

WDEQ Surface Water Quality Standards Triennial Stakeholder Group Meeting

NOTES From 4/22/21

Attendees

Organization/Interest	Contact Name	Contact Email	Present
WY Department of Environmental Quality	David Waterstreet	David.Waterstreet@wyo.gov	Yes
WY Department of Environmental Quality	Lindsay Patterson	Lindsay.Patterson@wyo.gov	Yes
WY Dept. of Envir. Quality	Madeleine Hamel	Madeleine.Hamel@wyo.gov	Yes
WY Dept. of Envir. Quality	Gina Thompson	Gina.Thompson@wyo.gov	Yes
Ruckelshaus Institute	Jessica Western	biggoosecreekresolutions@gmail.com	Yes
US Forest Service Region 2	Andrea Rogers	andrea.rogers@usda.gov	Yes
US Forest Service Region 4	Mark Muir	mark.muir@usda.gov	Yes
National Park Service	Sharla Stevenson	Sharla_Stevenson@nps.gov	Yes
US Bureau of Reclamation	Lyle Myler	lmyler@usbr.gov	Yes
	Shain Wright	slwright@usbr.gov	Yes
US Fish and Wildlife Service	Kim Dickerson	kimberly_dickerson@fws.gov	
Natural Resource Conservation Service	Andi Neugebauer	andi.neugebauer@usda.gov	
US Geological Survey	Cheryl Miller	cemiller@usgs.gov	Yes
Office of State Lands and Investments	Benjamin Bump	benjamin.bump@wyo.gov	Yes
WY State Parks	Conrrado Deniz	conrrado.deniz@wyo.gov	Yes
WY State Engineer's Office	Jason Feltner	jason.feltner@wyo.gov	Yes
	Sam Swartz	sam.swartz@wyo.gov	Yes
WY Game and Fish Department	Amanda Losch	amanda.losch@wyo.gov	No
	Lara Gertsch	lara.gertsch@wyo.gov	Yes
Wyoming Water Development Office	Mike Robertson	mike.robertson1@wyo.gov	Yes
WY Department of Agriculture	Scott McDonald	Scott.mcdonald@wyo.gov	Yes
WY Department of Health	Alexia Harrist	Alexia.harrist1@wyo.gov	
	Courtney Tillman	Courtney.tillman@wyo.gov	

Organization/Interest	Contact Name	Contact Email	Present
WY Outdoor Council	Dan Heilig	dan@wyomingoutdoorcouncil.org	Yes
Trout Unlimited	Liz Rose	liz.rose@tu.org	Yes
Powder River Basin Resource Council	Jill Morrison	jmorrison@powderriverbasin.org	Yes
WY Association of Rural Water Systems	Michelle Christopher	mchristopher@warws.com	Yes
	Mark Pepper	markp@warws.com	
WY Association of Municipalities	Clint Bassett	cbassett@cheyennebopu.org	Yes
	Matt Buelow	mbuelow@cheyennebopu.org	Yes
WY County Commissioners Association	Terry Wolf	terrywolf@washakiecounty.net	Yes
WY Association of Conservation Districts	Cathy Rosenthal	cathy.rosenthal@conservevy.com	
WY Petroleum Association	Tom McCormick	Thomas_McCormick@eogresources.com	
	Matt Smith	matt.smith@vaqueroibighorn.com	
	Colin McKee	colin@pawyo.org	Yes
WY Mining Association	Dale Brown	dbrown@wwcengineering.com	Yes
National Outdoor Leadership School	Jonathan Williams	jonathan_williams@nols.edu	Yes
WY Contractors Association	Chris Fare	chris@melgaardconstruction.com	Yes
WY Farm Bureau Federation	Ken Hamilton	khamilton@wyfb.org	Yes
WY Stock Growers Association	Jim Magagna	jim@wysga.org	No

- Introductions and brief overview of today's discussion
- Lindsay Patterson: **Presentation on Designated Uses in Wyoming**
 - All waterbodies need to have swimmable uses designated
 - Removing or modifying swimmable uses must go through a formal process that uses six factors to demonstrate the use is not attainable, called a use attainability analysis
 - Attainability factors are from federal regulations and are replicated in Wyoming's standards
 - Naturally occurring pollutants, natural low flow conditions, human conditions that cannot be remedied, hydrological modifications, physical conditions (aquatic life), & economic and social impacts

- EPA provides water quality criteria recommendations, as outlined in Section 304(a) of the Clean Water Act
 - Narrative and numeric criteria are used accordingly to best fit
- Nationally recommended criteria for recreation is *E. coli* and cyanotoxins
- EPA has begun to address non-primary contact recreational uses, due to questions from states wondering how to regulate waters not used for primary contact recreation
 - EPA wanted to understand if there were different levels of health risks from primary versus non-primary contact recreation activities – this was not associated with a criteria derivation, but will help to answer the question of whether additional criteria for non-primary contact recreation activities may be warranted
 - EPA categorized activities from studies that evaluated health risks as swimming, sports-related, minimal contact, sand contact, and mixed contact.
 - EPA looked for gastrointestinal illness, respiratory illness, skin, eye, ear, nose, throat, and cold/flu illness to determine the risk toward human health
 - Concluded that if you swim or are engaged in sports-related contact activities, the risks are much greater than those engaged in minimal contact, thus different levels of contact are going to increase or decrease your risk of illness
- In Wyoming, recreational uses are in Sections 2 and 3 of the water quality standards, and then there are criteria for *E. coli* in Section 27
 - Uses are primary recreation contact and secondary contact recreation contact; the difference in descriptions is that primary contact is immersion or ingestion and secondary is incidental or accidental
- Water quality should protect human safety
- State has done an analysis of all the bodies of water to determine primary and secondary contact recreation waters
- Other states have similar regulations to Wyoming
 - Idaho has both a primary and secondary contact use, although descriptions are vague
 - Missouri uses whole body contact, clarifies that this does not mean it is drinkable water, while their secondary recreation is more hands off like fishing and wading with limited contact and exposure would be less than the full body contact
 - Arizona has full and partial body contact uses, with swimming and contact for humans in relation to that first term; the partial body contact

is in reference to human and the quality standards are in reference to humans

- Ohio uses bathing waters, and that is in reference to where a lifeguard or bathing house is present, and they have primary contact uses, and secondary contact where these waters are hardly used for recreation uses
- Colorado has a similar definition of primary contact recreation (swimming, rafting, etc.) then they have a classification system to determine if recreational uses is likely or not within a specific waterbody
- Based off the different state examples, suggestions for potential modifications to Wyoming's standards regarding recreation:
 - Modify primary contact to full body contact and modify secondary contact to limited body contact
 - Already have a full-body contact definition in the standards, and using body contact nomenclature may be more aligned with the uses
 - Modify summer recreation season from May through September to May through October
 - There have been cyanobacteria blooms into October and people still recreate into October
 - There is definitely room to change the definitions of the uses
- *Question:* In a situation where people watering the grass on somewhere, does that use a surface water use?
 - It is under the waste water management; water must be treated of all pathogens before it goes out onto the lawn or other areas through watering
- *Comment:* People recreate and drink water while they are doing it
 - This is true, while people are hiking and hunting in a backcountry setting, and that you have to treat that water unless you want to run the risk of getting sick, and this is different from the immersion aspect of recreation uses, and drinking water is a use that the state has on the standards, but it is a separate uses
- *Comment:* there are a lot of uses that need to be addressed within this framework, and there needs to be recognition of backcountry uses that need to be acknowledged and protected in relation to the recreational uses of the water standards. Children play uses need to be held within official uses as well.
- **Breakout Room Session to discuss the Recreational Uses**
 - Summary from Lindsay Patterson's Breakout group:
 - Interest in uses for backcountry and wild scenic rivers.

- Support for changing the wording from primary-secondary to something more literal because it would be easier to understand.
 - Desire to have potable water use in the standards to capture actual uses in the standards.
 - Important to make sure we capture all of the recreational uses, like child's play in water bodies.
- Summary Madeleine Hamel's Breakout group:
 - Concern about getting too far into the weeds with use definitions or designations.
 - Concern for a one-size fit all aspect does not really work due to the nuances that the state sees.
 - Concerns about including pet ingestion into the standards.
 - Desire to see wording changed to the full-body term.
 - Concerns about cyanobacteria and its impact on the standards.
- Summary from Gina Thompson's Breakout group:
 - Concerns about what problem really needs to get solved with these revisions. Do not just want to make changes for change's sake.
 - There are big differences between backcountry water consumption versus water consumption in town.
 - Want to make sure there is information available to make sure people understand what the various uses are in the state.
- **Presentation of Recreation Criteria**
 - Water quality criteria are there to protect designated uses, and there are many options to derive criteria, including EPA recommendations, EPA recommendations modified to reflect site-specific information, other scientifically defensible methods, narrative criteria, etc.
 - The EPA releases water quality criteria recommendations derived from the best available science, and these can be adopted into the state's standards, but they remain recommendations only and are not binding
 - Wyoming uses the EPA's *E. coli* criteria from 2012 national recommended criteria, for example
 - 2019 nationally recommended cyanotoxin criteria include the amount of each toxin that is not expected to result in unacceptable health effects, the period of time that the criteria should be evaluated over, and how frequently the level can be exceeded and the use be supported
 - These can also be used for swimming advisories
 - The recreation criteria are broken down to the primary or secondary contact criteria for *E. coli* concentrations

- Primary contact waters are only protected for that use during the summer recreation season and are protected for secondary contact recreation during the remainder of the recreation season
 - Secondary contact waterbodies have higher allowable concentrations of *E. coli* because people are not getting fully immersed in the water as often as a primary contact water body
- There is a waterborne pathogen notification process that was developed with the Department of Health that uses *E. coli* concentrations
 - The DEQ is often not the one who is posting the signage. It is usually a Conservation District, the Department of Health, or another water management agency
- Cyanotoxin thresholds from EPA's recommended criteria are used in Wyoming's program to inform the public when these blooms may be harmful
- There are narrative criteria that may be applicable to recreational uses, although these are not clear
 - An example would be "imparting color to skin after contact with water"
 - Toxic material is another narrative criteria
 - References "pollution" in the Wyoming Environmental Quality Act
 - Narrative criteria for undesirable aquatic life could potentially be used for cyanobacteria blooms
 - *Question:* Do Zebra mussels count as an undesirable aquatic life in that narrative criteria?
 - Yes, those types of organisms could qualify under that narrative criteria, but for DEQ, there are limitations to what we do in terms of regulating water quality. We can try and help to stop invasive species from becoming established.
- Examples from other states
 - Idaho: there are narrative criteria that include hazardous materials, toxic materials, excess nutrients
 - Missouri: they have a general criteria section that uses a narrative criteria style, with specific narratives that look at no human health risks, livestock and wildlife watering narratives
 - Arizona: they call their narrative water quality standards which covers similar areas that WY and other states do as well. They have criteria regarding taste, smell, and coloration; also have narratives for toxics and also directly call out recreation uses
 - Alabama: general conditions applicable to all water quality criteria, and they say that all water should be suitable for recreation

- Colorado: basic standards applicable to surface water of the state, and they have criteria that is harmful to the beneficial use to human, aquatic life, etc.
 - South Carolina: their narrative criteria look at primary contact recreation and how standards must protect water to their best uses, so no floating debris or scum can be present
 - South Carolina and South Dakota: they both have cyanotoxin criteria in their water quality standards
 - More states use cyanotoxin thresholds like Wyoming for public notification programs
- Frequency requirements are determined by the states, but there are not a lot of states that have frequencies associated with recreation criteria
- Ideas for changes to the standards:
 - Remove single sample maxima, as these are not water quality criteria and not water quality standards
 - Could include “free from” criteria in the standards that consolidate the existing criteria currently spread out through the standards
 - “surface waters of the state shall be from pollution that...” that could be succinctly written up in one section
 - Could add cyanotoxin criteria into the recreation criteria that would apply to the primary contact recreation season
 - Could add frequency to the *E. coli* criteria
- Potential implications
 - Improved clarity for narrative criteria, and for determining attainment of *E. coli* criteria
 - Could evaluate attainment based on the specific cyanotoxins (microcystin and cylindrospermopsin) and how we can tie this back to the issues that DEQ can actually manage
- *Question:* As far as the testing process, is there flexibility in terms of DEQ testing process, and that there wouldn’t be any restrictions due to the difference of results in different reaches of the water, or one side of the lake is outside the range of blooms but the other is not?
 - There is a lot of flexibility for DEQ in how we determine attainment of water quality standards. Certain sections of water bodies could exceed water quality criteria and not others, however, we know that cyanobacterial blooms move around the water, so we would need to provide guidance for testing processes in our assessment methods
- *Question:* How does DEQ handle issues that might be upstream and how does DEQ management handle those types of mitigation practices?

- If there is a potential exceedance of cyanotoxin criteria, we would try and see what we can actually manage, like nutrient influx, that might be contributing to the cyanobacterial blooms and then we try make sure those issues are addressed. We would partner with other agencies because water bodies are dynamic and it is important to try and manage the aspects that we can to hopefully reduce the risk of cyanobacterial blooms
- **Breakout Groups to Discuss Recreation Criteria**
 - Summary from Gina Thompson's breakout group:
 - Look at the revised 2012 EPA criteria for recreation uses.
 - What would happen if we got rid of the secondary criteria for recreation uses.
 - Cyanobacteria are a concern for both drinking and recreation water use.
 - Questions about how the criteria interact with the other uses, and curious about a chart in terms of hierarchy of uses. Like which type of use would it meet (recreational or industrial?)
 - Needs to be consideration for temperature and other drivers like nutrients, as well as dealing with non-point sources and their impact on water bodies.
 - Summary from Madeleine Hamel's breakout group:
 - How would cyanobacteria be integrated into the criteria.
 - How do we make statements like 'free from' or 'scum' because there are natural causes behind similar aspects, so important to clarify that human causes are the reason for that narrative criteria.
 - Summary from Lindsay Patterson's group:
 - Support for consolidating narrative criteria.
 - Concerns regarding increased regulation.
 - Support for removing the single sample maxima for *E. coli*
 - Discussion of cyanobacteria criteria and how that these would translate to regulation of point sources.
 - Discussion of invasive species, and how it impacts recreational uses because recreation could be a vector
 - DEQ, however, has a very specific scope on what we can do since we are a regulatory agency for water quality.
 - Discussion about indicators for public health purposes versus implications for regulated entities.
 - Single use maxima might need to be removed, but we could use it as a trigger for additional sampling, not for a violation or an impairment. If a high value were found, more sampling should be done.

End of Meeting