



EXECUTIVE OFFICER'S REPORT • June 2019
Covers April 16, 2019 – May 15, 2019

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State and Regional

1. Personnel Report – Eric Shay

New Hires

- Michael Suglian, Scientific Aid, North Basin Regulatory Unit, South Lake Tahoe. This position assists staff with administering storm water and water quality certification permitting actions, conducting inspections, reviewing reports, and maintaining databases.
- Angelica Soto, Office Technician, Victorville. This position supports our technical staff by finalizing staff correspondence and board agenda packets.

Vacancies – We are currently recruiting for the following positions:

- 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 for cases, permits and enforcement actions; and assists with field inspections.

- Graduate Student Assistant, South Regulatory Division, Victorville. This position uses computer programming languages, key datasets, and an interactive mapping tool to assist staff in visualizing water quality data.

Departures – None

North Lahontan Region

2. Tahoe Keys Property Owners Association WDR Permit Update - El Dorado County – Bruce Warden

The Tahoe Keys Property Owners Association (TKPOA) submitted, under requirements of a 2014 Waste Discharge Requirements (WDR) permit, annual updates of its Integrated Management Plan (IMP), Nonpoint Source Water Quality Management Plan (NPS Plan), Aquatic Macrophyte Monitoring Report, Bottom Barrier Project Summary and Water Quality Certification status. Though TKPOA continues to implement various non-chemical aquatic plant control methods and NPS stormwater pollution control actions, the invasive aquatic weeds persist and appear to have increased in abundance. Following is a summary of key features of the TKPOA annual update:

Aquatic Macrophyte Survey Report

Relative abundance and coverage of aquatic plant species were found to be like that of previous years: Eurasian watermilfoil, curlyleaf pondweed, coontail, Richardson's pondweed, leafy pondweed, elodea, watershield, Yellow pond-lily, Smartweed, and various species of *Nitella*, *Chara*, *Spirogyra*, and other filamentous algae. However, the prevalence and relative abundance of curlyleaf pondweed has increased in the Tahoe Keys lagoons for the third year in a row. Additionally, in some areas it has surpassed coontail as the most dominant species. Curlyleaf pondweed's swift and multiple modes of establishment (e.g., fragments, turions, and seeds), coupled with its ability to overwinter in near freezing temperatures, strongly suggest that this invasive species could become well-established in much of the near-shore, shallow-zone (roughly 20 feet and less) ecosystems throughout Lake Tahoe within the next several years.

Integrated Management Plan (IMP)

In 2019, as in years past, TKPOA's program for aquatic plant control uses approved mechanical and cultural control methods, combined with regular aquatic plant and water quality monitoring. These control and monitoring methods include the following specific actions:

TKPOA plans to undertake several new studies in 2019. Bubble curtains were a technology deployed in 2018 at the exit of the TKPOA lagoon channel to prevent spread of AIS plant fragments from entering Lake Tahoe. TKPOA also deployed "Seabins" in 2019, near the bubble curtain which is another new technology that collects floating plant fragments and functions like a pool leaf skimmer. TKPOA will perform studies to assess the effectiveness of plant fragment removal for bubble curtains and Seabins in 2019. Laminar Flow Aeration (LFA) is a technology that aerates organic nutrient-laden sediments and spreads aerated water over a large area to increase dissolved oxygen (DO) concentrations in the water column. In Spring of

2019, TKPOA installed a new LFA system in areas of the Keys lagoons that have historically had low DO and Harmful Algal Bloom (HAB) outbreaks to assess its effectiveness in control of HABs and long-term reductions of nutrients in lagoon bottom organic sediment. TKPOA will undertake an ambient water quality baseline study in 2019 of herbicides and the herbicide breakdown products (degradants), if any, in the Tahoe Keys Lagoons. This is part of a separate TKPOA proposal to use herbicides to knock down concentrated AIS populations prior to long-term control with non-chemical means of control.

In 2019 the TKPOA Board and Water Quality Committee (WQC) will also be closely following the environmental review and permitting process for its proposed Aquatic Restoration Project (application submitted to the Water Board in July 2018). TKPOA hopes to initiate implementation of the Aquatic Restoration Project as soon as possible following agency review, input and approval.

NPS Plan

In 2018, TKPOA coordinated NPS planning efforts with preparation of the California Environmental Quality Act Environmental Impact Report (CEQA EIR) for the proposed pilot-scale herbicide treatment project including characterization of stormwater effluent water quality from combined TKPOA - City of South Lake Tahoe (CSLT) collection facilities and characterization of nutrients in groundwater entering Keys Lagoon waters from terrestrial sources. This information will be included in a comprehensive NPS Plan update in 2019.

Bottom Barrier Monitoring Report

Seven homeowners installed bottom barriers in 2018, compared to three homeowner installations in 2017; the availability of no-cost barriers from the Tahoe Resource Conservation District (TRCD) may have been a factor in increased homeowner participation. Barriers were installed in June and removed in October.

Additional WDR Compliance Actions

TKPOA continues to promote, through the NPS Plan (including education and outreach activities), compliance with the Municipal Stormwater permit for stormwater draining into CSLT storm drains. TKPOA began a comprehensive data collection program in 2016 to locate and digitally map with Global Positioning System coordinates all visible storm drains into the Tahoe Keys lagoons. However, due to the high lake levels present in 2017 and 2018, data collection was impeded and will potentially resume in 2019 depending on water level.

As a follow-up to the January 2018 NPS Plan, which identified potentially sensitive drainage areas related to the shared stormwater facilities, TKPOA collected first-flush stormwater from combined TKPOA- CSLT collection facilities. Discharges from these shared facilities met the surface water numeric effluent limits identified in the WDR.

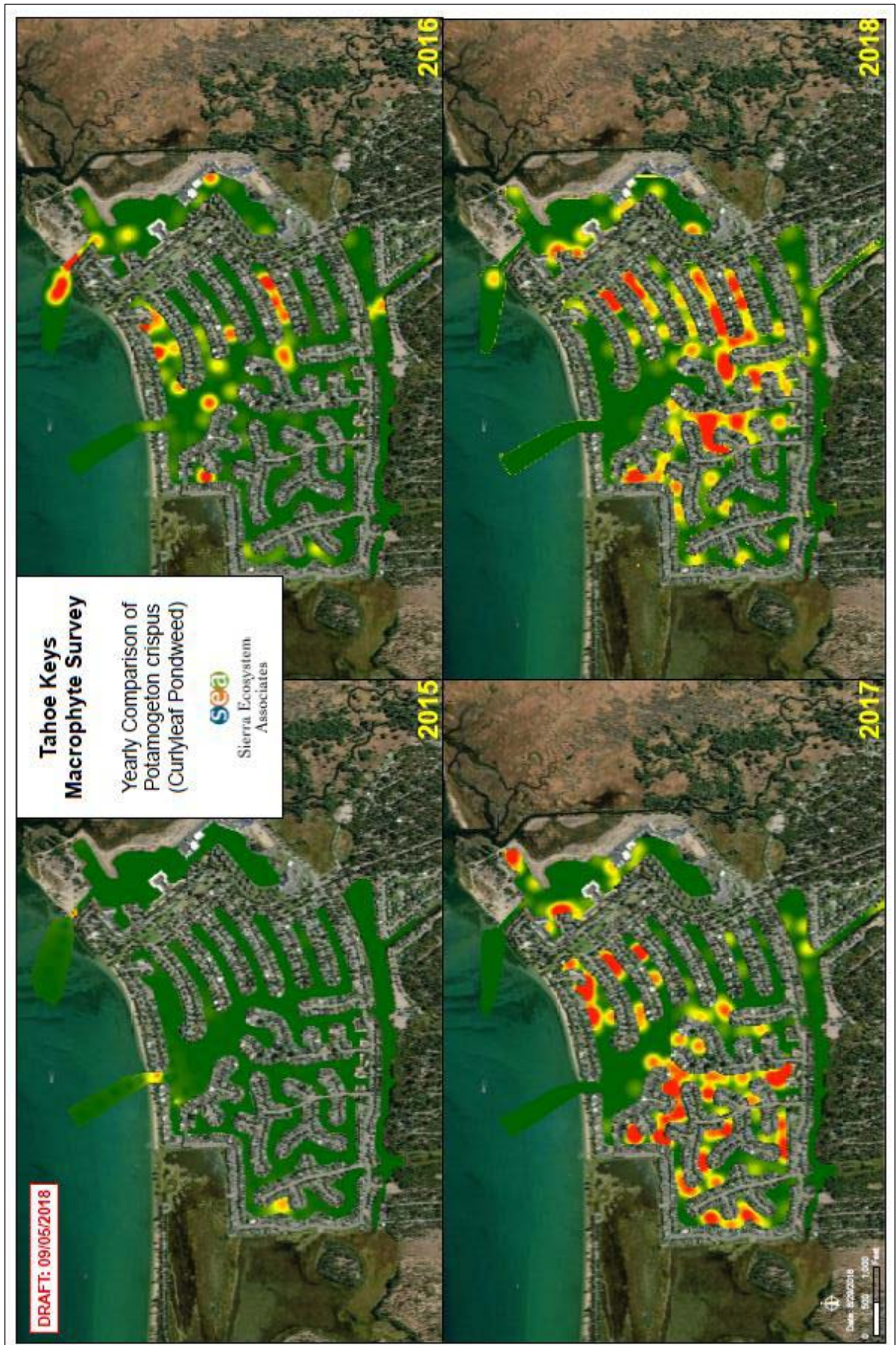


Figure 2 Curlyleaf Pondweed Composition Map 2015 to 2018

3. National Wild and Scenic River Designations in the Lahontan Region – Jennifer Watts

In 2019, and previously in 2009, the federal government designated a number of Lahontan Region surface waters under the National Wild and Scenic Rivers Act (Public Law 90-542; 16 U.S.C. 1271 et seq.). The National Wild and Scenic Rivers Act was signed into law by President Lyndon Johnson in October 1968 and celebrated its 50 year anniversary last year. As described on the website devoted to the Wild and Scenic River System (<http://www.rivers.gov>). The nation was more aware of the need for environmental protection, as evidenced by the remarks President Johnson made when he signed this landmark legislation:

“An unspoiled river is a very rare thing in this Nation today. Their flow and vitality have been harnessed by dams and too often they have been turned into open sewers by communities and by industries. It makes us all very fearful that all rivers will go this way unless somebody acts now to try to balance our river development”.

Fortunately, other federal laws, in addition to the Wild and Scenic Rivers Act were later adopted, including the Clean Water Act in 1972. These laws helped improve our nation’s rivers that President Johnson was observing at the time. At its heart, the National Wild and Scenic Rivers System was created to preserve rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. As stated in the Act itself:

“The Congress declares that the established national policy of dams and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers thereof in their free-flowing conditions to protect the water quality of such rivers and to fulfill other vital national conservation purposes”

Rivers may be designated as components of the National Wild and Scenic River System either by Congress, which is the most common route, or under certain circumstances, by the Secretary of the Interior. The process typically begins with Congress authorizing one of the federal land management agencies to conduct a study to determine the subject river’s eligibility for designation, the results of which are transmitted to Congress. Congress may or may not pass legislation to designate the river; however, it can also designate a river without authorizing a study. Once designated, specific segments of the river are classified as either wild, scenic, or recreational, such that each river may contain segments with different classifications depending upon the nature of the river. For example, “wild” segments are typically inaccessible except by trail and are essentially primitive, while “scenic” segments may be accessible by road at some locations. As established by the Wild and Scenic Rivers Act, designation under the Act does not necessarily prohibit development along the river, but it does prohibit federal support for actions that would harm the river’s free-flowing condition, water quality, or outstanding resource values.

On March 12, 2019, President Trump signed into law the John D. Dingell Jr., Conservation, Management, and Recreation Act, a wide-ranging public lands conservation measure that included the California Desert Protection and Recreation Act (California Desert Act) authored by Senator Diane Feinstein. The California Desert Act contained several new National Wild and Scenic River System designations within the Lahontan Region, shown in the table below. Additionally, the California Desert Act created several new wilderness area designations for portions of the Mojave Desert

near Barstow and Death Valley. Also, included in the table are Lahontan Region surface waters previously afforded National Wild and Scenic status when the Omnibus Public Lands Management Act was signed into law by President Barack Obama in March 2009.

Wild and Scenic River	Length of Segment¹	Year Designated	River Highlights²
Amargosa River	26.3 miles	2009	The only free-flowing river in the Death Valley region of the Mojave Desert, the portion that flows through Amargosa Canyon is known for dense greenery, hanging gardens, and a small waterfall. Natural systems along the river include marshes, mud hills, riparian areas, and salt-encrusted mud flats. Portions of the river provide habitat for two endangered fish species, Amargosa pupfish and Amargosa speckled dace.
	7.5 miles	2019	
Cottonwood Creek	21.5 miles	2009	Originating in bristlecone forests, Cottonwood Creek is the longest perennial stream flowing east from the crest of the White Mountains. It is home to Paiute cutthroat trout, one of the rarest trout in North America, and the lower segment contains habitat for the spotted bat, a state and federal species of special concern. It flows through stands of aspen and bristlecone pines before descending into sagebrush and pinyon-juniper woodlands at lower elevations.
Deep Creek	21 miles	2019	Deep Creek flows from its headwaters in the mixed conifer forests in the San Bernardino Mountains, descending through unique scenery to the Mojave Desert. It supports a diversity of wildlife habitats and vegetation communities and is home to several endangered plant and animal species. It is also popular with hikers, as a 16-mile portion of the Pacific Crest Trail is located along Deep Creek.

Wild and Scenic River	Length of Segment ¹	Year Designated	River Highlights ²
Owens River Headwaters	19.1 miles	2009	The Owens River Headwaters is an area of forested mountains and alpine meadows that contain diverse landforms, such as Glass Creek Meadow, the largest sub-alpine meadow east of the Sierra crest. The meadow provides habitat for the Yosemite toad and is also home to the highest diversity of butterflies in the Eastern Sierra. Additionally, the Owens River Headwaters flow through the region's largest old growth red fir forest.
Surprise Canyon Creek	7.1 miles	2019	Surprise Canyon Creek originates in the Panamint Mountains of Death Valley National Park and flows west into the Bureau of Land Management's Surprise Canyon Creek Wilderness. The creek's gradient is steep, dropping from above 6,000 feet to below 2,000 feet in seven miles. The creek is fed by springs that emerge from the canyon walls and supports lush riparian habitat and stands of cottonwood and willow trees that provide habitat for bighorn sheep and other desert plant and animal species.

¹Information regarding the classification of either wild, scenic, or recreational for designated river segments in California can be found here: <https://www.rivers.gov/california.php>

²River highlights information taken from: <http://www.rivers.gov>, except for Deep Creek and Holcomb Creek.

4. The General and Orphan Site Underground Storage Tank Cleanup Fund Programs, Barry Keene Underground Storage Tank Cleanup Act of 1989

– Kerri O’Keefe

Several different funding programs administered by the State Water Board are available for the investigation and cleanup of leaking underground storage tanks (UST). Initial acceptance into the funding program begins with two specific accounts, the General Cleanup Fund (GCF) and the Orphan Site Cleanup Fund (OSCF). These accounts help owners and operators of properties with leaking USTs comply with Water Board directives to investigate and cleanup contamination. Staff regularly recommends that dischargers apply for reimbursement of eligible costs (further described below) as part of the Water Board’s standard leaking UST case management process.

GCF applicants include current or former owners and/or operators of USTs that have had unauthorized waste discharges to the environment. OSCF applicants include leaking UST responsible parties that did not cause or contribute to the unauthorized waste discharge and have no affiliation with the parties that caused the unauthorized

discharge. The Water Board currently has eighteen claimants of the GCF, and two cases are seeking reimbursement from the OSCF.

Both programs require the claimant to meet specific requirements in order to qualify for reimbursement. First, the claimant must be required by the regulatory agency to undertake corrective action. Second, the claimant must be the individual or entity that has paid or will pay for cleanup costs. Additional eligibility information for both programs can be found on the State Water Board website at:

https://www.waterboards.ca.gov/water_issues/programs/ustcf/.

Eligible claimants can be reimbursed for 1) corrective action costs incurred for work performed on or after January 1, 1988 that have been approved by the appropriate regulatory agency; 2) costs awarded to a third party by a judgement or court-approved settlement such as medical expenses accumulated as a result of a release; and 3) Regulatory Technical Assistance Costs (RTAC) such as preparing Fund documents and compiling invoices, to a maximum of \$3,000 per occurrence, incurred for work performed on or after January 1, 1997. Non-reimbursable costs include attorney fees, interest or finance charges, and tank removal.

Although reimbursement for tank removal is not obtainable from the GCF or OSCF, loans and grants are available to come into compliance with UST regulatory requirements through the State Water Board's Replacing, Removing, or Upgrading Storage Tanks (RUST) Program. Eligible costs for compensation include removing and replacing single-walled USTs and/or piping, UST upgrades that include installation of containment sumps, under-dispenser containment boxes/pans, installation of electronic monitoring systems, and completion of enhanced leak detection tests. Loans and grants are also available for installation of USTs through the Installing Underground Storage Tank (IUST) Program. A complete copy of the Underground Storage Tank Cleanup Fund program summary can be found online at:

https://www.waterboards.ca.gov/water_issues/programs/ustcf/docs/claim_application_forms/program_summary.pdf.

5. Restoration Grant Awarded to Truckee River Watershed Council – Anne Holden

The State Water Board's Nonpoint Source Grant Program is supported by funds from the U.S. EPA under Clean Water Act (CWA) section 319, and annually awards funding in a competitive statewide grant solicitation and review process. During the 2019 CWA 319 grant cycle, the Truckee River Watershed Council (TRWC) submitted a proposal to reduce erosion and sedimentation from dirt roads and legacy sources in the Coldstream Canyon watershed, located in the larger Donner Creek watershed southwest of the town of Truckee. Historic land uses, which include native surface road building, logging, railroad construction, and gravel mining, have degraded watershed conditions. Cold Creek runs through Coldstream Canyon, and is a major undammed tributary to the middle Truckee River (see Figure 6). The Water Board adopted a TMDL for sediment in the middle Truckee River in 2008, which identified the Donner/Cold Creek watershed as the second highest suspended sediment contributor to the middle Truckee River.

The TRWC's successful grant proposal outlines actions to treat 13 miles of native surface roads, including decommissioning, abandoning, and re-routing roads, installing erosion control measures and improving crossings. The proposal also calls for restoring and enhancing 11 acres of wetland and riparian habitat impacted by legacy

gravel mining. The project proposes to reduce sediment loads from 51 percent of roads in the watershed, resulting in load reductions of 316 tons of sediment per year, and is estimated to improve watershed function overall in 8,000 acres of the project area. Project implementation will take place over two construction seasons starting in late summer 2020. The total project cost is \$868,911; the 319h grant award is \$648,906. Matching funds and services totaling 25 percent of the total project cost were contributed by the Martis Fund and the California Department of Parks and Recreation.

The project has a strong nexus to the middle Truckee River watershed TMDL, which identifies controlling sediment from dirt roads and legacy sources as high priorities to achieve TMDL targets. It also builds on previously completed 319 grants awarded to the TRWC, including a 2012 floodplain restoration project in the lower watershed, and a 319-grant funded sediment source assessment project from 2014, which identified this project area as a priority.

Water Board staff advocated for the project during the 2019 CWA 319 grant review and selection process. Staff will continue to support the project by processing grant invoices and work products, reviewing final design plans, and issuing CWA section 401 water quality certification and Basin Plan prohibition exemptions.

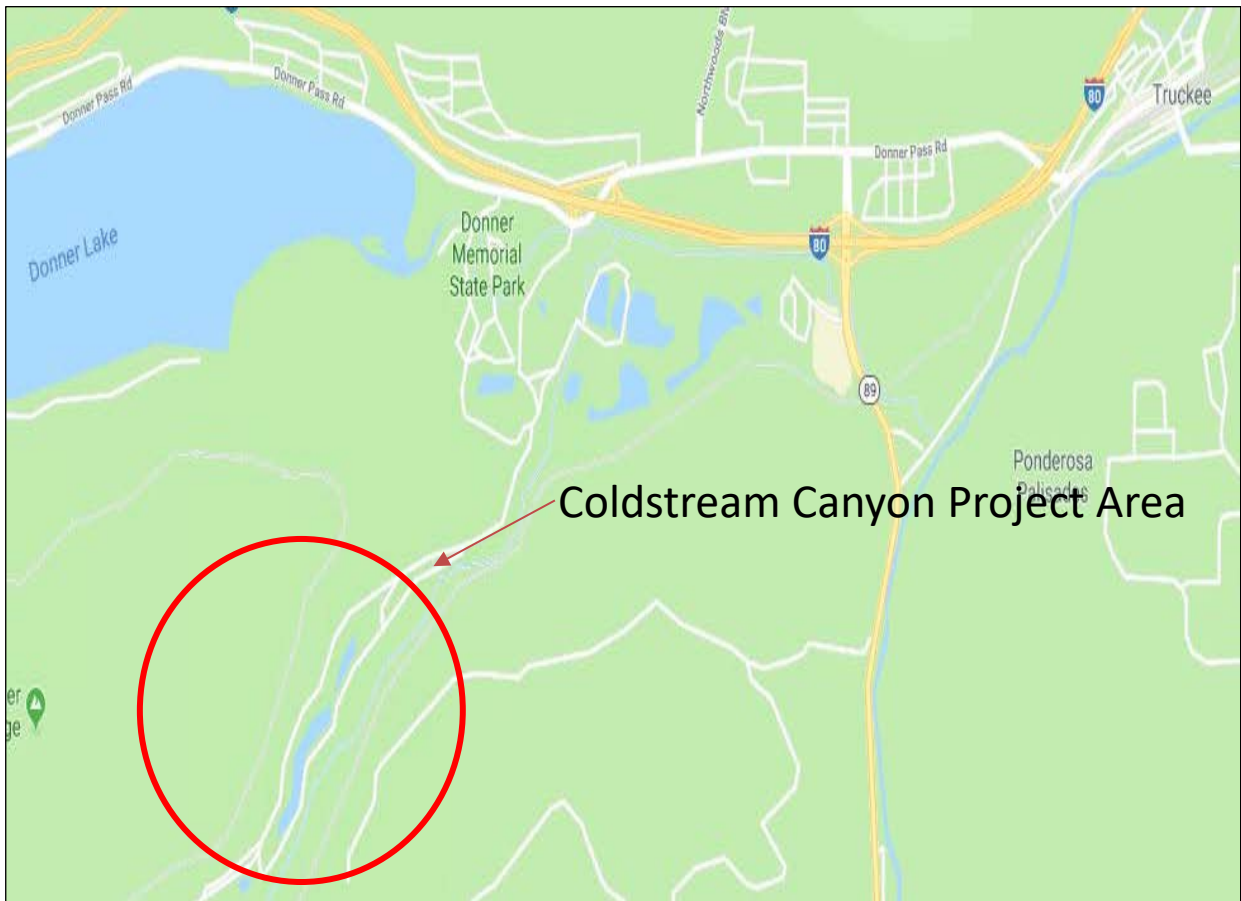


Figure 5 – Map of project location

6. Washoe Earth Day – Cindy Wise and Kathleen Bindl

Water Board staff participated in the annual Washoe Earth Day on May 11 in Woodfords, California. The event was organized by the Washoe Environmental Protection Department as a fun, family-oriented event that typically attracts hundreds of tribal members from all Washoe communities in both Nevada and California. The emphasis of the event was education and engaging Tribal youth. In addition to the Water Board, other resource management agencies such as the U.S. Forest Service, area non-profits (e.g., Alpine Watershed Group, Carson Water Subconservancy District), and local businesses presented watershed protection activities, distributed educational materials, showcased achievements, and described ongoing projects. Because of its location in Woodfords, many of the displays and activities focused on the West Fork Carson River watershed.

Water Board staff used a tabletop watershed model (see Figure 5) to illustrate how activities such as residential landscaping, pets, timber harvests, grazing, and agriculture can impact water quality, and how appropriate management activities can help to prevent or lessen the impacts. Additionally, staff was able to discuss aspects of the West Fork Carson River Vision Project with Alpine County partners.

The overall event was a success in focusing on environmental practices like water and energy conservation, recycling, creating climate resilience, as well as promoting healthy eating and lifestyle choices. Events such as Washoe Earth Day help to instill a sense of environmental stewardship in children to help them make better life choices resulting in the long-term protection of water and other natural resources.



Figure 6: Children learning about water quality protection by using a tabletop watershed model at Washoe Earth Day.

7. Eastern California Cannabis Unit Status Report - February 15, 2019 to April 14, 2019 – Eric Taxer

Enrollment

The Eastern California Cannabis Unit staff issued 7 Notices of Applicability (NOAs) for indoor cannabis cultivation facilities. Staff also issued 4 revised NOAs. To date, we have issued a total of 77 indoor and 15 outdoor cannabis cultivation NOAs.

Onsite Wastewater Treatment and Disposal Permitting

Many indoor cannabis cultivators wish to dispose cannabis cultivation wastewater (industrial waste) to onsite wastewater disposal systems such as septic tanks. Previously, the Lahontan Water Board identified a need to effectively regulate wastewater discharges to small wastewater treatment systems, including both domestic and nondomestic wastewater not regulated by a Local Agency Management Program. The existing State Board Small Domestic System Order adopted in 2014 does not provide coverage for small nondomestic wastewater discharges, nor does it provide nitrogen effluent concentration limits for domestic wastewater systems that have average flow rates under 20,000 gallons per day. As reported to the Water Board during the March 2019 Accomplishments & Priorities item, Water Board staff are drafting regionwide general permits (Small Nondomestic Order for industrial discharges and a Limited Domestic Order for domestic discharges less than 20,000 gpd) for the Water Board's consideration in 2019 or 2020.

CEQA

As a responsible agency, Eastern California Cannabis Unit staff submitted comments on four CEQA documents for proposed projects located in Inyo County, City of Adelanto, and City of Lancaster. Water Board staff attended Nevada County's hearing for the adoption of their cannabis ordinance. Staff have also been coordinating with the City of Adelanto and the City of California City to refine their CEQA process and to begin addressing cumulative environmental impacts from the high number of cannabis facilities in each area.

Interagency Coordination

Staff have coordinated with the City of South Lake Tahoe in implementing its cannabis cultivation ordinance consistent with the Cannabis General Order and Policy. Staff have also notified all cultivators and other interested stakeholders of planned stakeholder meetings regarding proposed increases to permit fees.

Inspection Program

Staff is developing a digitized inspection form in coordination with the State Water Board's Office of Enforcement. The form will standardize and streamline data collection efforts during site inspections, allowing staff to collect precise GPS points and measurements on individual computer tablets. Meetings conducted during this period focused on digitizing inspection data, correlating applicant and inspection data to expedite compliance determination, incorporating indoor cultivation sites, and evaluating final inspection report formatting. This tool will greatly increase staff efficiency and ensure high-quality data collection. Once the process is refined, the streamlined inspection report process will be rolled out to other Water Board cannabis units throughout the State.

Staff prioritized sites to be inspected May through July. Initial focus will be on indoor facilities that collect and haul process wastewater. Compliance assistance will be provided to ensure cultivators understand the mechanisms needed to disconnect industrial waste streams from existing onsite (septic) systems.

Meetings, Events, and Training

- State Water Board Cannabis April 5 Round Table and bi-weekly calls
- Cannabis Round Table Charter subcommittee
- Contracts training
- Facilitation training
- Effective Writing and Effective Editing trainings
- Cannabis Awareness safety training
- Fluvial geomorphology training
- Department of Pesticides symposium

Upcoming Significant Events

- Currently recruiting for a student intern to develop a data visualization tool. Position is coordinated between the Eastern California Cannabis Unit staff, Lahontan Water Board's Regional Data Coordinator, and the State Water Board's Office of Information Management. The Eastern California Cannabis Unit will be piloting the data visualization tool.
- California City outreach event on May 9.
- Interagency onsite meeting of a Lassen County site on April 18. Representatives from Division of Water Rights, Fish and Wildlife, Attorney General's Office, Office of Enforcement, and Eastern California Regional Cannabis Staff will discuss remediation and enforcement options.

8. Los Angeles Department of Water and Power's Temporary Urgency Change Petition

– *Robert Larsen*

On January 22, 2019 the Los Angeles Department of Water and Power (LADWP) submitted a Temporary Urgency Change Petition (TUCP) to increase spring flows in both Rush Creek (see Figure 8) and Lee Vining Creek. The initial TUCP was amended on March 22, 2019 to extend the proposed amended creek flows for 180 days. Like others before it, this year's TUCP is intended to implement elevated stream flows agreed to in the 2013 Mono Basin Stream Restoration Agreement.

Higher flows support geomorphic and ecological restoration by mobilizing bedload and fine sediment, improving stream pool habitat, scouring undercut banks, and improving overbank flow frequency. Proper floodplain function, in turn, supports riparian vegetation and improves groundwater recharge. The increase in flows to Rush and Lee Vining Creeks is supported by the Mono Lake Committee, California Trout, Inc., and stream scientists Dr. William Trush and Mr. Ross Taylor.

The stream flow adjustments agreed upon in 2013 require an amendment to LADWP's water diversion license. The amendment and necessary infrastructure improvements await the completion of a California Environmental Quality Act assessment. Until the needed environmental assessment is complete, LADWP will submit annual TUPCs to provide elevated flows needed to for stream restoration. Increased flow provided by the previous

TUCPs has overtopped creek banks to create a new inset floodplain in lower Rush Creek that supports riparian cottonwood and willow establishment. Increased flows have also effectively flushed accumulated sediment from both Rush and Lee Vining Creeks. Lower water temperatures provided by more consistent flows has increased brown trout recruitment and growth.

Increasing spring stream flow is critical to supporting ecological restoration in these fragile systems. Water Board staff support the 2019 TUCP and look forward to future work that will codify the flow adjustments in an amended water diversion license. Staff are also engaging with the Mono Lake Committee to learn how the Water Board can further support restoration efforts in the Mono Lake basin.



Figure 8: Photo of Rush Creek, courtesy of Mono Lake Committee

9. California Science and Engineering Fair Finals: Environmental and Earth Science, Junior High, California Science Center, Los Angeles – Tom Browne

Tom Browne, Water Resource Control Engineer of the Victorville office, volunteered to judge at the California Science and Engineering Fair (State Science Fair) finals on April 30, 2019, in Los Angeles for the Junior High, Earth and Environmental Science category. It was the 23rd year that Dr. Browne has volunteered as a judge at the State Science Fair.

There were 24 finalists in the category this year. Each finalist had already won a first, second, or third place award at their school, school district, county, or regional competition level, and these young scientists have already had practice with their public presentation skills before this event. Experiment topics included studies on climate change, soil erosion, models to predict wildfires, air quality at schools, microplastics pollution, microfiber pollution, salt water intrusion, microbial fuel cells, and sea urchin populations at state parks.

First place went to Reshma Kosaraju, a seventh grader attending The Harker School, San Jose, for her project *Application of Meteorological Data to Predict the Chances of a Forest Fire Using Machine Learning and Neural Networks*. She used a neural network (a.k.a. machine learning) to study data on California wildfires to come up with an algorithm that will predict the likelihood of fire at a particular location. Her model employed 13 variables, including temperature, humidity, fuel density, wind direction, wind speed, history of fires at that location, day of the week, and potential ignition sources (power lines and transformers). She wrote a program in Python language with over 200 lines of code. The network is tested and re-calibrated by submitting wildfire events (“epochs”) along with data for the 13 characteristic variables. The network “learns” by the programmer grading its predictions. Her algorithm achieved 67% prediction accuracy after adjusting it over nine epochs. Reshma believed that if she had even more variables that characterize fires, the model could achieve a 90% prediction accuracy.

The experiments by these young scientists were very impressive, and they give much hope and promise for the State’s next generation of scientists and engineers in solving challenges of wildfires, water pollution, air pollution, climate change, and other environmental challenges.

10. California Financing Coordinating Committee Funding Fair Event – Sergio Alonso

On May 9, 2019, Water Board staff attended the California Financing Coordinating Committee (CFCC) Funding Fair in Bakersfield. The CFCC consists of member agencies that facilitate and expedite the completion of various types of water, wastewater, and other public infrastructure projects. These events are held in multiple locations throughout the state to educate the public and potential customers about the different member agencies and, more importantly, the financial and technical resources available. Water Board staff attended the funding fair to gain the knowledge regarding current financial assistance information available that will allow us to further assist our dischargers, some of which are in economically disadvantaged communities, when upgrades for their domestic wastewater treatment systems and plants are needed.

The United States Department of Agriculture and Rural Development (USDA) discussed their loan and grant programs to assist rural communities. Their *Water and Waste Disposal Loan and Grant Program* assists with funding for construction, engineering fees, legal fees, and environmental costs. This program is intended for public bodies/special districts, nonprofit corporations, and federally recognized tribes. To qualify for this program, applicants must cover a population area of 10,000 people or less. The USDA also provides an *Emergency Community Water Assistance Grant* that assists rural communities that have experienced a significant decline in the quantity or quality of drinking water caused by an emergency incident, such as droughts, earthquakes, floods, or landslides. There are other grants provided by the USDA that have prerequisites such as only being applicable to certain counties, Native American territories under financial stress, and rural areas that have a population of 2,500 or less.

The United States Bureau of Reclamation (USBR) aids multiple regions across the western US. *Grants* provided by the USBR could cover up to 50% of a project’s cost and no more than \$5 million through a competitive bidding process that includes states, tribes, irrigation and water districts, and other entities with water or power authority. The USBR’s *Agricultural Water Use Efficiency Grant* focuses on projects that

increase the capability of on-farm water conservation projects and facilitates recycled water use, where allowed by quality and food safety regulations. Other assistance that the USBR provides includes implementing renewable energy sources or upgrading facilities in water delivery that provide sustained energy savings. Drought contingency planning and resiliency projects are a focus for the USBR. Monitoring near- and long-term water availability, along with identifying strategies to deal with a drought, are requirements for these types of grants.

The State Water Resources Control Board, Division of Financial Assistance (DFA) was also present and manages the *Clean Water State Revolving Fund (CWSRF)* program (funds averaging \$625 million/year), with applications accepted on a continuous basis. The CWSRF funds wastewater and water recycling projects including wastewater treatment, local sewers, sewer interceptors, and water reclamation facilities. The *Small Community Grant* program deals with small communities with a population less than 20,000 and a median household income less than 80% of the statewide median household income. The *Water Recycling Funding Program* promotes the use of treated municipal wastewater to augment or offset state/local water supplies for publicly owned facilities and privately-owned water utilities. The DFA also deals with site cleanup, groundwater sustainability, stormwater, and drinking water projects.

These agencies were just some of the participants at the funding fair discussing loans and grants for future projects. There are a few low population and low income communities within the Lahontan Region that could benefit from such assistance.

11. Mojave Water Agency, City of Victorville, and San Bernardino County Joint Tour of Amethyst Basin – Tiffany Steinert

Water Board staff member, Tiffany Steinert, represented the Water Board at the Amethyst Basin Tour (Tour) hosted by the Mojave Water Agency, City of Victorville, and the County of San Bernardino on Wednesday, April 3, 2019. The Tour was a public outreach event intended to educate the general public in the Victor Valley area regarding the importance of our groundwater recharge, the knowledge of where our drinking water comes from, and the importance of water conservation in the high desert.

The Amethyst Basin project (Figure 11a) is in the City of Victorville along the Oro Grande Wash. The Basin is located approximately 0.5-mile west of Interstate 15, approximately 1.7 miles north of the California Aqueduct, and approximately 0.7-mile east of U.S. Highway 395. The Oro Grande Wash, a major tributary to the Mojave River, is an intermittent stream that receives water from the top of the Cajon Pass area of the San Bernardino Mountains as well as from desert floor runoff and flows in a northeasterly direction.

The Amethyst Basin will be used to recharge groundwater and provide storm water protection to the Victor Valley Mall and surrounding homes and businesses. The inlet of the basin connects to the upstream natural flow path via an approximately 300-foot wide armored inlet spillway (Figure 11b). Two armored interior dikes with gated drain culverts designed to contain 5 feet of water for groundwater recharge are in the floor of the basin. These dikes will subdivide the basin into three sub-basins enhancing recharge and preventing saturation of the main dam embankment during recharge operations. The recharge for the sub-basins is staggered. Mojave Water Agency is hoping to recharge 3,000-acre feet per year of State Water Project water into this basin. Mojave Water Agency will pace future expanded recharge capacity as demand increases.



Figure 11a - View of Amethyst Basin with dam and spillway in the background.



Figure 11b - View of the spillway still under construction and the two gated drain culverts

12. Governor's Office of Emergency Services Burn Debris Task Force Efforts for the Woolsey/Hill Fire Incident – Jeff Fitzsimmons

Water Board staff member, Jeff Fitzsimmons, volunteered and was temporarily deployed to the Debris Operations Removal Center in Calabasas as a member of one of four Debris Management Teams assigned to assist in the cleanup efforts for the Woolsey/Hill Fire incident in Los Angeles and Ventura counties. The removal of the burn debris is important to prevent distribution of asbestos, household hazardous wastes, heavy metals, and other associated wastes from being discharged into waterways by precipitation or wind events or by percolation into groundwater. Mr. Fitzsimmons was deployed from February 8 through March 9, 2019, and again from April 4 through May 3, 2019.

The Debris Management Teams consist of volunteers from the State and Regional Water Quality Control Boards, Cal Recycle, Office of Environmental Health Hazard Assessment, California Department of Fish and Wildlife, California Department of Transportation, and California Department of Water Resources. Members of a Debris Management Team are either assigned to the Operations Division as Division Supervisors or to the Planning Division as Planning Assistants. Planning Assistants support the efforts of the Deputy Planning Chief through collecting information, managing data, and coordinating directly with fire victims/property owners and local agencies in the preparation and implementation of debris cleanup, operation, and demobilization. Operations Division Supervisors support the Operations Chief and Deputy Operations Chief through oversight of burn debris removal Task Force teams, whereby one Task Force consists of a task force leader, a foreman, an equipment operator, and two laborers.

Mr. Fitzsimmons was assigned to the Operations Division as a Division Supervisor and managed up to seven Task Force teams at any given time.

The Task Force teams are responsible for onsite burnt debris removal, consisting of the following tasks: 1) identifying any potential safety concerns; 2) determining the ash-footprint of the burnt debris; 3) sorting and removal of burnt debris by the designations of ash and debris, concrete, metal, or soil; 4) wrapping the burnt debris; and 5) loading and tarping of the sorted debris for offsite disposal in accordance with the Debris Recovery Operations Plan (DROP). The Task Force teams are also charged with ensuring that any special requests of the fire victims are carried out. The Division Supervisor oversees the work of the Task Force teams and interacts with contractor, tribal, local municipal, and federal representatives.

The DROP burnt debris removal process is as follows: 1) segregation and removal of metals; 2) removal of ash and commingled debris; 3) removal of fire damaged concrete foundations; and 4) removal of 3- to 6-inches of residual soil within the burn footprint. All ash and commingled debris along with soil are placed within a plastic liner that allows for the entire load to be wrapped. All loads are then manually tarped prior to departing from the source site. Dependent upon landfill load allowances, most burnt debris is transported to either the Sunshine Canyon Landfill, the Calabasas Landfill, or the Simi Valley Landfill (all within the jurisdiction of Los Angeles Water Board). The Sunshine Canyon Landfill will accept ash and debris; the Calabasas Landfill will accept ash, debris, and concrete; and the Simi Valley Landfill will accept ash, debris, concrete, soil, metal, and vehicles. Any asbestos containing material is diverted to the Azusa Land Reclamation Landfill.

Division Supervisors frequently interact with fire victims, particularly early on in the burnt debris removal process when emotions run highest. Most fire victims have lost their homes and most, if not all, of their possessions. Frequently, Task Force members and Division Supervisors assist fire victims with searching through the debris for specific items of monetary and/or sentimental value, and occasionally items are recovered. The efforts of the Debris Management Teams hopefully serve to assist the fire victims with finding closure, and that their compassion and humanity adds a little bit of hope to an otherwise unimaginable disaster.