



Consortium Communication, Outreach, and Education Plan

Background

The New Mexico Produced Water Research Consortium (Consortium or NMPWRC) is organized under a Memorandum of Understanding (MOU) with the New Mexico Environment Department (NMED) to establish a research framework to fill scientific and technical knowledge gaps related to the fit for purpose treatment and reuse of produced water outside the oil and gas sector. The filling of these gaps will allow NMED and the New Mexico Water Quality Control Commission to establish directly related regulations and policies for such reuse of treated produced water. NMED will require that these regulations and policies are protective of public health and the environment, based on sound science, and consistent with all applicable laws.

The Consortium management and operations are organized and designed to utilize public-private partnerships to help advance scientific and technology solutions related to the treatment and reuse of produced water. To accomplish this, the Consortium operates in collaboration with universities, industrial companies, non-governmental organizations, and government agencies, with the objective of participating in joint activities and pooling resources to achieve the common goal of advancing research to provide a public service and support the greater public good.

To inform the Consortium membership, participants, and the public of Consortium activities and provide the public with the most up-to-date technical information collected, the Consortium has established a comprehensive **Consortium Communication, Outreach, and Education Plan**. This plan provides direction on:

- 1) Internal coordination of Consortium interactions, communications, and documentation of meetings, schedules, research activities, and research results;
- 2) External interactions and communications for public access to Consortium information; and
- 3) Public education and outreach on Consortium progress, activities, and research results showing the impact to public and ecological health and safety of the use of treated produced water.

Implementation of this plan will involve a combination of activities and approaches, including:

- Use of web-based communications and document management to provide Consortium members and the public easy access to information on Consortium efforts and activities;
- Internal communication processes and approaches to assist Consortium Members in tracking Consortium progress, activities, meetings, schedules, technical and scientific research opportunities, research activities, and summary research reports;
- External communication of Consortium operations, activities, highlights, research, and reports for public review; and
- Outreach to the public through educational programs to improve public understanding of the Consortium and implication of research results in terms of expected impacts to public and environmental health and safety for fit-for-purpose reuse of treated produced water.

Communication Plan Elements

Article I: Consortium Communication Plan Management

The Consortium leadership team – program director, research director, fellows, operations manager, NMSU manager, and the Chair of the Government Advisory Board (GAB) – will maintain a quarterly schedule of Consortium activities. The Consortium leadership team will meet monthly to discuss upcoming activities, project milestones, technical results, press releases, meetings, etc., that should be communicated to the Consortium membership and the public for the current and upcoming months.

This assures that internal and external Consortium communications and public outreach is timely, topical, and efficient.

Article II: Consortium Website Development and Maintenance

The Consortium website <https://nmpwrc.nmsu.edu> is maintained by New Mexico State University (NMSU) in support of the Consortium to share information with the general public, archive Consortium information, and provide different levels of access to Consortium information and documents for the Consortium members and the public. The Consortium website will serve as the primary archive for Consortium information, documents, and reports. The website will be designed to be user-friendly, with easy access by the public through a simple internet connection. The selected domain name “[nmpwrc](https://nmpwrc.nmsu.edu)” will be used to give direct access to the Consortium website through a web browser such as Google Chrome.

A. Consortium Website Information Availability

Website information made available for Consortium membership use and public review will include:

- Background information on Consortium organization, goals and objectives, membership opportunities, research plans, sponsorship opportunities, and new member opportunities;
- Highlights of important progress and press releases, list of upcoming events and meetings, upcoming research requests, and projects;

- Documentation and retrieval of standard NMSU forms used by the Consortium including Conflict of Interest Forms, Non-Disclosure Agreement Forms, Research RFPs, etc.;
- Finalized and approved Consortium documents, including Memorandums of Agreement, Membership Agreements, Cooperative Agreements, and operational documents such as the Management and Operation Plan; Document Management Plan; Research Plan; Research Selection and Management Plan; Communication, Outreach, and Education Plan; Sampling Plan; Technology Evaluation Plan; Annual Program Plans, etc.;
- Identification of upcoming webinars, public education sessions, and presentations;
- Documentation of final Consortium technical reports, technology test and evaluation reports, and summary test data for public review;
- Direct access to the NM Produced Water Data Portal, which include;
 - produced water quality and constituent information, data, and location,
 - produced water quantity data and location,
 - frack and completion water quality constituents,
- Relevant information from other sources and publicly available technical produced water reports; and
- Notification of and/or registration for Consortium or NMED sponsored public meetings on produced water.

The website will also provide access to public health information about produced water treatment and reuse. The Consortium website will be organized to provide public access and discussion of the following information:

- treated produced water quality data and typical constituent levels by technology,
- water toxicology and risk information and data for different applications,
- comparison of water quality and risks of different waters sources, with treated produced water,
- downloadable information of education resources for additional study,
- frequently asked questions,
- fact sheets, and
- the ability to answer public questions in a timely manner.

In addition, NMSU will manage a password-protected page for Consortium members to access and review draft operational and technical documents . Once finalized, the documents will be posted to the public website in accordance with this Plan.

This approach is an effort to provide transparency for the public of Consortium activities, research results, and to have the Consortium be a technical clearinghouse of scientific information on the major technical issues, challenges, and benefits along with potential health and safety risks of treated produced water reuse outside of the oil and gas industry. While the Consortium will strive to provide as much information as possible to the public following internal review and approval, some Consortium information will not be available to the public, including:

- sensitive information including proprietary, and confidential business information that is identified as such through Non-Disclosure Agreements, or Conflict-of-Interest agreements,
- specific information on Consortium contracts or project funding, and
- draft technical documents and data not finalized nor approved by the Consortium.

B. Consortium Website Updates

The Consortium website will be updated regularly with information on upcoming events and Consortium highlights, news, notes, press releases, etc. based on direction from the Consortium leadership.

Meeting minutes and presentations will be uploaded onto the web as available or when required to keep content current.

Article III: Internal Consortium Communication Processes

Communication of Consortium activities and schedules to Consortium members, members of the Technical Steering Committee (TSC), and the GAB, and researchers and collaborating organizations is important to facilitate smooth and efficient Consortium efforts. To accomplish this, internal Consortium communication efforts will be managed according to this Article as set forth below.

A. Consortium General Membership Communication

The Consortium will hold at least two general membership meetings each calendar year, generally at the beginning and mid-year. Additional membership meetings will be held as needed. These meetings are to provide the members with information on program priorities for each calendar year, proposed schedules, progress on identified activities, and consensus on program directions. Membership meetings provide an opportunity for Consortium leadership to hear perspectives from members on Consortium business and activities.

All general membership meetings will be advertised to the full membership via email and on the Consortium website. The Consortium will provide meeting information (e.g., date, time, location, format, purpose, agenda) in advance of a virtual meeting date and an in-person meeting date to allow members and participants time to arrange to attend each meeting. The meetings will be held either in person or by webinar, in compliance with all applicable New Mexico Executive Orders and Public Health Orders and in consideration of the most effective method for accomplishing the meeting goals.

Members are defined in the Consortium Management and Operations Plan. Membership meetings are open to members, their technical representatives on the TSC, and state and federal agency members of the GAB. Consortium management and invited guests or presenters will also be notified if needed to participate in membership meetings.

All presentations and the associated meeting minutes for each meeting will be made available on the Consortium website for public access once finalized in accordance with the Document Management and Information Protection Plan.

B. Consortium Technical Steering Committee Working Group Communication

The Consortium's TSC is organized into six technical Working Groups. Each Working Group has an approved charter. Each calendar year, an assessment will be made of which Working Groups or subset of groups need to meet and will schedule discussions as needed to address annual work plan elements.

Information on Working Group meetings will be sent to all Consortium members, TSC members, and GAB members to assure the ability of all members to participate in Working Group meetings. Information on these meetings will be provided in advance including meeting agendas, as appropriate.

If beneficial, minutes will be kept of each working group meeting and placed on the Consortium website to document working group action items, discussions, and decisions.

C. Consortium Government Advisory Board (GAB) Communication

The GAB charter, adopted March 24, 2020, describes meeting process, frequency, and recordkeeping for the GAB. The GAB operates in the public interest to provide independent advice to the program director regarding (1) Consortium administration, (2) protocols and criteria for TSC activities, and (3) research priorities to ensure efforts are aligned with Consortium purpose and goals and to ensure Consortium outcomes adhere to core principles of scientific integrity. GAB meeting notes and action items will be provided to the Consortium program and research directors for review and implementation.

D. Consortium Research Funding, Selection, Management, and Report Communication

The primary focus of the Consortium is to conduct directed research to fill existing science and technology gaps associated with the efficient and cost-effective treatment of produced water to meet fit-for-purpose uses outside of the oil and gas industry that are protective of human health and the environment. To accomplish these goals, the Consortium will develop both Requests for Proposals (RFPs) and Requests for Information (RFIs).

All RFPs and RFIs will be advertised by the Consortium on the website and notifications will be sent to Consortium members and associated organizations and industries via email. The RFP and RFI notification schedule, review schedule, and review and selection will be coordinated through existing NMSU SOPs, following the Consortium Research Selection and Management Plan, and coordinated in cooperation with the NM Water Resources Research Institute (WRRRI).

RFP submittals will be collected and archived by WRRRI, while RFI submittals will be archived by the Consortium and NMSU. Any research proposals selected by the Consortium selection committee will be posted on the Consortium website for Consortium and public review. Likewise, summary test reports

that are finalized and approved according to the Document Management Plan will be archived on the Consortium website for public access, review, and use.

Article IV: Consortium Public Education and Outreach Process

A program to provide information to the public concerning produced water treatment and reuse research will be designed to help identify and address concerns associated with the use of an industrial wastewater like produced water. This effort will be coordinated through the Consortium's Public Education and Outreach Task Committee as discussed below.

NMED's summary of public input gathered via email and outreach meetings in the fall of 2019 includes:

- Public concern or opinion is roughly split between regulation needs and research needs, with slightly more focus toward regulatory matters (59% or 1,350 out of 2,296 statements);
- Most input (56% or 1,278 out of 2,296 statements) generally expressed concern regarding 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;
- Six percent of comments expressed direct support for one or more produced water topics, while 38% of comments conveyed opposition to one or more produced water topics.

For a more detailed summary of public input, see <https://www.env.nm.gov/new-mexico-produced-water/public-participation-2/>

Based on these initial outreach efforts, NMED and the Consortium understand that many members of the public are interested in more certainty and transparency regarding the chemicals associated with produced water from oil and gas bearing formations, naturally occurring radioactive material (NORM), the types and level of treatment needed for different reuse applications, analytical methods for testing contaminants in untreated and treated produced water, and the potential municipal, economic, environmental, and ecological benefits or potential risks of using treated produced water for activities outside of the oil and gas industry.

To accomplish this, the Consortium established a Public Education and Outreach Task Committee in 2021 to look at the best way to keep both the Consortium members and the public aware of Consortium efforts and activities, as well as help educate the public on the basics of produced water and the emerging issues, challenges, and opportunities regarding the treatment and potential use of treated produced water. The Committee identified a combination of activities and approaches, as outlined in the Background Section of this document.

Based on input and experience from the health care community on risk and health and safety education, the Consortium public education and outreach program will include:

- Full disclosure and discussion of all chemicals in produced waters across New Mexico;
- Discussion of the risk and toxicology tests and standards; private, academia and government research; and environmental community concerns to better assess treated produced water safety and risks;
- Discussion of the chemical constituents in treated produced water in relation to the constituents in other water sources, such as rivers, effluent from municipal wastewater treatment plants, agricultural runoff, home wells, or local groundwater;;
- Information on the water quality and risks of the use of the treated produced water compared to the use of water from other public or individual supplies or sources for similar applications;
- Identification of co-products and residual wastes from the treated produced water, as well as waste disposition techniques and potential human health and environmental toxicology and risks; and
- Information on the environmental and ecological benefits related to mitigation of drought and climate change impacts through produced water treatment and reuse.

This information will allow the Consortium to explain 1) the overall, economic, and ecological costs and benefits of different fit-for-purpose uses of treated produced water and 2) the water quality and risks of using treated produced water versus other common water sources based on EPA-approved methods and validated scientific methods in development for toxicology and risk assessment.

Input and experience from the health care community suggest that several specific educational elements are required to be effective. These include:

- 1) general information on treated produced water uses and applications;
- 2) a standard public safety awareness campaign that includes mass media communications; and
- 3) public meetings that enable direct interaction between the general public and public health officials.

The proposed approach for each of these three educational outreach elements are presented below.

A. Use of the Consortium Website as a Clearinghouse of Public Health and Safety Information

The public will have access to public health information about produced water treatment and reuse from the Consortium Website as described in Article II above.

As explained further in item C below, because not all members of the public have access to the internet, the Consortium will utilize non-web-based forms of outreach when possible, such as newspaper and radio announcements, in-person public education and open houses, and dissemination of hand-outs, such as fact sheets and brochures.

Translation and interpretation services can be provided at public meetings upon request with advanced notice from communities and individuals with limited English proficiency. The Consortium will also translate materials, if requested. Additionally, the information presented will be provided at an appropriate public environmental health and safety literacy level.

B. Consortium Local, State, and Federal Outreach

The Consortium will provide summary data and information on treated produced water facts and reports and publications to the public, technical organizations, state and federal agencies, and New Mexico state legislators through:

- in-person meetings or webinars with the public if possible, in cooperation with regional community colleges across New Mexico;
- in-person meetings or webinars with local, state, or federal agencies, state legislators, state legislative committees, or other government officials;
- presentations at state and national meetings and webinars;
- presentations at technical conferences and webinars;
- publication of summary technical data and reports on Consortium research, development, and demonstration projects; and
- dissemination of treated produced water technical data and research results from other efforts around the country.

C. Education Program of Public Health Meetings and Webinars

The Consortium will establish public, in-person, educational outreach meetings or free webinars (as COVID-19 related public health directives dictate) in communities across New Mexico to allow public discussion, answer questions, and respond to concerns associated with produced water treatment and reuse.

The Consortium will conduct up to four public educational meetings, workshops, open houses, or webinars each year to discuss Consortium efforts, highlights, and progress. These meetings/webinars will include handouts, demonstrations, and discussions of treated produced water reuse utilizing technical experts, doctors, and public health professionals, to discuss both technical issues and challenges of produced water reuse, economic development opportunities, and public and environmental health and safety information.

The educational outreach events will utilize educational venues in local communities to reinforce the educational aspects of the meetings. The events will be scheduled to alternate between venues in southeastern New Mexico and northwestern New Mexico, the primary oil and gas producing regions of the State, including locations within tribes, nations, and pueblos upon invitation. This approach will assist the Consortium in staying apprised of emerging regional issues and concerns and it will provide continuity of outreach to the most impacted populations in the state where the most likely applications of treated produced water will occur.

Article V: Public Feedback

Communication strategies will be based on an evaluation of prior and current communication efforts, with an emphasis on input from previous public meetings including:

- (2019 NMED meeting summary: <https://www.env.nm.gov/new-mexico-produced-water/public-participation-2/>; and
- Responses to Questionnaires prepared for each public workshop to be completed by attendees.

All communication events or topics shall include built-in feedback opportunities. The Consortium will also receive feedback through a general email at: nmpwrc@nmsu.edu which will be monitored and collected on an on-going basis. This information will be used by the Consortium to continuously improve public education and outreach activities. Progress toward meeting objectives will be evaluated at regular intervals, and the process can then be adjusted accordingly.

The Consortium invites the public feedback on this document at: nmpwrc@nmsu.edu