STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF SEPTEMBER 22-23, 2016
Prepared on August 11, 2016

ITEM NUMBER: 18

SUBJECT: Executive Officer's Report to the Board

STAFF CONTACT: John Robertson 805/549-3140 or John.Robertson@waterboards.ca.gov

This item presents a brief discussion of issues that may interest the Board. Upon request, staff can provide more detailed information about any particular item.

WATER QUALITY CERTIFICATIONS

[Phil Hammer 805/549-3882]

The tables on the following pages list applications received and certifications issued from June 10, 2016—August 2, 2016.

401 Water Quality Certification Applications Received June 10, 2016 - August 2, 2016.

Applicant	Date Received	Project Title	Project Purpose	Location	County	Receiving Water	Proposed Total Impact[1]	Status
William J Clark-William J. Clark Trucking Services	6/28/2016	Clark Pit-Bitterwater	To remove aggregates (rock, sand, and gravel) from the streambed.	King City	Monterey	San Lorenzo Creek	8.5 acres/ 12000 linear feet	Under Staff Review
Scott Kriens-1440 DevCo, LLC	7/8/2016	1440 Center Slope Erosion Failure Repair	To restore two areas of slope failure along the bank of Carbonera Creek.	City of Scotts Valley	Santa Cruz	Carbonera Creek	0.024 acres/ 240 linear feet	Under Staff Review
Rob Arciero-Fallingstar Homes, Inc.	7/14/2016	Tract 2541 Outfall Project	To install a storm water outfall, a vegetated swale, an access road, and bank protection to prevent erosion and to accommodate storm water runoff.	Shandon	San Luis Obispo	Cholame Creek	0.036 acres/ 25 linear feet	Under Staff Review
Ken Scott-Ken G Scott Construction	7/19/2016	Estero Landing Piling Repair	To repair the existing wood pilings to prevent failure.	Morro Bay	San Luis Obispo	Morro Bay Harbor	0.0004 acres/16 linear feet	Under Staff Review
Lisa Stratton-UCSB Cheadle Center for Biodiversity and Ecological Restoration	7/19/2016	North Campus Open Space Restoration Project	To restore the North Campus Open Space to conditions that existed onsite prior to the construction of the Ocean Meadows Golf Course.	UCSB North Campus	Santa Barbara	Devereux Slough and Pacific Ocean	9.05 acres	Under Staff Review
Greg Jones-County of Santa Cruz	7/20/2016	West Hilton Emergency Culvert Repair	To replace a failed 36-inch culvert on an unnamed intermittent drainage across West Hilton Road.	Boulder Creek	Santa Cruz	Unnamed tributary to Boulder Creek	0.0825 acres/118 linear feet	Under Staff Review

Applicant	Date Received	Project Title	Project Purpose	Location	County	Receiving Water	Pro-posed Total Impact[1]	Status
Paul and Kathy Madonna	7/21/2016	Water Pipeline Across Old Creek	To move water from a new well to existing irrigation system.	Cayucos	San Luis Obispo	Old Creek	0.0057 acres/ 82 linear feet	Under Staff Review
Alfred T. Meyer	7/25/2016	Morro Bay Boatyard Marina Piling Repair	To repair existing wood pilings because dock guides are failing.	Morro Bay	San Luis Obispo	Morro Bay Harbor	0.00001 acres/ 0.65 linear feet	Under Staff Review
Larry Bonner-Caltrans	7/28/2016	Salsipuedes Creek Bridge Scour Mitigation Project	To address the stream bank and bed erosion that is threatening the integrity of the existing bridge and roadway.	South of City of Lompoc	Santa Barbara	Salsipuedes Creek	0.282 acres/ 340 feet	Incomplete Application

[1] Total Impact includes both temporary and permanent impacts to waters.

401 Water Quality Certifications Issued June 10, 2016 - August 2, 2016.

Applicant	Date Certified	Project Title	Project Purpose	Location	County	Receiving Water	Includes LID Retention Feature[2]	Total Impact[1]
Richard S. Kline	5/31/2016	Rancho San Lorenzo Bank Stabilization	To obtain permitting for permanent bank stabilization activities.	Los Alamos	Santa Barbara	Canada Laguna Seca, a tributary to San Antonio Creek	N/A	0.121 acres/125 linear feet
Julie Vance-CA Dept. of Fish and Wildlife	7/25/2016	Elkhorn Slough Tidal Marsh Restoration Project, Phase 1	To restore tidal marsh, reduce tidal erosion, improve water quality, provide sea-level rise resilience, increase carbon sequestration, improve ecosystem function and support the recovery of the southern sea otter within areas of Elkhorn Slough that have been altered by past land use practices.	Castroville	Monterey	Elkhorn Slough	N/A	44.5 acres
Jeff Gaffney-County of Santa Cruz Parks, Open Space, and Cultural Serv.	7/25/2016	CCC Water Quality Project	To address the nutrient rich runoff in the Pinto Lake Watershed by capturing sediment and reducing the loading of nutrients to Pinto Lake.	Watsonville	Santa Cruz	CCC Creek	N/A	0.1 acres
Jeff Gaffney-County of Santa Cruz Parks, Open Space, and Cultural Serv.	7/25/2016	Amesti Water Quality Project	To address the nutrient rich runoff in the Pinto Lake Watershed by capturing sediment and reducing the loading of nutrients to Pinto Lake.	Watsonville	Santa Cruz	Amesti Creek	N/A	0.2 acres

[1] Total Impact includes both temporary and permanent impacts to waters.
[2] Low Impact Development (LID) Retention Features are stormwater management structures designed to retain stormwater on-site, such as bioretention cells, infiltration trenches, etc.

Former Shell Hercules Gas Plant, Santa Barbara County – Update on Cleanup and Restoration Activities
[Donette Dunaway, 805-549-3698]

The former Shell Hercules gas plant occupies a small canyon adjacent to the Pacific Ocean east of Santa Barbara (see location map below). The property has been polluted by polychlorinated biphenyls (PCBs) and other wastes. The Department of Toxic Substances Control (DTSC) has been the lead site cleanup oversight agency since January 1988. DTSC established an interagency working team (IWT) that included the Central Coast Water Board, Department of Fish and Wildlife, County of Santa Barbara Environmental Health Services, and County Planning and Development, Energy Division staff. Since 1989, the IWT has provided input to DTSC on Shell's investigation and remedial efforts. Thanks to its extensive cleanup efforts, Shell is transforming a polluted site into a crowning restoration achievement in Santa Barbara County.

Site History

Shell constructed what it called the Molino/Hercules Gas Plant in the north-south trending Canada de la Huerta, about 4.5 miles east of Gaviota, in 1963 to process natural gas from offshore wells for pipeline transport. The entire site occupies approximately 69 acres and is composed of topographically defined areas dubbed "Upper Canyon," "Fill Pad," "Lower Canyon," and "Sea Cliff" (listed from highest to lowest elevation). The Fill Pad is 230 feet wide, spanning the width of Canada de la Huerta, stands 55 feet tall, and is graded flat to reach 800 feet in depth. Intermittent stormwater flows in a creekbed through the Upper Canyon into a culvert beneath the Fill Pad, re-surfaces in the Lower Canyon, and discharges at the Sea Cliff area where water flows onto the beach and into the Pacific Ocean. Shell and its subsidiary Aera Energy operated the facility until 1989, and Shell demolished the facility's infrastructure in 1996. The facility's heat transfer system historically used Therminol, which contained PCBs. Soils in the Upper Canyon and Fill Pad areas were contaminated by leaking buried drums with mixed contents, a leaking underground storage tank, and spilling and poor storage of Therminol and other products, including mercury. Shell also used the spent Therminol for dust and vegetation control along roads and other structures. Soils in the Lower Canyon and Sea Cliff areas and on the beach were contaminated by episodic erosion and redeposition of contaminated soils from farther up the canyon. The PCBs appear to have been transported in the surface-water and groundwater systems by attaching to suspended solids. Hydrologic investigations concluded that surface water infiltrating to groundwater does not directly recharge the creek at the site.

Previous Cleanup Actions

In 1988, DTSC issued, and Shell signed, a consent order to investigate and remediate hazardous wastes from historical facility operations. The consent order was amended in 1998 to include Aera Energy. Shell's and Aera Energy's site investigations and groundwater monitoring verified that PCBs, mercury, and petroleum hydrocarbons were present in various media, although the PCBs were the dominant contaminant posing the highest risk to human health and the environment.

Between 1986 and 2013, Aera and Shell conducted multiple surface-water, groundwater, soil-vapor, hydrogeologic, geophysical, biological, marine-invertebrate, and marine-sediment investigations and risk assessments. From 1986 through 2013, Shell and Aera sampled approximately 3,295 locations, many with multiple depths, for PCBs, metals, and volatile organic compounds. Soil excavations were conducted in 1996, 2000, 2004, 2005, 2009, 2010, and 2013 to remove approximately 22,000 cubic yards of PCB-impacted soils from the Upper Canyon, Fill Pad, Lower Canyon, and Seacliff areas.

Over the 15-year time period, Shell and Aera installed 24 groundwater monitoring wells, one 200-foot-long horizontal and 18 vertical vapor extraction wells, nine nested vertical air sparge wells, and 42 permanent soil-vapor monitoring wells. Shell upgraded the stormwater conveyance system beneath the Fill Pad to include a water extraction and carbon filtration treatment system and a functioning energy dissipater box for discharge water and lined the Lower Canyon with plastic and rip rap in an attempt to prevent episodic erosion and deposition from carrying PCB-laden sediment from the site to the Sea Cliff area and Pacific Ocean.

Since 2006, the underdrain treatment system has been enrolled in the Central Coast Water Board's National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Highly Treated Groundwater to surface water (NPDES General Permit). The system treats groundwater collected in the drain beneath the Fill Pad before it is discharged into the Lower Canyon and Seacliff areas. Neither Aera or Shell has had NPDES General Permit discharge violations since the underdrain treatment system has been in operation.

Current Cleanup and Remediation

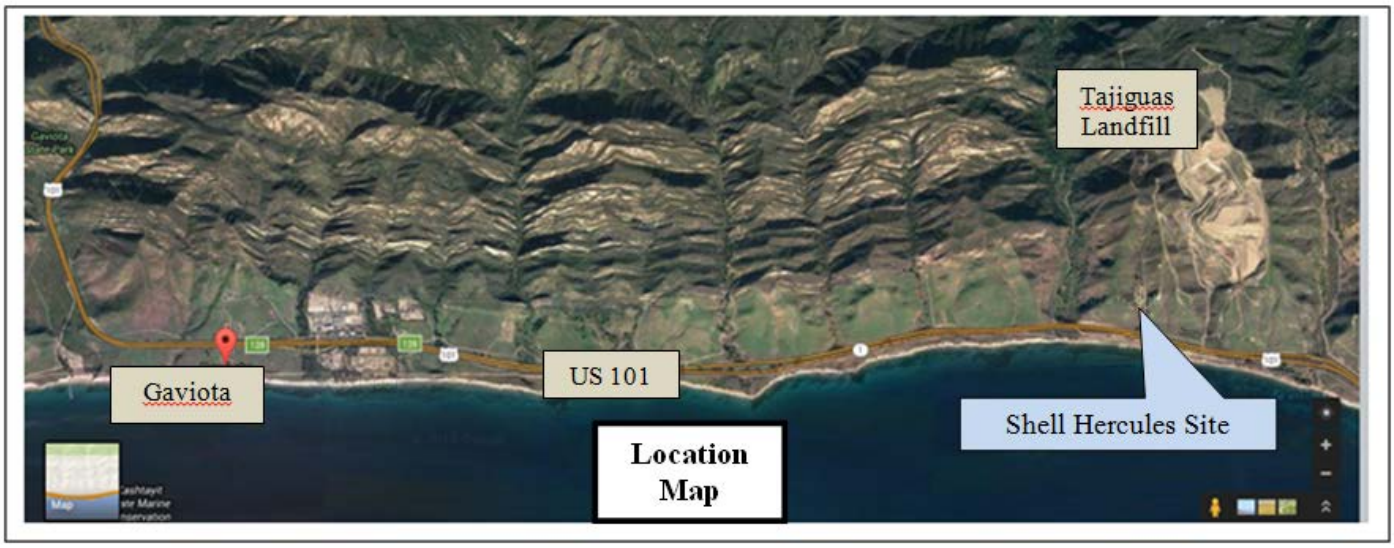
In September 2013, USEPA Region 9 informed Water Board staff that USEPA would be the lead agency overseeing the site investigation for all PCB sites within its region, including the former Shell Hercules site. USEPA would manage the cleanup and remediation until the site reached a "No Further Action" (NFA) status for PCBs, after which DTSC would take over certification of NFA status for the entire site (including non-PCB contamination issues, if any remained). Site investigation data analysis concluded that there was a high correlation between PCB contamination locations and non-PCB contamination locations at the site; therefore, it was presumed that massive excavation of PCB soils would result in non-PCB contaminant removal as well. Massive soil excavation is underway and soil sampling is being conducted to verify this hypothesis. Shell has agreed to remove all PCB-laden soils with concentrations that exceed agreed-upon risk levels protective of human health and ecological receptors and to remove or regrade remaining site soils to achieve an original topographic contour profile (i.e., "pre Fill Pad"), including reestablishment of a vegetated stream corridor. Shell estimates that 9,456 tons of hazardous-level soil waste and 9,766 tons of non-hazardous soil waste will be removed and disposed of properly in appropriate landfills. Remediation efforts, cleanup level derivation, and risk assessment analyses have been and continue to be overseen by staff from USEPA, DTSC, and the other IWT member agencies.

The vegetation removal, excavations, earthmoving, and regrading commenced in May 2016 and completion of earth work, final planting, hydroseeding, mulching and long-term erosion control emplacement is expected to be completed by November 15, 2016. As of July 2016, 29 out of 31 excavations completed have met cleanup goals in the Upper Canyon and the upper 250 feet of new stream channel is rough-graded. See photos and captions noted below.

At the completion of the grading and revegetation, Santa Barbara County will oversee a 5-year monitoring program to verify vegetation establishment and other site goal achievements.

Conclusion

Shell's cleanup work is expected to remove an ongoing, continual source of toxic pollutants to onshore and ocean environments. Central Coast Water Board staff will continue to work with the responsible parties and other agencies to finish the cleanup and verify its effectiveness.


Tajiguas
Landfill
Gaviota
US 101
Shell Hercules Site
Location
Map

Upper Canyon
View towards Lower Canyon and Pacific Ocean

Upper Canyon

Middle of the canyon, looking toward Fill Pad

Lower Canyon
View towards Fill Pad and Upper Canyon

INTEGRATED REPORT UPDATE
[Mary S. Hamilton, 805/542-4768]

The following is a brief informational update. At the December 2016 Board Meeting, the Central Coast Regional Water Quality Control Board (Central Coast Water Board) will hear staff's recommendations for changes to the Federal Clean Water Act (CWA) Section 303(d) List of waterbodies that are not meeting water quality standards (303(d) List) and the Section 305(b) water quality condition report (305(b) Report). Together, they are called the "Integrated Report."

The last changes to the Central Coast Region's 303(d) List occurred on July 10, 2009 when the Central Coast Water Board adopted Resolution No.R3-2009-0053. Changes to the 303(d) List must be adopted by the Regional Water Quality Control Boards, the State Water Resources Control Board and the US Environmental Protection Agency (USEPA). Water segments placed on the 303(d) List must be addressed through either the development of Total Maximum Daily Loads (TMDLs), or an existing regulatory program or action that is reasonably expected to result in the attainment of the water quality standard within a specified timeframe.

The 305(b) Report does not require approval. However, USEPA will compile the data from the state's 305(b) Reports and transmit the summaries in their "National Water Quality Inventory Report" to Congress.

Central Coast Water Board staff prepared a detailed summary report describing the assessment process and the procedures utilized by State and Regional Water Board staff to gather and analyze data and information, to develop the Integrated Report for surface water quality in the Central Coast Region. For this Integrated Report, Central Coast Water Board staff evaluated data and information for over 5400 waterbody segment and pollutant combinations (e.g. Salinas River and nitrate) and as a result, will provide recommendations for additions, deletions, and changes to the 303(d) List and the 305(b) Report.

On August 22, 2016, staff made the summary report and all supporting documentation available for a 30-day public review and comment period and staff held a public workshop at the Central Coast Water Board office on September 14, 2016. Documents available for public review are available on the Central Coast Water Board website.

The staff report for the December 8-9, 2016 Board Meeting will contain the following:

- Summary report including all public comments received and written responses to those comments.
- Proposed changes to the 303(d) List and 305(b) Report for the Central Coast Region.
- Resolution that contains a formal recommendation for the Central Coast Water Board to adopt changes to the 303(d) List.

Notes from the Field
[Mary S. Hamilton, 805/542-4768 and Karen R. Worcester, 805/549-3333]

This report summarizes Central Coast Ambient Monitoring Program (CCAMP) nitrate data from lower San Simeon Creek. Recent monitoring results show a significant reduction in nitrate concentrations in the lower reach of the creek. This site is

downstream of percolation ponds utilized by the Cambria Community Services for discharge of municipal wastewater.

Upstream of the percolation ponds, the average nitrate-N concentration is typically around 0.1 mg/L. For the past decade, nitrate-N concentrations in San Simeon Creek lagoon have averaged approximately 3.0 mg/L in wet weather months (January – April) and 10.8 in dry season months (May – December), with concentrations at times exceeding 25 mg/L (Figure 1).

Recent CCAMP data have shown dramatically decreasing concentrations of nitrate in the lagoon. The dry season average was 12.1 mg/L in 2014 and dropped to 4.2 mg/L in 2015 (Figure 2). Dry weather samples analyzed to date for 2016 (May-July) do not have detectable levels of nitrate, meaning the concentration is below 0.013 mg/L. This represents a thousand-fold drop in concentration from the dry season average.

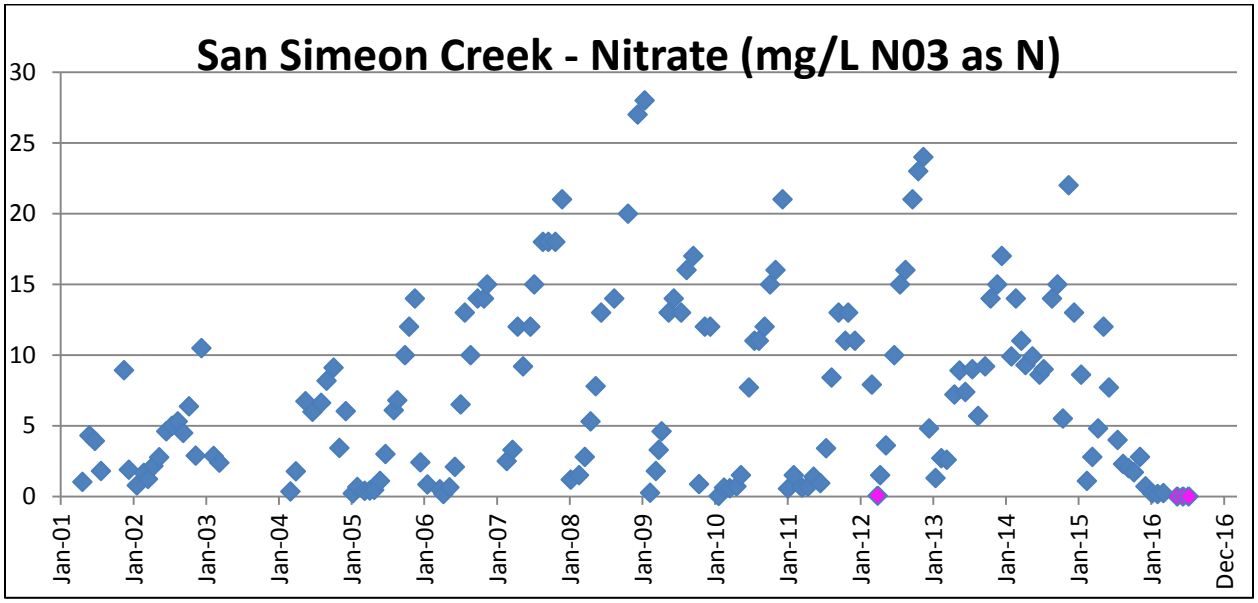


Figure 1. Nitrate concentrations from the CCAMP monitoring station in San Simeon Creek Lagoon (January 2001 – June 2016). Note, pink data points are non-detect results.

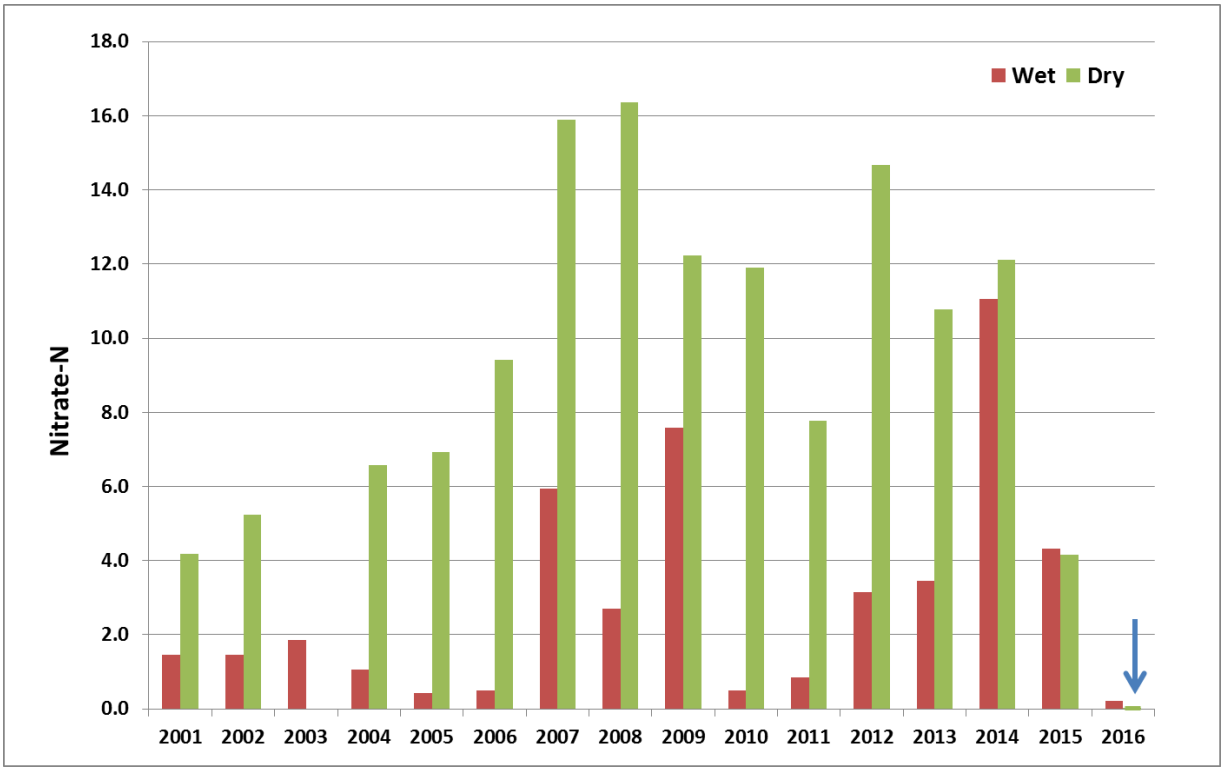


Figure 2. Average wet season (January – April) and dry season (May – December) concentrations in San Simeon Creek lagoon, 2001 – 2016. Note that dry season data for 2016 includes only May – July.

A nutrient Total Maximum Daily Load (TMDL) for San Simeon Creek was drafted and released for public review in March of 2015. Although this TMDL has not yet been adopted, it identifies "land application of treated wastewater through spray irrigation/percolation ponds adjacent to San Simeon Creek" as the source of nutrients to the groundwater which is flowing sub-surface into the creek. Implementation of this TMDL is to be through Cambria Community Service District Waste Discharge Requirements (WDRs) for Discharges, Order No. R3-2001-100 (adopted by the Central Coast Water Board on November 14, 2014) and NPDES Order No. R3-2011-0223 (permitted on December 8, 2014). Central Coast Water Board staff will provide a status report on the Cambria Emergency Water Supply Project at the December Board meeting. Changes in wastewater treatment that have been required for this project have resulted in the dramatic improvements in nitrate concentration in lower San Simeon Creek.

Attachments

1. Table 3 - Groundwater Section, Case Closure Performance Scoreboard
2. Table 4 - Groundwater Case Closures
3. Table 5 - Enrollments in General Orders/Waivers
4. Table 6 - Drinking Water Dashboard