

San Diego Regional Water Quality Control Board



Executive Officer's Report

September 9, 2009

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Attachments for B-1, B-5, and B-9 are included at the end of the report. Also included as an attachment are the Significant NPDES Permits, WDRs, and RB Actions.

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

EXECUTIVE OFFICER'S REPORT

September 9, 2009

PART A

SAN DIEGO REGION STAFF ACTIVITIES (*Staff Contact*)

1. Personnel Report (*DiAnne Broussard*)

The Organizational Chart of the California Regional Water Quality Control Board, San Diego Region (Regional Board) can be viewed at http://www.waterboards.ca.gov/sandiego/about_us/org_charts/orgchart.pdf

Departures

On August 27, 2009 we received notice from Human Resources that Governor Schwarzenegger's office had directed us to lay off our Retired Annuitants. Water Resource Control Engineer Donald Perrin who worked in the Core Regulatory Unit and Office Technician Betty Stewart who was our receptionist were let go on Monday, August 31. Along with several other Boards within our department we have filed an appeal. We do not know how long we will have to wait for a determination. In addition, the Governor's Office ordered us to abolish one-third of all vacant positions. Region 9 currently has five vacancies. The positions that will be eliminated have not yet been named.

Recruitment

Recruitment for an Executive Officer has come to a close. The final filing date was September 1, 2009. The Regional Board is in the process of reviewing the applications that were received. We anticipate an announcement in October.

We have received over fifty (50) applications for the Associate Governmental Program Analyst. We will hold interviews in mid-September

Vacant positions for the State and Regional Boards are posted on the State Board web page at http://www.waterboards.ca.gov/about_us/employment/

This is the link to the State Personnel Board vacancy web page.
http://www.spb.ca.gov/employment/wvpos_index.htm

2. Disaster Management for Water and Wastewater (*Jimmy Smith*)

On August 12, 2009, Jimmy Smith attended training on *Disaster Management for Water and Wastewater*. The Tijuana River National Estuarine Research Reserve (TJNERR) hosted the free event and the U.S. Department of Homeland Security conducted the training. The four-hour course, structured mostly toward water and wastewater utilities, provided an overview of natural and anthropogenic

disasters, potential vulnerabilities, and appropriate responses. Of particular interest were the discussions on threat-management-decision-response-trees, and the role Regional Board water quality experts could serve in assisting incident commanders in making informed and timely assessments. Appropriate pre-cautions and actions for the up-coming flu season were also discussed. Many experts assert that the current swine flu pandemic could render twenty to forth percent of the workforce unavailable for an extended period.

The majority of those in attendance had traveled across the border and represented Mexican water and wastewater utilities and universities. Also in attendance were representatives from the City of San Diego water and wastewater utilities, the City of San Diego's Independent Rates Oversight Committee, the City of Imperial Beach, private citizens and staff of the TJNERR. A more in-depth course will be taught over two days in September at the TJNERR, but the Regional Board is not likely to attend. In the event of disasters and water quality emergencies, the Regional Board serves to advise first responders dealing with the protection of life and property, and with threat assessment, containment and clean-up.

3. Tijuana River Restoration Team Meeting *(Ben Tobler and John Robertus)*

The Tijuana River Valley Recovery Team (TRVRT) convened its monthly Policy Committee meeting on August 28, 2009, including 16 representatives of various agencies and organizations. The TRVRT's includes four Action Teams, comprised of the: Border Team, Bi-national Team, Restoration Team, and the Cleanup Team. The Committee met for approximately two hours and the chair persons of each Action Team reported on the status of the various projects. The Team Reports included the following highlights:

Border Action Team: Mr. Tony Heinrichs (Team Co-Chair) reported that the City of San Diego contractor URS Corporation has completed a preliminary estimate for trash capture devices in Smuggler's & Goat Canyons. Included in the roughly five million dollar estimate was the construction of a sediment basin in Smuggler's Canyon to compliment the intended functions of the existing sediment basin in Goat Canyon. He also highlighted the need to excavate sediment from the area known as the pilot channel to prepare for the rainy season.

Restoration Action Team: Mr. Jeff Crooks (Team Co-Chair) reported on successful planning efforts to map the topography of the entire Tijuana River Valley estuary using aerial Light Detection and Ranging (LiDAR) mapping and coordination with the U.S. Army Corps of Engineers. He also reported that the County Water Authority is funding the design of restored wetlands near Smuggler's Canyon, and that the County Water Authority is a possible partner in the construction of a deep well to monitor ground water quality. Progress also is continuing in efforts to engage SANDAG and CalTrans to utilize the river valley as a regional mitigation bank.

Bi-National Team: Mr. Oscar Romo (Team Co-Chair) highly recommended that U.S. and state officials meet face-to-face with Mexican counterparts to encourage cross-border cooperation. City of Tijuana officials have been receptive to the cleanup efforts and have offered to match up to one million dollars in funding to support those efforts.

Cleanup Action Team: Mr. Cid Tesoro (Team Co-Chair) reported on the successful commencement of a trash and sediment characterization study for the Tijuana River Valley. The County of San Diego, as lead for the Cleanup Team, proposed the project to determine the full extent of the trash and excess sediment in the river valley. The proposed project was considered by the Regional Board and subsequently received funding from the Cleanup and Abatement Account in the amount of \$700,000 via Regional Board Resolution No. R9-2009-0035. The name of this project is the Tijuana River Valley Trash/Sediment Transport and Deposition Study.

The County of San Diego and the San Diego Regional Board concluded collaboration, on August 27, 2009, to determine the scope and deliverables for this project. The discussion identified a number of tasks and deliverables for the project, including: conducting trash and sediment characterization investigations, creating an inventory of existing information, digitizing and compiling existing information, analyzing the existing flow regime and determining the floodplain impacts, conducting an alternatives analysis for various potential best management practices, and commencing trash and sediment removal based on the study results.

PART B SIGNIFICANT REGIONAL WATER QUALITY ISSUES

1. Clean Water Act Section 401 Water Quality Certification Actions Taken in July and August 2009 *(Chiara Clemente) (Attachment B-1)*

Section 401 of the Clean Water Act requires that any person applying for a federal permit which may result in a discharge of pollutants into Waters of the United States must obtain a water quality certification that the specific activity complies with all applicable state water quality standards, limitations, requirements, and restrictions. The most common federal permit that requires a 401 Certification is a CWA Section 404 permit, issued by the Army Corps of Engineers, for the placing of fill (sediment, rip rap, concrete, pipes, etc.) in Waters of the U.S. (i.e. Ocean, bays, lagoons, rivers and streams).

Upon receipt of a complete 401 certification application, the Regional Board may either certify the project or deny certification, with or without prejudice. In cases where there are impacts to Waters of the U.S., the Regional Board may issue a conditional certification. The certification can be either in the form of a conditional certification document approved by the Regional Board Executive

Office, or Waste Discharge Requirements (WDRs), adopted by the Regional Board. And, in the case where a federal permit is not required because impacts have been determined to be only to Waters of the State, the Regional Board may adopt WDRs. Attachment B-1 contains a list of actions taken during the months of July and August 2009. Certification amendments will be included in these reports, starting with June 2008. Public notification of pending 401 Water Quality Certification applications can be found on our web site at:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/publicnotice8_4_08.pdf . Certifications issued from January 2008 on, can also be found on our web site at:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/401projects.shtml .

2. Enforcement Actions for August 2009 *(Rebecca Stewart)*

The following is a summary of all enforcement actions taken or initiated during the month of August 2009. During this period the California Regional Water Quality Control Board, San Diego Region (Regional Board) initiated ten enforcement actions: Two Settlement Agreements, one Administrative Civil Liability Order, one ACL Complaint, one Cleanup and Abatement Order, three Notices of Violation, one Time Schedule Order and one Investigative Order.

In addition to the summary information provided below, access to information on violations, enforcement actions, and Mandatory Minimum Penalties (MMPs) on a real-time basis is available to the public from the State Water Resources Control Board's Internet webpage at:

http://www.waterboards.ca.gov/water_issues/programs/enforcement/

SETTLEMENT AGREEMENTS

Ametek, Inc., Former Ketema Facility, El Cajon

Order No. R9-2009-0091 was adopted on August 12, 2009. The Settlement Agreement assessed administrative civil liability against Ametek, Inc. in the amount of \$1,095,000. Ametek, Inc. is required to pay \$600,000 to the State Water Board Cleanup and Abatement Account and will satisfy the balance of the total liability by taking timely actions in accordance with Cleanup and Abatement Order No. R9-2009-0073.

William and Heidi Dickerson, Larry and Penny Gunning, and Perry and Papenhausen, Inc., Coronado

Order No. R9-2009-0125 was adopted on August 12, 2009. The Settlement Agreement rescinds Amended Cleanup and Abatement Order Nos. R9-2006-0101 and R9-2006-0102, reimburses the Regional Board for staff costs totaling \$67,000, and requires the Dischargers to comply with riprap replacement and eelgrass mitigation required by a Federal Settlement Agreement.

ADMINISTRATIVE CIVIL LIABILITY (ACL) ORDERS**William and Heidi Dickerson, Larry and Penny Gunning, and Perry and Papenhausen, Inc., Coronado**

Order No. R9-2009-0084 was adopted on August 12, 2009 assessing administrative civil liability in the amount of \$61,200. Of that amount, \$24,000 is to satisfy mandatory minimum penalties for violations of NPDES Order No. R9-2000-0090 and will be deposited into the State Water Board Cleanup and Abatement Account. The remaining \$37,200 in discretionary liability will be divided between the Cleanup and Abatement Account and the Waste Discharge Permit Fund.

ADMINISTRATIVE CIVIL LIABILITY (ACL) COMPLAINTS**City of Laguna Beach, Sanitary Sewer System**

ACL Complaint No. R9-2009-0040 was issued on August 18, 2009 to the City of Laguna Beach for the discharge of sanitary sewage into the Pacific Ocean. The Complaint recommends a civil liability of \$70,680 for the discharge of 591,000 gallons of untreated sewage on October 29, 2008 from the Bluebird Lift Station. A hearing is tentatively scheduled for November 10, 2009.

CLEANUP AND ABATEMENT ORDERS (CAO)**Ametek, Inc. Former Ketema Facility, El Cajon**

CAO R9-2009-0073 was adopted by the Regional Board on August 12, 2009 as part of a Settlement Agreement. The CAO requires Ametek, Inc. to implement an Environmental Monitoring Program and submit quarterly gas/vapor and groundwater monitoring reports. Successful completion of the requirements contained in the CAO will permanently suspend the imposition of \$495,000 of the civil liability imposed in Order No. R9-2009-0091.

NOTICES OF VIOLATION (NOV)**U. S. Marine Corps, Southern Regional Tertiary Treatment Plant, Camp Pendleton**

NOV No. R9-2009-0141 was issued to the U. S. Marine Corps Southern Region Tertiary Treatment Plant on August 3, 2009 for eight violations of discharge specifications prescribed in Conditional Waiver No. 7 and Waste Discharge Requirements (WDR) Order No. R9-2009-0021. The NOV alleges the Marine Corps: (1) failed to collect all of the wastewater samples required in January 2009; (2) discharged 1,000 gallons of recycled water to an area not specified in Order No. R9-2009-0021 on May 12, 2009; and (3) discharged chloride in excess of the daily maximum effluent limitation in March and April 2009.

Carlsbad Municipal Water District, Carlsbad Water Recycling Facility

NOV No. R9-2009-0145 was issued to the Carlsbad Municipal Water District on August 5, 2009 for violations of WDR Order No. R9-2004-0409. The NOV alleges four violations of WDR discharge specifications for manganese in April, May, and June 2009 and two violations of WDR discharge specifications for iron in April 2009.

County of Orange, Aliso Creek Outlet Maintenance Program Project

NOV No. R9-2009-0159 was issued to the County of Orange on August 31, 2009 for violations of Water Quality Certification No. 05C-009. The NOV alleges that the County failed to comply with monitoring and notification requirements of the Certification.

TIME SCHEDULE ORDERS (TSO)**General Dynamics, National Steel and Shipbuilding Company (NASSCO)**

On August 12, 2009 the Regional Board adopted TSO No. R9-2009-0117 establishing a compliance schedule for the implementation of new drydock flooding and cleaning procedures in order to comply with new effluent limitations for copper and nickel in NPDES Order No. R9-2009-0099. The TSO contains a final compliance date of August 12, 2014.

INVESTIGATIVE ORDERS**Unocal Station #6519, Temecula**

Addendum No. 1 to Investigative Order No. R9-2002-0105 was issued to Unocal Service Station #6519 located in Temecula on August 4, 2009. Addendum No. 1 modifies the frequency of monitoring activities from quarterly to semiannual. Changing the monitoring frequency statewide from quarterly to semiannual will save \$40 million annually without harm to the environment or risk to health and safety.

3. Grants Update (Laurie Walsh)

Restarting Stopped Bond Projects: Money from the State's March and April 2009 Bond sales are available for distribution to those bond funded projects that were frozen last December 17, 2008 under Budget Letter 08-33. The bond sale did not generate enough money to restart all projects. In order to finance as many projects as possible, the State Water Resources Control Board Department of Financial Assistance (DFA) is reviewing the list of stopped Proposition 13, 40, and 50 bond funded projects to determine their status towards completion and their water quality benefits. After a full review of these projects, DFA will determine which projects can restart and how much funding they will receive.

American Recovery and Reinvestment Act (ARRA): On February 17, 2009, President Obama signed the American Recovery and Reinvestment Act (ARRA) of 2009. The ARRA is designed to boost the U.S. economy through a \$787 billion package of spending and tax measures. In response to the national recession and global credit crunch, Congress authorized new incentives in the ARRA for state and local governments to issue bonds. The authorization, provided under the American Recovery and Reinvestment Act (ARRA) of 2009, is for a limited time and is intended to expedite economic recovery in the US. The State of California estimates that it currently stands to receive approximately \$85 billion

from the ARRA – approximately \$50 billion in education, infrastructure and other spending, and \$35 billion in tax benefits.

The stimulus money is available for projects in communities that might not normally be able to qualify for a SRF loan. The stimulus money is being granted or loaned at rates even lower than normally available from the SRF. The SWRCB has been working with local governments and others to make sure their clean water projects were ready to begin work and qualify for stimulus money as quickly as possible.

Within the San Diego Region, three Grantees obtained ARRA funds:

- The Mission Resource Conservation District received \$294,746 to continue its work on Arrundo Control in the San Luis Rey River. The project will restore approximately 2.2 miles of river in the San Luis Rey Watershed. The project is estimated to create or retain up to 20 jobs.
- The Los Penasquitos Lagoon Foundation is scheduled to receive \$972,166 to continue its work on constructing a sedimentation basin in the Los Penasquitos Lagoon Watershed. The project is estimated to create or retain up to 40 jobs.
- The Regents of the University of California received \$2,644,400 to install treatment devices and controls including dry weather flow diversions, trash enclosures, erosion and sediment controls to prevent polluted storm water runoff from entering the ocean at the La Jolla Area of Special Biological Significance (ASBS). The project is estimated to create or retain up to 30 jobs.

State Revolving Fund Project Priority List: The current State Revolving Fund Project Priority List (PPL) for State Fiscal Year (SFY) 2008/2009 was adopted by the State Water Board on September 16, 2008. It was amended by the Executive Director on April 17, 2009 to add projects that are expected to receive ARRA and base program funds in the remainder of SFY 2008/2009 and the beginning of SFY 2009/2010. The SWRCB adopted the updated list in August 2009. The approved additions to the Clean Water State Revolving PPL can be obtained at

http://www.swrcb.ca.gov/water_issues/programs/grants_loans/srf/docs/08_09cwsrf_ppl082009.pdf

Department of Water Resources Integrated Regional Water Management Region Acceptance Process (RAP) Update

The Proposition 50, Chapter 8, Integrated Regional Water Management (IRWM) Grant Program provides funding for projects to protect communities from drought, protect and improve water quality, and reduce dependence on imported water.

The IRWM Grant Program includes two separate grant types - Planning Grants and Implementation Grants. The IRWM Grant Program is administered jointly by Department of Water Resources (DWR) and State Water Resources Control Board (State Water Board) and is intended to promote a new model for water management. The Region Acceptance Process (RAP) is a component of IRWM Program Guidelines used to evaluate and accept an "IRWM Region" into the IRWM grant program.

DWR received 46 RAP proposals and subsequently conducted interviews with each regional group. Regional Board staff member Laurie Walsh participated in the group review of RAP applications that began in May 2009. Within the San Diego Regional Board boundary, RAP applications were received from:

- San Diego County Water Authority on behalf of the San Diego Regional Water Management Group;
- County of Orange on behalf of the South Orange County Watershed Management Area;
- Rancho California Water District on behalf of the Upper Santa Margarita Planning Area Regional Water Management Group.

Group Interviews were completed in July 2009. DWR will be accepting comments on the draft recommended RAP list during August 2009. The final RAP decision, as approved by the Director of DWR, is expected to be released in mid-October 2009. DWR is presenting the draft recommendations at workshops to be held on September 8, 9, and 10, 2009 in Sacramento, Los Angeles, and Fresno, respectively.

September 8, 2009 10:00 am: California EPA Building, Byron Sher Auditorium, 1001 "I" Street, Sacramento, CA 95814 -- Webcast: <http://www.calepa.ca.gov/broadcast/> e-mail questions or comments during the webcast to DWR_IRWM@water.ca.gov

September 9, 2009 10:00 am: Metropolitan Water District, 700 North Alameda Street, Los Angeles, CA 90012-2944

September 10, 2009 10:00am: State of California Building, 2550 Mariposa Mall, room 1036 Fresno, CA 93721

The news release, RAP draft recommendations, and associated materials (review summaries, individual RAP documents, and maps) will be posted on the following DWR IRWM Program website by September 1, 2009:
http://www.water.ca.gov/irwm/integregio_rap.cfm

Proposition 84 Storm Water Grant Program Solicitations - Still On Hold
Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, was approved by California voters in the general election on November 7, 2006. The Proposition 84 Storm Water Grant Program provides matching grants to local public agencies

for the reduction and prevention of Storm Water contamination of rivers, lakes, and streams.

Project solicitations for the Proposition 84 Storm Water Grant Program funds are currently on hold until further notice due to the continued budget crisis and Bond Fund Suspension ordered per the December 18, 2008, Budget Letter issued by the California Department of Finance. For the most up-to-date information on the Budget Letter, visit the Department of Finance Website.

4. Marine Debris (*Bruce Posthumus*)

As indicated in a report to the SDRWQCB at its July 1, 2009 meeting, marine debris, most of which originates from land-based sources, is of concern, not only for aesthetic reasons, but also because of the threat it poses to marine life. In August 2009, the Scripps Environmental Accumulation of Plastic Expedition (SEAPLEX) from Scripps Institution of Oceanography went to the North Pacific Gyre, an area of the ocean where large quantities of marine debris, particularly plastic materials, accumulate.

The expedition appears to have generated considerable public interest and received substantial media coverage. Reports in the San Diego Union-Tribune included the following:

<http://www3.signonsandiego.com/stories/2009/aug/27/us-sci-ocean-junk-082709/?science&zIndex=156384>

<http://www3.signonsandiego.com/stories/2009/aug/28/floating-dump-seen-deadly-sea/?science&zIndex=156632>

Additional information about the expedition is available on the SEAPLEX website at <http://sio.ucsd.edu/Expeditions/Seaplex/>.

5. Status of Petitions for Review by State Water Board (*Catherine Hagan*) (Attachment B-5)

The State Water Board maintains a list of the petitions for review of Regional Water Board actions or inactions that are currently being reviewed. The list also identifies the total number of petitions, most of which are being held in abeyance at the petitioners' request. As of August 12, 2009, there are 33 active petitions before the State Water Board and 229 petitions being held in abeyance. Of the 33 active petitions, four seek review of San Diego Water Board actions. Two of these are consolidated for review (the petitions filed by San Diego Coastkeeper and Surfrider Foundation to challenge the Board's action in the Poseidon Resources Corporation's Carlsbad Desalination Plant matter [Petitions A-2024 and A-2024(a)]. The others are the Department of the Navy's petition for review of the San Diego Water Board's NPDES permit reissuance for the Coronado Naval Base (Petition A-2032) and the South Orange County Wastewater Authority and South Coast Water District's petition for review of the San Diego Water Board's order imposing administrative civil liability (Petition A-2035). Petitions for review of San Diego Water Board actions, and a notation indicating whether a petition is being held in abeyance, are listed in the Board's agenda notice at item 13. For your reference, attached is the list of statewide active

petitions provided by the State Water Board. This list shows that most regions, including the San Diego Region, have a handful of active petitions (between one and four), the Central Valley Water Board has 16 and the Lahontan and Colorado River Basin Water Boards have none. In addition, many active petitions as well as those held in abeyance, are available on the State Water Board's website at the following address:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality/petitions.shtml.

6. Priorities for Supplemental Environmental Projects (*Jeremy Haas*)

In March 2009 the Regional Board held an informational workshop on its enforcement function and consideration of Supplemental Environmental Projects (SEPs). In June 2009, the Executive Officer's Report summarized the distribution of Administrative Civil Liabilities (ACL), noting that 34 percent of liabilities imposed since 2000 have been suspended for use in SEPs. At the June 2009 Regional Board meeting, board members discussed the use of funds from SEPs and, alternatively, the Cleanup and Abatement Account for water quality improvement projects and asked staff to report on priority uses of SEPs.

In June 2009, the State Water Board adopted the "Policy for Supplemental Environmental Projects," which provides further guidance for staff and the Board. Traditionally, SEP applications would be reviewed for consistency with State Policy, benefit to the region's water quality of beneficial uses, and likelihood of successful implementation. The reviews would periodically be refined based on staff's experience managing and evaluating previous SEPs. Staff would then provide a recommendation to the Board during an agenda item involving a SEP.

In response to the Board's discussion and the new SEP Policy, staff has been refining a two-step process for making SEP recommendations to the Board. First, staff would consider whether the SEP would serve the interests of the Board by providing any of the following four outcome-oriented performance objectives.

1. Supplemental ambient monitoring;
2. Supplemental cleanup of legacy or non-point pollution;
3. Supplemental protection or restoration of wetlands and streambeds; and
4. Supplemental basin planning studies.

Second, staff would consider the following five-part criteria:

1. Does the SEP further the mission of the Regional Board?
2. Has the Discharger considered and committed to the SEP?
3. Does the SEP have a definitive beginning and end, and is the SEP timely?
4. Is the SEP "shovel-ready;" Are permits, planning, and design complete?
and
5. Are there measureable performance objectives?

Staff's process is a strategic approach to planning and prioritizing SEPs within the business functions of the Regional Board. Written evaluations of the criteria will be provided to the Board to support staff's recommendations for each agenda item in which SEPs are proposed.

7. Algae as Bioindicators for Streams (*Lilian Busse*)

Biological assessments are an integral component of the State's Water Quality Program and the Surface Water Ambient Monitoring Program (SWAMP) has focused most of its effort and resources on the development of benthic macroinvertebrate-based indicators but is now developing the capacity to also use algae because this will be necessary for biological assessment based on multiple lines of evidence, as recommended by USEPA. The goal is to develop tools to use algae as a second biological indicator for streams, and as biological endpoints in numeric nutrient criteria. Regional Board staff (Lilian Busse) is coordinating various state efforts for implementation of the algae bioindicators program.

Significant progress has been made during the last two years to include algae in the bioassessment program in California. A technical report by the Southern California Coastal Water Research Project (SCCWRP) was released in May 2008 with guidance on how to incorporate freshwater algae in the SWAMP program. During 2008 and 2009, algae were sampled for various statewide and regional programs. SWAMP funds were used by SCCWRP and the San Diego Regional Board to develop a Standard Operating Procedures (SOP) for field sampling of stream algae. Lilian Busse is leading the effort to establish a freshwater algae taxonomic group with the goal of standardizing algae taxonomy for the State. The taxonomy group will develop standard taxonomic efforts levels and an online taxonomic key and resources. Funds from two Proposition 50 grants are supporting the development of an index of biotic integrity (IBI) based on algae in Southern California and on the Central Coast. These grants were approved in March of 2007 but were suspended in December of 2008.

Lilian Busse will convene a SWAMP webinar entitled: "A New Tool for Water Quality Assessment - Algae as Bioindicators" on September 24, 2009. The webinar is available through the State Boards' WebEx Portal. The presentation will include an introduction on using stream algae as bioindicators and an overview of SWAMP's strategy for incorporating stream algae into California's bioassessment programs. The presentation will cover the following implementation areas: (1) SOP for sampling stream algae; (2) Laboratory analysis of stream algae; (3) Current programs that include algae as indicators; (4) Development of a California-wide stream algae taxonomic standards group; (5) SWAMP database modules for stream algae; (6) Quality Assurance Program Plan; and (7) First results on the development of an index of biotic integrity based on stream algae.

8. Southern California Steelhead Distinct Population Segment Recovery Plan
(Linda Pardy)

The National Marine Fisheries Service (NMFS) recently announced the availability of the "Draft Southern California Steelhead Distinct Population Segment Recovery Plan" (Draft Recovery Plan) for public review. The Draft Recovery Plan identifies recovery actions, based upon the best scientific and commercial data available, necessary for the recovery of the southern California steelhead distinct population segment.

The recovery goals are to prevent the extinction of southern California steelhead and ensure the long-term persistence of viable, self-sustaining, interacting wild populations of steelhead across the Distinct Population Segment (DPS). NMFS identifies the following actions to reach these recovery goals: (1) Reduce threats to multiple populations throughout the DPS; (2) Protect, restore, and maintain habitats of sufficient quality and natural complexity throughout the DPS; (3) Allow the full range of all life-history forms of *Oncorhynchus mykiss* (aka, *O. mykiss*) to use as many types of habitat as possible in order to overcome challenges of a highly natural environment.

The Southern California Steelhead DPS spawns in watersheds from the Santa Maria River (just north of Point Conception) south to the Tijuana River at the U.S. – Mexico border. The San Diego Region encompasses *O. mykiss* populations within the Santa Catalina Gulf Coast Biogeographic Population Group (BPG). Key watersheds and steelhead populations within the Santa Catalina Gulf Coast BPG identified by NMFS as forming the foundation for the recovery of the Southern California DPS include San Juan Creek and the San Luis Rey River (Core 1 – highest priority); San Mateo Creek and the Santa Margarita River (Core 2); and San Onofre Creek, San Diego River, Sweetwater River, Otay River, and Tijuana River (Core 3).

Regional Board staff attended the public meeting on the Draft Recovery Plan on August 25, 2009, and is planning to submit comments to NMFS. The draft recovery plan is available at http://swr.nmfs.noaa.gov/recovery/So_Cal.htm, and the comment period is open until 5PM PDT on September 21, 2009.

9. Emerging Contaminants of Concern (ECCs) (Brian Kelley, John Anderson, Bob Morris) (Attachment B-9)

Current water quality standards and regulations have focused on a small list of contaminants that were identified as priority pollutants decades ago. However, there are thousands of additional chemicals in common use by industry, agriculture, and households, which are eventually discharged into waters of the state. Some of these chemicals persist in the environment, accumulate in tissues of organisms exposed to the constituents, and are toxic to certain species. Others interfere with hormone systems governing reproduction and growth. Because the production of these compounds is likely to continue and/or increase in the future, while their behavior, fate and effects are largely unknown,

scientists are concerned about the impact of emerging contaminants in the coastal and marine environment, inland surface waters, groundwater, and other water supply sources. These chemicals are euphemistically referred to as emerging contaminants of concern (ECCs) and Contaminants/Chemicals of Emerging Concerns (CECs) (Attachment B-9a).

In contrast to "legacy" contaminants, little is known about the sources, occurrence and fates of ECCs, which are grouped by intended use, chemical similarity and/or mode of toxicological action. Like their legacy counterparts, ECCs are introduced into the environment via point discharges or nonpoint pathways, or both. As the ability to detect ECCs improves, the body of scientific literature documenting their occurrence in urban waters will continue to grow. Studies on their environmental behavior are key in understanding their potential for impacts (e.g., do they accumulate in sediments? biota?).

Pharmaceuticals and Personal Care Products (PPCPs) occur in wastewater treatment plant influent primarily due to human excretion, handwashing, showering, cleaning, and disposal of unused or expired medications down the drain. Conventional wastewater treatment technology currently enables for removal of some PPCPs in sludge, complete or partial degradation of some PPCPs, or no removal of some PPCPs. Major factors affecting the degree of degradation and/or removal rates are residence times in the treatment process, initial concentrations of the PPCPs, and use of advanced membrane treatment. Limited information is available due to the lack of available laboratory methods for detecting PPCPs and the difficulty in replicating wastewater treatment plant conditions in the laboratory.

PPCPs and degradation products are present in both the wastewater treatment plant effluent and wasted sludge. As a result, these contaminants, including acetaminophen, steroids, hormones, diltiazem (blood pressure medication), codeine, antibiotics, and ibuprofen, have been detected in surface water bodies. Major sources of these contaminants in surface waters are treated sewage, untreated sewage, runoff from confined animal feeding operations, and lands amended by recycled water or biosolids.

Ongoing research into ECCs and their effects by SCCWRP, NOAA, USEPA, and the State Water Board are summarized in an attached report (Attachment B-9b). This report also discusses ECCs and groundwater impacts with respect to recycled water and wastewater discharges to land.

PART C
STATEWIDE ISSUES OF IMPORTANCE TO THE SAN DIEGO REGION

1. Proposed Public Health Goal (PHG) for Hexavalent Chromium in Drinking Water by the California Office of Environmental Health Hazard Assessment
(Charles Cheng)

On August 20, 2009, the California Office of Environmental Health Hazard Assessment (OEHHA) released a draft public health goal (PHG) for hexavalent chromium in drinking water at 0.06 ug/L or 0.06 parts per billion (ppb). OEHHA also announced the availability of a draft technical support document on the proposed PHG at www.oehha.ca.gov/water/phg/chr6draft082009.html for public comments.

A public health goal is the level of a chemical contaminant in drinking water that does not pose a significant health risk. However, a PHG is not a drinking water standard, nor regulatory level for cleanup of groundwater or surface water contamination. It is developed based on pure scientific studies of a chemical's effect on human health, and is the scientific basis for a regulatory agency such as the California Department of Public Health (CDPH) to develop the state's regulatory drinking water standard, i.e. the Maximum Contaminant Levels (MCLs). In developing MCLs, the CDPH must consider PHGs, as well as technical and economical feasibilities. It is not unusual that MCLs and PHGs are not the same values. A PHG is not considered the maximum limit of a chemical that is safe to drink; drinking water containing chemical level exceeding the PHG can still be considered acceptable for public consumption.

Both CDPH and the US EPA currently have regulatory drinking water standards for "total chromium," which consists of both trivalent chromium (chromium 3) and hexavalent chromium (chromium 6). While chromium 6 is shown to be carcinogenic and harmful to human health, chromium 3 is found naturally in foods at low levels and is considered an essential human dietary nutrient. Setting a health goal and drinking water standard for chromium 6 will more directly protect the public from health risks from this contaminant.

The proposed draft chromium 6 PHG is based on tumor incidence data from rodent cancer bioassays published by the National Toxicology Program in 2007. OEHHA, CDPH and other groups requested the research to provide data needed to develop a chromium 6 PHG and drinking water standard. A copy of the draft technical support document can be downloaded from the website. OEHHA is soliciting comments on the draft report during a 45-day comment period, and will hold a public workshop on October 19, 2009 at the Elihu Harris Building, 1515 Clay Street, Oakland, 94612.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

**SIGNIFICANT NPDES
PERMITS, WDRs, AND
ACTIONS OF THE
REGIONAL BOARD**

September 9, 2009

APPENDED TO EXECUTIVE OFFICER REPORT

TENTATIVE SCHEDULE
SIGNIFICANT NPDES PERMITS, WDRS, AND ACTIONS OF THE SAN DIEGO RWQCB

Scheduled Board Meeting Date	Action Agenda Item	Action Type	Initial Document Application Complete	Discharge & Receiving Water Quality Limits and Monitoring Plan Known	Draft Complete	Public Review & Comment	Consent Item	Comments
October 14, 2009 Regional Board Meeting San Diego Regional Water Board Office								
10/14/2009	Initial Hearing - 2008 Fed. Clean Water Act Sec. 303(D) List Of Water Quality Segments (<i>David Gibson</i>)	Hearing: CWA 303(d) WQ List	NA	NA	75%	0%	No	Finalizing the decisions and drafting staff report underway. Planning on July 1 release for public review and comments.
10/14/2009	Administrative Civil Liability against Progressive Steel Fabricators, failure to submit the Fiscal Year 2007-08 annual monitoring report (<i>Rebecca Stewart</i>)	ACL	50%	50%	50%	10%	No	Mandatory minimum penalty \$1,000 plus \$600 staff costs ACL for failing to submit industrial stormwater annual report
10/14/2009	Administrative Civil Liability against GMG Stone, failure to submit the Fiscal Year 2007-08 annual monitoring report (<i>Rebecca Stewart</i>)	ACL	50%	50%	50%	10%	No	Mandatory minimum penalty \$1,000 plus \$600 staff costs ACL for failing to submit industrial stormwater annual report
10/14/2009	Administrative Civil Liability against E & E Transportation, failure to submit the Fiscal Year 2007-08 annual monitoring report (<i>Rebecca Stewart</i>)	ACL	50%	50%	50%	10%	No	Mandatory minimum penalty \$1,000 plus \$600 staff costs ACL for failing to submit industrial stormwater annual report
10/14/2009	San Diego County Solid Waste Trust Fund (<i>Bob Morris/Amy Grove</i>)	Information Item	NA	NA	NA	NA	No	Vicky Gallagher (SD County) will be invited to make a presentation to the Board and answer questions.

Scheduled Board Meeting Date	Action Agenda Item	Action Type	Initial Document Application Complete	Discharge & Receiving Water Quality Limits and Monitoring Plan Known	Draft Complete	Public Review & Comment	Consent Item	Comments
10/14/2009	Tijuana River Valley Recovery Team (Mike McCann)	Information Item	0%	NA	NA	NA	Yes	
10/14/2009	Regional Harbor Monitoring Program (Bruce Posthumus)	Information Item	0%	NA	NA	NA	Yes	
10/14/2009	Agriculture Waiver Status Report (Peter Peuron)	Information Item	NA	NA	NA	NA	NA	
10/14/2009	San Dieguito Hydro Unit (Watershed)	Information Item	0%	NA	NA	NA	Yes	
November 10, 2009 Regional Board Meeting San Diego Regional Water Board Office								
11/10/2009	Water Recycling Workshop (Bob Morris)	Information Item	0%	NA	NA	NA	Yes	
11/10/2009	NPDES General De Mimimis Discharges Permit - San Diego Region (Michelle Mata)	NPDES Permit Adoption	NA	0%	0%	0%	No	

DATE OF REPORT
September 9, 2009

TENTATIVE SCHEDULE
SIGNIFICANT NPDES PERMITS, WDRS, AND ACTIONS OF THE SAN DIEGO RWQCB

Scheduled Board Meeting Date	Action Agenda Item	Action Type	Initial Document Application Complete	Discharge & Receiving Water Quality Limits and Monitoring Plan Known	Draft Complete	Public Review & Comment	Consent Item	Comments
11/10/2009	Sweetwater Authority Groundwater Demineralization (Michelle Mata)	NPDES Permit Reissuance	0%	80%	0%	0%	No	
11/10/2009	NPDES General Permit Hydrostatic Testing and Potable Water Discharge (Michelle Mata)	NPDES Permit Reissuance	NA	100%	80%	0%	No	NPDES Workplan FY 2006-07
11/10/2009	Minshew Brothers Steel Construction, Inc. (Rebecca Stewart)	ACL Order	100%	NA	20%	50%	No	Mandatory and discretionary liability proposed for failure to submit two annual industrial storm water reports
11/10/2009	Carlsbad Energy Center, LLS Power, Agua Hedionda Lagoon Seawater Intake and Brine Discharge To Pacific Ocean (Michelle Mata)	NPDES Permit New	90%	80%	50%	0%	No	Proposed use of existing Encina Power Station Intake structure
11/10/2009	Administrative Civil Liability against City of Laguna Beach, Bluebird Lift Station Sewage Spill to Pacific Ocean (Rebecca Stewart)	ACL Order	75%	NA	20%	50%	No	ACL Complaint issued August 18, 2009 with recommended \$70,680 liability.
11/10/2009	Administrative Civil Liability against City of San Diego, 381,185 gallons of untreated sewage sanitary sewer overflow into Lake Hodges (Joann Cofrancesco)	ACL	50%	50%	40%	0%	No	ACL Complaint issued July 22, 2009 with recommended \$620,278 in administrative civil liability. City has waived its right to hearing within 90 days.

DATE OF REPORT
September 9, 2009

TENTATIVE SCHEDULE
SIGNIFICANT NPDES PERMITS, WDRS, AND ACTIONS OF THE SAN DIEGO RWQCB

Scheduled Board Meeting Date	Action Agenda Item	Action Type	Initial Document Application Complete	Discharge & Receiving Water Quality Limits and Monitoring Plan Known	Draft Complete	Public Review & Comment	Consent Item	Comments
11/10/2009	Clean Water Act 401 Certification Workshop (<i>Chiara Clemente</i>)	Information Item	0%	NA	NA	NA	Yes	
December 9, 2009 Regional Board Meeting San Diego Regional Water Board Office								
12/9/2009	US Navy--Naval Base Pt. Loma - San Diego Bay (<i>Vicente Rodriguez</i>)	NPDES Permit Reissuance	100%	90%	80%	0%	No	NPDES Workplan FY 2007-08
12/9/2009	US Navy--Naval Base San Diego (including Graving Dock) - San Diego Bay (<i>Vicente Rodriguez</i>)	NPDES Permit Reissuance	90%	90%	80%	0%	No	NPDES Workplan FY 2007-08
12/9/2009	Hubbs Research Facility Carlsbad - Agua Hedionda Lagoon (<i>Joanne Cofrancesco</i>)	NPDES Permit Reissuance	100%	80%	80%	50%	No	Pending receipt of information from Hubbs Res.
12/9/2009	Initial Hearing -2008 Basin Plan Triennial Reivew (<i>Deborah Woodward</i>)	Hearing: Basin Plan Triennial Review	NA	0%	0%	0%	No	
12/9/2009	Adoption Hearing - 2008 Fed. Clean Water Act Sec. 303(D) List of Water Quality Segments (<i>Alan Monji</i>)	Adoption: CWA 303(d) WQ List	0%	0%	0%	0%	No	

TENTATIVE SCHEDULE
SIGNIFICANT NPDES PERMITS, WDRS, AND ACTIONS OF THE SAN DIEGO RWQCB

Scheduled Board Meeting Date	Action Agenda Item	Action Type	Initial Document Application Complete	Discharge & Receiving Water Quality Limits and Monitoring Plan Known	Draft Complete	Public Review & Comment	Consent Item	Comments
12/9/2009	Adoption Hearing - Tecolote Creek Bacti TMDL (Amy Mecklenborg / Benjamin Tobler / Wayne Chiu)	Hearing: TMDL Basin Plan Amendment	100%	100%	100%	0%	No	Combined with Bacti I, both set for June 15th public release for review and comments.
12/9/2009	Readoption Hearing - Revised Bacteria Impaired Waters TMDL Project I For Beaches And Creeks (Wayne Chiu / Benjamin Tobler / Amy Mecklenborg)	Hearing: TMDL Basin Plan Amendment	100%	100%	100%	0%	No	Revise TMDL for Bacti Indicators using Exceedance Days Approach. TMDL withdrawn by Regional Board in December 2008. Combined with Tecolote Bacti project, scheduled for public release June 15th.
12/9/2009	Update of Receiving Water Monitoring Programs--Mid to Small POTWs (Bruce Posthumus)	Information Item	0%	0%	0%	0%	Yes	
February 10, 2010 Regional Board Meeting San Diego Regional Water Board Office								
2/10/2010	Adoption -2008 Basin Plan Triennial Reivew (Deborah Woodward)	Adoption - Basin Plan Triennial Review	0%	0%	0%	0%	No	
2/10/2010	Initial Hearing -Riverside County MS4 Permit (James Smith)	NPDES Permit Reissuance	0%	0%	0%	0%	No	

DATE OF REPORT
September 9, 2009

TENTATIVE SCHEDULE
SIGNIFICANT NPDES PERMITS, WDRS, AND ACTIONS OF THE SAN DIEGO RWQCB

Scheduled Board Meeting Date	Action Agenda Item	Action Type	Initial Document Application Complete	Discharge & Receiving Water Quality Limits and Monitoring Plan Known	Draft Complete	Public Review & Comment	Consent Item	Comments
2/10/2010	UCSD Scripps (<i>Brian Kelley</i>)	NPDES Permit Reissuance	0%	0%	0%	0%	No	Stormwater ASBS Issue
March 10, 2010 Regional Board Meeting San Diego Regional Water Board Office								
3/10/2010	Mountain Water Ice (<i>Brian Kelley</i>)	NPDES Permit Reissuance	0%	0%	0%	0%	No	Discharge may be terminated
April 14, 2010 Regional Board Meeting San Diego Regional Water Board Office								
4/14/2010	Sea World - Mission Bay (<i>Brian Kelley</i>)	NPDES Permit Reissuance	0%	0%	0%	0%	No	
May 12, 2010 Regional Board Meeting San Diego Regional Water Board Office								

DATE OF REPORT
September 9, 2009

TENTATIVE SCHEDULE
SIGNIFICANT NPDES PERMITS, WDRS, AND ACTIONS OF THE SAN DIEGO RWQCB

Scheduled Board Meeting Date	Action Agenda Item	Action Type	Initial Document Application Complete	Discharge & Receiving Water Quality Limits and Monitoring Plan Known	Draft Complete	Public Review & Comment	Consent Item	Comments
June 8, 2010 Regional Board Meeting San Diego Regional Water Board Office								
6/8/2010	San Elijo JPA Ocean Outfall (<i>Brian Kelley</i>)	NPDES Permit Reissuance	0%	0%	0%	0%	No	
6/8/2010	City of Escondido Ocean Outfall (<i>Brian Kelley</i>)	NPDES Permit Reissuance	0%	0%	0%	0%	No	

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF JULY 1, 2009 THROUGH AUGUST 31, 2009**

DATE	APPLICANT	PROJECT TITLE	PROJECT DESCRIPTION	WATERBODY	IMPACT (Acres) ¹	MITIGATION (Acres) ¹	CERTIFICATION ACTION ²
7/2/09	San Diego Unified Port District	Emergency Outfall Stabilization at McCall Street	The project proposes to stabilize the sand and the immediate area surrounding a 24" storm drain outfall along the beach at the foot of McCall Street in San Diego. The project will excavate a 10'x10'x4' area of sand around the storm drain until the invert elevations of the pipe is exposed and an additional 2 ft underneath. The excavated area will be filled with approx. 180 cubic ft of rocks at the outfall and immediate area, and then backfilled with the excavated sand. A surrounded chain link fence will also be removed and replaced.	San Diego Bay Point Loma HA (908.10)	No significant impacts.	No significant impacts to water are anticipated, therefore no mitigation is required.	09C-049 Low Impact Certification & Enrollment in SWRCB GWDR Order No. 2003-017 DWQ
7/8/09	La Costa Town Square, LLC	La Costa Town Square	The proposed project is the development of 83 acres into a 284,400 sq. ft. shopping center, two office buildings totaling 55,000 sq. ft., 64 single family detached residential units, and 128 condominium units.	4 unnamed streambeds that flow into Encinas Creek Baiquitos HSA (904.51)	Not applicable.	Not applicable.	09C-043 Denial of Water Quality Certification

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF JULY 1, 2009 THROUGH AUGUST 31, 2009**

DATE	APPLICANT	PROJECT TITLE	PROJECT DESCRIPTION	WATERBODY	IMPACT (Acres) ¹	MITIGATION (Acres) ¹	CERTIFICATION ACTION ²
7/8/09	City of Oceanside - Engineering Division	San Luis Rey River Trail Extension and Sewer Access Road Improvement Project	The proposed project is the extension of the San Luis Rey River Trail from the Andrew Jackson/Polk Street intersection to a future trail staging area at mission Avenue near the North Santa Fe Drive intersection. The asphalt-paved trail will also provide vehicular access to the nearby sewer line for inspections and maintenance. The project will also remove and reconstruct 5 culverts.	Five unnamed drainage features that drain to another unnamed stream which is tributary to the San Luis Rey River. Mission HSA (903.11)	(P): 0.001 acre (5.5 linear feet) of wetland, 0.003 acre (44 linear feet) of streambed.	Proposed mitigation is the removal of four 36" diameter, 25 feet-long steel culverts and associated fill and the revegetation of 0.17 acre with native riparian and upland plants (restoration). The mitigation ration will be 56.7:1.	08C-064 Technically-Conditioned Programmatic Certification & Waiver of Waste Discharge Requirements, R9-2007-0014
7/8/09	RDWS LTD	ADLAI ROAD/SWAIM TM 5356	The proposed project is the subdivision of 4.54 acres into 9 lots for single family residences including an open space easement. The project will impact 0.02 acres (230 linear feet) of ephemeral stream, which will be mitigated by on-site establishment of 0.05 acres (620 feet) of ephemeral streams.	Los Cochtes Creek Cochtes HSA (907.14)	(P): 0.02 acre (230 linear feet) of streambed.	On-site establishment of 0.05 acre (620 linear feet) of streambed.	08C-020 Technically-Conditioned Certification & Enrollment in SWRCB GWDR Order No. 2003-017 DWQ
7/9/09	City of San Diego	Alvarado Court Sewer Pipe Crossing Accelerated Project	The proposed project consists of replacing approximately 741 linear feet of sewer mains and abandoning the existing sewer mains in place; rehabilitating, abandoning, and replacing sewer	Alvarado Creek Mission San Diego HSA (907.11)	(T): 0.002 acre of streambed, 0.005 acre of wetland.	Temporary impacts to streambed will be restored to pre-existing conditions. In the wetland area, exotic plants will be removed and replanted with native species.	09C-028 Low Impact Certification & Enrollment in SWRCB GWDR Order No.

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF JULY 1, 2009 THROUGH AUGUST 31, 2009**

DATE	APPLICANT	PROJECT TITLE	PROJECT DESCRIPTION	WATERBODY	IMPACT (Acres) ¹	MITIGATION (Acres) ¹	CERTIFICATION ACTION ²
			manholes; and removal of approximately 30 linear feet of an existing 8" cast iron pipe that will be replaced by a suspended steel bridge.				2003-017 DWQ
7/13/09	D.R. Horton	TT #29484 at Briggs Road (Country Roads Project)	Amendment to allow additional impacts due to changes in the culvert crossing design requirements from the County of Riverside and City of Murrieta. Amendments also include increased mitigation for the additional impacts as well as punitive mitigation for the delayed implementation of the original mitigation site.	Unnamed ephemeral channel French HSA (902.33)	(P): Additional 0.019 acre of impacts to open water, 0.013 acre of impacts to alkali marsh wetland, and 0.008 acre of alkali marsh non-wetland (16.27 linear feet total). (T): Additional 0.078 acre (60.06 linear feet).	Mitigation for additional impacts as well as punitive mitigation will be establishment of 0.3 acre within lot 243, an upstream tributary of the impact site, and purchase of 0.618 acre of enhancement credit from the local Conservation District.	03C-002 Amendment to a Technically-Conditioned Certification
7/16/09	City of Poway	Concrete Flood Control Channel Maintenance and Cleaning Project	Amend the existing Certification to include two additional channels to the authorized maintenance list, Bounty Way Channel and Poway Channel.	Rattlesnake Creek, Poway Creek, Los Penasquitos Creek, Los Penasquitos Lagoon Poway HA (906.20)	No change in impacts.	No change in mitigation.	07C-068 Amendment to a Low Impact Certification
7/16/09	California Department of Transportation - District 11	State Route 76 - Via Monserate Culvert Replacement	The project proposes to remove an existing 18" cross culvert, which conveys flows from an unnamed stream across State Route 76 to the San Luis Rey River, and replace it with a 36" x 90"	Unnamed tributary to San Luis Rey River Bonsall HSA (903.12)	(P): 0.014 acre of wetland, 0.008 acre of streambed.	Mitigation is achieved by deducting 0.044 acre of excess wetland creation credits from the Caltrans Marron Mitigation site, adjacent to SR-76.	09C-047 Low Impact Certification & Enrollment in SWRCB GWDR Order No.

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF JULY 1, 2009 THROUGH AUGUST 31, 2009**

DATE	APPLICANT	PROJECT TITLE	PROJECT DESCRIPTION	WATERBODY	IMPACT (Acres) ¹	MITIGATION (Acres) ¹	CERTIFICATION ACTION ²
			reinforced concrete pipe to improve capacity and reduce or eliminate flooding.				2003-017 DWQ
7/23/09	City of San Diego	Mt. Ashmun Pipe Protection Project	The proposed project includes encasement of a PVC sewer pipe in concrete, the removal of previously installed gabion baskets surrounding the pipe, and the placement of rip rap within the channel to slow storm water velocities.	Tributary to Tecolote Creek Tecolote HA (906.50)	(P): 0.003 acre (47 linear feet) of wetland	Mitigation for impacts to 0.002 acre of Oak Riparian Forest must be achieved by a combined 3:1 ratio of 1:1 establishment and 2:1 enhancement. Mitigation for impacts to 0.001 acre of Southern Willow Scrub must be achieved at a combined 2:1 ratio by 1:1 establishment and 1:1 enhancement.	08C-092 Technically-Conditioned Certification & Enrollment in SWRCB GWDR Order No. 2003-017 DWQ
8/3/09	Unified Post of San Diego	Kellogg Beach Sand Replenishment Project	The project proposes one-time beach replenishment at Kellogg Beach located along the west side of San Diego bay with 1,000 cubic yards of sand.	San Diego Bay Point Loma HA (908.10)	(T): 0.4 acre (215 linear feet) of unvegetated, sandy open water	The project is considered self-mitigating as it will restore beneficial uses.	09C-014 Technically-Conditioned Certification & Enrollment in SWRCB GWDR Order No. 2003-017 DWQ

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF JULY 1, 2009 THROUGH AUGUST 31, 2009**

DATE	APPLICANT	PROJECT TITLE	PROJECT DESCRIPTION	WATERBODY	IMPACT (Acres) ¹	MITIGATION (Acres) ¹	CERTIFICATION ACTION ²
8/5/09	22 nd District Agricultural Association	Sewer Forcemain Replacement Project	Amendment to the Certification to allow removal of the now non-operational forcemain to facilitate dredging required for the San Dieguito Wetlands Restoration Project (04C-113).	San Dieguito River, Pacific Ocean Rancho Santa Fe HSA (905.11)	No change in impacts.	No change in mitigation.	08C-058 Amendment to a Technically-Conditioned Certification
8/12/09	Pacific Century Group	Plaza de Murrieta Project	The proposed project is the construction of a commercial and residential development in a master planned community. Project includes the fill of intermittent and ephemeral drainages and widening of one intermittent drainage.	Unnamed tributary to Murrieta Creek Murrieta HSA (902.32)	Not applicable.	Not applicable.	07C-007 Withdrawn
8/12/09	French Valley Towne Center, LLC	French Valley Towne Center Project	The proposed project is the development of a commercial center at the southeast intersection of Winchester Road and Thompson Road.	Unnamed tributaries to Warm Springs Creek and other isolated waters	Not applicable.	Not applicable.	07C-117 Withdrawn
8/12/09	City of Temecula	Culvert @ Santiago Road and John Warner Project	The proposed project will replace the existing 24" CMP with two new 36" CMPs with head walls, riprap, and concrete aprons.	Unnamed ephemeral tributary to Murrieta Creek	Not applicable.	Not applicable.	07C-119 Withdrawn

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF JULY 1, 2009 THROUGH AUGUST 31, 2009**

DATE	APPLICANT	PROJECT TITLE	PROJECT DESCRIPTION	WATERBODY	IMPACT (Acres) ¹	MITIGATION (Acres) ¹	CERTIFICATION ACTION ²
8/17/09	California Department of Parks and Recreation	Tijuana Estuary Sediment Fate and Transport Study	Amendment to the Certification to change the final date for sediment placement from March 1, 2009 to December 31, 2009.	Pacific Ocean San Ysidro HSA (911.11)	No change in impacts.	No change in mitigation.	08C-031 Amendment to a Technically-Conditioned Certification
8/19/09	City of San Diego	Manhole 88 Repair at Encanto Creek	The proposed project consists of repairing a sewer manhole within the City of San Diego. The project will raise manhole 88 above the surface. Currently it is below grade. This will limit the amount of water infiltration into the manhole and allow for regular maintenance and cleaning of the sewer line.	Encanto Creek and South Chollas Chollas HSA 9908.22)	(P): 0.009 acre of wetland	Permanent impacts to wetlands will be mitigated at a 2:1 ratio by 1:1 establishment and 1:1 willow scrub at the City of San Diego's Camino del Rio North and Rancho Mission Enhancement sites.	09C-037 Low Impact Certification & Enrollment in SWRCB GWDR Order No. 2003-017 DWQ
8/20/09	City of San Diego	Mission Center Canyon B Sewer Access Path Project	The proposed project includes the creation of an unpaved path and two small stream crossings that will use pervious Arizona pavers to provide access to sewer line segments that occur within Murray Canyon.	Tributary to Murray Creek Mission San Diego HSA (907.11)	(P): 0.012 acre of waters of the U.S. (T): 0.011 acre of waters of the U.S.	Mitigation for permanent discharges to 0.012 acre of waters of the U.S. must be achieved at a 2:1 ratio and will be accomplished through off-site establishment of vegetated waters. Temporary impacts will be mitigated at a 1:1 ratio through on-site restoration and of-site enhancement of vegetated waters.	09C-039 Low Impact Certification & Enrollment in SWRCB GWDR Order No. 2003-017 DWQ

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF JULY 1, 2009 THROUGH AUGUST 31, 2009**

DATE	APPLICANT	PROJECT TITLE	PROJECT DESCRIPTION	WATERBODY	IMPACT (Acres) ¹	MITIGATION (Acres) ¹	CERTIFICATION ACTION ²
8/20/09	City of San Diego	Group Job 665 Project	The proposed project consists of replacement and rehabilitation of sewer lines in the Old Town/Mission Hills area within the City of San Diego. The project will replace and rehabilitate sections of the sewer lines that run through Presidio park, Trias, and Heritage park Canyons.	Unnamed channel Boundary of Chollas HSA (9908.22) and Mission San Diego HSA (907.11)	(T) 0.0137 acre of waters of the U.S. and 0.165 acre of riparian habitat	Temporary impacts will be mitigated at a 1.6:1 ratio by 0.1 acre on-site wetland enhancement and 0.192 acre of off-site wetland establishment.	09C-027 Low Impact Certification & Enrollment in SWRCB GWDR Order No. 2003-017 DWQ
8/24/09	U.S. Marine Corps Base Camp Pendleton	Green Beach Operations Access Points (P-159A)	The proposed action is to realign El Camino Real and Beach Club Road at Green Beach. The road realignment would include modification of the existing railroad trestle to accommodate the modified lanes. A new road with concrete pavement and a cross slope of 2% towards the San Onofre Creek would be constructed.	San Onofre Creek San Onofre Valley HSA (901.51)	(P): 0.03 acre (240 linear feet) of wetland	Mitigation for permanent impacts will be accomplished through restoration of 0.03 acre of wetland and enhancement of 0.03 acre of wetland.	09C-052 Certified by Default
8/28/09	BAE Systems San Diego Ship Repair Inc.	BAE Systems Pier 3 Fender Pile Backing Project	The proposed project is the installation of 16 fender piles at 8 locations on Pier 3 at the BAE Systems ship repair yard to support 8 steel backing plates and fender cushions.	San Diego Bay Chollas HSA (908.22)	No significant impacts.	No mitigation is required.	08C-097 Low Impact Certification & Enrollment in SWRCB GWDR Order No. 2003-017 DWQ

CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS FOR THE PERIOD OF JULY 1, 2009 THROUGH AUGUST 31, 2009

1. Wetland refers to vegetated waters of the U.S. and streambed refers to unvegetated waters of the U.S. (P) = permanent impacts. (T) = temporary impacts.
2. Low impact certification is issued to projects that have minimal potential to adversely impact water quality. Conditional certification is issued to projects that have the potential to adversely impact water quality, but by complying with technical conditions, will have minimal impacts. Denials are issued when the project will adversely impact water quality and suitable mitigation measures are not proposed or possible. Time expired refers to projects that may proceed due to the lack of an action by the Regional Board within specified regulatory timelines. Withdrawn refers to projects that the applicant or Regional Board have withdrawn due to procedural problems that have not been corrected within one year.

Number of Projects Received Between July 1, 2009 and July 31, 2009: 7
Number of Amendment Requests Received Between July 1, 2009 and July 31, 2009: 1
Number of Projects Received Between August 1, 2009 and August 31, 2009: 7
Number of Amendment Requests Received Between August 1, 2009 and August 31, 2009: 0
Number of Projects Received Between January 1, 2009 and August 31, 2009: 63
Number of Certifications Issued Between January 1, 2009 and August 31, 2009: 12
Number of Projects Withdrawn Between January 1, 2009 and August 31, 2009: 12
Number of Projects Certified by Default Between January 1, 2009 and August 31, 2009: 8
Number of Projects Denied Between January 1, 2009 and August 31, 2009: 3

SWRCB OFFICE OF CHIEF COUNSEL
CURRENT ACTIVE PETITIONS STATUS

August 10, 2009

Petitioner & Discharger (if different)	RB or SB	Petition Number	ATTY Assigned	Action Pending		Technical Review	Critical Dates		Action Appealed
				REVIEW	ENFORCEMENT		FILED ON	EXTENSION DEADLINE	
Emhart Industries, Inc. DISCHARGERS: Emhart Industries, Inc.; Black & Decker (U.S.), Inc.	8	A-1693	koh	pending [activated 07-24-07]	no	RGSTD / DUE	03-30-05	FILED ON	Cleanup and Abatement Order No. R8-2005-0053 for Emhart and Black & Decker
				STAY RQST				STAY DEADLINE	
				ABEYANCE				PETITION DEADLINE	
				INCOMPLETE LTR				EXTENSION DEADLINE	
				ORDER		RCVD			
				DISMISSAL LTR	yes				
Black & Decker (U.S.), Inc. DISCHARGERS: Emhart Industries, Inc.; Black & Decker (U.S.), Inc.	8	A-1693(a)	koh	pending [activated 07-24-07]	no	RGSTD / DUE	03-30-05	FILED ON	Cleanup and Abatement Order No. R8-2005-0053 for Emhart and Black & Decker
				STAY RQST				STAY DEADLINE	
				ABEYANCE				PETITION DEADLINE	
				INCOMPLETE LTR				EXTENSION DEADLINE	
				ORDER		RCVD			
				DISMISSAL LTR	yes				
Own Motion Review by State Water Board	8	A-1824	koh	pending	no	RGSTD / DUE	n/a	FILED ON	Rialto-Area Perchlorate Contamination
				STAY RQST				COMPLETED	
				ABEYANCE				DEADLINE	
				INCOMPLETE LTR				EXTENSION	
				ORDER		RCVD			
				DISMISSAL LTR	yes				
Julio Cesar Palmaz and Amalia B. Palmaz, Trustee of the Amalia B. Palmaz Living Trust	2	A-1837	koh	pending-activated 06-04-09	no	RGSTD / DUE	04-20-07	FILED ON	Cleanup and Abatement Order No. R2-2007-0019 for Palmaz Vineyard and Winery, Napa County
				STAY RQST				COMPLETED	
				ABEYANCE				DEADLINE	
				INCOMPLETE LTR				EXTENSION	
				ORDER		RCVD			
				DISMISSAL LTR	yes				

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Petitioner & Discharger (if different)	RB or SB	Petition Number	ATTY Assigned	Action Pending		Technical Review	Critical Dates	Action Appealed	
				REVIEW	ENFORCEMENT				
City of Tracy	5	A-1846	shb	REVIEW	pending-activated 05-22-09	RQSTD / DUE	FILED ON	05-31-07	
				STAY RQST	no		COMPLETED	05-28-09	
				ABEYANCE	yes / till 05-31-11		RCV'D	DEADLINE	02-22-10
				INCOMPLETE LTR				EXTENSION	
				ORDER					
California Sportfishing Protection Alliance DISCHARGER: City of Davis	5	A-1894	tac	REVIEW	pending	RQSTD / DUE	FILED ON	11-26-07	
				STAY RQST			COMPLETED	12-18-07	
				ABEYANCE		02-13-08 / 05-13-08	DEADLINE		
				INCOMPLETE LTR		RCV'D	EXTENSION		
				ORDER	9/2/08 Order-surface water only	6/16/2008; 12/3/08-groundwater issues			
California Sportfishing Protection Alliance DISCHARGER: Soper Company Spanish Mine	5	A-1948	tjr	REVIEW	pending	RQSTD / DUE	FILED ON	09-01-08	
				STAY RQST			COMPLETED	10-31-08	
				ABEYANCE			DEADLINE	07-28-09	
				INCOMPLETE LTR			EXTENSION	09-28-09	
				ORDER					
California Sportfishing Protection Alliance DISCHARGER: Tuolumne Utilities District	5	A-1967	sno	REVIEW	pending	RQSTD / DUE	FILED ON	11-23-08	
				STAY RQST			COMPLETED	01-07-09	
				ABEYANCE		02-11-09/05-12-09	DEADLINE	10-05-09	
				INCOMPLETE LTR		RCV'D	EXTENSION		
				ORDER		05-20-09			

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				REVIEW	pending		FILED ON	COMPLETED	
California Sportfishing Protection Alliance DISCHARGER: Syngenta Seeds, Inc., Woodland Seed Processing Facility	5	A-1970	tac	STAY RQST	pending	RQSTD / DUE	11-23-08	Waste Discharge Requirements Order No. R5-2008-0158 for Syngenta Seeds, Inc., Woodland Seed Processing Facility, Yolo County	
				ABEYANCE		COMPLETED	01-06-09		
				INCOMPLETE LTR		RCV'D	10-05-09		
				ORDER		DEADLINE			
				DISMISSAL LTR	no	EXTENSION			
City of Stockton	5	A-1971	bmj	REVIEW	pending (activated 01-12-09)	RQSTD / DUE	11-21-08	Waste Discharge Requirements Order No. R5-2008-0154 [NPDES No. CA0079138] for the City of Stockton Regional Wastewater Control Facility, San Joaquin County	
				STAY RQST		COMPLETED	01-12-09		
				ABEYANCE	yes (11-21-10)	RCV'D			
				INCOMPLETE LTR		DEADLINE			
				ORDER		EXTENSION	09-14-09		
California Sportfishing Protection Alliance DISCHARGER: City of Stockton	5	A-1971(a)	bmj	REVIEW	pending	RQSTD / DUE	11-23-08	Waste Discharge Requirements Order No. R5-2008-0154 [NPDES No. CA0079138] for the City of Stockton Regional Wastewater Control Facility, San Joaquin County	
				STAY RQST		COMPLETED	12-18-08		
				ABEYANCE		RCV'D	09-14-09		
				INCOMPLETE LTR		DEADLINE			
				ORDER		EXTENSION			
San Luis & Delta-Mendota Water Authority and Wetlands Water District DISCHARGER: City of Stockton	5	A-1971(b)	bmj	REVIEW	pending	RQSTD / DUE	11-24-08	Waste Discharge Requirements Order No. R5-2008-0154 [NPDES No. CA0079138] for the City of Stockton Regional Wastewater Control Facility, San Joaquin County	
				STAY RQST		COMPLETED	12-18-08		
				ABEYANCE		RCV'D	09-14-09		
				INCOMPLETE LTR		DEADLINE			
				ORDER		EXTENSION			
DISMISSAL LTR	no								

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				REVIEW	ENFORCEMENT		FILED ON	EXTENSION		
Ken Berry and California Citizens for Environmental Justice DISCHARGER: City of Richmond, United States Department of Defense, Department of the Navy, Former Point Molate Naval Fuel Depot, Richmond, Contra Costa County	2	A-1972	jhb	REVIEW	pending	RQSTD / DUE	12-04-08	FILED ON	Cleanup and Abatement Order No. R2-2008-0095 for City of Richmond, United States Department of Defense, Department of the Navy, Former Point Molate Naval Fuel Depot, Richmond, Contra Costa County	
				STAY RQST						
				ABEYANCE				COMPLETED		02-18-09
				INCOMPLETE LTR				DEADLINE		11-16-09
				ORDER				EXTENSION		
San Luis & Delta-Mendota Water Authority and Wetlands Water District DISCHARGER: Town of Discovery Bay CSD	5	A-1982	shb	REVIEW	pending	RQSTD / DUE	01-02-09	FILED ON	Waste Discharge Requirements Order No. R5-2008-0179 [NPDES No. CA0078590] for the Town of Discovery Bay CSD, Discovery Bay Wastewater Treatment Plant, Contra Costa County	
				STAY RQST						
				ABEYANCE				COMPLETED		
				INCOMPLETE LTR				DEADLINE		
				ORDER				EXTENSION		
California Sportfishing Protection Alliance DISCHARGER: Town of Discovery Bay CSD	5	A-1982(e)	shb	REVIEW	pending	RQSTD / DUE	01-02-09	FILED ON	Waste Discharge Requirements Order No. R5-2008-0179 [NPDES No. CA0078590] for the Town of Discovery Bay CSD, Discovery Bay Wastewater Treatment Plant, Contra Costa County	
				STAY RQST						
				ABEYANCE				COMPLETED		
				INCOMPLETE LTR				DEADLINE		
				ORDER				EXTENSION		
California Sportfishing Protection Alliance DISCHARGER: City of Nevada City	5	A-1983	apm	REVIEW	pending	RQSTD / DUE	01-02-09	FILED ON	Waste Discharge Requirements Order No. R5-2008-0177 [NPDES No. CA0079901] for the City of Nevada City Wastewater Treatment Plant, Nevada County	
				STAY RQST						
				ABEYANCE				COMPLETED		
				INCOMPLETE LTR				DEADLINE		
				ORDER				EXTENSION		

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California Sportfishing Protection Alliance DISCHARGER: University of California, Davis	5	A-1988	skv	REVIEW	pending	RQST'D / DUE	01-05-09	Waste Discharge Requirements Order No. R5-2008-0183 [NPDES No. CA0077895] for the University of California, Davis Main Wastewater Treatment Plant, Solano and Yolo Counties
				STAY RQST		FILED ON		
				ABEYANCE		COMPLETED	02-10-09	
				INCOMPLETE LTR		RCV'D	11-09-09	
				ORDER		EXTENSION		
DISMISSAL LTR	no							
ENFORCEMENT								
Carson Redevelopment Agency	4	A-1997	mjjw	REVIEW	pending	RQST'D / DUE	02-19-09	Water Code section 13267 Letter dated January 21, 2009, requiring completion of Site-Specific Human Health Risk Assessment for the Undeveloped Property Located at 21208 Shearer Avenue, Carson, Los Angeles County
				STAY RQST		FILED ON		
				ABEYANCE		COMPLETED	03-17-09	
				INCOMPLETE LTR		RCV'D	12-14-09	
				ORDER		EXTENSION		
DISMISSAL LTR	no							
ENFORCEMENT								
Ken Berry and California Citizens for Environmental Justice DISCHARGERS: Willits Environmental Remediation Trust (former Remco Hydraulics Facility)	1	A-1998	shb	REVIEW	pending	RQST'D / DUE	03-02-09	Waste Discharge Requirements Order No. R1-2009-0001 In-Situ Groundwater Treatment, Willits Environmental Remediation Trust, Former Remco Hydraulics Facility, 934 South Main Street, Willits, Mendocino County
				STAY RQST		FILED ON		
				ABEYANCE		COMPLETED		
				INCOMPLETE LTR		RCV'D		
				ORDER		EXTENSION		
DISMISSAL LTR	no							
ENFORCEMENT								
California Sportfishing Protection Alliance DISCHARGERS: San Andreas Sanitary District	5	A-2002	sno	REVIEW	pending	RQST'D / DUE	03-06-09	Waste Discharge Requirements Order No. R5-2009-0007 [NPDES No. CA0079464] for San Andreas Sanitary District Wastewater Treatment Plant, Calaveras County
				STAY RQST		FILED ON		
				ABEYANCE		COMPLETED		
				INCOMPLETE LTR		RCV'D		
				ORDER		EXTENSION		
DISMISSAL LTR	no							
ENFORCEMENT								

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				REVIEW	STAY RQST		RCQSTD / DUE	FILED ON	
U.S. Department of Agriculture, Forest Service Eldorado National Forest DISCHARGERS: El Dorado County; U.S. Department of Agriculture, Forest Service Eldorado	5	A-2017	apm	REVIEW	pending	RCQSTD / DUE	FILED ON	05-21-09	Cleanup and Abatement Order No. R5-2009-0030 for El Dorado County and the United States Department of Agriculture, Forest Service, Eldorado National Forest, Rubicon Trail, El Dorado County
				STAY RQST	no		COMPLETED	07-15-09	
				ABEYANCE			DEADLINE	04-12-10	
				INCOMPLETE LTR		RCVD	EXTENSION		
				ORDER					
California Sportfishing Protection Alliance DISCHARGERS: Barrel Ten Quarter Circle Land Company; Barrel Ten Quarter Circle, Escalon Cellars	5	A-2018	tjr	REVIEW	pending	RCQSTD / DUE	FILED ON	05-26-09	Waste Discharge Requirements Order No. R5-2009-0038 for Barrel Ten Quarter Circle Land Company, Barrel Ten Quarter Circle, Escalon Cellars, San Joaquin County
				STAY RQST	no		COMPLETED		
				ABEYANCE			DEADLINE		
				INCOMPLETE LTR		RCVD	EXTENSION		
				ORDER					
California Sportfishing Protection Alliance DISCHARGER: City of Rio Vista	5	A-2020	skv	REVIEW	pending	RCQSTD / DUE	FILED ON	05-26-09	Waste Discharge Requirements Order No. R5-2009-0037 Amending Waste Discharge Requirements Order No. R5-2008-0108 [NPDES No. CA0079588] for City of Rio Vista, Rio Vista Beach Wastewater Treatment Plant, Solano County
				STAY RQST	no		COMPLETED		
				ABEYANCE			DEADLINE		
				INCOMPLETE LTR		RCVD	EXTENSION		
				ORDER					
City of Grover Beach	3	A-2021	apm	REVIEW	pending	RCQSTD / DUE	FILED ON	06-08-09	Resolution No. R3-2009-0035 for City of Grover Beach Stormwater Management Program, San Luis Obispo County STAY requested / DENIED 07-22-09
				STAY RQST	yes / Denied 07-22-09		COMPLETED		
				ABEYANCE			DEADLINE		
				INCOMPLETE LTR		RCVD	EXTENSION		
				ORDER					

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				REVIEW	STAY / denied			
Building Industry Legal Defense Foundation, Construction Industry Coalition on Water Quality, and Building Industry Association of Southern California, Inc.	4	A-2023	mjw	REVIEW	pending	RQSTD / DUE	FILED ON	Waste Discharge Requirements Order No. R4-2009-0057 [NPDES No. CAS004002] for Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from The Municipal Separate Storm Sewer Systems Within the Ventura County Watershed Protection District, County of Ventura
				STAY RQST	Yes / denied 06-24-09			
				ABEYANCE			COMPLETED	07-02-09
				INCOMPLETE LTR			DEADLINE	03-29-10
San Diego Coastkeeper DISCHARGER: The Poseidon Resources Corporation	9	A-2024	mjw	ORDER	no	RCVD	EXTENSION	
				DISMISSAL LTR	no			
				ENFORCEMENT	no			
				REVIEW	pending	RQSTD / DUE	FILED ON	06-11-09
Surfrider Foundation DISCHARGER: The Poseidon Resources Corporation	9	A-2024(a)	mjw	STAY RQST	no		COMPLETED	Waste Discharge Requirements Order No. R9-2009-0038 [NPDES No. CA0109223] Amending Order No. R9-2006-0065 for The Poseidon Resources Corporation, Carlsbad Desalination Project Discharge to the Pacific Ocean via the Encina Power Station Discharge Channel
				ABEYANCE				
				INCOMPLETE LTR			DEADLINE	04-19-10
				ORDER	no	RCVD	EXTENSION	
Barry Ross, Trustee of the Louis Ross and Alice Ross Family Trust	4	A-2028	tac	REVIEW	pending	RQSTD / DUE	FILED ON	Waste Discharge Requirements Order No. R9-2009-0038 [NPDES No. CA0109223] Amending Order No. R9-2006-0065 for The Poseidon Resources Corporation, Carlsbad Desalination Project Discharge to the Pacific Ocean via the Encina Power Station Discharge Channel
				STAY RQST	no			
				ABEYANCE			COMPLETED	06-26-09
				INCOMPLETE LTR			DEADLINE	
				ORDER	no	RCVD	EXTENSION	Cleanup and Abatement Order No. R4-2009-0045 for Mr. Barry Ross as Trustee and the Ross Family Trust, Garfield Express, 11600 Long Beach Boulevard, Lynwood, Los Angeles County
				DISMISSAL LTR	no			
				ENFORCEMENT	no			
				REVIEW	pending	RQSTD / DUE	FILED ON	06-26-09

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				REVIEW	STAY RQST		FILED ON	COMPLETED	
California Department of Forestry and Fire Protection	1	A-2029	koh	REVIEW	pending	RQSTD / DUE	07-03-09	Categorical Waiver of Waste Discharge Requirements Order No. R1-2009-0038 for Discharges Related to Timber Harvest Activities on Non-Federal Lands in the North Coast Region	
				STAY RQST	no	FILED ON			
				ABEYANCE		COMPLETED			
				INCOMPLETE LTR		DEADLINE			
				ORDER		EXTENSION			
California Farm Bureau Federation; Forest Landowners of California; The Buckeye Conservancy; California Licensed Foresters Association; Association of	1	A-2029(a)	koh	REVIEW	pending	RQSTD / DUE	07-06-09	Categorical Waiver of Waste Discharge Requirements Order No. R1-2009-0038 for Discharges Related to Timber Harvest Activities on Non-Federal Lands in the North Coast Region STAY requested	
				STAY RQST	yes	FILED ON			
				ABEYANCE		COMPLETED			
				INCOMPLETE LTR		DEADLINE			
				ORDER		EXTENSION			
Department of the Navy	9	A-2032	sno	REVIEW	pending	RQSTD / DUE	07-09-09	Waste Discharge Requirements Order No. R9-2009-0081 [NPDES No. CA0109185] for the United States Department of the Navy, Naval Base Coronado, San Diego County STAY requested	
				STAY RQST	yes	FILED ON			
				ABEYANCE		COMPLETED			
				INCOMPLETE LTR		DEADLINE			
				ORDER		EXTENSION			
South Coast Water District and South Orange County Wastewater Authority DISCHARGERS: South Orange County Wastewater Authority, South Coast Water District	9	A-2035	koh	REVIEW	pending	RQSTD / DUE	07-30-09	Administrative Civil Liability Order No. R9-2009-0048 for South Orange County Wastewater Authority, South Coast Water District Groundwater Recovery Facility, San Diego County	
				STAY RQST	no	FILED ON			
				ABEYANCE		COMPLETED			
				INCOMPLETE LTR		DEADLINE			
				ORDER		EXTENSION			

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				REVIEW	pending		FILED ON	07-23-09	
Malibu La Paz Ranch, LLC	4	A-2036	jlh	STAY RQST	no	RQST'D / DUE	FILED ON	07-23-09	Failure to Issue Waste Discharge Requirements/Water Reclamation Requirements for Malibu La Paz Ranch, LLC, Los Angeles County
				ABEYANCE			COMPLETED		
				INCOMPLETE LTR			DEADLINE		
				ORDER		RCVD	EXTENSION		
				DISMISSAL LTR					
				ENFORCEMENT	no				

33 active petitions
 229 abeyance petitions
 7 dismissed petitions
 0 withdrawn petitions
 1 orders issued
 270 total petitions

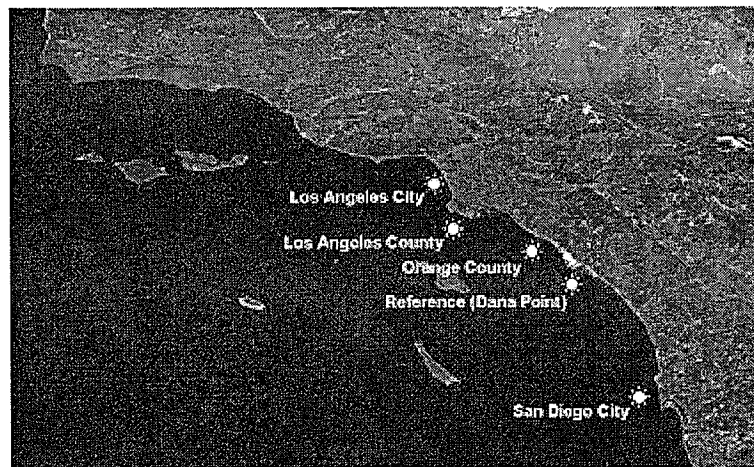
Ongoing Research on Emerging Contaminants of Concern

The Southern California Coastal Water Research Project (SCCWRP) is collaborating with multiple institutions including NOAA, USEPA, and the State Water Board to characterize the occurrence of emerging contaminants of concern (ECCs) and potential for effects in the southern California coastal environment. Due to the ever-increasing number of ECCs, investigations are classified based on their origin, use, and environmental fate, as well as their potential for reproductive effects and/or endocrine disruption. An endocrine disrupting chemical is a chemical that, when absorbed into the body, has the capability of disrupting the organism's normal functions, through effects on hormone production, transport, or response. Recent findings and on-going studies on ECC's are summarized below:

SCCWRP Research on ECC Effects on Biota

Determining the effects of emerging contaminants on biota (i.e. all the plant and animal life of a particular region) is challenging because these compounds can have many different types of effects. Some compounds are endocrine disruptors, while other compounds may affect the immune system, growth, or development of organisms. For most emerging contaminants, insufficient information is available to determine whether chemical concentrations measured in the environment are likely to have ecologically significant effects.

The exposure and potential effects of emerging contaminants were investigated on fish living areas near the four largest publicly owned treatment works (POTW) wastewater effluent ocean outfall discharges in southern California. The study areas included the Los Angeles County Sanitation District (LACSD), City of Los Angeles, Orange County Sanitation District (OCSD), and City of San Diego ocean outfalls, which represented a range of effluent characteristics and levels of legacy contamination in sediments. A reference area at a similar depth offshore of Dana Point was also sampled.



SCCWRP researchers completed a study in 2009 which concluded that PBDEs and nonylphenol, an industrial detergent component, were detected in flatfish that frequent offshore of the POTW wastewater effluent outfalls. Several pyrethroids were detected in estuarine sediments from a 303(d) listed impaired waterbody. Estimated toxic units associated with pyrethroid levels strongly suggest that they are a major contributor of toxicity in these sediments.

SCCWRP Research on ECC Effects on Coastal Fish

Municipal wastewater and other discharges to the coastal environment may contain a variety of ECCs, such as pharmaceuticals, hormones, personal care products, industrial compounds, and current use pesticides. These "emerging" compounds are not routinely monitored and little is known regarding their fate in the marine environment. Some have been shown to cause endocrine disruption after being released to the environment, as they either mimic or interfere with the action of reproductive hormones such as estrogen and testosterone. In southern California, indicators of estrogen exposure such as egg yolk protein production and egg development in male flatfish have been observed, but the cause and significance of these effects is not known. Some coastal areas are contaminated with legacy pollutants that can also cause endocrine disruption (e.g., DDTs and PCBs), so these biological responses may not be caused by current discharges to the Southern California Bight.

SCCWRP has investigated the exposure and potential effects of emerging contaminants on fish living areas near the four largest POTW wastewater effluent ocean outfalls in southern California. The study areas included the LACSD, City of Los Angeles, OCSD, and City of San Diego outfalls, which represented range of effluent characteristics and levels of legacy contamination in sediments.

This study was completed in 2009 and represents one of the most comprehensive investigations of emerging contaminant exposure and effects in coastal waters. Preliminary results show that many pharmaceuticals and personal care products PPCPs and industrial compounds were present in wastewater effluent, generally at concentrations of 1-10 micrograms per liter. The estimated mass emission of some of these chemicals reached 1-5 metric tons per year; similar to that of some priority pollutants such as trace metals. Some PPCPs were also detected in seawater at much lower concentrations. These findings indicate that aquatic life is exposed to a wide variety of emerging contaminants, even after 100- to 1000-fold dilutions of wastewater effluent in the ocean.

Several indicators of endocrine disruption were detected in fish from the study sites. These included the presence of vitellogenin in up to 90% of the male turbot (depending of site and season), unusually high estrogen concentrations in males, reduced thyroid hormone concentrations, and impaired production of the stress

hormone cortisol. The effects were generally widespread and could not be attributed to any specific discharge location. Higher-level effects on gonad condition, reproductive cycle or gender ratio were rarely found, suggesting that these hormone changes had limited impacts on hornyhead turbot populations. However, effects on fish survival and reproduction may have been masked by factors such as fish movement, complex life histories, and competing stressors like legacy pollutants and ocean climate change.

SCCWRP Research on Causes of Endocrine Disruption in Fish

Several indicators of endocrine disruption have been detected in fish collected from areas near large POTW wastewater effluent outfalls, but it is not known what specifically causes these effects (e.g., legacy contamination, ongoing discharges, combination of factors). Both the source and identity of the endocrine disrupting compounds (EDCs) need to be determined before appropriate management actions can be taken. Unfortunately, data from previous studies are not sufficient for determining the source of contaminant exposure, largely due to technology limitations and expense of acquiring a large dataset. Rapid advances in biotechnology have resulted in new tools, which use microarray technology to measure changes in gene expression. SCCWRP is conducting a study to develop and apply a gene microarray tool for investigating contaminant exposure and identifying impacts on sentinel organisms in the coastal marine environment.

Status: This project is an ongoing study with completion anticipated in 2011.

SCCWRP Research on ECC Effects on Wetland Fish

To assess the net effect of wetland management efforts, a three-tiered monitoring program has been created utilizing the standardized California Rapid Assessment Method (CRAM), which measures the general condition of habitat but does not elicit contaminant impacts. Thus, very little information on the extent of exposure and effects of emerging contaminants on the organisms living in wetlands is available.

Rapid advances in biotechnology have resulted in the development of new methods to investigate environmental stressors. For example, microarray technology allows measurement of changes in gene expression, and therefore has the potential to provide a rapid and comprehensive evaluation of an organism's response to contaminants. However, microarrays have not been applied within southern California coastal wetlands and so their effectiveness, especially relative to more traditional assessment methods, is unknown. The goal of this project is to apply a fish gene microarray as a tool for investigating contaminant impacts on wetland condition.

Status: This project is an ongoing study with completion anticipated in 2010.

SCCWRP Research on ECC Effects on Recycled Water

The California State Water Resources Control Board (SWRCB) recently issued a Recycled Water Policy that, among other efforts, attempts to incorporate the most current science on ECCs into regulatory policies for use by various state agencies. As a part of this policy, SCCWRP was asked to convene a panel of six experts to provide recommendations to the SWRCB. This "blue ribbon" panel will address the following questions:

- 1) What are the appropriate constituents to be monitored in recycled water, and what are the applicable monitoring methods and detection limits?
- 2) What toxicological information is available for these constituents?
- 3) Would the constituent list change based on level of treatment? If so, how?
- 4) What are the possible indicators (i.e. surrogates) that represent a suite of ECCs?
- 5) What levels of ECCs should trigger enhanced monitoring in recycled, ground or surface waters?

Status: This project was initiated in 2009 with anticipated completion in 2010.

NOAA Research on ECC on Mussels

Polybrominated diphenyl ethers (PBDEs) are used as flame retardants in polymeric materials such as furnishing foam, rigid plastics and textiles. The U.S. has historically led the world production of these man-made chemicals and was responsible for about 50 percent of the total global demand in 2001.

A 2009 National Oceanic and Atmospheric Administration (NOAA) mussel watch report entitled "An Assessment Of Polybrominated Diphenyl Ethers (PBDEs) In Sediments And Bivalves Of The U.S. Coastal Zone" is the first-ever comprehensive assessment of levels of a flame retardant chemical (PBDE) found in U.S. coastal waters, including the Great Lakes. Mussel watch is an estuarine and coastal pollutant monitoring effort in the United States that is conducted by NOAA each year.

In recent years, PBDEs have generated international concern due to their global distribution and associated adverse environmental and human health effects. Laboratory studies indicate that PBDEs may impair liver, thyroid, and neurobehavioral development, and the most sensitive populations are likely to be pregnant women, developing fetuses, and infants. PBDE production has been banned throughout Europe and Asia, and production of some PBDE mixtures has been voluntarily discontinued by U.S. industry, although one form of PBDES

still produced. While production of PBDE flame retardants began in the 1970s and peaked in 1999 they are still found in many consumer products including many household items. Because the application of PBDEs has been so widespread – including many consumer plastics, textiles, electronics, and furniture – scientists speculate that they may present an ongoing and growing problem in coastal environments.

To assess this potential threat, the NOAA's Mussel Watch program conducted a retrospective study of PBDEs in bivalve tissues and marine sediment. The study determined that PBDEs are found throughout the U.S. Coastal Zone, including the Great Lakes. Highest concentrations were detected in the southern California bight and New York's Hudson-Raritan estuary, including the waters around Los Angeles and New York City. Overall, highest concentrations were found near industrial and urban locations, and both sediment and mollusk concentrations directly correlated with local human population.

NOAA found that given the present level of PBDE-containing consumer products in use today (e.g., furniture and electronics), waste disposal policy must begin to mitigate the release of PBDEs to the environment. Determining and implementing best practices could have a substantial and positive impact on future contamination levels along U.S. shoreline.

USEPA Research on ECC Effects

As shown in Attachment 2, a substantial amount of research is being conducted by and for the US Environmental Protection Agency on this subject. Key information necessary to develop appropriate water quality protection standards, the regulatory measures to achieve those standards, and the analytical methods necessary to provide accurate and reliable data about ECCs is dependent upon the outcomes of this research.

ECC Effects on Groundwater

Discharges from community wastewater treatment plants and septic tank/leach field systems are a means through which emerging contaminants can be introduced to groundwater. There are approximately 80,000 - 100,000 septic tank/leach field systems in San Diego County, and more than 90,000 septic tank/leach field systems in Riverside County. Results of research studies conducted in other states reveal that several organic compounds such as caffeine, cholesterol, menthol, diethylxynonylphenol, bisphenol-A, 3-methyl-1H-indole, triclosan, p-cresol, and 4-nonylphenol have been detected in septic tank effluent, in orders of tens of micrograms per liter ($\mu\text{g/L}$) or higher. Information presented in a United States Geological Survey (USGS) research study also indicates that some emerging contaminants were detected in samples collected from groundwater monitoring wells downgradient of leach field systems, generally at concentrations below 1 $\mu\text{g/L}$. The USGS study also reported that compounds detected in the groundwater monitoring well samples were typically detected at concentrations below those found in septic tank effluent.

Information obtained from the *California Ground-Water Ambient Monitoring and Assessment (GAMA) Program: Ground-Water Quality Data in the San Diego Drainages Hydrogeologic Province, California, 2004* study report demonstrated that wastewater indicator compounds were detected in 21 of 47 public supply wells that were sampled for wastewater indicator compounds. Wastewater indicator compounds collected for the San Diego GAMA study included: Phenol, Methyl salicylate, DEET, Caffeine, 4-tert-octylphenol, Triphenyl phosphate, Tris phosphate, and D-Limonen. Wastewater indicator compounds were detected in the Alluvial Basins study area (9 of 17 wells), Hard Rock study area (6 of 12 wells), Warner Valley study area (3 of 8 wells), and least frequently in the Temecula Valley study area (2 of 6 wells). None of the wastewater indicator compounds detected in this study has a drinking water standard.

Perchlorate, 1,4-Dioxane and N-nitrosodimethylamine (NDMA) [NDMA is a semi-volatile organic chemical used in production of liquid rocket fuel and as an unintended byproduct of chlorination of wastewater treatment plants] were the only "emerging chemicals" analyzed in the public supply wells for this study, they represent a reasonable surrogate for other emerging chemical compounds (e.g. personal care products and pharmaceuticals). Perchlorate was detected in 14 of 50 wells in the San Diego GAMA study; it was most frequently detected in the Temecula Valley study area (7 of 11 wells). 1,4-Dioxane and NDMA were not detected in any water samples.



<http://www.epa.gov/ppcp/work2.html>
Last updated on Wednesday, September 26th, 2007,
Pharmaceuticals and Personal Care Products (PPCPs)

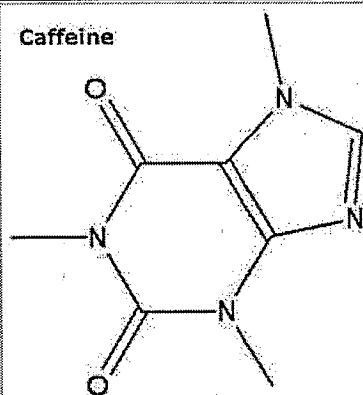
You are here: [EPA Home](#) > [PPCPs](#) > [Research Areas](#)

EPA PPCP Research Areas

Each link below goes to a page that describes the purpose, the project, and the outcomes. [This information is also available sorted by the organization doing the research.](#)

- [Sources](#)
- [Intro to Environment: Fate and Transport](#)
- [Exposure Pathway: Human](#)
- [Exposure Pathway: Ecological](#)
- [Monitoring and Detection Tools](#)
- [Assessment of Potential Ecological Effects](#)
- [Assessment of Potential Human Health Effects](#)
- [Environmental Stewardship: Public Communication](#)

Caffeine



Caffeine is commonly found in many other products but is also found in several over the counter (OTC) medications.

Sources

- [Investigating environmental sinks of macrolide antibiotics and illicit drugs with analytical chemistry: 1999 - 2014](#)
- [Development of Analytical methods for studying the Environmental Fate of the Veterinary Drug Roxarsone: Part II - Determination of volatile arsenic in chicken litter contaminated with Roxarsone: 2006 - 2014](#)
- [Development of analytical methods for determining PPCPs in biosolids, effluent, and sediment 2005 - 2008](#)
- [Assessment of the Occurrence and Potential Risks of EDCs that are pharmaceuticals or natural in Discharges from Concentrated Animal Feeding Operations 2005 - 2014](#)
- [Report on the transport and fate of selected EDCs during the land application of biosolids 2006 - 2014](#)
- [Fate of Selected EDCs under Redox Conditions Typical of Wastewater and Sediments 2006 - 2014](#)
- [Natural and synthetic EDCs from wastewater treatment: source characterization, environmental fate, and risk management 2006 - 2014](#)
- [Evaluation of Drinking Water Treatment Technologies 2000 - 2014](#)
- [Analytical Methods Development for 65 Ecologically Relevant Pharmaceuticals and Metabolites 2006 - 2014](#)
- [Development of Molecular Indicators of Exposures for Pharmaceuticals and EDCs 2005 - 2014](#)
- [An Informatic approach to estimating ecological risks posed by pharmaceutical use 2004 - 2014](#)
- [Identification of ecological and molecular indicator responses to pharmaceuticals under simulated field conditions at the EPA Experimental Stream Facility 2006 - 2014](#)
- [In Vitro Screening of Environment Samples for Estrogenic and Androgenic Activity](#)

Attachment 1 – USEPA Emerging Contaminants of Concern (ECCs) Research Areas

- Concentrated Animal feedlot operations (beef, dairy, poultry), 2002 - 2014
- * National Screening Survey of EDCs, including some Pharmaceuticals in Municipal Wastewater Treatment Effluents 2002 - 2004
- * Occurrence, Transport, and Fate of Pharmaceuticals and Other Emerging Contaminants Present in Wastewater 2001 - 2014
- * Persistence of Contaminants from Wastewater Discharges During Drinking Water Treatment: Identification of Compounds and Degradation/ Disinfection Byproducts, Evaluation of Removal, and Potential Exposure 2006 - 2014
- * Utility of Pharmaceuticals and Other Emerging Contaminants as Chemical Indicators of Human Fecal Contamination 2002 - 2009
- * The Effects of Disinfection on Pharmaceuticals in Drinking Water Supplies 2000 - 2003
- * In Vitro Screening of Environment Samples for Estrogenic Activity: Treated sewage effluent and Global Water Research Coalition (GWRC) 2005 - 2014

Intro to Environment: Fate and Transport

- * Investigating environmental sinks of macrolide antibiotics, and illicit drugs, with analytical chemistry 1999 - 2014
- * Development of Analytical methods for studying the Environmental Fate of the Veterinary Drug Roxarsone: Part II - Determination of volatile arsenic in chicken litter contaminated with Roxarsone, 2006 - 2014
- * Hydrolytic Transformation of Emerging Contaminants 2007 - 2009
- * Development of analytical methods for determining PPCPs in biosolids, effluent, and sediment 2005 - 2008
- * Assessment of the Occurrence and Potential Risks of EDCs that are pharmaceuticals or natural in Discharges from Concentrated Animal Feeding Operations 2005 - 2014
- * Report on the transport and fate of selected EDCs during the land application of biosolids 2006 - 2014
- * Fate of Selected EDCs under Redox Conditions Typical of Wastewater and Sediments 2006 - 2014
- * Natural and synthetic EDCs from wastewater treatment- source characterization, environmental fate, and risk management 2006 - 2014
- * Analytical Methods Development for 65 Ecologically Relevant Pharmaceuticals and Metabolites 2006 - 2014
- * Development of Molecular Indicators of Exposures for Pharmaceuticals and EDCs 2005 - 2014
- * An informatic approach to estimating ecological risks posed by pharmaceutical use 2004 - 2014
- * Identification of ecological and molecular indicator responses to pharmaceuticals under simulated field conditions at the EPA Experimental Stream Facility 2006 - 2014
- * National Screening Survey of EDCs, including some Pharmaceuticals in Municipal Wastewater Treatment Effluents 2002 - 2004
- * Occurrence, Transport, and Fate of Pharmaceuticals and Other Emerging Contaminants Present in Wastewater 2001 - 2014
- * Persistence of Contaminants from Wastewater Discharges During Drinking Water Treatment: Identification of Compounds and Degradation/ Disinfection Byproducts, Evaluation of Removal, and Potential Exposure 2006 - 2014
- * Utility of Pharmaceuticals and Other Emerging Contaminants as Chemical Indicators of Human Fecal Contamination 2002 - 2009
- * The Effects of Disinfection on Pharmaceuticals in Drinking Water Supplies 2000 - 2003
- * Development of Methods for PPCPs
- * Alkylphenols, Alkylphenoxyethoxylates and Their Metabolites (APEs) as Potential Great

Attachment 1 – USEPA Emerging Contaminants of Concern (ECCs) Research Areas

- Lakes, Tributaries, and Effluent Dominated Stream Endocrine Disruptors, 1999 - 2002
- STAR Grant R829005 - The Influence of Amphiphilic Molecules on the Environmental Fate and Transport of Pharmaceuticals, 2001 - 2004
- STAR Grant R829007 - Occurrence and Fate of Pharmaceuticals and Personal Care Products in Groundwater Environments 2001 - 2004
- STAR Grant R829004 - Pharmaceuticals and Antiseptics: Occurrence and Fate in Drinking Water, Sewage Treatment Facilities, and Coastal Waters 2001 - 2004
- STAR Grant R829006 - The Environmental Occurrence, Fate, and Ecotoxicity of Selective Serotonin Reuptake Inhibitors (SSRIs) in Aquatic Environments 2001 - 2004
- STAR Grant R829014 - Impact of Residual Pharmaceutical Agents and their Metabolites in Wastewater Effluents on Downstream Drinking Water Treatment Facilities 2001 - 2004
- STAR Grant R829008 - Fate and Effects of Fluoroquinolone Antibacterial Agents in Aquatic Ecosystems 2001 - 2004
- STAR Grant R833417: Fate of Hormones in Tile-Drained Fields and Impact to Aquatic Organisms Under Different Animal Waste Land-Application Practices 2007 - 2010
- STAR Grant R833418: Transport/Fate/Ecological Effects of Steroids from Poultry Litter & Evaluations of Existing/Novel Management Strategies 2007 - 2010
- STAR Grant R833421: Assessing Occurrence, Persistence, and Biological Effects of Hormones Released from Livestock Waste 2007 - 2010
- STAR Grant R833422: Transport and Transformation of Natural and Synthetic Steroid Hormones at Beef Cattle and Dairy Concentrated Animal Feeding Operations (CAFOs) 2007 - 2010
- STAR Grant R833423: Effects of Cattle Manure Handling and Management Strategies on Fate and Transport of Hormones in the Feedlot and the Field 2007 - 2010

Exposure Pathway: Human

- Investigating environmental sinks of macrolide antibiotics, and illicit drugs, with analytical chemistry 1999 - 2014
- Development of Analytical methods for studying the Environmental Fate of the Veterinary Drug Roxarsone: Part II - Determination of volatile arsenic in chicken litter contaminated with Roxarsone, 2006 - 2014
- Development of analytical methods for determining PPCPs in biosolids, effluent, and sediment 2005 - 2008
- In Vitro Screening of Environment Samples for Estrogenic and Androgenic Activity: Concentrated Animal feedlot operations (beef, dairy, poultry), 2002 - 2014
- Occurrence, Transport, and Fate of Pharmaceuticals and Other Emerging Contaminants Present in Wastewater 2001 - 2014
- Persistence of Contaminants from Wastewater Discharges During Drinking Water Treatment: Identification of Compounds and Degradation/ Disinfection Byproducts, Evaluation of Removal, and Potential Exposure 2006 - 2014
- The Effects of Disinfection on Pharmaceuticals in Drinking Water Supplies 2000 - 2003
- STAR Grant R832737: Development of receptor- to population- level analytical tools for assessing endocrine disruptor exposure in wastewater-impacted estuarine systems 2005 - 2008

Exposure Pathway: Ecological

- Investigating environmental sinks of macrolide antibiotics, and illicit drugs, with analytical chemistry 1999 - 2014
- Vitellogenin Gene Expression in Fathead Minnows and Pearl Dace from Reference (non-dosed) and Lakes Dosed with EE2 in the Canadian Experimental Lakes Area

Attachment 1 – USEPA Emerging Contaminants of Concern (ECCs) Research Areas

2000 - 2005

- Development of Analytical methods for studying the Environmental Fate of the Veterinary Drug Roxarsone: Part II - Determination of volatile arsenic in chicken litter contaminated with Roxarsone. 2006 - 2014
- Hydrolytic Transformation of Emerging Contaminants 2007 - 2009
- Development of analytical methods for determining PPCPs in biosolids, effluent, and sediment 2005 - 2008
- Assessment of the Occurrence and Potential Risks of EDCs that are pharmaceuticals or natural in Discharges from Concentrated Animal Feeding Operations 2005 - 2014
- Analytical Methods Development for 65 Ecologically Relevant Pharmaceuticals and Metabolites 2006 - 2014
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- An informatic approach to estimating ecological risks posed by pharmaceutical use 2004 - 2014
- Identification of ecological and molecular indicator responses to pharmaceuticals under simulated field conditions at the EPA Experimental Stream Facility 2006 - 2014
- In Vitro Screening of Environment Samples for Estrogenic and Androgenic Activity: Concentrated Animal feedlot operations (beef, dairy, poultry), 2002 - 2014
- Vitellogenin Gene Expression in Fathead Minnows and Pearl Dace from Reference (non-dosed) and Lakes Dosed with EE2 in the Canadian Experimental Lakes Area 2000 - 2005
- National Screening Survey of EDCs, including some Pharmaceuticals in Municipal Wastewater Treatment Effluents 2002 - 2004
- Occurrence, Transport, and Fate of Pharmaceuticals and Other Emerging Contaminants Present in Wastewater 2001 - 2014
- STAR Grant R832738: Rapid Detection of Trace Endocrine Disrupting Chemicals in Complex Mixtures: A Full-Spectrum Deconvolution Technique with a UV-Transparent Passive Concentrator 2006 - 2008
- STAR Cooperative Agreement R832741: Developing Rapid Assessment Tools to Evaluate the Biological Effects of Complex and Biologically Active Chemical Mixture 2005 - 2008
- STAR Grant R829005 - The Influence of Amphiphilic Molecules on the Environmental Fate and Transport of Pharmaceuticals 2001 - 2004
- STAR Grant R829007 - Occurrence and Fate of Pharmaceuticals and Personal Care Products in Groundwater Environments 2001 - 2004
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- STAR Grant R829008 - Fate and Effects of Fluoroquinolone Antibacterial Agents in Aquatic Ecosystems 2001 - 2004
- Alkylphenols, Alkylphenoxyethoxylates and Their Metabolites (APEs) as Potential Great Lakes, Tributaries, and Effluent Dominated Stream Endocrine Disrupters. 1999 - 2002

Monitoring and Detection Tools

- Investigating environmental sinks of macrolide antibiotics, and illicit drugs, with analytical chemistry 1999 - 2014

Attachment 1 – USEPA Emerging Contaminants of Concern (ECCs) Research Areas

- * Development of Analytical methods for studying the Environmental Fate of the Veterinary Drug Roxarsone: Part II - Determination of volatile arsenic in chicken litter contaminated with Roxarsone. 2006 - 2014
- * Identification of Non-Target List Analytes in Complex Environmental Samples 1996 - 2014
- * Development of analytical methods for determining PPCPs in biosolids, effluent, and sediment 2005 - 2008
- * Toxicity pathway-specific protein expression models for chemical screening and prioritization 2004 - 2014
- * Assessment of the Occurrence and Potential Risks of EDCs that are pharmaceuticals or natural in Discharges from Concentrated Animal Feeding Operations 2005 - 2014
- * Report on the transport and fate of selected EDCs during the land application of biosolids 2006 - 2014
- * Fate of Selected EDCs under Redox Conditions Typical of Wastewater and Sediments 2006 - 2014
- * Regional Methods Initiative: Examination of Enzyme-Linked Immunosorbent Assay (ELISA) for Endocrine Disrupting Compounds (EDCs), Estrogen and Alkyl Phenol Ethoxylates 2006 - 2014
- * Natural and synthetic EDCs from wastewater treatment- source characterization, environmental fate, and risk management 2006 - 2014
- * Evaluation of Drinking Water Treatment Technologies 2000 - 2014
- * In Vitro Screening of Environment Samples for Estrogenic and Androgenic Activity: Concentrated Animal feedlot operations (beef, dairy, poultry), 2002 - 2014
- * Occurrence, Transport, and Fate of Pharmaceuticals and Other Emerging Contaminants Present in Wastewater 2001 - 2014
- * Persistence of Contaminants from Wastewater Discharges During Drinking Water Treatment: Identification of Compounds and Degradation/ Disinfection Byproducts, Evaluation of Removal, and Potential Exposure 2006 - 2014
- * Utility of Pharmaceuticals and Other Emerging Contaminants as Chemical Indicators of Human Fecal Contamination 2002 - 2009
- * The Effects of Disinfection on Pharmaceuticals in Drinking Water Supplies 2000 - 2003
- * Validation of methods for PPCPs 2006 - 2008
- * In Vitro Screening of Environment Samples for Estrogenic Activity: Treated sewage effluent and Global Water Research Coalition (GWRC) 2005 - 2014
- * Conazoles: Application of Omic Technologies to Mode of Action Evaluations 2003 - 2014
- * STAR Grant R832738: Rapid Detection of Trace Endocrine Disrupting Chemicals in Complex Mixtures: A Full-Spectrum Deconvolution Technique with a UV-Transparent Passive Concentrator 2006 - 2008
- * STAR Grant R832737: Development of receptor- to population- level analytical tools for assessing endocrine disruptor exposure in wastewater-impacted estuarine systems 2005 - 2008
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- * STAR Grant R829007 - Occurrence and Fate of Pharmaceuticals and Personal Care Products in Groundwater Environments 2001 - 2004
- * STAR Grant R829004 - Pharmaceuticals and Antiseptics: Occurrence and Fate in Drinking Water, Sewage Treatment Facilities, and Coastal Waters 2001 - 2004
- * STAR Grant R829006 - The Environmental Occurrence, Fate, and Ecotoxicity of

Attachment 1 – USEPA Emerging Contaminants of Concern (ECCs) Research Areas

- Selective Serotonin Reuptake Inhibitors (SSRIs) in Aquatic Environments 2001 - 2004
- STAR Grant R829014 - Impact of Residual Pharmaceutical Agents and their Metabolites in Wastewater Effluents on Downstream Drinking Water Treatment Facilities 2001 - 2004
- STAR Grant R829008 - Fate and Effects of Fluoroquinolone Antibacterial Agents in Aquatic Ecosystems 2001 - 2004
- Alkylphenols, Alkylphenoxyethoxylates and Their Metabolites (APEs) as Potential Great Lakes, Tributaries, and Effluent Dominated Stream Endocrine Disrupters. 1999 - 2002

Assessment of Potential Ecological Effects

- Hydrolytic Transformation of Emerging Contaminants 2007 - 2009
- Toxicity pathway-specific protein expression models for chemical screening and prioritization 2004 - 2014
- Development of an Tier II two-generation test guideline for the sheepshead minnow 2004 - 2007
- Linkage of Exposure and Effects using Genomics, Proteomics and Metabolomics in Small Fish Models 2005 - 2014
- A Systems Approach to Characterizing and Predicting Thyroid Toxicity Using an Amphibian Model 2004 - 2014
- Assessment of the Occurrence and Potential Risks of EDCs that are pharmaceuticals or natural in Discharges from Concentrated Animal Feeding Operations 2005 - 2014
- Development and evaluation of long-term testing protocols for assessing the effects of EDCs and reproductive toxicants in small fish 2004 - 2014
- Analytical Methods Development for 65 Ecologically Relevant Pharmaceuticals and Metabolites 2006 - 2014
- Development of Molecular Indicators of Exposures for Pharmaceuticals and EDCs 2005 - 2014
- An informatic approach to estimating ecological risks posed by pharmaceutical use 2004 - 2014
- Identification of ecological and molecular indicator responses to pharmaceuticals under simulated field conditions at the EPA Experimental Stream Facility 2006 - 2014
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Assessment of Potential Human Health Effects

- Toxicity pathway-specific protein expression models for chemical screening and prioritization 2004 - 2014
- Toxicity estimation using the ICE and ACE modeling tools 2004 - 2008
- Vitellogenin Gene Expression in Fathead Minnows and Pearl Dace from Reference (non-dosed) and Lakes Dosed with EE2 in the Canadian Experimental Lakes Area 2000 - 2005
- Persistence of Contaminants from Wastewater Discharges During Drinking Water Treatment: Identification of Compounds and Degradation/ Disinfection Byproducts

Attachment 1 – USEPA Emerging Contaminants of Concern (ECCs) Research Areas

Evaluation of Removal, and Potential Exposure 2006 - 2014

Environmental Stewardship Public Communication

- Outreach and Defining the Scope of the Issues and Concerns Surrounding Pharmaceuticals and Personal Care Products (PPCPs) as Environmental Pollutants 1999 - 2014
- Drug Disposal: Ramifications for the Environment and Human Health 2006 - 2008
- Persistence of Contaminants from Wastewater Discharges During Drinking Water Treatment: Identification of Compounds and Degradation/ Disinfection Byproducts, Evaluation of Removal, and Potential Exposure 2006 - 2014