

*Bay Area Watershed Network*  
**Watershed Assessment Workshop**

**MAY 20<sup>th</sup>, 2013 9:30 am – 4:00 pm**  
**StopWaste.Org Board Room**

**Summary of Panel Discussion: Watershed Assessments in the Bay Area**

**Facilitator: Larry Kolb (LK)**

**Panel Participants:**

Eric Stein (ES)  
Laurel Marcus (LM)  
Christina Sloop (CS)  
Gordon Becker (GB)  
Fraser Shilling (FS)  
Josh Fuller (JF)  
Ann Riley (AR)  
Mike Liquori (ML)  
Josh Collins (JC)  
Rodger Leventhal (RL)  
Gretchen Hayes (GH)

**LK: Several speakers today have said that no single assessment method will be workable for all kinds of assessment questions. Name 1-2 things assessment methodologies are valuable for, and what would those things be?**

JF: I do recovery planning for steelhead, at all scales. Certainly assessments of any kind provide information for a baseline or a setting for what we're dealing with. Often we get projects where we know nothing about physical habitat and species present. In regulatory work and in recovery plans it's essential that we have assessments. Things need to be fleshed out on a scenario-by-scenario scale.

CS: as a multi-stakeholder conservation/restoration partnership, the SF bay Joint Venture must have a good sense of what is going on at many scales to evaluate status and trends of our conservation targets and the efficacy of our work as a collective. Our partners are always facing the fact that there isn't enough money, and monitoring is a low priority in the funding scale. Assessment methods can inform regional goals; and help us understand whether or not the work we're doing on the ground is successful or not. No one tool is it. We need to first come together on objectives and methods, and then can hopefully build a regionally coordinated framework that works for a variety of partners at a variety of scales

**LK: What are assessments good for and what are the obstacles to using assessments?**

ES: At the core, it is a language. An assessment tool is a common language for a suite of complicated things that we can all use to communicate condition and trends. A way of taking a complicated thing and putting it into a common language for greater understanding and for use to communicate across various specialties, roles and responsibilities.

GH: Scale of communication and tying information to the end users. At Rutherford Reach we have a dedicated source of funding for stream monitoring and managing from landowners. We are measuring

metrics that landowners are interested in as well. Scale of the communication should be targeted for multiple purposes: science, funding development, etc. Must benefit payers as well.

RL: We make connections to people to vote to fund. The best metric for where I work would be a way to tie people's property values to a measure of their ecological worth. A way to "connect-up," like the Zillow walkability scores.

JF: Reasons to assess fall under planning, under permitting, for tracking process, and for identifying problems. For tracking success, we typically celebrate, then stop monitoring. Education, decision-making, political will. Obstacles: money and data. There's never enough. Irony is that those who pay for monitoring are often those who don't want to know. It's difficult to produce a report card that doesn't report good news.

FS: You can condense a lot of this into assessments that support decisions and education of self in a larger society. That's where storytelling part comes in. Because they're voluntary and optimistic, when you find the wrong answer (when things are bad or in decline) you are challenged by the process and assessment itself. Monitoring will then lead to assessment. The biggest barrier in use of assessments is that they're voluntary but threatening. We aren't at the point where we just do it anyway and change the scope of our decisions. We need to make new decisions if we want to live better.

LM: Assessments are important to do before you set goals. Notions of what a watershed can do is something extremely different from reality. If we can put the science out there, and then develop goals and objectives, perhaps we won't see so much deflation in ideas and enthusiasm.

GB: One challenge is in watershed user groups who want all their specific metrics to be measured (salmon, birds, etc). Another challenge is that the metrics have to have certain characteristics such as being regionally applicable, long term, cost effective, etc. But those aren't the metrics that will answer my questions – the assessments I want will require consensus by the community.

ML: When assessments are done well they help identify the problems. They're given a bad name when done for the sake of assessment. It leads to suspicion. Our job is to find ways to make the assessment more focused toward solving and identifying problems, and not data collection for the sake of collecting data.

**LK: Ideally a watershed assessment should make it easier for agencies to review and select project for funding. To what extent is this being done now and should it be? How is this working?**

GH: When we go after money we have to meet objectives of a single grant, it is a challenge to tailor assessments to meet specific objectives of grant. I wish the grant programs were more flexible; that caps were larger for multi-phase projects, that permits and agencies could come together on objectives for rivers, reaches, etc. I wish there wasn't such a disconnect between planning, permitting and funding a project.

ES: Although implementation is mixed, the idea behind IRWMP is good. Priority setting for watersheds through the plan ideally gives priority setting and decision making more local control. Where this fails is that it's restricted to the IRWMP process. Could other processes plug into the IRWMP process?

CS: Funding opportunities are unfortunately very fragmented, available mainly within short-term (1-5 year) funding cycles, and usually focused on short-term outcomes. This is challenging for projects with long-term monitoring & evaluation needs, where change may extent over decades. With focus on restoration of wetlands, an action is implemented and then restoration is passive. It might take 50-100

years to re-establish ecological function in a given habitat. Most grants ask for 3-year success or efficacy. Therefore, long-term frameworks need to be set up and funded!

LK: What occurs to me is the impulse to give, like endowments. I wish we could leverage that.

GB: I like that the FRGP decides there are species or watersheds that are important based on a scientific rationale. However, it doesn't allow picking of one watershed and addressing all the threats. It won't be successful.

**LK: In your experience what do you think are the most important attributes of watershed health indicators?**

FS: I find that many are patterns in time and space indicators (e.g. % of x, acres of x). What is missing is a good set of process indicators, or focus on process as much as pattern. This comes from an over reliance on GIS. Processes are difficult to measure and communicate, but they drive the patterns. It's an opportunity to invest in understanding processes. GIS is attractive because it's easy: flashy maps and more money. It has become its own monkey on its own back. Some of the power of GIS is forgotten in the attractiveness of cartography.

GH: My favorite thing to measure are long profiles of stream channel. Going out with a multi-disciplinary staff and getting "easy" data ties to a lot of adjunct monitoring. Capture what you can if it won't cost more; for example spawning riffles, etc. It tells us about habitat as well as process over time. And be economical - leverage on-the ground survey data from public works, transportation agencies, etc.

JF: One thing I've noticed is that we're lacking is flow stream gauge information. We have pre-fixed sites, but we need local information to make flow habitat connections to recover salmonids. It's relatively inexpensive, but time and time again it's a hard thing to get a good understanding of and it takes some strategic planning.

LK: Would drones work for any of this stuff?

ML: You joke, but I recommended to a client to use drones for large wood jam monitoring. We want to watch the change, and currently we can only monitor in the summer when flows are down and the stream is dry. By sending out an iPad-driven drone to take a picture after every high flow will be a powerful tool in the future. Snap shots give almost more information than easy low-cost data.

JC: I see a different approach to indicator selection emerging. It begins with difficult decisions and questions. Like, what levels of ecosystem services do you need this watershed to provide? The answer is a practical operational definition of good health. Once you reconcile one goal with another, the metrics are easy. They define themselves once you decide what the watershed has to do for you. It's hard, but people are trying. How much flood control? Salmon? Acres of wetland? Representative hydrology? Computing makes it possible. But the politics are not easy. The other side is the interpretation of metrics. Big group think on the front end: goals, data to collect, and how to interpret the data.

LM: You have to think about people. You can't make decisions without those who make decisions on these properties. Maybe local health depends on how many people are engaged with what is going on. A poll returned that some folks think that a watershed is a shed with water in it. Need to think about humans producing pollution and make them part of our indicators.

RL: Some data sets can only be valuable in the long-term, at the watershed scale.

GB: I'm interested in the hydrology and flows issue, in particular the idea of dry season impairment. Let's decide what an acceptable level of dry season impairment is for those who use a dam, etc. Another dream metric is a good one for riparian condition, which is tied to public involvement (riparian set back ordinances, for example). We need to work with people who want to work with us until we can get polices in place so we can implement throughout the region.

CS: It's important to think big picture. Indices of the various things we're measuring (e.g. bird abundance and restoration efficacy) don't necessarily correlate. I struggle with having to pull the two together to find causality to inform our planning. We have to be aware of what it is that we are trying to inform at all times and design our assessments accordingly.

**AUDIENCE QUESTION: How do we determine what amount of riparian area needs protection? Beyond what function you're trying to preserve, what kind of tools can we use to set standards that are reasonable for the environmental and riparian area we're in?**

ML: I just chaired a committee for CalFire. We changed regulations in forestry from buffer widths to buffer structure. This comes from science done over the last 15 years. Structure gets us away from continuous uniform buffer strategies. It's not how wide the buffer should be, but what are the processes that are important at that site? And how to you trade off those processes?

FS: Over a large landscape, we tackled what widths compare to a stream's physical function. Point steep headwater swales are where power is generated, and that's where widths should be widest. The consequence is that you radically change the amount of land that falls within those buffers. Geomorphic process flips riparian buffers on their head, and we'd have wide buffers on small streams. But biologically, it's different. You have to start to generate tailored buffered widths. Ecosystem benefits have to consider both approaches. It seems less arbitrary.

GB: Fixed width is a short cut when we don't have the resources to come up with the right answer. Historical ecology can be useful to help us figure out what it looked like or probably looked like, for setting goals for widths on a watershed by watershed or stream by stream basis.

JC: Tahoe basin has had extreme environmental zones since 1972. They asked the same question, and now wonder how much is enough. But they lack the assessment data to know. Which is why we're at this workshop.

LK: It's political.

RL – In Marin we tried to incentive landowners, but it is very hard. Private property is a real challenge – difficult to not have standard set back.

**LK: If you lived in a perfect world, how would you like to see assessments be done? And what areas would you like to see more money spent?**

FS: Aside from what has already been said, there is seldom assessment of need. A needs assessment to set parameters to help all subsequent assessments fit into it. If you're not going to do the Full Monty, why take off your socks?

JF: Outside of flow, we're having a hard time on threat assessment (land use) for salmonids. More than attacking one industry, it's about looking at what is actually impairing a stream. I think it's about understanding land use, and what things about a given land use, we need to monitor.

LM: If I could do whatever I wanted, I'd put as much effort and funding into environment and resources as we currently do military and development. I'd change the budget system so we get long-term studies.

ES: Tie assessments back to decisions. We need the abilities like a river basin authority to take action based on assessments. Get bold and be more predictive. We tend to be reactive. Climate change does it better than us. We need to predict scenarios and consequences.

LK: As a warning?

GB: If it's a good assessment.

GB: Another response is: what is the capacity in the watershed where we want to work? Every watershed doesn't have an implementation action group. We don't want to rely on the agencies; we need to build social infrastructure, human infrastructure.

LK: Thank you.