

CONSORTIUM NEWS NOTES – September 3, 2020

Consortium News Notes Highlights

- July Webinar presentation and meeting minutes uploaded on MS Teams site and July GWPC seminar.
- Consortium Sponsorship by ExxonMobil
- DOE RFP on fit-for-purpose reuse of nontraditional water by due 9/21/2020
- Participating with the Consortium on Research RFP's
- Produced Water Society – Midstream preliminary treatment support
- TSC Working group update
- Government Advisory Board (GAB) update
- Consortium Outreach Efforts
- Upcoming September and October TSC conference calls,
- Consortium End of Year Meeting, November 5, 2020 (Mark your calendar to save the date!)
- NMED releases *Summary of Initial Public Input on Produced Water*

July Mid-Year Webinar Presentations and Meeting Minutes

The July 14 Webinar of the NM Produced Water Research Consortium was attended by 65-70 members for both the morning technical sessions, and the afternoon sessions by the Government Advisory Board and NMED. The webinar was hosted by NMSU and from what I could see and from complimentary emails, it appears that the coordination, presentations, and question and answers format and connections went smoothly.

We got compliments from the Ground Water Protection Council, on the webinar NMSU hosted through our Consortium on July 13th. They had about 300 participants nationwide, and NM was highlighted as part of the GWPC webinar with Environment Department Cabinet Secretary James Kenney as a key presenter and several participants from our Consortium on the user perspective panel. The Consortium will continue to work with the GWPC to lead and coordinate some of the EPA's Water Reuse Action Plan (WRAP) efforts for produced water, as identified in the National WRAP released by the EPA in February 2020.

The presentations and meeting minutes from the Consortium webinar have been loaded on the Consortium's MS Teams site. All members should have access to the MS Teams site through your email address. If you have any issues, please let Mike Hightower know.

With the success of the webinar, we will continue to utilize the NMSU webinar services as needed to ensure future PWRC meetings adhere to all applicable COVID-19 related public health orders and executive orders.

ExxonMobil Consortium Sponsorship

In September 2020, ExxonMobil approved a \$250,000 cash sponsorship of the Consortium to be paid over a three-year period from 2020 through 2022. This sponsorship was coordinated through ExxonMobil representatives in Houston, Santa Fe, and with support from ExxonMobil

members of the Technical Steering Committee. We appreciate the ExxonMobil support and have already started putting their 2020 funding to good use.

New DOE RFP on Fit-for-purpose reuse of nontraditional waters.

The National Association for Water Innovation (NAWI), a group led by Lawrence Berkeley National Laboratory, with NMSU as a partner, announced an RFP on August 28, 2020 for \$8M for early stage research on innovative technologies to support fit-for-purpose reuse of nontraditional waters. If you or your company are interested in having the Consortium work with you on a proposal, or help facilitate connections with Consortium members, please contact our Research Director, Dr. Pei Xu at pxu@nmsu.edu. Dr. Xu supports the NAWI team on produced water research and should be able to provide good insight into how a proposal might be focused. The information and links are provided below.

Funding Opportunity Announcement (FOA): FOA #: NAWI-BP12020

Key Dates for this Funding Opportunity Announcement	
Funding Opportunity Announcement Released	August 28, 2020
Concept Papers Due	September 21, 2020*
Encourage/Discourage Decision Notification	Week of November 16 th 2020
Full Proposals Due	January 11, 2021*
Pre-Selection Clarifications, if needed	Between last week of February and first week of March
Expected Date for Selection Notification	March 2021
Anticipated Project Start Date	June 2021

*Due 5:00pm PT

- Interested applicants must submit a Concept Paper by 5:00pm PT, on September 21, 2020, to be eligible to submit a Full Proposal.
- To apply to this FOA, applicants must register with and submit application materials through NAWI Exchange at <https://nawi.infoready4.com/> NAWI’s online application portal.

How to Participate with the Consortium on RFP Research Proposals

In support of the Consortium membership, NMSU constantly follows federal and state opportunities for produced water research. We have supported several proposals by a number of Consortium organizations, universities, and technology vendors in RFPs for the BOR and USDA. If you are interested in participating in upcoming research RFP efforts, please contact Dr. Pei Xu to discuss opportunities.

Produced Water Society Produced Water Conditioning Standard for In-field Reuse and Recycling

The Consortium reviewed and commented on a suggested industry standard for preliminary treatment of produced water to facilitate midstream transfers to address the challenges of non-compatible water impacting pipeline operations, corrosion, sludge buildup, etc. The

Consortium leadership has supported the suggested PWS strategy to require some general minimal water treatment values for pH, ORP, turbidity, and oils to reduce incompatibility issues. We believe this will help in improved operational performance of treatment systems knowing the general quality of the produced water to be treated.

Technical Steering Committee Working Group Updates

Consortium technical leadership is working closely with the Government Advisory Board to review and finalize draft technical reports, guidance and case studies developed by the Consortium since January or currently under development. In addition, the Consortium is working on a science, technology, and gaps analysis report for the end of October. Three major working group activities discussed in July have made significant progress. These include:

- **Produced Water Infrastructure GIS Mapping**
Meetings have been held with the BLM to utilize their ARC GIS system to begin mapping of infrastructure, rights of way, and federal range lands needing restoration. The expectation is that we will use this as a template for further mapping of other lands for potential application, infrastructure, etc.
- **Produced Water Data Portal Upgrade**
Several meetings have been held with the GWPC on upgrading our current produced water quantity and quality data and providing a web-based and more user-friendly system. We have identified a list of functionality and data evaluation needed for the different Tiers of information needed. GWPC and their contractors are developing initial elements of a TIER 1 system capability, which is based on general public information. This will be a multi-month effort, but an initial review could be available for evaluation and Consortium member input by the end of 2020.
- **Risk and Toxicology Analysis**
The risk and toxicology subgroup members have reviewed recent EPA directions on direct evaluation of health and safety risks of treated wastewater for land and water applications through the analysis of water, plant, and soil bioaccumulation. This is being done using hydroponics, and soil and plant biopsies from greenhouse cultivated plants and WET testing. This has shown significant promise for use in looking at treated municipal wastewater, and EPA thinks it is applicable to reuse and risk evaluation of other treated wastewaters.

NMSU researchers are evaluating the opportunity to use dedicated greenhouses and NM Agricultural Research Centers in Farmington, Artesia, and Hobbs to assess opportunities to use this type of approach. The benefits would be the ability to limit risks to the public and environment during initial research because of initial testing in greenhouses and facilitate direct quantification of treated water safety and environmental risk. The approach will also provide the ability to establish a direct relative risk for use of different treated wastewaters, including municipal wastewater and agricultural wastewater.

Government Advisory Board Meeting August 21, 2020

The GAB met Friday, August 21 to establish a process for GAB review of reports, case studies, guidance and program plans. While the GAB has reviewed the six initial working group charters, several additional documents were provided to the GAB for review in August. Other documents will be provided in September and October, as they are completed by Consortium technical leadership. The Consortium and the GAB have coordinated a Technical Document Log to coordinate document review timelines and final adoption dates. GAB review of most documents developed to date will conclude by mid-October. This is an extensive effort by the GAB to support the Consortium in facilitating research and development efforts in 2021.

Consortium Produced Water Outreach Efforts

The Consortium continues to engage in outreach to the public, research groups, and industry on produced water fit-for-purpose treatment research and the Consortium's efforts to fill critical science and technology gaps for safe treatment and reuse of produced water outside of the oil and gas industry. Recent presentations and upcoming presentations include:

- Santa Fe Water Law Conference Presentation on Produced Water – August 19
- NMOGA Water and Environmental Working Group – Consortium Update – August 27
- NM Association of Commerce and Industry – September 17
- Bureau of Reclamation WIN Conference – Consortium Update – September 22
- GWPC Annual Meeting– Consortium Update – September 29
- IPEC Conference – Consortium & Research Priorities – October 20
- Texas Desal Association – Produced Water in NM – October 27

Also, the Consortium leadership and the Government Advisory Board have discussed holding a public meeting to help the public better understand the discussions and decisions of the Consortium on research directions and challenges and the gaps to be filled by the research. We are still discussing how and where to hold a public meeting and the format. Depending on timing, public health orders will dictate whether the public meeting would be virtual or in person, or a combination of the two. If you have suggestions, please let us know.

In addition, the Water and Natural Resources Interim Committee meeting on September 3, 2020, included a produced water panel. NMED Water Protection Division Director Rebecca Roose provided an NMED update and answered several questions related to the research needs that are the focus of the PWRC. For more information, visit https://www.nmlegis.gov/Committee/Interim_Committee?CommitteeCode=WNR.

Next Consortium Meetings and Conference Calls

Consortium would like to conduct a meeting by Sector – i.e. NGO, producers, midstream, universities, technology vendors, etc. to allow groups of like interests to suggest potential improvements needed to address their issues and concerns. Those meetings are being planned for September 21, 22, and 23.

We will return to the Working Group meeting format on October 13, 14, and 15.

End of Year Meeting – November 5th (Save the date!)

We have set the date for the “End of Year One” meeting to be Thursday, November 5th.

The tentative agenda includes a combination of discussion and training sessions to review progress from year one and set the stage for year two, including the research plan, or Travel Guide, technical reports, and guidance and protocols for pilot projects and the RFP process. Our current plan is to do this as a webinar through NMSU just like the July webinar. We expect most of the webinar to focus on research priorities and timelines for research proposals, approvals, and implementation of research projects.

NMED Releases *Summary of Initial Public Input on Produced Water*

When the NM Produced Water Research Consortium was initiated in October 2019, the NMED also initiated a series of five public meetings, which were held in Albuquerque, Santa Fe, Carlsbad, Farmington, and Las Cruces last Fall.

On September 2, 2020, NMED posted a report titled *Summary of Initial Public Input on Produced Water*. Access the report from the NMED Produced Water webpage, <https://www.env.nm.gov/new-mexico-produced-water/> under the Public Participation topic. The *Summary of Initial Public Input on Produced Water* presents NMED’s compilation and careful analysis of over 760 messages NMED received from the public between October 11, 2019, and March 3, 2020. NMED received these messages in response to information NMED posted to its produced water webpage and information NMED presented during the five public engagement meetings.

The *Summary of Initial Public Input on Produced Water* summarizes the public engagement efforts and captures public sentiment about produced water management, organized around common themes and without attribution to individuals, companies or organizations. Much of the input received focused on the unknowns surrounding produced water use outside of oil and gas, how these unknowns may inhibit development of safe and effective regulation, and how these potential negative implications may affect human health and the environment, now or in the future. The *Summary of Initial Public Input on Produced Water* distills these concerns into primary topics that the public considers priorities for the State to address through future produced water research and/or regulation.

NMED and the New Mexico PWRC have already been utilizing this public input to guide produced water activities. The *Summary of Initial Public Input on Produced Water* will continue to serve as a resource to NMED, the Consortium, other state officials, and the general public relative to produced water as research and policy initiatives.