EXECUTIVE OFFICER'S REPORT • AUGUST 2016

State and Regional

1. **The Surface Water Ambient Monitoring Program (SWAMP) First Annual Water Quality Science Symposium** – *Jane Covey*

   Staff attended the Science Symposium on June 29 and learned about the availability and use of data to model biodiversity and habitat health. The goal of the symposium was to bring attention to the challenges that water quality stakeholders face while managing California's waters. Current data management systems are fragmented and can be improved to increase data usability. Increasing access to reliable, comprehensive data is important to improving water quality planning, management and permitting.
   The symposium continues the focus on open data introduced at the Data Fair (see the May 2016 Executive Officer Reports for more information about the Data Fair). The symposium included topics on water quality monitoring and data management. Orange County Public Works and CloudCompli, who won a data innovation challenge sponsored by the Office of Information Management and Analysis (OIMA), presented a smart system that combines monitoring data from multiple databases to identify contaminant sources. The smart system, called WQExplorer, is in the beta stage but shows promise for analyzing water monitoring data in urban areas.

   The California Department of Fish and Wildlife presented the need for more comprehensive bioassessment of streams and rivers by using the California Stream Condition Index, the H2O Algae Index, and the California Rapid Assessment Method for riparian habitat condition. These methods, when used together, allow for a more complete assessment of a waterbody's biological and physical heath and can be used to verify impairment and pinpoint sources of pollutants.

   The symposium featured 13 other presentations that covered topics focused on bioassessment, habitat restoration, watershed assessment, bacteria and contaminant monitoring, and data management. The Water Board's programs will benefit from the improvements in data accessibility and assessment methods. Future updates and training of the SWAMP data series will be conducted by OIMA as lunchtime Web Seminars.

2. **(Standing Item) Annual Update on Basin Planning Activities –** *Daniel Sussman*

   The Water Board adopted the current Triennial Review Priorities on November 4, 2015. State and federal laws require periodic review and revision of Basin Plans. The federal process is called "Triennial Review." Due to resource limitations and the complexity of California's Basin Plan amendment process, Triennial Review in California is generally limited to identification of the highest priority planning projects to be addressed over the

three years between one Triennial Review cycle and the next. The 2015 Triennial Review priority list includes nine projects identified with available resources and twelve projects in need of additional resources. See Attachment A for the 2015 Triennial Review list of projects.
The February 2016 Executive Officer Report on Basin Planning activities described staffing transitions within the Basin Planning and TMDL Unit. Staffing changes will continue this fiscal year. The TMDL and Basin Planning Unit will add new Surface Water Ambient staff (SWAMP) to the Unit which will allow for improved integrational TMDL and Basin Planning needs within SWAMP program priorities. The FY 2016-2017 Budget Act included three permanent new positions for SWAMP. We anticipate filling these positions by the end of the year.

In January 2016 the Office of Administrative Law issued final approval of the China Lake Basin Plan amendment removing the MUN beneficial use from certain ground waters beneath Naval Air Weapons Station China Lake. You adopted this amendment in February 2015. In May staff visited the Hot Creek Hatchery to better understand hatchery infrastructure to inform work on a site specific objective for nitrate. This project was subsequently put on hold in favor of other Regional priorities.

Staff anticipates work on Basin Planning priorities such as Bacteria Water Quality Objective revisions Riparian Protection policies, and Lake Tahoe Nearshore this fiscal year. Staff is investigating and preparing work plans to address other priorities from the 2015 Triennial Review list when we fill our vacancies. Additionally, staff continues to compile a list of edits to the Basin Plan for the 2018 Triennial Review.

3. Personnel Report – *Eric Shay*

New Hires – None

Vacancies – We are currently recruiting for an Executive Assistant and a Staff Services Analyst (SSA) in our South Lake Tahoe office. The SSA will be supporting our Leviathan Mine staff. In addition, we will soon begin the recruitment process for a Supervising Engineering Geologist (Division Manager) for the Victorville office.

Departures

Mike Plaziak, Supervising Engineering Geologist, Victorville. Mike has accepted a position as manager of in the Drinking Water Program at the Maine Center for Disease Control. Lauri Kemper, Assistant Executive Officer, will serve as interim Division Manager until the position is filled.

4. (Standing Item) Caltrans Storm Water Program – *Bud Amorfini/Robert Larson*

Caltrans continues to make progress on water quality improvement activities in the North Lahontan Region. The following highlights of its storm water program are presented below, with a focus on the Lake Tahoe region.

Lake Tahoe Basin Highway Retrofit Program

Caltrans is approaching completion of its program to retrofit the state highway system in the Lake Tahoe Basin to reduce erosion and treat storm water runoff. There are 13 major highway segments included in the program. To date, nine segments have been completed and three will be finished this year, with one project left to be started next year (Highway 50 from the Y to Trout Creek). Storm water runoff is being controlled by sheet flow to forested and meadow areas where disconnected from surface waters, or by collecting and treating runoff using curbs, bio-swales, infiltration basins, sand filters, and other treatment devices. Initial monitoring efforts indicate that sand filters perform much better than other available cartridge-type treatment boxes in use at other sites. Large-capacity sand filters are in use at certain high-priority outfalls in the urbanized area along Highway 50, and smaller double-chambered vaults with the capacity to use sand as a media filter are in place, or being placed, along highways 89 and 28 in the west and north shore areas. Caltrans plans to start installing sand filter media in these double-chambered vaults this year.

Snow and Ice Management

In addition to installing roadway treatment facilities, Caltrans is improving its pollutant source controls by modifying its snow and ice management program. Traction sand applied to its roadways is now comprised of Washoe Septic Sand, which is hard granite and contains less fine particles and nutrients. Additionally, a brine solution is now applied to roadways prior to storms in favor of using solid rock salt. The brine uses less salt, covers the road more evenly, and adheres to the road better than solid salt applications. Using the combination of better quality sand and brine improves the quality of storm water runoff from the roadways.

In the urbanized area of the south and north shores, snow is collected from the highways and placed in holding areas where it can melt slowly and infiltrate into the ground rather than being discharged to surface waters. Although doing this protects surface water quality, the practice can adversely affect the quality of ground water. The Water Board has asked Caltrans through a Section 13267 Order to investigate the degree and extent of potential ground water effects at the Sierra Boulevard Snow Storage Site in South Lake Tahoe. Initial information indicates that shallow groundwater beneath the site has elevated levels of total dissolved solids and chloride. Staff anticipates that changes to the use of brine will reduce the amount of salt in snow stored at the site and mitigate its effects on ground water over time.

Caltrans has approached staff regarding the potential use of a “snow melter” instead of collecting, transporting, and storing snow at a site currently used in the urbanized Kings Beach area on the north shore. The snow melter is a trailer-mounted portable device that would allow Caltrans to load snow directly from the roadway, melt it, and discharge it to an appropriate location such as an infiltration basin with sufficient capacity. The snow melter

has an added benefit of providing pretreatment to remove oil and grease, and heavy particles before being discharged. Caltrans is likely to follow-up with more detailed information and a formal request for Water Board acceptance of the process at a future date.

Caltrans Statewide Storm Water Management Plan

The Caltrans statewide municipal permit issued by the State Water Board (Order 2012-0011-DWQ) requires that a Storm Water Management Plan (SWMP) be developed that implements the requirements of the permit. Caltrans is currently operating under its SWMP that was approved by the State Water Board in 2003 for the previous version of the municipal permit. In 2014, Caltrans revised the 2003 SWMP to comply with existing Permit requirements and submitted the revised SWMP to the State Water Board for approval by the Executive Director. State Water Board staff worked collaboratively with Department staff to ensure the revised SWMP is consistent with the Permit. The SWMP was circulated to the regions for review and comment and was subsequently posted for public comment ending in May 2016. The SWMP maintains the region-specific requirements for the Lahontan Region including:

- Designing project to infiltrate the 20-year, 1-hour storm volume in the Truckee River, Carson River, and Mammoth Creek (above 7,000 feet) hydrologic units;
- Prohibiting land disturbing activities between October 15 and May 1 of the following year in the snowy areas of the region; and
- Requiring early project design consultation with Water Board staff for projects in the Lake Tahoe, Truckee River, Carson River, and Mammoth Creek hydrologic units.

The revised SWMP is now pending State Water Board Executive Director approval.

Lake Tahoe Total Maximum Daily Load (TMDL)

Caltrans continues to be an important partner in Lake Tahoe TMDL implementation. Caltrans' statewide storm water permit requires the Department to comply with fine sediment particle (FSP) and nutrient load reductions specified by the TMDL program. Specifically, Caltrans must reduce FSP, total phosphorus, and total nitrogen loads by 10%, 7%, and 8%, respectively, by September 30, 2016. Caltrans is actively using the established Lake Clarity Crediting Program to demonstrate required load reductions and document ongoing maintenance actions. By improving traction abrasive management and sweeping activities, Caltrans plans to slightly improve road conditions on portions of Highways 50 and 89 above TMDL baseline condition to meet the first TMDL milestone. The Nevada Tahoe Conservation District is performing required roadway inspections on the Caltrans's behalf to confirm improved highway conditions are consistent with modeled expectations. Water Board staff look forward to reviewing inspection results and awarding Lake Clarity Credits in spring 2017.

5. Regional Conservation Framework: A Pilot Program in Antelope Valley – *Jan M. Zimmerman*

A Regional Conservation Framework (RCF) is a planning document intended to guide and coordinate public and private investments in wildlife and habitat conservation, including conservation actions needed to address climate change and protect wildlife corridors on a regional-scale. RCFs are voluntary, non-regulatory tools, developed by public or private entities, and can be used as a foundation for more comprehensive plans such as Natural Community Conservation Plans or regional Habitat Conservation Plans. In addition, RCFs may guide conservation investments by state, federal, local and private entities and provide a basis for the development of advance mitigation agreements. Though not yet part of California's statute, the RCF concept was introduced as Assembly Bill AB 2087, which would amend Fish and Game Code to include specific criteria for developing a RCF and to give the California Department of Fish and Wildlife the statutory authority to approve RCFs for the purpose of creating mitigation credits similar to a mitigation bank. AB 2087 passed the Assembly on June 2, 2016, and, with minor amendments, passed the Senate Natural Resources Committee on June 28, 2016; final approval by the Legislature is still pending.

The Antelope Valley RCF is one of four in a state-wide effort to pilot the RCF model under a variety of settings. The three other RCFs in the program include East San Francisco Bay, Santa Clara County, and Yolo County. With private foundation support and coordination by the Conservation Strategy Group, ICF International has teamed with the Conservation Biology Institute and Terry Watt Consulting to develop the draft Antelope Valley RCF. The Antelope Valley RCF will build on the data, analyses, and conservation strategies that were developed as part of the Desert Renewable Energy Conservation Plan, and create a framework that will expand the utility of that information beyond its current application for renewable energy planning. It is anticipated that very little new data will need to be collected or generated. The entire process is expected to take up to eight months to complete, with a draft Antelope Valley RCF scheduled to be completed by February 2017. The end result will be a planning document that identifies and prioritizes areas for habitat conservation within the Antelope Valley.

Water Board staff participated in the kick-off meeting for the Antelope RCF on June 22, 2016. Various other stakeholders engaged in the process include the Bureau of Land Management, United States Fish and Wildlife Service, California Department of Fish and Wildlife, California Energy Commission, California Department of Transportation, High Speed Rail Authority, Los Angeles County Department of Regional Planning, City of Lancaster, Edwards Air Force Base, various non-governmental organizations, and a number of solar utility companies. Water Board staff intend to participate in additional stakeholder meetings that are planned to be held between now and February of next year. Once developed, the Antelope Valley RCF will be an important tool that Water Board staff can use to guide and coordinate compensatory mitigation for regulated development projects in the Antelope Valley.

6. Deep Infiltration and Dry Wells for Groundwater Recharge - *Jehiel Cass*

State Board sponsored a public webinar describing the use of deep infiltration systems and dry wells to promote groundwater recharge and manage stormwater runoff. As the impervious surface area from development increases, infiltration to groundwater decreases. As this runoff

volume and intensity increases it carries pollutants and contributes to downstream erosion and sediment transport to riparian areas. Across the nation there is increasing use of infiltration systems to treat and remove pollutants from stormwater. In the desert southwest, deep infiltration also promotes groundwater recharge in over drafted aquifers. Many municipalities, as well as the State Board Municipal Stormwater permits, require infiltration to treat stormwater, maintain pre-development hydrology and achieve Low Impact Development standards. Shallow landscape infiltration systems are efficient with semi-porous soils and where space allows. In urbanizing areas proprietary systems are often used (Figure 1).

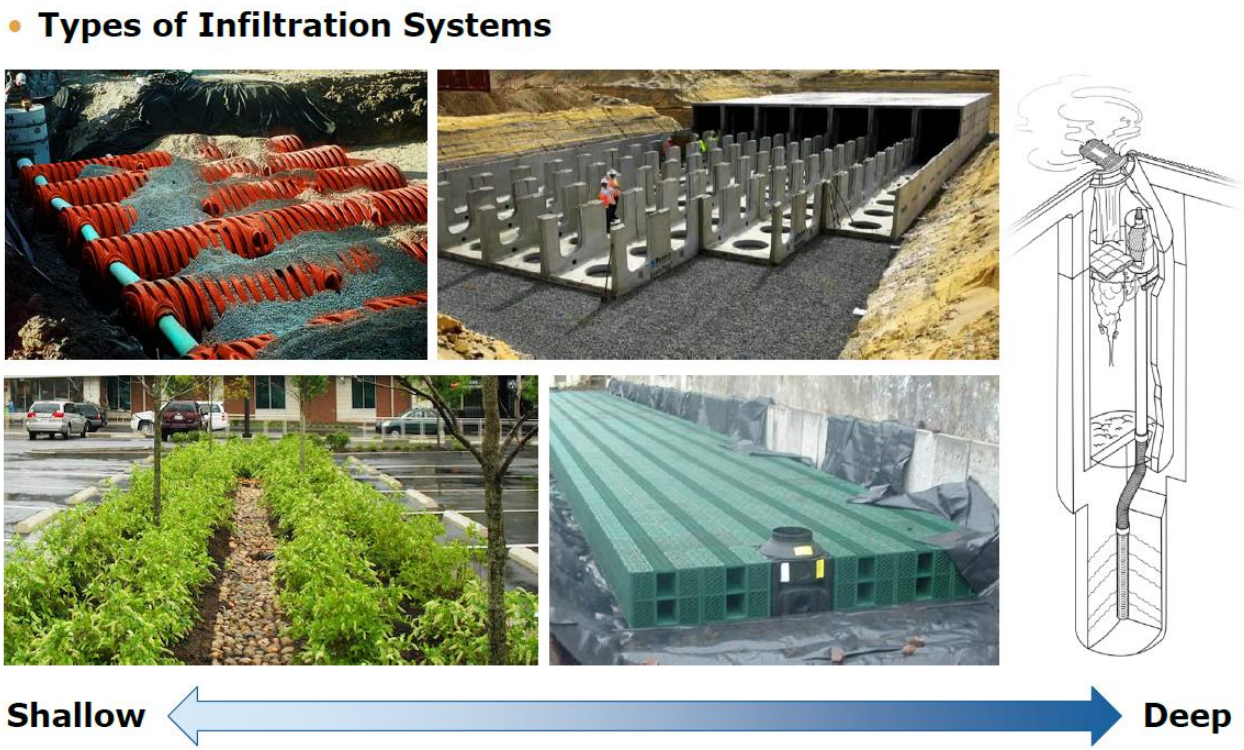

Figure 1 – Typical Stormwater Infiltration Systems

Factors to consider in the selection, design and use of infiltration or dry well systems include:

- Avoidance of sub-surface pollutant sources or known groundwater plumes.
- Measurement of percolation at the depth where infiltration occurs.
- Deep wells should penetrate at least 10 feet into permeable soil.
- The minimum distance above groundwater should be 10 feet or greater.
- Ensure maintenance to remove trash and sediment to increase longevity.

Many studies document the effectiveness of these systems and the US Environmental Protection Agency concluded that there is low potential for injection wells to endanger the drinking water supply. One study evaluated a single site in Arizona that had 7.5 inches of rainfall, typical for the high desert, and found that 3,800,000 gallons of water was recharged and all pollutants effectively mitigated. The City of Chandler, Arizona conducted a study and found that citywide, there was an estimated annual 191 acre-feet of recharge from undeveloped land and 2,610 acre-feet of recharge from urbanized land

using infiltration systems. Many high desert cities such as Hesperia, Victorville, and Palmdale have established specifications for, and approved, deep infiltration wells (Figure 2).

- ± 15,000 installations

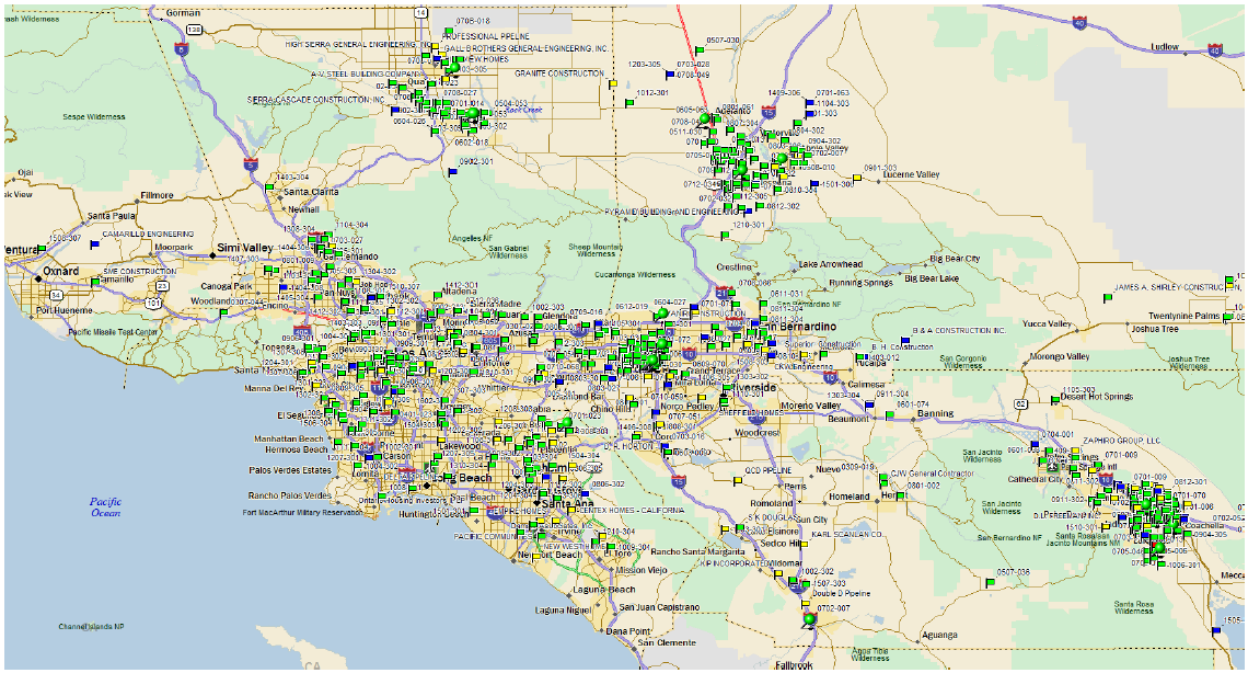

Figure 2 – Dry Well Installations in Southern California for one Proprietary System

Staff concludes that properly designed, located, and maintained deep infiltration and dry well systems are cost effective for stormwater management, promote groundwater recharge, and effectively remove pollutants from reaching groundwater.

7. Support for Wrightwood Special District - *Jehiel Cass*

The San Bernardino County Local Agency Formation Commission (LAFCO) is considering creating an independent Special District for the San Gabriel Mountain community of Wrightwood. The Water Board sent a letter to LAFCO stating our support for creating a Special District and indicated that authority should be included for managing long-term sewage treatment and disposal.

The Wrightwood community is at an elevation of about 6,000 ft. above sea level along the San Andreas Fault and has grown to about 4,500 residents. It is predominantly residential with some commercial businesses that support its recreational economic base. Sewage disposal is only to onsite wastewater treatment systems, also called septic systems. There is no centralized sewer collection or treatment system. Because Wrightwood crosses the San Bernardino and Los Angeles County boundaries, LAFCO said they would create a Special District crossing county lines.

Over the years, the Wrightwood community has had numerous septic issues that required staff involvement. During high precipitation years the groundwater table rises and, in some areas, surfaces in springs along the fault. Many decades ago, San Bernardino County and

the Water Board identified these problem areas and do not allow new septic systems to be installed. The older areas of the community are located on small lots that do not meet the current Basin Plan minimum lot size of 15,000 square feet for lots subdivided before 1987. The Executive Officer has granted an exemption allowing undeveloped lots to be built, but may require supplemental, or enhanced treatment systems to be used. Septic failures in the older portion of the community are increasing in recent years as waste loading to the subsurface soils reduce percolation. Some small lots do have sufficient replacement area for new leach lines or seepage pits that limit sewage disposal options. At least three previous sewerage Feasibility Studies were completed since the 1970's, but no systems were installed. Staff encourages the community to consider both centralized and decentralized systems with nitrogen removal to protect the underlying groundwater. Septic system maintenance (solids removal) should be required to extend existing system life. We look forward to working with a new Wrightwood Special District should it be formed.

Attachment A -
2015 Triennial Review Priority List
Triennial Review of Water Quality Control Plan for the Lahontan Region

Projects With Available Resources

Priority		PYs over 3 years	Cumulative PYs
1	Program Manager	0.3	0.3
2	2018 Triennial Review	0.2	0.5
3	Miscellaneous work that will not directly result in Basin Plan Amendments (e.g., regulatory assistance and corrections)	0.6	1.1
4	Bacteria Water Quality Objective revisions	1.0	2.1
5	Lake Tahoe Nearshore	0.5	2.6
6	Mojave River - add BIOL beneficial use to a reach Mojave River - remove COLD beneficial use from a reach Mojave River - SSOs for reach Mojave Basin - SSOs for select groundwater sub-basins	1.8	4.4
7	Squaw Valley groundwater withdrawal & in-stream flow	0.5	4.9
8	Evaluate appropriate statistical methods (e.g. replace Means of Monthly Means with annual averages, where appropriate, such as Truckee River and Pine Creek)	0.5	5.4
9	Riparian Protection Policy	0.6	6.0

Projects Needing Additional Resources

Priority			
10	Hot Creek Water Quality Objectives	0.6	6.6
11	Survey of surface waters to identify those we might want to consider creating in-steam flow requirements for the purposes of protecting beneficial uses	0.1	6.7
12	Biological indicators	0.9	7.6
13	Region-wide approach to TDS Water Quality Objectives for surface waters	1.5	9.1
14	Susan River site specific objectives	2.0	11.1
15	Deposited/embedded sediment standard for Middle Truckee River	0.9	12.0
16	Remove two beneficial uses from Piute Ponds wetlands	0.5	12.5
17	Clarify Lahontan Water Board policy on package plants	0.1	12.6
18	Fish Springs site specific objectives	1.0	13.6
19	Biotic Ligand Model for copper	0.5	14.1
20	Revise PCPs water quality objectives	1.0	15.1
21	Eagle Lake “building moratorium” related to septic systems	0.5	15.6

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Summary of
No Further Action Required Letters Issued
June 16 - July 15, 2016
August 2016 EO Report

State of California
Lahontan Regional Water Quality Control Board

The Executive Officer finds the release of petroleum products at the following site poses a low threat to human health, safety, and the environment. Therefore, the petroleum cases were closed in accordance with the Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closure (Resolution 2012-016). The Policy recognizes contaminant mass often remains after the investment of reasonable remedial effort and this mass may be difficult to remove regardless of the level of additional effort and resources invested. The establishment of the Policy is an effort to maximize the benefits to the people of the State of California through the judicious application of available resources.

Date Closure Issued	Site Name	Site Address	Case Number	Additional Information
July 8, 2016	Private Residence	Squaw Valley Placer County	6T0408A	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000008108

Additional links:

General Policy information: http://www.swrcb.ca.gov/ust/lt_cls_plcy.shtml#policy081712

Copy of Policy: http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

Implementation Plan http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/110612_6_final_ltcp%20imp%20plan.pdf

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EO's Monthly Report June 16, 2016 - July 15, 2016
Unauthorized Waste Discharges*

COUNTY: Inyo

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
June Lake PUD/June Lake PUD CS	Highway 158 at Arie Crag Day use camp	South	Yes	6/30/2016	157,083 gallons	Pipe failure caused 157,083 gallons of raw sewage to discharge. No surface water body affected.	Ten inch forcemain failed causing discharge to ground at day camp.	Diverted sewage to trench, replaced pipe segment (crack/rupture in line) disinfected area with bleach mixture. Pipe replaced and a plan is in place to replace the forcemain. 157,083 gallons of sewage were recovered.

COUNTY: Los Angeles

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Ca Dept of Corrections Soledad/ Los Angeles County, Lancaster	44750 60th St. West	South	Yes	7/5/2016	150 gallons	Toilet blockage caused 150 gallons of raw sewage to spill to a storm drain. No surface water body affected.	Toilet overflowed and raw sewage reached a storm drain.	Toilet unplugged, area cleaned up.

COUNTY: NEVADA

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Big Rig with Ruptured Fuel tank	Westbound Hwy 80 Truckee truck scales	North	No	7/7/2016	100 gallons	Ruptured fuel tank caused 100 gallons of diesel to discharge to Highway 80 on both west bound lanes. No surface water affected.	Spill was contained on the pavement.	Spill cleaned up, highway reopened.

*All discharges to surface waters are included in the report.
Discharges to land of less than 100 gallons are not included in the report.

EO's Monthly Report June 16, 2016 - July 15, 2016
Unauthorized Waste Discharges*

COUNTY: SAN BERNARDINO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Victor Valley Wastewater Reclamation Authority/Victor Valley Wastewater CS	Upper Narrows Effluent Site # 1	South	Yes	6/30/2016	1,806 gallons	Construction bypass caused 1,806 gallons of raw sewage to spill from three manholes and a wet well at Upper Narrows Site#1 to unpaved surface. No surface water affected.	Temporary construction bypass pump overwhelmed Upper Narrows pump station # 1 resulting in manhole overflow.	Bypass was immediately suspended and redesigned to ensure pumping rate matched downstream pump station flows. All of the spill was recovered and the area was cleaned up and chlorinated.
US Marine Corps Barstow Logistic Base/Yermo Annex IWT Recycle Fac	Industrial Wastewater Treatment Facility-Facility 611	South	Yes	6/28/2016	200 gallons	Mechanical failure caused the discharge of approximately 200 gallons of industrial wastewater to the storm drain system. No surface water affected.	Industrial wastewater from Building 573 was being pumped to the IWTP and the pumps became overwhelmed resulting in an unauthorized discharge.	Discharger is ordering a larger pump, changing discharge practices and implementing inspection protocols.
US Marine Corps Barstow Logistic Base/Yermo Annex IWT Recycle Fac	Industrial Wastewater Treatment Facility-Facility 611	South	Yes	6/29/2016	200 gallons	Mechanical failure caused the discharge of approximately 200 gallons of industrial wastewater to the storm drain system. No surface water affected.	Industrial wastewater from Building 573 was being pumped to the IWTP and the pumps became overwhelmed resulting in an unauthorized discharge. Second discharge from facility in two days.	Discharger is ordering a larger pump, changing discharge practices and implementing inspection protocols.
Unknown Discharger/City of Hesperia	Mariposa Road and Powerline Rd to Grandview Rd/Mariposa Rd between Farmington and Jenny/East of Mariposa Rd on Farmington Rd	South	No	7/6/2016	Unknown	Illegal dumping of raw sewage in rural Oak Hills Area of Hesperia. This has happened on three occasions. Suspected sewage truck dumping raw sewage in the desert area during late night hours.	Coordinating with County Environmental Health and Hazmat to provide cleanup.	Investigate to determine identity of discharger.

*All discharges to surface waters are included in the report.
Discharges to land of less than 100 gallons are not included in the report.

EO's Monthly Report June 16, 2016 - July 15, 2016

Unauthorized Waste Discharges*

COUNTY: SAN BERNARDINO

Discharger/Facility	Location	Basin	Regulated Facility?	Discharge Date	Discharge Volume	Description of Failure	Additional Details	Status
Arrowhead Lake Association (ALA)	Lake Arrowhead beach west of North Shore Marina, below Hospital Rd and Old North Shore Rd.	South	No	7/5/2016	5-6 tons	Grey sand disposed of along the lakeshore after the fireworks, from the fireworks barge.	ALA removed the remaining grey sand to stockpile in maintenance yard. Testing is being done to determine final disposal location.	Report due to VV 7/27/2016.

*All discharges to surface waters are included in the report.
Discharges to land of less than 100 gallons are not included in the report.