| California Water Quality Monitoring Council
Data Management Workgroup (DMWG) Meeting Notes
January 30, 2012 — 10:30am to 3:00pm

Room 550 (5th Floor)
Joe Serna Jr. Cal/EPA Headquarters Building
1001 I Street, Sacramento, CA | |

Attendees in person and (on the phone):
Hugh Aldridge, UC Berkeley
(Jason Barnes, Humboldt State University)
Christina Boggs, Dept of Water Resources
(Clay Clifton, Ecolayers)
(Paul Collins, Dept of Public Health)
Aaron Cuthbertson, Dept of Water Resources
Michael Dangermond, Esri
(Mark Emmerson, Dept of Public Health)
(Patty Frontiera, SF Estuary Institute)
Cristina Grosso, SF Estuary Institute
Catilina Guillen, Dept of Water Resources
Anthony Hale, CA Ocean Science Trust, MPA Monitoring Enterprise
David Harris, Natural Resources Agency
(Lisa Hazard, Southern Calif Ocean Observing System)
Jeff Kapellas, State Water Board
Tony Lafferty, Esri
(Anne Littlejohn, Central Valley Regional Water Board)
Tom Lupo, Dept of Fish & Game
Jon Marshack, Monitoring Council
(Michael May, SF Estuary Institute)
(David Osti, 34 North)
Dale Robinson, SF State University
Greg Smith, Dept of Water Resources
Thomas Spellman, rimdb.org
Steve Steinberg, Southern Calif Coastal Water Research Project, CEDEN
Shem Stygar, Dept of Water Resources
Meredith Williams, SF Estuary Institute
Adam Wolfe, Dept of Fish & Game
(Chantell Krider, Klamath Basin Monitoring Program)
(Tony ?, ?)

ITEM: #	1	
Title of Topic:	**Introductions & Announcements**	
Contact Person:	Steve Steinberg	steves@sccwrp.org, (714) 755-3260

ITEM: #	2	
Title of Topic:	**Esri – Data Management and Visualization Technologies and Approaches**	
Purpose:	Information	
Contact Person:	Michael Dangermond	mdangermond@esri.com, (909) 793-2853, x5045
	Tony Lafferty	tlafferty@esri.com, (916) 448-2412, x 3738
Attachment:	Esri Mapping Tools – presentation by Michael Dangermond	
Notes:	Esri has created new base maps and templates to help others with cartography and data presentation. Users can log into arcgis.com and register to use 2 GB of free space to create and share maps. The Esri Hydro Blog presents information on water-related tools, such as a hydro base map. New templates allow users to apply a "map shell" to other map-based information, such as NHD to add cartographic information, improving the consistency of resulting maps; could be used to create California NHD high resolution base maps. Map templates are tailored to different data types and questions, providing better performance for defined user needs. A Community Base Map area uses a Wikipedia approach to share map information. See mapstories.esri.com for additional information. A National Geographic basemap can be used to apply that organization's popular map conventions. A "light gray canvas" base map allows users to add lots of colorful data and information. Historic LANSAT photos are also available. Exports are available in other platforms, e.g., KML.	
	CERES and the Dept of Fish & Game are using Esri templates and metadata for a number of projects. DFG has used the oceans base map for maps.dfg.ca.gov/maps/marine. An NRCS Soils map adds pictures and graphs that link to map-displayed soils data. DFG has also created a map to track the movement of a wolf that recently entered Northern California; the map lives in the cloud, avoiding the use of DFG server space, and was easy to produce.	
Decisions:	None	
Action Items:	None	

ITEM: #	3	
Title of Topic:	**SFEI – Central Valley Monitoring Directory**	
Purpose:	A briefing on the directory to evaluate its potential value to the portals and (if appropriate) the best means for incorporating this technology into the Council's portals.	
Contact Person:	Meredith Williams	meredith@sfei.org, (510) 746-7396

	Anne Littlejohn	alittlejohn@waterboards.ca.gov, (916) 464-4840
	Michael May	mikem@sfei.org, (510) 746-7370
Attachments:	Central Valley Monitoring Directory – presentation by Anne Littlejohn and Michael May	
Notes:	This site manages information about who monitors what, where, and when. Water quality data are not managed in this system, but links to data sources are provided. The Directory is a more prospective looking database, showing planned monitoring activities, as compared with monitoring data systems such as CEDEN that store data on past monitoring activities. The target audience is other entities that monitor.	
	Information could be batch loaded into the directory from other systems, such as CEDEN, or from a local monitoring group's data tools.	
	Populating the Directory and maintenance are issues, as entities that monitor are depended upon to add their information and to keep it current. Email notices are sent out to entities when their "end dates" approach or have been passed. It has been easier to get smaller entities to enter their information. Regional Board staff has had to enter information from larger programs. Past the "end date" of a monitoring program, information is no longer visible in the system.	
	Marine monitoring may require a different feature set (e.g., time series, transects) as compared with inland surface water monitoring.	
	The "Duplication of Effort" analysis feature would make the Directory more useful to others. But developing this tool would require resources beyond normal maintenance costs.	
Decisions:	None	
Action Items:	None	

ITEM: #	**4**
Title of Topic:	**Data Management Workgroup Information Needs**
Purpose:	To assist our workgroup in making recommendations on best practices for data management, tools and technologies, we require specific information from the other current workgroups. We will discuss our information needs leading to the development of a survey/needs assessment to be provided to the council workgroups.
Background:	Theme-specific workgroups had been asked to provide feedback regarding data management needs and how the DMWG can help support their work. Responses were obtained from • Wetland Monitoring Workgroup

	• [Bioaccumulation Oversight Group](#) • [Safe to Swim Workgroup](#) At the November 22, 2011 meeting of the Data Management Workgroup, it was decided to pose the following more detailed questions to the theme-specific workgroups: a) What specific data elements are needed in each desired data set? – elements/sets common to multiple portals will receive higher priority for integration b) What tools are currently being used or are needed? – share with others c) What current data elements of which data sets are currently integrated in each portal?	
Contact Person:	Steve Steinberg	steves@sccwrp.org, (714) 755-3260
Notes:	Because most theme-specific workgroups meet only four to six times per year, responses to the more-detailed questions have not yet been received. Hugh Aldridge briefly described work being done by UC Berkeley, UC Davis, UC Merced, and UC Santa Cruiz to create intelligent water information for California. The effort is currently focused on water supply and could demonstrate new technologies and tools in a public-private partnership. "What would the system look like if you built it from scratch?" Funding is envisioned to come from entities that depend on water information (e.g., power generators, agriculture) who need to be able to forecast conditions. The DMWG needs to work to break down silos between agency data sets. Technical standards, agreements to share data, and guidelines & tools for new portals are needed. Guidance is needed for common denominators of all portals: • Similar look and feel • Access to raw portal data (e.g. data tab and/or standard data access tools on each page) Lessons learned and tools uses should be shared. Allow sufficient flexibility to use new tools. Metadata libraries have been created by the Strategic Growth Council and others. Federate existing data catalogs. May not need to define new standards but utilize appropriate standards and tools already developed. Identify appropriate exchange networks (e.g., WQX for water quality). Currently no standard format exists for marine data, but a national effort is under way to develop a standard.	
Decisions:	1) Instead of obtaining answers from the theme-specific workgroups to the above three questions developed in November, the DMWG will develop and present • Here is what we can provide and it looks like _____. • Will this meet your needs? 2) The DMWG will develop recommendations and guidelines for data management (federated system), web development, and geospatial data	

	in plain English to make it accessible to the workgroups.
	3) Where applicable the DMWG will provide, recommendations and/or evaluation of tools and software stacks appropriate to meeting the needs (analytical/business needs) of the workgroups while maintaining compatibility with guidelines. (DMWG develop an IT standards cookbook as a framework for developers).
	4) Sample mappings between various existing data systems will be developed.
Action Items:	DMWG members will identify existing available standards for various data types.

ITEM: #	**5**	
Title of Topic:	**Data Management Workgroup Structure and function**	
Purpose:	Review our mission and charter to set the stage for how we move forward.	
Contact Person:	Jon Marshack	jmarshack@waterboards.ca.gov, (916) 341-5514
	Steve Steinberg	steves@sccwrp.org, (714) 755-3260

Decisions:	1) DMWG will develop:
	  • Metadata catalog
	  • Library of existing standards
	2) Existing portals need to be documented	

Action Items:	Steve Steinberg (with the assistance of Jon Marshack) will develop a proposed charter for discussion at the next DMWG meeting.	

ITEM: #	**6**	
Title of Topic:	**Next meeting and items for discussion**	
Purpose:	Select date and topics to be included in our next workgroup meeting	
Background:	Set the stage for how we move forward	
Contact Person:	Steve Steinberg	steves@sccwrp.org, (714) 755-3260
Decisions:	1) Next meeting will be in early March 2) 34 North demo of OpenGeo standard 3) Paul Ramsey of OpenGeo	
Action Items:	Steve Steinberg will send out a Doodle poll to schedule the next meeting.	