STREAM Team Mid and North Coast Summit

Water Quality Breakout Session Notes ~ February 28, 2018

Background:

Oregon’s Strategic Enterprise Approach to Monitoring (STREAM) Team is an inter-agency effort to facilitate collaborative and coordinated planning, monitoring and communication of water-related data and information among Oregon’s natural resource agencies. STREAM Team hosted a Water Monitoring Summit covering the Mid and North Coast on February 28-March 1st, 2018, convening state and federal natural resource agencies, tribes, watershed councils, municipalities, Soil and Water Conservation Districts (SWCDs), conservation and research groups, and others that collect water monitoring data throughout the region.

At the Summit, practitioners shared information about their water monitoring activities, building knowledge and identifying opportunities for further collaboration. Five breakout groups addressed Water Quality; Water Quantity; Habitat for Fish and Aquatic Life; Land Use and Streamside Habitat Conditions; and Nearshore/Estuary issues. Each breakout group identified priority issues impacting these themes; data needs; and opportunities to improve data sharing and collaboration. This document contains the information discussed by the Water Quality breakout group on February 28th. Information from this document was summarized for discussion with all Summit participants on March 1st.

Breakout Session Notes – Water Quality

Question: What are the important issues impacting water quality?

- Lack of alkalinity data for streams, which affects so many other parameters
- Stream temperature
- Effective monitoring techniques for herbicide contamination, complete list of synthetic organic compounds which includes herbicides that are currently being used, adequate time of notification to which spraying activity occurs.
- Ignorance by public that there are important issues impacting WQ. Need more education and communication of WQ information.
- Erosion that leads to sedimentation, participant has noticed higher turbidities than in the past.
- About 50% of stream network in any watershed is in the intermittent Class 1 streams. Those streams aren’t sampled. Lots of atmospheric deposition up high in watershed, first flush events/pulses that come out of upper watershed aren’t captured by our data sampling. Lack of normal winter flow grab samples. Nobody samples after first rainstorm.
- Need for more drinking water sampling?
- Freshwater gets a lot of focus, but ocean acidification is a major issue. CO2, OAH, are going to be issues that dominate in the future.
- From a WQ manager perspective, understanding the entire dynamic nature of our watershed and packaging it in a way that allows us to enact better management is important. Need more holistic management. We are focusing too much on little pockets.
• High input of toxic metals to coastal streams that aren’t monitored for are a big concern.
• Lack of regulatory monitoring and enforcement is a big problem. A little monitoring is going on, but those people aren’t able to do anything about it. Not funded for enforcement. With regards to fecal coliforms, pesticides, and other contaminants, the wrong people are in control of the data and there is a funding and policy disconnect between the monitoring and the enforcement.
• Urban runoff is in general a big issue in coastal communities. Lots of runoff going into Columbia River, direct runoff from parking lots full of products that keep machinery running. Stormwater monitoring around urban areas.
• Lack of funding for harmful algal bloom toxic assessments.
• Lack of funding in general for monitoring.
• Relationship between temperature increases and how it affects aquatic life. Fish become more exposed to contaminants as the temperature goes up- respiration rate.
• Aging infrastructure has an acute effect on groundwater quality. Could be looped into education and communication to landowners.
• Important to highlight groundwater-surface water connection and interactions when considering WQ issues.
• Need to identify cause of pollution. The relationship between industry and priorities of public doesn’t always align with priorities. Disconnect/missing link. Monitoring sourcewater contaminants is an important issue.
• Large volume of regulatory agencies, hard to discern who is in charge of what data or who to talk to. Communication isn’t happening as well as it could between regulatory and industry. Landowners weren’t invited to this forum. Making sure forum was easily accessible. Education piece is big on all sides, no common understanding. Agency folks need to be prepared to explain various programs, sometimes folks even within the same agency aren’t aware of changes.
• Legacy issues remain a big problem. We are facing undoing 100 years of impacts. Siletz River for example is highly incised with sediment continually moving downstream. We’ve dug a 50 year hole with CO2 when it comes to carbon in the ocean, legacy issues.
• Turnaround time on data we collect is an issue. Collect data, takes a long time to process. Lag time makes it difficult to communicate with project partners and project managers. Need timely data turnaround in order to utilize it for adaptive management.
• In our watershed there are a number of actively operated quarries. The quarries dumped holding pond water directly into the creek. Who controls the quarries? It depends. If quarry is used for industrial purposes, DOGAMI does. But if you have a quarry that timber company uses for logging purposes, then ODF handles it. Need to pick one agency to be in charge of “stream quality”, responsible for monitoring, detection, and enforcement. Single point of contact.
• A lot of overlap between different agencies and somehow many issues needing to be addressed, but they are overlooked.

**Question: Is there adequate environmental data for these resources to establish trends?**

• Spotty. Some areas that have a lot of data, but there are also a lot of gaping holes.
• From the Nehalem: Lots of temperature data, no DO or E.coli data. It might exist, but not aware of existence and not sure how to find.
• We need more flow data to go with samples. How do you establish trends with a concentration? Look at what dilution does. Don’t see why anyone bothers collecting expensive data without the discharge data to go with it.
• In response to previous point- there are some WQ sites visited with gauging stations, can be used with WQ data, can have data sondes deployed. Need more collaboration with selecting sampling sites. Once you put feelers out and focusing where you are collecting data, can work through this. Establishing USGS gauges is cost-limiting. 100k just to get a gauging station up and running.
• What about Doppler systems for doing flow data? Recognize that measuring flow is not easy, but still need more.
• Need for more quality assurance- is it a valid trend? You won’t know if it’s a valid trend if you don’t know if you have good data quality.

Question- thoughts around data sharing and accessibility?

• We need good metadata so people know how the data was collected. This also starts to address data “share-ability”. Metadata is what allows our data to be shared among each other.

What voices are missing from the conversation?

• There have been accessibility issues with some of the modeling that DEQ has done. A lot of times the regulations are extrapolated through models. Model accessibility has been an issue. There needs to be more transparency in the process. Also need more opportunities for others to weigh in early on. Once there has been considerable investment, it is hard to backtrack and revise a model (Farm Bureau).
• Really difficult to find out what other watershed councils are doing. Right now, going to DEQ website there are no functions to search for existing data.
• Our ability to collect data has outpaced our ability to share data. But, systems are beginning to catch up and we’re beginning to implement those functions. Hope that this will improve soon.
• When we test for herbicides, there is a number- MCL (maximum contamination level). Where does that number come from? Speaker believes it comes out of “thin air”. There is no number for short term transient phenomenon.
• We don’t do a good job publishing anything about a synergistic effect of the toxic contaminants we monitor for.
• A big hurdle is having a platform to upload continuous data. Have 12 years of continuous data within Tribe’s boundaries, but no place to put the data and nobody can access it.
• Events like this go a long way to start the info process, hope we all walk away from this with new information and connections.
• Nehalem watershed- some concern with what kind of testing has been done to drinking water?
• Encouraged by improvements in Tillamook and how dairy farmers have improved their practices.

• Agencies responsible for WQ assessment are limited by what legislature will allow them to do. Working with legislature could improve funding availability, especially for toxic contaminants. Would be nice to see public funding for a toxin lab, building state capacity for monitoring.

• As to cause and effect, we get distracted. Science is pretty good, and we don’t get or take credit for it. Would like to see initiative from the State standing by the science.

• Landowners need to be part of the dialogue to make progress.

• Breweries use a lot of water, but would be good ambassadors for the importance of good quality water. Could be the type of people that could influence legislature.

**Question: Let’s switch gears- think about the next 5 years in the mid and north coast region- what is important? Consider limited resources, limited responsibilities and roles**

• The Mid-Coast has very unusual water when compared to other places in the watershed when considering alkaline and hardness levels. Assessment of acidification in fresh water and where (what sites) is happening is crucial.

• Nehalem: has collected a lot of data. Began collecting temp data in 1993, but lack predictive models. Takes a lot of time to go through data and can’t always use it. If I could extrapolate, could take much quicker action. Need more analysis abilities, better access to models, to reduce data collection.

• Monitoring should focus heavily downstream of areas or within areas where restoration has taken place. We have a lack of effectiveness monitoring of restoration projects. It’s important to have evidence that what we are doing pays off. More long term effectiveness monitoring to be able to identify benefits of a particular project. Promotes an understanding of the value of restoration work.

• More information available on state databases like FERNS that is easily accessible. Right now, hard to find out what herbicides are being sprayed across a watershed.

• Could use freshwater mussels to compare watersheds, untapped resource.

• Need to scale back monitoring in areas where we know where the problems are but there is no money to do anything with it. Resources could be better allocated to developing projects and other “boots on the ground” type efforts. More focus on implementation, scale back monitoring. Come back in 5 years for additional monitoring.

• With groundwater, does it make sense to focus on more long term monitoring on a quarterly basis similar to the east side? May not need 100 wells, but rather chose 1 or 2 more representative wells.

• More consolidated data, better access to data.

• Speaking about project implementation, ODA has been working on focus areas and SIAs. Getting funding through OWEB. Had some 303 listings in the Tillamook but funding has been stripped due to lawsuits. Funding may be reduced, but still available.
• If we can demonstrate well how finding problems and correcting them can save money, then we can start talking to legislature. Important to be able to show that before we can ask for more funds.

**Water Quality POSTERS**

Most important issues:

- Alkalinity
- Stream temperature: effects on fish (e.g. contaminants)
- Effective monitoring for contamination (especially toxics)
- Adequate notice for spraying activity
- Education and communication
- Erosion and sedimentation
- Lack of Sampling of ephemeral streams and upper watershed
- Ocean acidification; hypoxia
- Watershed processes approach
- High input of toxic metals
- Lack of regulatory monitoring enforcement
- Urban runoff
- Stormwater monitoring
- Lack of $$
- Aging infrastructure
- Highlight groundwater/surface water connection
- Disconnect between industry and the public
- Communication between regulator agencies ->infographics; public guidance; coordination; single point of contact
- Continue to address legacy issues
- Lag in data turnaround time
- Involving different voices
- Build state capacity for monitoring
- Focus on project implementation; scale back monitoring; strategically redirect funding

What data are needed in the next 5 years?

- Freshwater acidification; where (alkalinity, hardness)
- Predictive models
- Restoration monitoring data; long term, effectiveness
- Herbicide application records (Forestry, Ag)
- Identifying biomonitoring organisms
- Wastewater treatment plant upgrade status

What data is needed for establishing trends?
- Flow data
- Discharge data with each sample
- Focus data collection efforts in areas where other efforts are underway
- Quality assurance and good metadata (allows sharing)
- Process transparency
- Opportunity for input/peer review
- Platforms/tools for sharing data
- Better data to understand transient phenomena; acute situations
- Synergistic effects of toxics
- Utilize and promote good science

What voices are missing:
- Landowners
- Breweries (large water users). Want ambassadors/marketers