California Water Quality Monitoring Council

Data Management Workgroup Meeting Notes

October 7, 2015 — 1:00pm to 4:00pm

Conference Room 240
Joe Serna Jr. Cal/EPA Headquarters Building
1001 I Street, Sacramento, CA
Collaboration Site: http://sfei.li/dmwg

ITEM: #	**1**	
Title of Topic:	**Introductions, announcements & agenda review**	
Contact Person:	Gary Darling Tony Hale	gary.darling@water.ca.gov tonyh@sfei.org, (510) 746-7381
Attendees:	In person: Jarma Bennett, State Water Board Jonnell Medina, State Water Board Tony Hale, San Francisco Estuary Institute-Aquatic Science Center Joanne Vinton, Delta Stewardship Council, Science Program Kris Jones, Water Quality Monitoring Council & Dept. of Water Resources Jeff Kapellas, State Water Board Gary Darling, Dept. of Water Resources Hildie Spautz, Department of Fish and Wildlife On the phone: Cristina Grosso, San Francisco Estuary Institute-Aquatic Science Center Dave Osti, 34 North Fraser Shilling, UC Davis	

ITEM: #	**2**
Title of Topic:	**Dwane Young – Water Quality Exchange (WQX)**
Purpose:	Informational: The Water Quality Exchange (WQX) is a framework that makes it easier for States, Tribes, and others to submit and share water quality monitoring data over the Internet. States, Tribes and other organizations can use WQX as a means of publishing water quality monitoring data to the Water Quality Portal (http://waterqualitydata.us). WQX describes the core data elements and data sharing requirements that are needed to describe and share water quality monitoring data. WQX leverages the Exchange Network (www.exchangenetwork.net) for establishing automated procedures for sharing these data. EPA also provides a web interface (WQX Web) for those partners who need to only share data more infrequently, and may not have the capability to share the data in an automated fashion.
Desired Outcome:	Coordination: In our last meeting, we learned about the National Water Quality Portal and its ability to aggregate information from select sources. This topic covers the mechanics of that integration and the opportunity for California, particularly through CEDEN, to find its way into WQX and the National Water

	Quality Portal.	
Contact Person:	Tony Hale	tonyh@sfei.org, (510) 746-7381
Notes:	Dwane Young provided a presentation regarding the Water Quality Exchange (WQX). He indicated that WQX is standards based approach for sharing water quality monitoring data, which defines a common data model for communicating water quality data (e.g., sample data). He also added that it is designed to be automated, and that WQX provides a standard format for publishing data. Dwane indicated that this data model is what makes the National Water Quality Portal possible. Dwane raised the question—why use a standards-based approach? He indicated the benefit of this approach is that it does not depend on a particular technology. The data sharing model is based on the science of water quality monitoring, which he mentioned does not change frequently. Also, he indicated that partners do not need to run EPA's software. Rather, they simply need to map their data systems to WQX. Dwane then went through the structure of WQX and the information that is associated with sample data. Jeff Kapellas asked whether there is a "higher authority" for the nomenclature WQX deals with among the contributing agencies. Dwane indicated that it is up to the organizations themselves to sort out any standardization. He added that the only standardization that takes place is under the organization field (e.g., state agency, tribal etc.). Dwane then indicated that each partner is responsible for managing and backing up their own data. Following Dwane's presentation, Gary Darling asked about security (specifically "security tokens"). Dwane indicated that this was beyond his expertise. Tony Hale then asked about how they deal with duplication of data. Dwane mentioned that there are unique identifiers which help to prevent duplication. It added that WQX will replace the data rather than duplicate it; however, he did indicate that if the data were from different organizations, that it would be possible for the data to be duplicated (this was an issue they would look into).	

ITEM: #	**3**
Title of Topic:	**New Subcommittees**
Purpose:	Information: Subcommittees on White Paper topics will report their progress regarding the form and content of their own informational topics
Desired Outcome:	With the formal release of the White Paper on environmental data management, we must seek to clarify concepts critical to the proper understanding of the Paper's recommendations. The data management workgroup will hear from each of the subcommittees who have crafted ideas about conveying information about their chosen subject to those in our target audience – including scientists, researchers, agency staffers, decision-makers. The subcommittees would tackle the effort to provide general background information – such as concept definitions, vendors to consult, opportunities to explore – or they might even create formal position papers that could represent the collective will of the Data Management Workgroup.

	Subcommittees include: a. Data management plans b. Data federation c. Web services Each subcommittee will have 15 minutes to present its form and possibly even content related to its topic.	
Contact Person:	Tony Hale	tonyh@sfei.org, (510) 746-7381
Attachment Link:	Delta Stewardship Council, draft Environmental Data Summit White Paper, *Enhancing the Vision for Managing California's Environmental Information*	
Notes:	Tony Hale introduced the idea of creating new subcommittees, which focus on areas relating to 1) Data management plans; 2) Data federation; and 3) Web services. Regarding data management plans, he indicated that this subcommittee would provide guidance and support, for example, providing example templates and tools for data management plans. Tony also indicated that the group could educate users regarding the use and purpose of data management plans—helping to support consistent and meaningful plans among partner agencies. Jeff Kapellas asked what the criterion would be for a bad data management plan. Tony mentioned that they had not yet established those criteria, but that will be discussed and established by the group. Tony clarified that he was looking to establish what types of attributes would go into a data management plan, rather than how well it is adopted or how well it is used etc. Gary Darling asked for specifics for the data management plan structure. Tony clarified that the plans would consider where the data is going, such as details regarding how the data is being submitted to CEDEN, for example. Fraser Shilling asked whether this information could be incorporated into a QAPP. Tony thought this was a good suggestion worth considering as they move forward. Tony then discussed the next subcommittee relating to Data Federation Guidance. He indicated that this group would discuss the relative merits and roles of different data server models, including ERDDAP, THREDDS, OPeNDAP etc. Jeff Kapellas asked what the end product would be for this effort. Would they develop another white paper? Tony suggested different forms of communication and ways to present these ideas; however, he acknowledged that this was yet to be determined. Fraser Shilling indicated that he thinks that the model is not as important. He encouraged the group to focus on the essential elements of the models, which could help support their needs (rather than adopting a specific model). Cristina Grosso and Jarma Bennett then discussed a Web Services Subcommittee. Cristina indicated that there are different possible options for web services. She and Jarma indicated that this subcommittee would help support and inform groups trying to make their data available through web services. Gary Darling expressed concerns regarding security and confidential data. Gary indicated that this would be an issue with data coming from the Department of Water Resources (DWR). Kris Jones clarified that he did not believe that this was a concern for much of the Environmental and Water Quality data collected within DWR's Division of Environmental Services; he added that while there may be security concerns with some data within DWR, that considerable amounts of DWR's data is not confidential,	

	highlighting the data in the Environmental Monitoring Program's online Water Quality Conditions Report (required reporting for the State Water Board for D1641 compliance). Nevertheless, Tony Hale agreed that security concerns will be considered by this subcommittee.

ITEM: #	**4**	
Title of Topic:	**Flash Round! 5-minute updates on topics related to the workgroup**	
Purpose:	Informational: What is happening in the community? Examples might include progress updates on portal development efforts, potential connections to related projects, upcoming presentations and conferences, and new innovations we should assess.	
Desired Outcome:	Information and planning: This item allows for anyone to contribute news about developments that haven't been covered earlier in the meeting. We are looking for news related to water quality, ecosystem health, and data management. Please confine your update to 5 minutes.	
Contact Person:	Tony Hale	tonyh@sfei.org, (510) 746-7381
Notes:	**SFEI, Project Tracker Effort** – Cristina Grosso discussed an effort that seeks to incorporate data and information into their database, which will allow them to more easily track projects and data entered into EcoAtlas. Cristina indicated that SFEI was working closely with partners (e.g., the Delta Conservancy, US Fish and Wildlife Service, Department of Water Resources etc.) to enter this information into their database. She added that they will be finished with this project within the next month. **Delta Stewardship Council, White Paper** – Tony Hale mentioned again that the White Paper was released on Friday October 2nd. Tony indicated that the group is now moving towards implementation, and connecting with certain groups to help support the White Paper's vision. He said there will be more news as they move forward. **DWR, Division of Environmental Services** – at the last DMWG meeting, Kris Jones discussed DWR's effort to develop a roadmap to web services, new database and data exchange, organizing data from IEP Tidal Wetlands fish project, habitat restoration and others. Kris briefly discussed a parallel effort regarding the revitalization of DWR's QA/QC program. He added that DWR is currently developing a roadmap and strategizing their approach to revitalize their QA/QC program, and indicated that this effort will be closely linked to DWR's efforts to organize their environmental and water quality data.	

ITEM: #	**5**
Title of Topic:	**Water Informatics Merger**
Purpose:	Decision: Would it be fruitful to merge with the Water Informatics Workgroup
Background:	On October 2, 2015, Fraser Shilling and Greg Gearheart convened a group of people representing projects that collect, aggregate, and analyze data in service of facilitating better water-related decisions. Many of the meeting's

	attendees also have some presence on the Data Management Workgroup. The goal of the meeting was to explore how the different projects might better coordinate to reduce redundancy and optimize efforts. People emerged with positive feelings and a desire to continue the efforts to coordinate. How shall we remain in touch, and how shall we make group decisions?	
Desired Outcome:	Articulate the pros and cons of joining forces and, ultimately, determine whether or not to merge or remain separate efforts.	
Contact Person:	Gary Darling Tony Hale	gary.darling@water.ca.gov, (916) 651-9207 tonyh@sfei.org, (510) 746-7381
Notes:	Fraser Shilling provided a brief introduction to the Water Informatics group. Fraser indicated that the group represented partners from various projects that are sharing and visualizing data related to water quality and ecosystem health. He added that the meeting that took place on October 2nd was to help identify projects that were engaged in developing water informatics systems and to help ensure that these efforts were coordinating. Fraser added that their next step was to 1) identify partners (e.g., those who were not present at the meeting); and 2) to think about funding opportunities that could help support these efforts (e.g., EPA grants etc.). Following this brief introduction, Jeff Kapellas asked for details regarding the mission of the group. Fraser mentioned that data informatics referred to data sharing and data visualization. In terms of the subject areas covered by their effort, he added that it covered different areas relating to water quality, water quantity, ecosystem health etc. Kris Jones added that these goals closely paralleled (even overlap) with those of the Monitoring Council, as well as those of the Data Management Workgroup. He added that this was the main reason that Jon Marshack, Tony Hale and he thought it would be worth discussing coordination. Gary Darling expressed concern regarding a potential merger. Kris Jones clarified that the goals of the two groups were nearly identical, and included many of the same members—coordination and/or merging the two groups would help to minimize redundancies of effort. Kris added that doing this would grow the respective groups (broadening membership), and help increase their chances of success.	

ITEM: #	**6**	
Title of Topic:	**Next meeting and agenda items**	
Purpose:	Identify topics and responsibilities for inclusion in our next workgroup meeting.	
Background:	Previously the DMWG selected the 1st Wednesday of even months for its meeting time. However, our next meeting conflicts with a major event. Therefore, we will discuss the upcoming schedule.	
Desired Outcome:	Agendize topics for next meeting as appropriate.	
Contact Person:	Tony Hale Gary Darling	tonyh@sfei.org, (510) 746-7381 gary.darling@water.ca.gov , (916) 651-9207

Notes:	December 2 is the next DMWG meeting date.
Decisions:	Potential topics: • Melissa Morris as a presenter on SWAMP • Touch base on progress related to white paper information assets • Receive an update on Fraser Shilling's progress in coordinating data sharing initiatives

November 4, 2015