



Meeting Minutes

Wednesday, August 10th, 2022

Attendees:

Blair Corning – South Platte Renew
Julie Tinetti – Centennial
Gabe Racz – Vranesh and Raisch
Mark Thomas - NFRWQPA
Mary Paterniti - Longmont
Nathan Moore - CDPHE
Jim Kendrick – Tri Lakes
Jim Dorsch – Metro
Cole Sigmon – Boulder
Mike Morgan – Weld
Annie Berleman – Colorado Springs
Nick Harmon – Aurora
Robert Fleck – St. Vrain
Bethany Green – Aurora
Tyler Eldridge – Greeley
Meghan Wilson – Boulder
Jesse Schlam – Fort Collins
Andra Ahrens – Pueblo
John Gage – Longmont
Annie Noble – Longmont
Jessica DiToro - LRE Water for BHCCSD
Kelly Cline - Westminster
Barb Biggs - Roxborough

Dawn Cowell - Broomfield
Jeremy Woolf - Greeley
Patti Zietlow – Colorado Springs
Bryan Burks – Mount Crested Butte
Ronda Sandquist - BHFS
Sam Calkins - Centennial
Kathryne Marko – Fort Collins
Mike Fabbre – Mount Crested Butte
Sherry Scaggiari – Aurora
Amanda Clements – Metro
Mary Parker -
Caroline Byus – Pinon
Jurget ?
Joe Creaghe –
David Bries – Montrose
Cynthia Lane –
Meghan Kelley – Aurora
Michaela Jackson – Greeley
Roy Heald – Security
Toby Ormandy – Fremont

Amy Conklin – CWWUC Coordinator
James McCutchan - CSU

Amy got the virtual meeting started and Blair welcomed everyone. Here is a link to the meeting recording:

<https://www.dropbox.com/s/s23quhobptfv3ps/video1931222391.mp4?dl=0>

Blair reviewed the agenda and there were no changes.

Nathan Moore (CDPHE) – State updates – Nathan reported that this week has been really busy for him and many others. They're still working to fill the position of section manager. They're planning some listening sessions which will be to determine the topics of interest for the stakeholders.

Nathan asked for clarification on PFAS notice item on the agenda. It is in regarding the letter that CDPHE was going to send. So far no one has received a letter clarifying the methodology to be used in analyzing PFAS. He reiterated what the issue is. **Nathan** will check on the letter and follow up next month. Longmont has received the letter. John Gage shared the letter. Blair shared that their labs may

not be able to do the method. Sherry Scaggiari agreed. The method will take some time for the labs to get up to speed. Nathan reported that three labs are doing the method now. Sherry requested the list of labs be included in the letter. Sometimes CDPHE gets in trouble if they list labs. They depend on the stakeholders to share information about labs. Skepticism was expressed about adopting the method quickly.

Gabe added that language in the permits will be suggested regarding instructions for permittees knowing what to do and which methods to apply. Nathan commented that now the problem has been identified, it is unlikely to occur again. Nathan indicated that this particular problem may be a one-off situation. That is the hope.

Amy will send the group a copy of the form letter, when someone sends it to her. January 1, 2023 will be the date to have the method in place for the permits to which it applies. Nathan will try to find a way to share the names of the labs that can meet the requirements of the method and encourages all the members to share information amongst themselves. The membership is encouraged to send the names of the labs to **Amy** who will share with the members.

Discussion Items

Gabe Racz – Updates and discussion –

Antidegradation - Responsive Prehearing Statement (RPHS) update – The RPHS was filed for the hearing in September. There have been no surprises in process so far. The Alternative Analyses memo should be coming out soon. The Chemical Evaluation forms are important components. **Gabe** will try to get info out ahead of time for review.

Temperature requirements updates – Comments were received.

Proposed changes to Regulation 21 – The work group will start soon.

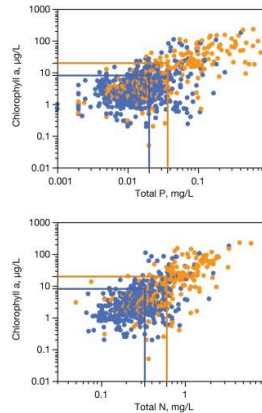
Regulation 22 - **Gabe** will send out a summary that describes the two (2) options going forward.

Regulation 85/Policy 17-1 – This topic was mostly covered under Lakes Nutrient Criteria item. He hasn't seen anything he's concerned about in revisions to the policy. Katie Koplitz had a concern about Policy 17-1. She's concerned that the change would let additional months of compliance to be ignored. She's not sure how important the change is so Gabe recommends stating the comment again. **Gabe** will reach out to The Water Quality Control Division (WQCD), too.

Lake Nutrients Criteria – SOW – Dr. Jimmy McCutchan attended the meeting. Dr. McCutchan's review of the Tetra Tech Report was sent out before the meeting.

The WQCD's Proponent's Pre-Hearing Statement (PPHS) was released on August 3rd. Party status requests are due August 17th. A few entities requested cost/benefit and regulatory analyses. Those requests have been granted. The cost/benefit analysis will be available by November 4th; only a few days before the hearing. Gabe reviewed the proposed standards.

Dr. McCutchan reviewed the report with a series of slides. Important factors controlling algal growths in lakes are: nutrients (Nitrogen, N and Phosphorus, P); other elements; temperature; light; lake depth; and flushing rate. In situations where N or P are limiting, there can be strong relationships between nutrients and algal biomass. But, because other factors can limit production besides nutrients, the relationships between nutrients and algal biomass is variable. There's a great deal of scatter in the data depicting the relationship.



Proposed criteria

- Total phosphorus
 - 0.020 mg/L Aquatic Life Cold
 - 0.036 mg/L Aquatic Life Warm
- Total nitrogen
 - 0.330 mg/L Aquatic Life Cold
 - 0.600 mg/L Aquatic Life Warm
- Option for site-specific adjustment based on Secchi O/E



In nutrient rich lakes, the N:P ratio seems to be lower than in nutrient poor lakes. At low N:P rations, N is more likely to be limiting than P. Some groups of cyanobacteria (blue-green algae) can fix N from the air and compensate for limited N. Cyanobacteria can grow without any source of N in the water. Treatment technologies for N and P are very different. Controlling P is the most economical way to limit nutrients. Other factors are not as easily controlled.

The final Technical Report from Tetra Tech included a revised data set that corrected some errors in the original data set. The status of the data set is reviewed in his report. EPA reported that different lakes may have different relationships between Chlorophyll (a measure of algal biomass) and nutrients. Tetra Tech segregated the data into categories to address the variability of the relationship. There is a proposed 1 in 5 year exceedance in the proposed standards. A [quantile regression](#) approach was used to provide additional protection so that there would be fewer lakes where Chlorophyll standards could be attained even if the nutrient standards were not. Seasonal mean values were used for Chlorophyll and nutrients and Tetra Tech included some co-variants including Secchi depths. Its an acknowledgement that factors other than nutrients impact algal levels in lakes.

The proposed criteria differ slightly from the Tetra Tech report. However, the differences aren't large. The WQCD includes an option for site specific adjustment based on Secchi disk transparency (Secchi O/E). For both P and N, the chlorophyll values are higher than what would be expected.

He reviewed the methods used to identify errors in the data set. There are still anomalous data in the data set. A review on a lake by lake basis needs to be done. He used an anomalous data point from Chatfield Reservoir. The value is clearly an outlier and needs to be eliminated from the data set. He suggests Tetra Tech review the data set more carefully, on a lake by lake basis to identify and eliminate outliers.

In developing the data set, detection limits among the organizations collecting the data varied. The detection limits of the data were sometimes high enough that the data shouldn't be used in deriving the proposed standards. Non detects were assumed to be ½ the detection limits. That method is not a reasonable method for some of the data. It will result in weakening the relationship between nutrients and chlorophyll.

One example is [Total Kjeldahl N](#) (TKN) to Total N (TN) in the data set where sometimes the TKN is greater than the TN; sometimes twice as high. Tetra Tech handled this issue with an analytical method. The USGS data sometimes was an estimated value rather than a measured value. This has caused a bias in many of the TN values from USGS. He thinks this is a serious flaw because USGS data set included 40 lakes; the second largest (behind CDPHE). It could have a significant impact on values for N.

The intent of the analyses was to only include surface sample data. In comparing data in dataset, they found samples from the bottom, often in the USGS data. It has to do with how USGS reports their data. The evaluation of the data didn't pick up that the samples were from the bottom. Surface and bottom samples were averaged and carried forward. There is a big difference between surface and bottom samples and there is a significant potential that is might impact proposed N values.

Historically the WQCD has conducted lake assessments with a minimum of three (3) data points in the July – September growing season. For the analysis, the minimum data point was reduced to one (1) data point. For some lakes and some years this is a reasonable assumption. For others it is not. There is enough variability during a season that using one sample is not defensible. The intent was to expand the number of lakes that could be included, but the data doesn't support what was done.

Lakes were classified by categories and continuous variables. Aquatic life was chosen in preference to other variables. It would be helpful for Tetra Tech to provide more information about why aquatic life was chosen based on data analyses. Temperature, for example, can vary between and among lakes. The aquatic life designation is often based on the ecology present rather than measurement of water quality variables.

His recommendations include:

- Revising the data set to strengthen the relationship between chlorophyll and nutrients by reviewing:
 - Detection Limits assumptions
 - USGS TN data
 - Surface samples versus bottom samples
 - Minimum sample size
- Reviewing the lake classifications – Tetra Tech should consider other variables including temperature, flushing rate, and lake depth. The lake classifications were done before the data set was refined. It's unclear if this could be done in time for the November hearing.
- Criteria development impacts from data set refinement.
- Implementation feasibility.

He suggests a postponement of the hearing until the issues he's identified can be addressed. Implementation of the criteria is another important issue. Reducing sample size from 3 to 1 data point, in particular, is not a good recommendation. Assessments are carried out one lake at a time. It's important to be able to determine if a lake is attaining its standards. Accomplishing that with only one sample is unreasonable. It raises questions about nutrient rich lakes whether 3 samples is adequate.

Historically algal growth control has focused on P. N may be limiting algal growth in downstream systems and should be included in trying to limit algal growth but P control has the better record. Removal of N may not have the full desired effect because an environment can be created where N fixing cyanobacteria can have an advantage. Limiting N may make things worse.

Treatment technologies have been developed to treat P to very low levels and control algal growth. TN hasn't had similar research and application. The Tetra Tech analysis was done for N and P separately rather than combining them, and comparing to algal growth. Just controlling N may not attain the Chlorophyll standards. To require both N and P standards to be met is redundant. There are other options such as considering N control on a site-specific basis such as where P control doesn't achieve the standards. Generally N control alone will not be adequate.

Chlorophyll standards may be attained without N and P standards being attained. What will happen in those circumstances? WQCD tried to address this by including secchi depths. More thought and discussion about implementation is necessary for situations where nutrient values are low and chlorophyll values are not being met.

The Chlorophyll standards adopted in 2012 were 5 ug/L for drinking supply lakes to be applied on a discretionary basis. In this proposal, the WQCD will apply the 5 ug/L standard for any lake with direct water use designation. This is a potentially important shift because for any discharger upstream from a direct use water supply lake, the impacts from the down stream lake could apply far upstream.

Gabe summarized that the issues of concern for him are the dual control for N and P. The work Tetra Tech did doesn't justify use of both N and P controls. A different analytical approach would have been needed for that approach. Technology only gets effluent down to about 2 mg/L N. The WQCD and EPA knows the standards are not achievable and they propose to issue variances. He would argue that if a standard is known not to be achievable, don't make it a standard. Another important consideration is where lakes achieve nutrient standards but not chlorophyll standards or vice versa. Use of one sample to represent a lake is problematic, also, as well as the flaws in the data set. Gabe recommends CWWUC participate as a party in the hearing and present the analysis and recommend a pause with N standards, in particular.

Jim Dorsch reported that an analysis of the results, eliminating lakes with only one data point made no difference. The WQCD is using both TP and TN numbers as EPA recommended. They did try to eliminate lakes with a lot of data but it still made no difference. The argument regarding controlling P and N is a complex one. The issue is that both values don't need to necessarily be attained in every lake to achieve the beneficial uses and control the chlorophyll. The analysis didn't prove that using dual control is necessary, but it is believed that EPA would insist on dual control.

EPA is looking at the dual control issue from a national perspective. Control of N can be important in some circumstances. If P values are set at a level, how high can N values be set to still control algal growth? N concentrations may not cause a problem locally but may further downstream. More site-specific evaluations are needed. Practically speaking, P control is easier and more proven. N concentrations haven't been studied enough. How important N control is should be determined on a site specific basis.

Party status requests are due August 17th with Responsive Prehearing Statements due in September. Andra moved, Julie seconded a motion for the CWWUC to apply for party status. The motion passed unanimously. **Gabe** will apply on behalf of the council. Several CWWUC members will be requesting party status as well.

Other

Recap of Water Quality Forum meeting - Justine gave Gabe a high level overview of the forum.

- Technical Advisory Committee (TAC) – A concern was expressed about the lack of access to information the TAC is using. The WQCD will discuss the concern with a small group.
- PFAS – The WQCD work group is ongoing. There was discussion about including PFAS in the Water Quality Forum without resolution.
- Permit issues forum – There wasn't a commitment from the WQCD, but a scoping process was suggested.
- Reg. 21 – A procedural rules work group was proposed.
- Salt Creek – A proposed work group was withdrawn but Salt Creek is likely to be an ongoing issue.
- EPA gave an update on PFAS
- Environmental Justice requirements were discussed. Under current guidance, the Water Quality Control Commission will hold outreach meetings with groups impacted by environmental justice concerns. It might be better for the WQCD to hold the meetings since they make recommendations and have staff. Recommended changes will be coming.
- Longmont hired someone from the WQCD which may lead to more variance requests going unanswered.
- Nathan requested that CWWUC would bring up topics for the permit webinar. **Blair and Andra** will send out a survey to solicit topics from the membership. It should be coming soon.

Julie reported that she, Barb Biggs and Gabe made a presentation to the interim legislative committee on water resources. Discussions with Nathan about the Permit Issues Forum have been conducted. The discussion was about having more effective meetings but the WQCD lacks staff to address the issue.

Chemical Form Evaluation Subcommittee – **Kathryn Marko** reviewed that this is an issue from the Colorado Monitoring Framework. She hopes to form a CWWUC subcommittee. She will send out invitations to members and hope there are some volunteers. She's unable to continue to lead on this issue. Please let **Amy** know if you're interested. Kathryn will participate in the subcommittee but isn't able to lead the effort.

Board Action Items

Approval of invoices for payment.

Send **Amy** requests to see invoices. Katie made a motion to approve payment of the invoices. Roy seconded the motion. The vote to approve was unanimous.

Checks for Approval August 2022		
2327 - Amy Conklin	\$2,450.00	July Coordinating
2328 - University of AZ Foundation	\$2,000.00	Dr. Pepper PFAS research - \$1,000 from Security included
2329 - Vraesh & Raisch	\$6,133.50	Inv. #42976
Checks for Deposit in August		
NFRWQPA - #3759	\$1,000.00	Nutrient Criteria Vol. Assess.
Security San. Dst. - #38101	\$1,000.00	Dr. Pepper - PFAS research

Payments to Dr. Pepper – Amy gently reminded the members to send fund for Dr. Pepper's PFAS research if they're interested.

Financial Sustainability – A subcommittee is being formed to review the organization’s financial sustainability. Kathyne Marko, Mark Thomas, and Andra Ahrens have agreed to serve on the subcommittee. Rob Fleck will talk to Mark and Amy about joining the group. **Amy** will coordinate the committee and hopes to have a recommendation for the October meeting. Dave Bries commented that there might be value in recruiting members. October 4-5 is the conference for Western Water. **David Bries** will look into getting a booth for CWWUC. He’ll follow up on what may be required.

Approval of July 13th 2022 minutes – Roy made a motion to approve the minutes. Andra seconded the motion which passed unanimously.

Regulatory submittal protocols – Amy explained that there was a lot of time-sensitive activity during July and requested clarification on the organization’s protocols. The protocol will be that time sensitive issues will be discussed among Board Officers followed by time sensitive messages being sent to the membership.

Open discussion – Katie Koplitz reported on an air quality issue regarding green house gases; renewable natural gas. Recovered methane protocols are being discussed. The crediting program for creating renewable gas would be impacted. She invites anyone interested to reach out to her. They’re using models from other states. Metro will get party status to get clarity on establishing baselines. Metro wants to be sure they get credit for reductions they are already making. They’re also interested in clarifying how long credits can be retained. Party status is due on Monday so be sure to reach out to her if you’re interested.

Cooling towers at Metro’s Northern Treatment Plant are being built and they’re trying to get them online by the end of November. They’re trying to replicate the effort on the secondary and tertiary treatment streams at the Hite Facility. Supply chain issues are causing some delays. Metro’s permit will be public noticed for additional PFAS components in their permit. They will be using method 1633 to get all 40 PFAS components.

Julie reminded the group that there will need to be nominations for Board Officers and the subcommittee will be forming soon.

Next Meeting: Wednesday, September 14th, 2022 at 1:00 pm