Technical Advisory Committee Meeting # 1 (Kick-Off Meeting)
August 1, 2018, 9:30 AM, Webinar

1. The meeting was opened with an Agenda and a discussion of the meeting goals. The Agenda includes Introductions and Meeting Guidelines, Project Scope Discussion, Water Demand Projections Development Process, and concluded by the identification of Future TAC Meetings and Preliminary Schedule. The meeting presentation was about 30 minutes and was followed by 15 minutes of questions and answers. The meeting goals include receiving stakeholder feedback and buy-in on the State Water Plan update. Comprehensive stakeholder input will provide not only a basis for this study, but for future updates as well. Participants should share their knowledge as they know their sectors water use or best practices for water demand forecasting better than anyone.

Meeting purpose:
Creating an environment for technical information and idea exchange for developing methodologies for water demand forecasting. This is an opportunity to provide specialized technical contributions to the water demand forecasting effort for the state which will be an important component in updating the state water plan and developing policy recommendations. While this effort builds on recent water planning efforts and is one part of the update to the state water plan, it will also be an important component in subsequent water planning cycles. It is important to get this phase of the water planning project as right as possible and to incorporate as much information as possible into developing appropriate methodologies for water demand in various sectors. You are the experts in your field and, as such, can bring significant stakeholder contributions to the process.

How to accomplish:
Sharing sectoral best practices/approaches to water demand forecasting. Discussion will focus on information currently collected/presented by Alex of SCDNR and what information might be missing that is important to consider. Additionally, what are the best ways to apply this information into water demand forecasts? Atmosphere of mutual respect, allowing all who wish to share their thoughts the ability to do so with constructive feedback and criticisms only. If you disagree, make it known in a respectful manner what you disagree with and why.

2. A discussion of how to provide feedback during, immediately after, and following the meeting was held:
   • During the meeting use the Webex Chat Box.
   • After the meeting we will have Open Discussion.
   • Feedback following the meeting:
     Please send any input to: scwatermodels@clemson.edu
     Find meeting materials at: www.scwatermodels.com

   Ideally feedback within 30 days gives the study team a chance to include your feedback.

3. The next portion of the meeting included an introduction of the Presenters/Study Team. Participants introduced themselves via the Chat Box on the Webex (information provided is included in the meeting Roster).
   • Meeting Moderator – Holly Carpenter, Project Manager, USACE Charleston District
• Meeting 1st Presenter – Tom Walker, Tom Walker, Ph.D. is a postdoctoral fellow in the South Carolina Water Resources Center. He received a Ph.D. in Policy Studies from Clemson University with an emphasis in environmental and natural resource policy. His postdoctoral fellowship is primarily focused on the State Water Planning Process.

• Meeting 2nd Presenter - Alex Pellett, Alex has been with the Department of Natural Resources for three years. Prior to that he got his Master’s degree in Plant and Environmental Science from Clemson University, and he is currently working on a PhD dissertation on agricultural water demand.

• Also joining the meeting from the Study Team:
  a. SC DNR – Scott Harder (Senior Hydrologist), Joe Gellici (Chief Hydrologist, SC Dept. of Natural Resources)
  b. USACE – Stuart Norvell, Regional Economist, USACE Little Rock District, extensive experience water supply and demand studies in Texas.

4. The Project Scope was discussed, presentation slides contain the project scope outline.

5. The Water Demand Project process was outlined, presentation slides contain an overview of the process from receiving Raw Data through Scenario Projections.

6. Future Meeting schedule was identified. A TAC meeting is planned for each sector in the Project Scope. Tentative plans include meetings every two weeks on Wednesdays:
   a. Wednesday August 15th – Industry
   b. Wednesday August 29th – Power
   c. Golf
   d. Public & Domestic Supply
   e. Agriculture

7. Open Discussion/Questions

  1) Q- Why are we only looking at water use from 2012 to 2017? We are missing the worst droughts that occurred before that time. We need to consider severe/extreme events.
     A - Absolutely, we will use grid climatology factors each month of water use.

  2) Q- Consider severe and extreme drought scenarios
     A- He will know variables for each month of water use (online at www.scwatermodels.com)

  3) Q- How will demand projections for groundwater be separated from demand projection from surface water?
     A- Baseline – business as usual approach for things we don’t understand – meaning assume they will stay the same. For given user, multiple surface water sources per users, then we would use the same ratio they are already using. May notice it is not realistic so it will be adjusted accordingly. If there is some reason, i.e. a given enterprise is moving water supply, then we would include
Noted that Alex is always ready to take notes with suggestions, but can’t promise all suggestions be incorporated into the forecasting.

4) Q-How does this work dovetail with the work of the planning process advisory committee?
A-We will report back to the committee at the meeting tomorrow. Founding of the TAC is in line with feedback from the committee. We will also keep the PPAC informed and they will have the opportunity to comment.

To clarify, the projections are a deliverable. The process for regional planning is a deliverable of the PPAC to the regional planning group. Alex does not control the regional planning group.

5) Q (Stuart)-How are you forecasting public water supply (utilities, municipalities, etc.)?
A- Regression model or classify/cluster some enterprises if they are similar to be able to be grouped

Comment- A regression with sensitivity variables is going to be a lot of work (budget/cost). Population projections were fundamentally simple and cost effective. Another option might be to look at high growth areas, hone in, and develop detailed models.

Response – Public Methodology TAC Meeting is planned for sometime in September. The reason for waiting to tackle public supply is because it is a broad category and includes agriculture/irrigation and domestic. We do have some existing information on population projections. We are looking at methodology of what was done in the San Diego model, it would be great if that could be done for the entire state. Otherwise, population per capita use model was simple.

Comment – Very complex model for each basin in San Diego and may be too hard to accomplish for the entire state.

Response – yes, that type of feedback is what we need at each sector meeting.

6) Q-Most median to large public water systems do long range water demand projections based on local comprehensive land use plans, water supply development takes years to plan and fund and build.
A-Absolutely. Very interested in local on the ground projections that are out there, looking at those, and using them (statewide water demand projections).

7) Q-Can the model also answer how to manage input variables contributing to the water supply to meet the target demand (e.g. identifying land use best management practice as intervention to increase water supply)
A-Yes. There might be something we can identify, but may be a little beyond scope of what we are trying to do

8) Any other industrial forecast models he (Alex) might use?
A - No, he does not know of any other data sources

9) Q-How will this work be related to the panels potentially being formed by DNR?
A-Planning Process Advisory Committee- formed for several months and coming up with blueprint for basin planning process. This work will relate to those panels and we hope to provide to their projection tailored to their basin. We want to get from statewide projection methodology to application from each state basin. Focused solely on application of projection methodology to local region, including any scenarios.

10) Q-Can we collaborate to reconcile input data and validate outputs to develop watershed management plans?
A-Yes we can collaborate with your team to reconcile input data and validate outputs to develop watershed management plans

11) The Motallebi's lab in Clemson U is also doing a research on identifying best management practices and intervention for improvement of Ecosystem Services in the Santee Basin. This includes water supply improvement. Is it ok to collaborate with your team to reconcile input data and validate outputs to develop watershed management plans?
A-Yes.

12) Q-Where we can RSVP for the next meeting?
A- The next meeting will be sent out to those that RSVPd to this meeting or you can contact us via scwatermodels@clemson.edu

NOTES:

- To all participants, if you see your name coming up beside the "Speaker:" at the top of the participants tab, you still need to mute your phone line. You can mute through your own phone and also by pressing the microphone next to your name. When it turns RED you are muted.