

Industrial Stormwater Program



State of Oregon
Department of
Environmental
Quality

1200-Z Rulemaking Advisory Committee Meeting No. 4

Wednesday, Jan.22, 2020
DEQ Headquarters, floor 3 conference room
700 NE Multnomah St.
Portland, Or 97232

List of DEQ attendees

- Justin Green
- Christine Svetkovich
- Krista Ratliff
- Courtney Brown
- Michele Martin
- Becky Anthony
- Inez Lawson
- James McConaghie

List of Committee Member attendees

- Ada Banasik
- Alan Flemming
- Chris Rich
- Jamie Saul
- Jonah Sandford
- Debbie Silva
- Kathryn VanNatta, by phone
- Michael Campbell
- Norma Job
- Stacy Hibbard (Chair)

Meeting materials

Please refer to the webpage for this rulemaking under 1200-Z Permit Rulemaking Advisory Committee Meetings / [Meeting 4](#)

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

Industrial Stormwater
700 NE Multnomah St.,
Suite 600
Portland, OR 97232
Phone: 541-633-2033
866-863-6668
Fax: 503-229-6762
Contact: Krista Ratliff
www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining, and enhancing the quality of Oregon's air, land, and water.

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Agenda

Jan. 22, 2020

8:30 am – 3:30 pm

DEQ, Floor 3 Conference Room

700 NE Multnomah St., Portland, OR 97232

Time	Topic	Presenter
8:30 am	Welcome and logistics	Michele Martin
8:40 am	Follow-up from meeting No. 3 <i>DEQ Meeting 4 presentation</i>	Christine Svetkovich
8:50 am	Presentation <i>DEQ Meeting 4 presentation</i>	Krista Ratliff
9:45 am	Break	
10:00 am	PG Environmental presentation	PG Environmental
11:30 am	Lunch	
12:20 pm	Presentation and discussion <i>DEQ Meeting 4 presentation</i>	Krista Ratliff
2:20 pm	Informal public comment opportunity	Michele Martin
2:40 pm	Continue discussion as needed and next steps	Krista Ratliff
3:30 pm	Adjourn	

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Additional documents for this meeting:

- DEQ Supplemental Information Sheet 1
- DEQ Supplemental Information Sheet 2

Meeting Summary

Note: Several attendees were on the phone for this meeting. DEQ was unable to capture all phone attendee names and affiliations.

Michele Martin (MM):

- Welcome, logistics, ask questions at any time;
- Public comment period will be provided at the end of meeting (currently no one on the phone);
- Started meeting recording
- Review agenda

Christine Svetkovich (CS):

- Follow-ups: Nothing specific to follow up on from last meeting; we appreciate your input; we re-listened to the meeting No.3 recording and re-read meeting notes.
- We provided the EQC an update on the rulemaking at the Nov.15, 2019, meeting in Portland.
- Timelines: Updated, draft permit will be released late summer 2020, no firm date yet. The rulemaking is on schedule as described in meeting materials.

MM: Acknowledged committee member, Kathryn VanNatta who attended by phone.

Michael Campbell (MC): We are past the half-way point, we are running out of time to talk about those other issues regarding other modifications to the permit; also, we are not striving for consensus, but Advisory Committee thoughts versus random comments; seems helpful to try to get some consensus of Advisory Committee. Seems like we should have a proposal to react to; people I represent have other issues; should I send to the committee?

CS: As noted in previous meetings, if we have time for other topics we can take those; we want your input in any way you want to share; any info provided is part of public record; would like it to be shared with group; today we have some specific considerations and are looking for your input; for next meeting hope to get committee input, so that by sixth meeting we will complete discussion from this group, and have the fiscal impact discussion. We request input from group today so we can turn these concepts into solid permit recommendations for the next meeting.

Justin Green (JG): Numeric limits are a focus of this Advisory Committee; do other members have objections to members sending recommendations for permit conditions or other concepts? Send to the whole group; the discussion is important; this is the time for us to hear your thoughts to have a well-informed discussion.

CS: Introduced James McConaghie, with DEQ standards program. James is present to help with recommendations that have a water quality standards nexus.

Krista Ratliff (KR):

Good morning;

- Map of precipitation in Oregon from the Climate Center. Purpose is to be aware of this as we go through today; map is 10 years old but still relevant as; eastern region has 31 industrial sites under the permit and gets under 10 inches of rain. Norma Job mentioned this regarding the four sample frequency and difficulty in getting required samples. We must think about frequency; permit sampling is monthly in individual permits and we only sample four times in stormwater; in contrast, the coastal region has up to 100 inches per year.
- Today, we will start with Tier II numbers, then discuss technology based limits, then Dan Connally's presentation from PG Environmental, water quality-based limits, then discussion of future permit conditions.
- Tier II framework in place since 2012, prior to that we required geometric mean in 4th year; copper and zinc is driving Tier II treatment in the state; cities of Portland and Eugene provide us with complete data, including the pollutants which triggered and the geometric means. DEQ only tracks who triggered but not what pollutants triggered; Clean Water Services currently tracks same as DEQ does, so some info missing.

- Bureau of Environmental Services (City of Portland) numbers; we did a correction and the numbers went from 35 (on the slide) to 70 facilities for 2013/2014.
- A lot of facilities analyze Tier II outside of the designated second Tier II year, but majority are within that year; the second-year from issuance of the permit.
- Numbers stayed consistent.
- Western Region has an asterisk because in 2012, it took a while to get all permit registrants under the renewed 1200-Z due to the number of stormwater pollution control plans that had to be reviewed and put on public notice. Therefore, the second-year evaluations for renewing facilities spanned a three year cycle. The 78 facilities for Western Region represents years 2013, 2014, and 2015.
- Tier II context – it’s still working; some facilities trigger Tier II in second cycle, but most of these are new facilities or new parameters.
- We do not have mass reduction numbers.
 - MC had asked for percent of facilities infiltrating?
 - Portland Bureau of Environmental Services, or BES, has 40 or so facilities; will be evaluated next year.
- Numeric technology-based limits - current thinking is that we are not able to establish, because PG Environmental presentation showed every calculated limit was above the water quality standard; so obviously we cannot use any technology-based limits that are not protective of water quality.
- Information gaps - with the new electronic reporting tool we can close some of these information gaps; there are also challenges with tracking treatment trains; we want your input on that topic.
- Later we will get into exactly what we want to track as far as technology going forward to inform our future decisions.
- Additional limitations – and recap idea of how much we want to invest in figuring out storm characteristics and drainage data on a facility, e.g., de-icing technology-based guideline, was 82-page final rule with more pages of technical analysis.
- What we can do? - concentrate on better informing ourselves for future decisions. To do that, we need an idea of what technologies are going into the ground and what technologies are working
- Recommendations include to better track site-specific structural controls:
 - Tier II treatment technologies: end of pipe info and pollutants triggering; track pollutant removal that has been proposed
 - Look for sector trends
 - Require rain gauges and precipitation reporting (when and where appropriate)

MC: I don’t disagree with challenges of setting up with numeric technology-based limit – disagree with concept that calculated limits would not protect water quality – we don’t have a limit now, so adding a limit would do that – so it’s not legitimate to say these numbers are too high – not sure that’s a reason to reject limits for technology; as a legal matter, right now we have a narrative water quality-based limit in this permit; all those other things are challenges for setting a numeric technology-based limit but can’t say it’s not protective because there are other things that are protective in the permit.

Dan Connally (Dan), from PG Environmental: If you establish – you cannot apply a technology-based limit and not also calculate a water quality-based limit; you cannot apply one and not the other. You have to apply the most stringent. You cannot apply one without the other. You cannot apply a tech-based limit that is not protective of water quality in a permit.

MC: I respectfully disagree. You cannot make a permit less stringent by imposing a numeric limit for technology, because we don't have a numeric water quality limit now; adding a technology limit doesn't change that.

Dan: It is not part of the anti-degradation or backsliding, it is part of the establishing numeric limits in federal regulation. I understand what you are saying, the permit would be more protective and work closer towards the goal of minimizing pollutants, if we set a numeric technology-based limit; the federal regulations are very clear that you may not calculate a technology limit without a water quality limit.

Clarification: Dan clarifies that when a technology-based effluent limitation is not protective of water quality, he asserts that a water quality-based effluent limitation is required. There are two important citations: Clean Water Act (CWA) section 301(b)(1)(C) and 40 CFR 122.44(d).

CWA section 301(b)(1)(C) requires that permits include any effluent limitations necessary to meet water quality standards, where technology-based limits are not protective of water quality.

MC: Please send me the citation for the federal regulation – I don't want to belabor this, but I don't think it will be important when we talk about benchmarks; we need clarity on what we are trying to achieve with the limits and with the narrative criteria; we would end up numeric technology-limit; I am not advocating this because I think it is a challenge for all the other reasons; with a mixed permit with numeric technology-based standards and narrative water quality-based standards.

See Appendix A: Federal regulations for numeric effluent limitations

Jonah Sandford (Jonah): Is there any tracking of effectiveness of technology installed during the last Tier II cycle, over 2013-2014 for example, for expected pollutant reductions and what actually was reported?

KR: No, facilities have a deadline to get us a Tier II proposal, but then a year-and-a-half to install; during that time they are investigating and sampling and their plan may change; so it is more difficult to evaluate the original plan and track revisions since we do not always know what was implemented until we are onsite doing inspections. If we start tracking this we have to track re-triggering to understand if whatever is going into the Tier II is working or not. We do not have the full story of how permit registrants are meeting numbers because it's a combination of non-tangible, source control, even employee education. We have a starting point – some data to compare; with an electronic system it will be so much easier going forward.

Chris Rich (CR): Jonah hit on key issue for this committee: the adaptive management approach of a general stormwater permit that relies on facility-specific adaptation, to start using the electronic system to track parameter by parameter to see if it is working; goal is if you go into Tier II, you should have reductions; we will not be answering the question. If we can establish protocols for tracking the metrics then we will have real information to track if it's working – going to numeric limits is jumping to a solution that may not be required; looking at facilities triggering Tier II we do

not have parameter by parameter information; this is the big question of the general permit we need to solve.

Jamie Saul (Jamie): There have been multiple permits cycles of this; we have water quality criteria exceedances; if there are data gaps we have to move swiftly; reason we are here is the litigation, because the system that has been in place is not protective of water quality – we cannot use a lack of data as a basis for doing nothing. The reasonable potential analysis suggests we have to act – if there is a reasonable potential, a permit will allow an exceedance, and then limits are required. The benefit of the doubt should be given to aquatic resource; site-specific structural controls are captured in a stormwater pollution control plan; are plans routinely submitted to DEQ? One of our issues was that all stormwater pollution control plans and revisions are submitted and reviewed by DEQ; if best management practices (BMPs) are narrative limits, then they should be reviewed by DEQ; the stormwater pollution control plan submission process should have the means to include this in DEQ's data collection methods.

CS: Regarding stormwater pollution control plans, yes permit registrants are required to update plans and submit; challenge is that we do not have a central repository – difficult in our system now to pull info out of that submittal to analyze it; with our new Environmental Data Management System (EDMS), we are trying to make a system that permittees can submit information to us so that it comes to us in an e-format we can analyze; the paper submittal makes it challenging for a broad analysis (we are limited by site-by-site).

KR: We do review the stormwater pollution control plans; frankly most states do not, EPA does not; we are ahead of game there; goal is capture more data, to help us define what technologies we want to see on the ground; we want a system where we can pull out nuggets of information and decide which nuggets are most beneficial to actually figure out what sectors are triggering Tier II perhaps, are there trends we should concentrate technology piece on?

KR: Rain gauges – May help facilities justify variance requests; some parts of state difficult to find outside sources for accurate rain gauges; if we decide this could benefit facility then we could design something that could focus on a specific geographic area as needed; areas where there are not readily available precipitation data.

Kathryn VanNatta (KVN): Comment about rain gauges. Cost estimate to maintain and quality assurance regarding a rain gauge? Need constant care and tending?

KR: There are no concrete numbers. Right now proposing to track Tier II technology and try to analyze trends of what's working around the state; track pollutants that are triggered; design system to give us a removal efficiency – so we have some baseline data.

Stacy Hibbard (SH): Good to track data in the off-years to see if we should be evaluating for Tier II, more often; there is a big data gap there; do this if we don't see a change to Tier II in the next permit.

CR: Tracking Tier II – have some kind of coding for controls – so that as you are tracking you can track the different types of Tier II measures such as media filters, sweeping.

KR: But that's source control.

CR: How do you know what's working?

KR: We will track the treatment, but the up-stream source control stuff is so variable – too many to track, that includes sweeping.

Ada Banasick (Ada): for treatment or source control you want to track what people are doing as well as *where* they are doing it because not all are treating at end of pipe, e.g., some just treating the roof; if you just track sweeping not helpful, need to know where they are doing it.

Alan Fleming (AF): Second what Chris and Ada said – even 20 categories of treatment is not enough without tying it to basin characteristics – e.g., percent of impervious, characteristic of a site; also rain gauges are difficult to run.

KR: Now is the time to think about if there are too many variables; electronic system is set up now so that each permittee can upload a stormwater pollution control plan, so maybe tracking Tier II treatment will not get us where we need to go – tracking Tier II could answer the question if that permit structure is working and if facilities are meeting benchmarks after. If we are moving to risk-based water quality then a facility that is meeting benchmarks should have low risk; are there too many variables to make a conclusion? We do not want to track items if we cannot use it to analyze.

AF: Possible to track overall permit performance; use percent reduction; that is a number that is quantifiable and understandable; you can track the change in geometric mean over permit cycle. Evaluate the geometric mean in the fifth year of the permit, as well as the second year.

KR: If we go to a monitoring waiver with annual verification (National Academy of Sciences, recommendation) a facility will not go four years without information of what is going on – that creates a difficult paradigm; how do we track reinstating monitoring of those facilities with waivers? Then when does Tier II monitoring start? Tier II in the second year – purpose of that was to give facilities time to do good investigation after initial year of monitoring and then ramp up. There are also static compliance dates: six months to submit a plan, one and half year to install treatment. I like Alan's idea of doing a fifth year re-evaluation if we stick with geometric mean, because by then, they would have treatment installed and able to take some samples; when we move to verification (which we all think is a good idea), and then reinstate sampling if they exceed how do we track that based on Tier II if different timeline.

Ada: To study technology you need influent and effluent data. Track using before and after treatment – can use this to study for particular technology performance; in theory should work: trigger Tier II, have up to 18 months, then get four samples and ask for a waiver; so compare – you might have to ignore some sites that are not treating whole site.

MC: Questions need to circle back after benchmark discussion: DEQ has a plan checklist but maybe have a form that asks specific questions DEQ wants to collect – so easier to pull out info and get more consistent info from folks; otherwise inconsistent info from the plans.

[Break]

Dan Connelly, PG Environmental: Oregon 1200-Z Benchmark Analysis

Dan Connelly, PG Environmental is a firm that supports application of CWA and implementation of National Pollution Discharge Elimination System (NPDES) program; a lot of experience across country both writing permits but also training at federal and state level; lead instructor; solely focused

on supporting regulators: EPA, Department of Justice, states; with me are Audrey Signorelli, and Karishma Kibria– did a lot of the background research for this presentation.

CS: We asked Dan to do this to analyze appropriateness of our framework used to establish benchmarks.

Dan: Outline of presentation – this can get highly technical and nuanced but we are prepared to answer questions

- Objectives of the Analysis: evaluate the appropriateness of the existing benchmark methodology for cooper, lead, and zinc – assessed and looked at what’s being done across the nation, looked at a number of states to see what their procedures are.
 - Then, we evaluated translator metals, looked at EPA guidance and other states, and what Oregon is currently doing.
 - Ultimately hope to provide recommendations regarding methodology to develop benchmarks and translators.
- Overall findings and recommendations:
 - We do like the risk-based assessment for development of the water quality-based metals– it’s a unique application to establish an effective benchmark – thought the technological achievability analysis had a number of concerning methods that we do not support or think appropriate or in line with the overall goal of CW; could retain use of translator values for metals with caveat that other alternatives that would be reasonable, but there are increased levels of work for those.
- Assessment of benchmark development:
 - Step 1: identify appropriate water quality criteria to be utilized;
 - Step 2: risk-based assessment to look at a number of variables in receiving water and discharge pollutant concentrations and volume to determine a benchmark that would be protective of water quality or allow for an acceptable risk defined as a 10 percent probability of causing an exceedance in a receiving water;
 - Step 3: technological achievability analysis – attempts to look at a threshold at which most facilities could implement an economically achievable technology and meet specific pollutant concentrations; and
 - Step 4: Final benchmark, compare technological achievability analysis resulting benchmark to the risk-based assessment water quality-based benchmark and take the least stringent of the two, and that is compared to the previous benchmarks and the more stringent of those two and that is established as the final permit benchmark.
- Step 1 – Water quality criteria chosen are based on acute criteria for copper, lead, and zinc
 - For copper it’s the biotic ligand model (BLM)
 - Lead and zinc criteria are based on Oregon’s hardness-dependent criteria
 - Question: how to determine what values go in there? DEQ approach: site selection – identify all sites where discharges are likely to occur where we have data; eliminate those not representative – i.e., directly downstream or adjacent to a discharge; then left with 2,000 sites in state; categorized these by geo-region and used these to id variables for the BLM model – all data from 2008-2016; identify

appropriate distribution for each variable (how frequently we expect certain values to re-occur)

- Step 2: Used Monte Carlo model and data distributions to – identify how frequently exceedances would occur in each defined geo-region for these metals.
 - Monte Carlo model says randomly select values, but it's based on the re-occurrence frequency; gives output of in-stream receiving water concentration; assume dilution of 5:1, meaning 5 parts to receiving water, and one part to effluent
 - Lead example (graph slide 10) – did 10,000 model runs for each parameter; trying to see in the real world what is the resultant receiving water concentration under defined effluent concentrations then use that to help determine what effluent concentrations needs to be for exceedances no more than 10 percent of the time
 - Struck us: relatively unique component of the application of the dilution of 5:1 commonly occurring during storm events in different regions within the state, calculated based on 48 randomly selected facilities – it was determined that a dilution of 5:1 is going to be available at least at 80 percent of facilities; that means an estimated 20 percent of facilities will have this dilution factor of less than 5:1, that means this assumption will not be protective for those 20 percent facilities; as a general permit, it would be infeasible to come up with dilution that is appropriate for all facilities; there are management decisions that need to be made here for a general permit
 - Because a general permit it's not feasible to come up with a dilution appropriate for each facility
 - Here the dilution is applicable to at least 85 percent facilities
 - Dilution factor calculation = total stream flow/facility stormwater runoff
 - Use max and median storm size; median stream flow
 - Dilution concerns with 5:1: sample size was relatively small 48 randomly selected facilities out of 800 registered facilities; only 3 of the regions were considered; stream-flow data limited to only the last 3 years (relatively short timeframe);
 - Typically with dilution establish worst case scenarios so protective of water quality at all times – not using median; EPA recommends using low flow condition
 - Modelling used assumed that complete mixing was occurring creating homogeneous mixture – normally you have plumes, so EPA recommends using models or use another method such as a diffuser
 - We aren't saying 5:1 is inappropriate, but want to acknowledge we don't think its protective of all conditions for all facilities

MC: What would you recommend for addressing dilution in the context of the benchmark for a General Permit?

Dan: If I had to come up with a single dilution applicable across the board at all facilities, it would be to provide dilution. Providing no dilution is overly conservative. I really like that Oregon and Washington have moved forward in an attempt to apply some level of dilution. Defining what is appropriate or not is – some could argue that what is applied now is reasonably protective and some argue it's not; it's a gray area with enough flexibility for a management decision; EPA's own approach in establishing their own benchmarks, while it doesn't consider benchmarks that allow for

dilution, it does provide for you to allow for meeting the benchmarks on an annual basis; aren't strict immediate adherence with benchmarks at all times; now could argue DEQ dilution is reasonably protective and appropriate and others could argue counter.

MC: Do you think it would be helpful to integrate the distribution of dilution in the Monte Carlo analysis assuming DEQ had more data to do that?

Dan: If goal is to establish an effluent concentration at a level that will not cause any greater than 10 percent at any time, then incorporating individual dilutions would be much more representative of the stated goal, but I don't know that data exists or is feasible; Monte Carlo will pull variables independent of each other – considers how frequently they reoccur – may pull data that results in an overly conservative dilution value.

Ada: Ecology evaluated three dilution ratios and looked at likelihood of exceedances with different ratios and ended up with 5:1.

Dan: Majority of states do not apply dilution and neither does EPA with the exception of Washington state.

- Step 2: Determine what concentration is likely to correspond to 10 percent exceedance of water quality.
- Step 3: Technology achievable evaluation – identify treatment performance that facilities can implement at low cost; using “model technology” in this case that is likely passive media filtration.
 - Evaluates what will happen if facility without treatment were to install; looks at Oregon discharger effluent data.
 - Methodology used isn't consistent with what we deem to be the expected treatment technology process within NPDES program for toxic pollutants; we typically apply Best Available Control Technology Economically Achievable – approach Oregon taken shouldn't necessary be written off (other reasons for why it should); Best Available Control Technology wasn't used – if it were used, we would feel more confident in the analysis

MC: Agree it wasn't a Best Available Control Technology approach; but if DEQ tried to do that isn't it the same problem we came up with in trying to establish a technology-based effluent limit?

Dan: Yes, if Best Available Control Technology were used, this would be cut and dry; we would have a much higher confidence level; we tried to figure out applicable Best Available Control Technology we'd run into the same issue; it's infeasible given the available data to determine a meaningful technology-based effluent limitation (TBEL) based on Best Available Control Technology for stormwater.

Step 3: DEQ used data from international stormwater database, used paired data to try to evaluate the capability of these passive media filters – looked at median influent concentration and what's achievable for effluent 75 percent of the time – this gives us a very achievable performance capability. A performance standard that is relatively conservative.

- Once they had the data, they applied 90 percent confidence line

- 2011-2016- calculated average discharge concentrations and used data within 75th to 90th percentile, DEQ determined to use the upper end of discharge concentrations; we have concerns with this, that were touched on this this morning. This process inappropriate assumes that concentrations can't be addressed via alternative best management practices, that minimize contact – this assumes worst-case scenario; a lot is not being considered in this evaluation
- Took worst case scenarios, upper range of discharge concentration and applied pollutant reduction capability to give us the resultant benchmarks that we ultimately compared to water quality-based benchmarks – I don't think its representative of pollutant reductions you can expect from best application of treatment technologies and consistent use of best management practices
- Concerns: inconsistent with regulatory expectations – not saying outright should preclude, but does make evaluation harder
- Higher discharge concentrations selections assumes it's the only way to minimize pollutant concentrations in the effluent - discounts consistent application of best management practices
- Biggest concern: inconsistent with standard permitting approaches of applying most conservative of water quality and technological considerations; inconsistent with intent of CWA

MC: I agree with you here. My point; if these are not limits, just benchmarks, if objective is to identify at a general level with certain degree of risk the probability of exceeding a water quality standard then does not make sense to bump up benchmark because it is lower than the technology-based benchmark, then we need to be clear about what the corrective action will be required and what triggers that evaluation. For example, if exceeding a water quality-based benchmark you would do an evaluation to determine if that facility is causing a problem with water quality, concern with overall approach with permit is that we confuse those two things – if you have a numeric TBEL which meets technology box then need something else to show you are meeting water quality standards – with general permit have other narrative provisions to meet water quality standards. I agree it does not make sense if benchmark is designed to assess degree of meeting water quality standards; need to be clear in terms of corrective action required what's triggering that evaluation.

Dan: Even a water quality-based benchmark should compel appropriate technological application without consideration of cost; when considering corrective action, water quality based consideration we cannot consider cost. I agree with MC statement.

Dan: Step 4, least stringent is applied – we believe this is counter-intuitive to the intent of the CWA.

- Benchmarks that are resulted from the water quality and technological based benchmarks, were compared and the more stringent of them was applied – this is consistent and we agree with this
- What is being done at federal and other state's level to evaluate acceptability of Oregon approach: benchmarks developed for both freshwater and saltwater – benchmark set equal to criteria with no dilution – most states using hardness dependent criteria for copper

- Slide 30 – shows other multi-sector general permits from 22 states we looked at for development of their benchmark criteria
- Summary: range of methodologies used is slim – most benchmarks are established based on direct application of criteria; exceptions: Washington state used approach similar to Oregon, Florida set at minimum level (of detection) as opposed to something that is protective of water quality
- Oregon’s benchmark use appropriate criteria align with EPA approach although application of dilution is unique and not always protective of aquatic life
- Technical feasibility – biggest concern – not a big fan and inconsistent with CWA

Metal translators – looked at federal and state

Metal translators used to convert criterion – criteria is provided as dissolved but other components of the metal that aren’t dissolved and thus need to be accounted for – how the metal speciates out in the environment may be different from what’s in effluent – EPA requires us to account for that.

- EPA guidance give three approaches for translators, EPA recommends application of site-specific translators – in general permit would be huge effort
- Slide 35 table of Oregon translators – felt like copper was directly from BLM, all of these are very conservative approaches; intent is to be protective of aquatic life – may be overly conservative
- Translators were taken right out of water quality standards for lead and zinc – consistent with EPA and protective of water quality – appropriate – but DEQ doesn’t have to be that conservative in application of translator values – we have flexibility to establish less stringent translators

Discussion and findings:

- Would be appropriate to calculate less stringent translators – could do discharger by discharger basis or water quality by water quality basis – but on general permit level probably infeasible; need to track to provide parity among industrial sectors
- Could consider geo-region translators or statewide translators for individual metals
- When picking appropriate variables (if moving away from default) – have to make sure you are making conservative assumptions – need to be protective of worst case scenario throughout the state; you get more flexibility if you do that on a georegion basis

Questions? Comments?

MC: General observation – this seems to evaluate the benchmarks as if they were limits; in a general permit we are talking about probability so not sure appropriate criticism that benchmarks are not set the same way you set a limit; talk about benchmarks in terms of the objectives of the probability assessment of achieving Best Available Technologies or water quality standards – so need to think of benchmarks in that context, because the real limits in this permit are the narrative limits for both water quality and technology. If we tried to set benchmarks in the same way we would set limits, we run into the problems with setting numeric limits – For example, the translators, yes if you were setting a limit the conservative assumptions are appropriate, but should be more flexible with translators.

Dan: You do want benchmarks to compel appropriate actions to ensure not exceeding the criteria in receiving stream; the benchmarks are attempting to establish a performance standard protective of water quality; complexity of benchmarks is there is no book on how to develop them.

Ada: Ecology did calculate translator values based on paired values across the state. They had a more robust data set and found that EPA values based on lab tests were overly conservative than what was observed in waterbodies – Oregon is more comparable to Washington than EPA; if we compare the water quality and technology-based and go with a lower technology-based benchmark then we are setting people up for failure.

Dan: I feel confident in saying that the determination of technology-based benchmark through all industrial sectors is infeasible at this time – given that, we have to rely on only the water quality factors for at least these three metals; a lot more work involved in determining if economically achievable; we haven't done that on our end and it would take years on a state level – the only thing we have is the water quality aspect.

Jamie: Concern about the use of the dilution factors, to the extent that we are talking about toxic metals and need to achieve compliance with the acute criteria for those metals, where assumed mixing zone would not be appropriate, I have concern with the 5:1 dilution because it is inconsistent with EPA and many other states. About 20 percent of facilities, not sufficiently protective. Hope something DEQ evaluates moving forward.

KVN: reserving comments until next presentation on outcomes of 303(d) list and de-listings because we *are* achieving water quality standards.

[Break]

KR: PG Environmental Data Summary

- Impairment data summary slide that PG Environmental presented last meeting – re-cap: stormwater effluent data compared against the category 5 water bodies, used all data to account for reasonable potential analysis; also compared total metals with translator; did not incorporate any waiver in analysis; PG Environmental stated that if waivers were incorporated then the number of exceedances shown here would have gone down – would have skewed data to an unknown so not used
- 10-25 percent exceedances defined as moderate and above 25 percent was significant
- 51 water bodies had one or more with above 10 percent exceedances
- Breakdown based on proposed 2018/2020 Integrated Report de-listings:
 - With the refinement of de-listing picture incorporated; all zinc and lead listings where active industrial facilities and there were previous impairment listings are proposed de-listing for those water bodies showing 10 percent or more exceedances – most are smaller streams without industrial dischargers;
 - Arsenic: one water body
 - Total suspended solids: 2 water body
 - Overall 51 water bodies showing moderate or more exceedances - down to 31 water bodies and seven pollutants down from a total of 11 pollutants (includes pH – only a couple remaining listings of water bodies that were not assessed this time- listings moving forward from 2012 Integrated Report)

- Some water bodies went from category 5 to category 2 (attaining) or category 4A (approved TMDL)
- Looked at water bodies with active facilities only
- Going forward – Table on slide 11 – breakdown of facilities – means 14 facilities in that waterbody, not that 14 are contributing to exceedances
- E. coli – is the indicator (might be fecal coliform is listing - we assigned E. coli surrogate)
- Copper – supplemental handout 1 listing is for dissolved copper but supplemental handout 2 indicates total, due to conversion factor; Category 5 listing are for dissolved copper
- Iron is biggest driver in the State – 331 facilities discharging to these water bodies; doesn't mean every facility is exceeding
- Iron standard is set at chronic aquatic life – we don't have an acute water quality standard
- Total Suspended Solids: Beaver creek and Elk creek remain with listings– some of the water bodies around the state had duplicate names – total suspended solids went down because the water bodies where active facilities were located were not impaired
- E. coli –Columbia has both; saltwater and freshwater bacterial impairments – especially at the mouth; standard for fecal coliform and enterococcus – single sample criterion is mean, not instantaneous so doesn't fit into 4 samples per year, so we will propose to use the chronic bacteria standard rather than acute water quality standard
- Slide 14 – drills down more for E. coli– gives context around number of active facilities and number of samples exceeding – this context missing from PG Enviro presentation from last time –
- Slide 15: saltwater and estuarine bacteria standard – James McConaghie (James) – what makes most sense to align monitoring with the way assessments are looked at; facilities that are monitoring to see if contributing to an impairment – makes most sense to look at chronic criteria – bacteria impairment happens during high flow seasons so results of bacteria during wet season are the critical time
- E. coli 90-day geometric mean is 126/100 mL, E. coli is for fresh water; fecal coliform median is 14/100 mL –enterococcus is for marine water, geometric mean is 35/100 mL
- We could align with U.S. Geological Survey wet weather calendar Oct 1 through May 31 – not our July 1 thru June 30 ; facilities collect minimum of five samples during wet weather season – just for facilities that discharge to impaired waters for appropriate bacteria – this would align better for evaluating if they are impacting water quality regarding bacteria – would get more accurate data to prove impact to water quality

Jamie: Elaborate on the proposal to look at chronic versus acute – are you reading acute out of the standard – if there is an acute that applies to that waterbody shouldn't we use it?

KR: The fecal coliform and enterococcus - their acute is based on a mean/median not just one sample.

James: Two components to the standard recognizing high variability in standard; single sample maximum.

KR: We are in the discovery phase but the problem with other two bacterial criterion is that fecal coliform is a median and it does not align with our frequency of sampling.

James: Standard looks at five samples within a rolling 90-day window; design monitoring program within that 90-days; on top of that you'd have a single sample.

KR: This gives you a better idea in a year period if impact to beneficial uses.

James: Just using the maximum you miss part of the potential impact.

CR: The approach focusing more on wet weather periods addresses some of the concerns but DEQ needs to have bigger conversation about E. coli – if there is no industrial activity contributing a pollutant to a water body then – these are non-industrial and non-anthropogenic activities simply from the presence of wildlife ubiquitous in state of Oregon. Look at the opportunity for facility to examine if it's a contributor.

MC: The way Washington state handled it is the way to go – mandatory BMPs to address the issue – the standard is set up for continuous municipal wastewater dischargers. I wonder if 90-day geometric acute is appropriate – with fairly intermittent storms, using lower chronic number, the acute number is the single sample; not sure 90-day geometric is appropriate for stormwater?

James: Standards are designed to protect uses in the waterbodies, and yes designed with a standard monitoring program in mind; so geared more towards ambient – there's a translation to how that impacts the water body.

MC: The E. coli standard is saying that over that 90-day period as long as standard is below 126 but you never want any sample over 406 so apply the 126 to stormwater discharge seems overly conservative but that's not over 90-day period.

KR: fecal coliform and enterococcus do not have the instantaneous so trying to align them all – move E.coli into the geometric mean realm of the other two criteria.

MC: Seems like using geometric mean of 90-day is not appropriate for stormwater if we aren't talking about continuous discharge; even some coastal facilities have a hard time collecting samples; it might rain a lot but doesn't mean it discharges a lot.

KR: We are always looking at the issue if a site that is not discharging E. coli but is contributing.

KVN: Regarding E. coli and water quality standards implementation in permits – during EQC adoption there was some direction adopted re: the problem for certain facilities' E. coli mimicking other things that are not a bacteria – Aron Borok and Deb Sturdevant, DEQ standards, are familiar.

[Lunch]

KR: Afternoon focus will be Water Quality-Based Effluent Limitations (WQBEL)

- Based on variability of discharge data NOT proposing to set statewide water quality-based effluent limits
- Projected changes in 303(d) listings provide us with good info on what pollutants are showing up in discharges
- We are further along in understanding the impairment pollutants that are showing up in discharges
- Geographic locations – wide range of rainfall and industrial activities
- Large coefficients of variability of concentrations across the state
- Hand-outs show number of exceedances – e.g., Neal Creek and iron, may be a candidate for site-specific limit but compare to Yamhill River – where majority of sites are not exceeding iron – may be other compliance pathways
- So much variation in data and discharge so concentrate efforts at facility level rather than base limit on single exceedance over 20 years of data collection
- Additional gaps in our tools to develop water quality-based effluent limits
WA’s permit discusses background – they describe how their effluent limitations tool is not built for intermittent discharges; Washington state and Oregon’s effluent calculation tools are linked from the EPA support documents – these are used for continuous discharge, not intermittent
- Washington’s vessel deconstruction general permit – they used a default coefficient variance, 0.6 mg/L, and came up with limits that are basically water quality-based; they set extremely conservative effluent limits
- In Washington industrial stormwater general permit – they have allowed a two year compliance schedule for facility’s that are subject now to limits, 2020 permit, because of 303(d) listed discharges – similar to our Tier III concept
- More limitations: chronic criteria – will not have human health criteria if we can eliminate some of the impairment monitoring; proposing to do that and focus on facilities with reasonable potential – arsenic, bacteria, iron, show up in background, elements that are naturally-occurring; figure out how best to limit discharges
- Willamette, Molalla-Pudding TMDL for iron – dissolved concentrations increase during rain events
- Both iron and E. coli are wet weather issues
- Some improvements that DEQ could make: verify discharge location and receiving water – need to do thorough look to see where specific facility’s discharge locations are (i.e. for facilities located between two water body listings), start assigning saltwater criteria in assignment letters, finally a lot of surrogates established over last few years- need to verify they are appropriate; 2018/2020 mapping tool incorporated into the integrated report; DMR review – improve sampling quality through quality control and quality assurance, we will continue to verify data for accuracy and compliance
- 2021 permit requirements:
 - Focus on site-specific impairment exceedances
 - Clear reporting guidelines – get really accurate assessment of discharge locations

- We will be evaluating approved TMDLs and evaluating waste load allocation for industrial stormwater
- Tier III concept: once we re-assign coverage in 2021, give facilities one to two years to get some monitoring for impairment exceedances and give us an annual report for those that aren't meeting reference concentrations; summarize Tier I and any internal investigatory monitoring – Tier III annual report will be publicly accessible to everyone;
- Propose to make some Tier I BMPs (e.g., housekeeping and erosion and sediment control) mandatory

KVN: When you say confirm industrial activity contributing to exceedance – can you clarify what you are looking for there? What if it is unknown or out of the control of the permittee?

KR: Right now we follow EPA guidance regarding run-on – if there is run-on that becomes part of permittees' discharge, it becomes the responsibility of the facility. California allows run-on to be a demonstration that shows they are not contributing to their footprint, and so in California you are not responsible for run-on. That is an example. Now Oregon does not allow run-on as a “contributing factor” – another is natural background – must have anthropomorphic non-human impacted site, it's been difficult for facilities. Perhaps we could look at this. These are examples of things we can tweak. Iron is a huge source of exceedances and it is naturally occurring – a lot of facilities are having an issue with this.

KVN: Thank you, because if you are going to hold someone responsible for their effluent in new ways, you have to be open to where the stormwater effluent is coming from, because of the nature of where stormwater is it's running from one stop to another; you also have to look at the transport factors and be open if you are going to change the process; you can't hold everything stagnant and move a couple things.

Ada: How would Tier III be triggered? Single exceedance or geometric mean?

KR: Slide 26, DEQ presentation – Tier III trigger: not sure if this will be evaluated first year or second year – similar approach: there will be a timeframe for permittee to evaluate discharge and make improvements before annual report.

- Two samples exceeding is consistent with listing methodology – so here talking about impairments so stick with that and align with methodology in listing if overwhelming evidence of exceedance, i.e., two times over reference concentration (looking at acute, chronic; not human health)
- Trying to get at that reasonable potential and the contribution of in-stream excursion – looking at federal regulations, 40 CFR 122.44; allow for permitting authority to account for existing controls and variability in the effluent/discharge
- Natural background demonstration – I don't have clear concrete ideas how to tweak that – in following the federal allowance, and also we want to look at demonstration from facility that they may not be a contributing factor. The purpose is for us to have the facility give us information to evaluate at the time.

Ada: Question regarding natural background – a common way for iron to get into sample results, e.g., high groundwater sites, infiltrating into sites or ponds during the year, [had conversation with staff] said EPA said, yes it's natural but once it's in the pipe or a pond no longer natural – is that still true?

KR: Don't know, we have had a policy on natural background that has been stringent, but we also have not had escalated corrective action based on impairment exceedance; want to balance those, these are broader policy issues that I can't answer, we are waiting for draft EPA permit issuance, not hopeful this will be addressed; in California they give allowances that contradict EPA, so may be some broader policy decisions – my premise is that if we are going to ramp up to a numeric limit we should make sure that water is being impacted by that industrial activity.

Ada: My point is that if we are going to list it [natural background] as a potential to address Tier III, then it must be achievable, it is there for the Tier II waiver. If we cannot get the waiver due to natural background, then let's take it out or make it more workable if we are going to keep it in.

CR: Concur – should be tied to industrial activity occurring on a site that is contributing.

KR: Federal regulations which control general permit requirements for states – says since you have a general permit with broad scope – there needs to be consistency when establishing water quality-based effluent limits in broader permit, 40 CFR 122.44 states: “Where sources within a specific category or subcategory of dischargers are subject to water quality-based limits, imposed the sources in that specific category or subcategory shall be subject to the same water quality-based effluent limitations.” PG Environmental has advised us this could mean a geographic area, rather than a sector area.

Why not extend Tier II to impairment exceedance - require treatment and have one corrective action? Dealing with water quality, account for complex issues when we are dealing with a strict numeric limits; such as natural background. One reason there is not good off the shelf treatment for iron and E. coli. Difficulties in treating certain pollutants with off the shelf. Molalla-Pudding TMDL established a load allocation for total suspended solids to address iron water quality issues. There is an allowance in federal regulation to set a water quality-based effluent limits as an indicator pollutant.

Correlation between total suspended solids and iron– PG Environmental did correlation analysis and it wasn't super conclusive; total suspended solids values were in single digits at the chronic water quality standard of 1.0 mg/L

Besides setting bacteria we want to start looking at marine water quality criteria and assigning appropriate values for that - Any objections? (No objections)

- There are some translators for this – calculator based; some are chronic, some are acute
- Want a list of impacted facilities? And pollutants? Yes (noted by head nods)

KR: Rule changes at federal level to NPDES permits: require North American Industry Classification System (NAICS) in addition to Standard Industrial Classification (SIC), also latitude and longitude of each discharge location [will help define receiving water], and 72-hour apart sample collection and not 14-days.

MC: General permit application does not apply to this – you just say you want to be covered.

KR: Variance requests are hard to evaluate – if we can go to three days instead of 14-day that would help facilities get the required samples; not sure where the 14-days came from – I think it's to make sure you get distinct storm events.

MC: Was not a big level of analysis that went into 14-days apart requirement for sampling.

KR: I propose 72-hour between samples and also that we adopt the other stuff too (latitude and longitude and NAICS) – right now we don't know where actual discharge points are and we miss some of the impairment evaluation because of that.

SH: Latitude and longitude for discharge points – you mean discharge point from site not the ultimate discharge point to receiving stream?

KR: Yes.

Debbie Deetz Silva: I don't see a problem but would you see this in an application?

KR: Yes.

Debbie: In applications, are you submitting sample data in application?

KR: No, sample collection would not be in application.

KR: Based on the timing and needing renewal to be in 180 prior to assignment looking at one more paper renewal application this go around.

SH: Latitude and longitude – there are some facilities that have up to 100 discharge points.

KR: How about monitoring point? That would be most beneficial.

Alan: Crosswalk between SIC and NAICS is not totally straightforward.

KR: Recommendations:

- Waivers: do not think it makes sense to make a waiver condition that is different from the Tier II – so basing a waiver criteria based on 4 samples at or below benchmark is a more conservative than a geometric mean – if we will allow a facility to stop monitoring then there should be higher threshold than Tier II – make the waiver have a higher bar than where it is now – then follow National Academy of Science recommendation to do annual verification – I am happy with Tier II model the way it is, the premise was you'd use first year to evaluate your monitoring – if we start to do more evaluations then all those dates become more revolving.
- Have annual verification sampling.
- Any input on changing the waiver condition?
 - SH: Fine to have it based on four and keep Tier II on geometric mean; should be a higher bar to stop monitoring.
 - MC: How conservative do we want to be? Is there a compelling need to change the existing?
 - SH: We've had facilities where they've had lots of exceedances but one sample drives the geo-mean way down – if a facilities is having an exceedance they should continue to monitor to ensure not an outlier.

- CR: In terms of the four samples, is it any four consecutive samples?
- KR: Yes. Do not want to change too much, anything that is changed can have big unintended consequences. You have to think through implementation.
- Ada: Keep it simple and few changes – by adding the annual verification sample you are would get a lot of changes that people will have to re-learn.
- KR: How did Ecology limit verification sample to the fourth quarter sampling?
- Ada: Washington Ecology has quarterly sampling – you can average samples and if below, still retain your waiver. This is accounting for anomalies and variations and that matters more than going for outlier.
- SH: Confusion – on getting a waiver, and that the next sample is above the benchmark but your four sample geometric mean isn't above the benchmark. There has been different interpretations and it is not clear. Have clear language about how long keep monitoring and when a waiver will be available again.
- KR: Need to put the meaning of consecutive.
- Ada: Ecology is on the calendar year – they also allow you to take multiple samples throughout a day and take a daily average.
- SH: What is required in the EPA permit to get a waiver?
- KR: An average of four samples. The consecutive gets confusing – if you start and stop then gets confusing. Another reason for a simple proposal. We can write it to be clear, but want to make sure it makes sense.
- SH: In theory the geometric mean makes sense but feels weird, because sometimes you end up giving someone a waiver when their most recent sample was above the benchmark and samples are possibly trending up, but under the current condition approvable - maybe annual verification might take care of that?
- MC: Input has been that it's important that if you apply for waiver – approval are decided quickly, because you are still sampling and waiting for the approval and the sample results make it confusing.
- JG: Requests for additional positions have to go to the legislature. Keeping the permit simple, implementable, meaningful, and protective is important-- and it is important to have resources and have timely responses.
- KR: Do you [CS] have any sense of the EDMS structure for the ease of setting up a waiver request?
- CS: We will be able to set up EDMS to meet our needs.
- KR: When our system is electronic, we envision decisions to be more timely. The evolving nature of waivers – we never know when they will come and I don't know if we can fix that - and with the verification samples and the consecutive; more evolving if we keep it on the geometric mean level.
- Ada: Consecutive not confusing – seems easier for DEQ to review throughout the year than all at one time.
- MC: Practical standpoint – biggest motivator for many clients to get good results is the prospect of getting a waiver.
- SH: Approval part – would be interesting to look at how many waivers denied and why?
- CS: Most common reason waivers get denied: results of an inspection – sample not taken in the right location so DEQ or the Agent cannot confirm results are

meaningful; denials occur when we determine that there is a quality assurance, control issue from the lab reports.

KR: Tier I mandatory BMPs:

- To improve the Tier I process and decrease regulatory discretion – not a lot of clear guidelines; have Tier I response be part of the annual report – report on doing “XYZ” and if “XYZ” is good enough; idea is to help with all that – set Tier I to prescriptive requirements and monitoring will show improvement.
- Erosion control – a real contributor to iron.
- Housekeeping TBELS – and make those Tier 1 responses – make them be more verifiable when we get them.

MC: Raises a whole host of questions we should think about – Washington state has mandatory response, you have to do something – starts to turn benchmark into a limit – original idea was you have to implement plan that meets the BMPs, and that’s it, no need for further action. I agree: I look at Tier I reports and they are all over the map. Concerned about going to Tier I every quarter – no good off-ramp for benchmark – also if erosion control is an issue, then the response still subjective.

Ada: These are already mandatory narrative limits so what’s the change?

KR: We would make them prescriptive – a prescriptive control.

CR: You are describing Tier II – and if they are prescriptive then they may not have anything to do with your facility; goal is to compel a site to evaluate its stormwater permit pollution control plan – concerned about one size fits all – may not be a nexus to an environmental benefit.

AF: Sounds like what you are trying to do is make sure something has been done in Tier I – maybe just a checklist?

[PAUSE]

MM: Public comment – Any comments? Comments about comments? Recommendations? This is informal – there will be a formal public comment later after the final committee meeting.

[One question from the phone about Tier III requirements. Would Tier III apply to benchmarks or just specific parameters?]

KR: It would be for impairment exceedances.

KR: Eliminate impairment monitoring based on data summary of pollutants not present in stormwater.

- Slide 31 table of pollutants shown not having any or few exceedances
- Last bullet: Align the DMR with monitoring frequency: we moved to quarterly reporting – but left monitoring year from July 1 – June 30 – confusion; also rain patterns don’t line up with first quarter and last quarter so getting DMRs with no data; also we can’t evaluate a variance because the variance is based on a 6 month period; not a lot of benefit to the added reporting requirement

Jamie: Biggest concern, is that we want access to results on a timely basis – middle ground? I think quarterly monitoring may be appropriate, taking into account that certain stormwater events may not take place during a reporting period, but having results should be sooner than 5 months old.

Ada: I agree with Jamie – especially the summer quarter; some quarters will be “NS.” It does make the variance request confusing; it would simplify if it went to semi-annual to have the same cycle as reporting as we do for sampling.

JG: Other states? What do other states do?

See Appendix B: States’ monitoring and reporting frequencies

Dan: Fairly consistent with quarterly sampling and annual submittal; can follow up with Krishma Kibria, PG Environmental, and get that to you.

KR: Now EPA does annual reporting; paper problem goes away with electronic reporting.

MC: Some of my folks would prefer to submit sample results as they get them; with electronic reporting this seems feasible.

JG: We are looking forward to EDMS and having that system to flag issues.

AF: Tie together with the concept of improving Tier I scoring process then it is a single process for a facility to see the results and evaluate it and do a Tier I if needed or not, submit DMR, and forget about it until the next time it rains and then at the end of the year take the mass.

Ada: Makes sense to me, but it would be harder on DEQ to figure out if DMR was late.

JG: We want meaningful reporting.

KR: The way it is now, we can evaluate if the DMR is missing. The concept just discussed, we have no way of knowing if the facility sampled and failed to upload the data – until the year goes on and we do not have data, and we ask the permit holder and they say they forgot to upload the monitoring results. The whole electronic system is new for us; then if everything is under the benchmark or the impairment targets, then likely with an electronic reporting it will not take as long to evaluate with the exception of the quality assurance, quality control.

CS: EDMS will give flags on the outward facing dashboard

JG: If we make a change now in this permit cycle, should we make it now or after we have a chance to see the EDMS system.

KR: Retention Standards – we need to brainstorm

- We want to keep mass reduction for Tier II – could even allow for Tier III – possible allowance to base a water quality limit on reduction
- How can a facility incorporate an infiltration device into a regulatory compliance device – no answers but want to flag this – want to still continue to evaluate impairment discharges

Ada: Why not apply mass reduction to impairment pollutants? Also if someone designs infiltration facility then has to sample large storms - big disconnect – maybe if someone designs this then doesn’t have to sample overflows if you put in infiltration – it’s a tiny fraction of what you’d be discharging –

same goes for treatment systems, its designed for a storm and then when bypasses shouldn't have to sample, you will be over benchmark.

KR: Question to Dan – now Oregon is the only state that allows for mass reduction waiver instead of treatment – issues with overflow from design-storm and does that need to be sampled? That discharge is over the benchmarks – what tools do we have to account for infiltration and mass reduction?

Dan: Need to look into that.

KR: Any sense of CWA or federal regulation that state that discharge to be sampled?

Dan: Will look into that.

CR: CWA does not require every discharge to be sampled – if you are in compliance with permit then; if someone puts in an infiltration basin they are using a large realty, lots of costs; it is a public benefit – should be incentivized. Don't require facilities to monitor that, it will fail, nor should you enforce upon that; have facilities report on overflows from infiltration then you can track over time – during times of year when there will be upset/bypass there will be the highest dilution – really bad policy – disincentives parties to invest in the systems, which otherwise do a great job. Suggestion to require facilities to report when they have overflow events from retention units then you can track over time – if you think a facility is having a lot of overflow events when you can calculate the design storm – e.g., there may be a clog in the system. During the times of year when there are upset bypass events, there is a high level of dilution.

MC: Agree with CR – nothing that requires monitoring of bypass – right design storm, being maintained, operated correctly then grant a variance/waiver/whatever and not apply the benchmarks.

KR: What about impairment exceedances? As Ada said the mass reduction is reducing impairments and others.

Alan: Not convinced that concentration will be above benchmarks in overflow – overflow should be lower- mass reduction part of permit would allow someone to install a small basin and meet the permit – important to distinguish – if it is a basin to meet water quality then they should be done.

Jamie: I agree, but for toxics we have concentration-based criteria – DEQ needs to know about this – ultimate driver is how to ensure the discharge complies with standards; monitoring has to be sufficient to determine the permit is being complied with.

KR: Continued discussion, to summarize and stay on track: next meeting we will come with benchmark numbers based on geo-regions – 2017 benchmark work and hardness data – we also have new defaults due EPA didn't like our 25 mg/L default hardness - we now have a new policy.

James: 25 mg/L hardness was the lowest value about three years ago.

- EPA cadmium rule – put in a default value for each eco-region of the state – Oregon did our own analysis of our hardness data – and came up with our own conservative hardness value; that is one tool we could look at.

MC: Thought the Monte Carlo analysis included the hardness.

KR: We looked at those numbers and compared to these and they were different.

Ada: Also data gaps.

MC: Can we run the Monte Carlo analysis model with those values? If we are using a probabilistic assessment to come up with benchmarks, we've already deviated from that – I'd advocate re-running that if we are talking about plugging in hardness data.

James: The Monte Carlo is available if that is the decision. Hardness is based on ambient water body attainment condition, not the concentration that can be stormwater. May want to go back to do Monte Carlo as opposed to adopt an assessment.

KR: I'd love to come with some numbers to the next meeting – we can do the analysis for marine and estuaries; when looking at impairments for metals - copper BLM; the input would be dissolved already - would love to be able to provide to you – based on what Dan provided today – any comment on policy decisions DEQ made?

MC: Which policy decisions?

KR: Dilution of 5. The existing. If some of these concepts work –i.e. Tier III, impairment monitoring concentrations, we need to have some numbers behind it.

MC: As to feasibility question of benchmarks – if trying to evaluate risk of exceeding water quality then doesn't make sense to set benchmarks based on achievability – need to divorce that concept benchmark that will be wildly conservative for facilities with 200:1 dilution – needs to be a step there to evaluate the facility; give facility ability to show they have high dilution that's the Tier II dilution answer – so concerned about dropping feasibility from benchmark, but not having the ability to do a site-specific evaluation that is based on water quality if that is the basis of the benchmark.

Jamie: WQBELs – out of last meeting based on presentation that for certain dischargers pretty clear they are contributing to impairment exceedances – at this point on slides 21 and 22 – these are DEQ's reasons for moving away from WQBEL – to me these are solvable and not insurmountable – we have data synthesized to date, we have Ecology's model, I would be looking for greater explanation on these eight bullet points (slide 21, 22) why DEQ thinks this is sufficient explanation for not doing WQBEL at least for discharges to impaired waters.

CR: I respect Jamie's position – I think we have to hear explanation why these eight limitations are a challenge – step back – benchmarks are applicable to no one facility but applicable to all. To the extent the benchmark equates to trigger further analysis or action, the analysis should not be lost – facilities should be allowed to provide data to show there is no impact; if they can't do that, it's fair to move into action – this will be more accurate than any benchmark that is one size fits all.

KR: Any feedback on the seven geo-regions – eastern region numbers are so different?

Ada: Some of the regions just didn't have a lot of data.

JG: In wrapping up this meeting - thank you for your time.

KR: PG Environmental will take another look at the Columbia Slough – make sure we are complying with Slough TMDL and benchmark is accurate – This is the only TMDL with waste load allocation for industrial stormwater.

- I'd love to have some benchmark recommendations

- Will discuss EPA Multi-Sector General Permit if it is public by then

MC: Talked about sending out additional concerns.

MM: Whatever you send us we will put back out there for public consumption – may do that in meeting summary or another way; thank you, good job everyone.

KVN: Overarching comment – we can make stormwater permitting world very complicated – we should ask ourselves if we need to make it really complicated – is there environmental gain?

END 3:30 PM.

Appendix A: Federal regulations for numeric effluent limitations

Clean Water Act section 301(b)(1)(C) and 40 CFR 122.44(d)

CWA section 301: <https://www.epa.gov/sites/production/files/2017-08/documents/federal-water-pollution-control-act-508full.pdf>

TITLE III—STANDARDS AND ENFORCEMENT

EFFLUENT LIMITATIONS

SEC. 301. (a) Except as in compliance with this section and sections 302, 306, 307, 318, 402, and 404 of this Act, the discharge of any pollutant by any person shall be unlawful.

(b) In order to carry out the objective of this Act there shall be achieved—

(1)(A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of this Act, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 307 of this Act; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 203 of this Act prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 304(d)(1) of this Act; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedule of compliance, established pursuant to any State law or regulations, (under authority preserved by section 510) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this Act.

40 CFR 122.44 <https://www.govinfo.gov/content/pkg/CFR-2011-title40-vol22/pdf/CFR-2011-title40-vol22-sec122-44.pdf>

§ 122.44 Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs, see § 123.25). In addition to the conditions established under § 122.43(a), each NPDES permit shall include conditions meeting the following requirements when applicable. (a)(1) Technology-based effluent limitations and standards based on: effluent limitations and standards promulgated under section 301 of the CWA, or new source performance standards promulgated under section 306 of CWA, on case-by-case effluent limitations determined under section 402(a)(1) of CWA, or a combination of the three, in accordance with § 125.3 of this chapter. For new sources or new dischargers, these technology based limitations and standards are subject to the provisions of § 122.29(d) (protection period).

40 CFR 122.44(d)(1)(i) <https://www.govinfo.gov/content/pkg/CFR-2011-title40-vol22/pdf/CFR-2011-title40-vol22-sec122-44.pdf>

(d) Water quality standards and State requirements: any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318 and 405 of CWA necessary to: (1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality. (i) Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.

Appendix B: States' monitoring and reporting frequencies

The information below was prepared by PG Environmental in response a committee inquiry. See page 22 of the meeting summary for context.

States' monitoring and reporting frequencies – Jan. 22, 2020					
EPA Region	States	Monitoring Requirements		Data Reporting Requirements	
		Benchmark	Numeric Effluent Limits	Benchmark monitoring	Effluent monitoring
1	Connecticut	Annual	Quarterly	Within 90 days of sampling	
	Maine	Quarterly	Annual	Not clearly specified	
	Rhode Island	4 times a year	Annual	No later than 15 days after the last day of the monitoring period	
	Vermont	Quarterly	Annual	No later than 30 days after receiving laboratory results for each quarter	No later than 30 days after receiving complete laboratory results for all outfalls for the reporting period
2	New York	Semi-annual	Semi-annual	28 days after the end of the monitoring period	
3	Virginia	Semi-annual	Semi-annual	No later than the 10 th day of the month after monitoring takes place	
	Maryland	Quarterly	--	No later than 28 days following the Monitoring Period	--
	Pennsylvania	--	Semi-annual	--	Semi-annual
	West Virginia	Semi-annual	1/ 6 months	No later than 20 days following the end of the reporting period	
4	Georgia	Quarterly/Semi-annual	Quarterly/Semi-annual	Annual	
	Kentucky	--	Semi-annual	No later than the 28th day of the month following the monitoring period	

States' monitoring and reporting frequencies – Jan. 22, 2020

EPA Region	States	Monitoring Requirements		Data Reporting Requirements	
		Benchmark	Numeric Effluent Limits	Benchmark monitoring	Effluent monitoring
5	Ohio	Quarterly	Annual	No later than 30 days (email date or postmark date) after receiving complete laboratory results for all monitored outfalls	
	Minnesota	Quarterly	Annual	by the 21st day of the month following the quarter	by the 21st day after the end of the calendar sample collection month
	Illinois	Quarterly	--	Annual (Within Inspection report)	--
6	Texas	The frequency of this monitoring may be established on a case-by-case basis, but must not be less than once per year		Annual	Annual, by January 28th for the preceding calendar year
	Oklahoma	NA (used a compliance evaluation report instead)	Annual	--	by March 1st of the year following the monitoring period
	Louisiana	Quarterly	Annual	Annual	by January 28th for the preceding calendar year
	Arkansas	Annual	Annual	Annual (Stormwater annual report)	
7	Kansas	--	Annual	Not specified (Data reported in a report and kept on site)	

States' monitoring and reporting frequencies – Jan. 22, 2020

EPA Region	States	Monitoring Requirements		Data Reporting Requirements	
		Benchmark	Numeric Effluent Limits	Benchmark monitoring	Effluent monitoring
	Nebraska	Quarterly	--	Should be maintained with SWPPP. Upon request, data should be reported within 14 days	
8	Montana	Quarterly	--	No later than the 28th day of the month following the reporting period	
	South Dakota	--	Annual	--	Within one month of the end of the year the samples were taken
	Utah	--	Annual (coal pile runoff)	--	For each outfall, one SWDMR form must be submitted per storm event sampled
	Wyoming	Semi-annual	Annual	By January 28th each year	
9	Arizona	Quarterly	Annual	Not later than July 15 of each year of permit coverage	
	California	Quarterly	Quarterly	Within 30 days of obtaining all results for each sampling event	
10	Alaska	Quarterly	Annual	No later than 30 days after receiving laboratory results for each quarter	No later than 30 days (email date or postmark date) after receiving complete laboratory results for all monitored outfalls for

States' monitoring and reporting frequencies – Jan. 22, 2020

EPA Region	States	Monitoring Requirements		Data Reporting Requirements	
		Benchmark	Numeric Effluent Limits	Benchmark monitoring	Effluent monitoring
					the reporting period
	Washington	Quarterly	Annual	Quarterly	