

CALIFORNIA WATER QUALITY MONITORING COUNCIL

Monitoring Council Meeting Notes

Wednesday, May 30, 2012 – 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:

Sara Aminzadeh	Sarge Green	John Norton	Stephani Spaar
Jonathan Bishop	Parry Klassen	Armand Ruby	Stephen Weisberg
Mike Connor	Karen Larsen	Ken Schiff	

Others in attendance or (on the phone):

Jamie Adirhold, CI Agent Stormwater Solutions (Arne Anselm, County of Ventura) Brock Bernstein, consultant (Steve Blecker, Delta Stewardship Council) Heather Boyd, Santa Ana Regional Water Board Erick Burres, State Water Board (Lilian Busse, San Diego Regional Water Board) Jay Davis, San Francisco Estuary Institute (Cristina Grosso, San Francisco Estuary Institute) (Richard Hill, California Department of Transportation) Scott Johnson, Aquatic Bioassay Consulting Labs (Fran Lau, URS Corporation)	Michael Lyons, Los Angeles Regional Water Board Jon Marshack, Monitoring Council (SWRCB) Kristy Morris, Council for Watershed Health Natali Maldonado, Santa Ana Water Protection Authority Jodie Nygaard, LA County Sanitation District (Katherine Pease, Heal the Bay) Bruce Posthumus, San Diego Regional Water Board Ken Schiff, So. California Coastal Water Research Project Nancy Steele, Council for Watershed Health (Lori Webber, State Water Board) (Meredith Williams, San Francisco Estuary Institute) (Joe Yun, Department of Water Resources)
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ITEM:	1	
Title of Topic:	INTRODUCTIONS AND HOUSEKEEPING	
Purpose:	1) Introductions 2) Review draft notes from November 30, 2011 Monitoring Council meeting 3) Review agenda for today's meeting	
Desired Outcome:	a) Approve February 2012 Monitoring Council meeting notes b) Preview what will be covered today and overall meeting expectations c) Adjust today's agenda, as needed	
Attachment Links:	Draft notes from February 29, 2012 Council meeting	
Contact Person:	Jon Marshack	jmarshack@waterboards.ca.gov , 916-341-5514
Decisions:	<ul style="list-style-type: none"> • February 2012 meeting notes approved without amendment • Item 5 moved to between Items 2 and 3 	

ITEM:	2	
Title of Topic:	ANNOUNCEMENTS AND UPDATES	
Purpose:	<ul style="list-style-type: none"> a) Healthy Streams Portal update (Jon Marshack) b) State and federal budget update (Jonathan Bishop, Stephani Spaar, Leah Walker) c) National Monitoring Conference, Portland Oregon d) Natural Resources Agency involvement in Monitoring Council activities e) Letter on data management issues from Wetland Monitoring Workgroup 	
Desired Outcome:	Information and feedback	
Background:	<p>At the February 2012 Monitoring Council meeting, the Healthy Streams Portal was approved for public release after modifications to accommodate comments provided at the meeting and later by email from Monitoring Council Members. Publicity for the release of this portal is being coordinated between the State Water Board, the Department of Water Resources, and the California Coastkeeper Alliance. Public release is expected in early June.</p>	
Attachment Links	<ul style="list-style-type: none"> • Draft notes from February 29, 2012 Council meeting (see Item 3) • Healthy Streams Portal Fact Sheet • California Participation in the 8th National Monitoring Conference • Letter from the Wetland Monitoring Workgroup - Recommendations on Wetland Data Management 	
Contact Person:	Jon Marshack	jmarshack@waterboards.ca.gov , (916) 341-5514
Notes:	<ul style="list-style-type: none"> a) Jon Marshack provided an update on the Healthy Streams Portal. A fact sheet has been developed. Publicity for public release is being coordinated between the State Water Board, the California Coastkeeper Alliance, and the Department of Water Resources. b) No budget update was provided c) Jon Marshack handed out a summary of California's involvement in the recent conference of the National Water Quality Monitoring Council. Steve Weisberg mentioned that the Maryland Monitoring Council holds an annual conference that improves outreach and partnerships. He recommended that California do something similar. A morning plenary could be followed with afternoon sessions focusing on each of the workgroups. A steering committee would be needed to handle the high workload of putting on such a conference. Outreach to advocacy groups and tribes could be included. With the size and diversity of California, would separate conferences be needed in the north and the south? d) Stephani Spaar mentioned that the Natural Resources Agency has identified funding for a half-time position to provide coordination of Monitoring Council involvement. The Interagency Ecological Program has formed a strong connection with the Estuary Monitoring Workgroup working on the Estuary Portal and this effort is now a standing agenda item for the Interagency 	

	<p>Ecological Program (IEP) Coordinators. Resources Agency and Department of Water Resources staff has joined the workgroup that will build the Safe to Drink Portal and the Data Management Workgroup.</p> <p>Sarge Green recommended that the recent UC Davis report on nitrate contamination in Central Valley and Salinas Valley aquifers be featured in the Safe to Drink portal and that the portal should address the concerns of affected communities.</p> <p>e) Jon Marshack handed out copies of a recent letter from the Wetland Monitoring Workgroup asking that specific data management issues be addressed.</p>
Decisions:	<ul style="list-style-type: none"> The letter from the Wetland Monitoring Workgroup was forwarded to the Data Management Workgroup to develop options and recommendations.
Action Items:	<ul style="list-style-type: none"> A future Monitoring Council meeting agenda item should focus on the possibility of holding an annual conference. A representative from the Maryland Monitoring Council should be invited to participate by phone.

ITEM:	5
Title of Topic:	BIOLOGICAL OBJECTIVES DEVELOPMENT
Purpose:	Karen Larsen (State Water Board) and Ken Schiff (SCCWRP) to present information on the Water Boards' development of biological water quality objectives and an implementation plan designed to directly protect the biological integrity of California waters
Desired Outcome:	Information
Background:	State Water Board staff is developing a statewide policy that will establish narrative water quality objectives to protect biological communities and an implementation plan to describe how compliance with the narrative objectives will be measured. The State Water Board's Surface Water Ambient Monitoring Program (SWAMP) already requires the use of standard field and laboratory protocols and data management procedures for all bioassessment monitoring required or funded by the Water Boards. However, the tools for interpreting biological data (i.e., indices of biological integrity or observed/expected models) are not consistent statewide. The new policy will establish a statewide network of reference sites as well as consistent scoring tools to measure compliance with the narrative objective. This effort supports the Monitoring Council's objectives by establishing consistent monitoring protocols and thresholds for assessing biological condition in California streams. These new tools also will be used to display biological data available in the California Environmental Data Exchange Network (CEDEN) through the Healthy Streams Portal.
Attachment Links:	<ul style="list-style-type: none"> Biological Objectives for California Streams – presentation by Karen Larsen Developing the Technical Foundation for Statewide Biological Objectives – presentation by Ken Schiff Biological Objectives page of the State Water Board website
Contact Persons:	Karen Larsen klarsen@waterboards.ca.gov , (916) 319-9769

	Ken Schiff	kens@sccwrp.org , (714) 755-3202
Notes:	<p>Karen Larsen and Ken Schiff presented information on the State Water Board's development of biological water quality objectives, the Perennial Streams Assessment and the Reference Condition Management Program and how these relate to the Healthy Streams Portal. These efforts further the Monitoring Council's goals to coordinate monitoring for broader assessment, to help the decision-making of resource managers, and to standardize methods and assessment thresholds. While chemical- and toxicity-based water quality monitoring focuses on the potential of a stream to <i>support</i> aquatic life uses, biological monitoring directly measures the protection of those uses. Biological endpoints will be added to California's water quality standards. Implementation plans will affect all Water Board programs. An antidegradation component is needed to ensure that healthy streams remain so and that degraded streams are restored. Current focus is on perennial wadeable streams, but will eventually be expanded to all waterbodies. Bioassessment data will begin with our largest data set, benthic macroinvertebrates, and will expand to include algae, CRAM, and fish data.</p> <p>The diversity of California conditions necessitates having regional flexibility in setting thresholds. In addition society may not have the same expectation of condition for some streams as compared with others – what is the “best attainable” condition for a particular water body? Both technical and policy/societal factors will affect decisions. Causal assessment will provide information to guide appropriate responses when compliance problems are found. Auto data calculators in SWAMP and CEDEN will be included to help perform assessments; beta testers will be able to see how formula adjustments will affect results. The report on the technical portion of this effort is anticipated to be released by the end of 2012.</p>	
Action Items:	Beta testers will be needed for the bioassessment and bio-objectives tools being developed. Regional stormwater data sets may be one place to start.	

ITEM:	3
Title of Topic:	BIOACCUMULATED CONTAMINANTS IN COASTAL SPORT FISH
Purpose:	Jay Davis of the San Francisco Estuary Institute/Aquatic Science Center (SFEI/AQC) to present the results of a two year screening level study of bioaccumulated contaminants in sport fish along the California coast
Desired Outcome:	Information and feedback
Background:	The Bioaccumulation Oversight Group, a theme-specific workgroup of the Monitoring Council and part of the State Water Resources Control Board's Surface Water Ambient Monitoring Program (SWAMP), is about to release findings from California's largest-ever statewide survey of contaminants in sport fish on the California coast. The report, <i>Contaminants in Sport Fish from the California Coast, 2009-2010</i> , represents a major step forward in understanding the extent of chemical contamination in the coastal food web. The report presents new data from sampling that focused on the North and Central coasts in 2010. These data combine with the results from 2009 to provide a comprehensive assessment of the entire coast. The study has provided information that will be valuable in prioritizing areas in need of further study,

	<p>support development of consumption guidelines and cleanup plans, and provide information the public can use to be better informed about the degree of contamination of popular fishing spots.</p> <p>Release of this report is expected in late May 2012. At the same time, the data from this study will be made available through the <i>My Water Quality</i> portal "Is it safe to eat fish and shellfish from our waters?"</p>		
Attachment Links:	<ul style="list-style-type: none"> • Contaminants in Coastal Fish, 2009-2010 – presentation by Jay Davis • The full report, fact sheet, press release and media responses are posted on the SWAMP website • Data and a summary assessment from this study are available on the Safe to Eat Portal, on the Recent Conditions and Data & Trends pages 		
Contact Person:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; padding: 2px;">Jay Davis</td> <td style="padding: 2px;">jay@sfei.org, (510) 746-7368</td> </tr> </table>	Jay Davis	jay@sfei.org , (510) 746-7368
Jay Davis	jay@sfei.org , (510) 746-7368		
Notes:	<p>Longer-lived and high trophic level species, e.g., sharks and certain rock fish, had the highest concentrations of mercury. Sampling location did not appear to be a significant factor for mercury in coastal fish, suggesting that aerial deposition or upwelling of methylmercury rich sediments may be a significant factor, in addition to historic mining. Shiner surf perch were found in many locations along the coast, with higher mercury concentrations in San Francisco Bay, perhaps due to the influence of mining-related sources. PCB contamination displayed more pronounced locational differences, with highest levels in the San Francisco Bay, Los Angeles, and San Diego, close to urban/industrial sources. No locations showed contaminants in all species sampled below all OEHHA and USEPA thresholds. To be able to answer questions regarding trends, sampling must continue. Partnerships could include discharger-based regional monitoring efforts, such as the Southern California Bight.</p> <p>Data and an assessment report on contaminants in fish from California rivers and streams will be released in 2013, completing the initial 5-year survey of all waterbody types. An initial study focusing on wildlife impacts is currently being conducted on grebes and small fish in lakes and reservoirs with data to be made available in 2014.</p>		

ITEM:	4
Title of Topic:	BIOACCUMULATION OVERSIGHT GROUP STRATEGY
Purpose:	Jay Davis (SFEI/AQC), Chair of the Bioaccumulation Oversight Group (BOG) to present a draft of this workgroup's strategy document.
Desired Outcome:	Review and approval of the direction of the strategy
Background:	For the past five years, the BOG has systematically conducted surveys of sport fish tissue contaminants in California lakes and reservoirs, coastal waters, and streams and rivers with a focus on potential threats to public health. This year's sampling efforts will begin to address potential aquatic life and wildlife threats from bioaccumulated pollutants through survey-level sampling of small fish and Western Grebes from California lakes and reservoirs. SWAMP management believes that the BOG could benefit from a formal strategy to help plan future monitoring, assessment and reporting efforts and to expand participation in

	<p>address methylmercury in the Delta, and will connect them with Jay Davis.</p> <p>With the exception of adding data from each year’s study, no portal development effort has been scheduled for the upcoming fiscal year.</p>
Decisions:	<ul style="list-style-type: none"> • Expand the BOG focus to include additional agencies and programs to address their bioaccumulation needs • Provide recommendations to guide bioaccumulation monitoring throughout California • Include provisions requiring coordination with the BOG in State Board permits and grants • Expanding the BOG and Safe to Eat Portal focus to address aquatic life and wildlife impacts is appropriate • BOG strategy should clearly identify both internal (Monitoring Council) and external components with a brief executive summary to focus on Monitoring Council actions • Details of the strategy belong in appendices
Action Items:	<ul style="list-style-type: none"> • Steve Weisberg asked for a future Monitoring Council agenda item to focus on the NOAA National Mussel Watch program that was piloted in California. How does this effort fit with California’s program? How are we using the data? • Sarge Green can help connect bioaccumulation efforts of California State University and University of California programs.

ITEM:	6
Title of Topic:	REGIONAL MONITORING PROGRAMS IN SOUTHERN CALIFORNIA
Purpose:	<p>Each of these monitoring programs to provide a short introduction, followed by a panel discussion guided by the questions below:</p> <p>Programs (<i>presenters/representatives</i>)</p> <ol style="list-style-type: none"> 1. So Cal Bight (Ken Schiff) 2. Stormwater Monitoring Coalition in Southern California (Ken Schiff) 3. San Gabriel River Regional Monitoring Program (Nancy Steele, Kristy Morris) 4. Los Angeles River Watershed Monitoring Program (Nancy Steele, Kristy Morris) 5. Santa Clara River (Michael Lyons) 6. San Diego River (Bruce Posthumus, Brock Bernstein) 7. San Diego Region coastal estuaries (Brock Bernstein, Bruce Posthumus) <p>Questions</p> <ol style="list-style-type: none"> a. What caused the coordination to occur? b. Why has it been successful? c. Has the coordination resulted in tools that would benefit coordination efforts

	<p>by others?</p> <p>d. Would a tool like the Central Valley Monitoring Directory have been helpful in getting the coordination going?</p> <p>e. How are the data being managed and made available?</p> <p>f. What are measures of success?</p> <p>g. How are portals fitting into your programs?</p> <p>h. What agency data are being integrated?</p> <p>i. What do you need from the Monitoring Council?</p>
Desired Outcome:	<ul style="list-style-type: none"> • Elucidate the reasons why some collaborative regional monitoring efforts are successful • Can those successes benefit or be transferred to other monitoring efforts and if so, how?
Background:	<p>An agenda item on successful regional monitoring programs, highlighting the San Francisco Bay RMP, was originally scheduled to be part of the February 2012 Monitoring Council meeting. However, this item was postponed, due to the unexpected illness of the main presenter. This item was intended to be the first of several such presentations, each focusing on a single monitoring program. The Monitoring Council instead decided that such presentations should be consolidated into panel discussions, to enhance direct sharing of information between monitoring programs, and to include additional monitoring programs that are not yet fully developed.</p> <p>This item to focus on collaborative regional monitoring programs in Southern California. At the August Monitoring Council meeting, a similar agenda item will focus on Northern California monitoring programs.</p>
Attachment Links:	<ul style="list-style-type: none"> • Central Valley Monitoring Directory brochure • Bight Program Overview and Stream Monitoring Program – presentations by Ken Schiff • Southern California Bight 2008 Regional Marine Monitoring Program: Coastal Ecology Synthesis Report • Fact Sheet: Assessing the Health of Southern California Streams • San Gabriel River Regional Monitoring Program and Los Angeles River Watershed Monitoring Program – presentation by Nancy Steele and Kristy Morris • Santa Clara River Watershed Map
Contact Person:	<p>Jon Marshack jmarshack@waterboards.ca.gov, (916) 341-5514</p>
Notes:	<p><i>Note: Information presented in the formal presentations (links above) is not necessarily reproduced below.</i></p> <p>The Bight is a 20 year regional marine monitoring program including over 100 agencies/organizations and covering head-of-tide, beaches and rocky and soft bottom to a depth of 1000 meters. Probability based surveys are conducted every 5 years. The focus is the extent, magnitude, and trends of impacts to habitats. 400 sites were sampled during the last event (2008). The results are</p>

used to develop changes in management activities. Included are special studies conducted by research organizations to explore questions of interest without being part of an NPDES permit. Features of the program include:

- Coordinated integrated monitoring
- Pooled data
- Identify redundancies and gaps
- Cost neutral to regulated community
- Tools, training, standardization and QA
- Scientific consensus – dischargers and regulators decide collectively what the data mean
- Collaborative planning of monitoring activities
- Forming relationships with each other and with others
- Regional reference condition

The **Stormwater Monitoring Coalition (SMC)** is a collaborative, integrated regional stream monitoring program conducted by a coalition of regulators and the regulated community. The focus is the extent, magnitude, and trends with 1/5 of the total locations sampled each year over a 5 year rotation.

SCCWRP handles regional data for both the Bight and the SMC. Data are placed into CEDEN, but are otherwise not delivered in a useful way to the public. Integration between the two programs could be improved, but currently includes eutrophication in estuaries and wet weather inputs to the marine environment. Both programs were initiated by letter from the Executive Officer of the Regional Water Board, providing a 1-time waiver of receiving water monitoring permit requirements. Later, NPDES permits were modified to require participation. No MOU has been adopted. All participants have a common desire to participate. The high density of regulated entities allows for a more effective regional program. Trust is built through collaboration.

The Council for Watershed Health is a not-for-profit organization that operates both the **San Gabriel River** and **Los Angeles River** regional monitoring programs. The Council's Board includes water agencies, conservancies, regulated entities, businesses, non-profits, and academic interests, but not regulators. Permit conditions on the LA County Sanitation District require participation during dry-weather conditions. MOUs exist between the Council and dischargers. Most stakeholders who designed the programs are still involved in implementation. Questions drive the probabilistic design of the program. Additional features include conferences, workshops, symposia, and a regular newsletter. Funding comes from the LA County Sanitation District and the cities of Los Angeles and Burbank. Agricultural interests, mainly nurseries, are engaged through a Clean Water Act Section 319(g) grant. Both programs collect the same data types as the SMC, including fish bioaccumulation and bacterial indicators. Data are sent to SCCWRP for inclusion in CEDEN. The Safe to Swim and Safe to Eat Fish portals should receive data from these programs. A key priority is to assimilate data into larger outreach efforts, including the beta version of a regional portal, featuring data download and graphing capabilities, as well as comparison with California Toxics Rule criteria. Assistance from the Monitoring Council would include direct data flow to the portals and web service outputs from the portals with email notifications when new data types and sources are made available – two-way notification and data

feeds. For the San Gabriel River program, a good set of monitoring stations already existed. A change in permit requirements created this regional monitoring program. Regional SWAMP funding (\$300,000) provided seed money to get the San Gabriel River and LA River programs started.

The **Santa Clara River** is the largest watershed in the Los Angeles Region, is more complex, and involves many diverse stakeholders. No good baseline monitoring existed and resources are limited, necessitating a more dictatorial driver. The LA Regional Water Board hopes to achieve a similar program to the San Gabriel River and LA River programs, run by the Council for Watershed Health with the same standardized methods. But fewer existing monitoring efforts and a lower density of permittees have made it difficult to move away from simple compliance monitoring. A resource-neutral program is likely not possible, and outside funding may be needed.

In the **San Diego Region**, most regulated entity monitoring focuses on discharger compliance, rather than determining whether beneficial uses of water bodies are supported. No data are collected in many areas. Little coordination of methods means little data comparability. The Regional Water Board would like to have a better understanding of whether beneficial uses are supported and better use of monitoring and assessment resources focused on water bodies. Three projects are being developed:

- Watershed monitoring, starting with the San Diego River watershed
- Coordinated assessment of coastal embayments
- Beach water quality, starting with southern Orange County

Coordination between county health agencies, publicly owned treatment works, and municipal stormwater permittees would eliminate duplication, ensure adequate water body coverage, and allocate monitoring among these players.

For the San Diego River, Brock Bernstein recommended that many different stakeholders be involved, including resource agencies and non-governmental organizations that have interests in watersheds and water use. The U.S. Forest Service controls lands upstream of regulated discharges; coordination is needed between these interests. Brock recommends use of methods and protocols developed by others, such as LA River and San Gabriel River programs. The Department of Fish and Game has multi-species conservation programs. To create a more complete watershed focus that involves more players, more bioassessment, physical habitat condition, algae, and fish population survey monitoring should be added. New measures should be integrated into other Regional Water Board monitoring efforts, such as biological endpoint monitoring in municipal stormwater permits. Citizen monitors could be involved in fish, trash and bird monitoring.

For coastal embayments and estuaries, Brock recommended using a core set of indicators borrowed from SWAMP, sediment quality objective (SQO), nutrient numeric endpoint (NNE) and biological objectives. Academic interests would likely be involved in restoration programs in these waters. To foster engagement, the Regional Water Board should be more open to change and willing to allow more creative input.

Steve Weisberg advocated a statewide framework of methods, QA and data management but retaining local ownership of these programs and leveraging to encourage local programs. He sees three potential dangers:

- Local efforts duplicating state efforts

	<ul style="list-style-type: none"> • Methods development at the state and regional levels – some efforts are not part of a state program, such as microbial indicators in streams, trash and algae • Watershed specific tools – reference conditions, observed/expected, indices of biologic integrity – a multiplicity of tools could be problematic <p>A greater communication network is needed to share solutions between watershed-, regional-, and statewide-level programs, such as annual meetings to bring entities together, and feedback mechanisms for true sharing of information. SWAMP can play a key role with its question-driven assessment framework, minimum QA, SOPs and other tools; it should develop standardized protocols where none currently exist. A collection of background documents would also be useful. CEDEN and the portals also play key coordination roles in how information is presented and access provided. Additional ideas included:</p> <ul style="list-style-type: none"> • Directory of regional monitoring programs in the portals • List of common questions and answers • Tools on SWAMP website, portal, collaboration network web page • Rotate Monitoring Council meeting locations to better receive local input • Annual monitoring conference <p>The Monitoring Council should encourage development of additional statewide standards and guidance and foster group-to-group coordination and sharing.</p> <p>John Norton announced that on August 22 and 23, a workshop for citizen volunteer monitors will be held at Cal Poly Pomona. To promote citizen monitoring and watershed stewardship, he invited the Monitoring Council to select a group to be awarded volunteer monitoring group of the year.</p>
Decisions:	<p>During the following year, a transparent process and criteria will be developed to select a volunteer monitoring group for an annual award. The first award will be presented at the annual citizen monitoring workshop in 2013.</p>
Action Items:	<p>John Bishop will attend the citizen monitoring workshop in August at Cal Poly Pomona and invited other Monitoring Council Members to join him.</p>

ITEM:	7
Title of Topic:	MEETING WRAP-UP
Purpose:	<ol style="list-style-type: none"> 1) Summarize meeting 2) Plan agenda for August 29, 2012 Monitoring Council meeting in Sacramento – potential items include: <ol style="list-style-type: none"> a) Successful collaborative monitoring programs in northern and central California <ol style="list-style-type: none"> i) San Francisco Bay Regional Monitoring Program ii) Central Coast Long-Term Environmental Assessment (CCLEAN) iii) Sacramento River Watershed Program iv) Klamath Basin Monitoring Program

	<ul style="list-style-type: none"> v) Delta Regional Monitoring Program vi) San Joaquin River Regional Monitoring Program b) Ocean Ecosystem Health <ul style="list-style-type: none"> i) Areas of Special Biological Significance (ASBS) monitoring (Ken Schiff) ii) Marine Protected Area (MPA) Monitoring Enterprise (Liz Whiteman) iii) Plans for new Ocean Ecosystem Workgroup and Ocean Health Portal c) Safe to Drink workgroup and portal development proposal d) Status of developing a common base map for California water resources (Greg Smith of DWR, Tom Lupo of DFG, and Josh Collins of SFEI) e) Department of Water Resources grant project effectiveness monitoring f) Outreach strategy and publicity to increase portal usage 		
Desired Outcome:	Develop agenda items for the August 29, 2012 Monitoring Council meeting		
Contact Person:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 2px;">Jon Marshack</td> <td style="padding: 2px;">jmarshack@waterboards.ca.gov, (916) 341-5514</td> </tr> </table>	Jon Marshack	jmarshack@waterboards.ca.gov , (916) 341-5514
Jon Marshack	jmarshack@waterboards.ca.gov , (916) 341-5514		
Action Items:	<ul style="list-style-type: none"> • Add the following question for the collaborative monitoring programs: "What is the role of citizen volunteer monitoring?" • Add the following monitoring programs: <ul style="list-style-type: none"> ○ San Francisco Bay Stormwater Regional Monitoring Coalition (Armand Ruby) ○ Monterey Bay Regional Monitoring Coalition • Add stewardship for NHD and NWI to item (d) • Add Sara Aminzadeh to item (f) • Add an update item on the Healthy Watershed Initiative indicators and indices 		

July 25, 2012
 Amended July 27, 2012
 Approved August 29, 2012