

AGENDA
NEWPORT BAY WATERSHED EXECUTIVE COMMITTEE

May 20, 2015
1:30 p.m. – 3:30 p.m.

Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

Michelle Steel
County of Orange

Peer Swan, Vice Chair
Irvine Ranch Water District

Beth Krom
City of Irvine

Dr. Allan Bernstein
City of Tustin

William von Blasingame
Santa Ana Regional Water Quality Control
Board

Marshall 'Duffy' Duffield
City of Newport Beach

Michele Martinez
City of Santa Ana

Sandra Genis
City of Costa Mesa

Andrew Hamilton
City of Lake Forest

Dean Kirk
The Irvine Company

Carla Navarro
California Department of Fish and Wildlife

Meeting information available at
<http://ocwatersheds.com/programs/ourws/wmaareas/wmacentraloc/nbexcomm>

The Newport Bay Watershed Executive Committee welcomes you to this meeting and encourages your participation. This agenda contains a brief general description of each item to be considered. No action shall be taken on any items not appearing in the following agenda except as otherwise provided by law. Any member of the public may ask the Executive Committee to be heard on the following items, as those items are called. To speak on an agenda item, please provide a speaker request card to the Committee Staff. To speak on a matter not appearing in the agenda, please provide a speaker request card to the Committee Staff indicating Public Comments.

Welcome and Pledge of Allegiance

ITEM #1 MINUTES OF THE NOVEMBER 19, 2014 MEETING

Recommended Action: Approve the minutes of the November 19, 2014 meeting

ITEM #2 OVERVIEW OF EXECUTIVE COMMITTEE

Recommended Action: Receive and File

ITEM #3 ELECTION OF OFFICERS

Recommended Action: Elect Chair and Vice Chair for 2015

ITEM #4 US EPA APPROVAL OF SANTA ANA REGIONAL BOARD BASIN PLAN AMENDMENTS FOR RECREATIONAL STANDARDS AND IMPLICATIONS FOR NEWPORT BAY WATERSHED

Presentation by Wanda Cross, Santa Ana Regional Water Quality Control Board and Chris Crompton, County of Orange

Recommended Action: Receive and File

ITEM #5 SELENIUM TMDL PROJECT STATUS

- a. Peters Canyon Wash Channel Water Capture and Reuse Pipeline Project
Ray Bennett, Irvine Ranch Water District
- b. Santa Ana Delhi Channel diversion and Trash Removal Project
Tyrone Chesanek, City of Santa Ana

Recommended Action: Receive and File

CONSENT CALENDAR – ITEM # 6-8

The Staff Report contains written updates on projects. All matters are approved by one motion unless pulled by a Board Member for discussion for separate action. At this time, any member of the public may ask the Board to be heard on any item on the Consent Calendar.

ITEM #6 STATEWIDE TRASH POLICY IMPLICATIONS FOR ORANGE COUNTY

Recommended Action: Receive and File

ITEM #7 SELENIUM TMDL STATUS

Recommended Action: Receive and File

ITEM #8 CIENEGA SELENIUM REMOVAL DEMONSTRATION PILOT PROJECT STATUS

Recommended Action: Receive and File

ITEM #9 EXECUTIVE OFFICER REPORT

ITEM #10 EXECUTIVE COMMITTEE MEMBER COMMENTS

ITEM #11 PUBLIC COMMENTS

ITEM #12 ADJOURNMENT

Next meeting date: August 19, 2015

**AGENDA STAFF REPORTS
NEWPORT BAY WATERSHED EXECUTIVE COMMITTEE
MAY 20, 2015**

DISCUSSION CALENDAR , ITEMS # 1 - 5

ITEM # 1. MINUTES OF THE NOVEMBER 19, 2014 MEETING

Recommended Action: Approve the minutes of the November 19, 2014 meeting as follows:

Date and Location: November 19, 2014, 1:30 – 3:30 p.m.
Irvine Ranch Water District
15600 Sand Canyon Avenue, Irvine, CA 92618

Participants: Peer Swan, Vice Chair, Irvine Ranch Water District
Allan Bernstein, City of Tustin
Nancy Gardner, City of Newport Beach
Dean Kirk, Irvine Company
Beth Krom, City of Irvine
Susan L. Longville, Santa Ana Regional Water Quality Control Board
Kathryn McCullough, City of Lake Forest
Carla Navarro, California Department of Fish and Wildlife

Welcome and Pledge of Allegiance

ITEM # 1. MINUTES OF THE MAY 21, 2014 MEETING

The minutes of the May 21, 2014 meeting were presented to the Executive Committee.

First/Second: Mr. Swan/Ms. McCullough
Motion: Approve minutes of the May 21, 2014
Outcome: Unanimously approved

ITEM # 2. 2015 MEETING DATES

First/Second: Dr. Bernstein/Ms. Krom
*Motion: Approve the proposed 2015 meeting dates of February 18, May 20, August 19,
and November 18*
Outcome: Unanimously approved

ITEM # 3. BIG CANYON WATERSHED SELENIUM MITIGATION PROGRAM

Dr. Robert Stein, Assistant City Engineer with the City of Newport Beach Public Works Department, gave an update on the Selenium Mitigation Program in the Big Canyon Watershed. He reported that in 2008 a study by Southern California Coastal Water Research Project surveyed freshwater urban wetlands in Southern California and found elevated concentrations of selenium in sediment samples taken in Big Canyon Wash. A follow-up study in 2010 was conducted to look at the entire watershed which resulted in three findings:

- (1) Monterey Formation underlies most of the watershed, where selenium has been sequestered for hundreds of thousands of years
- (2) Beginning in 1970s, grading activity for home construction began. Over-irrigation of gardens and landscaping infiltrated into the Monterey Formation mobilizing selenium that then exfiltrated into the Wash.
- (3) When selenium reaches pooled sections of the Wash, such as the lakes at Big Canyon Golf Course, it converts to a more bioavailable form called selenite

The selenium standard in California is 5 parts per billion (ppb), however concentrations in groundwater in Big Canyon were found to range from 50-149 ppb, and in surface water from 15-50 ppb, considerably above the standard. For fish tissue and bird eggs, a safe level in tissue is approximately 8 parts per million (ppm), however, in Big Canyon, fish tissue concentrations were found to range from 40-60 ppm and bird egg concentrations from 20-40 ppm. While these concentrations would not be expected to cause deformation or death, there could be potential impacts to reproduction or life span.

The City prepared a selenium mitigation plan in 2011, which included three elements:

- (1) A focused study to determine selenium source locations and pathways into the Wash.
- (2) A series of projects to mitigate the problem with education and upstream source-control project given priority. An example of community outreach is the landscaping partnership with Rogers Gardens, which included promotion of water-thrifty plants and the use of "smart" irrigation controllers. Roger's Gardens and the City also sponsor the annual California Friendly Landscape Competition to recognize property owners with beautiful California Friendly gardens. Another example is the smart timer irrigation controller program: the City installed hundreds of irrigation controllers that meter exact amounts of water based on plant type, soil conditions and evapotranspiration rates.
- (3) Effective monitoring to verify project performance.

One of the findings of the 2010 study was that of the two creeks coming into Lake 3 of the Big Canyon Golf Course, one was high in selenium while the other was contained safe levels. A project was constructed to divert the flow high in selenium (about 50 gallons per minute) into a small 6" line connected to the sanitary sewer. An over flow line was established in case of larger dry weather flows. The diversion reduced selenium concentration at Lake 3 from 17.0 ppb to 9.5 ppb, and

concentrations at Jamboree Road from 13.1 ppb to 5.5 ppb; a significant reduction and almost in compliance at these particular monitoring locations. However, the selenium concentration downstream in the Wash just before it enters freshwater lake near Back Bay Drive was measured at 22.4 ppb, indicating there are other downstream sources of selenium that need to be identified and addressed. Dr. Stein also noted that the freshwater lake on the California Department of Fish and Wildlife (Fish and Wildlife) property had high selenium concentrations in the sediments, water column, and biota.

Dr. Stein discussed a proposed restoration plan to be implemented over the next five to eight years for the Canyon. Big Canyon has numerous exotic plants including large groves of pepper trees. The Wash has split into numerous flow paths called braided flow. The City and Fish and Wildlife will restore the Wash to correct erosion problems and concentrate all flows into a single stream with a sufficient Wash bed slope to prevent water from ponding where the more bioavailable selenite is formed. Pepper trees and non-native plants would be removed and replaced with native plants. In the freshwater lake area where dredging and removal of selenium-laden sediment would be costly, there is a proposal being considered to re-contour the Wash away from lake and replant the lake with riparian vegetation.

The City is also proposing to route a portion of the Wash flow into a treatment wetland to remove selenium as well as other constituents and then re-route clean flow back to the Wash. Measure M grant funding has been secured to fund this project.

Ms. Longville inquired about Measure M and Ms. Skorpanich explained that it was a local sales tax for transportation. It was renewed by Orange County voters a couple of years ago for 30 more years. Water quality ranked high in polling so the ballot measure was designed to set aside two percent of sales tax proceeds for water quality. Only the cities of Orange County and the County of Orange are eligible to receive grants funds from Measure M.

Ms. Gardner asked if the relevant agencies were on board with the remediation plan. Dr. Stein said they had a partnership with Fish and Wildlife and very good cooperation from the Santa Ana Regional Water Quality Control Board. He was hopeful that the California Coastal Commission staff would be supportive of the project.

Ms. Navarro asked if the treatment wetland project would address selenium loading downstream of Jamboree Road. Dr. Stein said the wetland project would not. He noted that a follow up study was needed to identify selenium sources in the Big Canyon restoration area. Ms. Navarro stated that restoration efforts in this reach of Big Canyon were intended to be a holistic plan. As the City is able to take care of the selenium loading upstream that would present a good opportunity for Fish and Wildlife to implement mitigation at the freshwater pond. She said it was necessary to ensure that selenium load was reduced, there were measurable outcomes, and consistency seasonally and annually so there was confidence in whatever would be done downstream.

Mr. Peer Swan asked what the maintenance requirements for the freshwater pond were. Dr. Stein said research could not find any documentation requiring maintenance of the freshwater pond. Ms.

Navarro said they had been in communication with the Corps of Engineers and Coastal Commission. The agencies were concerned about protecting wildlife and were receptive to the pond being considered a failed mitigation. She believed it made more sense to convert the habitat into something more viable. She stated that it was a really good opportunity and everyone was onboard. She hoped they could maintain the momentum.

Mr. Swan asked if the new wetland was absorbing selenium, or if it was just banking it to come out at some later time. Dr. Stein said the selenium would be adsorbed by the wetland medium and at some point, would become saturated. At that time, the wetland would be decommissioned and the area would be capped to ensure the selenium would remain immobile.

Mr. Swan explained that typically selenium becomes immobile when in extremely low oxygen conditions. As he understood it, if oxygen increases the selenium converts to a soluble form and is mobilized. Dr. Stein said there were several processes. One process that started the mobilization occurred when water started to flow through the Monterey Formation. By stopping the flow through this area, there would be no mechanism to transform and mobilize the selenium.

Ms. Gardner asked what decommissioning meant because when she thought of decommissioning, she thought of nuclear power plants. She asked if it meant you had to remove the entire infrastructure. Dr. Stein explained that they were going to disconnect the water flow from that area so it would be dry area like it is now. There would not be a connection between the Wash and the sequestered selenium in the wetlands.

Motion: Receive and file
Outcome: Unanimously approved

ITEM # 4. SANTA ANA DELHI DIVERSION PROJECT UPDATE

Mr. Thomas Lo from the City of Santa Ana gave an update on the proposed Santa Ana-Delhi Diversion Project. The drainage area is composed of Santa Ana-Delhi Channel, Santa Ana Gardens Channel, and Paularino Channel which come together and parallel Bristol Street into Upper Newport Bay. The proximate tributary area is Santa Ana 71 percent, Costa Mesa 21 percent, John Wayne Airport 6 percent, County 1 percent, and Irvine 1 percent. The proposed project will be located on the Newport Beach Golf Course adjacent to the Channel. The Project is a multi-jurisdictional project involving cities of Santa Ana, Costa Mesa, Irvine and Newport Beach, Irvine Ranch Water District, and County of Orange, and Orange County Flood Control District. The project proposes to divert water from the channel to Orange County Sanitation District sanitary sewer system prior to entering Upper Newport Bay. It will address current and future Total Maximum Daily Loads (TMDLs) for sediments, toxics, metals, bacteria, and nutrients. By diverting the low flows, the pollutants would be removed.

Trash would also be addressed by having a screening process. Approximately 400 tons of trash has been collected from the Bay. A portion of this trash can be reduced by removing flows from Santa Ana-Delhi Channel, followed by screening and settling chambers. Diverted water will be stored and released to the sanitary sewer during non-peak hours. Another option would be to disinfect it and divert it to an adjacent pond and use it for irrigation for the golf course.

Design, construction and maintenance are estimated to cost \$7.4 million. The City received a \$2.57 million OCTA grant, which is driving the program because of the construction grant requirement deadline of June 30, 2016. Santa Ana's contribution is \$1.9 million, County of Orange \$1.6 million, and Newport Beach \$1.55 million.

The County and cities are discussing the preliminary design concepts and a funding agreement. The City of Santa Ana is in the process of hiring the design consultant (award of contract December 2014). Construction plans and specifications will take 12 months, environmental work 12 months, CEQA documentation 12 months, permits 10 months, right of way easements 8 months, and construction bid, and award 3 months. Construction is expected to begin in July 2016.

Ms. Gardner asked whether the City needed Coastal Commission approval. Mr. Lo said he did not believe they did. There was discussion as to whether it was within Coastal Commission's jurisdiction and it was believed that Mesa Drive, downstream was the boundary. Ms. Navarro asked who supplied the water for the golf course and if it was reclaimed. Mr. Swan said it does not get serviced by Irvine Ranch Water District even though it is in their district. He thought it was well water.

First/Second: Ms. Krom/Mr. Kirk
Motion: Receive and file
Outcome: Unanimously approved

ITEM # 5. SELECTION OF ENVIRONMENTAL REPRESENTATIVE ON MANAGEMENT COMMITTEE

Ms. Skorpanich provided background information on this item. Each organization that participates in the Executive Committee has a staff member that participates in the Management Committee. The Management Committee is augmented by a person representing the environmental community. This addition dates back a number of years. In 2009, a solicitation was carried out and about five applications were received. After reviewing applications, the Management Committee made a recommendation to the Executive Committee. Mr. Roger Mallett who was affiliated with Newport Bay Conservancy was picked as the member and Mr. Ray Hiemstra from Orange Coast Keeper as the alternate. Mr. Mallett has since relocated and resigned his seat. During the time when the primary representative was not available, Mr. Hiemstra, participated in the Management Committee as well as on other important issues as the alternate member. Rather than going out for another solicitation, Ms. Skorpanich recommended recognizing the contributions Mr. Hiemstra had made by appointing him as a member of the Management Committee. The Management Committee supported this recommendation.

First/Second: Ms. Gardner/Ms.McCullough
Motion: Appoint Ray Hiemstra as the Environmental Representative to the Newport Bay Watershed Management Committee
Outcome: Unanimously approved

ITEM # 6. NEWPORT BAY FECAL COLIFORM TMDL UPDATE

Motion: Receive and file
Outcome: Unanimously approved

ITEM # 7. SELENIUM TMDL UPDATE

It was noted that there was an error on the date of the approval of the Best Management Practices Strategic Plan by the Regional Board. The date was revised from December 5, 2014 to December 5, 2013.

Motion: Receive and file
Outcome: Unanimously approved

ITEM # 8. EXECUTIVE OFFICER REPORT

Ms. Skorpanich recognized two long term members in the Executive Committee for whom it was their last meeting, Nancy Gardner from City of Newport Beach and Kathryn McCullough from City of Lake Forest. Congratulations were extended to Ms. Gardner for two terms on the City Council and Ms. McCullough for four terms on the City Council.

ITEM # 9. EXECUTIVE COMMITTEE MEMBER COMMENTS

None

ITEM # 10. PUBLIC COMMENTS

None

ITEM # 11. ADJOURNMENT

Next meeting date: February 18, 2015

Attendees: Alex Waite, City of Tustin
Amanda Carr, City of Irvine
Devin Slaven, City of Lake Forest
Kurt Berchtold, Santa Ana Regional Water Quality Control Board

Mark Tetterer, Irvine Ranch Water District
Raymond Hiemstra, Orange County Coastkeeper
Robert Stein, City of Newport Beach
Thomas Lo, City of Santa Ana
Wanda Cross, Santa Ana Regional Water Quality Control Board

Committee Staff, County of Orange:

Mary Anne Skorpanich
Chris Crompton
Jian Peng

ITEM # 2. OVERVIEW OF EXECUTIVE COMMITTEE

Staff will present an overview of activities of interest to the Executive Committee.

Recommended Action: Receive and File

ITEM # 3. ELECTION OF OFFICERS

Recommended Action:

Elect Chair and Vice Chair for 2015.

ITEM # 4. USEPA APPROVAL OF SANTA ANA REGIONAL BOARD BASIN PLAN AMENDMENTS FOR RECREATIONAL STANDARDS AND IMPLICATIONS FOR NEWPORT BAY WATERSHED

The Stormwater Quality Standards Task Force was established in response to the 2002 Basin Plan Triennial Review process of the Santa Ana Regional Board with the intent of updating recreational use standards (REC - REC1 is water contact recreation, REC2 is non-contact recreation). The Basin Plan underpins water quality planning and permits for the entire Regional Board area and is thus a very important regional document. Changing the Basin Plan requires approval by the Regional Board, State Water Resources Control Board, the Office of Administrative Law, and the United States Environmental Protection Agency (USEPA).

The counties of Orange, Riverside, and San Bernardino collaborated with the Santa Ana Regional Board in funding this effort, which involved many other governmental and non-governmental stakeholders. The multi-year project included consideration of the relevant factors specified in Water Code Section 13241, including economics, and a re-evaluation of bacteria indicators, another triennial review priority. The amendment to the Basin Plan included the following:

- Changes to recreation standards for inland surface waters:
 - Deleted fecal coliform objectives for REC

- Added objectives based on *E. coli*
 - Deleted (or exempted) REC1 designation for eight water body segments, including parts of the Santa Ana-Delhi (in the Newport Bay watershed) and Greenville-Banning Channels (adjacent to the Santa Ana River) – an unprecedented action in California.
 - Deleted (or exempted) REC2 designation for four water body segments, including certain parts of the Santa Ana-Delhi and Greenville-Banning Channels – an unprecedented action in California
- Added surface waters not previously identified in the Basin Plan and beneficial use designations for those waters, including parts of the Santa Ana-Delhi Channel and the Greenville-Banning Channel; included exceptions from municipal and domestic supply (MUN) beneficial use designations for a number of added waters, including Santa Ana-Delhi and Greenville-Banning Channels.
- Added implementation strategies for recreation standards for inland surface waters, including:
 - Temporary suspension of recreation standards under specified high flow conditions.
 - Requirement for a comprehensive bacteria indicator monitoring program to be submitted by the Orange, Riverside and San Bernardino stormwater agencies.

The Regional Board approved the amendments on June 15, 2012 and the State Board on January 21, 2014. On April 8, 2015, the USEPA submitted a decision letter with partial approval/disapproval. Certain changes were not addressed in the decision letter. It is not clear whether this was an oversight, or reflected a decision by USEPA to not act on the amendments. In the case of no action, the changes do not take effect.

- USEPA Approvals:
 - Deletion of fecal coliform objectives for REC1
 - Addition of *E. coli* objectives, with certain exceptions related to single samples
 - Deletion/exemption from REC1 for all eight waterbody segments
 - Addition of waterbodies, beneficial uses, including MUN exceptions
 - Deletion of REC2 for 1 of 4 water body segments (Greenville-Banning channel upstream of diversion dam to California Street). The REC2 exemption for Greenville-Banning Channel was based on the diversion in place that protected downstream REC1 uses.
 - Temporary high flow suspension of recreation standards
- USEPA Disapprovals:
 - Deletion/exemption of REC2 for three water body segments, including Santa Ana-Delhi Channel, Reach 1
 - Application of certain single sample *E. coli* values based on intensity of REC1 use.

- USEPA took no action on:
 - Deletion of fecal coliform objectives for inland surface waters designated REC2 (non-contact water recreation)(as the result of the amendments, now also known as secondary contact recreation).
 - Deletion of total coliform objectives for lakes and streams waters designated MUN (municipal and domestic supply)

Regional Board staff will request written clarification/confirmation from USEPA about these changes and whether the fact that the April 8, 2015 decision letter does not address them was merely an oversight on USEPA's part. Prior discussions with USEPA staff concerning these changes suggest that this is the case.

Recommended Action: Receive and File

ITEM # 5. SELENIUM TMDL PROJECT STATUS

a. PETERS CANYON WASH CHANNEL WATER CAPTURE AND REUSE PIPELINE PROJECT

The Peters Canyon Wash Channel Water Capture and Reuse Pipeline (Peters Canyon Pipeline) is a \$12.8 million cooperative watershed project funded by the City of Irvine, City of Tustin, County of Orange, Orange County Flood Control District, Caltrans and IRWD. \$4.2 million in partial funding has been secured from a combination of Proposition 84 Integrated Regional Water Management and Orange County Transportation Agency grants.

The Peters Canyon Pipeline will divert nuisance groundwater and surface water flows with high concentrations of selenium and nitrates from selected tributaries to Peters Canyon Channel and deliver them in a pressure pipeline to the Orange County Sanitation District (OCSD) for treatment and reuse. The project includes installation of a pipeline conveyance system with diversion structures that begins on the west side of Peters Canyon Channel near Walnut Avenue where the Caltrans Ground Water Treatment Facility (GWTF) is located. It ultimately discharges into the Main Street sewer for treatment and reuse by OCSD and reuse by the Orange County Water District following reverse osmosis treatment.

The Peters Canyon Pipeline is expected to remove selenium loading to Peters Canyon Wash Channel and San Diego Creek by 40-43% (154 lbs per year).

IRWD will oversee the design and construction, and will operate and maintain the project for 20 years. The design for the Peters Canyon Pipeline is complete, and was advertised for construction bids in February 2015. IRWD plans to award construction in June 2015. The construction is expected to be completed in spring 2016.

b. SANTA ANA-DELHI CHANNEL DIVERSION AND TRASH REMOVAL PROJECT

Multi-Jurisdiction: Cities of Santa Ana, Costa Mesa, Irvine, and Newport Beach; IRWD; and the County of Orange

Divert low-flows (1.6 MGD) for reuse by OCSD by sewer force main prior to entering Upper Newport Bay

Addresses current and future Total Maximum Daily Loads: metals, bacteria, sediment, toxics; trash and debris

Enhances our reputation for being good stewards of our water resources

Design, construction, and maintenance est. construction cost - \$7.4 million

Funding Sources:

- \$2.57 OCTA Grant
- \$1.9 Santa Ana
- \$1.6 County of Orange
- \$1.5 Newport Beach

Award construction contract by June 30, 2016 (grant requirement)

Schedule of Action Items/Milestones

- January 2015 started design, environmental work, CEQA documentation, permits, and right-of-way
- January 2016 complete environmental, CEQA, permits, and right-of-way
- February 2016 complete final review of construction documents
- March 2016 advertise construction contract
- May 2016 award construction contract
- July 2016 start construction

Recommended Action: Receive and File

CONSENT CALENDAR , ITEMS # 6 - 8

The Staff Report contains written updates on projects. All matters are approved by one motion unless pulled by a Committee Member for discussion for separate action. Any member of the public may ask the Committee to be heard on any item on the Consent Calendar.

ITEM # 6. STATEWIDE TRASH POLICY IMPLICATIONS FOR ORANGE COUNTY

An Amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Part I Trash Provisions for the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, also known as the Statewide Trash Amendments, was adopted by the State Water Resources Control Board on April 7, 2015. The Amendments:

- Establish a narrative water quality objective for trash, such as “Trash shall not be present... in amounts that adversely affect beneficial uses or cause nuisance;”
- Establish a prohibition on the discharge of trash;
- Provide land use based implementation requirements for trash control;
- Set a schedule for compliance; and
- Provide a framework for monitoring

The objective of the Amendments is to provide statewide consistency for the Water Boards’ regulatory approach to reduce trash in state waters. Control efforts are focused on a pre-selected set of priority land uses; High density residential (10+ units per acre), Industrial, Commercial, Mixed Urban, and Public Transportation Stations.

The Trash Amendments are not effective as of yet. They must still be approved by the Office of Administrative Law and the Environmental Protection Agency (EPA). Once the EPA has approved the Amendments there are a number of compliance milestones the Regional Water Quality Control Boards and municipal stormwater permittees must comply with:

- Within 18 months of the effective date of the Trash Amendments, the RWQCB shall modify, re-issue, or adopt municipal stormwater permits with requirements to implement the Trash Amendments;
- Municipal stormwater permittees must choose Track 1 or Track 2 no later than three months from the effective date of the implementing permit;
- Within 18 months of the effective date of the implementing permit, permittees that have elected to comply via Track 2 shall submit an implementation plan;

- Permittees must demonstrate achievement of interim milestones in Annual Reports;
- Full compliance shall occur within 10 years of the effective date of the first implementing permit

There are two potential compliance options available to Permittees under these provisions. Track 1 requires installation, operation and maintenance of full capture devices in all catch basins within priority land use areas. Based on the number of catch basins in priority land use areas, 10-year implementation costs under Track 1 are estimated to be \$15.93 (total per capita) for the City of Anaheim and \$50.70 (total per capita) for the City of Irvine. Track 2 requires Permittees to implement a plan using a combination of treatment controls, institutional controls, multi-benefit projects, and full capture devices to achieve full capture system equivalency.

Orange County cities and the County can reasonably expect to see the provisions of the Trash Amendments inserted into their municipal stormwater permits by the end of 2015, with selection of compliance track required by end of March 2016.

Recommended Action: Receive and File

ITEM # 7. SELENIUM TMDL STATUS

Since the approval of the BMP Strategic Plan by the Santa Ana Regional Board on December 5, 2013, emphasis has been focused on implementing the tasks called for in the BMP Strategic Plan (see Agenda Item #5 above for examples), which is a phased, adaptive approach to achieving applicable selenium water quality standards in the Newport Bay watershed. The Plan is required by the Time Schedule Order (TSO) R8-2009-0069 (as amended by R8-2013-0060 and 2014-0025) and extends the compliance schedule to December 2019. The first BMP Strategic Plan Annual Report, which summarized the implementation activities, was submitted to the Regional Board on November 15, 2014.

Current efforts are also focused on assisting the Santa Ana Regional Board on updating the 2009 Draft Selenium TMDL through a third-party process, in which a consultant team assists the Regional Board staff on the TMDL revision to ensure that the TMDL be approved in time to provide a compliance schedule beyond December 2019. The updated draft TMDL documents have been prepared and are currently under internal review before final submittal to the Regional Board in July 2015. The final TMDL is anticipated to be adopted in October 2015.

Recommended Action: Receive and File

ITEM # 8. CIENEGA SELENIUM REMOVAL DEMONSTRATION PILOT PROJECT STATUS

In 2002, the U.S. Environmental Protection Agency declared the Newport Bay/San Diego Creek watershed impaired and established a Total Maximum Daily Load (TMDL) of 5 parts per billion of selenium. Although no existing cost-effective technology was available to treat the selenium, IRWD actively participated in watershed efforts to pilot different technologies, including the Cienega Field Demonstration Project (Cienega Project).

The Cienega Project consists of a series of subsurface biofilter cells designed to remove nitrogen and capture selenium from surface water runoff before the treated water is then returned to Peters Canyon Wash. The Cienega Project was built at 1/10 scale of a full-scale project in order to evaluate the performance of the selenium removal technology for a one-year period, and also to guide the design, operation and maintenance of a full-scale permanent facility, if successful. It was envisioned that the Cienega Project would be demolished and replaced at the time of construction of the full-scale facility. The Cienega Project was constructed in early 2008 and began operation in November 2008.

An evaluation of the Cienega Project in 2010 showed that it achieved consistency in attaining the discharge concentration below 5 ppb only 30 percent of the time. A lack of vented head space in the design resulted in the formation of nitrogen and hydrogen sulfide gases. In light of these issues, the Peters Canyon Wash Channel Water Capture and Reuse Pipeline Project (Peters Canyon Pipeline – see Agenda Item 5 a above) became the preferred full-scale implementation project alternative. The Peters Canyon Pipeline will divert nuisance groundwater and surface water flows with high concentrations of selenium and nitrates from selected tributaries to Peters Canyon Channel and deliver them in a pressure pipeline to the Orange County Sanitation District (OCSD) for treatment and reuse. The design for the Peters Canyon Pipeline is complete, and was advertised for construction bids in February 2015. IRWD plans to award construction in June 2015. The construction is expected to be completed in spring 2016.

The Cienega Project is now in its seventh year of operation, although it was only designed to operate for two to three years. Consequently, there are a number of issues contributing to the decline in throughput and anticipated performance, including the following:

- The system cannot be backwashed;
- The system frequently clogs;
- The facility is frequently off-line (25 days in 2013 and 70 days in 2014);
- The hydrogen sulfide concentrations are increasing and becoming more problematic; and
- The cost to operate the facility has increased from approximately \$4,500 per pound of selenium removed in 2008 to \$7,500 per pound in 2014, and those costs continue to trend upward.

Given the declining operational performance and escalating costs associated with the Cienega Project, IRWD has initiated the process to decommission it. The Peters Canyon Pipeline will

function as a replacement project to remove selenium from the San Diego Creek watershed. The Peters Canyon Pipeline is expected to remove selenium loading to Peters Canyon Wash Channel and San Diego Creek by 40-43 percent, or 154 pounds per year. By comparison, the Cienega Project removed a total of 51 pounds of selenium from 2010 to 2014.

Recommended Action: Receive and File

DISCUSSION CALENDAR, CONTINUED

ITEM # 9. EXECUTIVE OFFICER REPORT

ITEM # 10. EXECUTIVE COMMITTEE MEMBER COMMENTS

ITEM # 11. PUBLIC COMMENTS

ITEM # 12. ADJOURNMENT

Next meeting date:

August 19, 2015