CALIFORNIA WATER QUALITY MONITORING COUNCIL

Monitoring Council Meeting Agenda

Wednesday, August 29, 2012 – 9:00 AM to 4:30 PM

Conference Room 550 – Fifth Floor
Joe Serna Jr. Cal/EPA Headquarters Building
1001 I Street, Sacramento

Monitoring Council Members and (Alternates) in attendance:

Sara Aminzadeh	Sarge Green	Armand Ruby
Jonathan Bishop	Dale Hoffman-Floerke	(Stephani Spaar)
(Dave Bolland)	Parry Klassen	Stephen Weisberg
(Paul Collins)	Karen Larsen	
Mike Connor	John Norton	

Others in attendance or (on the phone):
(Arne Anselm, County of Ventura)
Steve Blecker, Delta Science Program, Delta Stewardship Council
Clay Brandow, California Department of Forestry and Fire Protection (CalFire)
Mariela Paz Carpio-Obeso, State Water Resources Control Board
Valerie Connor, State and Federal Contractors Water Agency
Clayton Creager, North Coast Regional Water Quality Control Board
Jay Davis, San Francisco Estuary Institute – Aquatic Science Center
Max Gomberg, State Water Resources Control Board
Terry Fleming, U.S. Environmental Protection Agency – Region 9
Stephanie Fong, Central Valley Regional Water Quality Control Board
Susan Fregien, Central Valley Regional Water Quality Control Board
(Cristina Grosso, San Francisco Estuary Institute – Aquatic Science Center)
Dane Hardin, Applied Marine Sciences
Rainer Hoenicke, San Francisco Estuary Institute – Aquatic Science Center
Bridget Hoover, Monterey Bay National Marine Sanctuary
John Hunt, UC Davis
(Michael Johnson, MLJ-LLC)
Chantell Krider, Klamath Basin Monitoring Program
Leslie Laudon, State Water Resources Control Board
Jon Marshack, State Water Resources Control Board
Stephen McCord, McCord Environmental
(Elizabeth Nielsen, URS Corporation)
(Amye Osti, 34 North)
Dave Osti, 34 North
(Greg Pepping, Coastal Watershed Council)
(Mark Pumford, City of Oxnard)
Meg Sedlak, San Francisco Estuary Institute – Aquatic Science Center
Kirk Schmidt, Central Coast Water Quality Preservation
(Eric Stein, Southern California Coastal Water Research Project)
(Steve Steinberg, Southern California Coastal Water Research Project)
Meghan Sullivan, Central Valley Regional Water Quality Control Board
(Alison Weber-Stover, The Bay Institute)
Meredith Williams, San Francisco Estuary Institute – Aquatic Science Center

ITEM:	**1**	
Title of Topic:	**INTRODUCTIONS AND HOUSEKEEPING**	
Purpose:	a) Introductions b) Review draft notes from November 30, 2011 Monitoring Council meeting c) Review agenda for today's meeting	
Desired Outcome:	1) Approve May 2012 Monitoring Council meeting notes 2) Preview what will be covered today and overall meeting expectations 3) Adjust today's agenda, as needed	
Attachment Link:	Draft notes from May 30, 2012 Council meeting	
Contact Person:	Jon Marshack	jmarshack@waterboards.ca.gov, 916-341-5514
Decisions:	Notes from the May 2012 Monitoring Council meeting were approved.	

ITEM:	**2**
Title of Topic:	**ANNOUNCEMENTS AND UPDATES**
Purpose:	These are expected to be brief informational items that could be expanded into more detailed discussions for future meetings: a) Update on Healthy Watersheds Initiative, California Project (Karen Larsen) b) Monitoring and Assessment for Climate Change (Max Gomberg) c) Outreach strategy and publicity to increase portal usage (Sara Aminzadeh) d) Potential Monitoring Council meeting dates in 2013 (Jon Marshack)
Desired Outcome:	• Information and feedback • Agreement on 2012 Monitoring Council meeting dates and locations
Background:	a) In mid-2011, USEPA's Healthy Watershed Initiative offered to provide USEPA-funded contractor support for Healthy Streams portal development that identifies healthy watersheds in California based on a systematic integration of a number of existing data sets. At the November 2011 meeting, the Monitoring Council reviewed a Draft Technical Approach developed by USEPA's contractor, Cadmus Group. At the February 29 meeting, the Monitoring Council was given a presentation on a draft summary of proposed indicators for use in the California Healthy Watersheds integrated assessment. The Monitoring Council offered a number of constructive comments and recommendations to refine the list of indicators. b) The state is currently updating its Climate Adaptation Strategy and is focusing on gathering better data on climate change impacts. A brief overview of these research and data collection efforts will be provided. c) Through the Coastkeeper Alliance and in commemoration of the 40th anniversary of the Clean Water Act, Sara Aminzadeh has been working with legislative staff to add the *My Water Quality* button link to legislators'

	websites. d) If the current pattern of meetings is continued – the last Wednesday of every third month – Monitoring Council meetings would be scheduled for: • November 28, 2012 (already calendared) • February 27, 2013 • May 29, 2013 • August 28, 2013 • November 27, 2013 (day before Thanksgiving) Monitoring Council Members and Alternates should check their calendars to determine whether they will be able to attend meetings on these dates.	
Attachment Links	1) Notes from the February 29 Monitoring Council meeting (see Item 4) 2) Healthy Watersheds Initiative – Indicator Thresholds 3) Summary of Healthy Streams Project Meeting of August 24, 2012	
Contact Person:	Jon Marshack	jmarshack@waterboards.ca.gov, (916) 341-5514
Notes:	a) ***Healthy Watersheds Initiative*** – At an August 24 meeting the Healthy Streams Partnership, USEPA and their contractor, Cadmus Group, decided to take the Healthy Watersheds Initiative multimetric analysis of watershed health in a new direction, outlining three sets of indicators: • Structural Indicators of Watershed Condition are based on datasets that have statewide coverage and would be used to predict watershed health. • Indicators of Aquatic Ecosystem Health would use monitoring data of biologic, chemical, and physical condition to determine whether and here the predictions were correct and incorrect. • Indicators of Watershed Vulnerability would analyze watershed stressors to explain why predictions turned out to be correct or incorrect and also to identify additional change agents that may threaten watershed health in future years, such as climate change and urbanization. Karen Larsen presented a chart of the indicators that resulted from the Monitoring Council's February input, as well as an outline of the new indicator structure from the August 24 workgroup meeting. The project will present a statewide picture of watershed health, based on the above sets of indicators. The Monitoring Council had asked that pesticides be included, but the workgroup decided not to add them, as they reflect problems rather than health indicators. The timeframe of the project has been extended into the spring of 2013 to enable a better assessment product to be developed. This project is important to USEPA. The Monitoring Council suggested adding additional indicators. For algae, we have data but no scoring tool at this time. The absence of native species in many locations and the preponderance of non-native species make fish less useful, and there are no metrics to rank streams. The output of this project will allow us to augment the analysis in the future as additional relevant datasets become available. b) ***Climate Change*** – Max Gomberg gave an overview of efforts to integrate climate change into the initiatives of numerous California agencies. He met	

	earlier with the Monitoring Council's Healthy Streams Partnership. Cal/EPA will soon release a new draft of the Climate Action Plan, outlining high risk impacts including fires, temperature rise, and sea level rise. Response chapters will focus on a number of topics including water and critical research needs. This plan is mainly a Water Board and Department of Water Resources effort. Working groups are addressing issues across agencies. The Research Action Team is focusing on research needs and could use more people involved in water. A Biodiversity Action Team, headed by the Department of Fish and Game is also focusing on priority research and actions. There is an opportunity to integrate the Monitoring Council's work into these efforts. Max may be reached at (916) 322-3052. Sarge Green suggested that the Monitoring Council develop a website or wiki to keep track of who is doing what in the area of water quality and contact information. Jonathan Bishop responded that he does not expect part-time Monitoring Council Members to keep abreast of all water quality initiatives and that Jon Marshack does not have time to develop and maintain such a tool. Jonathan suggested that we continue to bring issues forward to meetings as is currently the procedure. The Monitoring Council's Workgroup pages could be used to track major issues relevant to each theme. Clay Brandow of the Department of Forestry and Fire Protection (DOF) mentioned a report, *Water Quality Monitoring in the Forested Watersheds of California: Status and Future Directions*, developed by his agency's Monitoring Study Group and posted on their website (http://www.bof.fire.ca.gov/board_committees/monitoring_study_group/msg_monitoring_reports/draft_monitoring_tracking_report_09nov09.pdf) that may also be useful in this area, focusing on forest and wild lands water quality related monitoring. c) ***Outreach*** – In response to the lower than desirable level of traffic that our My Water Quality portals receive, Sara Aminzadeh has been working to expand awareness among the general public. The press release for the release of the Healthy Streams Portal was more widely distributed than earlier releases, being a joint effort between the Water Boards Public Affairs Office and the Coastkeeper Alliance and its members. She has also been spreading the presence of the My Water Quality button on more websites, initially working with state legislators with a bi-partisan focus. The 40th anniversary of the Clean Water Act is also being used by the Coastkeeper Alliance to promote the portals. Additional efforts will include workgroup member organizations and environmental non-governmental organizations (NGOs). Another suggested idea was to ask Google to donate top-billing on their search engine for "water quality in California."
Decisions:	2013 Monitoring Council meetings – May 29 in Costa Mesa and August 28 in Sacramento were confirmed. February and November meetings will also be in Sacramento.
Action Items:	1) An update on the Healthy Watersheds Initiative, California Project will be presented at the February 2012 Monitoring Council meeting. 2) Through workgroup members, member organizations of the Monitoring Council's workgroups will be asked to place the My Water Quality button link on their websites. Environmental NGOs will also be asked to add the button. 3) Jon Marshack will poll Monitoring Council Members and Alternates to select February and November meeting dates in 2013.

ITEM:	**3**
Title of Topic:	**MONITORING EFFECTIVENESS OF WATER QUALITY IMPROVEMENT PROJECTS – DEPT. OF WATER RESOURCES**
Purpose:	Tracie Billington will update the Monitoring Council on efforts to monitor grant project effectiveness and improve data accessibility
Desired Outcome:	Review and comment; develop recommendations for improving coordination and data access.
Background:	This is follow-up to a discussion at the August 2011 Monitoring Council meeting regarding grant monitoring and data management at the State Water Board. The Monitoring Council asked for a presentation on similar efforts at the Department of Water Resources. In SB 1070, California Water Code Section 13181(a) states, in part: (6) Among other things, the memorandum of understanding shall describe the means by which the monitoring council shall formulate recommendations to accomplish both of the following: . . . (B) Ensure that water quality improvement projects financed by the state provide specific information necessary to track project effectiveness with regard to achieving clean water and healthy ecosystems. Water Code Section 13181(e) states, in part: In accordance with the requirements of the Clean Water Act (33 U.S.C. Sec. 1251 et seq.) and implementing guidance, the state board shall develop, in coordination with the monitoring council, all of the following: . . . (4) Methodology for compiling, analyzing, and integrating readily available information, to the maximum extent feasible, including, but not limited to, data acquired from discharge reports, volunteer monitoring groups, local, state, and federal agencies, and recipients of state-funded or federally funded water quality improvement or restoration projects. The MOU between Cal/EPA and the Natural Resources Agency that formed the Monitoring Council included the following task for the two agency secretaries: The Secretaries will establish policies and procedures to ensure that water quality improvement projects, including bond-funded grant projects financed by the state, include the ability to track project effectiveness with respect to specific water quality and ecosystem health. The MOU also included the following task for the Monitoring Council: In an effort to: … 2) ensure that water quality improvement projects financed by the state provide specific information necessary to track project effectiveness with regard to achieving clean water and healthy ecosystems, the Monitoring Council responsibilities under this MOU include, but are not limited to, the following: 4. Report, on or before December 1, 2008, to the Secretaries of Cal/EPA and Resources, and the public its recommendations for: … tracking the effectiveness of water quality improvement projects financed by the state in achieving clean water and healthy ecosystems; and, for ensuring that collected data are maintained and available for use by decision makers and the public. The Monitoring Council shall consult with and consider input from the U.S. EPA in preparing these recommendations.

	The Monitoring Council' *Comprehensive Monitoring Program Strategy* recommendations discuss grant project monitoring (Section 2.2.6 beginning on page 29) and presents the following recommendation (page 46): > monitoring of state- and federally-funded water quality and ecosystem improvement projects be coordinated and enhanced to ensure that the effectiveness of such projects is evaluated and that the generated data are available for use in larger-scale assessments. The Monitoring Council will enlist the support and cooperation of granting agencies to evaluate options and implement the necessary changes. There are many grant programs administered by various departments, boards, agencies and conservancies that also fund water quality improvement projects. Statutes establishing these programs often have specific requirements for monitoring and reporting project effectiveness. Information on water quality improvement projects administered by the State Water Resources Control Board was presented to the Monitoring Council in August 2011 (see Item 4). A number of factors make measuring effectiveness of grant-funded water quality improvement projects difficult. In most cases, direct water quality monitoring cannot be used because the post-project time frame for monitoring is often very short, and the amount of sampling required to statistically demonstrate improvement is cost prohibitive. And individual projects are often too small to result in measureable water quality and/or ecosystem changes. For the Areas of Special Biological Significance (ASBS) Grant Program, the Natural Water Quality Committee has developed specific recommendations to assist grantees with effectiveness monitoring of grant projects. Those recommendations are discussed in Section 2.2.6 of the Monitoring Council's *Comprehensive Monitoring Program Strategy*.
Attachment Links:	• Department of Water Resources Financial Assistance Programs – presentation by Tracie Billington • Notes of August 2011 Monitoring Council Meeting (see Item 4) • SB 1070 (see Section 13181(a)(6) and (e)(4)) • MOU between Cal/EPA and the Natural Resources Agency (see Sections IV.2. and V.4.) • Monitoring Council' *Comprehensive Monitoring Program Strategy* (see Section 2.2.6 beginning on page 29 and Recommendation on page 46)
Contact Persons:	Tracie Billington — tracieb@water.ca.gov, (916) 651- 9226
Notes:	Tracie Billington provided an overview of the Department of Water Resources financial assistance programs. 30 percent of the Integrated Regional Water Management grants involve water quality improvements. However, most of the monitoring is focused on satisfying permit requirements (e.g., drinking water, POTWs), rather than ambient water quality monitoring. Project outputs may not necessarily improve water quality. Could the Monitoring Council affect project funding based on water quality improvement? Beginning with grants funded with Proposition 50, water quality data were required to be submitted to SWAMP and GAMA (Groundwater Ambient Monitoring and Assessment) databases. For Prop 84 grants, submittal to "statewide databases" (such as SWAMP or CEDEN, GAMA, Water Data Library, CASGEM) was mandated, which should satisfy the SB 1070 requirement to

	make grant funded water quality data available for broader assessments. The Resources Agency's Bond Accountability Database, accessible on the web at http://bondaccountability.resources.ca.gov, tracks bond-funded projects, with information updated every 6 months. While this system is available to the public, its main users are the Department of Finance and the Bureau of State Audits. The public would have a difficult time finding the site and using it. DWR is developing the Water Planning Information Exchange (Water PIE), a tool to link to other data sources. Terry Fleming recommended that project level data should be displayed via the My Water Quality portals under the pages that describe "What is being done to make things better?" Performance measures for projects are focused on meeting goals stated in the bond measures. However, since in many cases grants are only a fraction of the total project cost, project outputs and benefits may not fully match. In many cases, it may take 7 to 10 years to see project benefits. Integrated Regional Water Management (IRWM) plans, the main type of project funded by DWR grants that provide funding for water quality related actions, are available on DWR's website, including a map of funding areas (http://www.water.ca.gov/irwm/integregio_fundingarea.cfm). IRWM groups could help foster better water quality monitoring.
Decisions:	• DWR should add web services to their grant tracking systems to allow others to obtain project information. • Geolocation information should be added to allow users to find project information via GIS maps.
Action Items:	Work with DWR to obtain access to grant project information for the portals.

ITEM:	**4**
Title of Topic:	**WETLAND LOCATION, EXTENT, AND PROJECT MAPPING AND DATA MANAGEMENT**
Purpose:	Eric Stein and Steve Steinberg will provide an update on the efforts of the Wetland Monitoring Workgroup and the Data Management Workgroup, respectively, to address wetland mapping and data management needs.
Desired Outcome:	Greater understanding of the mapping and data management needs and actions of the Wetland Monitoring Workgroup and potential involvement by the Data Management Workgroup relative to the California Aquatic Resources Inventory (CARI) and EcoAtlas.
Background:	At the May 30 Monitoring Council meeting, Jon Marshack handed out copies of a recent letter from the Wetland Monitoring Workgroup to the Monitoring Council recommending the use of CARI as the base map for wetland monitoring and assessment. The Monitoring Council decided to forward the letter to the Data Management Workgroup for review and possible recommendations. The Data Management Workgroup met twice since then and believes that it does not have sufficient information from which to develop recommendations. The Wetland Monitoring Workgroup was informed of these developments at their August 14 meeting and will be working directly with the Data Management Workgroup to provide additional information. The Wetlands and Data Management workgroups will address the Monitoring Council at a future meeting to present

	policy issues related to CARI and the EcoAtlas that will need to be addressed at the Council level.	
Attachment Links:	• Letter from the Wetland Monitoring Workgroup - Recommendations on Wetland Data Management • EcoAtlas and the California Aquatic Resources Inventory (CARI) – joint presentation by Eric Stein of the Wetland Monitoring Workgroup and Steve Steinberg of the Data Management Workgroup	
Contact Persons:	Eric Stein Steve Steinberg	erics@sccwrp.org; (714) 755-3233 steves@sccwrp.org; (714) 755-3260
Notes:	The Wetland Workgroup's Wetland Tracker is evolving into EcoAtlas to better manage wetland extent and condition data to satisfy three wetland-related program needs • Clean Water Act (CWA) Section 401, Water Quality Certifications • Waste Discharger Requirements • Wetland and Riparian Area Policy of the State Water Board EcoAtlas will also feed data into the State of the State's Wetlands report and CWA 303d/305b water quality assessments. Streambed Alteration Agreements of the Department of Fish and Game may also be served by EcoAtlas, but DFG has not yet committed to use the tool. Federal partners in the effort include USEPA, US Army Corps of Engineers, and the Natural Resource Conservation Service. Because wetlands involve lakes, rivers, streams, and coastal waters, the mapping of water resources is being developed from the National Hydrography Dataset (NHD) and the National Wetland Inventory (NWI), including intensification mapping performed in various areas around the state. The base map is being called the California Aquatic Resources Inventory (CARI) and is using standardized mapping protocols and QA measures developed by the Wetland Workgroup and an advisory team to the State Water Board's Wetland Policy effort that includes numerous partner organizations. Currently there is no state steward for NHD and NWI. The Department of Water resources has developed a cost and personnel estimate for NHD stewardship, but their funding proposal did not make it out of the Resources Agency. Without a state steward, intensification of NHD and NWI mapping would need individual partnership agreements with the national steward organizations, USGS and the US Fish and Wildlife Service, to be recorded in the master maps. Eric Stein requested direction from the Monitoring Council to ensure sustainability of the CARI mapping effort. Steve Steinberg indicated that the Data Management Workgroup found the Wetland Workgroup's letter to be more informative than posing questions. The Data Management Workgroup does not have the expertise to evaluate the state stewardship issue.	
Decisions:	The two workgroups will meet jointly to determine how each can assist the other in the areas of GIS and data management.	
Action Items:	Dale Hoffman-Floerke and Jonathan Bishop will pursue the state stewardship issue.	

ITEM:	**5**	
Title of Topic:	**NATIONAL MUSSEL WATCH PROGRAM, CALIFORNIA PILOT**	
Purpose:	Dominic Gregorio will present information regarding the California pilot of the National Mussel Watch monitoring program. Jay Davis will address how this effort fits with the Bioaccumulation Strategy discussed at the May 30 Monitoring Council meeting.	
Desired Outcome:	Direction on the coordination of National Mussel Watch monitoring, assessment, and reporting with other California bioaccumulation monitoring efforts	
Background:	At the May 30 Monitoring Council meeting, Jay Davis presented information about the Bioaccumulation Strategy being developed by the Bioaccumulation Oversight Group (BOG). Steve Weisberg requested a future Monitoring Council agenda item focusing on the NOAA National Mussel Watch program that was piloted in California. The following questions were provided to guide this presentation: • How does this effort fit with California's program? • How are we using the data?	
Attachment Links:	• Notes of May 2012 Monitoring Council Meeting (see Item 4) • National Mussel Watch Monitoring of the California Coast: A collaborative effort between NOAA and California – presentation by Dominic Gregorio	
Contact Persons:	Dominic Gregorio Jay Davis	dgregorio@waterboards.ca.gov; (916) 341-5488 jay@sfei.org; (510) 746-7368
Notes:	After state funding for the State Mussel Watch (SMW) monitoring program was cut in 2000, settlement funds were set aside by the Central Coast Regional Water Board to continue support for the program. This has allowed ongoing monitoring of a number of trend sites statewide, but funds from this one-time settlement have nearly been used up. The SMW program used transplanted mussels and was limited mainly to the Central Coast Region. Funding declined over the years. Many compounds accumulate better in mussels because they do not metabolize them as fish and other organisms do. The California project of the National Mussel Watch program included monitoring of non-transplanted mussels in northern, central and southern California. The program initially focused on status and trends. More recent efforts support Areas of Special Biological Significance (ASBS) where pollutant discharges are severely limited, and constituents of emerging concern (CECs). However, the NOAA program has taken a large budget hit and is going away. What does California want to do? Other organizations monitor mussels in California, but the efforts are fragmented and their existence is tenuous. SFEI and CCLEAN mussel monitoring stand alone. Many legacy pollutants showed declining concentrations over time. Mike Connor suggested that monitoring for CECs should largely replace monitoring for legacy pollutants. A CEC strategy is being developed by the State Water Board.	
Decisions:	• Partnerships should be developed between existing mussel monitoring programs to keep Mussel Watch going in California as a cohesive unit.	

	• A coordinated mussel watch program could fit well into the future of the BOG. The BOG strategy should include this in its strategy document. • The State Water Board should include mussel monitoring as part of NPDES and stormwater regulatory requirements, through collaborative regional monitoring programs.
Action Items:	• Dominic Gregorio and Steve Weisberg will draft a letter from the Monitoring Council to NOAA extoling the importance of the National Mussel Watch Program and of continued partnership with California. • Jay Davis will add two items to the BOG strategy: o Mussels are important to monitor and current fragmented efforts need to be coordinated under the BOG. o Focus of mussel monitoring should emphasize CECs, rather than legacy pollutants.

ITEM:	**6**
Title of Topic:	**ESTUARIES MONITORING WORKGROUP AND PORTAL PROPOSAL**
Purpose:	Val Connor will provide a summary of workgroup actions to date and plans for development of a California Estuaries Portal, initially focusing on the San Francisco / San Joaquin Bay-Delta Estuary. Amye Osti will demonstrate the workgroup's internal working website and progress on pulling together Delta condition information pursuant to Water Rights Decision D-1641. The workgroup will present a status report and proposed next steps to the Council to ensure they have a solid foundation to begin portal development. This workgroup has significant overlap, in terms of charge, with several other workgroups and portals. Council guidance on integration would be useful at this time.
Desired Outcome:	Feedback from Council on the approach being used by the workgroup
Background:	At the October 2010 meeting, the Monitoring Council accepted a proposal to form the California Estuaries Monitoring Workgroup (CEMW) that will develop a California Estuaries ecosystem health portal. The Monitoring Council agreed to an initial emphasis on the San Francisco Bay-Delta, with the inclusion of a statewide focus. Initially, the Interagency Ecological Program (IEP) was assumed to be well positioned to lead this effort, with participation from the San Francisco Bay and Delta regional monitoring programs, the Bay-Delta Science Program, and the Delta Stewardship Council. The State and Federal Contractors Water Agency (SFCWA) agreed to provide initial funding for portal development. After much deliberation, SFCWA and The Bay Institute agreed to jointly lead the workgroup, with oversight from the IEP Coordinators. The CEMW has been organizing over the past 18 months. The workgroup has developed a charter, a set of operating guidelines and a workgroup internal website (NOT a portal) to facilitate workgroup activities. The CEMW is initially focused on the Sacramento / San Joaquin Bay-Delta and Estuary. The workgroup is attempting to implement the Council's strategy and guidance, but

	have deviated from it when necessary to continue making progress.	
Attachment Links:	• California Estuaries Monitoring Workgroup (CEMW) – presentation by Val Connor • CEMW Web Toolbox – presentation by Amye Osti • Notes from the October 13, 2010 Monitoring Council meeting (see Item 6)	
Contact Person:	Val Connor	vconnor@sfcwa.org, (916) 476-5053
Notes:	Val Connor presented an overview of the Estuary Monitoring Workgroup and its efforts to develop the California Estuaries Portal, initially focusing on the SF Bay-Delta. Their initial goal will be to transform a DWR delta water quality report required by State Water Board Water Rights Decision D-1641 into an interactive web presence, making more effective and efficient access for scientists at key agencies and telling stories about changes in the delta ecosystem for the public. DFG ecosystem restoration performance measures could also be tracked via the new portal. The mockup for the live Estuaries Portal has yet to be agreed upon. The general story has been developed and performance measures agreed upon. The workgroup does not want to duplicate the portal efforts of other workgroups; as a result, the Estuaries Portal will focus on biota – fish, birds, the food web – and response measure indices. The DWR is reworking some of their key databases and changing data paths. Liaisons to other Monitoring Council workgroups have been selected to keep communication open. Amy Osti of 34 North presented a demonstration of a set of web tools that her firm has developed to the Estuary Monitoring Workgroup combine and visualize data, maps, and other information from a variety of sources as they develop the portal. Included are a wiki, document management library, project information, datasets with imbedded source information, GIS maps, and data visualization tools. The software for these tools is open source, as required by Peter Goodwin, Lead Scientist of the Delta Stewardship Council. A library of California estuaries is being developed, for eventual incorporation into the portal. These tools can be shared with other groups and portals, such as managers of other estuaries. The tools will be used by workgroup members to transform data into stories that will be presented in the portal.	
Decisions:	The Monitoring Council provided positive feedback on the efforts of the workgroup and the web tools they are using	
Action Items:	A data mart or other mechanism is needed to provide access to CEDEN data	

ITEM:	**7**
Title of Topic:	**COLLABORATIVE REGIONAL MONITORING PROGRAMS IN NORTHERN AND CENTRAL CALIFORNIA**
Purpose:	Each of these monitoring programs will provide a short introduction, followed by a panel discussion guided by the questions below ***Programs*** *(presenters/representatives)* a) San Francisco Bay Regional Monitoring Program (Meg Sedlak) b) Central Coast Long-Term Environmental Assessment Network, CCLEAN

	(Karen Worcester, Dane Hardin) c) Sacramento River Watershed Program (Stephen McCord, Meghan Sullivan, Stephanie Fong) d) Klamath Basin Monitoring Program (Chantell Royer-Krider, Clayton Creager) e) Central Coast Agricultural Waiver Cooperative Monitoring Program (Kirk Schmidt, Karen Worcester) f) Central Coast Integrated Regional Monitoring Program (Dane Hardin, Karen Worcester) g) Delta Regional Monitoring Program (Meghan Sullivan, Stephanie Fong) h) San Joaquin River Regional Monitoring Program (Parry Klassen, Rudy Schnagl) i) Central Valley Agricultural Waiver Monitoring Program (Susan Fregien, Parry Klassen) j) Sierra Streams Institute/Friends of Deer Creek (John Norton) k) San Francisco Bay Stormwater Regional Monitoring Coalition (Armand Ruby) ***Questions*** 1) What caused the coordination to occur? 2) Why has it been successful? 3) Has the coordination resulted in tools that would benefit coordination efforts by others? 4) Would a tool like the Central Valley Monitoring Directory have been helpful in getting the coordination going? 5) How are the data being managed and made available? 6) What are measures of success? 7) How are portals fitting into your programs? 8) What agency data are being integrated? 9) What is the role of citizen volunteer monitoring? 10) What do you need from the Monitoring Council?
Desired Outcome:	• Elucidate the reasons why some collaborative regional monitoring efforts are successful • Can those successes benefit or be transferred to other monitoring efforts and if so, how?
Background:	An agenda item on successful regional monitoring programs, highlighting programs in Southern California, was part of the May 2012 Monitoring Council meeting. This item was held as a consolidated panel discussion, to enhance direct sharing of information between monitoring programs, and to include additional monitoring programs that are not yet fully developed. This item will similarly focus on collaborative regional monitoring programs in Northern and Central California.
Attachment Links:	• Central Valley Monitoring Directory brochure

	a) The Value of Regional Monitoring: Lessons Learned from the RMP – presentation by Meg Sedlak b) CCLEAN - Central Coast Long-term Environmental Assessment Network – presentation by Dane Hardin c) Regional Monitoring Program for the Sacramento River Watershed – presentation by Stephen McCord d) Klamath Basin Monitoring Program – presentation by Chantell Royer-Krider e) Central Coast Ambient Monitoring Program Web Site and Ag Waiver Cooperative Monitoring Program – presentation by Karen Worcester and Kirk Schmidt f) Central Coast Integrated Regional Monitoring Program – presentation by Dane Hardin	
Contact Person:	Jon Marshack	jmarshack@waterboards.ca.gov, (916) 341-5514
Notes:	a) ***San Francisco Bay Regional Monitoring Program (RMP)*** – Meg Sedlak made a presentation about this "most-mature" of California's regional monitoring programs, which is celebrating its 20th anniversary. Initiated by the SF Bay Regional Water Board to make more effective use of monitoring funding, the RMP is a strategic partnership with consistent stable funding from regulated entities. Decisions are consensus based. Stakeholders prioritize management questions that support management decisions. An external scientific peer review adds to the program's credibility. When asked what the RMP needs from the Monitoring Council, Meg responded that the California Estuaries Portal will be a useful outlet for RMP data. The future of CEDEN is critical to the RMP, leveraging integration with data from other programs and sources and providing statewide relevance for RMP data. With respect to CEDEN, more modules are needed to handle additional data types and new data access and use tools are needed. With USGS monitoring programs declining, the statewide theme-based coordination that the Monitoring Council's workgroups are critical. More resources are always needed, especially in times of constrained budgets. b) ***Central Coast Long-Term Environmental Assessment Network (CCLEAN)*** – In her opening remarks, Karen Worcester indicated that this program complies with SWAMP method quality objectives and is uploading data to the Moss Landing Regional Data Center for delivery to CEDEN. CCLEAN arose out of a need to put permitted discharges into a regional context, in part because of the major influence of river discharges to receiving water in the area. A regional approach was requested by the Central Coast Region and voluntarily pursued by area dischargers. Dane Harding provided an overview of CCLEAN, indicating that its focus is on Monterey Bay with an annual funding base of approximately $400,000. A steering committee provides governance for the program, developing program objectives. A participation fee helps to even cost sharing among regulated POTW entities, with the remaining payments based on each member's proportion of the total regulated discharge to the ocean. Participation is written into NPDES permits by the Regional Water Board. The focus of the program is assessment of beneficial use protection, with resulting data now being fed to CEDEN. The program makes use of ocean current and LIDAR data from the Ocean Observing Systems to track discharges. POTWs feel that other pollution sources, i.e., those responsible	

for pollution sources to area rivers, need to be at the table. When asked what the Monitoring Council could do for CCLEAN, Dane responded that a data portal like that being built for estuaries would allow their data to be better utilized. When asked about coordination with SFEI and SCCWRP, Dane responded that the regulated community did not want to pay for research efforts, only permit-related monitoring. There is currently no coordination with the Marine Protected Area (MPA) Monitoring Enterprise.

c) ***Sacramento River Watershed Program*** – Stephen McCord provided an overview of this currently inactive program that over laps geographically with the Delta RMP, which also overlaps with the San Joaquin River RMP and the SF Bay RMP. With regulated dischargers and other potential RMP participants spread out over such a vast watershed area, it is hard to find critical mass for a self-sustaining program going. Early efforts were grant-funded, but participants did not to continue to fund the program. Monitoring data was archived in the Bay-Delta and Tributaries (BDAT) database at DWR. Larry Walker Associates also has the dataset, which could be (but has not yet been) submitted to the Davis Regional Data Center of CEDEN. Limitations include lack of funding and leadership and the small amount of receiving water monitoring currently in NPDES permits, especially for smaller dischargers. With water quality generally fairly high, there is less of a driver for the program, as compared with the Delta.

d) ***Klamath Basin Monitoring Program (KBMP)*** – Chantell Royer-Krider made the presentation of this bi-state program. This watershed is unusual, in that most of its wetlands are located in the upper part of the basin. The need to coordinate and collaborate was realized after the 2002 fish kill. In 2007, a CWA Section 319 grant was obtained through Humboldt State University to bring the program together. The program's structure is similar to the SF Bay RMP, with an annual budget of $60,000 administered by one PY split between two persons. The membership is engaged, with 23 monitoring entities participating as of 2009. A tool like the Central Valley Monitoring Directory would be useful to help with planning and updating monitoring efforts. To save RMP resources, the KBMP requested state support for such a map of who monitors what, where and when. It took one year to get KBMP data into CEDEN, due to the need to change formatting. KBMP holds membership meetings twice per year to share monitoring efforts. Staff finds funding to conduct special studies of water quality and fisheries. The My Water Quality portals are of limited use to the KBMP because they stop at the California-Oregon border and they currently do not present microcystin data. So the KBMP has developed their own portal, based on open source architecture, to handle pollutant tracking, TMDLs, and pollutant trading. In addition to a statewide version of the Central Valley Monitoring Directory, needs include continued CEDEN support, extending the My Water Quality portals north of the boarder and including cyanotoxins. Common data management and protocols help foster credibility between member organizations, which increases the level of scientific effort. CEDEN forces the compatibility of data.

e) ***Central Coast Agricultural Waiver Cooperative Monitoring Program*** (CMP) – Karen Worcester began the presentation with an overview of the Central Coast Ambient Monitoring Program (CCAMP) website, developed by the Central Coast Regional Water Board, which includes CMP data. CMP data are delivered via the California Data Upload and Checking System (CalDUCS) and then moves to the CCAMP website and to CEDEN. Key website features combine data from a variety of sources, color coding

	reflecting rule-based data analysis, and time series plots. The website also provides easy access to loading data, which shows in many cases that agriculture tail water volume reductions are causing decreasing pollutant loads, but increasing concentrations in water. Kirk Schmidt provided additional information on the CMP, which began in 2004. To maintain compliance with the Agricultural Waiver of Waste Discharge Requirements, farmers are required to monitor their runoff either independently or collectively. So far about 1800 entities are enrolled, covering 95% of agricultural acreage. The CMP is a non-profit entity that conducts the monitoring and provides outreach to growers through one-on-one meetings. The CMP target audience is the farmers who pay for the program. Web portals are not their focus. The program was initiated by remediation funds and grants, but is now self-funded by farmers. Overlaps exist with other monitoring programs, necessitating regional cooperation to share efforts. Facilitation is needed to develop clearly defined objectives, which may not be true for existing citizen monitoring and stormwater monitoring efforts in the region. Data formatting is critical and should be consistent across programs. A hierarchy of data quality should be developed to satisfy multiple types of inquiry. Kirk asked for less politics in monitoring requirements, citing a recent rewrite of the agricultural waiver by the Regional Board, which he claimed lead to meaningless data. Armand Ruby responded with the need for a question-driven approach to define monitoring objectives and necessary data quality. f) ***Central Coast Integrated Regional Monitoring Program*** – Dane Hardin made a presentation on this budding new effort, that is intend to focus on stormwater, POTW and ASBS (areas of special biological significance from the Water Board's Ocean Plan) interests from Point Reyes to the California state parks south of Carmel. Challenges include different implementation schedules for each program. Regulators should be encouraged to take a broader view of integrated regional monitoring, especially in the area of ASBSs.
Decisions:	• Presentations and discussion on the following programs were continued to the November 28 Monitoring Council meeting: g) Delta Regional Monitoring Program (Meghan Sullivan, Stephanie Fong) h) San Joaquin River Regional Monitoring Program (Parry Klassen, Rudy Schnagl) i) Central Valley Agricultural Waiver Monitoring Program (Susan Fregien, Parry Klassen) j) Sierra Streams Institute/Friends of Deer Creek (John Norton) k) San Francisco Bay Stormwater Regional Monitoring Coalition (Armand Ruby)
Action Items:	• A future agenda item should focus on potential endorsement by the Monitoring Council of a regional approach to monitoring, rather than end-of-pipe monitoring

ITEM:	**8**	
Title of Topic:	**MEETING WRAP-UP**	
Purpose:	Plan agenda for November 28, 2012 Monitoring Council meeting in Sacramento. Potential items include: 1) Annual reports from each workgroup 2) Safe to Drink workgroup and portal development proposal 3) Possibility of holding an annual conference. A representative from the Maryland Monitoring Council should be invited to participate by phone (see May 2012 notes, Item 2d) 4) Water Board new effort to gather groundwater monitoring data in support of potential future programmatic actions (Eric Oppenheimer, John Borkovich) 5) Department of Pesticide Regulation monitoring (David Duncan) a) What monitored where – SWAMP comparability? Quantitation limits? b) How data assessed – thresholds from water quality objectives, criteria & guidelines? c) How data managed – connection with CEDEN? d) Pesticides as stressors – stressors portal? 6) Department of Fish & Game monitoring (Glenda Marsh, Adam Ballard, Robert Holmes, Josh Grover, Chad Dibble, Pete Ode) a) Coordination b) Financial support c) Flow d) Data Management – CEDEN for water quality data? e) Monitoring Council endorsement of collaboration? 7) Ocean Ecosystem Health a) Areas of Special Biological Significance (ASBS) monitoring (Ken Schiff) b) Marine Protected Area (MPA) Monitoring Enterprise (Liz Whiteman) c) Plans for Ocean Ecosystem Workgroup and new Ocean Health Portal	
Desired Outcome:	Develop agenda items for the next meeting	
Contact Person:	Jon Marshack	jmarshack@waterboards.ca.gov, (916) 341-5514
Notes:	• Steve Weisberg suggested that a Monitoring Council Member social event, such as a dinner, be scheduled to help members to get to know each other better • Steve Weisberg has prepared a Clean Water Act retrospective paper and offered that the Monitoring Council discuss it at the next meeting	
Decisions:	• Annual workgroup reports will be delivered in writing with the potential exception of major items needing discussion	

	• The Ocean Ecosystem Health item will not be heard at November meeting • Continuation of the Collaborative Regional Monitoring Program item will be heard at November meeting

October 23, 2012
Amended November 1, 2012
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