

CALIFORNIA WATER QUALITY MONITORING COUNCIL

Monitoring Council Meeting Notes

Wednesday, May 28, 2014 – 9:00 AM to 4:00 PM

Large Conference Room
Southern California Coastal Water Research Project (SCCWRP)
3535 Harbor Blvd., Suite 110, Costa Mesa



Monitoring Council Members and (Alternates) in attendance:

(Sean Bothwell) (Karen Larsen) (Ken Schiff)
Jonathan Bishop (Phil Markle) Beth Christman
Armand Ruby Stephen Weisberg

Others in attendance or on the phone:

Jamie Adorhold, CI Agent Stormwater Solutions
(Sara Aminzadeh, California Coastkeeper Alliance)
(Arne Anselm, Ventura County Watershed Protection District)
Brock Bernstein, independent contractor
(Rich Breuer, State Water Resources Control Board)
(Erick Burres, State Water Resources Control Board)
Julia Coates, California Ocean Science Trust and the California Coastal Water Research Project
(Jay Davis, San Francisco Estuary Institute)
(Stephanie Fong, State & Federal Contractors Water Agency)
(Karen Gehrts, Department of Water Resources)
(Tony Hale, San Francisco Estuary Institute)
Kris Jones, Department of Water Resources—Monitoring Council Assistant Director
(Jason Lofton, Sacramento Regional County Sanitation District)
Jon Marshack, State Water Resources Control Board—Monitoring Council Executive Director
Chase McDonald, Los Angeles County Sanitation District
(Lara Meeker, LA Waterkeeper)
(Angie Noorda, State Water Resources Control Board)
(Huyen Tran Pham, Office of Environmental Health Hazard Assessment)
(Linda Sheehan, Earth Law Center)
(Renee Spears, State Water Resources Control Board)
Steve Steinberg, Southern California Coastal Water Research Project
Lori Webber, State Water Resources Control Board
Liz Whiteman, California Ocean Science Trust
(Calvin Yang, State Water Resources Control Board)

ITEM:	1
Title of Topic:	INTRODUCTIONS AND HOUSEKEEPING
Purpose:	1) Introductions (in the room and on the phone) 2) Review draft notes from February 19, 2014 Monitoring Council meeting 3) Review agenda for today's meeting
Desired Outcome:	a) Approve February 19, 2014 Monitoring Council meeting notes b) Preview what will be covered today and overall meeting expectations c) Adjust today's agenda, as needed

Attachment Link:	Notes from February 19, 2014 Council meeting	
Contact Persons:	Kris Jones Jon Marshack	kristopher.jones@water.ca.gov , (916) 376-9756 jon.marshack@waterboards.ca.gov , (916) 341-5514
Notes:	Jon Marshack requested that we move Item 8 (Surface Water Ambient Monitoring Program Programmatic Review) before lunch, per the request of Phil Markle. The Monitoring Council members agreed with this change, and decided to move Items 6 (Triennial Audit) and 7 (Rocky Reef Assessment Index) after lunch.	
Decisions:	Notes from the February 19, 2014 meeting of the Monitoring Council were approved without amendment.	

ITEM:	2
Title of Topic:	ANNOUNCEMENTS AND UPDATES
Purpose:	<p>These are brief informational items that could be expanded into more detailed discussions for future meetings:</p> <ul style="list-style-type: none"> a) California participation in the National Water Quality Monitoring Council's 2014 Conference, April 28 – May 2, Cincinnati, Ohio (Jon Marshack) b) Successful Collaborations Presentation to the March meeting of the Delta Stewardship Council (Sarge Green) c) Delta Stewardship Council's Delta Science Plan Data Summit (Karen Larsen) d) New Quality Assurance/Quality Control website of the State Water Board (Renee Spears)
Desired Outcome:	Information and comment
Background:	<ul style="list-style-type: none"> a) National Monitoring Conference – The National Water Quality Monitoring Council, co-chaired by USEPA and USGS, holds a national monitoring conference every two years. California has participated in past conferences and made oral and poster presentations on the Monitoring Council, its workgroups, and the My Water Quality portals. The 9th National Monitoring Conference was held April 28 to May 2, 2014 in Cincinnati, Ohio. The agenda included a number of California Water Quality Monitoring Council-related presentations, including an oral presentation on the Triennial Audit and posters on three of the My Water Quality portals. b) Delta Stewardship Council Presentation – At the Delta Stewardship Council's March 28 meeting, Sarge Green participated in the panel discussion "Lessons from Coordination Efforts in the Delta" in which he reviewed the progress of the Monitoring Council to build collaborative relationships between agencies and stakeholders. c) Delta Science Plan Data Summit – The Delta Science Program plans to hold a Data Summit on June 5-6, 2014. The Delta Science Plan included an action to hold a Data Summit. The plan committed the Science Program to "Host a data summit to explore and identify needed improvements to cyber-infrastructure, data management capacity, and mechanisms to facilitate active data sharing, data mining, and analysis. Information generated in the

	<p>Summit will inform the Science Action Agenda, support innovations in data integration and management, and develop paths for enhancing and sustaining current initiatives.” The summit will be held at UC Davis on June 5th and continued at the Cal/EPA Headquarters Building in Sacramento on June 6th.</p> <p>d) Water Board QA/QC Website – Provides guidance information for Water Board staff, the public, and all other interested parties about Quality Assurance and Quality Control as it relates to obtaining water quality data. This site describes the Quality System developed by US EPA. Subsequently, the Water Boards have created planning documents based on this system. The site was created as a repository for guidance information for Water Board staff and the public who are preparing Quality Assurance Project Plans, Program Plans, and other types of QA/QC documents; and to serve as a catalogue of online QA/QC training developed over the years, largely by the Surface Water Ambient Monitoring Program (SWAMP).</p>	
<p>Attachment Links</p>	<p>a) Working Together for Clean Water, the 9th National Monitoring Conference</p> <ul style="list-style-type: none"> • Conference Program • Abstracts <p>b) “Success in the Delta through collaboration and coordination: The California Water Quality Monitoring Council, the Yolo Bypass Foundation, and the Cosumnes River Preserve” – Maven’s Notebook article on presentations made to the Delta Stewardship Council’s March 28, 2014 meeting.</p> <p>c) Environmental Data Summit website</p> <p>d) The Quality Assurance/Quality Control Website at the State Water Resources Control Board – presentation by Renee Spears</p> <p>Water Board QA/QC website</p>	
<p>Contact Persons:</p>	<p>Jon Marshack Kris Jones</p>	<p>jon.marshack@waterboards.ca.gov, (916) 341-5514 kristopher.jones@water.ca.gov, (916) 376-9756</p>
<p>Notes:</p>	<p>a) National Monitoring Conference – Jon Marshack provided an update regarding the 9th National Monitoring Conference which was held April 28 to May 2, 2014 in Cincinnati, Ohio. Jon provided oral presentations for the Monitoring Council’s Triennial Audit, as well as the work of the Wetland Monitoring Workgroup. He also presented posters for both the Wetland Monitoring Workgroup and Estuary Monitoring Workgroup and their My Water Quality portals. Jon indicated that a number of other California Water Quality Monitoring Council (CWQMC) workgroup members presented at the conference including the Water Quality Monitoring Collaboration Network coordinator Eric Burres (presented poster for the Safe to Swim Portal, and led an extended session regarding web based tools for citizen scientists). The San Francisco Estuary Institute presented their work relating to the California Rapid Assessment Method (CRAM) and EcoAtlas. Jon then discussed feedback he received from other National Monitoring Council Members and conference participants of how California’s efforts compared to other states, indicating that California appeared to be far ahead of many other states. He added that California has done far more to bring data together in a meaningful way, rather than just access to raw data. Stephen Weisberg asked whether other states have done something that we can learn from. Jon mentioned that we could do more in terms of advocacy. He also felt that the concept of an annual conference could be a draw to get more</p>	

- people involved, although the logistics of such a conference might be difficult.
- b) **Delta Stewardship Council Presentation** – Sarge Green was not able to attend this meeting of the Monitoring Council. So, Jon Marshack provided a brief update regarding Sarge Green’s presentation at the Delta Stewardship Council’s March 28 meeting, in which he reviewed the progress of the Monitoring Council in building collaborative relationships between agencies and stakeholders. Jon indicated that Sarge’s presentation was well received and provided a link to a related article on [Maven’s Notebook](#).
- c) **Delta Science Plan Data Summit** – Karen Larsen provided an update regarding the upcoming [Environmental Data Summit](#) (June 5-6, 2014). She mentioned that the impetus of the summit was AB378, which was intended to break down the current silos of monitoring and research data collected about the Sacramento-San Joaquin Delta. Karen indicated that the first day of the summit will take place at UC Davis. She added that the plenary session will include some heavy hitting discussions regarding data integration and display of these data. As part of the Summit, there will also be a review of existing data systems, including CEDEN, EcoAtlas, and the Estuary Portal, for example. She then mentioned that the second day would take place at the Cal/EPA Headquarters building in Sacramento, and would involve breakout sessions to discuss topics such as data integration, data libraries, business models and data presentation tools. She added that the goal is to take the information and discussions from the summit and develop a vision document detailing how we might achieve these goals, with the intended audience being legislative staff.
- d) **Water Board QA/QC Website** – Renee Spears (QA Officer for the State Water Board) provided an [overview of the new QA/QC website at the State Water Board](#). The website debuted in January 2014, and will evolve to include more information such as guidance documents. The intention of the website is to serve as a repository of developed QA/QC documents. Renee indicated that QA/QC is one of the tools that SWAMP provides to other programs, agencies, and organizations to help ensure water quality data are generated of a quality needed to respond to management questions and to document data quality. Renee asked the Monitoring Council to review the website and provide Renee with comments, for example, whether there should be additional information included that is currently absent from the website. Renee added that she and SWAMP are currently conducting outreach with various groups to try and get such feedback. Jon Marshack mentioned that SWAMP is a key player in the CWQMC’s Strategy for providing tools for quality assurance, data quality and data management. He added that this is an opportunity to enhance the quality of data generated by others, including our partner organizations. Brock Bernstein indicated that he has reviewed many QAPPs over the years, trying to comply with SWAMP guidelines. He mentioned that he felt that the SWAMP outline should be modified and consolidated to be more useful to the user. He mentioned that what is missing from many QAPPs is an explanation of information needed for decision making. Lori Webber mentioned that the current framework does not have the feedback loop for evaluating the data quality objectives before getting into a project. She added that this is an important component that is currently lacking, and an issue of which they are aware and working to resolve. Armand Ruby agreed with the need for this component. He also asked about the role of the Moss Landing Marine Labs website in these efforts. Jon Marshack indicated that there is currently a reorganization taking place to have the work developing the guidance documents all in one shop at the State Water Board. Lori added that this transition would involve moving

	<p>away from having this work carried out and housed at Moss Landing, and in the long term having everything on the State Water Board website. Stephen Weisberg asked how this QA/QC website will be used by the CWQMC. Jon mentioned that this website will help provide key links from the various portals that rely on this sort of QA documentation. He added that it should help raise standards for data quality. Lori added that these efforts also serve to raise awareness of QA/QC. Steve Weisberg mentioned that the website could expand into other areas, such as beach and sediment monitoring. Phil Markle asked whether Renee and SWAMP envision having the portal document the level of quality of the data (e.g., based on SWAMP standards). He added his concerns regarding the potential to lose citizen monitoring data because they do not meet certain standards. Because different data quality objectives exist depending on the proposed use of the data, SWAMP's main emphasis is to ensure that data are of known and documented quality.</p>
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ITEM:	3	
Title of Topic:	MONITORING COUNCIL EXECUTIVE DIRECTOR AND ASSISTANT DIRECTOR	
Purpose:	Karen Larsen presented a proposal to the Monitoring Council to elevate the full-time Council Coordinator position to Council Executive Director and to revise the Coordinator title to Assistant Director.	
Desired Outcome:	Discuss and vote on a proposal to change the title of the Council's full-time Coordinator to Executive Director, to change the title of the Council's half-time Coordinator to Assistant Director, and to amend the Monitoring Council's governance document to reflect these changes (if approved).	
Background:	<p>Recently the State Water Board management upgraded Jon Marshack's position from Senior Environmental Scientist (Specialist) to Environmental Program Manager I (Non-Supervisory). The justification for upgrading the position was the level of interaction this position has with Executive Managers at State agencies and external organizations as well as the increased work load related to the number of work groups formed to achieve the Council's charge. In addition, the EPM I classification will improve the Council's ability to attract high caliber incumbents to the position in the future. Jon Marshack has also recently been appointed to represent the Pacific Southwestern States on the National Water Quality Monitoring Council. Commensurate with the upgrade to the Water Board position and the appointment to the National Council, the Monitoring Council's Cal/EPA representatives propose to elevate the title of the full-time position in the Council's governance document. Concurrent with this change, Kris Jones' Coordinator position would be retitled Assistant Director.</p>	
Attachment Link:	Amendments to the Monitoring Council's governance document	
Contact Person:	Karen Larsen	karen.larsen@waterboards.ca.gov , (916) 319-9769
Notes:	At the previous Monitoring Council Meeting, Karen Larsen discussed Jon Marshack's promotion from Senior Environmental Scientist (Specialist) to Environmental Program Manager I (Non-Supervisory). Karen indicated that the justification for upgrading the position was the level of interaction this position has with Executive Managers at State agencies and external organizations as well as the increased work load related to the number of work groups formed to	

	<p>achieve the Council's charge. In conjunction with Jon's promotion, Karen suggested changing Jon's title from Monitoring Council Coordinator from the California Environmental Protection Agency to Executive Director. She also suggested changing the title of the Monitoring Council Coordinator from the Natural Resources Agency, Kris Jones, to Assistant Director. If approved, these updates would then be changed in the governance documents. Karen indicated that elevating the title for these positions would serve to better enable Jon and Kris to communicate with executive level staff. She added that she envisioned that these titles would also serve to attract high caliber staff to these positions in the future.</p> <p>Jonathan Bishop indicated that he was supportive of raising the status of the Monitoring Council positions, not only for how these title changes will raise the profile of Monitoring Council staff that should benefit outreach with executive level staff, but also for attracting good talent to these positions in the future. Beth Christman indicated that she agreed that the title does help with getting more face time and buy in with executives. Jonathan Bishop asked whether the group should move forward with this motion. The motion to change the titles of Jon Marshack to Executive Director and Kris Jones to Assistant Director was made by Armand Ruby and seconded by Steve Weisberg.</p> <p>Armand Ruby asked that "facilitate Monitoring Council meetings" be added to the description of Executive Director and Assistant Director duties in the Governance document.</p>
Decisions:	<p>The Monitoring Council members approved proposed changes to the Governance document amending the title for Jon Marshack to Executive Director and Kris Jones to Assistant Director. The vote was unanimous (no dissenting votes).</p>

ITEM:	4
Title of Topic:	OCEAN ECOSYSTEM HEALTH WORKGROUP AND PORTAL
Purpose:	<p>Liz Whiteman of the Ocean Science Trust and their consultant Brock Bernstein described a recent collaborative project to develop a roadmap that will guide the work of an ocean workgroup towards an ocean-themed portal on the My Water Quality website.</p>
Desired Outcome:	<ul style="list-style-type: none"> • Receipt by the Monitoring Council of the roadmap as guidance for advancing an ocean and coastal workgroup • Discussion of opportunities to maintain the momentum created by the scoping group participating in the roadmap development
Background:	<p>The Monitoring Council has identified ocean and coastal waters as a key theme area for workgroup formation and portal development within the context of the My Water Quality website. However, the potential scope of an ocean theme area is enormous and it has been unclear how to prioritize questions or areas of focus. The California Ocean Science Trust, working in partnership with Monitoring Council partners, collaborators and content experts, created a scoping group to develop a roadmap that charts a clear path forward for an ocean workgroup to work towards achievable, cost-effective content and a technical development strategy for the ocean-themed component of the My Water Quality website. Liz Whiteman and Brock Bernstein shared key</p>

	<p>components of the roadmap which identifies:</p> <ol style="list-style-type: none"> 1) Focal areas or questions within the ocean realm that bridge the water quality and marine resource monitoring communities, provide useful information for a broad audience, and build upon existing projects and programs; and 2) Cost-effective development options that effectively leverage existing investments in web-based platforms and data sharing tools. <p>The process to develop the roadmap has set the stage for an enduring collaboration among data providers and users in the ocean realm, across multiple regulatory and management dialogues.</p>	
Attachment Links:	<ul style="list-style-type: none"> • Ocean Ecosystem Health Workgroup and Portal – presentation by Brock Bernstein • My Water Quality Ocean Portal Roadmap 	
Contact Person:	Liz Whiteman Brock Bernstein	liz.whiteman@calost.org , (510) 251-8317 brockbernstein@sbcglobal.net , (805) 646-8369
Notes:	<p>Brock Bernstein presented the work detailed in the My Water Quality Ocean Portal Roadmap. He opened by describing their approach, which he acknowledged was very similar to the approach the Monitoring Council has taken with the development of previous workgroups and internet portals. The Ocean Health Scoping Group is working towards developing a framework that is question driven, with a single point of access. Moving forward, Brock indicated that there are several opportunities to improve the visibility and coordination between existing research and monitoring efforts. He then presented the work, as detailed the roadmapping document. Brock emphasized that the group's plan is to identify and engage key audiences and stakeholders for the development of the workgroup and portal efforts. He acknowledged that previous Monitoring Council portals that were developed independently of issue experts and key stakeholders have been much less successful. The goal is to try and develop the portals in a way that would directly address the users' needs. The group envisioned three audiences: 1) high level policy makers and stakeholders; 2) Agency and NGO managers; and 3) scientists. Brock also discussed how the scoping group envisioned that there would be flexible entry points into the portal, which would incorporate three key design principles, including allowing for future adaptation and expansion, avoidance of attractive dead ends that close off future options, and tune presentation to needs of multiple audiences. Jonathan Bishop asked what Brock meant by 'attractive dead ends'. Jon Marshack indicated that the data management workgroup, for example, is recommending that the workgroups should use open source formats when developing their portals and web-based tools; open source formats allows a certain level of flexibility for portal creation and maintenance over relatively long time frames.</p> <p>Brock then showed a generic governance diagram, which laid out the framework for how the workgroup might be organized. Under the umbrella of the Ocean Workgroup, the diagram illustrated how there would be subcommittees, which specialize in efforts relating to certain subject matters. Brock laid out three example case studies, which could comprise the first efforts of the Ocean Health Workgroup: 1) protected areas and water quality; 2) harmful algal blooms (HABs); and 3) ocean acidification. Brock also mentioned that the topic of marine debris was also identified as an area of importance, which may be prioritized as the group moves forward. As has been the case for the Monitoring Council's</p>	

	<p>other workgroups, he indicated that the developing workgroup would need to conduct focused outreach to bring in issue experts for these specific areas.</p> <p>Following Brock’s presentation, Liz Whiteman pointed out that the roadmap combines the vision for the future, but also tries to address low hanging fruit. She mentioned that they are open and interested in getting feedback regarding the case studies as well as whether there are suggestions for other topics to consider. Phil Markle asked what the Monitoring Council needs to do to implement. He continued by asking who will be working on this effort and who would lead these efforts? Several Monitoring Council members indicated that there needs to be a direct link between the Ocean Protection Council (OPC) and the Ocean workgroup, as well as commitment of organizations to the cause (e.g., OPC, CDFW, Water Boards). Liz mentioned that the Ocean Science Trust (OST) is committed to this effort. Stephen Weisberg asked whether others in the scoping group were as committed as Liz and the OST? With regard to outreach, Jon Marshack indicated that the California Department of Fish and Wildlife should be included in their efforts relating to HABs, as should the Department of Water Resources.</p> <p>Jonathan Bishop indicated that he was not clear on what the next steps should be for the workgroup. Liz indicated that a new version of Ocean Spaces will soon launch, and there is a portion that relates to state issues relating to water quality. She envisioned that this could be a first step in terms of visibility, and a potential means of eliciting involvement in and funding for the workgroup. Liz also indicated that an upcoming OPC Science Advisory Team was addressing the concept of ocean health and that this, with Johnathan Bishop’s involvement, may represent the next step towards a broader ocean health workgroup.</p> <p>Armand Ruby expressed concerns regarding the approach of focusing on case studies, as is detailed in the scoping document. He indicated that the workgroups proposed approach does not follow the same question driven approach of the other Monitoring Council Workgroups. Kris Jones suggested that the group could address this issue when organizing and developing the portal; the questions could be developed in a way that would be inclusive of these subject areas. Stephen Weisberg mentioned that he thinks that the group needs a leader, and suggested Liz Whiteman serve as the leader for areas relating to Marine Protected Areas and water quality. Stephen mentioned that he could serve in a similar role for work relating to Ocean Acidification working with California Current Acidification Network (C-CAN). Stephen also mentioned that he would coordinate with Kris Jones to have a meeting with Raphael Kudela (UC Santa Cruz) to discuss the possibility of Raphael serving as chair for a HABs subgroup. Jonathan Bishop volunteered to help by making contacts (e.g., RLF).</p>
<p>Action Items:</p>	<ul style="list-style-type: none"> • Kris Jones will coordinate with Liz Whiteman and Stephen Weisberg regarding their potential roles as subgroup leads for protected areas/water quality and ocean acidification, respectively. • Kris will also work with Liz and Stephen to help identify potential workgroup chair(s) to lead the broader workgroup. • Stephen Weisberg and Kris Jones will meet with Raphael Kudela (UC Santa Cruz) to discuss the possibility of his serving as chair for a HABs subgroup. • Kris, Liz and Stephen will conduct outreach for additional workgroup members and report back at the next Monitoring Council meeting.

ITEM:	5	
Title of Topic:	MARINE PROTECTED AREA (MPA) MONITORING ENTERPRISE AND COORDINATION WITH ASBS MONITORING	
Purpose:	Liz Whiteman of the Ocean Science Trust provided an update to the Monitoring Council on marine protected area (MPA) monitoring in California, including steps underway to advance towards a partnerships-based monitoring portfolio that supports the state in working towards healthy, resilient, and productive ocean and coastal ecosystems.	
Desired Outcome:	<ul style="list-style-type: none"> • Informational item • Discussion about opportunities to strengthen linkages and coordination among resource management and water quality monitoring programs 	
Background:	California's statewide network of MPAs has provided a needed opportunity to reframe the way that we think about MPA monitoring. The network regulates the extraction of living marine resources but performance will be measured against broad ecosystem protection policy goals and a backdrop of many other system impacts, drivers and pressures. The California Ocean Science Trust, working in partnership with resource managers, scientists, tribes, and the ocean community, has developed and begun testing an approach for building a partnerships-based monitoring program that is efficient and cost-effective. Liz Whiteman will share an update on the regional MPA monitoring programs including new collaborations to explore alignment between MPA and Areas of Special Biological Significance (ASBS) monitoring programs and new approaches to design and launch long-term monitoring in the Central Coast region.	
Attachment Link:	Monitoring California's MPAs: Building a partnerships-based monitoring portfolio – presentation by Liz Whiteman	
Contact Person:	Liz Whiteman	liz.whiteman@calost.org , (510) 251-8317
Notes:	<p>Prior to her presentation, Liz Whiteman indicated that the Ocean Science Trust (OST) would like to continue exploring opportunities to build partnerships. She added that her presentation would not focus on the science, but rather the opportunities for partnerships and collaborations.</p> <p>Liz indicated that the OST was asked to evaluate what a monitoring program would look like that would assess marine protected areas. She described a new approach to monitoring, one where they evaluate stakeholder priorities, engage diverse scientific expertise, foster new ways to participate, and share these data and information with a broad audience. In terms of what is next to come, Liz indicated that they have plans to develop their monitoring efforts in the central coast, and will be updating their monitoring plan. They will draw upon knowledge acquired from baseline monitoring and apply a monitoring framework, which reflects stakeholder and management priorities. It would serve multiple mandates; for example, their approach would address the requirements of the Marine Life Protection Act (MLPA), but also collect and present data in a way that serves California more broadly.</p> <p>Liz continued to describe their approach for developing an MPA monitoring</p>	

	<p>program, one which leverages existing capacity, gauges interests among stakeholders, identifies gaps, and shapes resource needs. She also indicated that their approach would better coordinate efforts where overlaps occur with water quality monitoring programs. To carry out these efforts, Liz indicated that a potential state investment in monitoring could be framed as seeding a long-term monitoring effort, setting the stage for resource leveraging. In this scenario, a combination of RFQs, RFPs and partnership agreements can be used to build a cost-effective program. Liz indicated that this approach should foster collaborations among existing efforts.</p> <p>The Ocean Science Trust has developed and released a survey to identify the geographic and temporal coverage of monitoring activities inside and outside of Central Coast MPAs, and the compatibility of those activities with the metrics and priorities outlined in the draft Central Coast MPA Monitoring Plan. Data from the survey will also highlight potential partnerships and opportunities to build upon existing capacity in the region.</p> <p>With the completion of the statewide network of MPAs and the opportunity to build a long-term monitoring program, the Ocean Science Trust is exploring how that program can ‘put the MPAs to work’ for California; building on the investment made to serve California broadly. Liz shared examples including:</p> <ol style="list-style-type: none"> 1) Ongoing research to explore the spatial scales of variability in ocean acidification and hypoxia and mapping these to MPAs and scales of variability in habitats and communities. 2) Coordination among the Bight regional monitoring program and South Coast MPA Baseline Program researchers, facilitated through a joint OST SCCWRP Science Integration Fellow. <p>The OST sees these programmatic collaborations as a means of answering shared science questions in a more efficient and collaborative manner.</p> <p>Sara Aminzadeh mentioned that she appreciated the OST’s willingness to collaborate and wanted to emphasize that the goal is not just to build portals, but also to improve the current state of research and monitoring in these areas, improving data access and integration. She added that improved coordination among MPA and ASBS monitoring and research efforts is a great example of the benefits of this approach.</p>
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ITEM:	6
Title of Topic:	TRIENNIAL AUDIT OF THE MONITORING COUNCIL’S STRATEGY
Purpose:	Jon Marshack and Kris Jones presented a draft of the First Triennial Audit Report, followed by discussion among the Monitoring Council Members, Alternates, and EPA Liaison.
Desired Outcome:	<ul style="list-style-type: none"> • Approval of the first Triennial Self-Audit of implementation of the Monitoring Council’s comprehensive monitoring program strategy • Discussion on to whom the report should be addressed, publicity, and next steps
Background:	SB 1070 , specifically California Water Code Section 31383(h), and the MOU that created the Monitoring Council require that the Secretary of Cal/EPA, in consultation with the Secretary of the California Natural Resources Agency,

	<p>conduct a triennial audit of implementing the Monitoring Council's A Comprehensive Monitoring Program Strategy for California (2010). Cal/EPA Secretary Matthew Rodriguez requested that the Monitoring Council perform a self-audit.</p> <p>This is a continuation of Item 6 from the December 12, 2013 Monitoring Council meeting and Item 5 from the February 19, 2014 Council meeting. During those meetings, the Monitoring Council heard presentations and reviewed progress reports from the seven theme-specific workgroups, the Data Management Workgroup and the Water Quality Monitoring Collaboration Network, followed by a discussion of common themes, concerns and recommendations.</p> <p>Monitoring Council Coordinators Jon Marshack and Kris Jones outlined the workgroup progress reports in a summary table that ranks each of six performance measures against rating benchmarks from the Monitoring Council's <i>Strategy</i> and 2008 Initial Recommendations Report. Also in the summary table, explicit needs and additional necessary collaborators were identified by each workgroup. The summary table and individual workgroup progress reports comprise an appendix to the draft Triennial Audit Report.</p> <p>In February, Jon Marshack presented a draft outline of the Triennial Audit Report, identifying goals, accomplishments, challenges, unaddressed mandates, sustainability, next steps, and recommendations. The Monitoring Council provided feedback and instruction on turning the outline into a draft of the report.</p> <p>The proposed recipients of the report include the Secretaries of Cal/EPA and the Natural Resources Agency and key legislators.</p>	
Attachment Links:	<ul style="list-style-type: none"> • Increasing Efficiency and Effectiveness through Collaboration: First Triennial Audit of Implementing A Comprehensive Monitoring Program Strategy for California – presentation by Jon Marshack • Draft of the First Triennial Audit Report • Notes from the February 19, 2014 Monitoring Council meeting (see Item 5) • Notes from the December 12, 2013 Monitoring Council meeting (see Item 6) • CA Senate Bill 1070 (Statutes of 2006, specifically Water Code §13181(h)) • Memorandum of Understanding (MOU) establishing the Monitoring Council (see section IV, 4 on page 4) • Comprehensive Monitoring Program Strategy (see page 22) • Monitoring Council's 2008 Initial Recommendations report (see page 11 and Appendix 3) 	
Contact Persons:	Jon Marshack Kris Jones	jon.marshack@waterboards.ca.gov , (916) 341-5514 kristopher.jones@water.ca.gov , (916) 376-9756
Notes:	<p>Jon Marshack presented the draft Triennial Audit report, which was based on feedback from the February 19th Monitoring Council meeting. Following his presentation, he asked for feedback from the Monitoring Council. Specifically, he asked whether the Monitoring Council members approved of the way in which the report was framed. Jon also asked how the group felt the report should be used to further the goals of the Monitoring Council.</p> <p>Sean Bothwell asked whether there were any specifics regarding legislative approaches for support? Jon mentioned that he had conversations with Tina</p>	

Cannon Leahy (Principal Consultant to the Assembly Committee on Water, Parks and Wildlife) regarding additional legislative support. Tina indicated that she would like to wait for the outcome of the Delta Stewardship Council's Environmental Data Summit (June 5-6, 2014) before proposing any new legislative language. Phil Markle asked about the section relating to Challenges and Recommendations, as he felt that this section should have more detail. For example, what are the resources that would be required to break down the silos? Which agencies should we first focus our efforts? He thought that it would be good to provide those details. Phil also thought that the audit could help serve as a means to track progress. Jon explained that the audit proposes that each of the workgroups develop a business plan that would provide those details. The business plans could be combined in a future audit report.

With regard to recommendation 3a (page 7 of the [Triennial Audit Report](#)), Phil suggested that we modify the language from 'Allow their staff to participate' to 'encourage'. Karen Larsen took this further and suggested that we modify the language to say 'direct' staff to participate. Phil added that he thinks that we should include a discussion of agencies that we have contacted and who have not yet been as cooperative. Jon Marshack indicated that the workgroup business plans would also address this issue. Stephen Weisberg thinks that the document is too thorough and not readable. Stephen added that currently the document is not concise enough for our target audiences (e.g., the agency secretaries). He added that he thinks that the people we need to convince would not read past the first page of the document. He recommended that we create an executive summary, as well as a roadmap to the report – purpose, document layout, pointers to specific topics. Use successes as a springboard for action. The executive summary would start with why the audit is occurring, give 3 to 5 bullets of major accomplishments, point out that this is a great opportunity for further success, and end with, What do we do from here?, based on the recommendations. The audience would be agency secretaries and legislative aids.

Jonathan Bishop added that he did not think that it would be fruitful to revisit the MOU (recommendation 4; page 7 of the [Triennial Audit Report](#)), unless there is buy in from the Natural Resources Agency to do so. It would need to be a collaborative effort. Jonathan also was hesitant to bother the agency secretaries, unless we felt it was absolutely necessary. Beth Christman asked whether there were any negatives to contacting the agency secretaries. Stephen Weisberg mentioned that the first three recommendations are internal Monitoring Council-related issues that do not need to be raised to their level. He added that he felt that is important for us to highlight recommendations that are at the level of the agency secretaries. Karen Larsen commented that she did not feel that recommendation 3 is necessarily an internal issue. Jonathan suggested that we change the language from 'revisit the MOU' to asking the secretaries to convene the department heads regarding their data needs and how the Monitoring Council could help them further their goals. He added that he did not feel that revisiting the MOU was the best approach.

Stephen Weisberg suggested that if the agency secretaries are not responsive that we should change our target audience. He added that he did not think that we are a big enough success or failure to warrant their attention, indicating that the secretaries focus is on bigger issues (e.g., climate change, Delta tunnels etc.). Write to the legislature and ask for a legislative briefing. Brock added that perhaps we might adjust our approach, as a number of the Monitoring Council's workgroups are pursuing areas that have a direct link to climate change (e.g., work in the Delta, ocean acidification, etc.). Jonathan Bishop suggested that any

	recommendations we make should be focused. He added that we should consider having two recommendations. The first would be addressed to the agency secretaries, and would request the much needed top-down support for departmental staff to participate in the Monitoring Council's workgroups – dedicated staff time for this coordination and portal development effort, not just attending meetings, but doing the background work as well. The second would be addressed to the legislature (e.g., Kip Lipper), and would request a dedicated source of funding and positions for coordination, data management, portal development, etc. (provide examples of needs). The intent of SB 1070 cannot be achieved without such ongoing support. It was also suggested that a letter be developed to heads of appropriate legislative committees asking for briefings.
Decisions:	The Monitoring Council members agreed that Jon Marshack and Kris Jones should modify the Triennial Audit Report based on the comments provided (see above).
Action Items:	Jon Marshack and Kris Jones will make the recommended modifications to the Triennial Audit Report for distribution to the Monitoring Council Members prior to the next Monitoring Council meeting.

ITEM:	7
Title of Topic:	ROCKY REEF ECOSYSTEM ASSESSMENT INDEX
Purpose:	Julia Coates, shared Fellow between California Ocean Science Trust and the California Coastal Water Research Project, described development of a rocky reef index of ecosystem status, based on collaboration between the natural resource and water quality management communities.
Desired Outcome:	Informational item. Discussion about utilizing the index for other council needs including the Ocean Health portal.
Background:	The Southern California Coastal Water Research Project and the Ocean Science Trust hired a joint post-doctoral researcher, Dr. Julia Coates, to help bridge the perceived gap between the water quality and natural resources communities. One opportunity to accomplish this connection was the development of a rocky reef index of ecosystem status to address the question: "Which has more effect on rocky reef communities, fishing pressure or water quality?" The index follows analytical frameworks for quantifying biological health and stressor response utilized in the Council's Healthy Streams portal. Working in collaboration with the Southern California Bight Regional Monitoring Program, Dr. Coates has interacted with the Marine Protected Area Monitoring Enterprise (a program within the Ocean Science Trust), SCCWRP, numerous regulated water quality agencies, and several universities to help generate indices of water quality and fishing pressure for application of her rocky reef ecosystem status index to address the study question.
Attachment Link:	An index of ecosystem status for Southern California shallow rock reefs – presentation by Julia Coates
Contact Person:	Ken Schiff kens@sccwrp.org , (714) 755-3202
Notes:	Julia Coates presented her research relating to the development of a rocky reef

ecosystem assessment index. She mentioned that California has struggled to effectively manage many harvested species associated with rocky reefs, which has led to the functional extinction of numerous species (e.g., white abalone). Additional impacts include changes in abundance and size structure. Julia then acknowledged that the state, like many areas in the world, is increasingly turning to ecosystem based approaches. However, she indicated that monitoring the entire ecosystem is challenging. There is a great deal of natural variability—both spatial and temporal. There is also variation in anthropogenic stress, such as fishing pressure and water quality. Julia discussed how there is a need for quantitative and repeatable methods for evaluating ecosystem integrity, which link natural resource management and water quality communities. Their approach was to create quantitative indices that consider both the stressors and the ecology, to look at whether fishing or water quality has more of an impact. One of the challenges they faced was how to allocate fishing pressure to individual reefs (e.g., current vs. historical, catch amount vs. effort, etc.). Since commercial and recreational fishing are regulated and documented in California, she was able to use reports from these areas to quantify the total amount harvested (both historical and current).

For the development of the water quality indices, she developed a risk-based framework, which considered the function of magnitude (load) and frequency of exposure (plume frequency). Her initial focus was on two major sources: 1) POTWs; and 2) storm water. She only focused on nitrate, copper and total suspended solids (TSS), and generated a GIS layer of the water quality index for the entire bight. In terms of the biological impact, she developed a multivariate, ecosystem-level biological index, which integrates direct and indirect effects due to organism interactions. The approach incorporates a framework to account for habitat variability, and which focuses on variation due to stress. Julia then went over additional details regarding her methods.

From her study, she concluded that the collaboration between water quality and resource management aspects was a success. Also, this study demonstrated that it is possible to build a biological index for a marine habitat, which separates reference from non-reference conditions. Her results suggest that fishing pressure may be a bigger stressor than water quality for rocky reef ecosystems. She closed by saying that the results from her study would make a great addition and could be incorporated into the Ocean Ecosystem Health Portal.

Jonathan Bishop asked whether she considered any additional water quality parameters to evaluate. Julia indicated that they have tried others (e.g., zinc), and there was little difference in the patterns that they observed. Sean Bothwell asked whether Julia could modify her approach to use other stressors, such as impingement by cooling water intakes. Julia and Ken both agreed that it would be possible. Jonathan Bishop said that Julia has now accomplished her initial goal, examining the relative importance of water quality vs. fishing pressure on rocky reef ecosystems. He then asked whether she could modify the question to look at how this differs between ASBSs and non-ASBSs. Is increased protection helping? Could something similar be applied by incorporating MPAs (comparing inside versus outside MPAs)? Julia thought that her approach could certainly be modified to explore these questions.

Jonathan Bishop asked whether they have any plans following this study. Julia indicated that the Bight MPA group has suggested developing other indices. Ken added that they will document this work, and will conduct a similar study for soft bottom fishes. Steve Weisberg highlighted the point that this project represents the blending of the MPA and ASBS monitoring programs.

	<p>Ken Schiff asked whether they should consider hiring another post-doctoral fellow to conduct similar research on the soft bottom fishes. Jonathan Bishop acknowledged that he would like to see this done, but was also interested in what it would take to migrate Julia's work to California's Central Coast, an area with less population pressure. A collaboration between the Central Coast Ambient Monitoring Program (CCAMP), the Central Coast Long-term Environmental Assessment Network (CCLEAN), and the Monterey Bay Aquarium Research Institute (MBARI) was suggested.</p> <p>Julia has accepted a position with the Marine Division of the California Department of Fish and Wildlife in Santa Barbara.</p>
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ITEM:	8	
Title of Topic:	SURFACE WATER AMBIENT MONITORING PROGRAM – PROGRAMMATIC REVIEW	
Purpose:	Lori Webber provided information on the programmatic review currently under way within the Surface Water Ambient Monitoring Program (SWAMP)	
Desired Outcome:	Monitoring Council Member input on what SWAMP does well for the Monitoring Council and what the Monitoring Council would like to see improved	
Background:	Water Board executive management has asked SWAMP to conduct an internal programmatic review and report back with recommendations for changes to the program. Rather than a technical review, this programmatic review involves a critical evaluation of the program and its priorities, with an opportunity to change the focus of program activities and to renew commitment to coordination with other Water Board programs. The review is to be completed in June of this year.	
Attachment Link:	SWAMP Programmatic Review - presentation by Lori Webber	
Contact Person:	Lori Webber	Lori.webber@waterboards.ca.gov , (916) 341-5556
Notes:	<p>Lori Webber provided a brief presentation regarding the SWAMP programmatic review, and requested feedback from the Monitoring Council. Specifically, she asked:</p> <ol style="list-style-type: none"> 1) What is the Monitoring Council's vision for interactions between SWAMP, Bioaccumulation Oversight Group (BOG), the Healthy Streams Partnership (HSP), and the Monitoring Council? 2) What is working well? 3) What is not working well? and 4) Does the Monitoring Council have any recommendations for how SWAMP should move forward? <p>Jonathan Bishop responded that he feels that the interactions between the Monitoring Council, SWAMP, HSP and BOG are working well because the State Water Board has asked SWAMP to perform this work. However, he was unclear regarding how these questions relate to the programmatic review. Karen Larsen indicated that since the Monitoring Council is a SWAMP partner, that they wanted to ask key users for their general input (this was the purpose of the presentation). Jonathan indicated that he was very happy with the relationship between SWAMP and the Monitoring Council, and with how SWAMP has worked together with BOG and the HSP. He did not have any suggestions for how they could improve. Jon Marshack raised the issue of SWAMP tools,</p>	

	<p>specifically QA, documented data quality, monitoring and assessment protocols, and data management, and that more outreach is needed for other workgroups to use SWAMP’s tools. Kris Jones also suggested that more work is needed to broaden SWAMP QA/QC guidelines (e.g., for QA/QC documentation) to include a broader range of data types, such as real time water quality monitoring and biological data.</p> <p>Armand Ruby recommended that there should be better integration between CEDEN and SWAMP data management and that some of SWAMP’s standard operating procedures (SOPs) needed to be updated. He also thought that it could be helpful to have more user support. Karen Larsen tried to clarify this point, and suggested that they consider forming a SWAMP tools user group to provide feedback and prioritize improvements. Lori also reminded the group that CEDEN is undergoing a transition under the direction of Rich Breuer and one outcome of that effort will be improved integration between the SWAMP database and CEDEN.</p> <p>Brock Bernstein asked, how can questions that need to be answered better drive data quality? Lori responded that QA staff from the State Water Board’s Office of Information and Analysis (OIMA) is beginning to work with each of the Water Board programs to develop their own Quality Assurance Program Plans, which will move toward that goal.</p>
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ITEM:	9	
Title of Topic:	MEETING WRAP-UP	
Purpose:	<p>Plan agenda for August 27, 2014 Monitoring Council meeting in Sacramento. Potential items include:</p> <ol style="list-style-type: none"> 1) Development of Monitoring Council recommendations to improve grant project monitoring, data management, assessment, and reporting 2) Department of Fish & Wildlife’s role with the Monitoring Council and its workgroups – coordination, financial support, data management and data access, what they need from the Monitoring Council to improve collaboration 3) Data quality standardization efforts of SWAMP – “Data Comparability” 4) Possibility of holding an annual conference. A representative from the Maryland Monitoring Council would be invited to participate by phone (see May 2012 notes, Item 2d) 	
Desired Outcome:	<ul style="list-style-type: none"> • Confirm August 27, 2014 Monitoring Council meeting date • Develop agenda for the August 27 meeting 	
Contact Persons:	<p>Kris Jones</p> <p>Jon Marshack</p>	<p>kristopher.jones@water.ca.gov, (916) 376-9756</p> <p>jon.marshack@waterboards.ca.gov, (916) 341-5514</p>
Notes:	<ul style="list-style-type: none"> • The Monitoring Council expressed interest in hearing Items (1) and (2). For item (1) Jon and Kris would need to look at the background information on grant project monitoring as required by the Water Boards and the Department of Water Resources and develop specific recommendations for the Council to consider. Jonathan Bishop felt that it was too early to discuss Item (3). 	

	<ul style="list-style-type: none">• As additional items to consider, Jon suggested that we discuss the revisions to the Triennial Audit Report, and updates on the Delta Science Program's Data Summit document, the move of the Drinking Water Program and implications for monitoring, and the Central Coast Regional Water Board's data visualization tools.• Armand Ruby also suggested that Karen Larsen could present on the regulatory initiatives that could impact monitoring programs, e.g., biological objectives, toxicity policy, trash policy.• The next meeting will likely be too soon for an update on the Ocean Ecosystem Health workgroup effort and the three priority topic areas.
Action Items:	<ul style="list-style-type: none">• Jon Marshack will organize a meeting with Department of Fish and Wildlife staff in July, in preparation of Item (2) above.• Jon will poll Monitoring Council Members and Alternates on different dates for the next Monitoring Council Meeting.

July 2, 2014
Amended July 17, 2014
Approved September 3, 2014