

**CALIFORNIA WATER QUALITY MONITORING COUNCIL**

**Monitoring Council Meeting Notes**

**Thursday, March 7, 2013 – 9:00 AM to 4:00 PM**

Training Room 1 East/West – First Floor  
Joe Serna Jr. Cal/EPA Headquarters Building  
1001 I Street, Sacramento



Monitoring Council Members and (Alternates) in attendance:

Jonathan Bishop	Mike Connor	(Karen Larsen)	Stephen Weisberg
(Sean Bothwell)	Dale Hoffman-Floerke	Armand Ruby	
(Paul Collins)	Parry Klassen	(Stephani Spaar)	

Others in attendance or (on the phone):

(Laura Blake, Cadmus Group)  
(Clay Brandow, California Department of Forestry and Fire Protection)  
Rich Breuer, State Water Resources Control Board  
(Linda Dorn, Sacramento Area Sewer District)  
Mark Emmerson, California Department of Public Health  
Kristal Fadtko, Sacramento-San Joaquin Delta Conservancy  
Terry Fleming, U.S. Environmental Protection Agency, Region 9  
(Laura Gabanski, U.S. Environmental Protection Agency)  
(Michael Garabedian)  
(Cindy Garcia, California Department of Water Resources)  
(Corey Godfrey, Cadmus Group)  
Max Gomberg, State Water Resources Control Board  
(Cristina Grosso, San Francisco Estuary Institute – Aquatic Science Center)  
(Bruce Houdesheldt, Northern California Water Association)  
Jon Marshack, Monitoring Council Coordinator  
(Stella McMillin, California Department of Fish and Wildlife)  
(Kelly Moran, TDC Environmental)  
Emilie Mortazavi, Delta Stewardship Council, Delta Science Program  
(Amye Osti, 34 North)  
(Mark Pumford, City of Oxnard)  
(Rudy Schnagl, Central Valley Regional Water Quality Control Board)  
Hildie Spautz, California Department of Fish and Wildlife  
(Meghan Sullivan, Central Valley Regional Water Quality Control Board)  
Melissa Turner, MLJ LLC  
Lori Webber, State Water Resources Control Board  
(Darren Wright, Southern California Coastal Ocean Observing System)

<b>ITEM:</b>	<b>1</b>
<b>Title of Topic:</b>	<b>INTRODUCTIONS AND HOUSEKEEPING</b>
<b>Purpose:</b>	1) Introductions 2) Review notes from November 28, 2012 Monitoring Council meeting 3) Review agenda for today's meeting
<b>Desired Outcome:</b>	a) Approve November 28, 2012 Monitoring Council meeting notes

	b) Preview what will be covered today and overall meeting expectations c) Adjust today's agenda, as needed
<b>Attachment Links:</b>	<a href="#">Notes from November 28, 2012 Council meeting</a>
<b>Contact Person:</b>	Jon Marshack <a href="mailto:Jon.Marshack@waterboards.ca.gov">Jon.Marshack@waterboards.ca.gov</a> , 916-341-5514
<b>Decisions:</b>	Notes from November 28, 2012 Council meeting were approved as amended.

<b>ITEM:</b>	<b>2</b>
<b>Title of Topic:</b>	<b>ANNOUNCEMENTS AND UPDATES</b>
<b>Purpose:</b>	<p>These are brief informational items that could be expanded into more detailed discussions for future meetings:</p> <ul style="list-style-type: none"> <li>a) Request from Karl Longley to provide comments on technology needs for the California Water Plan to support implementation of the Monitoring Council's goals and objectives</li> <li>b) Letter of support for continued coordination between California and the National Oceanographic and Atmospheric Administration (NOAA) on Mussel Watch monitoring</li> <li>c) Resignation of Monitoring Council Member John Norton, representing citizen monitoring organizations</li> <li>d) Other announcements and updates related to the Monitoring Council's mission pursuant to Senate Bill 1070 (Kehoe, 2006)</li> </ul>
<b>Desired Outcome:</b>	<ul style="list-style-type: none"> <li>a) Approval of letter on technology needs</li> <li>b) Approval of letter on Mussel Watch monitoring coordination</li> </ul>
<b>Background:</b>	<ul style="list-style-type: none"> <li>a) At the November 28, 2012 Monitoring Council meeting, Karl Longley of the California Council on Science and Technology (CCST) presented a draft memorandum on water related technology needs, which is intended to provide input to the California Water Plan 2013 Update. The Monitoring Council agreed to provide comments addressing impediments to data sharing and use and communication between potential partner organizations/agencies. A reminder email was sent to Monitoring Council Members and Alternates on January 16, 2013. The only comments received were from Alternate Stephanie Spaar.</li> <li>b) At the August 29, 2012 Monitoring Council meeting, Dominic Gregorio presented information regarding the California pilot of the National Mussel Watch monitoring program. The Monitoring Council tasked Dominic Gregorio and Steve Weisberg with drafting a letter from the Monitoring Council extolling the importance of the National Mussel Watch Program and of continued partnership with California.</li> </ul>
<b>Attachment Links</b>	<ul style="list-style-type: none"> <li>a) <a href="#">Monitoring Council letter on technology needs</a> <a href="#">Notes from November 28, 2012 Monitoring Council meeting</a> (see Item 5)</li> <li>b) <a href="#">Monitoring Council letter on Mussel Watch monitoring coordination</a></li> </ul>

	<a href="#">Notes from the August 29, 2012 Monitoring Council meeting</a> (see item 5)	
<b>Contact Person:</b>	Jon Marshack	<a href="mailto:Jon.Marshack@waterboards.ca.gov">Jon.Marshack@waterboards.ca.gov</a> , (916) 341-5514
<b>Notes:</b>	<p>c) Steve Weisberg noted that he was the only Monitoring Council Member from Southern California and expressed the desire for more representation from that area of the state. It was also noted that Monitoring Council Members are intended to provide statewide representation for their area of interest.</p> <p>d) Terry Fleming stated that the federal budget sequester was likely to result in a budget reduction of 5 to 10% for USEPA and up to 22 furlough days for EPA employees. Grantees have been sent a letter that they need to be cautious on expenditures. The State Water Board budget will be affected.</p>	
<b>Decisions:</b>	<p>a) Letter to Karl Longley on technology needs was approved and signed by the Co-Chairs</p> <p>b) Letter regarding Mussel Watch monitoring coordination was approved and signed by the Co-Chairs</p> <p>c) The Monitoring Council declined to establish a formal ratio of Member representation for various geographic areas of the state</p>	
<b>Action Items:</b>	<p>c) Monitoring Council vacancy announcement to be sent out within two weeks</p> <p>Erick Burres (Water Board Citizen Monitoring Coordinator) to assist with outreach to fill vacancy on the Monitoring Council</p> <p>Letter of appreciation to be sent to John Norton for his service on the Monitoring Council</p>	

<b>ITEM:</b>	<b>3</b>
<b>Title of Topic:</b>	<b>NEW CALIFORNIA WETLANDS PORTAL AND ECOATLAS</b>
<b>Purpose:</b>	For Meredith Williams of SFEI to present a new proposed California Wetlands Portal and a new version of Wetland Tracker, called EcoAtlas
<b>Desired Outcome:</b>	Approval to release the new California Wetlands Portal to the public
<b>Background:</b>	<p>Developed by SFEI originally for the San Francisco Regional Water Board, Wetland Tracker is a web-enabled tool that provides map-based access to information about the location, extent, and condition of California's wetlands and wetland restoration projects. Wetland Tracker's functionality was developed mainly for use by regulatory and resource management agency staff and researchers under the direction of the California Wetland Monitoring Workgroup. The original <a href="#">California Wetlands Portal</a>, released to the public in March 2010, was adapted from the Wetland Tracker by adding a number of management questions on the home page linked to web pages presenting additional information geared toward the interests of the general public. This portal did not closely follow the Monitoring Council's <a href="#">portal development guidelines</a>, but was envisioned as an interim solution to deliver wetland ecosystem health information with a moderate amount of effort. The State Water Board amended an existing contact with SFEI to fund creation of a new California Wetlands Portal that would fully implement the Monitoring Council's guidelines. The Wetland Monitoring Workgroup has been working with SFEI and web developers</p>

	<p>at the State Water Board to bring this new portal to life.</p> <p>At the same time, the Wetland Workgroup has guided the development of Wetland Tracker into the new EcoAtlas, which includes broader water resource data management and analytical functionality. EcoAtlas is proposed to be released concurrently with the new California Wetlands Portal, at which time the old portal and Wetland Tracker would be retired. Information on EcoAtlas was presented to the Monitoring Council at the August 29, 2012 meeting.</p>	
<p><b>Attachment Links:</b></p>	<ul style="list-style-type: none"> <li>• <a href="#">My Water Quality Wetlands Portal &amp; EcoAtlas Release</a> – presentation by Meredith Williams</li> <li>• <a href="#">Letter of support from the Executive Officer of the Sacramento-San Joaquin Delta Conservancy</a></li> <li>• <a href="#">Notes from the August 29, 2012 Monitoring Council meeting</a> (see item 4)</li> </ul>	
<p><b>Contact Persons:</b></p>	<p>Meredith Williams</p>	<p><a href="mailto:meredith@sfei.org">meredith@sfei.org</a>; (510) 746-7396</p>
<p><b>Notes:</b></p>	<p>Development of these tools has been a collaborative effort between numerous state, federal and local agencies and non-governmental organizations, coordinated by the Wetland Monitoring Workgroup. Augmentations to the Wetlands Portal include:</p> <ul style="list-style-type: none"> <li>• Look and feel similar to other <i>My Water Quality</i> portals</li> <li>• Updated content</li> <li>• Wide range of wetland types presented</li> <li>• More interactive content</li> <li>• More monitoring data and assessment information</li> <li>• Data gaps identified</li> <li>• New base-map – the California Aquatic Resources Inventory (CARI) v.0</li> </ul> <p>CARI v.0 was created by stitching together the best available data from the National Hydrography Dataset (NHD), the National Wetlands Inventory (NWI), and local intensification mapping efforts conducted in various areas of the state. For this reason, the quality and level of detail is variable from place to place. Additional information will be added to CARI as new intensive mapping efforts are completed. CARI includes the California Aquatic Resources Classification System (CARCS) developed in support of the State Water Board’s wetland policy development efforts. Statistics presented in the portal regarding extent are derived from CARI. Meredith asked that the Monitoring Council continue to support the development and use of a common aquatic resources base-map.</p> <p>Parry Klassen raised a concern that currently farmed lands in the Delta are shown as wetlands. But restrictions on land use that apply to wetlands do not apply to these currently farmed lands. Meredith indicated that this information came from the 6-county mapping effort of the Army Corps of Engineers, one of the local intensive mapping efforts incorporated into CARI v.0, and that it may reflect land cover rather than land use. The 6-county data may not fully satisfy CARCS classification definitions.</p> <p>The wetland condition portion of the new portal displays scores from the California Rapid Assessment Method (CRAM) for wetlands, which are stored in the eCRAM database. Summary CRAM information is also made available in CEDEN. Meredith explained that not all of the available CRAM data are displayed, due to restrictions placed on the data by private land owners. The Monitoring Council expressed the desire to increase the amount of CRAM data</p>	

that are made available to the public through the portal.

CRAM data are shown on portal maps without the use of thresholds to indicate which scores are considered to represent “good condition.” The Monitoring Council asked that the workgroup consider developing thresholds of condition. Meredith explained that efforts to date have focused on making the data accessible and that determining wetland health on a watershed scale is more actionable than determining health for individual sites, given the mixture of attributes that are combined in a CRAM score. Drivers of and priorities for wetland health differ around the state.

The Wetland Monitoring Workgroup has capitalized on prominent projects to increase the use of CRAM and standard mapping protocols developed by the workgroup. Such projects include Delta conveyance, high speed rail, and the Caltrans Willits Bypass Project. The Perennial Streams Assessment of SWAMP also collects CRAM scores. SWAMP is expected to formally endorse the CRAM method, an action which could convince additional parties to use it.

Wetland restoration project information in the portal currently is limited to the information that has been entered into Wetland Tracker. But wetlands are also being restored elsewhere. Some permitting actions are currently entered into Wetland Tracker, including 401 certifications in the San Francisco Bay Region. The online 401 tool is currently being piloted in 5 water quality control regions and a report is being prepared to evaluate the new process. The 401 tool will transfer the responsibility of data entry and management from SFEI to the applicant.

Max Gomberg noted that wetlands serve critical functions to protect coastal communities from some of the effects of climate change. He asked whether the statistical sampling being started in the Wetland Workgroup’s Status and Trends Project could be intensified in targeted areas where wetland restoration projects could be most beneficial.

A [letter of support from the Executive Officer of the Sacramento-San Joaquin Delta Conservancy](#) expressed that “it is critical the California Monitoring Council and the State Water Board continue to support the Wetland Portal and the migration of Wetland Tracker into EcoAtlas as these portals are essential in meeting the Delta restoration tracking needs.” The Monitoring Council asked whether such an endorsement would come with funding. Kristal Fadtkke of the Delta Conservancy indicated that this may be possible.

The data engine that drives the new Wetland Portal is EcoAtlas. This tool is able to pull together data from a variety of sources (e.g., eCRAM, CEDEN, BIOS, BeachWatch, USGS) for visualization and analysis. Web services provide access to other data sets. The Estuary Workgroup, the Delta Conservancy, and the San Francisco Bay Joint Venture have expressed interest in using EcoAtlas in their work. EcoAtlas has two interconnected primary functions – a map side and a project side. Currently, 900 projects have been entered, including:

- Cross referencing of permit requirements where available
- Events and phases of construction
- Contact information
- Wetland type
- Uploaded supporting files

CRAM information on reference sites, project sites and survey sites, as well as historical ecology information may be viewed through the map side of EcoAtlas. A major new feature is the Landscape Profile tool, which permits access to data

	<p>from a landscape or watershed perspective. A user-defined area can be drawn manually to access EcoAtlas summary statistics, including wetland types and extent, projects, CRAM scores, endangered species, and census data. Alternatively, the USGS StreamStats tool can be used to summarize information upstream from a user-defined point in a watershed. A future enhancement will allow the user to upload a polygon to define a query area. This tool will provide information useful to assessing wetland mitigation on a watershed scale, mitigation banking, and other relationships. Summary reports can also be generated with these tools.</p> <p>The Monitoring Council was very impressed with the tools developed under the direction of the Wetland Monitoring Workgroup, as well as their outreach efforts to gain support for their use.</p> <p>Wetland data management is currently at a tipping point. More widespread use of these new tools is needed. Interagency and control agency issues and regulatory hurdles will need to be tackled to expand the use of these tools.</p>
<p><b>Decisions:</b></p>	<ul style="list-style-type: none"> <li>• Once currently farmed lands are clearly differentiated from functional wetlands, the new Wetlands Portal will be ready for public release</li> <li>• Monitoring Council support and connections are needed to help populate EcoAtlas with additional wetland project information from a wide variety of sources – “Get on the map!”</li> </ul>
<p><b>Action Items:</b></p>	<ol style="list-style-type: none"> <li>1) The Wetland Monitoring Workgroup will clearly differentiate between currently farmed lands and functional wetlands in the Delta and elsewhere in the state and will obtain Monitoring Council concurrence via email prior to public release of the new California Wetlands Portal</li> <li>2) Provide Monitoring Council Members with access information for the new Wetlands Portal and request their more detailed review and comment             <ul style="list-style-type: none"> <li>• Differentiate between show stoppers and desirable future changes</li> </ul> </li> <li>3) The Wetland Monitoring Workgroup is encouraged to develop thresholds for CRAM scores</li> <li>4) Additional explanatory information regarding data gaps should be added to the portal</li> <li>5) The Wetland Monitoring Workgroup will provide the Monitoring Council with             <ul style="list-style-type: none"> <li>• List of challenges to getting more data into EcoAtlas and related tools</li> <li>• Documentation of challenges that have been overcome</li> </ul> </li> </ol>

<p><b>ITEM:</b></p>	<p>4</p>	
<p><b>Title of Topic:</b></p>	<p><b>SAFE TO DRINK PORTAL MOCKUP</b></p>	
<p><b>Purpose:</b></p>	<p>Mark Emmerson of the Department of Public Health to present a mock-up of a new Safe to Drink Portal to be linked from the <a href="#">My Water Quality website</a></p>	
<p><b>Contact Persons:</b></p>	<p>Mark Emmerson</p>	<p><a href="mailto:memmerso@cdph.ca.gov">memmerso@cdph.ca.gov</a>; (916) 445-6190</p>
<p><b>Decisions:</b></p>	<p>Item postponed to a future meeting</p>	

<b>ITEM:</b>	5
<b>Title of Topic:</b>	<b>COLLABORATIVE REGIONAL MONITORING PROGRAMS IN NORTHERN AND CENTRAL CALIFORNIA</b>
<b>Purpose:</b>	<p>This item was continued from the November 28, 2012 Monitoring Council meeting. Each of the following monitoring programs to provide a short introduction, followed by discussion guided by the questions below.</p> <p><b>Programs</b> (<i>presenters/representatives</i>)</p> <ol style="list-style-type: none"> <li>1. San Joaquin River Regional Monitoring Program (Parry Klassen)</li> <li>2. San Francisco Bay Stormwater Regional Monitoring Coalition (Armand Ruby)</li> </ol> <p><b>Questions</b></p> <ol style="list-style-type: none"> <li>a. What caused the coordination to occur?</li> <li>b. Why has it been successful?</li> <li>c. Has the coordination resulted in tools that would benefit coordination efforts by others?</li> <li>d. Would a tool like the <a href="#">Central Valley Monitoring Directory</a> have been helpful in getting the coordination going?</li> <li>e. How are the data being managed and made available?</li> <li>f. What are measures of success?</li> <li>g. How are portals fitting into your programs?</li> <li>h. What agency data are being integrated?</li> <li>i. What is the role of citizen volunteer monitoring?</li> <li>j. What do you need from the Monitoring Council?</li> </ol>
<b>Desired Outcome:</b>	<ul style="list-style-type: none"> <li>• Elucidate the reasons why some collaborative regional monitoring efforts are successful</li> <li>• Can those successes benefit or be transferred to other monitoring efforts and if so, how?</li> </ul>
<b>Background:</b>	<p>An agenda item on successful collaborative regional monitoring 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 established monitoring programs and to include additional monitoring programs that are not yet fully developed.</p> <p>At the August 2012 Monitoring Council meeting, Item #7 similarly focused on collaborative regional monitoring programs in Northern and Central California. There was insufficient time for all programs to present. Presentations by the remaining programs were continued to the November meeting. However, two of the presenters were not able to attend; so their presentations were postponed.</p>
<b>Attachment Links:</b>	<ul style="list-style-type: none"> <li>• <a href="#">San Joaquin River Regional Monitoring Program</a> – presentation by Parry Klassen</li> <li>• <a href="#">Summary of BASMAA Monitoring – Regional Monitoring Coalition (RMC)</a> – presentation by Armand Ruby</li> </ul>

	<ul style="list-style-type: none"> <li>• <a href="#">Central Valley Monitoring Directory brochure</a></li> <li>• <a href="#">Notes from November 28, 2012 Council meeting</a> (see Item 6)</li> <li>• <a href="#">Notes from August 29, 2012 Council meeting</a> (see Item 7)</li> <li>• <a href="#">Notes of May 2012 Monitoring Council Meeting</a> (see Item 6)</li> </ul>		
<b>Contact Person:</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 2px;">Jon Marshack</td> <td style="padding: 2px;"><a href="mailto:Jon.Marshack@waterboards.ca.gov">Jon.Marshack@waterboards.ca.gov</a>, (916) 341-5514</td> </tr> </table>	Jon Marshack	<a href="mailto:Jon.Marshack@waterboards.ca.gov">Jon.Marshack@waterboards.ca.gov</a> , (916) 341-5514
Jon Marshack	<a href="mailto:Jon.Marshack@waterboards.ca.gov">Jon.Marshack@waterboards.ca.gov</a> , (916) 341-5514		
<b>Notes:</b>	<p><b><i>San Joaquin River Regional Monitoring Program</i></b></p> <p>The mission of the Coalition for Urban Rural Environmental Stewardship (CURES) is to develop and test best-management-practices for agriculture, including the movement of nitrate beyond the root zone. The San Joaquin River Regional Monitoring Program is an effort funded by USEPA Region 9, building on work initiated by the San Francisco Estuary Institute. SFEI’s Central Valley Monitoring Directory was used to document who was monitoring where. Both DWR and USBR have continuous monitoring stations for temperature, flow and EC that are collected in CDEC to support their water supply operations; data quality is not necessarily controlled. Selenium and salt monitoring occurs in the lower San Joaquin River under an NPDES permit for discharge to the main stem of the river; substantial reductions have been achieved in the amounts discharged. Agricultural monitoring coalitions monitor for agriculture-related water quality impacts. TMDL monitoring also occurs for diazinon and chlorpyrifos. All of these interests are willing to share their data, but is there a place for these data to be stored? Due in part to the vast area of this watershed, redundant monitoring is not occurring on the San Joaquin River. Monitoring of toxicity by agricultural coalitions will not occur without a regulatory requirement to do so. Fish health monitoring would also need a regulatory requirement. Essentially, a mandatory regulatory program would be needed to drive a regional monitoring program on the San Joaquin River. The effort would be tied to the development of a Delta RMP, which is currently stalled.</p> <p>A portal based on <a href="#">Bay-Delta Live</a> is being developed to visualize existing data from the above organizations; funded by a USEPA grant. Questions to be addressed include:</p> <ul style="list-style-type: none"> <li>• Is salt affecting beneficial uses?</li> <li>• Are waters toxic?</li> <li>• Are sediments toxic?</li> <li>• Are waters swimmable?</li> <li>• Are there excess nutrients?</li> <li>• Are pyrethroids affecting beneficial uses?</li> <li>• Do temperatures support salmonid migration?</li> </ul> <p>The portal will also help the Central Valley Regional Water Board’s CV-Salts efforts to develop a salt and nutrient management plan for the basin.</p> <p><b><i>San Francisco Bay Stormwater Regional Monitoring Coalition (RMC)</i></b></p> <p>The Bay Area Stormwater Management Agencies Association (BASMAA) formed the RMC pursuant to the region-wide municipal stormwater NPDES permit issued by the San Francisco Bay Regional Water Board. For 20 years, municipalities had monitored separately under individual permits with little coordination. The RMC covers most of the San Francisco Bay Region, with the exception of more rural Marin, Sonoma, and Napa counties. It is essentially a creek-monitoring effort, coordinated with the San Francisco Bay Region’s</p>		

	<p>SWAMP program. The region-wide stormwater permit provided the option for collaboration and provided two incentives for doing so – an extra year to plan for monitoring and reduced requirements for stressor/source identification projects. Monitoring is modeled after the design of the SWAMP Perennial Stream Assessment, using a combination of probabilistic and targeted designs. Each county conducts its own monitoring with separate contractors and laboratories, but coordination through the RMC provides consistent QA, SOPs, and inter-calibration. Monitoring data are sent to SFEI for entry into CEDEN. Armand Ruby indicated that template and other problems currently hamper data entry. Within three years, the RMC should be able to answer regional questions in a statistically relevant manner. Collaboration has associated costs, but generates some increases in efficiency as well as a statistically sound picture of regional ambient conditions. Monitoring results are used to inform management actions to mitigate impacts or alter stormwater operations.</p> <p>Would it be more efficient to hire an entity like SFEI to perform all of the RMC monitoring, as occurs with the RMP? While there may be greater cost efficiency, loss of ownership would occur. Standardization in stormwater monitoring spills over into other monitoring conducted by the counties with added benefits.</p>
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<b>ITEM:</b>	6	
<b>Title of Topic:</b>	UPDATE ON USEPA HEALTHY WATERSHEDS INITIATIVE, CALIFORNIA PROJECT	
<b>Purpose:</b>	Corey Godfrey and Laura Blake of Cadmus Group, contractors to USEPA, to present preliminary results of their multi-metric analysis of California watershed health	
<b>Desired Outcome:</b>	Review and comment, particularly on how the results of the analysis should be presented	
<b>Background:</b>	<p>In mid-2011, USEPA's <a href="#">Healthy Watersheds Initiative</a> offered to provide USEPA-funded contractor support for a new project to identify healthy watersheds throughout California based on a systematic integration of a number of monitored and modeled parameters. The Monitoring Council's <a href="#">Healthy Streams Partnership</a> has been guiding the contractor, Cadmus Group, and the results of the assessment are envisioned to be presented in the <a href="#">Healthy Streams Portal</a>. At the November 2011 meeting, the Monitoring Council reviewed a Draft Technical Approach developed by Cadmus. At the February 2012 meeting, the Monitoring Council was given a presentation on a draft summary of proposed indicators for use in the assessment. The Monitoring Council offered a number of constructive comments and recommendations to refine the list of indicators. Karen Larsen presented an update on the project to the Monitoring Council on August 29, 2012. A final set of indicators has been selected and preliminary results of the analysis are being generated. A final report of the analysis and all supporting project data are to be submitted to both USEPA and the Healthy Streams Partnership by mid-May of this year.</p>	
<b>Attachment Links:</b>	<ul style="list-style-type: none"> <li>• <a href="#">California Healthy Watersheds Assessment: Status Update</a> – presentation by Corey Godfrey</li> <li>• <a href="#">Notes from August 29, 2012 Council meeting</a> (see Item 2a)</li> </ul>	
<b>Contact Person:</b>	Lori Webber	<a href="mailto:Lori.Webber@waterboards.ca.gov">Lori.Webber@waterboards.ca.gov</a> , (916) 341-5556

**Notes:**

USEPA has so far funded assessments in four states and California's is the furthest along. Three sets of indicators were used in California's assessment. **Condition Indicators** were derived from statewide GIS layers without the need for modeling. **Stream Health Indicators** only had data from specific monitored sites. (Only seven out of over 4,000 watersheds had data for all indicators.) Regression models were used to relate Stream Health Indicators to upstream watershed characteristics for which statewide information was available, thereby allowing derivation of statewide modeled Stream Health Indicators. Modeling results were compared with additional monitoring data to derive relative error statistics, which are being used to refine the models. The Condition Indicators and Stream Health Indicators were combined by first normalizing each indicator into a common range of values and then averaging indicators within each of six Healthy Watershed Attributes: landscape condition, habitat condition, hydrologic condition, geomorphic condition, water quality, and biological condition. These attribute scores were then averaged to develop a **Stream Health Index**. Due to the general paucity of monitoring data to drive modeling in this area, the desert ecoregion will likely be excluded from the Stream Health Index. Finally, **Vulnerability Indicators** were selected to reflect watershed vulnerability to various stressors, such as water demand and climate change; no modeling was necessary for this third set of indicators. Laura Gabanski, USEPA's HWI lead, views the Healthy Watersheds Assessment as a more holistic systems approach to watershed evaluation. This will be California's first attempt to integrate disparate sets of indicators, which is one of the goals of the Monitoring Council. Due to time and funding constraints, this analysis used a relatively simple approach to evaluate and combine indicators without relying on evaluation thresholds or weightings. Results will be displayed through the Healthy Streams Portal.

Asked how California's Healthy Watershed Assessment results would be used, Karen Larsen responded that the HWI approach is complementary with the goals of the bio-objectives program, identifying and working to protect reference sites and identifying stressors responsible for watershed problems. The HWI analysis allows one to determine which factors are more or less associated with watershed health. Stream Health and Vulnerability indices (e.g., high health combined with high vulnerability) may be used to prioritize action to protect healthy and sensitive watersheds from degradation. The results of this analysis will be used in the 2013 California Water Plan Update to derive sustainability indicators. Results could also be useful in the development of climate adaptation plans. Regional Water Boards could use the vulnerability assessment results in their permitting actions. Terry Fleming offered that the results can be used to predict water quality in places where we cannot go or have not gone.

Asked about whether California had enough of the right data for the evaluation, Laura Gabanski responded that most states have the weakest data for fluvial geomorphology. Mike Connor offered that more data on how populations and agriculture respond to climate change would be useful. Parry Klassen spoke of the general lack of reference condition information in agricultural areas of the state, perhaps limiting the utility of the HWI analysis. Mike Connor expressed that the analysis would benefit from including fish and bird population data.

At the close of California's Healthy Watersheds Assessment, California's Healthy Streams Partnership will be presented not only with the final report, but also with the data and models used in the analysis. This will allow California to test various ways of adjusting the indicator integration (e.g., weightings, thresholds) and to augment and update the assessment as new data are made available.

<b>Decisions:</b>	<p>The final Healthy Watersheds Assessment report should:</p> <ul style="list-style-type: none"> <li>• Stress the strengths and limitations of the analysis</li> <li>• Identify where California needs to augment its monitoring efforts to allow future assessments to more accurately reflect watershed health and vulnerability</li> <li>• Identify, where models perform poorly</li> </ul>
<b>ITEM:</b>	7
<b>Title of Topic:</b>	<b>ANNUAL PROGRESS REPORT ON THE MONITORING COUNCIL, ITS WORKGROUPS, AND <i>MY WATER QUALITY</i> INTERNET PORTALS</b>
<b>Purpose:</b>	Discuss progress made in 2012 by the Monitoring Council and its eight workgroups to improve California's program to monitor and assess the quality of our waters and the health of associated ecosystem and to provide the resulting data and information to decision makers and the public via the Internet
<b>Desired Outcome:</b>	Direction on the focus and content of the annual report to the Secretaries of the California Environmental Protection Agency and the California Natural Resources Agency
<b>Background:</b>	<p>As required by SB 1070 (Kehoe, 2016), the Monitoring Council developed a comprehensive monitoring program strategy for California to guide the improvements mandated by the legislation. As an advisory body, the Monitoring Council submitted this strategy for review, comment, and subsequent implementation in two reports to the two agency secretaries:</p> <ul style="list-style-type: none"> <li>• <a href="#">Monitoring Council Recommendations to Agencies</a>, December 2008</li> <li>• <a href="#">A Comprehensive Monitoring Program Strategy for California</a>, December 2010</li> </ul> <p>The Monitoring Council presented a vision for implementation that would be guided by the Council. Initial briefings were held with the Agency Secretaries and both appeared to be genuinely impressed with the strategy and the progress made by the Council and its workgroups.</p> <p>In the cover letter to the December 2008 recommendations report, the Monitoring Council committed to provide the Agency Secretaries with annual progress reports on strategy implementation. Progress reports have been submitted for 2009, 2010, and 2011. In the 2011 progress report, the Monitoring Council made a number of requests for action by the Agency Secretaries:</p> <ol style="list-style-type: none"> <li>1) Formally encourage the organizations within both agencies to       <ol style="list-style-type: none"> <li>a) Implement the Monitoring Council's strategy,</li> <li>b) Actively engage with the Monitoring Council and its workgroups, and</li> <li>c) Utilize the tools developed by the workgroups.</li> </ol> <p>The text of a proposed letter to organizational directors was enclosed.</p> </li> <li>2) Encourage additional collaboration in water quality and related ecosystem health monitoring, assessment, and reporting with organizations outside of Cal/EPA and the Natural Resources Agency.</li> <li>3) Endorse state stewardship of the National Hydrography Dataset and the National Wetland Inventory.</li> </ol>

- 4) Encourage the California Ocean Protection Council to embrace the Monitoring Council's strategy.
- 5) Raise awareness of the *My Water Quality* web portals and the coordination efforts of the Monitoring Council and its workgroups.

Cal/EPA Secretary Rodriguez was briefed in early 2012. He expressed interest in the strategy, portals, and workgroup activities. But the letter requested in (1) above was never sent, even after repeated inquiries had been made. Secretary Rodriguez directed that we wait on item (4) until the new Ocean Protection Council Director had been appointed.

Repeated inquiries were made to schedule a briefing with Natural Resources Secretary Laird. To date there has been no response to the annual report or to the request for a briefing to discuss the Monitoring Council's requests.

With limited funds, most of which have been supplied by the State Water Board, and only one full-time staff person dedicated to this effort, amazing progress has been made implementing the Monitoring Council's strategy in some key areas – wetland health, bioaccumulation (safe to eat), estuary health, and stream health. Wetlands has also received funding through the Water Board's development of a wetland and riparian area protection policy and from the Coastal Impact Assistance Program (CIAP), a federal funding program to help oil and gas producing states to conserve, protect and preserve coastal areas including wetlands. The Bioaccumulation Oversight Group and the Healthy Streams Partnership were logical outgrowths of the Water Boards' Surface Water Ambient Monitoring Program and their activities are largely funded by the Board and USEPA. Additional support has come to Healthy Streams through USEPA's Healthy Watersheds Initiative (agenda item 6 above). These three workgroups have developed impressive My Water Quality portals to bring their information to the public and are actively coordinating water quality and associated ecosystem health data collection and assessment activities, drawing on a multitude of partner organizations. The State and Federal Contractors Water Agency is funding initial development of the California Estuaries portal and co-leading the Estuaries Workgroup along with The Bay Institute; and significant progress is being made through collaborative efforts of a number of state and private entities focusing on the San Francisco Bay-Delta.

Other thematic areas have had less success. Viable leadership for an Ocean Health Workgroup and funding for portal development are still being sought. After a new data management system (BeachWatch) was developed to speed the delivery of bacterial indicator data to users, Safe-to-Swim still focuses exclusively on coastal beach monitoring, even though data systems developed with State Water Board staff and funding allow inland bacterial indicator data to be made readily available through CEDEN. The Safe-to-Drink portal only got off the ground after seed money was provided through a State Water Board contract. While that contract is likely to generate an interesting and informative portal, no effort has been made to coordinate water quality monitoring and assessment efforts in this area. A Data Management Workgroup was formed over a year ago to tackle issues of data management and sharing, web development, and geospatial information that are common to all thematic areas. However, existing silos of data continue to exist in all of the state governmental organizations listed in SB 1070. Breaking them down to provide access to each other's data will require a substantial investment by each organization. While selected staff participation in these workgroups has occurred from a number of state and non-governmental organizations, management commitment to fully

	<p>engage has only been achieved at the Water Boards. The lack of dedicated funding, high existing agency workloads, and the general absence of management direction to move coordination to a high priority have largely stymied progress to implement the Monitoring Council's vision.</p> <p>With a single coordinator and funding committed mainly from the Water Boards, implementation has nearly reached capacity. Without dedicated funding to initiate and maintain interagency coordination of monitoring, assessment, and reporting and the interconnection of agency data systems, and without management leadership from the nine government organizations listed in SB 1070 that coordination is a high priority, little more can be achieved.</p> <p>SB 1070 calls for full implementation of the strategy within a 10 year period. The legislation also calls on the Cal/EPA Secretary to conduct a triennial audit of the effectiveness of the monitoring program strategy.</p>	
<p><b>Attachment Links:</b></p>	<ul style="list-style-type: none"> <li>• <a href="#">Status Report: March 2013</a> – presentation by Jon Marshack</li> <li>• 2012 Monitoring Council Workgroup Annual Reports             <ul style="list-style-type: none"> <li>○ <a href="#">Safe to Swim Workgroup</a></li> <li>○ <a href="#">Bioaccumulation Oversight Group (Safe to Eat Fish and Shellfish)</a></li> <li>○ <a href="#">Safe Drinking Water Workgroup</a></li> <li>○ <a href="#">Wetland Monitoring Workgroup</a></li> <li>○ <a href="#">Healthy Streams Partnership</a></li> <li>○ <a href="#">Estuary Monitoring Workgroup</a></li> <li>○ <a href="#">Data Management Workgroup</a></li> <li>○ <a href="#">Water Quality Monitoring Collaboration Network</a></li> </ul> </li> <li>• <a href="#">2011 Annual Progress Report to the Agency Secretaries</a></li> </ul>	
<p><b>Contact Persons:</b></p>	<p>Jon Marshack</p>	<p><a href="mailto:Jon.Marshack@waterboards.ca.gov">Jon.Marshack@waterboards.ca.gov</a>, (916) 341-5514</p>
<p><b>Notes:</b></p>	<p>The annual report should emphasize what is working given the meager resources provided to date and voluntary participation without dedicated funding. Also indicate what we are unable to get done. With the lack of action by agency secretaries and lack of funding from the legislature, the program's future is uncertain. Point out who is not coordinating without beating up on them. Emphasize how participation can help them do their jobs and how what we are doing will help make management decisions better. Cite examples, such as Caltrans participation on wetland mapping and condition assessment in the Willits Bypass Project, where participation can add value. If we stopped tomorrow, how would the state be damaged? What opportunities would be lost?</p> <p>Dale Hoffman-Floerke expressed how differences in authority have affected involvement to date. Regulatory authority drives Water Board involvement to manage data needed for regulatory decisions. While the Resources Agency sees the benefits of collaboration, the lack of a regulatory role presents a barrier to participation. An exception exists with the Sacramento-San Joaquin Delta. The Delta Conveyance is a driver for the State and Federal Contractors Water Agency and aids coordination efforts of the Estuary Workgroup. The need to comply with Water Rights Decision D-1641 is a driver for participation by the Department of Water Resources. Flow standards are a driver for both the Water Boards and the Department of Water Resources. Even though everyone</p>	

	<p>working on the Delta is spread thin, the Delta Science Program of the Delta Stewardship Council desires a single unified scientific effort for the Delta, which enhances participation in the Estuary Workgroup by the Interagency Ecological Program. IEP is struggling with data management and access to data and the workgroup can help in these areas. Implementing the Bay Delta Conservation Plan will require wetland restoration project tracking and the Wetland Monitoring Workgroup has already developed the necessary tools and methods. The San Joaquin River Regional Monitoring Program will use tools already developed by the Estuary Workgroup to develop their portal. Another example of mandated coordination would be the sanitary surveys conducted by DWR for the Department of Public Health. Climate change adaptation plans present another area where data integration would help answer management questions. Better data flow and more in-depth assessments will help agencies to make better resource management decisions. Cite these as opportunities on the horizon – sharing QA/QC, data management, and tools.</p> <p>Show how expansion of collaboration will help them to do their work. Duplication of monitoring efforts wastes taxpayer dollars. The power of working together is greater than the sum of independent uncoordinated efforts.</p> <p>Safe to Drink, Safe to Eat, and Safe to Swim themes have seen significant improvement in data management, but not in monitoring. The Wetlands theme has seen substantial improvement in both monitoring and data management and the same potential exists for the Estuaries theme.</p> <p>Assembly Bill 378 would require making data available in a timely manner for the Delta. It needs to be consistent with SB 1070.</p> <p>Funding is needed for data integration via the internet – web services to break down existing data silos. A legislative mandate to make all data accessible to the public online would help to achieve this goal. Building web services is relatively inexpensive, especially as data systems are being developed. But web services are also needed on key existing state databases. Amye Osti mentioned that the Estuary Workgroup with the help of IEP will be making all of the D-1641 water quality data available soon via web services.</p>
<p><b>Decisions:</b></p>	<p>The annual report will have the following sections:</p> <ol style="list-style-type: none"> <li>1. Accomplishments (50%)</li> <li>2. Challenges (25%)</li> <li>3. Opportunities on the horizon (25%), but we need help to get there</li> </ol>
<p><b>Action Items:</b></p>	<p>Dale Hoffman-Floerke will ask other government organizations for additional examples of opportunities for expanded collaboration</p>

<p><b>ITEM:</b></p>	<p><b>8</b></p>
<p><b>Title of Topic:</b></p>	<p><b>MEETING WRAP-UP</b></p>
<p><b>Purpose:</b></p>	<p>Plan agenda for May 29, 2013 Monitoring Council meeting in Costa Mesa. Potential items include:</p> <ol style="list-style-type: none"> <li>1) 2012 Monitoring Council Annual Report to Agency Secretaries, including Workgroup reports</li> <li>2) Update on the USEPA Healthy Watersheds Initiative, California Project to</li> </ol>

	<p>assess watersheds throughout the state and identify healthy watersheds</p> <ol style="list-style-type: none"> <li>3) Update on potential state stewardship for California's portion of the National Hydrography Dataset and the National Wetlands Inventory (Jonathan Bishop and Dale Hoffman-Floerke)</li> <li>4) Possibility of holding an annual conference. A representative from the Maryland Monitoring Council should be invited to participate by phone (see <a href="#">May 2012 notes</a>, Item 2d)</li> <li>5) Water Board new effort to gather groundwater monitoring data in support of potential future programmatic actions (Eric Oppenheimer, John Borkovich)</li> <li>6) Begin discussion of potential endorsement by the Monitoring Council of a regional approach to monitoring, rather than discharge-specific receiving water monitoring</li> <li>7) Department of Fish &amp; Game monitoring (Glenda Marsh, Adam Ballard, Robert Holmes, Josh Grover, Chad Dibble, Pete Ode, Tom Lupo) <ol style="list-style-type: none"> <li>a) Coordination</li> <li>b) Financial support</li> <li>c) Flow</li> <li>d) Data Management – CEDEN for water quality data?</li> <li>e) Monitoring Council endorsement of collaboration?</li> </ol> </li> <li>8) Ocean Ecosystem Health <ol style="list-style-type: none"> <li>a) Plans for Ocean Ecosystem Workgroup and new Ocean Health Portal</li> <li>b) Areas of Special Biological Significance (ASBS) monitoring (Ken Schiff)</li> <li>c) Marine Protected Area (MPA) Monitoring Enterprise (Liz Whiteman)</li> </ol> </li> </ol>
<b>Desired Outcome:</b>	Develop agenda for the next meeting
<b>Contact Person:</b>	Jon Marshack <a href="mailto:Jon.Marshack@waterboards.ca.gov">Jon.Marshack@waterboards.ca.gov</a> , (916) 341-5514
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Coordination time and funding as well as state travel restrictions would limit the success of Item 4, above</li> <li>• IEP Annual Workshop is April 24 to 26 in Folsom. A poster on the Estuary Workgroup and portal development effort would be beneficial, in addition to the Monitoring Council and Healthy Streams posters.</li> </ul>
<b>Decisions:</b>	<ul style="list-style-type: none"> <li>• For the May 2013 meeting, emphasize Items 1, 5, and 6, above</li> <li>• Item 6 would cover recent state policies and plans and would involve better coordination at the state level on monitoring requirements, data, and use of data</li> <li>• Add an item on quantitative polymerase chain reaction (qPCR) methods for bacterial indicator monitoring of swimming safety at beaches and for shellfish beds. New USEPA recreational use criteria have opened the door to the use of qPCR methods. Steve Weisberg will coordinate this item.</li> </ul>