

Monitoring Challenges Teleconference 14 Jan 2013

Attendees:

Peter Evans, ICWP	Jerad Bales, USGS	John Wells, ACWI-SWRR
Wendy Norton, USGS	Randy Orndorff, USGS	Fred Bloetscher, AWWA
Eric Evenson, USGS	Mike Norris, USGS	Dave Carlton, ASFPM
Pixie Hamilton, USGS	Robert Mason, USGS	Brandon Kernen, ASDWA
Bill Wilber, USGS	Sue Lowry, ICWP	Judy Campbell Bird, ACWI-NLC
Bill Cunningham, USGS	Tony Willardson, WSWC	Bob Schreiber, ASCE
Susan Trapanese, USGS	Chris Reimer, NGWA	Steve Heiskary, NALMS
Mike Yurewicz, USGS	Marie Garsjo, NRC Ret.	Darrell Osterhoudt, ASDWA
Jim Kolva, USGS	Mary Musick, GWPC	Doug McLaughlin, NCASI

Teleconference: The call-in number is 1-855-547-8255 (toll free); Access code: 53700#

Agenda:

1:00 pm Introductions and Agenda Review
1:10 pm Revision/Acceptance of Notes from Previous Meetings
1:15 pm Review of Strategic Directions – Water, 2012-2022
 a. Overview – Eric Evenson
 i. Eight Priority Actions
 ii. Five Goals
 iii. Relation to USGS Science Plan and other USGS Mission Area Strategic Directions
 iv. Implementation Plans
 b. Question & Answer
2:00 pm Federal Appropriations & FTEs – Status & Trends* (see note at end of minutes)
 a. Overview – Jerad Bales
 b. Question & Answer
2:15 pm Discussion of Next Steps toward the "Advice and Recommendations"
 a. What ideas are in the "parking lot"?
 b. What preparation should we initiate now to inform and facilitate future meetings?
2:30 pm Adjourn

Action Items:

1. **Norton:** Ensure the workgroup's website is up and running by the end of the week.
2. **ALL:** If you have suggestions regarding possible recommendations that this workgroup may want to make to Anne Castle, send them to Wendy.

Meeting notes:

Meeting notes from last teleconference are approved.

Garsjo – All these points are needed, and thus we have a really hard task.

McLaughlin – Your strategy document may actually help simplify our task, since it describes the range of priorities and where they fit with decision making and societal needs. We still have a challenging task, however. How does this fit with ground-level decisions on how priorities are set? Maybe Eric can comment on this, especially with the uncertainty factor.

Evenson – Uncertainty is an issue that we've been giving a lot of thought to (how to characterize, etc.). We're using models more and more, and each of those models has issues of uncertainty. Also, our data collection networks are not uniform across the country with respect to supporting those models. We have evaluated our surface water network with respect to how well it could support estimation of flows at ungaged stations; that analysis shows that there are areas where we need more streamgages in order to support the network and the models. There is a question about whether models/data with a high degree of uncertainty should even be released for public consumption. Assessing the degree of uncertainty; looking at the means of being able to communicate the level of uncertainty accurately to the public; and taking the appropriate measures to reduce the uncertainty. This dialogue must encompass all our information users, and not just scientists.

McLaughlin – I would encourage that discussion to continue further. It is important to consider that there may be some type of uncertainty threshold beyond which we won't publish the information; but there needs to be a balance. Some uncertainty is okay for some applications/users, and we shouldn't hold back data that has only marginal uncertainty.

Evenson – One note: when we were commissioned to write this strategic plan, we were told not to concern ourselves with money. There will be a phase 2, in which we scope out implementation plans that reflect what we might actually be able to accomplish within current budget constraints.

Musick – There's a lot of interest in droughts right now; how is data being generated under goal 1 being translated to climate change groups, etc?

Evenson – From the beginning we worked closely with the Climate and Land Use Change Team, and they have a great interest in following some of these recommendations forward into the implementation stage. The idea of drought prediction is interesting; in conjunction with our climate program and with NOAA, there are measures we're considering that might help us improve our drought prediction ability. Recently at a drought forum, it was suggested that we should perhaps update our drought predictions every single month, so the public can see how our forecast is informed as we approach growing season.

Musick – How does this fit into goals for emergency response?

Evenson – We've been discussing if there is a better way to display information about current conditions so people can more easily see how conditions will affect them. Most of the advances we can make are in terms of how we can integrate our data (and present it) to make it more useful/relevant to people. We already have much of the data we need; however, would like to have a better handle on reservoir operation.

Musick – It sounds like we'll be better off, the more we can find the nexus between different types/uses of data.

Evans – In a segue on "where do we go from here?" ... lots of the goals you outlined require a lot of planning and conversation and collaboration before we put any money on the table and begin the work.

Also, you mentioned that the goals you outlined were developed in a "no budget limits" environment. The challenge our work group faces is to make recommendations about where we should go in a *shrinking* budget environment. Can you tell us where you think the next steps are for USGS, given that we're not in an unconstrained budget environment? How do you see USGS moving forward with this process? This work group may be able to assist you, just as the work of your strategic directions team is providing a good foundation for *our* work.

Evenson – Let me start by talking about where we are currently in the budget cycle. If we were to stop doing something (in order to start something new), that would need to be reflected in our budget request. The 2014 budget is pretty well "in the can" right now; so the first budget that this plan will have any ability to influence is the 2015 budget. One of the things we'll have to do is begin writing an implementation plan, either for the whole strategic plan or for the portions of it that we feel we could move forward with in the 2015-16 timeframe. Responsibility for writing this implementation program is divided among the program coordinators, the technical offices (OSW, OGW, OWQ); I envision some dialogue among those entities during the next month or two regarding what work we can realistically do within the resources we already have. Each of the program coordinators and technical offices has a large stakeholder base also, and those groups will be consulted, though we can't share any budget information with them at this point in the process.

Evans – So you're sort of on the same schedule that we're on – trying to have something ready by early summer.

Evenson – That's right. And of course that's only the first step in a long multi-step budget process.

A lot of the people who need to be involved in these discussions are on the phone right now and are serving as members of this work group.

Schreiber – We've been talking about limited budgets; this strategic document does a great job of laying out how USGS is partnering/leveraging, etc., but maybe Eric can tell us if USGS is thinking about increasing leveraging of funds by digging into the energy sector or other sectors who aren't currently linked with the USGS water programs? Or can we make use of international resources such as satellites operated by other nations? Or can we partner with the private sector (looking at their drivers such as hydraulic fracturing).

Evenson – In talking about partnering, I'm going to concentrate on information exchange. USGS isn't shy about asking people to give us funding, but there are also good opportunities in the information sharing arena. We've been ramping up the routine contact we have with other agencies in an effort to increase our information sharing. We have routine meetings with COE, NOAA/NWS, NASA, and others; we're doing much better at this coordination than we used to, but we can continue to improve. Before we ask to exchange money, we should talk to other organizations about interoperability for exchanging information. This type of conversation helps us "work smarter" – both at USGS and at our partner organizations.

Mason – Through IWRSS efforts, for example, we know that we don't need to build new capability of evapotranspiration monitoring. We just need to make use of capability that others already possess.

Evans – Bob also talked about looking at opportunities to partner with the private sector; that's something I don't see USGS doing very much.

Evenson – We do have authority now to have private sector entities contribute funds toward data collection activities.

Mason – We do get funds from Federal Energy Regulatory Commission permittees; we also get funds from recreational users such as outfitters to fund gaging stations.

Evans – I'm wondering if there's an opportunity to meet regularly with private sector representatives to talk about data sharing and funding issues.

McLaughlin – In some cases river data are collected as special conditions of NPDES permits, so that's across municipalities and various industrial sectors. That's one way in which private entities collect data that end up in the public domain.

Schreiber – One thing to think about would be to pull in more entities from the private sector or utilities to do some brainstorming about the drivers and potential future drivers.

Evans – That sounds like a good idea.

Evenson – We are particularly interested in expanding the number of long-term streamgages that we have, so we also need to have a dialogue with private sector entities about the importance of long-term data. Setting up new streamgages to address an issue such as hydraulic fracturing, for example, is great; however, the gages can't be discontinued as soon as the fracturing work is finished.

Mason – Also, we usually have to already be monitoring in an area before we can offer any opinion on how baseline conditions may be affected by land use changes or energy development. It's hard to anticipate where we need to be monitoring 5 years from now.

Evenson – In fracking, particularly, we get questions like "how much water do they use?" Fracking is unlike the other water uses we look at because the operations move around; other water uses are fixed-in-place uses. In fracking, water is trucked around, reused, trucked around some more, and then disposed of (and probably trucked to the disposal site). It would be useful if we could get the industry's records on how they're moving the water around, and it may be easy to engage them in how to tackle this question as a model/pilot program.

Mason – What would be the model for this? Would we focus on a particular industry? A particular geographic area?

We would need to give some more thought to that.

McLaughlin – I want to highlight the effort that Bill Wilber, Jeff Deacon, and others are working on through the NWQMC to establish a national network of reference watersheds. This effort is gathering information that is collected by many organizations for many different purposes.

Wilber – We're going to include information about that effort during the briefing we give this group in February. If this model works for the reference watersheds, there's no reason it couldn't work for other types of sites.

Evenson – One more thought on planning for the future and taking advantage of opportunities as they present themselves: money flows toward problems. The drought that we're experiencing in the Midwest and the floods that we've experienced over the last 7-10 years from hurricanes and other storms are very strong in people's memories right now. So any work that's related to those hydrologic extremes probably addresses some of the prime issues that will resonate with Interior, OMB, Congress, and others.

Evans – My inclination is to think not in terms of a shrinking budget, but in terms of a Federal budget that's so bad that we can't expect *additional* Federal funds.

Is it worth looking at how much other developed nations spend, relative to what we spend on water monitoring?

USGS has recently been asked to help New Zealand because they're in the process of rebuilding their networks after discovering that the previous privatization was unsustainable.

Can we come up with some economic value for monitoring and the value of better decision making? Can we give concrete examples of how much money monitoring saves us?

Norris – We've been trying to do that for quite a while, and finally we have some economists on board, but we won't have anything we can report for at least 6 months.

If there are any reports put out by New Zealand as to why the privatization didn't work, that would be a good thing to have in one's back pocket.

ACTION – ALL: If you have suggestions regarding possible recommendations that this workgroup may want to make to Anne Castle, send them to Wendy.

The next meeting is January 28 at 1:00 p.m.

* **Note:** The presentation and discussion on USGS funding and FTEs did not take place because the presenter was unexpectedly called away from the office. This presentation will be rescheduled for a later meeting.