



NUTRIENT CORE ADVISORY TEAM MEETING

MONDAY, MARCH 30, 2015, 1:00 PM – 4:00 PM

NUTRIENT CORE ADVISORY TEAM:

<u>Representative</u>	<u>Stakeholder Group</u>	<u>Affiliation</u>
Walt Baker	Chairman	DEQ/Division of Water Quality
Jay Olsen	Agriculture	UDAF, Advisor
Don Leonard	GSL Artemia	Great Salt Lake Brine Shrimp Cooperative, Inc
Theron Miller	POTWs	Jordan River Farmington Bay Water Quality Council
Darwin Sorensen	Surface/Groundwater	Utah State University
Tom Ward	Public Utilities	Salt Lake City
Tina Liadlaw	EPA	
Craig Walker		
Jesse Stewart	Public Utilities	Salt Lake Public Utilities
Ty Hunter	DNR	State Parks
Leland Myers	POTWs	Central Davis
Neils Hanson	Agriculture	NRCS
Bracken Davis	Agriculture	Utah Department of Agriculture and Food
David Whittekiend	Public lands	US Forest Service
Melissa Ure	Agriculture	Utah Department of Agriculture and Food

DWQ Support Staff

Leah Ann Lamb	DWQ	Assistant Director
Erica Gaddis	DWQ	Assistant Director
John Mackey	DWQ	Engineering Section Manager
Carl Adams	DWQ	Watershed Protection Section
Ben Holcomb	DWQ	Water Quality Management Section
Scott Daly	DWQ	Watershed Protection Section
Jeff Studenka	DWQ	UPDES Section Manager
Jeff Ostermiller	DWQ	Water Quality Management Section

Absent

Christine Pomeroy	Stormwater	University of Utah
Paul Krauth	DWQ	Engineering Section
Cameron Diehl	Municipalities	Utah League of Cities and Towns
Nick VonStackelberg	DWQ	Water Quality Management Section
Jim Web	Agriculture	Circle 4 Farms

PURPOSE

Seek early engagement from high-level representatives of stakeholder groups as the Division of Water Quality (DWQ) develops a plan for establishing water quality standards and associated nutrient reduction programs and policies for nutrients.

MEETING GOALS

Get feedback from each member on how their stakeholders view nutrient criteria and actions they have undertaken and develop a path forward.

AUDIO RECORDING: NOT AVAILABLE

1:00 PM – WELCOME AND INTRODUCTION

WALT BAKER

1:10 PM REVIEW-UTAH'S OVERALL NUTRIENT STRATEGY

REVIEW OF ACCOMPLISHMENTS AND NEXT STEPS (ERICA GADDIS)

- TBPEL rule was approved by water quality board. In accordance with the rule, water quality monitoring requirements are self-implementing at WWTPs beginning July 1, 2015 and effluent compliance will be required by January 1, 2020.
- Technical team has been working on Technical Basis document and Numeric Nitrogen and Phosphorus Criteria for Headwater Streams.
- USFS representation was requested since most Category 1 headwater streams are on USFS managed lands.
- Optimization rule is under development for nitrogen in support of reducing nitrogen loading to Utah's waters before a Technology Based Nitrogen Effluent Limit becomes effective.

COMMENTS/DISCUSSION:

- None.

ACTION ITEMS:

- None.

NATIONAL UPDATES (WALT BAKER)

- Region 8 water directors letter recently submitted to require nutrient monitoring from all waste water facilities.
- ACWA discussion
- Harmful algae blooms rules. DWQ is investigating how other states manage harmful algal bloom events in response the October 2014 algal bloom on Utah Lake.
- Nationally, states are considering how water quality trading is incorporated into nutrient criteria development. Trading is a big part of the Chesapeake Bay nutrient reduction strategy.
- May need to explore how narrative nutrient standards translate into UPDES permits.
- Utah DWQ is formulating a new work group, a Water Quality Health Advisory Panel, to combine the Mercury and E. coli Work Groups that will also focus on harmful algal blooms.

COMMENTS/DISCUSSION:

- EPA headquarters is working on a document with case studies of states that implement an optimization plan. Preliminary results show that reductions of 50% nitrogen are common with some optimization programs.



- Study of drinking water intakes and an identification of problems that occur related to nutrients.
- Montana recently completed a cost benefit analysis of water quality trading looking at nutrient trading between nonpoint and point sources.

ACTION ITEMS:

- None.

OTHER UPDATES (ALL)

- None.

COMMENTS/DISCUSSION:

- None.

ACTION ITEMS:

- None.

1:30 PM HEADWATER NUMERIC NUTRIENT CRITERIA DEVELOPMENT

PROCESS FOR DERIVING NNC IN COLLABORATION WITH TECHNICAL TEAM (ERICA GADDIS)

- Discussed the role of the technical team and timeline for proceeding to rulemaking for headwater criteria.

COMMENTS/DISCUSSION:

- None.

ACTION ITEMS:

- None.

PROPOSED NUMERIC NUTRIENT CRITERIA FOR HEADWATERS (JEFF OSTERMILLER)

- Presentation of Numeric Nutrient Criteria for Utah’s Headwater Steams.
 - Adaptive management is a key component to address uncertainty, prioritize resources, and to address new and evolving issues.
 - Technical review findings apply NNC only strictly to headwaters streams with an adaptive management approach.
 - Development of new indicators for structural and functional responses including stream metabolism and macroinvertebrates and diatoms, respectively.
 - Response thresholds were selected using a multiple lines of evidence approach including literature review, structural responses, functional responses, and other NNC developed in the region.
 - Nutrient criteria were selected to identify a lower concentration where below the criteria there are rarely responses and a higher concentration above which there are almost always deleterious effects.
 - Green path responses are addressed through responses of gross primary production and filamentous algae cover. Gross primary production threshold is <10 g oxygen/m²/day . Filamentous algae cover threshold is less than one third of the streambed.
 - The brown path response threshold for respiration is <9 g oxygen/m²/day.
 - Recreational nutrient criteria were developed utilizing survey results from a recreational demand survey completed previously by DWQ.

COMMENTS/DISCUSSION:



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ACTION ITEMS:

- None.

EPA’S GUIDELINES FOR COMBINED CRITERIA (TINA LAIDLAW)

- Where do the EPA Guiding Principles apply?
 - Only apply for nutrients criteria development.
 - When states rely on response parameters to indicate that a designated use is protective, even though N and or P are above an adopted threshold.
 - States should have a robust biological assessment program.
 - The criteria must be demonstrated to be protective of the use.
 - Requires detailed documentation that identifies nutrient pathways and selected biological response parameters indicative of nutrient pollution.
 - States should have sufficient data from within the state and clearly identify supporting water quality standard documentations like assessment methodologies.
 - Causal and response parameters must be combined into one criterion, expressed numerically, and express duration and frequency.
 - Assessment methodology should be consistent with the criterion.
 - States should develop NPDES permitting implementation procedures to ensure a consistent application

COMMENTS/DISCUSSION:

- None.

ACTION ITEMS:

- None.

MONITORING AND ASSESSMENT PLAN FOR HEADWATERS NNC (JEFF OSTERMILLER)

- DWQ will monitor to support NNC using a two tier approach. Sites will be evaluated during tier one and targeted for tier two monitoring depending on observations of tier 1 data
- Presentation of Assessment matrix table.
- 70% of streams are in meeting criteria, 9% are potentially impaired for TP and 6% for TN, and 20% need follow up investigations with responses.

COMMENTS/DISCUSSION:

- Discussion on the implications of insufficient data assessment decisions. Particular concerns were raised in cases where nutrient concentrations would be below the threshold and response variables are exceeded. *The technical team will revisit the concept and revise the table presented in Figure 10.*

ACTION ITEMS:

- Address specific comments and revise documentation.
- Convene Technical Team to discuss proposed changes and algae cover SOPs.
- Collect response data for sites with historic data for sites that may have nutrient related impairment.
- Rulemaking.

3:15 PM UPDATE: OPTIMIZATION RULE FOR NITROGEN REDUCTION

REDUCING NITROGEN FROM POINT SOURCES THROUGH OPTIMIZATION OF POTW’S (WALT BAKER)



- Nitrogen optimization concept was presented to group of WWTP operators.
- Recognition with TBNEL that rule would not be in place until 2025.
- Optimization will allow for nitrogen removal before 2025 and provide incentive to dischargers by providing certainty in discharge limits for ten years.
- DWQ is still deciding whether the optimization study should be mandatory; regardless it can be completed by either DWQ or by the treatment plant.
- The study needs to be completed by July 1, 2019.
- Optimization study scope of work needs to be reviewed and approved by DWQ.
- Aim to employ no cost or low cost options identified during optimization.
- Comments from dischargers:
 - POTWs wouldn't optimize unless it was mandatory.
 - The ten year time frame wasn't perceived as a big benefit.
 - Trading would need to occur within the HUC.
 - Likely that rulemaking will occur before the end of 2015.

COMMENTS/DISCUSSION:

- "Natural waters" as identified in the optimization document should be defined as fresh water.
- What are considered "significant" reductions? Some case studies show that nitrogen can be reduced by 50 percent.

ACTION ITEMS:

- None.

3:25 PM MEETING SUMMARY AND ACTION ITEMS

- No discussion.

NEXT MEETING: TO BE DETERMINED