

No Drugs Down The Drain! Statewide Campaign, October 4-11, 2008

Final Report



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EXECUTIVE SUMMARY

A coalition of local, regional, state and federal agencies conducted a California-wide educational campaign during October 2008 to educate the public that disposing of leftover medication down the toilet has environmental costs and is no longer acceptable in California. The campaign, “**No Drugs Down the Drain!**” provided the public with information on alternative disposal options throughout the state.

The Region 9 U.S. Environmental Protection Agency, the California State Water Resources Control Board and the California Legislature enthusiastically supported the campaign.

Efforts to conduct outreach to residents and to provide alternative disposal options resulted in great collection efforts at the local level. Highlights include:

- More than 200 local one-day and ongoing pharmaceutical collection options, including community household hazardous waste facilities, were available to the public the week of October 4 – 11, 2008.
- Collection sites received an average of 238 pounds each.¹
- The small community of Scott’s Valley, CA, with a population of approximately 11,000 residents, collected 705 lb medication during a one-day event.
- The City of San Jose collected 1,695 pounds of medication at a one-day event located at a senior center.

BACKGROUND

Everyday in California, unwanted or expired medicine is disposed of down the toilet. While this was once recommended practice to protect children and pets from accidental poisonings, studies show that pharmaceuticals can pass through wastewater treatment facilities into creeks, rivers, bays and oceans. In 2002, the U.S. Geological Survey reported that there were pharmaceutical compounds in 80% of waterways tested.² Because many of these compounds are designed to be effective in small doses and some are endocrine disruptors, there is concern that they may have impacts on water quality and wildlife.

Certain pharmaceuticals at concentrations found in the environment have been shown to have impacts to aquatic species, such as abnormal development and reproduction in fish and other wildlife. For example, trace levels of the antidepressant Fluoxetine delayed development of young Western Mosquitofish (*Gambusia affinis*).³ In addition, as analytical chemistry detection has improved, some waterways that supply drinking water have been reported to have trace levels of pharmaceuticals. At this time, researchers and the EPA do not know whether human health impacts are associated with these trace levels.

¹ Average based on 29 agencies reporting collection results.

² Kolpin, Dana et al. 2002. Pharmaceuticals, hormones and other organic wastewater contaminants in U.S. Streams, 1999-2000: A National Reconnaissance, *Environmental Science and Technology* v. 36: 1202-1211.

³ Black, M.C., Rogers E.D., and Henry, T.B., 2005. Endocrine Effects of Selective Serotonin Reuptake Inhibitors on Aquatic Organisms. Abstract available at

<http://es.epa.gov/ncer/publications/meetings/8-23-2005/abstract/black1.html>

There is also concern that pharmaceuticals may cause upsets of biological wastewater treatment systems, failures of whole effluent toxicity tests, impact the beneficial reuse of biosolids, and jeopardize POTWs' ability to provide high quality recycled water. Associated Press (AP) articles released in March 2008 also brought the issue of trace pharmaceuticals in drinking water into the public eye, dramatically increasing regulators' interest in taking steps to reduce pharmaceuticals in the environment.

There are a number of institutional challenges associated with the collection of pharmaceuticals. The U.S. Drug Enforcement Administration has specific requirements for the handling of any controlled (narcotic) substances that may be collected, typically requiring the involvement of law enforcement. In addition, in California, non-controlled medication must be disposed by a licensed Medical Waste hauler, per the Medical Waste Management Act, or a hazardous waste transporter. Despite these challenges, local agencies proved that collection events and programs can be implemented. That said, one-day collection events are not convenient for many residents, and agencies must find increasingly creative ways to get event information to residents in the information age. Participating agencies and residents have indicated that pharmacies and doctor's offices are more logical locations for ongoing collection programs.

To that end, in 2007, the Governor signed SB 966 into law, requiring the CIWMB to establish model pharmaceutical take-back program procedures for the state. These procedures will hopefully provide pharmacies and other locations detailed procedures to navigate regulatory barriers.

CAMPAIGN LOGISTICS

The statewide campaign was led by a steering committee from public agencies around the state and US EPA Region 9. In addition to the significant staff resources contributed by these agencies, these and other agencies from around the state helped fund the campaign's media relations effort. Campaign sponsors included:

- California Association of Sanitation Agencies
- California Water Environment Association
- Region 9 U.S. Environmental Protection Agency
- State Water Resources Control Board
- Bay Area Clean Water Agencies
- Southern California Association of Publicly Owned Treatment Works
- Central Valley Clean Water Agencies
- City of Davis
- City of Palo Alto
- City of Riverside
- Dublin San Ramon Services District
- Orange County Sanitation District
- East Bay Municipal Utility District
- Los Angeles County Sanitation Districts
- Placer County

- Delta Diablo Sanitation District

The campaign itself consisted of two major elements:

- Statewide public relations/education effort
- Local implementation of education and disposal events

STATEWIDE PUBLIC RELATIONS/EDUCATION EFFORT

The campaign contracted with O’Rorke, Inc., a public relations firm that has extensive experience working with state and local governments. The campaign steering committee developed a scope of work that included the following elements:

- Creation of campaign outreach materials and templates (flyers, ads, postcards) based on artwork provided by Southern California agencies
- Posting outreach materials to a central website for use by local agencies
- Development of a press kit including:
 - Press release
 - Press alert
 - Frequently asked questions document (FAQ)
 - Media messages
- Assistance coordinating two press events, in Southern and Northern CA
- Media pitching and follow-up for print, radio and TV statewide
- Collection of garnered media in a Media Relations Campaign Final Report

O’Rorke’s media pitching was extremely successful, garnering extensive free TV, radio and print media stories that had an estimated value of at least \$97,250. The final report by O’Rorke, Inc. is available in Appendix H, along with Appendices I-K.

To bring greater awareness about the issue of pharmaceuticals to state legislators’ attention, the campaign steering committee developed a resolution and worked with State Senator Joe Simitian to bring the resolution to both houses of the legislature to proclaim October 4 – 11, 2008, *No Drugs Down the Drain Week*. Senate Concurrent Resolution 126, found in Appendix B, was passed by both houses of the CA Legislature on September 9, 2008.

In addition, the campaign steering committee worked with the State Water Resources Control Board to develop several public service announcements that were pitched to radio stations to air throughout the state. These PSAs are available in Appendix G.

Region 9 of the U.S. Environmental Protection Agency worked with the campaign to develop a video public service announcement for posting to the statewide campaign website and for sharing via email and YouTube. The video is available at <http://www.epa.gov/region09/water/watershed/pharma/>

To unify the campaign as a statewide effort, several agencies donated an existing website, www.NoDrugsDownTheDrain.org for use by the statewide campaign, a screen view of which is

available in Appendix C. A new page for the campaign was developed initially as a recruitment tool for agencies, including an invitation to participate in the campaign from CASA, EPA and SWRCB available in Appendix D, and an on-line presentation on how to conduct a collection event or program. As the campaign progressed from recruitment into a public campaign, the web page then evolved into an information portal for residents, providing information about the campaign as well as a zip-code driven search tool to find local disposal options.

Rather than developing an underlying database for the events, the search tool connected to Earth911.com, an existing search engine that provides residents with local recycling information. Earth911.com worked with the campaign to provide an easy-to-use data entry dashboard through which local agencies uploaded their collection events and programs information. An additional advantage of Earth911.com is that it continues to provide value to agencies and residents beyond the lifetime of this campaign.

LOCAL OUTREACH AND EDUCATION

Local agencies around the state partnered with the statewide campaign to implement outreach, public education and disposal options for their local residents. Appendix A includes a list of known partner agencies in this campaign, though this list is not exhaustive as many agencies participated but did not necessarily notify the campaign.

Outreach materials developed by O’Rorke proved to be useful for many agencies’ local outreach efforts. They helped to maintain a coordinated look and feel for the campaign even as agencies were able to change them for their own purposes. Graphics were posted on O’Rorke’s website for download by local agencies at any time, as were other campaign materials such as proclamation templates and a Frequently Asked Questions document. Outreach materials are included in Appendix C and the FAQ is available in Appendix G.

CONCLUSIONS & CONSIDERATIONS FOR NEXT STEPS

The No Drugs Down the Drain campaign was the first effort in California to tackle pharmaceutical disposal issues at a statewide level. Through the process of conducting a statewide campaign, several conclusions have emerged.

1. While they can be successful in educating residents, event-based disposal is not a long-term solution. Some residents are not able to attend events, and stockpiling medication until a future event is not an option for many who are concerned about accidental poisoning, misuse, abuse or diversion.
2. As economies contract, many local agencies may not have the resources to offer events frequently.
3. In some locations throughout the state, wastewater treatment is completed onsite or through private systems, so there is not a public wastewater agency available to provide any type of service for residents.

4. Although California wastewater agencies agree that medication should not be flushed, it became a problem that there is not a uniform message as to what residents should do instead. For various reasons, some agencies have adopted a trash message, while others embrace a product stewardship and extended producer responsibility approach, where manufacturers play a large role in the collection of unwanted medication. Despite these differences, all would likely agree that changing behavior relies on providing easy alternatives to what is common practice.

Almost without exception, agencies that participated in the No Drugs Down the Drain Statewide Campaign found it to be a positive experience both in terms of execution as well as the reception by their residents and local media. The steering committee members agree however, that a future statewide No Drugs Down the Drain campaign needs a single organization to spearhead the effort, along with funding and staffing to sustain it. The 2008 effort was completely volunteer-led.

Throughout the campaign planning and execution, other efforts have been underway to try to address the question of long-term solutions to the drug disposal problem. An ad-hoc group of California solid waste, wastewater, hazardous waste and reverse distribution representatives have crafted a bill, SB 26 (Simitian), that would reduce the regulatory barriers in California law that currently deter many agencies and pharmacies from conducting collection programs. It is possible that voluntary collection programs will become more widely available if SB 26 is passed.

At the national level, the non-governmental organization, the Product Stewardship Institute, launched a multi-stakeholder dialogue in June 2008 to better understand the regulatory challenges, research gaps, existing collection programs worldwide, and ultimately come to stakeholder-supported resolution as to how best to manage waste pharmaceuticals in the U.S.

As SB 966 implementation continues, protocols for collection within California will become more clear, and, along with SB 26, may create an environment in which local government, NGOs, manufacturers and retailers can come together to create convenient and cost-effective disposal programs throughout the state.

APPENDIX A: Participating Agencies (note this list is not necessarily exhaustive; it only represents those agencies that notified the campaign of their participation. Other agencies and organizations may have conducted outreach and disposal events without the campaign's knowledge.)

Camarillo Household Hazardous Waste Program
Central Marin Sanitation Agency
City of Auburn
City of Benicia
City of Beverly Hills, Public Works
City of Camarillo Household Hazardous Waste Drop-off
City of Corona Dept of Water & Power
City of Livermore
City of Los Baños
City of Palo Alto
City of Redding Stillwater WWTP
City of Riverside
City of Roseville
City of San Diego – Environmental Services Department
City of San Jose - Environmental Services Dept
City of Santa Cruz WWTF
City of Santa Maria
City of Santa Rosa Utilities Department
City of South San Francisco
City of South San Francisco
City of Thousand Oaks
City of Turlock
City of Vacaville
City of Vacaville
City of Victorville
Clean Water Action
County of Solano
County of Ventura
Delta Diablo Sanitation District
Dublin San Ramon Services District
East Bay Municipal Utility District
Encina Wastewater Authority
Environmental Innovations
Fairfield-Suisun Sewer District
Kaiser Permanente
Las Gallinas Valley Sanitary District
Las Virgenes Municipal Water District
Las Virgenes Municipal Water District
Leiter's Pharmacy
Monterey Regional Water Pollution Control Agency
Mt. View Sanitary District
Napa Sanitation District
Orange County Sanitation District
Orange County Sanitation District
Peralta Outpatient Pharmacy

Rancho Murieta CSD
Russian River Watershed Association
Sacramento Regional County Sanitation District
San Benito County
San Francisco Estuary Project
San Francisco Public Utilities Commission (SFPUC)
Sanitation Districts of Los Angeles County
Sonoma Co. Water Agency
Sony Pictures Entertainment
South Placer Municipal Utility District
South Tahoe Public Utility District
Tamalpais Community Services District
Teleosis Institute
Union Sanitary District
Vallejo Sanitation & Flood Control District
Victor Valley Wastewater Reclamation Authority
Western Municipal Water District

APPENDIX B: SCR 126 Transmittal Letter & Resolution



Secretary of the Senate

GREGORY SCHMIDT

ROOM 3044, STATE CAPITOL
SACRAMENTO, CA 95814

(916) 651-4171

September 15, 2008

Mr. Phil Bobel
City of Palo Alto
2501 Embarcadero Way
Palo Alto, CA 94303

Dear Mr. Bobel:

By the direction of the State Senate, I am transmitting herewith a copy of Senate Concurrent Resolution No. 126, which was recently adopted by the State Legislature.

Sincerely,

A handwritten signature in black ink that reads "Greg P. Schmidt".

GREGORY P. SCHMIDT
SECRETARY OF THE SENATE

Senate Concurrent Resolution No. 126—Relative to drug waste.

[Filed with Secretary of State September 2, 2008.]

LEGISLATIVE COUNSEL'S DIGEST

SCR 126, Simitian. No Drugs Down the Drain Week.

This measure would proclaim the week of October 4 to October 11, 2008, inclusive, as "No Drugs Down the Drain Week" to raise awareness among the public about the environmental problems caused by flushing unwanted drugs down the drain.

WHEREAS, The United States Geological Survey conducted a study in 2002 sampling 139 streams across 30 states and found that 80 percent had measurable concentrations of prescription and nonprescription drugs, steroids, and reproductive hormones; and

WHEREAS, Articles reported by the Associated Press in March of 2008 have corroborated the findings of the United States Geological Survey; and

WHEREAS, Exposure, even to low levels of drugs, has been shown to have negative effects on fish and other aquatic species; and

WHEREAS, The effects of trace concentrations of drugs in the environment on human health are unknown; and

WHEREAS, A pathway for prescription and nonprescription drugs to enter the environment is the disposal of unwanted and unused drugs down drains that lead to community sewer systems, which convey untreated wastewater to municipal wastewater treatment facilities; and

WHEREAS, Many of these municipal wastewater treatment facilities discharge to surface waters in the state; and

WHEREAS, Municipal wastewater treatment facilities remove some, but may not remove all, of the drugs that enter the community sewer systems; and

WHEREAS, The safest methods of disposal of unwanted drugs are not well understood by the public and therefore a public education campaign is necessary to educate consumers; and

WHEREAS, A coalition of federal, state, and local agencies and private organizations are organizing a statewide public education campaign from October 4 to October 11, 2008, inclusive, to encourage the public not to flush unwanted drugs down the drain; and

WHEREAS, It is in the best interest of the state to encourage the public not to flush unwanted drugs down the drain; and

WHEREAS, The Legislature has directed the California Integrated Waste Management Board to adopt model programs for the proper collection and disposal of drug waste and to provide recommendations to the Legislature for the implementation of a statewide program by December 1, 2010; and

WHEREAS, During No Drugs Down the Drain Week, the public will be educated about the currently available safe disposal options for unwanted drugs; and

WHEREAS, In many areas, special take-back events or household hazardous waste collection events will be held during No Drugs Down the Drain Week to accept unwanted drugs from the public; and

WHEREAS, Information about No Drugs Down the Drain Week is available at www.nodrugsdownthedrain.org; now, therefore, be it

Resolved by the Senate of the State of California, the Assembly thereof concurring. That the Legislature hereby proclaims the week of October 4 to October 11, 2008, inclusive, as "No Drugs Down the Drain Week" for the state, to raise awareness among the public about the environmental problems caused by flushing unwanted drugs down the drain and to encourage the use of proper disposal methods; and be it further

Resolved, That the Secretary of the Senate transmit copies of this resolution to the Governor and to the author for appropriate distribution.


APPENDIX C: Campaign Website

The screenshot shows a Microsoft Internet Explorer browser window displaying the website for the "No Drugs Down the Drain Statewide Campaign" running from October 4-11, 2008. The browser's address bar shows the URL <http://www.nodrugsdownthedrain.com/>. The website has a blue header with the campaign title and dates. Below the header, there are navigation links for "STATEWIDE SPONSORS", "STATEWIDE SUPPORTERS", and "FOR PARTNERS/AGENCIES". The main content area features a paragraph explaining the campaign's purpose: "Your local, regional, state and federal agencies have joined together in the No Drugs Down the Drain campaign, a one-week California-wide educational campaign during October 4-11, 2008. Because of the possible environmental consequences, disposing of leftover medication down the toilet is no longer acceptable. To find your local agency's disposal information, enter your zip code below." Below this text, there is a "Frequently Asked Questions" link accompanied by an image of a spilled pill bottle. To the right is a search box titled "Find Out Where to Drop Off Your Unwanted Medication" with a "Where? ZIP Code" label, a yellow input field, a "Go" button, and an "Earth 911" logo. A note specifies: "For Los Angeles County, Orange County, Riverside and San Diego, please click here." At the bottom of the page, it says "Contact statewidecampaign@nodrugsdownthedrain.org". The browser's taskbar at the bottom shows several open applications, including Microsoft Office Word and Internet Explorer, with the system clock indicating 9:07 AM.

NO DRUGS DOWN THE DRAIN
Statewide Campaign
October 4-11, 2008


| STATEWIDE SPONSORS | STATEWIDE SUPPORTERS | FOR PARTNERS/AGENCIES |

Your local, regional, state and federal agencies have joined together in the No Drugs Down the Drain campaign, a one-week California-wide educational campaign during October 4-11, 2008. Because of the possible environmental consequences, disposing of leftover medication down the toilet is no longer acceptable. To find your local agency's disposal information, enter your zip code below.


[Frequently Asked Questions](#)

Find Out Where to Drop Off Your Unwanted Medication

Where? ZIP Code

Go 

For Los Angeles County, Orange County, Riverside and San Diego, please [click here](#).

Contact statewidecampaign@nodrugsdownthedrain.org

APPENDIX D: Campaign Outreach Materials

Postcard



**OLD PILLS
PILING UP?**
*No Drugs Down
the Drain Please!*

**UNUSED MEDICINE THAT
IS FLUSHED OR PUT DOWN
THE DRAIN CAN END UP
IN OUR WATERWAYS AND
POLLUTES THE ENVIRONMENT.**
You can make a difference
by disposing of your
unused portions properly.

www.NoDrugsDownTheDrain.org

The postcard features a blue header with the title and a red box with environmental impact text. To the right, a photograph shows a woman and two children at a toilet, with a large red 'no' symbol overlaid. Below the photo is a blue footer with the website URL. Various medicine bottles and pills are scattered in the center.

Full-page Flyer



**OLD PILLS
PILING UP?**
*No Drugs Down
the Drain Please!*

**UNUSED MEDICINE THAT
IS FLUSHED OR PUT DOWN
THE DRAIN CAN END UP
IN OUR WATERWAYS
AND POLLUTES THE
ENVIRONMENT.**
You can make a world
of difference by
following prescriptions
as directed, and then
disposing of your unused
portions properly.

www.NoDrugsDownTheDrain.org

The flyer has a similar layout to the postcard but is larger. It features a blue header, a red box with text, a photograph of a family at a toilet with a red 'no' symbol, and a blue footer with the website URL. Medicine bottles and pills are also present.

¿Tiene muchos medicamentos viejos?

Por favor, ¡no los tire al drenaje!



LOS MEDICAMENTOS SOBANTES ARROJADOS AL DRENAJE PUEDEN ACABAR EN NUESTRA AGUA, CONTAMINANDO ASÍ EL MEDIO AMBIENTE.

Usted puede hacer una gran aportación siguiendo adecuadamente las indicaciones de sus recetas, y desechando los medicamentos sobrantes de manera correcta.



En lugar de tirar los medicamentos sobrantes, por favor tráigalos a nuestro siguiente evento de recolección el XXX de XXX de 2008, a las [time] en [location].

Para más información sobre otras formas de desechar medicamentos, por favor visite [WEB ADDY HERE.] o acuda a nuestro evento de recolección el XXX de XXX de 2008, a las [time] en [location].

www.NoDrugsDownTheDrain.org

Final Frame "End Slate" for EPA Video

**FOR
DISPOSAL
OPTIONS
VISIT:**



www.NoDrugsDownTheDrain.org

Newspaper Advertisement

**OLD PILLS
PILING UP?**
*No Drugs Down
the Drain Please!*



**UNUSED MEDICINE THAT IS
FLUSHED OR PUT DOWN
THE DRAIN CAN END
UP IN OUR WATERWAYS AND
POLLUTES THE ENVIRONMENT.**
You can make a world of difference
by following prescriptions as
directed, and then disposing of
your unused portions properly.

For Disposal Options visit: www.NoDrugsDownTheDrain.org

APPENDIX E: Statewide Campaign Invitation Letter



May 2008

Dear Sir or Madam:

The California Association of Sanitation Agencies, the State Water Resources Control Board and the U.S. Environmental Protection Agency Region 9 would like to invite you and your organization to join in a statewide campaign to educate residents about the proper disposal of unwanted pharmaceuticals and provide easy alternatives to disposing of them down the drain. Our campaign, "**No Drugs Down the Drain!**" scheduled for October 4-11, 2008, will involve agencies and organizations throughout the state, as well as state and federal partners.

We hope you will participate as well, to make this campaign a success at the local level. Recent studies reporting pharmaceutical compounds in the environment highlight the need for alternatives to flushing unwanted medication. By providing residents with these alternatives, we can immediately tackle one of the sources of pharmaceuticals to the environment.

There are many ways to participate in the "No Drugs Down the Drain!" campaign, such as:

- Conduct and promote a pharmaceutical take-back event in your local area.
- Promote existing disposal options.
- Educate residents to never flush drugs down the drain.
- Assist with coordination, outreach, funding or in-kind services such as graphic design, pharmacist volunteers, event space and advertising.
- Become a partner on www.nodrugsdownthedrain.org

For further information on the issue and the campaign, please find the attached campaign summary and frequently asked questions. You may also visit our website, www.nodrugsdownthedrain.org. You can sign up to participate via our website, or send an email to statewidecampaign@nodrugsdownthedrain.org.

Sincerely yours,

Catherine Smith
Executive Director
CASA

Alexis Strauss
Director
Water Division
USEPA Region 9

Dorothy Rice
Executive Director
State Water Resources Control Board

APPENDIX F: Template Proclamation/Resolution

MODEL RESOLUTION IN SUPPORT OF NO DRUGS DOWN THE DRAIN WEEK OCTOBER 4 TO OCTOBER 11, 2008.

WHEREAS, The United States Geological Survey conducted a study in 2002 sampling 139 streams across 30 states and found that 80 percent had measurable concentrations of prescription and nonprescription drugs, steroids, and reproductive hormones; and

WHEREAS, Articles reported by the Associated Press in March 2008 have corroborated the findings of the United States Geological Survey; and

WHEREAS, Exposure, even to low levels of drugs, has been shown to have negative effects on fish and other aquatic species; and

WHEREAS, The effects of trace concentrations of drugs in the environment on human health are unknown; and

WHEREAS, A pathway for prescription and nonprescription drugs to enter the environment is disposal of unwanted and unused drugs down drains that lead to community sewer systems, which convey untreated wastewater to municipal wastewater treatment facilities; and

WHEREAS, Many of these municipal wastewater treatment facilities discharge to surface waters in the State; and

WHEREAS, Municipal wastewater treatment facilities remove some, but may not remove all, of the drugs that enter the community sewer systems; and

WHEREAS, The safest methods of disposal of unwanted drugs are not well understood by the public and therefore a public education campaign is necessary to educate consumers; and

WHEREAS, A coalition of federal, state and local agencies and private organizations are organizing a statewide public education campaign from October 4 to October 11, 2008 to encourage the public not to flush unwanted drugs down the drain; and

WHEREAS, During No Drugs Down the Drain Week, the public will be educated about the currently available safe disposal options for unwanted drugs; and

WHEREAS, In many areas special take-back events or household hazardous waste collection events will be held during No Drugs Down the Drain Week to accept unwanted drugs from the public; and

WHEREAS, Information about No Drugs Down the Drain Week is available at www.nodrugsdownthedrain.org; now, therefore be it

RESOLVED, *by the Board of Directors of {fill in name of entity}*, That the {fill in name of entity} hereby recognizes the week of October 4 through October 11, 2008, inclusive, as “No Drugs Down the Drain Week” in the State of California to raise awareness among the public about the environmental problems caused by flushing unwanted drugs down the drain and to encourage the use of proper disposal methods; and be it further

RESOLVED, *by the Board of Directors of {fill in name of entity}* hereby declare that {fill in name of entity} will participate as a {SPONSOR/SUPPORTER/PARTNER} and direct staff to participate in and provide support to the coalition that is organizing No Drugs Down the Drain Week, as appropriate.

APPENDIX G: Public Service Announcements

30 – Second PSA

Medicine flushed down the drain can end up in your local creeks, bays and the ocean! So while medicine is good for what ails you, it's important to dispose of leftover medication properly so it doesn't hurt the environment.

This October, local agencies are providing disposal tips and collection events to safely dispose of unwanted medication. Visit www.nodrugsdownthedrain.org for events near you. That's nodrugsdownthedrain.org for more information.

15 – Second PSA

Flushed medication can end up in your local waterways.

Instead, visit www.nodrugsdownthedrain.org for local disposal options.

Never flush medication and visit nodrugsdownthedrain.org for more information.

APPENDIX H: O'Rorke, Inc. Media Report

NO DRUGS DOWN THE DRAIN
MEDIA RELATIONS CAMPAIGN FINAL REPORT
2008

Presented by: O'Rorke, Inc.
October 21, 2008

INTRODUCTION

O’Rorke Inc. was hired by the statewide No Drugs Down the Drain Steering Committee to conduct a full-scale media relations effort for the project.

O’Rorke’s work included creating an overall campaign strategy; the development of collateral and media materials; participation in steering committee meetings; and reaching out to the media with a public service announcement and earned media. We kicked off the effort with a press conference and developed talking points for the speakers. During the campaign, we monitored the media coverage, which is submitted with this report.

O’Rorke’s strategy, planning and media pitching led to PSA placements on 23 stations and 106 earned media stories. Overall, the campaign had an estimated advertising value of \$97,250. (A full list of media coverage follows in Appendix H: List of Media Coverage; a sampling of media articles is included in Appendix I: Selected Articles, and press outreach materials in Appendix J: Press Materials.)

What follows is a report by task on O’Rorke’s work on the NDDD project from July – October 2008.

Strategy

O’Rorke developed statewide media lists for both long-lead publications and general media, focusing on key markets within the state as well as areas where collection events were occurring.

Collateral Materials

O’Rorke provided input on existing materials for use by local agencies. This included assistance revamping copy and providing input on visuals. O’Rorke also set up a website which housed all the collateral so participating agencies could access all the collateral (postcards, flyers, etc) in easy-to-use file formats. O’Rorke also reviewed and provided strategic feedback to make the website more user-friendly

Press Materials Development

Long-lead press release

O’Rorke developed a long-lead press release geared toward magazines as well as a press advisory for the two news conferences and a press release to be distributed at and after the events. O’Rorke also worked with the steering committee to develop key message points for spokespeople.

Press Advisory

O’Rorke developed a press advisory about NDDD week which provided background on pharmaceutical pollution as well as information about the two news conferences.

Public Service Announcements

Using PSA copy developed by the Bay Area Regional Water Quality Control Board, O’Rorke staff distributed PSAs and conducted extensive follow-up to determine whether the PSAs were aired. In the course of this follow-up, O’Rorke was able to secure enough interest in NDDD to

schedule additional radio interviews as well. In all, PSAs were placed on 23 stations in five markets.

Media Outreach

Long-lead Pitching

O’Rorke pitched long-lead publications in July, with an emphasis on parenting and senior magazines, as well regional interest publications. (The long-lead press release is attached Appendix E: Materials. This effort resulted in nine long lead placements; a full list is included in Appendix A: List of Media Coverage.)

Kick-Off Press Conference O’Rorke planned two simultaneous kick-off press conferences in Palo Alto and Los Angeles on October 2. Working closely with the NDDD project manager, the Palo Alto Water Quality Control Plant and the Sanitation Districts of Los Angeles, O’Rorke developed outlines for the press conferences, talking points for the speakers, and pre-pitched the media. O’Rorke staff assisted at each press conference, and did media follow-up afterwards. Speakers at the northern California press conference included: State Senator Joe Simitian and Alexis Strauss of the US EPA Region IX office. Speakers at the southern California press conference included: Steve Maguin of the LA County Sanitation Districts, Cynthia Ruiz of the City of Los Angeles Department of Public Works and Frances Spivy-Webber, State Water Resources Control Board Member.

The northern California event was attended by *World Journal*, *Palo Alto Weekly News*, and KDTV-TV. The Los Angeles event was attended by Fox News.

Pitching General Media

O’Rorke pitched key media about the NDDD Week story. We pitched dozens of media outlets, and press coverage was extensive. Additionally, the story was picked up by the Associated Press in Southern California, resulting in more than 50 media hits, including many online outlets.

Media Monitoring

O’Rorke staff monitored the media using electronic services as well as scanning relevant newspapers and websites, culling together a list of media coverage included in this report.

Letter to the Editor

O’Rorke drafted a letter to the editor for Catherine Smith of CASA’s signature. The letter addressed an Associated Press story about health care workers flushing medication and calling attention to the then-upcoming NDDD week. The letter was published in the Bay Area News Group group of papers, including the Oakland Tribune.

Google AdWords

O’Rorke also arranged a Google AdWords campaign where keyword terms searched would result in NDDD-related ad copy and have a link to the NDDD site. Unfortunately, Google had stringent rules regarding any copy related to “drugs” or “pharmaceuticals” and our ad copy had to be modified. Unfortunately, nearly all of the keywords O’Rorke put together were rejected by Google. We launched AdWords anyway, but its success was limited by a lack of keywords.

Return on Investment

O'Rorke calculated an estimate of the value of the media coverage garnered using prevailing advertising rates wherever possible and some general formulas for PSAs and online media. While the estimated value is only an estimate, it does provide some perspective.

O'Rorke uses a composite figure of \$750 for valuation of PSAs. This assumes that PSAs aired 10 times on each station at a value of \$75 each, putting the value of each station at \$750. Since we cannot determine at what time of day the announcements aired (and day parts heavily influence the cost of purchased radio air time), these estimates are conservative.

Factoring in this kind of information as well as knowledge about media costs, O'Rorke estimates that the press coverage achieved is worth an estimated \$80,000 and the PSAs \$17,250, for a total value of \$97,250.

APPENDIX I: List of Media Coverage

MEDIA COVERAGE
No Drugs Down the Drain Campaign
September 25th – October 11th, 2008
Updated 10.15.08

Media Coverage Pitched by O'Rorke, Inc.
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Television

Fresno

- *KMPH*, aired on *KMPH News midday* on 9/30 at 11:30 AM
- *KMPH*, aired on the *Great Day show* on 9/29 at 9 AM
- *KMPH*, aired on the *Great Day show* on 9/29 at 8 AM

San Francisco

- *KDTV TV*, covered on 10/2 at 11PM

Santa Barbara

- *KPMR TV*, interview with Loretta Vanegas of the EPA aired on 10/3 at 6 PM

Sacramento

- *KXTV*, aired on the 'News 10 Good Morning' show on 9/26

Los Angeles

- *KABC*, aired 9/30
- *Fox-TV* (attended LA press conference)
- *Victorville Daily News*, 9/30

Radio

San Francisco

- KGO-AM, interviewed Joe Simitian, aired 10/3
- KQED-FM, interviewed Joe Simitian, air date TBD
- KCBS-AM, 'San Jose Residents Asked to Dispose of Drugs Safely', 10/6

Santa Barbara

- KRAZ, reading info from the advisory on air periodically (cannot confirm dates)

Ventura

- KVTA-AM, interview with members of Ventura Water & Sanitation Division, air date TBD

Sacramento

- KHTK AM, (Interview with Phil Bobel on 9/11 will air the week of October 4th)
- KNCI FM, (Interview with Phil Bobel on 9/11 will air the week of October 4th)
- KZZO FM, (Interview with Phil Bobel on 9/11 will air the week of October 4th)
- KQJK FM, (Interview with Phil Bobel on 9/11 will air the week of October 4th)
- KSFM FM, (Interview with Phil Bobel on 9/11 will air the week of October 4th)
- KYMX FM, (Interview with Phil Bobel on 9/11 will air the week of October 4th)

Bakersfield

- KBFP FM, (Interview with Debbie Boadway on 9/29 will air week of October 4)
- KBFP AM, (Interview with Debbi Boadway on 9/29 will air week of October 4)
- KDFO FM, (Interview with Debbie Boadway on 9/29 will air week of October 4)
- KHTY AM, (Interview with Debbie Boadway on 9/29 will air week of October 4)
- KRAB FM, (Interview with Debbie Boadway on 9/29 will air week of October 4)

Los Angeles

- *Victorville Daily Press*, 'Launch of 'No Drugs Down the Drain' campaign', 9/30
- *San Gabriel Valley Times*, "Bring household waste to roundup," 10/2

Sacramento

- *Auburn Journal*, 'Clear waterways of meds, Disposal day to boost awareness', 10/8
- *Sacramento Bee*, 'Proper disposal of old drugs is changing', 10/6

Chico

- *Mercury Register*, "Pharmaceutical no-flush warning given," 9/26
- *Paradise Post*, "No Drugs Down the Drain Campaign," 9/30

Fresno

- *Fresno Bee*, "Drug disposal sites few in Valley," 10/3

San Francisco

- *Marin Independent Journal*, 'Pharmaceutical disposal event set for Saturday', 10/9
- *Napa Valley Register*, 'Down the drain', 10/6
- *Fairfield Daily Republic*, "Prescription for Disposing Medication," 10/3
- *The Fremont Argus*, 'Tri-City residents urged to dispose of medications properly', 10/3
- *San Jose Mercury News*, 'Agencies' campaign aims to halt flushing of unused medicines', 10/3
- *San Mateo Daily News*, "Bitter Pill: Don't flush old medicines," 10/3
- *St. Helena Star*, 'Around the Valley, 'Collecting Drugs & Sharps'', 10/3
- *The Livermore Independent*, 'No Drugs Down the Drain', 10/2
- *Santa Rosa Press Democrat*, 'Dump your Drugs, Safely', 9/29
- *Alameda Times Star*, "Down drain isn't meds' only fate," 9/29
- *Palo Alto Weekly* (attended Palo Alto press conference)
- *World Journal* (attended Palo Alto press conference)
- *Oakland Tribune*, 9/28
- *TriValley Herald*, 9/28
- *Daily Review* (Hayward) 9/28
- *West San Jose Resident*, "free prescription drug drop-off event on Oct 6," 9/26
- *Alameda Times Star*, "No Drugs Down the Drain," 9/26

Monterey/San Luis Obispo

- *The Salinas Californian*, 'Old drugs pose threat to water sources', 10/7
- *Register-Pajaronian*, "A Sharp Solution for Santa Cruz County" 9/25

Online – By Market & General

San Francisco

- *CBS5.com*, Local Wire 'Vacaville: Unused Medicine Drop-Off on Saturday', 10/6/08
- *YubaNet.com*, 'California Senate Proclaims October 4-11 No Drugs Down the Drain Week', 9/30
- *San Francisco Chronicle*, *Village Green blog* 9/27

San Jose

- *KCBS-AM on kcbs.com*, 'San Jose Residents Asked to Dispose of Drugs Safely', 10/6
- *KLIV-AM on kliv.com*, 'Campaign against flushing medication continues', 10/6

Sacramento

- *McClatchydc.com*, California working to encourage proper disposal of unused drugs', 9/6
- *KYMX FM*, CBS Radio affiliate, on community calendar
- *KFIA AM*, aired on Weekend Community Calendars, 10/4-5 and 10/11-12
- *KTKZ AM*, aired on Weekend Community Calendars, 10/4-5 and 10/11-12
- *KKFS FM*, aired on Weekend Community Calendars, 10/4-5 and 10/11-12

Los Angeles

- *Los Angeles Times*, *Greenspace blog*
- *Daily Review (Hayward)* 9/28
- *Pasadenastarnews.com*, 10/2

General Online Coverage From Advisory Sent on 9/25

Associated Press: California warns people not to flush pharmaceutical

- The Charlotte Observer - Sep 26
- The Fresno Bee - Sep 25
- PhysOrg - Sep 26
- KGET 17 Bakersfield - Sep 25
- Las Vegas Sun - Sep 25 & 26
- KSBY San Luis Obispo - Sep 25

- CBS 47 Fresno - Sep 25
- Los Angeles Times - Sep 25
- Daily News- Sep 25
- San Francisco Chronicle - Sep 25
- Sacramento Bee- Sep 25
- Contra Costa Times- Sep 25
- cbs5.com (KPIX) - Sep 25
- sandiego6.com (XETV) - Sep 25
- cbs2.com (KCAL) - Sep 25
- kfwb.com- Sep 25
- San Francisco Examiner- Sep 25
- Marin Independent-Journal- Sep 25
- Press-Enterprise- Sep 25
- Los Angeles Examiner- Sep 25
- kcbs.com - Sep 25
- Victorville Daily Press- Sep 25
- Santa Cruz Sentinel- Sep 25
- Monterey Herald- Sep 25
- Baynewsnow.com- Sep 25
- New York Times- Sep 25
- Yahoo! News- Sep 25
- WCVB Boston - Sep 26
- USA Today- Sep 25
- Austin American Statesman- Sep 25
- The News & Observer- Sep 25
- Seattle Post-Intelligencer- Sep 25
- NY Daily News- Sep 25
- Seattle Times- Sep 25
- Star-Tribune- Sep 25
- Tri-City Herald- Sep 25
- Arizona Daily Sun- Sep 25
- Baltimore Examiner- Sep 25
- federalnewsradio.com- Sep 25
- Newsday- Sep 26

Public Service Announcements

Bakersfield

- *KCNQ FM*, PSA on air 9/5 – 9/26
- *KBLI FM*, PSA on air 9/5 – 9/26
- *KQAB FM*, PSA on air 9/5 – 9/26

Fresno

- KSEQ FM, PSA on air through 10/12
- KIOO-FM, PSA on air through 10/12

Los Angeles

- KFRN-FM, PSA on air through mid-October
- KDAR-FM, Oxnard
- KXRS-FM, San Bernardino
- KBRT-FM, Costa Mesa

San Francisco

- KCBS AM, PSA online and on air 10/2 and 10/3
- KKUP FM, PSA on air through 10/12
- KPOO FM, PSA will run 9/3 through 10/1
- KRRS AM, PSA will run for 2 weeks prior to 10/4 – 10/11
- KTOB AM, PSA will run for 2 weeks prior to 10/4 – 10/11

Sacramento

- KCBC AM, PSA on air and in community calendar
- KNLF FM, PSA on air
- KRVR FM, PSA on air
- KVIN AM, PSA on air
- KXJZ FM, PSA to air September 15 for two weeks
- KXPR FM, PSA to air September 15 for two weeks
- KKTO FM, PSA to air September 15 for two weeks
- KUOP FM, PSA to air September 15 for two weeks
- KXFR FM, PSA to air September 15 for two weeks

Long-Lead Publication Coverage

OC Family – October issue in Magazine – 75-100 words on website prior to events

944 Magazine

Antelope Valley Lifestyle

Sacramento Parent Magazine – in “Green Scene” column

San Diego Family Magazine

Senior Citizen’s Reporter – Will run press release as an article in September issue

After Five – Will run in September issue

APPENDIX J: Selected Articles

Parents Monthly – October 2008 issue



NEWS | VOICES | TIPS | TRENDS
Kirsten Flournoy & Jennifer A. Burman

No Drugs Down the Drain

Did you know that traces of pharmaceuticals have been found in drinking water across the US? A five-month study conducted by the Associated Press found prescription and over-the-counter drugs—including anti-depressants, antibiotics, pain relievers and more—in tap water.

Many of these medications are not removed from the water supply during treatment. Although it's believed that the amount of medication in tap water is too low to cause harm to humans, it is a significant threat to wildlife and the environment.

"No Drugs Down the Drain" urges all Californians to dispose of unwanted medication in the trash, instead of sinks or toilets. A joint venture between the Environmental Protection Agency, the California Association of Sanitation Agencies and the California Regional Water Quality Control Board, the campaign aims to keep pharmaceuticals out of our sewer system and waterways. Head to NoDrugsDownTheDrain.org for local disposal options.

Prescription for disposing medication

By IAN THOMPSON
DAILY REPUBLIC

1227
FAIRFIELD — Remember when your doctor told you to simply flush old prescription drugs down the toilet?

That's now a bad thing.

With drug sales doubling in recent years, dumping drugs down the drain or throwing them in the trash has become a worrisome source of pollution and a potential environmental health threat.

The state Senate on Thursday got into the act to keep discarded drugs from adversely affecting the environment by passing a resolution proclaiming next week as No Drugs Down the Drain Week.

Agencies such as the Fairfield-Suisun Sewer District are joining cities and counties across the state to host more than 130 medication collection events to keep drugs out of the sewer or garbage.

Next week, local residents can drop off their unused or expired pharmaceuticals from 8 a.m. to

See Medications, Back Page

Medications: Disposal

From Page One

5 p.m. at the Solano County Coroner's Office at 520 Clay St.

People dropping off drugs need to remove any pills from their containers and put them in plastic bags. Any liquids and creams should be sealed with duct tape. Any personal information removed for any medication container.

Since the drop-off is only available to Solano County residents, people need to bring proof of residency.

Any sharp medical items, such as hypodermic needles, cannot be dropped off. To find out how to dispose of those items, call 437-8971.

About 54 percent of unused drugs are dumped in the trash to be sent to landfills, and another 34.5 percent are flushed.

With sewer districts being able to detect substances in smaller amounts, they are finding more discarded drugs are making it into the wastewater, according to Meg Herston, the sewer district's environmental compliance engineer.

"This has been a concern in the industry for some time," said Margaret Kralovec, an environmental outreach specialist for the

Fairfield-Suisun Sewer District.

The sewer district's wastewater doesn't make it back into the drinking water system, but the treated water does go into the Suisun Marsh's sensitive habitat.

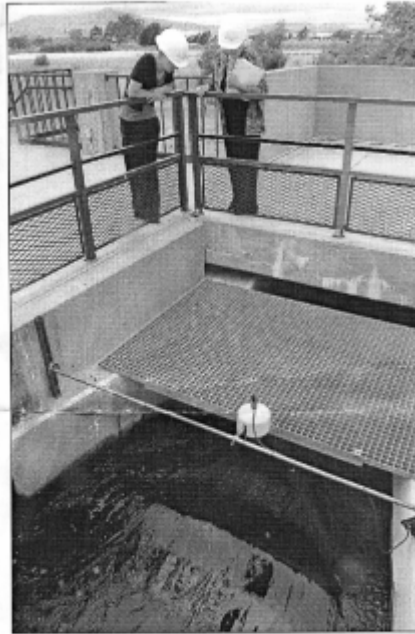
Such drugs could be removed, "but using a membrane or reverse osmosis would be cost prohibitive," Herston said. "It is much more cost-effective to remove (the drugs) at the source."

The Fairfield-Suisun Sewer District is part of a local task force consisting of waste management agencies that are working on holding monthly drug collection events and educating people on the need to take advantage of them.

At the state and federal levels, legislators are working on ways to unravel a mess of regulations created to keep drugs out of the wrong hands. But their efforts frustrate agencies trying to protect human and environmental health.

For example, the collection days are held at police departments because only they can take unused medications because it is illegal for other agencies to do so.

There are also few permanent collection sites available in the state and



Mike Green/Daily Republic

Fairfield-Suisun Wastewater sewer district's environmental compliance engineer Meg Herston and environmental outreach specialist Margaret Kralovec watch treated sewer water flow into holding reservoirs where it will eventually be recycled back into the Delta.

none in Solano County. The sewer district is part of the effort to create such sites and possibly even put together a mail-in program,

according to Kralovec.

Reach Ian Thompson at 427-6976 or ithompson@dailyrepublic.net.

Proper disposal of old drugs is changing

1227
DROPOFFS ARE ENCOURAGED OVER POURING DOWN DRAIN

By **CARRIE PEYTON DAHLBERG**
cpeyton@ahlib.org

Hoping to keep streams and groundwater cleaner, the people who run sewage plants around California want to change the way we get rid of old medicines.

The toilet is out. The hazardous-waste site is in. Except where it's not.

Then there's the trash. Advocates hoping to deliver the message "No Drugs Down the Drain" are struggling with exactly where else unwanted medications should go.

"Everybody is trying to do the right thing, and right now our laws just haven't caught up with what the right thing is," said Jen Jackson, the effort's statewide coordinator.

To help people navigate the legal morass, the campaign is coordinating special drop-off events state-

wide, including two planned for Saturday in Auburn and Roseville. It's also publicizing hazardous-waste sites that routinely accept medications, including four in the Sacramento region.

People are getting increasingly worried about drugs that make their way into America's waterways. An Associated Press investigation this year found traces of prescription and nonprescription medicines in the drinking supply of 41 million Americans.

Many of those drugs make a stop in the human body first, as people take birth control pills, antibiotics or painkillers and then eliminate what their bodies don't use up.

Americans also discard plenty of medicine - one estimate is 10 million pounds a year, Jackson said.

"The piece that we can address right now, in an immediate way, is what people throw away," she said.

Her group wants those drugs out of our waterways because they appear to be affecting sexual development in fish, and probably also have impacts on microbes, plants and other aquatic life. The chem-

DRUGS | Page B6



LEZLIE STERLING lsterling@sacbee.com

Jackie Frye, a hazardous-materials technician for Placer County, pours discarded medications into a bin last week at the county's disposal facility in Lincoln.

Drugs: County employs a 'goopy mess'

FROM PAGE B1

icals might be too diluted to affect people, but no one knows for sure.

Some of the biggest groups that deal with sewage treatment are behind the collection drive: the League of California Cities, the California Association of Sanitation Agencies, and the California Water Environment Association. Even so, there are only around 100 special collection sites planned during the right-day drive.

"Our coverage is not fabulous yet. A lot of regulatory issues make it very hard to set up programs," Jackson said.

Among them: If a pharmacy collects unused medications, it is considered medical waste, and that's expensive to get rid of. If a waste site takes it, technically a law enforcement of-

ficer has to be there, because controlled substances make up about 10 percent of discarded medicine.

Federal drug law forbids pouring along to others painkillers such as Vicodin, which contains hydrocodone. The same law restricts handling of things people might not think of as controlled substances, including Ritalin and other medications with methylphenidate, and even cough syrups that contain codeine.

Both Jackson and a DEA spokeswoman in Washington confirmed that in theory, a law officer needs to take custody of such controlled drugs. The DEA is looking into revising its policies. The agency generally focuses on bigger players than waste disposal sites.

The county of Sacramento

might be glad to hear that, since its household hazardous-waste site has long accepted a smattering of medicines, controlled or not.

"It's been an extremely minute amount of business, maybe two or three drop-offs a week," said Chris Anolis, public information officer for the county's solid waste program. The medicine seems unlikely to fall into the wrong hands, since an employee stands next to a big barrel where people can deposit wet waste, pharmaceuticals and toxic materials.

"Just picture in your mind dumping drugs into a goopy mess. They're not really usable" after that, Anolis said.

The city of Sacramento's household hazardous-waste site, by contrast, doesn't accept any medicine, partly because

of "security" issues, said spokeswoman Jessica Hess. The city of Folsom, which sends crews to residents' homes by appointment to pick up hazardous wastes, will take all medicines except controlled substances.

The patchwork of policies means there is no simple recommendation for how to clean out a medicine cabinet.

"We used to recommend for children's safety that you just get rid of them through flushing them," said Michelle White, a Placer County environmental resource specialist.

"Now, we realize it is harmful to the environment and our drinking water and our groundwater," she said.

Other options include special collections, like the one next week: a hazardous-waste

DISPOSE OF UNWANTED MEDICINES

People can dispose of all unwanted medicines from 10 a.m. to 2 p.m. Saturday at Auburn City Hall, 225 Lincoln Way, or the Roseville Sports Center, 1501 Pleasant Grove Ave., Roseville.

In addition, four county household hazardous waste sites in the Sacramento region will accept at least some medications from residents of their

own county, according to the "No Drugs Down the Drain" campaign. They are: 4100 Throville Way, Placerville, for El Dorado County residents; 3195 Atheni Ave., Lincoln, for Placer County residents; 4450 Roseville Road, North Highlands, for Sacramento County residents; and 44090 County Road 20H, Woodland, for Yolo County residents.

site that may accept drugs you want to dispose of, or your own garbage cans.

The "take-it-yourself" plan comes with an elaborate set of precautions. Recommendations include removing personal data from the label, mixing the drugs with something inedible, putting it back in its own container and then hiding that container inside some-

thing else so no one can tell there are drugs in your trash.

Oh, and it doesn't hurt to leave the drug name on the label. That way poison-control workers can refer to it in case, despite all your efforts, someone's pet or some unwary person ingests it.

1227
Call The Bee's Carrie Peyton Dahlberg, (916) 321-1095.

**Oakland Tribune letters
Letters from our readers
Article Last Updated: 09/25/2008 05:25:35 PM PDT**

No Drugs Down the Drain

THE ARTICLE "Health care industry sends tons of drugs into nation's wastewater system," Sept. 14, sheds light on an important issue: what happens to unused or unwanted medication.

While this article dealt specifically with findings from The Associated Press' ongoing investigation of pharmaceuticals in waterways and what is generated from hospitals and nursing homes, the reality is that pharmaceutical waste is an issue in many homes as well. At one time or another, most people have some prescription or over-the-counter medicine that has expired or is no longer needed.

To deal with this problem, local agencies around the state are collaborating to provide residents with safer alternatives to the disposal of medication down the sewer. In fact, the California Senate recently proclaimed the week of Oct. 4-11 as "No Drugs Down the Drain" week, to bring attention to our campaign.

During the campaign week, agencies will provide local disposal recommendations for safely disposing of unwanted medicine. Finding disposal options is as easy as going to the website www.NoDrugsDownTheDrain.org. This campaign is a collaborative effort between the U.S. Environmental Protection Agency, the California Association of Sanitation Agencies, and the California State Water Resources Control Board. The goal is to keep pharmaceuticals out of the wastewater system and our waterways.

The No Drugs Down the Drain campaign is a first step in dealing with residential pharmaceutical disposal. Additional collaboration with pharmaceutical manufacturers, the health care industry, and government agencies is needed to develop long-term solutions. We encourage all residents to use this free, convenient resource.

Catherine Smith

Executive Director, Ensuring Clean Water For California

APPENDIX K: Press Materials

FOR IMMEDIATE RELEASE
July 29, 2008

Media Contacts: Tracy Keough, 415/543-1426
Abbi Hertz, 310/ 557-3010

OLD PILLS PILING UP?

California's October 4-11 "No Drugs Down the Drain" campaign offers free, easy disposal options for unwanted meds

CALIFORNIA—This fall, medicine cabinets across the state will have the opportunity for a makeover as a statewide “No Drugs Down the Drain” campaign kicks off. The No Drugs Down the Drain campaign is a mammoth collaborative effort between the US Environmental Protection Agency (US EPA), the California Association of Sanitation Agencies (CASA) and its agency members, and the California Regional Water Quality Control Board to promote proper disposal of unwanted medication to all Californians in an effort to keep pharmaceuticals out of the sewer system and waterways. Residents can visit www.NoDrugsDownTheDrain.org for local disposal options.

With drug sales doubling in recent years and outpacing population growth, pharmaceutical waste has emerged as a major issue for the environment. With this increase, human disposal practices of flushing medicine down the toilet or pouring them in the drains may be a significant source of pharmaceuticals in the environment. In fact, before data began to show the presence of pharmaceuticals in our creeks, bays and oceans, it was commonplace for doctors and pharmacists to recommend that medication be disposed of down the toilet.

Now, amid scientific research showing that improperly disposed of medication is having a negative impact on wildlife, water pollution prevention agencies are seeking to educate and thereby persuade residents to properly dispose of unwanted medication.

“While flushing unwanted medication is just one source of pharmaceutical compounds in waterways, we can all make a difference by increasing access to safe, free medicine disposal alternatives to flushing,” stated Alexis Strauss, director of Water Division, U.S. Environmental Protection Agency, Pacific Southwest Region. “We are working with many partners, including the pharmaceutical industry, local utilities and others, to provide options for responsible disposal of waste pharmaceuticals.”

With more advanced technology detecting the pharmaceutical compounds in the environment, wastewater treatment agencies have become increasingly concerned about proper medicine disposal, particularly after studies showed the presence of pharmaceuticals in waterways had been linked to the skewed gender ratios in fish populations off the coast of Orange County; other research showed male fish in the Potomac River and Boulder Creek displaying female traits.

Now that we understand the negative impact pharmaceuticals can have on fish and wildlife, flushing is NOT considered to be proper disposal.” said Catherine Smith of CASA. “The statewide No Drugs Down the Drain Campaign’s goal is to build an awareness among Californians about this important issue and to give them local recommendations for proper disposal of unwanted medicine.”

To find more information about local disposal options, visit NoDrugsDownTheDrain.org.

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No Drugs Down the Drain Frequently Asked Questions – Rev. 1, July 31, 2008

How do pharmaceuticals enter the environment?

- While some pharmaceuticals enter the environment via normal human and livestock excretion into the sewer system or waterways, much is via direct disposal such as having been flushed down the toilet or poured down the drain.

Isn't excretion responsible for more pharmaceuticals entering the environment than improper disposal?

- Pharmaceuticals dumped down the drain have not been degraded at all by the body and may be more potent.
- Pharmaceuticals enter the environment through use and disposal; however, we can all make a world of difference by preventing improper disposal immediately.

Why don't wastewater treatment plants improve treatment to remove pharmaceuticals?

- Treatment does remove and reduce some types of pharmaceuticals, but some aquatic species have shown sensitivity to extremely low levels of medications (as low as nanograms/liter).
- Adding more sophisticated treatment, like ozone or reverse osmosis, is extremely expensive and would cost communities millions of dollars, significantly increasing utility rates. This type of treatment also requires enormous amounts of energy, which could also mean more greenhouse gases emitted into the environment.
- Alternative treatment is always more expensive than prevention and may have other environmental consequences.

Do pharmaceuticals impact water?

- Several studies have shown that exposure to certain pharmaceuticals results in abnormal development and reproduction in fish and other wildlife, even at very low levels.
 - The antidepressant Fluoxetine delayed development of young Western Mosquitofish (*Gambusia affinis*).¹
 - Increased numbers of male fish have been associated with pharmaceuticals in ocean waters in Orange County.²
- With the advance of technology and testing, some waterways that supply drinking water have been reported to have trace levels of pharmaceuticals.

Is the No Drugs Down the Drain campaign a long-term solution?

- Agencies throughout the state are working together to produce a long-term solution to the problem of properly disposing of unwanted medication. Senate Bill 966, passed in 2007, holds promise for the development of safe, legal disposal programs throughout the state. The California Integrated Waste Management Board is currently working to develop a long-term solution.

Why don't pharmacies have collection bins for unwanted and expired medication?

- Drug Enforcement Administration regulations prohibit the collection of controlled substances such as codeine, morphine, sudafedrin and narcotics without law enforcement involvement.
- Some pharmacies collect non-controlled substances, such as antibiotics and over-the-counter medicine.
- Agencies are working to find a way to allow permanent collection sites for all pharmaceuticals.

What is done with the medication after collection events?

- The medications are incinerated in regulated facilities to ensure that they are completely destroyed.

What should I do with unwanted or expired medication in the future?

- You can make a world of difference by following prescriptions as directed, and then disposing of your unused portions properly.
- Regularly check the www.NoDrugsDownTheDrain.org site for updated information on local disposal options and collection events.
- Remember: No Drugs Down the Drain Please!

1 Black, M.C., Rogers E.D., and Henry, T.B., 2005. Endocrine Effects of Selective Serotonin Reuptake Inhibitors (SSRIs) on Aquatic Organisms. Abstract

available at

<http://es.epa.gov/ncer/publications/meetings/8-23-2005/abstract/black1.html>.

2 Irwin, M., Reyes, J., Steinert, S., Hwang, W., Armstrong, J., Sakamoto, K., Kelley, K. and Schlenk, D., 2005. Relationships between reproductive endpoints measured in flatfish collected near an outfall in Orange County, California. Abstract available at <http://abstracts.co.allenpress.com/pweb/setac2005/category/?ID=57549>

NO DRUGS DOWN THE DRAIN

Key Media Messages 07/25/08

- This statewide campaign, called No Drugs Down the Drain, is spotlighting the week of October 4th-11th to educate people—young and old—to make sure they dispose of their medicine properly and to keep it out of the toilet. Here's the message: Medication does not belong in the wastewater system. Go to www.NoDrugsDownTheDrain.org for local disposal options.
- At one time, prior to evidence that pharmaceuticals are present in creeks, bays and oceans, doctors and pharmacists often recommended that medication be disposed of down the toilet to protect family members and pets from accidental poisoning. Now, water pollution prevention and health professionals understand the negative impact pharmaceuticals can have on the environment. Today flushing is NOT considered proper disposal.
- The presence of pharmaceuticals in waterways has been linked to skewed gender ratios of fish* and intersex characteristics where male fish display female traits.**
**such as off the coast of Orange County. **such as in Lake Mead, the Potomac River and Boulder Creek (see reference section below)*
- Studies show that most people *unknowingly* discard of medications improperly. While flushing drugs does not account for all pharmaceutical pollution in waterways, wastewater treatment agencies like ours know we can correct these disposal-related actions, both through education and by providing safe, free medication disposal options.
- With drug sales doubling in the last five years—outpacing population growth*—pharmaceutical waste has emerged as an important environmental and safety issue. While some pharmaceuticals enter the environment via normal human excretion, much is via direct disposal such as having been flushed down the toilet or poured down the drain. **Kaiser Family Fdn., Oct. 2004*
- Agencies, like ours, throughout the state are working together to produce a long-term solution to the problem of properly disposing of unwanted medication. Senate Bill 966, passed in 2007, holds promise for the development of safe, legal disposal programs throughout the state.

Additional messages

- Children's safety is a critical component of safe medicine disposal. While many people are inappropriately flushing and dumping unwanted medicine, others keep pharmaceuticals around in medicine cabinets because they don't know what to do with them. This can be hazardous. More than half of all calls to US poison control centers are pharmaceutical exposures; in 2004, 42% of these involved children under age 6.* **American Association of Poison Control Centers*

- Many local agencies are hosting disposal events. All No Drugs Down the Drain events are FREE—the goal of these events is to build awareness among Californians about this important issue and to give them an opportunity to get rid of unwanted medicine.
- For more information about local disposal options, visit NoDrugsDownTheDrain.org
- [If asked about AP study/pharma in drinking water] Although that story grabbed big headlines, the concentrations of medicine detected were so small that someone would need to drink the equivalent of 120 Olympic size swimming pools to get a single dose.
- [Continuing on pharma found in drinking water] The reason these trace amounts of pharmaceuticals have been detected at all is because of improvements in technology. Water professionals now—in some cases—have access to information that can detect concentrations as low as a tablespoon in the Mississippi River. There is no reason to believe that pharmaceuticals in the water is a new issue; it's simply that we can now analyze water to extremely low concentrations.

References

- Orange County/Southern California
 - Altered gender ratios and egg precursor protein in male testes (vitellogenin)
 - <http://articles.latimes.com/2005/nov/14/local/me-fish14>
- Boulder Creek. CO
 - Altered gender ratio and egg precursor protein in male testes (vitellogenin)
 - http://bcn.boulder.co.us/basin/topical/haa/CU_vajda.html
- Potomac River
 - Presence of immature eggs in male testes
(Blazer, et al. 2007. Intersex (Testicular Oocytes) in Smallmouth Bass from the Potomac River and Selected Nearby Drainages. *Journal of Aquatic Animal Health* 19:242–253.)
- Lake Mead
 - Endocrine disruption, reproductive tract abnormalities
 - <http://pubs.usgs.gov/fs/2006/3131/>
- SB 966
 - http://leginfo.ca.gov/pub/07-08/bill/sen/sb_0951-1000/sb_966_bill_20071012_chaptered.pdf

- Kaiser Family Foundation.
 - Prescription Drug Costs. Available at http://www.kaiseredu.org/topics_im.asp?id=352&parentID=68&imID=1
- American Association of Poison Control Centers
 - <http://www.aapcc.org/dnn/NPDS/AnnualReports/tabid/125/Default.aspx>

PRESS ADVISORY

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California Senate Proclaims October 4-11 No Drugs Down the Drain Week to Educate People About Pollution Caused by Flushing Medication
Events in Northern and Southern California Highlight Need to Dispose of Pills Properly

BACKGROUND: Everyday in California, unwanted or expired medicine is disposed of down the toilet and flushed medication ends up in local waterways. As chemical analysis has improved, wastewater treatment agencies now can detect even trace amounts of pharmaceuticals in rivers, bays and oceans that may have impacts to fish and wildlife. As a result, it is now necessary to work with communities across California to educate people about keeping medication out of the toilet and disposed of safely.

To deal with this pollution issue, the California Senate recently proclaimed October 4-11 “No Drugs Down the Drain Week.” A coalition of local, regional, state and federal agencies is conducting a one-week statewide effort to remind residents that flushing down the toilet and/or pouring down the sink are not acceptable means of medicine disposal. During this week the public will have access to various proper disposal options, with local agencies providing local recommendations such as special events, ongoing programs and trash disposal. Disposal options are available on-line at www.nodrugsdownthedrain.org.

WHAT: Events at pharmaceutical collection sites including drop-offs will be held simultaneously in Palo Alto and Los Angeles to kick-off No Drugs Down the Drain Week.

VISUALS: Piles of collected pills & medicine collection bins

SPEAKERS:

Palo Alto	Los Angeles
Joe Simitian,	Zev Yaroslavsky
California State Senator	Los Angeles County Supervisor, Third District

Alexis Strauss,
Director, Water Program,
US EPA Region IX

Cynthia Ruiz,
City of Los Angeles,
Public Works Board President

Steve Maguin,
Chief Engineer & General Manager
Los Angeles County Sanitation Districts

Frances Spivy-Weber
State Water Resources Control Board
Member

PALO ALTO
EVENT:

10:30 a.m. on Thursday, October 2
Palo Alto Baylands on Embarcadero Rd.
(adjacent to the Lucie Evans Baylands Nature Interpretive Center)

LOS ANGELES
EVENT:

9:30 a.m. on Thursday, October 2
City of LA S.A.F.E. Collection Center @ UCLA
550 Charles E. Young Drive West