

California Regional Water Quality Control Board
San Diego Region
David Gibson, Executive Officer



Executive Officer's Report
March 9, 2016

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The March report for the Tentative Schedule of Significant NPDES Permits, WDRs, and Actions; Agenda Items Requested by Board Members; and the attachments noted above are included at the end of this report.

Part A – San Diego Region Staff Activities

1. Personnel Report

Staff Contact: Lori Costa

The Organizational Chart of the San Diego Water Board can be viewed at http://www.waterboards.ca.gov/sandiego/about_us/org_charts/orgchart.pdf

Departures

Aaron Buck, a Scientific Aid in the Land Discharge Unit, left State service on January 29, 2016. Aaron is currently pursuing a Doctor of Business Administration degree from Argosy University.

Recruitment

The recruitment process has begun to fill a Scientific Aid position in the Central Cleanup Unit.

2. File Records Requests

Staff Contact: Lori Costa

Per the California Public Records Act, when a member of the public requests to inspect a public record or obtain a copy of a public record, each agency shall, within 10 days, determine whether the request seeks copies of disclosable public records in the possession of the agency and shall promptly notify the person making the request of the determination and the reasons therefor. Once the requested records are ready for review, the records coordinator schedules a date and time for the requestor to review the files.

The San Diego Water Board receives most of these requests by email (rb9_records@waterboards.ca.gov) and some by fax. From August 2015 – January 2016, the records coordinator received 323 records requests.

3. Inaugural Issue of the SWAMP Newsletter (*Attachment A-3*)

Staff Contact: Betty Fetscher

The Surface Water Ambient Monitoring Program (SWAMP) just launched a quarterly newsletter to apprise the public of the latest surface water ambient monitoring news from the State and Regional Boards (http://www.waterboards.ca.gov/water_issues/programs/swamp/newsletter/; (see Attachment A-3). The 2-page newsletter highlights major findings from SWAMP-funded projects and milestones in the development of monitoring tools and resources. Each issue will encompass several (approx. 4-6) summaries with key data graphics and photographs, as well as links to larger (1-page) write-ups with more detailed information. The current (Winter 2016) issue covers the following topics:

- Approaches for optimizing the sensitivity of toxicity bioassays
- Development of a cyanobacteria/cyanotoxins monitoring support and assessment program for California
- A “Data Navigator” data-viewing tool developed in the Central Coast Region
- Findings from a statewide survey on mercury levels in fish-eating birds

New issues of the newsletter will be announced via email. Interested parties can subscribe to the SWAMP Water Quality Monitoring email list (see link below, under the Water Quality tab) to receive the announcements:

http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml

4. Status Update – Public Meeting at Lake San Marcos

Staff Contact: Sarah Mearon

The San Diego Water Board held a public meeting for Lake San Marcos residents and other stakeholders to provide a project update and present information on the recently submitted Draft Remedial Investigation/Feasibility Study (RI/FS) Report on nutrient impairment of the lake. The meeting was held at the Lake San Marcos Community Pavilion on January 25, 2016. The RI/FS Report provides a summary of the data collection efforts to date, identifies causes of nutrient impairment in the lake and in the watershed, and evaluates and recommends cleanup alternatives. Public comments were accepted on the Report between January 26 and February 26, 2016.

Lake San Marcos is impaired by excess phosphorus and nitrogen that result in seasonal lake stratification, excess algal growth, and low dissolved oxygen. Both the lake and Upper San Marcos Creek, which flows into the lake at its north end, are included on the California 303(d) list of impaired water bodies. The lake owner, Citizens Development Corporation (CDC), and four public agencies (San Diego County, City of San Marcos, City of Escondido, and Vallecitos Water District) are working cooperatively to address a Water Board order to identify the causes of nutrient impairment in the lake and watershed and to identify cleanup alternatives and/or areas requiring additional investigation. The RI/FS Report serves as the nutrient impairment investigation report submittal required by the order.

Lead members of the technical team representing CDC and the four public agencies presented the major findings of the Report at the meeting. The lead members presented potential cleanup options for the lake and watershed and summarized the advantages and disadvantages of each option based on computer simulations, costs, and other factors. The presentation concluded with a description of the recommended cleanup options for the lake and watershed. These options consist of lake aeration, alum addition, periodic lake water removal, stream restoration within the watershed, and enhanced runoff controls. The lead members also provided examples of successful implementation of similar remedies in other southern California lakes. Gita Kapahi of the State Water Resources Control Board Office of Public Participation facilitated the meeting. Sarah Mearon of the Southern Cleanup Unit, the case manager, provided a summary of the project timeline, including opportunities for public comment. Laura Lavalley of the Division of Water Rights answered questions on the water right license for the lake.

Over 150 people attended the meeting, including Lake San Marcos residents, local agency representatives, CDC, who holds the water right license to the lake, and other stakeholders. The meeting attendees were very interested in the Report findings and the presentation was well-received. Many technical questions regarding the feasibility, timeline for implementation, and effectiveness of the proposed cleanup alternatives were asked and answered by the technical team during the question-and-answer period. Other discussion topics included risk to recreational lake users, dam operations, and the monitoring strategy to be adopted following remedy implementation.

The technical team presentation is available for review online on Geotracker at http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000003261. The San Diego Water Board will hold another public meeting once the proposed remedies have been approved.

Part B – Significant Regional Water Quality Issues

1. Total Dissolved Solids in San Diego Region Waters (*Attachment B-1*)

Staff Contact: Jeremy Haas

Total dissolved solids (TDS) in surface and ground waters include minerals, salts or metals dissolved in a given volume of water that pass through a 45 micron (0.45mm) filter. The rest are “suspended” solids. TDS is used as an indicator of water quality. The salts and other substances that comprise local TDS concentrations can affect the suitability of water for agriculture, drinking, and aquatic habitat. Since treatment processes to recycle wastewater increase TDS concentrations, Board Member Dr. Betty Olson asked staff at the February 2016 San Diego Water Board meeting whether TDS was generally a significant issue in San Diego region waters. In response, staff provides Attachment B-1, which is a brief fact sheet summarizing water quality issues in the region associated with TDS.

Some key issues involving TDS in the region include:

- Local TDS concentrations are a function of geology and both natural and anthropogenic water sources.
- Existing surface and ground water quality objectives are, in many places, considered impediments to recycled water use.
- Recent studies have found elevated TDS concentrations are a main stressor to biological health in freshwater streams.

Imported water use has raised TDS concentrations in surface waters and shallow aquifers, and that effect could increase with more recycled water use.

2. San Diego Bay Shipyard Sediment Dredging Completed

Staff Contact: Charles Cheng

BAE Systems, Inc. reported in early February that all dredging and sand covering operations within its San Diego Bay leasehold have been completed, and the dredging equipment demobilized. With the cessation of dredging at the BAE Systems leasehold, all dredging activities within the San Diego Bay Shipyard Sediment Site is complete pending confirmation sampling. Dredging activities were performed in accordance with Cleanup and Abatement Order (CAO) No. R9-2012-0024 and Waste Discharge Requirements Order No. R9-2013-0093. The sediment site is comprised of near-shore areas within the NASSCO Shipyard leasehold to the south, and within the BAE Systems, Inc. Shipyard leasehold to the north. Dredging activities at the NASSCO Shipyard were completed in March 2014. Dredging activities at the BAE Systems, Inc. Shipyard commenced in September 2014.

Discharge of dredge decant water to City of San Diego's sewer system has ceased and the sewer discharge permit terminated. The only remaining work is the completion of rock revetment along the shoreline by the Sediment Management Area. This work does not involve sediment dredging. Final project completion, including pavement repair and fence restoration, is planned for March 18, 2016. BAE Systems, Inc. will prepare and submit to this agency a Remedial Action Plan Implementation Report within 90 days of completion of remediation. The dischargers must provide a demonstration that sediment quality cleanup levels prescribed in the CAO have been achieved for the entire Shipyard Sediment Site. The next phase of the project is implementing post-remedial monitoring in accordance with the Post Remedial Monitoring Plan.¹

3. Recycled Water Fill Stations Online!

Staff Contacts: Fisayo Osibodu and Alex Cali

Olivenhain Municipal Water District (Olivenhain) and Padre Dam Municipal Water District (Padre Dam) are two agencies operating recycled water fill stations in the San Diego Region. San Diego Water Board staff members Mr. Fisayo Osibodu and Mr. Alex Cali visited the recycled water fill stations operated by Olivenhain and Padre Dam on February 8, 2016. The San Diego Water Board enrolled both fill stations in the State Water Board's General Waste Discharge Requirements for Recycled Water Use.² The nine agencies with fill stations³ provide an avenue for their customers to obtain recycled water that can be used in place of potable water for landscape irrigation, construction uses, street sweeping, sewer flushing, pressure testing of recycled water and gas pipelines, etc.

Olivenhain Recycled Water Fill Station



Examples of Recycled Water Containers



Dispenser at Fill Station

¹http://www.waterboards.ca.gov/sandiego/water_issues/programs/shipyards_sediment/docs/post_remedial_work_plan.pdf

² Statewide General Order WQ-2014-0090-DWQ:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0090_dwq_revised.pdf

³ Enrolled recycled water fill stations:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/ground_water_basin/recycled_subsurface/recycled_water_subsurfacedisposal_programs.shtml

Olivenhain⁴ operates a residential fill station serving residential customers who can pick up recycled water using containers under 300 gallons in capacity. Recycled water transported from the fill stations can be used at residences for irrigating landscapes and vegetation, and washing hard surfaces as long as the activity does not create runoff discharge into the MS4. Padre Dam⁵ shut down its residential fill station during the rainy season and will be reopen the fill station in the near future. Padre Dam also has several commercial recycled water hydrants within its service area where commercial customers can fill up trucks with recycled water. The commercial recycled water hydrants serve street sweepers, water hauling trucks, and Padre Dam's vactor trucks which supply water for flushing sewer mains.

Padre Dam Recycled Water Fill Station



Vactor Truck for Sewer Flushing



Commercial Hydrant

Operation of the recycled water fill stations will increase the region's resiliency during the drought, lessen dependence on imported water, and is consistent with the San Diego Water Board Practical Vision "Strategy for Achieving a Sustainable Local Water Supply."⁶

⁴ Additional information regarding Olivenhain's fill station is available online at: <https://www.olivenhain.com/component/content/article/3-news/340-residential-recycled-water-fill-station>

⁵ Additional information regarding Padre Dam's fill station is available online at: <http://www.padredam.org/246/Recycled-Water-Fill-Stations>

⁶ Practical Vision Sustainable Water Supply Chapter: http://www.waterboards.ca.gov/sandiego/water_issues/Practical_Vision/docs/PV_5_Sustainable_Local_Water_Supply_Dec2013.pdf

4. Summary of Violations and Enforcement Actions in 2015

Staff Contact: Chiara Clemente

The purpose of this report is to summarize violation and enforcement data available to the public from the Water Boards' [CIWQS](#),⁷ [SMARTS](#),⁸ and/or [Geotracker](#)⁹ databases and address a request by Board Member Warren at the December 2015 Board meeting.

Background

All Water Board staff track compliance and enforcement work using one or more of these three databases. According to the State Water Board's Enforcement Policy, all violations are to be entered within 10 days of discovery of the violation; and all enforcement actions must be entered within 20 days of the date of the enforcement action.

Site cleanup, Department of Defense facilities, and other ground water applications manage project compliance using the Geotracker database. The SMARTS database is used to track construction and industrial storm water enrollment, inspection, violation, and enforcement actions. The CIWQS database is used for tracking work (e.g. permitting, inspections, violations, enforcement, billing, etc.) from all other surface water discharge programs (e.g. certifications and NPDES permits). Although each of the databases has different query and report tools, the CIWQS database has the capability of generating multiple reports from data entered into either SMARTS and/or CIWQS. Geotracker information, however, cannot be queried using CIWQS. For this reason, staff using Geotracker also enter all formal enforcement actions into CIWQS.

Using the CIWQS public reports, the public can review data entered and drill down into specific compliance details. The State Water Board staff use these reports for generating [Annual Performance Reports](#).¹⁰ Regional Board staff use these reports to generate monthly Executive Officer Reports, which are also provided on our [website](#)¹¹ with hyperlinks to many of the individual enforcement actions.

Below is a summary of violations and enforcement actions in the region for calendar year 2015 from data generated using the CIWQS public reports.

CIWQS Violation Report Web Page

⁷ California Integrated Water Quality System, http://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml

⁸ Storm Water Multiple Application and Report Tracking System, <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>

⁹ <https://geotracker.waterboards.ca.gov/>

¹⁰ http://www.waterboards.ca.gov/about_us/performance_report_1415/index.shtml

¹¹ http://www.waterboards.ca.gov/sandiego/water_issues/programs/enforcement/index.shtml

Summary of Violations in 2015

In 2015, the San Diego Water Board staff confirmed approximately 435 surface water violations in CIWQS and SMARTS¹² with an additional 150 reported sanitary sewer overflows (SSO) that are considered potential violations. Table 1 shows the facilities with the most confirmed violations.

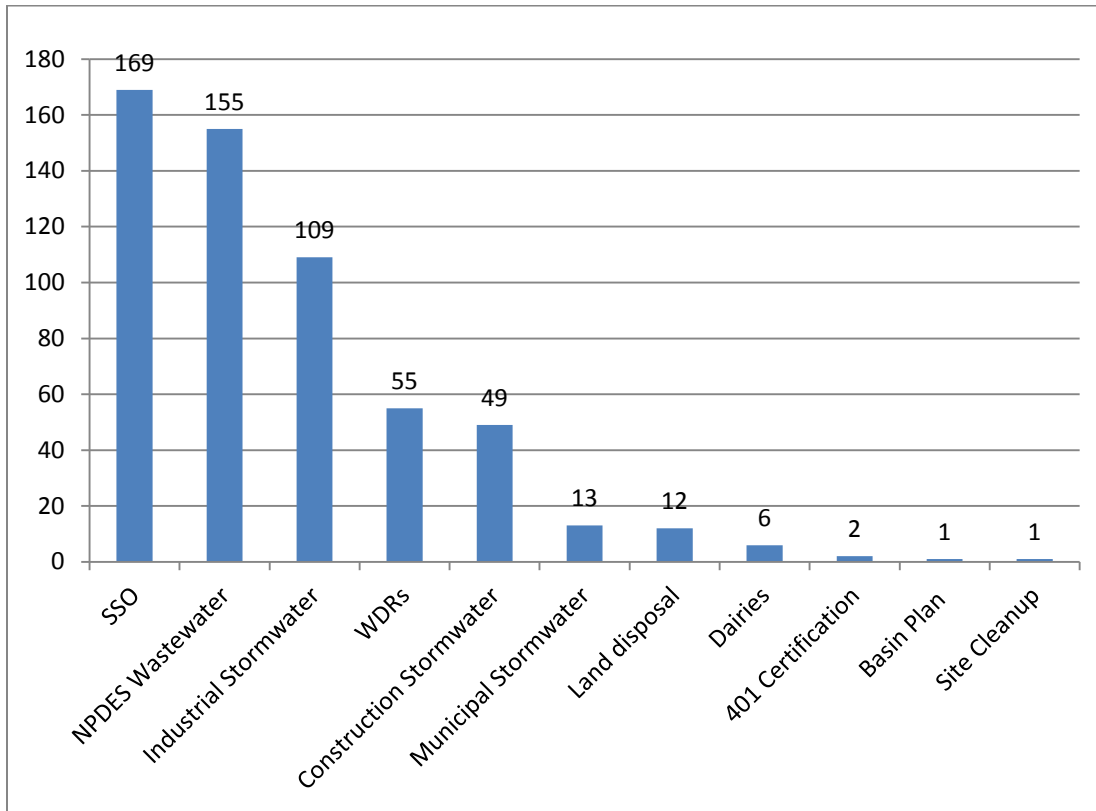
Table 1. San Diego Region Facilities with the Most Reported and Confirmed Violations in 2015

Facility	Agency	Number of Violations
1. US Naval Base Coronado (NBC)	US Navy Southwest Division	38
2. South Bay WRP	San Diego City Metropolitan Wastewater Dept.	24
3. South Bay International WTP	IBWC-US & Mexico Section	20
4. La Salina WWTP, Oceanside Ocean Outfall	Oceanside City	14
5. Santa Maria WWTP	Ramona MWD	10
6. 4-S Ranch WRF	Olivenhain Municipal Water District	9
7. Oceanside Ocean Outfall	City of Oceanside	9
8. Point Loma WWTP & Ocean Outfall	San Diego City Metropolitan Wastewater Dept	8
9. El Camino Real Road Widening Project	City of Carlsbad	8
10. SOCWA 3A RP	SOCWA-San Juan Creek Ocean O/F	8

Including the 150 potential SSO violations, the majority of surface water violations classified were related to SSOs (30%), followed by NPDES wastewater (27%) and industrial storm water (19%).

¹² Geotracker is not currently configured to track violations.

Figure 1. Surface Water Violations by Program in 2015



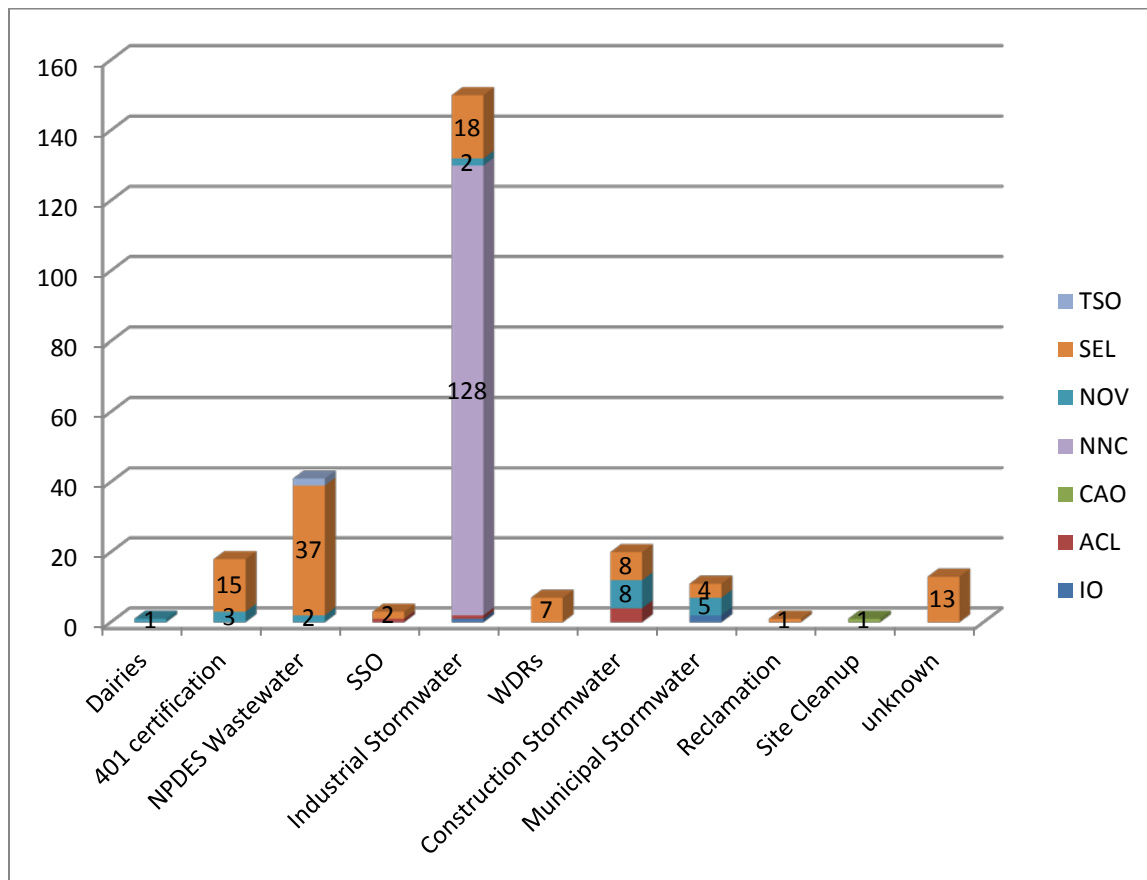
Summary of Enforcement Actions

Most of the verified violations in CIWQS and SMARTS (335 or 77%) were linked to one or more enforcement actions. The majority of enforcement actions were Notices of Non-Compliance (48%), followed by Staff Enforcement letters (34%), and Notices of Violation (8%).

In terms of formal enforcement actions, in 2015 the San Diego Water Board issued one Cleanup and Abatement Order (CAO) and one amendment to a CAO, two Time Schedule Orders, three investigative orders, and six Administrative Civil Liability (i.e. monetary penalty) actions; one of which was a mandatory penalty.

Figure 2 depicts the type and total number of enforcement actions reported into CIWQS and SMARTS, by program.

Figure 2. Enforcement Actions by Program in 2015



Conclusion

Although the data summarized above can be used for general trend analyses, it does not reflect the level of effort Water Board staff have put into enforcement priorities, and it is certainly not reflective of environmental outcomes. Additionally, the number of violations reported is not necessarily correlated to the severity of the environmental impacts from those violations. Likewise, mandatory actions, such as the Notices of Non-Compliance, can skew the enforcement response efforts. Staff will continue to strive to develop more meaningful reports, focused on environmental outcomes.

5. Enforcement Actions for January 2016 (Attachment B-5)

Staff Contact: Chiara Clemente

During the month of January 2016, the San Diego Water Board issued two Notices of Violation and sixteen Staff Enforcement Letters. A summary of each enforcement action taken is provided in the Table below and on the Board's [website](#)¹³ with hyperlinks to many of the individual enforcement actions. The State Water Board's [Enforcement Policy](#) contains a brief description of the kinds of enforcement actions the Water Boards can take.

¹³ http://www.waterboards.ca.gov/sandiego/water_issues/programs/enforcement/index.shtml

Additional information on violations, enforcement actions, and mandatory minimum penalties is available to the public from the following on-line sources:

State Water Board Office of Enforcement webpage:

http://www.waterboards.ca.gov/water_issues/programs/enforcement/

California Integrated Water Quality System (CIWQS):

http://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml

State Water Board GeoTracker database: <https://geotracker.waterboards.ca.gov/>

6. Sanitary Sewer Overflows (SSOs)—December 2015 (*Attachment B-6*)

Staff Contact: Dat Quach

State agencies, municipalities, counties, districts, and other entities (collectively referred to as public entities) that own or operate sewage collection systems report sanitary sewer overflow (SSO) spills through an on-line database system, the *California Integrated Water Quality System* (CIWQS). These spill reports are required under the [Statewide General SSO Order](#)¹⁴, the [San Diego Region-wide SSO Order](#)¹⁵, and/or individual National Pollutant Discharge Elimination System (NPDES) permit requirements. Some federal entities¹⁶ report this information voluntarily. The SSO reports are available to the public on a real-time basis at the following State Water Board webpage:

https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso_main

¹⁴ State Water Board Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* as amended by Order No. WQ 2013-0058-EXEC, *Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*.

¹⁵ San Diego Water Board Order No. R9-2007-0005, *Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region*.

¹⁶ Marine Corp Base Camp Pendleton reports sewage spills to CIWQS as required by its individual NPDES permit, Order No. R9-2013-0112, NPDES Permit No. CA0109347, *Waste Discharge Requirements for the Marine Corps Base, Camp Pendleton, Southern Regional Tertiary Treatment Plant and Advanced Water Treatment Plant, Discharge to the Pacific Ocean via the Oceanside Ocean Outfall*. The U.S. Marine Corps Recruit Depot is not required to report sewage spills but does so voluntarily. The U.S. Navy is not required to report sewage spills but does voluntarily fax in its sewage spill reports. This report does not include sewage spills from U.S. Navy sewage collection systems because this information is not available through CIWQS.

The information below summarizes SSO spills in the San Diego Region reported through the CIWQS database during **December 2015**:

Sewage Collection Systems	Private Laterals
<ul style="list-style-type: none"> • 19 spills reported, totaling 119,686 gallons 	<ul style="list-style-type: none"> • 15 spills reported, totaling 2,090 gallons
<ul style="list-style-type: none"> • 1 spill totaling 6,464 gallons reached surface waters or a tributary storm drain 	<ul style="list-style-type: none"> • 2 spills, totaling 671 gallons reached surface waters or a tributary storm drain

Details on the reported SSOs are provided in two attached tables titled:

- Table 1: December 2015 Summary of Public and Federal Sanitary Sewer Overflows in the San Diego Region.
- Table 2: December 2015 Summary of Private Lateral Sewage Discharges in the San Diego Region.

An SSO is any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater (collectively referred to as SSO spill) from a sanitary sewer system used to collect and convey sewage wastewater to a treatment plant. SSO spills often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease. SSO spills can pollute surface and ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. SSO spill impacts may include the closure of beaches and other recreational areas, inundated properties, and polluted ocean waters, rivers and streams.

Additional information about the San Diego Water Board sewage overflow regulatory program is available at http://www.waterboards.ca.gov/sandiego/water_issues/programs/sso/index.shtml.

Part C – Statewide Issues of Importance to the San Diego Region

No Report

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

Significant NPDES Permits,
WDRs, and Actions of the
San Diego Water Board

March 9, 2016

APPENDED TO EXECUTIVE OFFICER'S REPORT

DATE OF REPORT
March 9, 2016

TENTATIVE SCHEDULE
SIGNIFICANT NPDES PERMITS, WDRS, AND ACTIONS
OF THE SAN DIEGO WATER BOARD

Action Agenda Item	Action Type	Draft Complete	Written Comments Due	Consent Item
April 13, 2016 <i>Meeting Cancelled</i>				
May 11, 2016 <i>San Diego Water Board</i>				
Workshop on the Regulation of Irrigated Lands in the San Diego Region (<i>Pulver</i>)	Workshop	80%	NA	NA
Revised Master Reclamation Permit for the Ramona Municipal Water District, Santa Maria Wastewater Treatment Plant, City of Ramona, San Diego County (<i>Cali</i>)	Revised Master Reclamation Permit	95%	4-Apr-16	Yes
Presentation of Water Quality Conditions in the San Mateo and San Diego River Watersheds (<i>Fetscher / Loflen</i>)	Information Item	NA	NA	NA
June 22, 2016 <i>San Diego Water Board</i>				
Update on the Status of the Water Quality Improvement Plans and Educational Programs as Required by the Regional MS4 Permit (<i>Arias</i>)	Information Item	50%	TBD	No
Workshop on the Clean Water Act Sections 303(d) and 305(b) Integrated Report (<i>Yu</i>)	Workshop	10%	NA	NA

Agenda Items Requested by Board Members

Requested Agenda Item	Board Member	Status
June 24, 2015		
Workshop on low dissolved oxygen conditions in the San Diego River	Strawn	
Information Item regarding high levels of naturally occurring elements in groundwater when they interact with other issues.	Olson	
August 12, 2015		
Information item regarding data supporting Basin Plan Water Quality Objectives	Olson	
September 9, 2015		
Tour of USN laboratory	Olson	To be rescheduled
November 18, 2015		
Conduct Series of Outreach Meetings with local Water Districts, Elected Officials, and City Managers throughout the Region.	Abarbanel	2016 Outreach Meetings are scheduled and ongoing.
December 16, 2015		
Annual Enforcement Summary	Warren	
Environmental Justice Outreach Update	Morales	
Wetlands Recovery Project Update	Abarbanel	
February 10, 2016		
Update on Lake Mission Viejo Project	Olson	
Update on Educational Roles that cross watersheds	Abarbanel	
Meeting with Senator Hertzberg to discuss sustainable water supplies	Abarbanel	Meeting to be scheduled in April or May, schedules permitting.

Welcome to the first issue of the SWAMP Newsletter. Every few months we plan to bring you the latest surface water ambient monitoring news from the State Water Resources Control Board. We welcome your feedback at swamp@waterboards.ca.gov.

Toxicity Testing

Are you requiring the right test organism and temperature?

The [Stream Pollution Trends \(SPoT\)](#) Monitoring Program conducted additional toxicity tests at SWAMP sites to study how the use of different test species and temperatures can influence monitoring results. SPoT found different patterns of toxicity based on the test species used, highlighting the value of using more than one organism to detect multiple pesticides. Further SPoT study findings show that the standard protocol test temperature of 23°C can dramatically underestimate pyrethroid toxicity in California watersheds. [⇒ Learn More](#)

Water Body	% Lethality to Test Organism	
	<i>H. azteca</i>	<i>C. dilutus</i>
Alisal Slough	62	100
Chualar Creek	100	27
Main St. Ditch	6	8
Orcutt Creek	50	52
Oso Flaco Creek	100	28
Quail Creek	100	98
Rec Ditch III	70	96
Solomon Creek	2	100
Tembladero Slough	41	17

Toxic Algae

SWAMP Responds to an Emerging Problem

Cyanobacterial blooms are in the news. Warm temperatures, increased nutrients, and other factors favor these toxin-producing species. Toxic blooms are threatening swimming safety and drinking water supplies and causing wildlife and domestic animal deaths.



SWAMP is initiating a cyanobacteria monitoring support and assessment program for California that will use satellite imagery to track blooms. The [California CyanoHAB Network \(CCHAB\)](#) coordinates response efforts by agencies, organizations, and tribes, and is updating guidance on how to respond to blooms. Together, they will bring this information and more to a new portal on the California Water Quality Monitoring Council's [My Water Quality website](#). [⇒ Learn More](#)

Toxicity Test Species SPoTlight

Midge larvae – *Chironomus dilutus*

Of the common toxicity test organisms, chironomids are the most sensitive to newer classes of pesticides such as the neonicotinoid imidacloprid and fipronil. Use of both classes of pesticides is increasing in California. [⇒ Learn More](#)



SWAMP Strives to Improve Water Board Monitoring Efforts

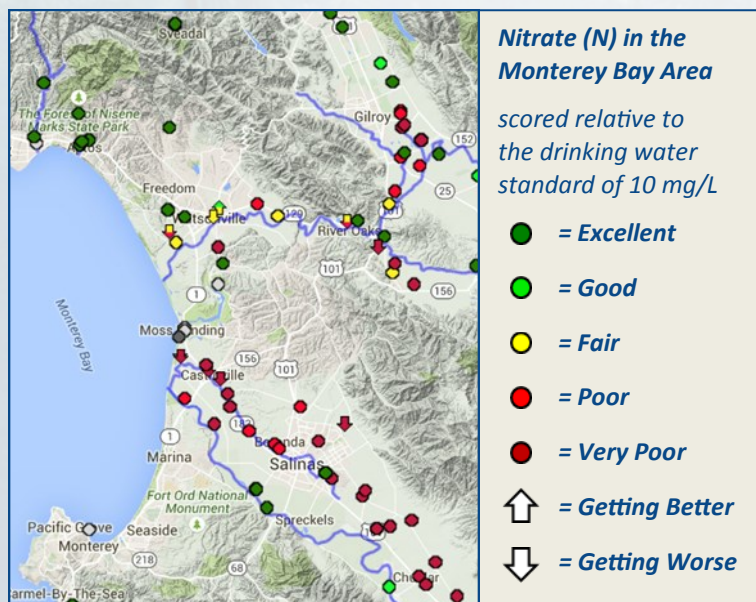
How good are the data that you rely on to make decisions? SWAMP aims to improve the usefulness of monitoring and the quality of resulting data generated by Water Board programs.

See what is in the works for your ambient monitoring program as SWAMP promotes question-driven science! [⇒ Learn More](#)

The CCAMP Data Navigator

A tool for better decision making

The California Central Coast Region's Data Navigator turns data into information at www.ccamp.org. This data viewing tool can serve as a model for how to make online data more accessible, useful and meaningful. Sites are color scored according to selected thresholds. The Data Navigator shows data in map, graph, and table formats, and provides access to statistical analyses, trends in concentration and load, documentation on thresholds and methods, interpretive map layers and other useful information. These web tools tell "data stories" to help staff make meaningful decisions. ⇒ [Learn More](#)



Statewide Survey Finds Fish-Eating Birds At Risk from Mercury in Many of California's Lakes



SWAMP has released findings from the first statewide survey of contaminants in wildlife from California waters. The findings are summarized in a [fact sheet](#), technical report, [Estimating Exposure of Piscivorous Birds and Sport Fish to Mercury in California Lakes Using Prey Fish Monitoring - A Predictive Tool for Managers](#), and a journal article in Environmental Science and Technology. The study:

- Evaluated mercury risk to wildlife (fish-eating birds) in a representative sample of California lakes,
- Documented correlations between concentrations of mercury in birds and fish and developed a [spreadsheet tool](#) that can be used to estimate risk to birds in lakes where fish data are available, and
- Established methods for monitoring birds and fish in lakes to estimate mercury risk to wildlife.

SWAMP Calendar

OIMA Brown-bag Series in Water Quality & Data Analysis

January 28 and last Thursday of each month, 12:00–12:30 p.m., CalEPA Headquarters Building in Sacramento. Attend in person or online. More information and recorded seminars [here](#).

Quality Assurance Roundtable

Established to ensure that an appropriate level of planning for data acquisition and analysis is applied consistently throughout the State and Regional Water Boards. March 16 and June 15. More information [here](#).

Water Board Data Fair

A forum to enhance the availability and integration of the Water Boards' key datasets. March 18. For more information, contact Jarma Bennett at jarma.bennett@waterboards.ca.gov or (916) 341-5532.

Clean Water Team Offers Free 2016 Calendar (Online or PDF)

Don't miss major water-related events and more! Get your copy [here](#).

SWAMP Calendar (continued)

Water Board Code-a-thon

Focused on creating apps, visualizations, and other tools to better harness available data currently found in CEDEN, SMARTS and CIWQS databases. The event will also kick-off the first phase of the Water Boards' open data initiative. April 18-22, 10:00 am. For more information, contact Jarma Bennett at jarma.bennett@waterboards.ca.gov.



TOTAL DISSOLVED SOLIDS IN THE SAN DIEGO REGION



February 2016
San Diego Water Board

Total dissolved solids (TDS) contain minerals and organic molecules that provide *benefits* such as nutrients or *contaminants* such as toxic metals and organic pollutants. In the San Diego region, sulfate and chloride may be drivers of observed TDS effects on biological condition scores.

TDS CONCENTRATIONS AFFECT WATER FOR AGRICULTURE, DRINKING AND ECOSYSTEMS

Salts and other substances affect the quality of water used for irrigation or drinking and critically influence aquatic species.

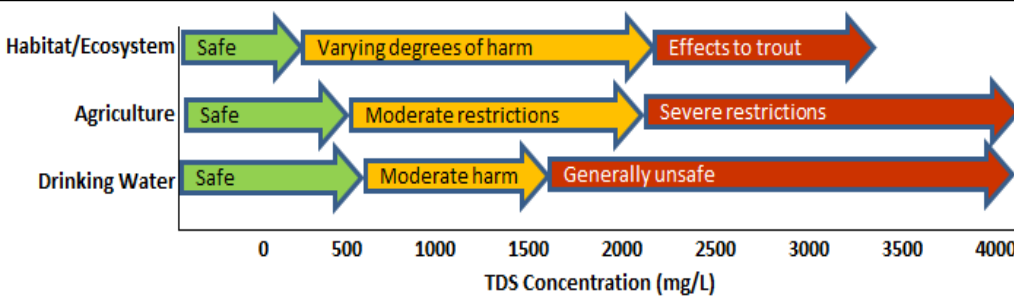
Agriculture: High TDS concentrations in irrigation waters can harm plants directly, or indirectly through adverse effects on soil permeability.

Habitat and Ecosystems: TDS causes toxicity and shifts in aquatic biological communities through increases in salinity, changes in the ionic composition of the water, and toxicity of individual ions. Effects vary between species and life-stages. Every kind of organism has a typical salinity range and ionic composition that it can tolerate.

Drinking Water: TDS is a secondary contaminant for aesthetic and technical effects. Noticeable effects include hardness, deposits, colored water, staining, and salty taste.

KEY ISSUES

- Recent studies found elevated TDS concentrations are a main stressor to biological health in freshwater streams.
- Existing surface and ground water quality objectives are, in many places, considered impediments to recycled water use.
- Imported water use has raised TDS in surface waters and shallow aquifers, and that effect could increase with more recycled water use.
- Localized TDS concentrations are a function of geology and both natural and anthropogenic water sources.



REGIONAL SURFACE WATER MONITORING		
	TDS (mg/L)	
Monitoring Program	Avg	Range
Surface Water Ambient Monitoring Program (SWAMP) (2007-2008)	892	92-3180
SMC (2009-2012)	984	199-6260
MS4 dry-weather flows (2013)	2127	415-8700

Data from [CEDEN](#) (n=138 observations)

TDS AND BIOLOGICAL CONDITION IN SAN DIEGO REGION SURFACE WATERS

A recent [San Diego River assessment](#) found elevated conductivity and pesticides likely responsible for the impacted biological condition at a test site. TDS across multiple months illustrated a causal pathway, and the site's benthic community was dominated by species indicative of saline conditions.

The Southern California Stormwater Monitoring Coalition (SMC) found in 2014, after 5 years of a [regional monitoring program](#), that TDS (with major ions such as sulfate and chloride) and nutrients were the most important contaminants causing poor biological condition in the region.

TDS WATER QUALITY OBJECTIVES (WQO) VARY ACROSS THE REGION:

These concentrations are not to be exceeded more than 10% of the time during any one year period:

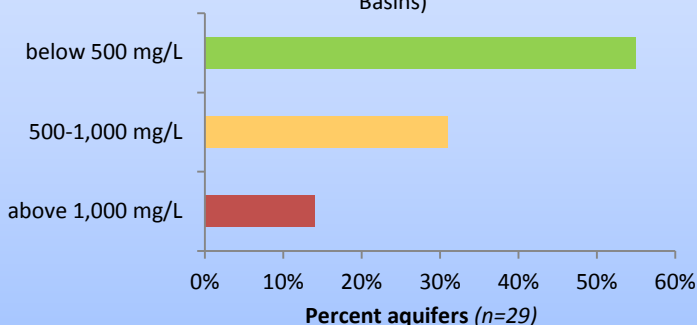
- [Inland Surface Water WQOs](#) range from 300 (upper San Diego River areas) to 2,100 (Tijuana Valley) mg/L.
- [Ground Water WQOs](#) range from 500 to 3,500 mg/L, with a variety of notes anticipating ground water recharge projects, degradation associated with agricultural land use, and potential detailed salt balance studies.

For example, in the San Juan Hydrologic Unit (south Orange County), the surface waters WQO is 500 mg/L everywhere, except 1,000 in the Laguna Hydrologic Area, and ground water WQOs range from 500 – 1,200 mg/L.

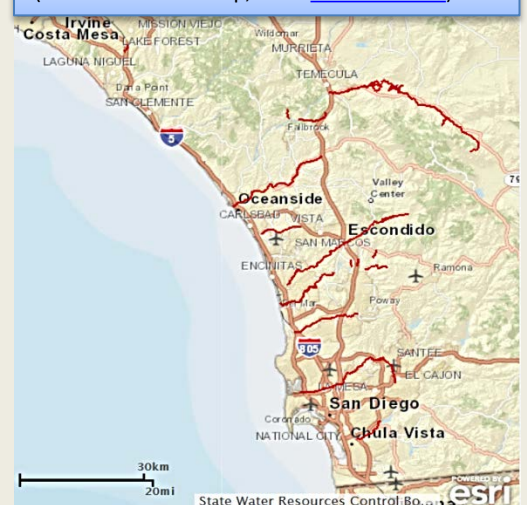
TDS IN REGIONAL GROUNDWATER

[USGS ambient groundwater monitoring](#) in alluvial basins during 2004-2009 found TDS concentrations ranging from 148 to 1,800 mg/L. Samples exceeded the secondary maximum contaminant level of 500 mg/L in 12 of the 24 wells in which it was measured, suggesting treatment to remove TDS is necessary to make the water drinkable and may be necessary to support certain crops.

TDS Concentrations in USGS Alluvial Groundwater study Aquifers (Temecula Valley, Warner Valley, and Alluvial Basins)



TDS IMPAIRS 17 CREEKS IN THE SAN DIEGO REGION (dark red lines in map, from 2010 303d list).



Enforcement Actions for January 2016

Enforcement Date	Enforcement Action	Entity/ Facility/ Location	Summary of Violations and Enforcement	Applicable Requirements/ Order Violated
1/22/2016	Notice of Violation No. R9-2016-0032	OHL USA Inc., Murrieta Creek, Temecula	Inadequate Storm Water Pollution Prevention Plan (SWPPP), deficient implementation of construction storm water best management practices (BMPs), and unauthorized discharges	National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/26/2016	Notice of Violation No. R9-2016-0036	University District Student Housing, Urban Villages San Marcos	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/6/16	Staff Enforcement Letter	Pardee Homes San Diego, Playa Del Sol, San Diego	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/6/16	Staff Enforcement Letter	Brown Field Technology Park, LLC, San Diego	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/8/16	Staff Enforcement Letter	The Boulevard, TR Hale LLC, El Cajon	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/8/16	Staff Enforcement Letter	Fairfield La Mesa LP, Fairfield Luxury Apartments, San Diego	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/11/16	Staff Enforcement Letter	Marine Group Boat Works, National City	Missing and deficient monitoring reports, and deficient implementation of required BMPs	NPDES Order No. R9-2005-0149

Enforcement Actions for January 2016

Enforcement Date	Enforcement Action	Entity/ Facility/ Location	Summary of Violations and Enforcement	Applicable Requirements/ Order Violated
1/11/16	Staff Enforcement Letter	Department of Environmental Health, San Diego County	Failure to investigate and effectively eliminate illicit discharges from the MS4 at Linden Road, Lakeside.	NPDES Municipal Storm Water Permit Order No. R9-2013-0001
1/11/16	Staff Enforcement Letter	7330 Mohawk LLC, Mohawk & Keeney St. Grading Plan, La Mesa	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/11/16	Staff Enforcement Letter	Urban Villages San Marcos, Corner at 2 Oaks Revegetation Project, San Diego	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/13/16	Staff Enforcement Letter	Fairfield Chula Vista LP, Millennia Apartments Lot 4	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/19/16	Staff Enforcement Letter	US Navy Southwest Division, US Naval Base Point Loma	Unauthorized discharge of hydraulic oil and failure to collect a pH sample	NPDES Order No. R9-2014-0037
1/19/16	Staff Enforcement Letter	San Diego Unified School District, UCHS Athletic Facilities Upgrades	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/20/16	Staff Enforcement Letter	BAE Systems San Diego Ship Repair Inc.	Exceedance effluent limit for chronic toxicity instantaneous maximum	NPDES Order No. R9-2014-0034
1/20/16	Staff Enforcement Letter	City of Oceanside, La Salina Wastewater Treatment Plant	Multiple exceedances of fecal indicator bacteria levels in receiving water monitoring from Oceanside Ocean Outfall	NPDES Order No. R9-2011-0016

Enforcement Actions for January 2016

Enforcement Date	Enforcement Action	Entity/ Facility/ Location	Summary of Violations and Enforcement	Applicable Requirements/ Order Violated
1/27/16	Staff Enforcement Letter	Shapell Properties Inc., Robertson's Ranch, Carlsbad	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/27/16	Staff Enforcement Letter	Pardee Homes San Diego, Parkview at Dennery Ranch, San Diego	Deficient implementation of construction storm water BMPs	NPDES General Construction Storm Water Permit Order No. R9-2009-0009-DWQ
1/28/16	Staff Enforcement Letter	Modern Stairways, Spring Valley	Failure to recertify enrollment in the general industrial storm water permit.	NPDES General Industrial Storm Water Permit Order No. 2014-0057-DWQ

Table 1: December 2015 - Summary of Public and Federal Sanitary Sewer Overflows in the San Diego Region

Responsible Agency	Collection System	Total Volume*	Total Recovered* (Gallons)	Total Reaching Surface Waters*	Percent Recovered (%)		Percent Reaching Surface Waters (%)	Additional Details	Miles of Pressure Sewer	Miles of Gravity Sewer	Population in Service Area
					Percent Recovered	Percent Reaching Surface Waters					
Carlsbad MWD	Carlsbad MWD CS	2	0	0	0%	0%	0%	1*	4.5	282.0	69,420
Chula Vista City	City of Chula Vista CS	800	750	0	94%	0%	0%	2*	3.4	503.0	256,780
Escondido City	HARRF Disch To San Elijo OO CS	1,125	1,000	0	89%	0%	0%	3*	10.7	370.0	142,000
Laguna Beach City	City of Laguna Beach CS	400	400	0	100%	0%	0%	4*	35.6	86.0	18,000
Oceanside City	La Salina WWTP, Oceanside Outfall CS	850	800	0	94%	0%	0%	5*	1.0	439.7	169,527
Ramona MWD	San Vicente Treatment Plant CS	200	25	0	13%	0%	0%	6*		40.0	15,000
		100	0	0	0%	0%	0%	7*			
		760	700	0	92%	0%	0%	8*			
		750	0	0	0%	0%	0%	9*			
San Diego City	San Diego City CS (Wastewater Collection System)	1,740	1,600	0	92%	0%	0%	10*	145.0	3,002.0	2,186,810
		60	0	0	0%	0%	0%	11*			
		830	0	0	0%	0%	0%				
		20	20	0	100%	0%	0%				
UC San Diego	University Of California, San Diego CS	20	15	0	75%	0%	0%	12*	0.5	25.0	55,000
Valecitos Water District	Meadowmark CS	104,100	36,500	0	35%	0%	0%	13*	6.4	287.3	97,481
Valley Center MWD	Lower Moosa Canyon Recl Facil CS	600	0	0	0%	0%	0%	14*	5.0	50.0	4,615
		250	50	0	20%	0%	0%	15*			
Vista City	City of Vista CS	615	400	0	65%	0%	0%	16*	0.3	211.8	90,000
US Marine Corps Base Camp Pendleton	USMC Base, Camp Pendleton CS	6,464	0	6,464	0%	100%	100%		35.0	122.0	85,000
	Totals for Public Spills	113,222	42,260	0							
	Totals for Federal Spills	6,464	0	6,464							

*Total Recovered plus Total Reaching Surface Waters does not always equal Total Volume for one or more of the following reasons: 1) a portion of the spill may have been to a drainage channel and recovered (all of the volume discharged to a drainage channel whether recovered or not is considered reaching surface waters), and/or 2) a portion of the spill may have been discharged directly to surface waters and recovered (all of the volume discharged directly to surface waters whether recovered or not is considered reaching surface waters).

- 1* All 2 gallons seeped into the ground and/or evaporated.
- 2* 800 gallons were discharged to land. 750 gallons were recovered, and 50 gallons seeped into the ground and/or evaporated.
- 3* 1,125 gallons were discharged to land. 1,000 gallons were recovered, and 125 gallons seeped into the ground and/or evaporated.
- 4* 850 gallons were discharged to land. 800 gallons were recovered, and 50 gallons seeped into the ground and/or evaporated.
- 5* 200 gallons were discharged to land. 25 gallons were recovered, and 175 gallons seeped into the ground and/or evaporated.
- 6* All 100 gallons seeped into the ground and/or evaporated.
- 7* 760 gallons were discharged to land. 700 gallons were recovered, and 60 gallons seeped into the ground and/or evaporated.
- 8* All 750 gallons seeped into the ground and/or evaporated.
- 9* 1,740 gallons were discharged to land. 1,600 gallons were recovered, and 140 gallons seeped into the ground and/or evaporated.
- 10* All 60 gallons seeped into the ground and/or evaporated.
- 11* All 830 gallons seeped into the ground and/or evaporated.
- 12* 20 gallons were discharged to land. 15 gallons were recovered, and 5 gallons seeped into the ground and/or evaporated.
- 13* 104,100 gallons were discharged to land. 36,500 gallons were recovered, and 67,600 gallons seeped into the ground and/or evaporated.
- 14* All 600 gallons seeped into the ground and/or evaporated.
- 15* 250 gallons were discharged to land. 50 gallons were recovered, and 200 gallons seeped into the ground and/or evaporated.
- 16* 615 gallons were discharged to land. 400 gallons were recovered, and 215 gallons seeped into the ground and/or evaporated.

Table 2: December 2015 - Summary of Private Lateral Sewage Discharges in the San Diego Region

	Collection System	Total Volume*	Total Recovered*	Total Reaching Surface Waters*	Percent Recovered	Percent Reaching Surface Waters	Additional Details	Population in Service Area	Lateral Connections
		(Gallons)	(Gallons)	(%)	(%)				
Chula Vista City	City of Chula Vista CS	100	100	0	100%	0%		256,780	49,532
Coronado City	City of Coronado CS	120	120	0	100%	0%		24,697	10,000
Escondido City	HARRF Disch To San Elijo OO CS	53	0	0	0%	0%	1*	142,000	53848
Imperial Beach City	City of Imperial Beach CS	10	10	0	100%	0%		10,909	26,324
La Mesa City	City of La Mesa CS	17	17	0	100%	0%		58,244	13,000
		16	16	0	100%	0%			
Laguna Beach City	City of Laguna Beach CS	5	5	0	100%	0%		18,000	6,650
		20	20	0	100%	0%			
Moulton Niguel Water District	Moulton Niguel Water District CS	400	50	350	13%	88%		165,000	50,200
Poway City	City of Poway CS	64	64	0	100%	0%		43,930	12,205
San Diego City	San Diego City CS (Wastewater Collection System)	244	244	0	100%	0%		2,186,810	267,237
		558	237	321	42%	58%			
South Coast Water District	South Coast Water District CS	73	73	0	100%	0%		42,000	14,762
		150	150	0	100%	0%			
	Totals	2,090	1,366	671					

*Total Recovered plus Total Reaching Surface Waters does not always equal Total Volume for one or more of the following reasons: 1) a portion of the spill may have been to land and not recovered, 2) a portion of the spill may have been to a drainage channel and recovered (all of the volume discharged to a drainage channel whether recovered or not is considered reaching surface waters), and/or 3) a portion of the spill may have been discharged directly to surface waters and recovered (all of the volume discharged directly to surface waters whether recovered or not is considered reaching surface waters).

1* All 53 gallons seeped into the ground and/or evaporated.