroscape model	Not rated	\$690 each plus materials	High	Easy	Students Attendees at public presentations and events
	Educational Videos	Not rated	High	Low	Hard	Students

Categories	Formats	Effectiveness (Reach & Influence)	Cost	Availability	Ease of New Development/ Distribution	Distribution Modes
	Classroom presentations	Not rated	Varies	Medium	Medium	Students and their families
	Teacher Resource Kit	Not rated	Varies	Medium	Medium	Students and teachers
	Curriculum from other communities	Not rated	Free to low	High	medium	Students and teachers
	EPA/State curriculum	Not rated	Low	Medium	Medium	Students
	Kid's page/teacher's resource materials on website	Not rated	Low	High	Easy	Students and Teachers General Public
<b>Public Presentations</b>	Speaker's Bureau	Low	Low	Low	Medium	Local Community and professional clubs and associations
	Public Workshops	Low	Low	Medium	Medium	Stakeholder's groups
<b>Promo Giveaways</b>	Frisbees	Not rated	High	Low	Hard	Handouts Classroom presentations
	Refrigerator magnets	Not rated	Medium	Medium Free EPA design	Medium	Mailers Handouts
	Key chains	Not rated	High	Low	Hard	Handouts Presentations Mailers
	Tote bags	Not rated	High	Low	Hard	Handouts Classroom presentations Workshops
	Coffee mugs	Not rated	High	Low	Hard	Handouts
	Pens	Not rated	High	Low	Hard	Handouts
	Pencils	Not rated	Med.	Low	Medium	Handouts Classroom presentations
	Bumper Stickers	Not rated	High	Low	Hard	Handouts
	Children stickers	Not rated	Low	High Free EPA	Easy	Handouts Classroom presentations
	Videos	Not rated	High	Low	Hard	Media distribution Classroom education Presentations Events/kiosks
	T shirts	Not rated	High	Low	Hard	Handouts Contest Prizes
	Buttons	Not rated	Med.	Low	Hard	Handouts Classroom presentations

Categories	Formats	Effectiveness (Reach & Influence)	Cost	Availability	Ease of New Development/ Distribution	Distribution Modes
	Temporary Tattoos	Not rated	Low	Low	Hard	Handouts Classroom presentations
	Coloring Books	Not rated	Low	High Free EPA	Easy	Handouts Website Classroom presentations
	Kid's Activity Books	Not rated	Low	High Free EPA	Easy	Handouts Website Classroom presentations
	Litterbags	Not rated	Med.	Low	Hard	Handouts Mailers

Information Sources:

Caltrans Public Education Research Study: Final Report, June 2003

On Watershed Education, Watershed Protection Techniques 3(3):680-686

Based on the above review, the Key Formats and Distribution modes in order of priority were as follow:

KEY MESSAGE FORMATS	DISTRIBUTION MODES
Public service announcement messages	TV Radio
Print Materials	Public Events Displays in public locations Websites Newsletters Direct mailings
Educational curriculum materials	Distribution through Office of Education Websites School presentations
Promotional giveaways	Public Events School presentations

### Step 5: Prepare the plan including timetables and measurable goals

The following plan was developed in collaboration with the SLO County Partners for Water Quality. Specific implementation timetables are shown in Sections 3 and 4 of the SWMP.

#### Stormwater Public Education and Outreach Program Implementation Work Plan

**Objective:** to distribute educational materials and conduct outreach activities to educate the public about the impacts of stormwater discharge on local water bodies and the steps that can be taken to reduce stormwater pollution. The program will emphasize the importance of the public's role in stormwater pollution prevention.

**Target Pollutant Categories:**

Nutrients/Nitrates/Low Dissolved Oxygen  
 Pathogens/Fecal Coliforms  
 Sediment  
 Toxics (priority organics, oil and grease, pesticides and herbicides, metals)  
 Trash

**Target Audiences:**

**Homeowners** (septic tanks, pets, landscaping, household hazardous wastes and auto maintenance)  
**Construction industry** (contractors, architects, engineers, building associations, developers)  
**Commercial businesses** (auto repair, auto salvage, restaurants, landscaping services)  
**Children and Young Adults**

**Key Messages:** *“You are the solution to stormwater pollution”*  
 Don’t trash San Luis Obispo County

**Key Formats:** Public service announcements  
 Printed materials  
 Educational curriculum materials  
 Promotional giveaways

**Key Distribution Modes:** TV/radio  
 Public Events  
 Displays in public locations  
 Websites  
 School presentations  
 Direct mailings  
 Newsletters

**Program Goals**

Program BMPs	Measurable Goals
Select Stormwater icon, logo, and slogan	Partners concur on icon, logo, and slogan before print deadline
Develop television and radio public service announcements	1 general SWP2 message for TV 1 general SWP2 message for radio

Program BMPs	Measurable Goals
Develop print materials and giveaways for the stormwater educational display booth to be used at public events	Obtain materials for public events: <ul style="list-style-type: none"> <li>▪ Display booth</li> <li>▪ Demonstration model</li> <li>▪ 1 general audience SWP2 brochure</li> <li>▪ 1 homeowners – septic system maintenance and repair</li> <li>▪ 1 homeowners – pet waste management</li> <li>▪ 1 homeowners – landscape &amp; lawn care</li> <li>▪ 1 homeowners – household hazardous waste</li> <li>▪ 1 auto maintenance/oil recycling</li> <li>▪ 1 business SWP2 brochure</li> <li>▪ 1 children’s piece</li> <li>▪ 1 construction brochure</li> <li>▪ 1 or more trash pieces</li> <li>▪ 1 poster</li> <li>▪ 1 giveaway</li> </ul>
Set up SWP2 educational display booth at public events	Set up booth and distribute materials at one public event in each community per year
Develop SWP2 classroom education curriculum materials	1 program for grades 3-6 1 program for grades 7-12
Conduct classroom education presentations	At least 1 school presentation or provide educational material to at least 1 school in each community.
Post SWP2 materials on community websites and provide links	Post electronic versions of print materials listed above and stormwater links on community websites
Provide direct mailings of SPW2 printed materials	Reach at least 50% of the populace in the permit areas using direct mail (utility bill insert) or community newsletters where possible. Note: not all communities have access to this distribution mode.
Provide SWP2 informational displays in public buildings	Place at least one public display in each community

**Step 6: Implement the plan and provide a means to evaluate the program’s effectiveness and revise it as needed**

The program will be reviewed and evaluated on an annual basis and revised as necessary.