Yadkin-Pee Dee Water Management Group

Meeting Summary

Yadkin-Pee Dee Water Management Group Meeting

1PM to 2:30PM, April 30, 2020

Virtual Meeting (Zoom)

Action Items

The following action items were identified by the Group at the meeting:

- Fountainworks to get in touch with some members of YPDWMG to help reach out to more NC operators.
- Fountainworks will reach out to SC utilities in the Fall to brief them on YPDWMG activities and coordinate on future basin planning work.
- YPDWMG will provide feedback on 10 scenarios by May 15, 2020 provided in Technical Memo.
- HDR will finalize scenarios based on comments and updates.
- Next meeting date and time will be determined through a doodle poll set for late June.

Welcome and Approval of Minutes

Chair Jim Behmer called the meeting to order. The group approved the meeting minutes from the March 4, 2020 meeting.

Open Ended and Round Table Discussion

Chair Jim Behmer began the meeting by opening up to the group to discuss issues surrounding the impact of COVID-19. The discussions focused on the topics of economic impact, planning for the transition back into previous operations, and remote work considerations. Chair Jim Behmer discussed the importance of planning to include policies and procedures to phase back to normalcy post-COVID-19. Identifying the strategies to ensure safety and community health are currently being analyzed. Ron Hargrove, City of Charlotte stated the first positive employee COVID-19 case was confirmed the past week. Exposure from the employee was limited, and measures have been taken to limit the potential negative impact. The City of Charlotte began discussions on logistical processes, communications, and revenue from COVID-19 that are deemed to have a significant economic impact. The Group discussed that revenue impact can be difficult to project, but local-level data will be essential to capture in reports.

The Group notes that additional workplace issues included rural areas that face the challenge with limited connectivity and conducting operations virtually. The limited connectivity constrains virtual platforms for smaller rural areas. Jeff Lineberger, Duke Energy, discussed the potential change to continuing to use remote working practices for certain employees and sections. The justification involved a reduced burden on the employees, space, and financially. Counter to this, the group agreed that meetings are more effective when conducted in person.

HDR Updates – Stakeholder Advisory Group & Scenarios

Jonathan Williams of HDR presented to the group about the Stakeholder Advisory Committee and continued Scenario Development (Slides can be found here under the 4/30/2020 meeting). Members of the YPDWMG were sent a technical memo prior to the meeting to that provides more details on each scenario.

1) **Stakeholder Advisory Committee Members and Representatives**

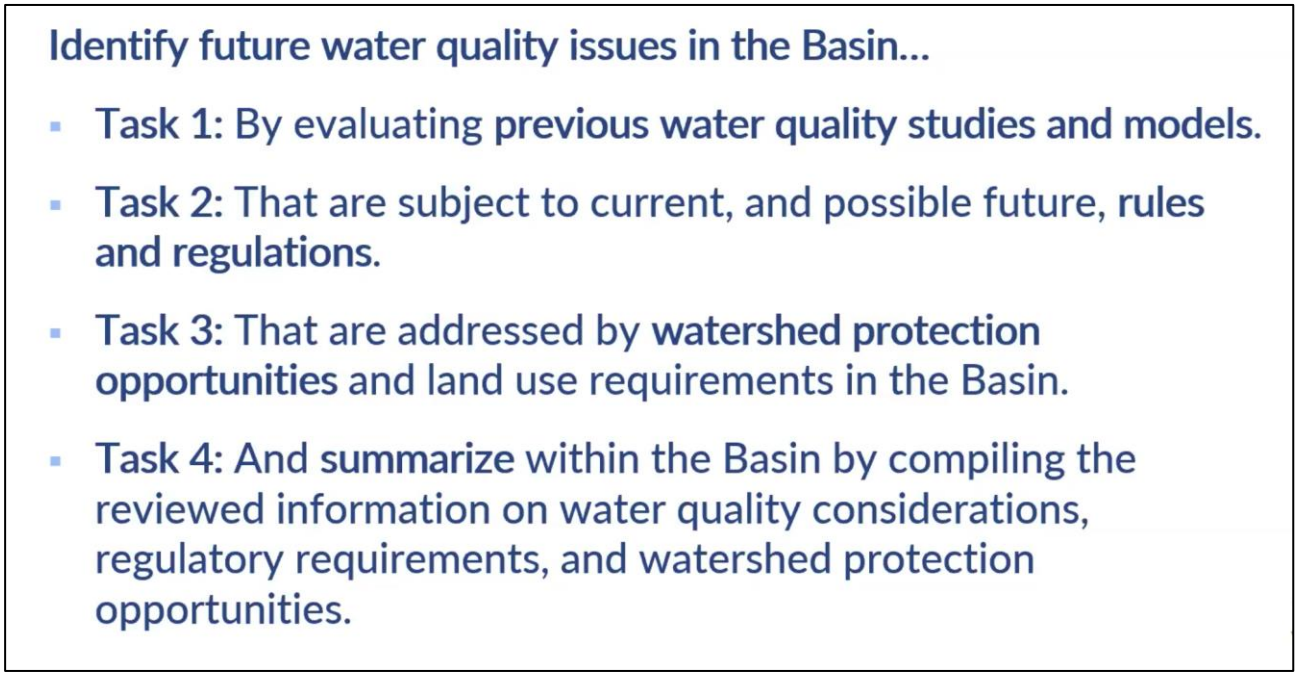
2) **Next Steps**

Stakeholder Advisory Committee Next Steps: In the process of developing a scenario summary to present to the Stakeholder Advisory Committee. ***Outcome*** *will be to get feedback and potential for* ***five*** *different sceneries that have not been considered.*

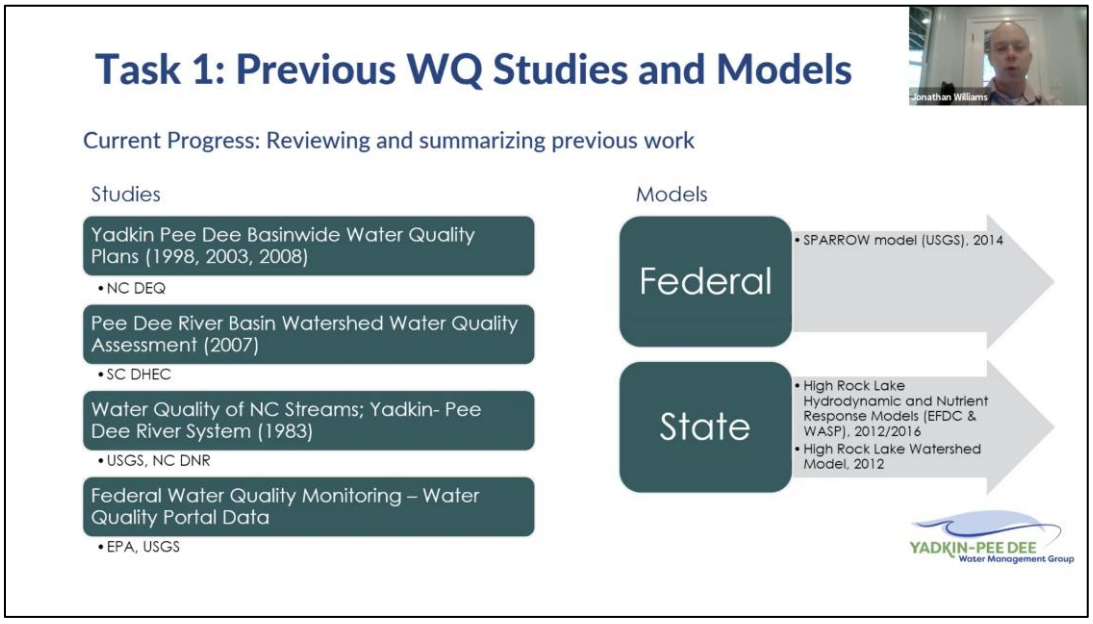
- *Scenario Development Survey feedback within two weeks (by May 15, 2020).*
- *Read and sign committee charter –* ***Delivered*** *on May 1, 2020*
  - *Goal to commit group to responsibilities and tasks*
- *Utilizing Microsoft Teams – Stakeholder Advisory Group project page*
  - *Decision Point – Decided to not allow the group access to YPDWMG website but instead will provide Microsoft Teams*
- *Next meeting of Stakeholder Advisory Committee: July 15-17*
  - *Pending COVID-19 and restrictions plan in person but virtual will be the alternate*
  - *Topic: Draft Scenario Discussions*

3) **Water Quality Investigation Update**

- Phase 5b Overview



- Focus on the scenario development
- Additional work helps with scenario development
    - Prevent duplication, learn, and identify where the gaps in relation to water quality
    - Look at existing and future potential regulatory changes – assess – water protection and land used requirements.
    - Deliverable to provide a snapshot document of what currently exist
- Currently in Task 1: Previous WQ Studies and Models – studies and models that have been developed.



4) Future Water Resources Planning Scenarios

- Tech memo sent out by Fountainworks
  - Based on top 10 scenarios and discussion on details with feedback by ***May 15, 2020***
- Top 10 Scenarios

Scenario Development – Top 10 Scenarios

Scenario Category	Scenario
Climate/ Environmental Shifts	Drought reduces supply
	Storms become more infrequent and intense
	Increase in sedimentation decreases reservoir storage and/or restricts intakes
General Policy Shift	New policy or regulation requires an increased quality of wastewater discharge (e.g. High Rock Lake Nutrient Management)
	W. Kerr Scott Reservoir revises flow release protocol
	New regulation/ policy requires an increase in the price of water, which decreases demand
Industrial	Increase in industry wastewater production (e.g. poultry processing), resulting in degraded water quality
Public Behavioral Shifts	Increased population growth within the region, which increases demand
	Increased regionalization as people move to urban centers and become less reliant on well water, which increases demand
	Changes to IBT, which allows more water to leave the Basin

- Johnathan Williams presented details for each scenario.
  - Technical detail can be found in memo emailed by Jonathan Williams
- Planning Scenario Highlights:
  - **Baseline Impacts of Climate Change**
    - Planning critical to develop a baseline case with a conservative approach
    - Goal is to establish a moderate impact for future considerations on the basin
    - Michael Mann, HDR hydrometeorology expert, consulted.
      - Focus on models, patterns, and variables (higher temperatures, greater evapotranspiration, greater reservoir surface evaporation) in analysis
    - Used RCP 4.5 (not as impactful/limitations on carbon control) that accounts for measures of control on climate change into the future
  - **Extreme Drought**
    - Similar to baseline model but difference is to use RCP 8.5 instead of 4.5
    - ***Clarification***: Difference between Extreme Drought versus Extreme Climate because variables are changed to include the entire period of record effecting the performance measures
      - Extreme climate change will be reflected in the data

- ***Question***: How does the scenario account for the Guide curve and LIP at reservoirs?
    - The scenario programs variables into the model and assumes existing operational rules. Informs under existing operational rules and what the impact are and what mitigation measures to include.

- **Less Frequent, More Intense Storms**
    - Scenario simulates Hurricane Florence into the future with increased intensity to determine the impact and mitigation measures
    - Evaluation and discussion on identification of the effects of less water in the system because the same amount of rainfall condensed into fewer rain events.
        - The event results in rain exiting the system during the events because it cannot be stored in either reservoirs or baseflow tributaries.

- **Increased Wastewater Quality**
    - Related to High Rock Lake phosphate nutrient loading using desktop analysis what the potential impact is
    - Goal is to identify the future hotspots
    - Modeling expensive so will utilize desktop as much as possible to reduced costs

- **Revised Flow Release Protocol at W. Kerr Scott Reservoir**
    - Focus on matching the inflows and outflows using OASIS model during extreme drought
    - Inflows and outflows should be moved to match once a drought is triggered
    - U.S. Corps Guide curve and LIP need to match and violates a core principle.
    - Need to have a coordinated plan with U.S. Army Corps of Engineers and the Basin (further discussion).
        - Continue to evaluate and update coordinated plan in Extreme Drought.

- **Reduced Water Consumption Due to Price Increase**
    - Working with UNC Environmental Finance Center to determine corresponding increase in utility rates that suppresses demands
        - Bottom Line is a 10% increase in a water bill = the demand will decrease from 3% to 8%
        - Using excel data base with functionality to run sensitivity analysis for various scenarios

- **Increase in industry wastewater production**
    - What industry sectors are primed for increase in the future?
    - Includes a desktop analysis to relate key constituents with water quality and overall impact on the basin

- **Increased Water Demand from Population Growth**
    - Building into excel tool to run sensitivity analysis that is based on an increase in population
    - Uncertainty principles of annual growth rate and local water supply methodology to run sensitivity analysis
    - Aids to help answer an increase in population growth or “What If” Scenarios

- **Regionalized Demand Increase**

- The scenario can evaluation future water demand by amplifying transition of the population toward surface water uses in urban areas
- Scenario can be arbitrary but looking at the "What If Scenarios.
- Outcomes can change due to COVID-19

- **Interbasin Transfers (IBTs)**
  - Evaluates potential impacts due to reduced water supply in the YPD because of changes in IBTs.
  - Answers two questions:
    1. What if water leaves the basin?
    2. What if more water enters the basin?

Administrative Items

No change from previous meeting.

Adjournment

The meeting was adjourned at 2:30 PM

Meeting Attendees

Ron Hargrove, City of Charlotte
Karen Baldwin, Cube Yadkin Generation
Ron Sink, Davidson Water, Inc.
Jeff Lineberger, Duke Energy
Ed Bruce, Duke Energy
Gerald Faulkner, City of Kannapolis
Johnny Lambert, Davie County
Russell Colbath, City of Monroe
Jim Behmer, Salisbury-Rowan Utilities
Aubrey Lofton, Union County
Bill Brewer, City of Winston-Salem
Courtney Driver, City of Winston-Salem

Non- Member Attendees:
Warren Miller, Fountainworks
Jonathan Williams, HDR
Nicola Hill, HDR