

C-6.0 PUBLIC EDUCATION

C-6.1 Introduction

A robust Education Program has been implemented by the Permittees since 2002 built upon a foundation of cooperative Permittee development of programs and materials, implementation at Countywide and city levels, and the validation of its success through the use of opinion surveys and other direct and indirect measures of public knowledge and behavior. The goal of the Education Program is to promote awareness of the condition of Orange County's creeks, rivers, streams and coastal waters and encourage participation in behaviors that are protective of water quality.

C-6.2 Program Background

Public Awareness Surveys conducted in 2003, 2005, 2009 and 2012 (Surveys)¹ indicated incremental positive changes in behavior and awareness; however, the nexus between increased knowledge and adoption of BMPs to improve water quality was less clear. For example, residents know dumping used motor oil in the street, throwing cigarette butts from a car window or overwatering a yard can result in water pollution; however, high levels of awareness did not always translate to better behavior (i.e. acceptance of associated "stormwater safe" behaviors by specific respondents).

An extensive strategic review of Survey results, water quality priorities and Orange County community structure was conducted in 2012. Based on this analysis, the Permittees determined a programmatic shift to focus on behavior change could enhance positive trends. Focusing on adoption of specific behaviors over the short term could better eliminate barriers and enhance motivators to behaviors protective of water quality. The *2012 Strategic Plan (Exhibit 6.1)* concluded that existing outreach efforts should be supplemented by targeted outreach to small, community-based groups utilizing proven Community-Based Social Marketing (CBSM)² techniques to create long term engagement.

CBSM involves four basic steps:

1. Identifying barriers and motivators to an activity;
2. Developing a strategy that utilizes tools to leverage those barriers and motivators in order to affect behavior change;
3. Pilot the strategy; and
4. Evaluate the strategy and refine it for future implementation.

Research shows that CBSM works at the community level when the individual or organization interested in effecting behavior change is directly in contact with those people whose behavior requires change (**Exhibit 6.1**). The goal of CBSM techniques are to walk residents up the scale from unaware of how their actions could contribute to water pollution to awareness of behaviors to engagement in the issue and ultimately,

¹ A full summary of the 2012 Survey results and trends was included in the 2011-12 Unified Annual Report.

² McKenzie-Mohr, Doug & Smith, William (1999). *Fostering sustainable behavior: An introduction to community-based social marketing*. Gabriola Island, B.C.: New Society. (www.CBSM.com)

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participation in behaviors protective of water quality.

Overall, the Education Program will focus on water quality protection best practices on a broad level – the *foundational campaign* – and specific behaviors on a smaller, more community-based level – *action campaigns*. This two-pronged approach will provide the Permittees information on changes in behavior of Orange County residents over time that could help reduce water quality impacts to our creeks, rivers and the Pacific Ocean.

C-6.2.1 Foundational Campaign

A key component of the 2012 *Strategic Plan* was rebranding *Project Pollution Prevention* to more closely relate to water quality. The Permittees selected “H₂OC” to replace *Project Pollution Prevention*, focusing the identity of the Education Program on our primary concern – protection of water resources in Orange County. H₂OC is the identity for the overall Education Program; primarily the *foundational campaign*.

The *foundational campaign* comprises large-scale and/or general pollution prevention outreach efforts, with the goal of building overall awareness of pollution prevention and runoff reduction BMPs. Elements of the *foundational campaign* can be characterized by one or all of the following:

- Use general water quality motivators as the basis of messaging (e.g. leaving an environmental legacy was the primary motivator in the 2012 Survey);
- A need to remain relatively steady over time for tracking or to increase program recognition (e.g. H₂OC Facebook page or calculation of media impressions);
- Use tactics³ focused on promoting general water quality (e.g. Cleanup Day advertisements encouraging participation); and/or
- Use tactics that rely solely on the Surveys to track success (i.e. long-running general messages).

Foundational campaign efforts entail a combination of media and direct outreach methods, including:

- Strategic placement of paid media and tracking of earned media (**Section 6.3.1.1**);
- General community outreach (e.g. speakers’ bureau, workshops, events) (**Section 6.3.1.2**);
- Maintenance of the H₂OC website and materials (**Section 6.3.1.3**);
- Outreach to school-aged children (**Section 6.3.1.4**); and
- Permittee support & coordination (**Section 6.3.1.5**).

Effectiveness of *foundational campaign* elements will be assessed over time through continuation of public awareness surveys. Efforts are assessed annually against program goals and objectives; the primary goal is outreaching to 100% of the Orange County

³ A tactic is defined here as specific interventions that a program will do in order to help reach the objective. Tactics are typically the tools to meet predetermined objectives, or specific numeric and/or measurable goals (e.g. achieve 10 million impressions through both paid and earned media).

audience by achieving a minimum of 10 million impressions through media. Other methods for *foundational campaign* assessment include follow-through from paid media placement, feedback from speakers' bureau presentations, website tracking and pre- and post-quizzes for outreach to school-age children. In addition, *foundational campaign* elements may support *action campaign* elements when needed, and thus be tied into *action campaign* metrics (e.g. obtaining sign-ups for an *action campaign* at an event). These efforts are detailed in **Section 6.3.1**.

C-6.2.2 Action Campaigns

H₂OC has demonstrated increases in community awareness around stormwater issues, in addition to small, yet significant changes in behavior through the use of large-scale information campaigns. This macro-level approach was primarily in response to permit requirements to reach 100% of the Orange County population, achieve 10 million impressions and to document changes in knowledge and behavior in a verifiable and consistent way. Additionally, this approach sought to maximize equity of messaging and resources among both Regional Water Quality Control Board regions – Santa Ana and San Diego – and among 34 cities in 11 watersheds.

The macro-level elements of H₂OC will continue as described in **Section C-6.2.1**; however, in tandem with these *foundational campaign* elements, the Permittees will develop *action campaigns* approximately every two years that will encourage adoption of specific behaviors associated with a pollutant or pollutants of concern. *Action campaigns* will focus on a single discrete action or set of actions, encouraging residents to adopt behaviors associated with a specific pollutant or suite of pollutants of concern.

As described in **Section C-6.2**, *action campaigns* utilize CBSM techniques to simplify messaging, reducing the chance for decision or action paralysis⁴ by inundating residents with too many pollution reduction behaviors to adopt. Through simplification of H₂OC messaging, *action campaigns* focus on one high-impact action. Each *action campaign* focus is determined by assessing the following variables:

- **Identification of key pollutants** – the Permittees examine and prioritize key pollutants based on level of harm they pose to the environment and prevalence in water quality on an annual basis; this process would take the list of pollutants and refine it further to assess whether anthropogenic sources are likely and whether education could impact the presence of these pollutants;
- **Determine return on investment (ROI)** – from the list of prioritized pollutants of concern in the first step, the Permittees assess which behaviors would produce the largest ROI, predicted by assessing the number of people performing that action (i.e. prevalence) and the likelihood that those people would change that action. This step balances ease of performing a behavior (participation in which is determined by the Surveys) and the potential environmental impact; and
- **Consideration of external opportunities and needs** – the final step considers

⁴ This phenomenon was described in the “Jam Study” – Iyengar and Lepper (2000); this study is referenced and described further in Section 3.2.1 of Exhibit 6.1.

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opportunities to leverage campaign messages and tactics with existing programs and/or messaging elsewhere in the Orange County Stormwater Program or by other agencies or groups.

Evaluation of each *action campaign* is built into the structure of the campaign itself, allowing the Permittees to conduct status checks and fine-tune efforts during the campaign as well as assess the campaign's overall success upon conclusion of efforts. On an annual basis, H₂OC will establish baseline measures and follow-up assessments; outcomes associated with these measures indicate engagement and/or adoption of specific BMPs in the short term. Implementation of this assessment process is further described in **Section C-6.3.2** as it applies to the "Overwatering" *action campaign* for 2012-2014.

OVERWATERING ACTION CAMPAIGN

During the reporting period, the Permittees selected "overwatering" as the focus of the first *action campaign*. Unlike other activities or behaviors, overwatering can lead to several types of pollution through creation of runoff and mobilization of some pollutants. From the 2012 Survey, it was clear that though overwatering is a pervasive issue most residents do not see a connection to their own watering habits. Sixty-seven percent (67%) of residents surveyed use sprinklers; however, few noticed wet pavement or pooling after irrigation. Additionally, almost half of respondents noted that higher water rates or fines would motivate them to adjust their sprinklers, suggesting that barriers to action might include a lack of knowledge concerning irrigation controllers and a lack of financial incentive to change watering habits.

The ultimate goal of the overwatering campaign is to build residential engagement with H₂OC by encouraging residents to sign up for program messaging (i.e. tips to reduce overwatering) and to commit to making small changes to their irrigation habits or landscape to reduce runoff. Through this engagement, H₂OC will track small changes in behavior of program participants to adopt practices such as reducing sprinkler run time, installing smart timers or shutting off irrigation systems immediately prior to a rain event.

In addition to building engagement, the Permittees also set the goal of demonstrating that the audience took an action to practice BMPs promoted by the *action campaign*. The objectives for the campaign (which spans the 2012-13 and 2013-14 reporting periods) are to a) recruit 300 campaign followers through obtaining email information (2,000 total followers over the next five years through action campaigns) and b) demonstrate that 100 people practiced a BMP⁵. Though the latter is a lofty goal, the Permittees will assess progress in attaining this goal after a year of implementation to best determine next steps for year two. Overwatering campaign assessment to date is described in **Section C-6.3.2**.

⁵ The Strategic Plan outlined objectives for year one of the action campaign; however, demonstrating practice of BMPs was in part tied to incentives to join the program effort. Due to existing policy concerning provision of incentives, the Permittees are utilizing other methods to encourage participation such as creating a norm (i.e. showing residents who have adopted BMPs as an example) until a process to provide incentives is established.

C-6.3 Accomplishments

H₂OC serves as the umbrella campaign that supports and reinforces local efforts to address their specific needs, issues and requirements. This synergistic approach is designed to ensure that *H₂OC* presents a consistent, comprehensive and coordinated approach that increases the likelihood of positively influencing public knowledge and behavior. In addition, *H₂OC* leverages resources to conduct analyses of outreach success as part of the iterative development process. Accomplishments of the *foundational* and *action campaign* elements during the 2012-13 reporting year are detailed below.

C-6.3.1 Foundational Campaign

C-6.3.1.1 Paid & Earned Media

PAID MEDIA

Paid media is used to achieve a minimum of 10 million impressions and to provide information to the public more generally on behaviors and/or pollutants of concern. In addition to paid media purchased by the Permittees, *H₂OC* also successfully leveraged an existing partnership with the Orange County Health Care Agency – Used Oil (OC HCA) to include their extensive advertising on proper disposal of used oil and oil filters. Based on the 2012 Survey results, Latino men are more likely to change their motor oil at home; OC HCA places advertisements in both English and Spanish to best reach this audience. For more information on collection of used motor oil and oil filters through OC HCA, please see **Section C-5.2.3** and **Table C-5.11** of this report.

In addition to OC HCA bus and billboard advertisements, targeted advertisements were placed in various media outlets during the reporting period to encourage participation in Cleanup Day 2012 and Earth Day 2013. Media outlets in which paid media advertisements were placed included print (OC Register weekly papers) and online. Encouraging volunteer participation in cleanup and/or Earth Day events both increases awareness of pollution and involves the public in BMPs to prevent further pollution.

In order to address residential activities or behaviors associated with bacteria entering water ways, the Permittees also advertised proper pet waste disposal in the program flyer for the Orange County Police Canine Association (OCPCA) event on October 20, 2012. Each year, approximately 6,000 Orange County residents, OCPCA supporters and dog enthusiasts attend from throughout Orange County. The advertisement, “Poollution” encouraged residents in this target audience to pick up pet waste and prevent bacteria from entering our waterways.

Impressions for all paid advertising total **3,062,230** for the 2012-13 reporting period (**Table C-6.1**) and **18,751,153** for OC HCA advertising (**Table C-6.2**).

EARNED MEDIA

Earned media is generally defined as any unpaid publicity either through mainstream

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outlets like television, radio, print or social media outlets (e.g. blogs, Facebook, Twitter, and YouTube). In this case, earned media includes any unpaid news stories regarding water pollution prevention issues that appear as content in the various forms of media.

As discussed in the 2011-12 Unified Annual Report, a 2012 Study by the Nielsen rating agency⁶ determined that ninety-two percent (92%) of consumers worldwide say that they trust earned media above all other forms of advertising and that trust in paid advertising has declined by approximately twenty-five percent (25%) since 1990. If information about water pollution prevention is within the content of the media programming, it is far more likely to be considered by the audience than a paid advertisement. As a result, *H₂OC* tracked earned media impressions throughout the 2012-13 reporting period; these impressions are reflected in the total impressions garnered by the program (**Table C-6.8**). Impressions for earned media total **18,405,509** for the 2012-13 reporting period (**Table C-6.3**).

Earned media impressions are calculated using similar methodology to impressions garnered through advertising; however earned media impressions are high in quality because they are content driven. The Permittees will continue to dedicate resources to tracking earned media on stormwater, pollution prevention, water quality, pollutants of concern, low impact development, etc. during the 2013-14 reporting period.

SUMMARY OF *H₂OC* MEDIA IMPRESSIONS

In order to be effective, a media outreach campaign must reach a majority of the selected target groups with sufficient frequency to measurably increase their knowledge and measurably change their behavior. **Table C-6.8** and **Figure C-6.1** show that the countywide paid and earned media and OC HCA advertising created **40,522,519 impressions** during the 2012-13 reporting period.

Headline Indicator – Number of Impressions: The *H₂OC* media plan created over 40 million impressions during the 2012-13 reporting period. This is four times the Fourth Term Permit requirement to deliver a minimum of 10 million impressions within the Santa Ana Regional Board Area through various forms of media.

SUMMARY OF EARNED AND PAID MEDIA

Based on market research stressing the value of earned media, the Permittees will seek to achieve at least 50% of media impressions from earned media during the 2013-14 reporting year.

2013-14 Program Focus:

- Achieve at least 50% of impressions through earned media to meet impression

⁶ 2012 Nielsen article, “Global Consumers’ Trust in ‘Earned’ Advertising Grows in Importance” based on 2012 Nielsen study of consumer ‘trust’ in earned and paid media sources (<http://www.nielsen.com/us/en/insights/press-room/2012/nielsen-global-consumers-trust-in-earned-advertising-grows.html>).

benchmarks and record public exposure to messaging in support of Program goals.

C-6.3.1.2 Community Outreach

Community-based outreach has been a fixture of *H₂OC* since 2002, including general outreach to residents attending presentations (e.g. HOA meetings) and businesses through targeted outreach on proper BMP implementation (e.g. food service establishment (FSE) and automotive facility outreach). Community outreach, formerly “non-media,” included implementation of a speakers’ bureau, workshops and participation in events during the reporting period.

SPEAKERS’ BUREAU PRESENTATIONS

A speakers’ bureau was developed for *H₂OC* in 2009 and was reinvigorated during the 2012-13 reporting year. On behalf of the Permittees, the Principal Permittee distributed requests for presentations to local groups and/or presented on behalf of the Permittees. *H₂OC* materials such as Quad newsletters, brochures and other information were provided to attendees and for posting on organization websites, when interested. Speakers’ bureau presentations garnered **357 impressions** during the reporting period for *H₂OC*. Impressions garnered from presentations provided by city staff are included in their respective jurisdictional PEAs.

WORKSHOPS

H₂OC outreach to the business community and general public included workshops during the reporting period. Coordination between *H₂OC* and industry professionals garnered direct access to business owners and operators in Orange County. Through a partnership with UCCE Cooperative Extension, *H₂OC* was able to directly outreach to plant nursery owners and operators about pesticide use and to members of the landscape industry.

In following with challenges during the 2011-12 reporting year, the Permittees determined that holding a workshop based on both MS4 Permit and the Industrial General Permit (IGP) might draw more interest. Adoption of a new IGP was expected during the 2012-13 reporting period; however adoption has been delayed until late 2013 or early 2014. For the 2013-14 reporting period, the Permittees will examine inspection records and other resources to focus workshop curriculum based on specific business activities and the final IGP.

Workshops for the mobile service industry were more successful and had greater participation when coordinated through a sector-specific organization (e.g. 2010-11 workshop with the Carpet & Fabricare Institute (CFI)). As a result, the Permittees began coordinating with the Power Washers of North America (PWNA) in early 2013. The goal is to produce a curriculum with PWNA leadership that addresses concerns/questions of industry professionals and to advertise the workshop to PWNA members. A workshop host has been selected through PWNA and a workshop is planned for late 2013. Though

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coordination of a power washer mobile business workshop extended beyond the reporting period, it is expected the workshop will draw increased participation by industry professionals.

Permittees were encouraged to promote and participate in region-wide workshops on the following topics for public and business sectors:

| Sector Reached | Workshop | Date |
|--|---|--------------------|
| Manufacturing Facilities | * | N/A |
| Mobile Service Industry | ** | N/A |
| Commercial, Distribution and Retail Sales Industry | Southern California CAPCA Chapter & UCCE Protecting Water Resources on Nursery Sites | September 27, 2012 |
| Residential/Commercial Landscape Construction and Services Industry | University of California-Cooperative Extension Landscape Open House - Held with Project Pollution Prevention and for Landscapers, Residents and Landscape Product Manufacturers | September 29, 2012 |
| Residential and Commercial Construction Industry | Orange County Stormwater Program Seminar: Lessons Learned in MS4 Permit Implementation in Orange County and Program Opportunities Moving Forward - Held Cooperatively with OC BIA | October 2, 2012 |
| Residential and Community Activities | University of California-Cooperative Extension Landscape Open House - Held with Project Pollution Prevention and for Landscapers, Residents and Landscape Product Manufacturers | September 29, 2012 |

*A workshop under development for late summer/early fall, 2013 for manufacturing facilities on the final Industrial General Permit released on July 19, 2013 has been postponed until adoption of the final order to address the most current permit requirements and BMPs.

**A workshop coordinated with the Power Washers of North America is scheduled for late 2013 depending upon availability of workshop host.

OUTREACH EVENTS

The following is a list of outreach events in which the Program participated during the 2012-13 reporting period supplemental to individual Permittee event participation:

- September 15, 2012: Cleanup Day 2012
- September 16, 2012: Laguna Beach County Water District Smart Scape Event
- March 13, 2013: California Landscape Contractors Association (CLCA) at DM Color Nursery
- March 27-28, 2013: Children’s Water Education Festival
- April 18, 2013: City of San Juan Capistrano Earth Day Event

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- April 26, 2013: City of Mission Viejo Environmental Fair

Through these events approximately **1,280 event participants** visited the *H₂OC* booth and received stormwater pollution prevention information. Impressions from in-person events, though much lower in quantity than advertising impressions, are of higher quality; booth visitors are able to ask questions, speak to Program representatives and take educational material home to show others.

CORPORATE ENVIRONMENTAL MANAGER OUTREACH

The Permittees conducted outreach to Corporate Environmental Managers during the 2011-12 permit term, building a list of 71 businesses in coordination with the Permittees. Most businesses contacted did not have an Environmental Manager or an environmental department within their organization; however, follow ups were made with contacts provided where possible. The Permittees will conduct a second round of outreach during the 2013-14 reporting year as a follow up to the efforts undertaken in 2011-12.

Table C-6.4 shows that community outreach created **2,317 impressions** and event participation created **1,280 impressions** in the 2012-13 reporting period.

SUMMARY OF COMMUNITY OUTREACH

Since 2009, *H₂OC* has collaborated with other agencies, businesses and organizations to host workshops on six public/business sectors outlined in the Santa Ana Region MS4 Permit. The workshops co-hosted with or hosted by a trusted source for information (e.g. CFI representatives or UC Cooperative Extension) have been better attended than those hosted by the Permittees only. In order to encourage greater attendance at workshops, the Permittees have endeavored to find opportunities to collaborate with trade organizations, community group leaders and representatives of educational institutions on workshop curriculum content and advertisement. Regarding workshops to manufacturing facilities and mobile businesses in particular, coordination with trade organizations has been fruitful; however, the process of workshop development takes more time to coordinate.

Participation in events allows the Permittees to have more direct contact with residents and answer questions regarding behaviors protective of water quality. Events may target a specific audience (e.g. landscape contractors) where targeted material is warranted (e.g. Homeowners' Guide to Sustainable Water Use) or they may have no targeted audience (e.g. Earth Day). Outreach at events integrates goals of both the *foundational* and *action campaigns*; events present opportunities to engage residents in *action campaigns*, especially when either targeted audience and messaging overlap or when events are general in nature. The Permittees will seek to obtain a minimum of 20% of total sign-ups for *action campaign* correspondence at events.

2013-14 Program Focus:

- Provide a workshop to manufacturing facilities prioritized based upon inspection results; workshop would focus on proper stormwater BMPs and

requirements in the State Industrial General Permit expected for adoption in early 2014.

- Supplement speakers' bureau presentations and materials with *action campaign* materials and encourage residents and business representatives to participate in recommended BMPs and sign-up for *H₂OC* correspondence.
- Encourage residents to sign-up for action campaign communication at events and seek to obtain at least 20% of *action campaign* sign-ups at events.
- Conduct follow-up outreach to Corporate Environmental Managers during the 2013-14 reporting period.

C-6.3.1.3 Outreach Materials & *H₂OC* Website

MATERIALS

The Principal Permittee, in collaboration with and under the direction of the NPDES Public Education Sub-Committee (Sub-Committee) annually review existing and develop new countywide public and business education materials that effectively communicate the message of pollution prevention. Though several materials focus on specific pollutants of concern, stormwater topics (e.g. LID) or target specific audiences, at a minimum, all of the program materials:

- Explain the difference between the storm drain and sanitary sewer system, and emphasize that water in the storm drain does not receive treatment before entering our waterways;
- Focus on specific pollution-causing behaviors and address them directly to increase the likelihood of changing those behaviors and reducing pollution;
- Emphasize the relevant impact of stormwater pollution to the target audience;
- Include a positive alternative to pollution-causing behaviors;
- Tailor the personality, focus and depth of program messages appropriately for each audience and venue; and
- Include the *H₂OC* moniker.

H₂OC actively maintains an extensive library of brochures, BMP factsheets, posters, BMP stickers (restaurant and automotive maintenance) and other materials which provides resources for Permittee outreach to target audiences within their jurisdictions. Each year, the Sub-committee determines if new materials are needed to address behaviors based on interactions with the public during inspections or pollution response, and at public counters. Materials are made available to the public through events, city counters, presentations and online at www.H2OC.org.

As discussed in Section C-6.2.1, the program underwent a strategic re-branding of *Project Pollution Prevention* during the 2012-13 reporting year, including changing the program name to *H₂OC* and the overall look and feel of materials to reflect the new logo graphics and colors. The program website link also changed from www.ocwatersheds.com/publiced to H2OC.org, directly associating the program message with the website.

Additionally, the 2012 Survey indicated that a strong majority of residents were “very” or “somewhat” concerned with preserving the environment for their children or grandchildren (88%), stressing the importance of leaving an environmental legacy for the next generation. *H₂OC* created a new advertisement and graphics in support of legacy messaging (**Figure C-6.2**) which has become an important part of the *foundational campaign*.

For a complete list of materials developed by *H₂OC* available to Permittees and other organizations, please see **Table C-6.5** of this report.

H₂OC WEBSITE

Residents increasingly seek information regarding pollution prevention from the internet. As a result, the Permittees continue to maintain a website dedicated to public education; the site includes informational pages, a Kids’ Corner, brochures, video clips and options to sign up for regular program updates.

The website - H2OC.org - garnered a total of **5,366 page views** during the reporting period and is included in **Table C-6.8**.

SUMMARY OF OUTREACH MATERIALS & H₂OC WEBSITE

Development and provision of educational materials is an important but static part of the program; however, maintaining an informative website that encourages participation in BMPs protective of water quality has become increasingly important. The Principal Permittee will examine opportunities in the 2013-14 reporting year to make the website more user friendly by clearly stating the objectives of the program, directing residents and businesses to resource pages and including links to action campaign microsites. The Permittees will include the H2OC.org logo on educational materials and seek to increase page views by a minimum of 10% per year.

2013-14 Program Focus:

- Reformat H2OC.org website to be more user friendly and increase page views on website pages by a minimum of 10% per year.

C-6.3.1.4 Outreach to School-age Children

Educating school children about stormwater and urban runoff pollution is critical to the long-term success of the Orange County Stormwater Program. Information provided to students in school is often brought into the home and shared with parents and other relatives. The 2012 Survey indicated that forty-six percent (46%) of adults with school-aged children at home received information about water pollution prevention.

Children are also excellent watchdogs when it comes to their parents’ activities, and they are likely to try to correct a parent’s polluting behavior. In the 2012 Survey, parents of

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students who provided them with water pollution prevention information were more likely than those without kids to engage in the seven “stormwater safe” behaviors.

H₂OC continued to implement a school outreach program throughout the 2012-13 reporting year; the programs implemented and/or supported by *H₂OC* are detailed below and in **Table C-6.6**.

DISCOVERY SCIENCE CENTER/MUNICIPAL WATER DISTRICT OF ORANGE COUNTY (MWDOC)

In 2012-2013, The Orange County Stormwater Program provided **9,803 fifth grade students** a workbook produced in coordination between *H₂OC* and the Discovery Science Center in 2009. The workbook meets California Science Content Standards and focuses on water pollution prevention. The workbooks were provided to students in support of the Municipal Water District of Orange County’s (MWDOC) program at Discovery Science Center to both outreach to students and bolster the existing relationship with MWDOC.

In addition to the workbooks, the Orange County Stormwater Program has an interactive water pollution prevention game on its website in the “Kid’s Corner” section. The website is promoted to the school children and teachers on the workbook provided at the Discovery Science Center.

PACIFIC MARINE MAMMAL CENTER (PMMC)

The Pacific Marine Mammal Center initiated the Pinniped Pollution Project program in 2009⁷, focused on watershed education and pollution prevention. The curriculum includes pollutant transport and the effects of trash and other pollutants on the marine environment and its inhabitants. The program was initially developed in partnership with the *H₂OC*, including curriculum content and the provision of maps and other materials.

The Pacific Marine Mammal Center is located in Laguna Beach, but serves students from throughout the County. During the 2012-2013 reporting year, the Pinniped Pollution Project program was presented to **3,115** Orange County students.

OC DEPARTMENT OF EDUCATION- INSIDE THE OUTDOORS: DRIP-DROP TRAVELING SCIENTIST

H₂OC supported the Orange County Department of Education (OC DOE) – Inside the Outdoors Drip Drop Traveling Scientist Program during the reporting period. This 60-minute presentation and mini-lab reviews the water cycle with students as they experiment with an aquifer, learn how pollution enters the watershed, and develop ways to conserve water in their neighborhoods.

During the 2012-2013 reporting year, the Drip-Drop Traveling Scientist Program was presented to **435** Orange County students from the cities of Garden Grove, Orange, Rancho Santa Margarita and Costa Mesa from May 2013 – June 2013.

CHAPMAN UNIVERSITY OC WATERSHED EDUCATION AMBASSADOR PROGRAM (OC WEAP)

⁷ Impressions garnered through the PMMC Pinniped Pollution Project were not included in the 2009-10 and 2010-11 reporting years. The 2011-12 report corrected this oversight.

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The Orange County Stormwater Program partnered with Chapman University to develop and implement the OC Watershed Education Ambassador Program (OC WEAP) to provide water pollution prevention and watershed outreach to fifth grade elementary school students. Through this pilot program, Principal Permittee staff developed a curriculum incorporating the California Science Content Standards for fifth grade and trained Chapman University students on presenting this information in a fun and informative way.

Chapman University students then made the curriculum their own by putting together unique presentations and materials for students. The inaugural presentation on May 1, 2013 at Linda Vista Elementary School in Orange was a great success; four Chapman University students presented the watershed curriculum to **77 fifth graders**.

Table C-6.6 shows the School Plan created **13,430 impressions** for the 2012-13 reporting year.

SUMMARY OF OUTREACH TO SCHOOL-AGE CHILDREN

It is the goal of *H₂OC* and the Public Education Sub-committee to continue to increase support of watershed education and pollution prevention school programs in Orange County. Support comes in two primary forms – through collaboration with an organization to design and implement a school program or by supporting existing school programs that meet necessary standards and permit requirements (e.g. outreach about pollution prevention BMPs). Existing programs may have metrics for tracking student learning or they may track participation only; the Permittees will work through existing partnerships to build metrics into school outreach programs wherever possible (e.g. pre-/post-tests).

2013-14 Program Focus:

- Expand support of Pacific Marine Mammal Center Pinniped Pollution Project watershed education program.
- Expand support of MWDOC water education programs and Discovery Science Center through workbook modifications and updates.
- Coordinate with school outreach organizations to incorporate metrics in existing outreach programs to gauge gains in student knowledge as a result of watershed/pollution prevention program messaging and materials.
- Institute a form of metrics for each type of school outreach (e.g. pre-/post-tests for presentation-based outreach).

C-6.3.1.5 Permittee Support & Coordination

H₂OC is annually revised per permit requirements and assessment results under the aegis of the Public Education Sub-Committee (Sub-committee). The Sub-Committee comprises Permittees and educational groups in Orange County and provides direction and oversight on plan development and implementation. The goal of the Sub-Committee is to provide regional consistency and oversight for the stormwater public education efforts. The Sub-Committee met monthly during the

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2012-13 reporting period.

Please reference **Section C-2.3.1** – Management Framework for a detailed discussion of the Committee structure.

POLLUTION HOTLINE

The County as Principal Permittee also manages the countywide 24-hour bilingual water pollution reporting hotline number, 1-877-89SPILL, which handles water pollution complaints as well as inquiries about stormwater and public education materials. During the reporting period the hotline received 74 water pollution calls. Water pollution complaints are also received through the County web site which received 12 reports (See **Section C-10.2** of this report) for a summary of pollution response activities.

Summary of Public Education Program Impressions

Permittee impressions individually total **93,902,251** during the 2012-2013 reporting period (see **Table C-6.7**). **Table C-6.8** shows that all impressions created by both the countywide public education program and jurisdictional programs total **134,445,883** during the 2012-2013 reporting period.

Headline Measure - Public Education Program Impressions

Headline Indicator – Number of Impressions: *The public education program created over 134 million impressions during the 2012-13 reporting period. One of the goals of the public education program is to target 100% of the residents of Orange County. Orange County has a population of approximately 3 million people. It is estimated that in order to be successful the campaign should make approximately 12 million impressions or approximately 4 per person in the County. The total impressions earned greatly exceed the program goal.*

C-6.3.2 Action Campaign

As described in **Section C-6.2.2** the Permittees began development and implementation of the first *action campaign* focused on curbing overwatering during the 2012-13 reporting period. *Overwatering action campaign* efforts are focused on engaging residents in the campaign, determining a baseline of overwatering behavior through a phone survey, and demonstrating that the audience started taking actions to practice BMPs. During the 2012-13 reporting period these efforts included:

- Conducting a baseline phone survey (**Section C-6.3.2.1**);
- Collaboration with water agencies (Overwatering Sub-committee) (**Section C-6.3.2.2**);
- Development and maintenance of an overwateringisout.org website (**Section C-6.3.2.3**); and
- Encouraging engagement and tracking sign-ups (**Section C-6.3.2.4**).

C-6.3.2.1 Overwatering Baseline Phone Survey

An essential component of the CBSM outreach technique is to establish a baseline for a behavior against which the outreach program will be assessed to document localized behavior change as a result of the campaign. The Permittees conducted a baseline phone survey in April 2013 utilizing an outside firm to obtain baseline information from Orange County residents about irrigation practices and overwatering behaviors. A total of 505 Orange County residents (50% male, 50% female) completed the survey and met eligibility criteria (18 years of age, a resident of Orange County, ability to complete the survey in English or Spanish).

The key findings of the baseline survey were described at length in a report completed in July 2013 – *Overwatering Campaign Baseline Phone Survey Summary (Exhibit 6.2)*, the conclusions of which included the following:

- The majority of respondents (78%) used automatic (61%) or manual (17%) sprinkler systems as the primary method to water outdoor lawns or gardens;
- Regardless of watering method, the average watering duration was approximately 15 minutes per incidence and 34 minutes per week;
- Most participants (77%) watered 1-4 days/week and frequency appeared to be inversely related to watering duration;
- A majority (77%) of respondents with sprinkler systems do their own maintenance and approximately half (50%) had adjusted their sprinklers in the few months preceding the survey;
- Despite having the confidence and ability to adjust sprinklers, a quarter of respondents (26%) did not do so prior to the latest rain event;
- Online outreach will be effective for all age groups and home improvement stores are popular sources of information on lawn care and irrigation techniques for older residents;
- Approximately a third (36%) of respondents noticed water runoff on hardscapes at least half of the time their irrigation system ran and an additional forty percent (40%) stated they noticed runoff “rarely;”
- Among individuals who noticed runoff onto hardscapes, approximately half noticed excess water running onto the sidewalk or street;
- Over half of the sample respondents were at least somewhat willing to reduce watering duration; and
- Reported perceptions of watering efficiency were inversely related to watering duration per week – the more time spent watering, the less efficient respondents rated themselves.

Baseline survey results subsequently guided development of messaging on the overwateringisout.org website and materials encouraging program sign-ups. Additionally, the Permittees will conduct a follow-up survey at the end of the *Overwatering action campaign*, comparing results against those of the baseline survey.

C-6.3.2.2 Collaboration with Water Agencies

Overwatering is a topic of interest from both water quality and water use efficiency

perspectives. Throughout development of the *Overwatering action campaign*, the Permittees have engaged the Municipal Water District of Orange County (MWDOC) and their member agencies to develop messaging, provide a central location for information about runoff reduction, proper irrigation techniques and rebates (overwatering.org) and to partner in spreading awareness of the program.

The Permittees coordinated with MWDOC to form an Overwatering Sub-committee of representatives from the MWDOC Water Use Efficiency Coordinators Workgroup to advise development of program messaging. Through this process, the Overwatering Sub-committee completed a survey ranking both ease of implementation and impact of specific BMPs (e.g. reducing each irrigation cycle by 1-3 minutes or using a layer of mulch around trees and plants). Based on this analysis, several behaviors arose for consideration in messaging, categorized by habits, activities that would require knowledge gain and change, upgrading lawn equipment and landscape changes. The overall behaviors selected for both ease of implementation and impact to water quality (i.e. reduction of runoff) included:

- Not watering when it rains;
- Reduce watering during the winter (water once every 3 days in summer, water only once every 5 days in winter) and overall from 5-7 days/week to 1-2 days/week;
- Use automatic shutoff nozzles on a hose;
- Adjust sprinkler distribution area to minimize contact with impervious areas;
- Eliminate leaks, overspray and broken sprinkler heads; and
- Replace high water-using plants with native, drought-resistant plants.

The behaviors selected formed the basis for tips distributed to residents signed up to receive *Overwatering action campaign* emails. The process for entering, tracking and distributing information to residents is described in **Section C-6.3.2.4**.

C-6.3.2.3 Overwatering Website

In addition to reformatting the public education program website to be both reflective of the change in program name and graphics, the Permittees built a microsite specifically for the *Overwatering action campaign* - overwateringisout.org. This website serves three main purposes; it is a platform for residents to sign-up to receive program messages and tips, as a “one stop shop” for both water use efficiency and runoff reduction information and as a forum for residents to provide feedback and see residents who have already implemented BMPs successfully. The Permittees will also cross-link to and from other websites (i.e. water district web pages) and use search engine optimization techniques to ensure keywords on the website are optimized to drive search traffic to the site.

Incentives are important to draw people to the website; the Permittees have included many links to rebate programs through the water districts and highlighted the opportunity to name the Overwatering program’s “garden gnome” character through advertisements (**Figure C-6.3**). Website page views and unique visitors are tracked and will be reported in the 2013-14 Annual Report.

C-6.3.2.4 Encouraging Engagement & Tracking Sign-ups

Through tracking software, *H₂OC* is able to track sign-ups through the Overwatering action campaign and *H₂OC* websites and from events. Additionally, *H₂OC* built in tracking of residents over time to provide the Permittees the ability to follow up with individuals on adoption of BMPs. An extensive email distribution system has been developed to distribute tailored correspondence based on reported watering efficiency; residents who report high levels of efficiency will be encouraged to adopt more intensive BMPs versus a resident who has reported not being efficient. Email correspondences will be distributed to residents as the “opt-in” to the program and on a regular basis to those already signed-up through the website and events throughout the 2013-14 reporting year.

SUMMARY OF OVERWATERING ACTION CAMPAIGN

The *Overwatering action campaign* has metrics built into the fabric of the campaign. Principally, the Permittees will seek to demonstrate that the audience took an action to practice BMPs that would result in reduction of runoff and pollutant transport. As noted previously, the objectives for the campaign are to a) recruit 300 campaign followers through obtaining email information and b) demonstrate that 100 people practiced a BMP. The Permittees will assess progress in attaining this goal after a year of implementation to best determine next steps for year two.

2013-14 Program Focus:

- Encourage residents to “opt-in” to the *Overwatering action campaign* and provide baseline information about watering efficiency; track sign-ups throughout the campaign.
- Recruit a minimum of 300 campaign followers through obtaining email addresses.
- Demonstrate that 100 people have practiced a BMP through the *Overwatering action campaign*.

C-6.4 Assessment

The principal means of both evaluating the effectiveness of *H₂OC* and informing the ongoing development of the campaign is the use of scientific telephone public opinion surveys. In May 2012, the Program conducted a fourth public opinion survey (2012 Survey) utilizing some questions from across the previous three surveys to show patterns in knowledge and behavior over time, and introduced new questions to target specific behaviors, potential motivators or barriers to those behaviors and involvement of residents within their community. Specifically, questions were added to identify: a) participation in behaviors such as pesticide and fertilizer use, landscaping/gardening, overwatering and automotive maintenance/washing; b) involvement in community groups such as hobby, professional, faith, environmental or school-based organizations; and c) motivators or barriers to participating in “stormwater safe” activities (e.g. washing a car at home versus at a commercial car wash). A full summary of 2012 Survey results was included in the

2011-12 Unified Annual Report.

Annual analyses of outreach efforts are summarized in each sub-section of this report to link directly to program foci for the 2013-14 reporting year. In addition to the activities and assessment in the summary sections, the Permittees also assessed advertising effectiveness and established assessment methodologies for the *Overwatering action campaign*. These activities are described below.

C-6.4.1 Foundational Campaign

H₂OC advertising efforts center on encouraging participation in Cleanup Day and Earth Day events. In keeping with promotion of behaviors directly related to pollutant removal (i.e. picking up trash), the Permittees placed Cleanup Day advertisements through Google AdWords in September 2012. Per the commitment in the 2011-12 Annual Report to assess the effectiveness of “click-through” online advertising, the Permittees also placed Cleanup Day advertising in the OC Register weekly papers as a means of comparing the effectiveness of online versus print advertising. The Google advertisement directly linked to a page on the www.ocwatersheds.com website (www.ocwatersheds.com/googlead), while the OC Register advertisement included a different link (www.ocwatersheds.com/volunteer) which re-directed traffic to the same page.

By utilizing website tracking tools, *H₂OC* was able to compare the effectiveness of online advertising against print media. The Google AdWords advertisement resulted in 355 click throughs and 404 total page views; visitors spent an average time of three and a half minutes on the webpage. The OC Register weekly print advertisements resulted in 87 page views as a direct result of the advertisement. Overall, the results indicated that click-through advertising was very successful in capturing residents with an interest in volunteering. The program will continue to utilize click-through forms of online media to encourage residents to visit both the *H₂OC* and *Overwatering* webpages as a result of this analysis.

C-6.4.1 Action Campaign

The primary assessment of the *action campaign* to date was the baseline phone survey described in **Section C-6.3.2.1**. In addition to the baseline phone survey, the Permittees will also assess the action campaign success against both a final phone survey and non-program participants in 2014. A control group which will have no interaction with the *Overwatering action campaign* will provide a comparison of behavioral differences between those exposed to campaign messages and those that were not. These efforts will be described in detail in future Annual Reports.

TRACKING PARTICIPATION IN OVERWATERING EFFORTS

Throughout the *Overwatering action campaign*, the Permittees will also track sign-ups by jurisdiction to identify locations for increased outreach where possible. Further, one of the primary goals of the *action campaigns* is to document that actions were taken by residents who have signed up to receive program correspondence and tips. The Permittees will

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follow up with residents through the website to document BMP adoption and to promote behavior change by providing examples of people “doing the right thing.” The results of these efforts will be described in the 2013-14 Annual Report.

MWDOC Surveys & Overwateringisout.org

The Municipal Water District of Orange County conducted a public awareness survey in October 2011 targeting consumer willingness to adjust behaviors to use water more efficiently inside and outside the home. Results from this survey guided the Overwatering Sub-committee in development of messaging as described in **Section C-6.3.2.2**.

A follow up survey was conducted by MWDOC in September 2013 which will provide insight into the most efficient ways to cross-pollinate messaging between water purveyors and *H₂OC* through the overwateringisout.org website effort throughout the *action campaign*.

C-6.5 Summary

H₂OC successfully achieved and exceeded the goal of 12 million impressions (4 times the Orange County population) and met compliance with the Santa Ana Region requirement to achieve a minimum of 10 million impressions through media. *H₂OC* will continue to implement the countywide effort and will robustly validate its success through the use of regular *action campaign* tracking metrics in addition to large-scale public awareness surveys.

Table C-6.1: Paid Media Advertising

| Media Type | Media Outlet | Advertisement Topic | Run Date(s) | Impressions | |
|---|---|--|------------------|------------------|----------------|
| | | | | SAR | SDR |
| Print | OC Register Weekly Papers | Encourage Participation in Events for Earth Day 2013 | April 2013 | 712,330 | 178,082 |
| Print | OCPCA Event Program | Proper Disposal of Pet Waste | October 20, 2012 | 4,800 | 1,200 |
| Online | Google Adword | Encourage Participation in Events for Cleanup Day 2012 | September 2012 | 613,366 | 153,342 |
| Print | OC Register Weekly Papers and Daily Circulation | Encourage Participation in Events for Cleanup Day 2012 | September 2012 | 1,119,288 | 279,822 |
| TOTAL | | | | 2,449,784 | 612,446 |
| <p>Impressions for print media are based on factors such as attendance numbers, readership, and newsstand numbers provided by the suppliers of advertising based on scientific market research. The newspaper industry standard for determining readership is generally 2.5 to 3.5 times circulation; based on the theory that more than one person reads an individual issue. When specific readership numbers are not provided, a conservative estimate of 2.5 times circulation has been used. Impressions for the OCPCA event program did not include a multiplier as all family members were likely in attendance and would receive their own. For online and regional advertising division between regions is divided between regions by 80% Santa Ana Region and 20% San Diego Region based on population.</p> | | | | | |

Table C-6.2: OC HCA Used Oil Advertising

| Type of Bus Advertisement | Impressions | |
|--|-------------------|------------------|
| | SAR | SDR |
| Billboard* | 1,775,354 | 443,838 |
| OCTA Bus | 4,690,500 | N/A** |
| Bus Shelters | 8,805,189 | 3,036,272 |
| TOTAL | 15,271,043 | 3,480,110 |
| <p>*Billboard was located on the Garden Grove Freeway (CA-22) before Harbor; however, as a major commuter freeway it is impossible to know how many residents from each region viewed the sign; impressions were divided similar to online media with 80% allocated to the Santa Ana Region and 20% to the San Diego Region. **OCTA bus advertising was on busses with routes in Anaheim, Garden Grove, Irvine and Santa Ana; all impressions are included in the Santa Ana Region based on these routes.</p> | | |

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Table C-6.3: Earned Media Advertising

| Region | Impressions |
|--------------|-------------------|
| SAR | 14,644,783 |
| SDR | 3,760,726 |
| TOTAL | 18,405,509 |

Table C-6.4: Impressions Created by Community Outreach

| Program | Type of Program | Estimated Number of Impressions |
|-------------------------|------------------------|---------------------------------|
| Workshops | Business & Residential | 680 |
| Speakers' Bureau | Business & Residential | 357 |
| H ₂ O Events | Outreach Events | 1,280 |
| TOTAL | | 2,317 |

Table C-6.5: Countywide Educational Materials

| Public Education Item | Pollutant(s) Addressed | Activities Addressed |
|---|--|---|
| Brochures | | |
| "The Ocean Begins At Your Front Door" - English, Spanish, Vietnamese | Household hazardous waste, trash, motor oil, chlorine, overwatering, green waste, dirt, pesticides/fertilizer, pet waste | Household maintenance and activities (i.e. hosing driveway), automotive maintenance and washing, pool maintenance, landscape and gardening, trash disposal, pet care |
| Homeowners Guide for Sustainable Water Use Pamphlet | Household hazardous waste, trash, motor oil, chlorine, overwatering, green waste, dirt, pesticides/fertilizer, pet waste | Preventing urban runoff through low impact development in residential properties, water conservation, use of IPM techniques and California-friendly landscaping, general water pollution prevention methods |
| "Help Prevent Ocean Pollution: Your Local Used Oil Collection Center" (North, South & Central) - English, Spanish, Vietnamese | Motor Oil | Automotive Maintenance, Disposal of Used Motor Oil |
| "Help Prevent Ocean Pollution: Tips for | Chlorine, runoff | Pool Drainage/Maintenance |

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| Public Education Item | Pollutant(s) Addressed | Activities Addressed |
|---|--|--|
| Pool Maintenance” - English, Spanish | | |
| “Help Prevent Ocean Pollution: Tips for Landscape and Gardening” - English, Spanish | Fertilizer, pesticide, dirt, overwatering, green waste | Landscape maintenance, pesticide/fertilizer application, proper disposal of household hazardous waste and green waste |
| “Help Prevent Ocean Pollution: Tips for Pet Care” - English, Spanish | Surfactants, chemicals, pet waste | Proper disposal of pet waste, proper pet bathing techniques |
| “Help Prevent Ocean Pollution: Household Tips” - English, Spanish | Household hazardous waste, pet waste, pesticides/fertilizers, overwatering, green waste, surfactants, motor oil, trash | Household maintenance and activities (i.e. hosing driveway), automotive maintenance and washing, pool maintenance, landscape and gardening, trash disposal, pet care |
| “Help Prevent Ocean Pollution: Tips for Horse Care” - English, Spanish | Bacteria, sediment | Large animal care and maintenance |
| “Help Prevent Ocean Pollution: Proper Disposal of Household Hazardous Materials” - English, Spanish, Vietnamese | Household hazardous wastes | Proper identification and disposal of household hazardous wastes |
| “Help Prevent Ocean Pollution: Maintenance Practices for Your Business” - English, Spanish | Fertilizer, pesticides, green waste, overwatering, trash, toxic substances | Landscape maintenance, proper application of pesticides and fertilizers, trash management, proper storage of materials |
| “Help Prevent Ocean Pollution: Tips for Using Concrete and Mortar” - English, Spanish | Concrete and mortar, slurry | Proper preparation, use, clean up and disposal of concrete and mortar |
| “Sewage Spill Reference Guide” | Sewage spills from overflows, grease buildup, structure problems and/or infiltration and inflow | Proper prevention of and identification and response to sewage spills |
| “Responsible Pest Control” | Pesticides | Proper identification of pests, selection of least toxic chemical, proper pesticide application, spill prevention and proper storage and disposal of pesticides (use of Integrated Pest Management (IPM) techniques) |
| “Help Prevent Ocean Pollution: Residential Pool, Landscape and Hardscape Drains” - English, Spanish | Chlorine, chemicals, pet waste, green waste, overwatering, motor oil and vehicle fluids | Pool maintenance, spill prevention, proper disposal of household hazardous waste, proper disposal of pet waste, proper use of pesticides and fertilizers, proper vehicle maintenance |
| “Help Prevent Ocean Pollution: Proper Use and Disposal of Paint” - English, | Paint, chemicals | Proper use, storage and disposal of paint |

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| Public Education Item | Pollutant(s) Addressed | Activities Addressed |
|---|---|--|
| Spanish | | |
| "Help Prevent Ocean Pollution: Tips for Home Improvement Projects" - English, Spanish | Construction debris, concrete, paint, household hazardous waste, sediment | Proper storage of construction materials, recycling of construction materials, proper disposal of household hazardous waste, proper erosion and spill control |
| "Help Prevent Ocean Pollution: Children's Coloring & Activity Book" | Trash, pet waste, motor oil, green waste | Litter control, proper disposal of pet waste, proper spill clean up (e.g. use of cat litter) |
| "Help Prevent Ocean Pollution: Tips for Carwash Fundraisers" | Surfactants, metals, motor oil, toxic substances | Proper BMPs for carwashing activities (i.e. containment and encouragement of infiltration) |
| "Help Prevent Ocean Pollution: Tips for Maintaining a Septic Tank System" | Grease, trash, pesticides | Proper maintenance of septic tanks |
| "Help Prevent Ocean Pollution: Tips for the Automotive Industry" - English, Spanish | Motor oil, metals, surfactants, toxic substances, dirt | Proper maintenance and washing practices for automobiles, proper storage and disposal of automotive liquids and materials |
| "Help Prevent Ocean Pollution: Tips for the Automotive Industry" | Motor oil, metals, surfactants, toxic substances | Proper maintenance and washing practices for automobiles and automotive detailing materials, proper storage and disposal of automotive liquids and materials |
| "Help Prevent Ocean Pollution: Tips for the Home Mechanic" | Motor oil, metals, surfactants, toxic substances | Proper maintenance and washing practices for automobiles and automotive detailing materials, proper storage and disposal of automotive liquids and materials, use of used oil collection centers |
| "Compliance Best Management Practices for Mobile Businesses" | Surfactants, toxic substances, dirt, metals | Mobile car washing and detailing, proper high pressure cleaning, proper storage and disposal of washwater from mobile automotive detailing, washing and carpet and fabric cleaning |
| "Educational Program Opportunities for Teachers and Students" | General | Programming available to Orange County teachers |
| "Help Prevent Ocean Pollution: A Guide for Food Service Facilities" - English, | Grease, food waste, trash | Proper food waste disposal, proper grease and oil |

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| Public Education Item | Pollutant(s) Addressed | Activities Addressed |
|---|--|--|
| Spanish, Vietnamese | | disposal, proper procedures for spill cleanup, proper maintenance of trash dumpsters, proper floor mat cleaning, proper wastewater disposal |
| "Help Prevent Ocean Pollution: A Guide to Prevent Overwatering" - English | General | Proper landscape irrigation techniques to prevent overwatering, potential for pollutant transport in runoff from properties; encourage the use of California-friendly plant palates to reduce water demand |
| Posters | | |
| "Help Prevent Ocean Pollution: A Guide for Food Service Facilities" BMP Poster - English, Spanish | Grease, food waste, trash | Proper food waste disposal, proper grease and oil disposal, proper procedures for spill cleanup, proper maintenance of trash dumpsters, proper floor mat cleaning, proper wastewater disposal |
| Auto Repair BMP Poster - English, Spanish | Motor oil, metals, surfactants, toxic substances | Proper maintenance practices for automobiles and automotive detailing materials, proper storage and disposal of automotive liquids and materials |
| Gas Stations BMP Poster - English, Spanish | Motor oil, metals, gasoline, surfactants, toxic substances | Proper maintenance of gas stations and BMPs for washing of gas station areas, proper disposal of toxic substances |
| Other Materials | | |
| "Help Prevent Ocean Pollution: A Guide for Food Service Facilities" CD-Rom | Grease, food waste, trash | Proper food waste disposal, proper grease and oil disposal, proper procedures for spill cleanup, proper maintenance of trash dumpsters, proper floor mat cleaning, proper wastewater disposal |
| "Help Prevent Ocean Pollution: A Guide for Food Service Facilities" Floor mat sticker | Grease, food waste, trash | Proper floor mat cleaning |
| "Help Prevent Ocean Pollution: A Guide for Food Service Facilities" Dumpster sticker | Grease, food waste, trash | Proper maintenance of trash dumpsters |

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| Public Education Item | Pollutant(s) Addressed | Activities Addressed |
|---|---------------------------|---|
| "Help Prevent Ocean Pollution: A Guide for Food Service Facilities" Outdoor maintenance sticker | Grease, food waste, trash | Proper maintenance of trash dumpster, proper wastewater disposal |
| "Help Prevent Ocean Pollution: A Guide for Food Service Facilities" Oil & grease disposal sticker | Grease, food waste, trash | Proper food waste disposal, proper grease and oil disposal, proper procedures for spill cleanup |

Note: Other materials not included in this table are available and distributed through H2OC. These materials are general outreach in nature and advertise the County website www.ocwatersheds.com. Most materials also include the 24-hr hotline reporting number as well.

Table C-6.6: Impressions Created by School Outreach

| Program | Type of Program | Estimated Number of Student Impressions |
|--|--|---|
| Discovery Science Center / Municipal Water District of Orange County Partnership | Student workbooks | 9,803 |
| Pacific Marine Mammal Center | Pinniped Pollution Prevention/Watershed Education | 3,115 |
| OC DOE - Inside the Outdoors: Drip-Drop Traveling Scientist | In-Classroom Curriculum | 435 |
| OC Watershed Education Ambassador Program | Water Cycle/Watershed Education/Pollution Prevention | 77 |
| TOTAL | | 13,430 |

Table C-6.7: Impressions Created by Each Permittee

| Permittees | Estimated Number of Impressions |
|------------------------|---------------------------------|
| Aliso Viejo | 110,000 |
| Anaheim | 475,000 |
| Brea | 242,124 |
| Buena Park | 20,585,869 |
| Costa Mesa | 7,800,000 |
| Cypress | 1,300,000 |
| Dana Point | 348,899 |
| Fountain Valley | 176,837 |
| Fullerton | 138,000 |
| Garden Grove | 8,388,712 |
| Huntington Beach | 964,735 |
| Irvine | 5,054 |
| La Habra | 2,176,684 |
| La Palma | 1,768,336 |
| Laguna Beach | 150,000 |
| Laguna Hills | 86,225 |
| Laguna Niguel | 153,711 |
| Laguna Woods | 25,853 |
| Lake Forest | 497,360 |
| Los Alamitos | 28,800 |
| Mission Viejo | 5,000,000 |
| Newport Beach | 1,318,000 |
| Orange | 37,000,000 |
| Placentia | 3,829 |
| Rancho Santa Margarita | 107,334 |
| San Clemente | 2,765,879 |
| San Juan Capistrano | 380,000 |
| Santa Ana | 696,413 |
| Seal Beach | 29,550 |
| Stanton | 150,000 |
| Tustin | 260,439 |
| Villa Park | 2,500 |
| Westminster | 260,000 |
| Yorba Linda | 290,000 |
| County of Orange/OCFCD | 216,108 |
| Total | 93,902,251 |

Table C-6.8: Total Impressions Created by Public Education Program

| Impressions Created | Estimated Number of Impressions |
|---|--|
| Countywide Paid and Earned Media Impressions | 40,522,519 |
| Community Outreach | 2,317 |
| School Programs | 13,430 |
| Website Impressions | 5,366 |
| Total Permittee Impressions | 93,902,251 |
| Grand Total | 134,445,883 |

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Table C-6.9: Current and Potential Outcome Levels (Public Education)

| Public Education Program | Effectiveness Assessment Outcome Levels | | | | | |
|--|---|---|--|---------------------------------------|----------------|-------------------------|
| | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 |
| | Document Stormwater Program Activities | Raise Awareness | Change Behavior | Load Reduction | Runoff Quality | Receiving Water Quality |
| Creating Impressions | ✓ Number of impressions | ✓ Surveys show change in knowledge of pollution preventative activities | ✓ Surveys show change in willingness to participate in pollution preventative activities | ✓ Household hazardous waste collected | | |
| | | ✓ Number of website page views | | | | |
| Public Participation | ✓ Number of workshops | ✓ Surveys show change in knowledge of pollution preventative activities | ✓ Surveys show change in willingness to participate in pollution preventative activities | | | |
| | ✓ Conduct Events | ✓ Surveys show change in knowledge of pollution preventative activities | ✓ Participation in events | ✓ Trash and debris recovered | | |
| <p>Key: ✓ = Currently Achieved Outcome Level P = Potentially Achievable Outcome Level</p> | | | | | | |

Figure C-6.1: Paid and Earned Media Impressions

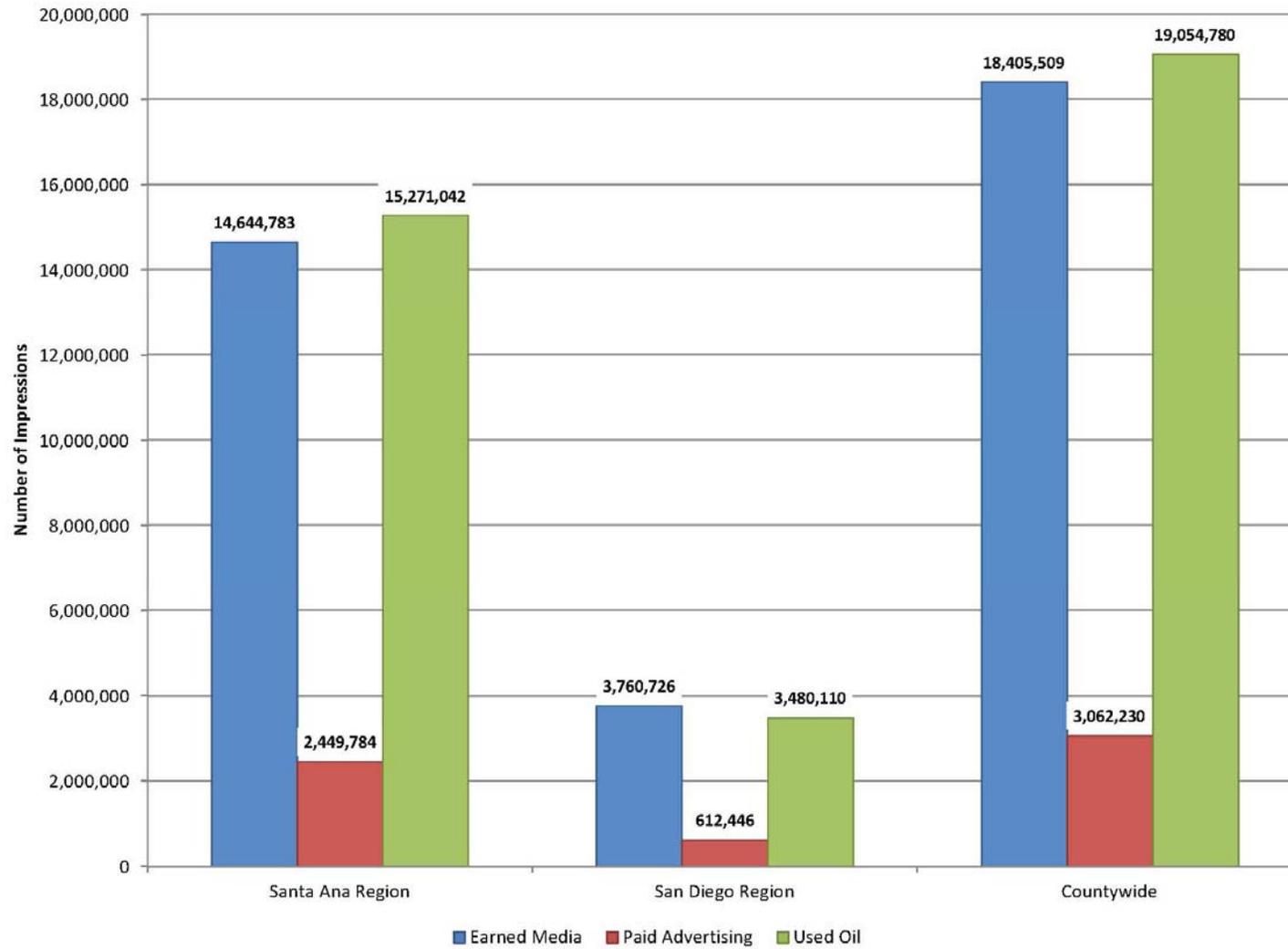


Figure C-6.2: H₂OC Advertisement & Graphics - Legacy Messaging

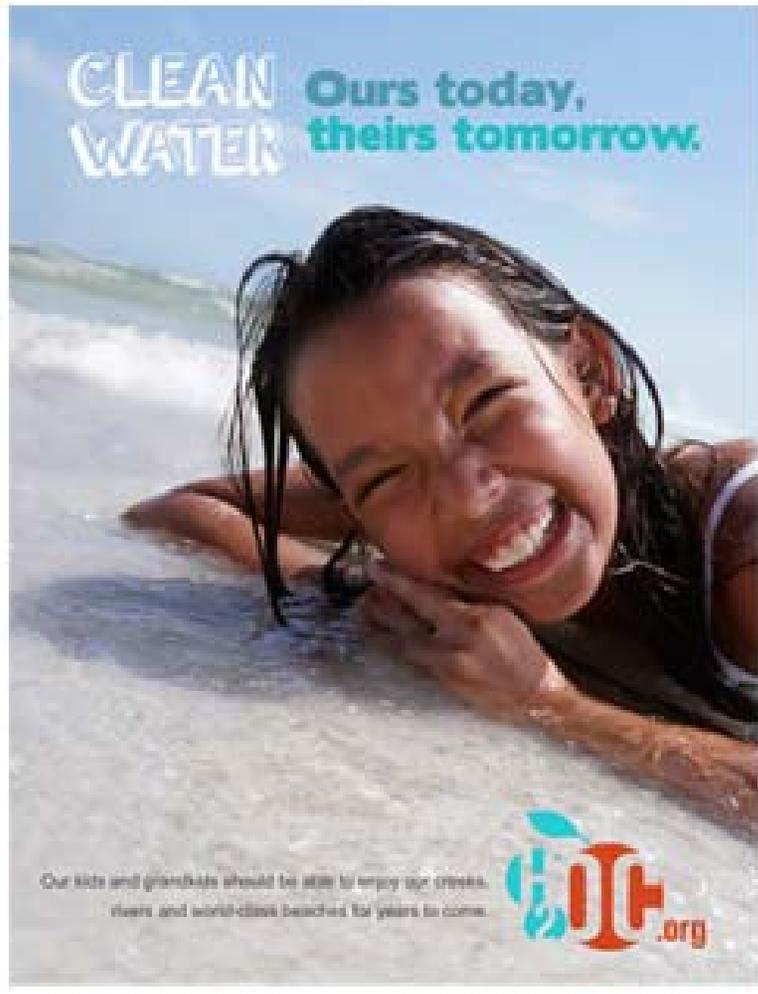


Figure C-6.3: Overwatering Action Campaign Advertising & Graphics

