



EXECUTIVE OFFICER’S REPORT • April 2020
 Covers February 16, 2020 – March 15, 2020

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State and Regional

1. Personnel Report – Eric Shay

New Hires – None

Promotions

- Mary Fiore-Wagner has promoted from Senior Environmental Scientist (Specialist) to Senior Environmental Scientist (Supervisor), South Lake Tahoe. This position oversees the Non-Point Source Unit, whose tasks include issues such as grazing, harmful algal blooms, 319(h) grants, Lake Tahoe Total Maximum Daily Load (TMDL), Lake Tahoe, Mono Lake, and management of our in-house laboratory.

Vacancies – We are currently recruiting for the following positions:

- C.E.A. (Career Executive Assignment) to serve as the Region’s Assistant Executive Officer.
- Scientific Aid, Cleanup/Site Investigation & Enforcement Unit, South Lake Tahoe. This position assists staff with administering the site cleanup, underground storage tank, land disposal, and enforcement programs; reviewing reports, and maintaining databases; reviews self-monitoring reports; reviews project files and water quality data for field inspections and permit updates; assists with field inspections; and reviews California Environmental Quality Act documents.

- Engineering Geologist, Department of Defense / Site Cleanup Program Unit, Victorville. This position analyzes threat of pollutants to groundwater and surface waters, reviews technical reports for cleanup strategies, reviews site investigation results, reviews proposed cleanup alternatives to ensure compliance with water quality objectives, prepares enforcement orders, investigates spills, and conducts inspections of cleanup sites and facilities.
- Water Resource Control Engineer, Wastewater & Agricultural Operations Unit, Victorville. This position provides regulatory oversight of projects involving discharges to ground or surface waters and projects intended to restore and/or enhance water quality.
- Senior Engineering Geologist (Specialist), South Regulatory Division, Victorville. This position serves as the Regional Groundwater Specialist, Regional Policies Representative and Lead, and Regional Specialist for Investigations and Studies. The selected candidate will provide lead responsibility for making policy recommendations; provide technical expertise; evaluate and draft geological reports, staff reports, other technical documents; and perform analyses on technically complex and potentially politically sensitive assignments related to water quality.

Departures – None

North Lahontan Region

2. Compliance Summary for Timber Waiver Monitoring Report – Adam Henriques

The Lahontan Regional Quality Control Board (Water Board's) Conditional Waiver of Waste Discharge Requirements for Waste Discharges Resulting from Timber Harvest and Vegetation Management Activities in the Lahontan Region (Timber Waiver) requires certain enrollees to submit Fall Implementation Reports by January 15, 2020. Water Board staff received Fall Implementation Monitoring Reports from 65 enrolled projects, which represents 100% compliance.

These projects are comprised of timber harvest and vegetation management activities across federal, state, and private land. Of the submitted monitoring reports, 44 (68%) were submitted on time, and 21 (32%) were submitted late. A majority of the late reports were submitted within 30 days of the January 15th deadline.

The Timber Waiver requires enrollees to conduct Fall Implementation Monitoring for projects enrolled under Categories 4, 5, and 6. Fall implementation monitoring is a visual assessment of the timber harvest and vegetation management project areas, to ensure management practices to protect water quality are in place and secure prior to the winter period.

The 2014 Timber Waiver also allows project implementers to submit a statement of non-operation and temporary suspension of fall implementation monitoring if their project has not been operated during the prior year. For the January 15, 2020 reporting period, 16 of the 65 Timber Waiver projects did not conduct operations during the 2019 season. Lahontan Water Board staff appreciates the enrollees prompt submittal of fall implementation monitoring reports.

3. Superior Accomplishment Award– *Scott C. Ferguson*

John Steude, Lahontan Water Board Engineering Geologist, was recently awarded a Superior Accomplishment Gold Award. This award is issued to state employees whose performance has resulted in an exceptional contribution to state government. John was issued the award for his quick and innovative work on Closure and Post-Closure Waste Discharge Requirements for the Solar Electric Generating Systems I and II (SEGS I & II) facility near Daggett, San Bernardino County.

The SEGS I & II facility is now a photovoltaic solar energy generating facility, but prior to 2016, the facility used concentrating solar thermal technology. The original facilities generated operational wastewater and oil contaminated with heat transfer fluid. Both wastes were characterized as designated waste, requiring waste management units that complied with California Code of Regulations (CCR), Title 27 regulations.

Following the facility's conversion to photovoltaic technology, the facility owners began pursuing closure of the CCR Title 27 waste management units (3 surface impoundments, 2 land treatment units). Originally, these facilities were to be "clean closed"; meaning that the waste management units and any waste within and surrounding the waste management units was to be removed from the facility site and transported to an authorized offsite waste treatment and/or disposal site. In January 2019, the facility owners submitted an alternative closure plan that would place the materials and waste from two of the three surface impoundments and the two land treatment units into the remaining third surface impoundment. Stockpiled contaminated soil would also be placed within the remaining surface impoundment, which would then be closed as a CCR Title 27-compliant landfill.

John would have been fully justified in requiring clean closure of all the waste management units and contaminated soil stockpiles, but instead relied upon his extensive knowledge and experience to evaluate proposed onsite closure alternative. John's thorough evaluation of past monitoring data, surface impoundment design, liner integrity test results, and proposed landfill designed confirmed that the proposed onsite closure alternative would protect water quality and comply with the state's water quality protection laws, policies, and regulations.

John also worked with the facility owners and their consultants to evaluate and further refine cost-estimates for each of the alternatives presented in the Revised Closure and Post-Closure Maintenance Plan. In total, the onsite closure alternative came with a cost savings of \$8 million. John also worked with the facility owners' consultants to demonstrate the onsite closure alternative would reduce hydrocarbon emissions by 1.5 tons, particulate emissions by 1.5 tons, and greenhouse emissions by 3,000 tons compared to the original clean closure proposal. The cost savings and pollutant reductions would be achieved by eliminating the original clean close proposal's approximately 5,000 truckloads traveling an average 300 miles roundtrip.

John's applied his extensive knowledge and experience in evaluating and demonstrating that the proposed onsite closure alternative would protect water quality, and result in significant cost-savings and reductions in air pollutant and greenhouse gas emissions. In doing so, John's efforts are further supporting California's solar energy industry and California's efforts to address climate change. The cost savings is of a scale that will likely encourage others to implement similar solar energy technology conversion projects, eliminating the waste production associated with concentrating solar thermal technology.

Additionally, John’s work demonstrated there is a viable alternative to clean closure that can significantly reduce air pollutant and greenhouse gas emissions. The positive results of John’s work are expected to help the solar energy industry remain a viable element of California’s climate change mitigation and adaptation efforts.

South Lahontan Region

4. Preventing Public Access at Munitions Site XU400, Former George Air Force Base (George AFB) – Linda Stone

The southeast portion of the Former George AFB was used for munitions training and disposal prior to Base closure in 1992. The area is on property currently controlled by the Federal Bureau of Prisons and is located southeast and outside of the boundaries of the Victorville Federal Correctional Institute. In 2017, the Air Force investigated with partial removal at a munition’s disposal area, Site XU400. The 2017 investigation/removal determined a potential risk from munitions remains at the site and the Air Force intends to perform additional investigation and removal in 2020 - 2021.

However, in a September 2019 site visit, the regulators saw visual evidence that Site XU400 was being used for off-road vehicle recreation (Photo 4.1) and noted that a large residential development is only 2,000 feet from the site. The site was unfenced, and the Air Force’s warning signs were not deterring trespassers. In September 2019, Water Board staff and the Department of Toxic Substances Control staff each sent letters to the Air Force requesting that a fence be immediately installed around the portion of the site with remaining munitions hazards. The Air Force agreed and finished fencing that portion of Site XU400 in February 2020 (Figure 4.1). The fence consists of 4-strand barbed wire approximately 4 feet high, with rolled concertina wire at the inside base of the barbed wire (Photo 4.2), effectively preventing public access.



Photo 4.1: Recreational vehicle tracks at Site XU400 September 2019, prior to fence installation.

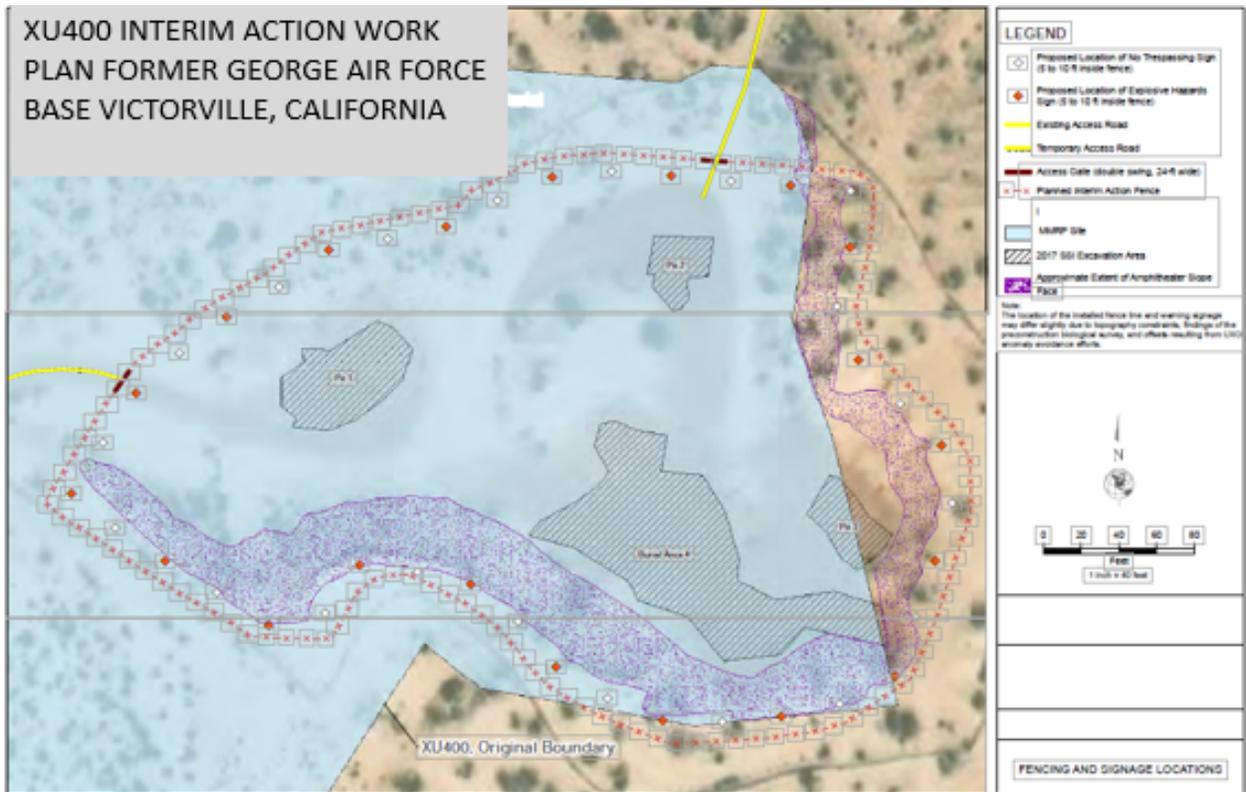


Figure 4.1, Map showing fenced portion of Site XU400, February 2020.



Photo 4.2: Fencing and signage around portion of Site XU400, March 2020.

5. USEPA NPDES Permit Writers' Course – Sergio Alonso

During the week of March 2, 2020, Water Board staff attended the National Pollutant Discharge Elimination System (NPDES) Permit Writers' Course in Sacramento. The purpose of the course was to provide basic regulatory framework and technical considerations for the development of waste discharge requirement permits under the NPDES program. The course's target audience were regulatory permit writers with introductory experience in the NPDES program.

According to NPDES statutory and regulatory framework under the Clean Water Act (CWA) and the Code of Federal Regulations (CFR), all point sources discharging pollutants into waters of the United States must obtain an NPDES permit from the U.S. Environmental Protection Agency (USEPA) or an authorized state. California is an authorized state to implement this program. NPDES permits contain five major components: a cover page, effluent limitations, monitoring and reporting requirements, special conditions, and standard conditions. The content of these components will vary depending on the type of facility. Facilities can range from publicly owned treatment works (POTWs) to industrial and commercial facilities. These facilities may be permitted either under an individual or general permit.

Effluent limitations are an important component of NPDES permits. Effluent limitations fall into two categories: technology-based effluent limitations (TBELs) and water quality-based effluent limitations (WQBELs). TBELs are derived from technology standards that are established by the USEPA for selected constituents. WQBELs are based on receiving water quality standards and are necessary where TBELs are not adequate to ensure water quality standards are met in the receiving water. WQBELs help prevent further receiving water degradation and may help to restore surface waters ensuring they meet water quality standards and protect designated beneficial uses. When comparing TBELs and WQBELs, the more stringent of the two is chosen as an effluent limitation because it will cover both types of effluent limitations.

NPDES permits expire and must be periodically updated. In the southern part of the Lahontan Region, there is one large POTW that has an NPDES Permit: Victor Valley Wastewater Reclamation Authority discharging to the Mojave River. Water Board staff have noted that the persistent application and continuous refinement of TBELs and WQBELs over the permit terms have improved effluent quality over time and improved the Mojave River receiving water quality. The overall principles applied to writing NPDES permits may be used by Water Board staff to also improve waste discharge requirements for facilities that discharge to land. The attendance of regulatory staff from various parts of the country also gave insight as to what types of challenges are faced by permit writers beyond the Lahontan Region.

6. Standing Item - Onsite Wastewater Treatment Systems – John Morales

This item provides status of the State Water Resources Control Board's (State Water Board's) *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* (OWTS), or OWTS Policy, originally adopted on November 13, 2012. The OWTS Policy became effective on May 13, 2013.

On April 17, 2018, the State Board renewed the statewide Waiver for an additional 5-year period. This waived the requirement to submit a report of waste discharge, obtain waste discharge requirements, or pay annual fees for all OWTS discharges that are following the policy.

A brief description of the OWTS Policy’s tiers is shown in Table 1 below along with the effect these tiers have on Lahontan Region OWTS.

Table 1 - OWTS Policy Tiers and Effect in the Lahontan Region

Tier	Description of Tier	Effect in Lahontan Region
0	All existing OWTS’s that are properly functioning	Applies regionwide
1	Statewide standards for OWTS siting, design, operation, and maintenance	Applies to local agencies issuing OWTS permits without a LAMP
2	Local agencies that permit OWTS may request Water Board approval of a <i>Local Agency Management Program (LAMP)</i> that has different than the statewide standards	Applies to local agencies issuing OWTS permits with an approved LAMP
3	OWTS located within watersheds containing water bodies impaired by pathogens or nutrients	There are no current watersheds in the Lahontan Region impaired for pathogens or nutrients where OWTS are suspected as the primary cause
4	Failing OWTS	Applies to individual OWTS on a case-by-case basis

LAMP Status

The Water Board has approved Local Area Management Plan (LAMPs) for several local agencies that issue OWTS permits in the Lahontan Region. Some local agencies cross regional board boundaries, such as in Kern or Nevada counties. When the State Board adopted the OWTS Policy, it assigned one regional board to be the lead agency for approving the LAMP. Two local agencies that approve OWTS within their jurisdictions, the cities of Adelanto and Victorville, did not submit a LAMP, and their OWTS approval must follow Tier 1. One local agency, Lassen County, submitted a LAMP but must follow Tier 1 until the LAMP is approved. Table 2 describes the local agency tiers and LAMP status for local agencies within the Lahontan Region.

Table 2 - Local Agency LAMP Status

Local Agency	Tier	Lead Regional Water Board	LAMP Approval Date
Adelanto, City of	1	6	No LAMP Submitted
Alpine County	2	6	07/10/2019
Apple Valley, Town of	2	6	01/10/2018
Barstow, City of	2	6	11/15/2018
California City, City of	2	6	04/12/2018
El Dorado County	2	5	06/09/2017
Hesperia, City of	2	6	01/10/2018
Inyo County	2	6	07/19/2018
Kern County	2	5	06/09/2017
Lassen County ¹	1	6	Pending approval May 2020

Local Agency	Tier	Lead Regional Water Board	LAMP Approval Date
Los Angeles County	2	4	05/21/2018
Modoc County	2	5	02/24/2017
Mono County	2	6	07/19/2018
Nevada County	2	5	04/07/2017
Placer County	2	5	04/07/2017
San Bernardino County	2	6	07/13/2017
Sierra County	2	5	08/02/2018
Victorville, City of	1	6	No LAMP Submitted

The LAMP will be presented at the May 2020 Water Board meeting. Lassen County approved its LAMP on Feb. 25, 2020.

Annual Reports

The OWTS Policy requires local agencies to submit annual reports by February 1 of each year.

Tier 1 local agencies must submit limited data as required by the OWTS Policy, section 3.3, for the following:

- Number and location of OWTS complaints,
- Number and locations of OWTS applications,
- Registrations of septage haulers in the jurisdiction, and
- Number, location, and descriptions of new or replacement permits issued.

Tier 2 agencies must provide the above information, and, in addition, provide the information required in the Policy, sections 9.3.1 through 9.3.2, which includes the following:

- Number, location and description of permits issued where a variance is granted; and,
- Information to evaluate the impact of OWTS discharges and assess the extent to which groundwater and local surface water quality may be adversely impacted.

Additionally, Lahontan Water Board staff are requesting local agencies to provide the following information in order to evaluate density loading in the Lahontan Region:

- Separate County data based on regional board boundaries data),
- Report OWTS connected to sewer,
- Report parcel size,
- Report OWTS design flow,
- Report cause of OWTS failure, and
- Report parcel information sufficient to locate sites using a geographical information system (GIS).

The table below includes information from 2019 Annual Reports submitted by the local agencies in early 2020. The quantities shown in Table 3, below, reflect system performance totals for a county or a city as a local agency. In some cases, such as Los Angeles County that encompasses the Los Angeles and Lahontan Regions, the results submitted are for the entire local agency. Some local agencies did not submit annual reports or did not submit annual reports on-time even after reminders from Water Board staff. Further follow up is needed.

The annual report comparison shown in Table 3 shows some unauthorized sewage discharges as well as odor and nuisance complaints. Several local agencies did not report some information crucial to understanding the effectiveness of their programs in their annual reports. Based on the data from Table 3, some local agencies show more connection to sewer or replaced or repaired OWTS than nuisance odors and complaints. An overall assessment of the region regarding the performance of the OWTS program cannot be provided since most local agencies did not provide complete information. There is only a small quantity of OWTS connected to sewers as compared to OWTS that have been repaired or replaced, indicating that local agencies are responding to complaints but not proactive in extending sewer collection system infrastructure to eliminate sources of groundwater degradation from OWTS.

Where there is a higher density of OWTS, there is a larger flux of organic waste and nutrient loading to groundwater. Typical OWTS failures occur when solids move through septic tanks into the leach dispersal lines clogging soil pores, typically by bacterial growth. A high density of OWTS contributes to a higher concentration of nitrate in groundwater sooner, depending upon the underlying soil lithology and climate regime. Coarser soils and higher rainfall cause increased water percolation through soil, but higher rainfall may dilute pollutant concentrations in groundwater. The drinking water standard for nitrate (as nitrogen) is 10 milligram per liter.

Table 3 – Local Agency 2019 OWTS System Performance

Local Agency¹	Unauthorized Sewage Discharges	Nuisance Odors/ Complaints	New Permits Issued	OWTS Repaired / Replaced	OWTS Connected to Sewer	2019 Annual Report Submittal Date
Adelanto, City of	Tier 1 – Annual Report not received					
Alpine County	1	0	2	1	0	01/22/2020
Apple Valley Town of	0	0	62	319	19	02/03/2020
Barstow, City of	N/R ²	0	N/R ²	1	N/R ²	Not Submitted
California City, City of	N/R ²	N/R ²	N/R ¹	N/R ²	N/R ²	Not Submitted
El Dorado County	N/R ²	45	248	350	N/R ²	02/14/2020
Hesperia, City of	N/R ²	N/R ²	135	213	15	02/06/2020
Inyo County	N/R ²	3	6	10	N/R ²	Not Submitted
Kern County	2	1	88	183	3	02/06/2020
Lassen County	LAMP target approval date is May 2020					
Los Angeles County	0	0	77	65	N/R ²	02/14/2020

Local Agency ¹	Unauthorized Sewage Discharges	Nuisance Odors/ Complaints	New Permits Issued	OWTS Repaired / Replaced	OWTS Connected to Sewer	2019 Annual Report Submittal Date
Modoc County	1	2	1	9	N/R ²	02/27/2020
Mono County	N/R ²	N/R ²	N/R ²	N/R ²	N/R	Not Submitted
Nevada County	3	7	25	48	N/R ²	01/22/2020
Placer County	N/R ²	20	182	48	N/R ²	02/27/2020
San Bernardino County	N/R ²	N/R ²	136	331	1	01/24/2020
Sierra County	1	1	5	9	N/R ²	01/31/2020
Victorville, City of	Tier 1 – Annual Report not received					

¹Local Agencies shown in bold report data for multiple Water Board jurisdictions.

² N/R = Not Reported.

Five-Year Review Report

The OWTS Policy requires that Tier 2 agencies with an approved LAMP must submit a Water Quality Assessment Report every five-years. The report must be submitted by the local agencies evaluating its monitoring program, assessing whether water quality is being impacted by OWTS within its jurisdiction, and identifying any changes to its LAMP.

The five-year assessment must include an evaluation based on real data that may be compiled from multiple existing sources of groundwater and surface water quality data. This would include assessing the number of complaints, failures and inspection results submitted for the previous five years. The first five-year reports are due five years after the LAMP was approved by the Water Board (see Table 2 for LAMP approval dates).

Accessory Dwelling Units

The State of California has adopted numerous laws promoting Accessory Dwelling Units (ADUs) as an affordable housing option that may attach to an existing structure or constructed as a separate building on an existing subdivided lot. A Fact Sheet provided by State Board addresses permitting guidelines for ADUs under the OWTS Policy. Local agency permitting activities must be consistent with the requirements of the OWTS Policy as described in the attached Fact Sheet (Attachment 6.1). Later this year, Water Board staff intends to provide the Water Board with further information discussing the effect of ADUs in the Lahontan Region.

Climate Change

A changing climate will impact water quality and water volume in the Lahontan Region. Warmer, drier winters will reduce the mountain snowpack, diminishing the natural groundwater recharge provided by the regions' creeks and rivers. An increasing number of permitted OWTS, especially in the suburban southern portion of the Lahontan Region, will contribute elevated organic and nutrient loading to groundwater.

OWTS systems operate by gravity and, typically, have no moving or mechanical parts that require power or maintenance. This reduces aerosol emissions, as compared to centralized wastewater treatment plants, and may limit atmospheric warming. However, the increased loading to groundwater from OWTS may impact the hydrologically closed groundwater basins of the Lahontan Region.

The Water Board has adopted a climate change mitigation and adaptation strategy. An increased number of OWTS systems, coupled with a diminished groundwater recharge, may negatively impact the quality of the regions groundwater resources.

OWTS information may be found on the Water Board's web site, including approved LAMPs. The web site address is as follows.

http://www.waterboards.ca.gov/lahontan/water_issues/programs/owts/index.shtml