

Project Charter

Project Title: Food Safety – Oil Field Wastewater Reuse Expert Panel

Background

California's San Joaquin Valley is a major oil producing area. In 2013, approximately 150 million barrels of oil (42 gallons/barrel) were produced along with nearly 2 billion barrels of water (about 250,000 acre feet). A portion of the produced water is recycled for irrigation of crops for human consumption. Produced water from the areas east and north of Bakersfield has been recycled for irrigation for about 30 years. There is significant interest to expand this water reuse practice due in part to the recent drought. The produced water used for irrigation is blended with other supplies to ensure it meets agricultural water quality objectives for salinity. It is also treated to remove/reduce the concentrations of petroleum hydrocarbons and other chemicals used during oil production activities prior to delivery to the districts.

There has been a rise in scrutiny of oil production activities and increasing public concern regarding the human health and environmental impacts of oil and gas production. A recent series of media articles has drawn attention to the use of oil field produced water for irrigation of crops in Kern County. These articles indicate that current testing requirements of produced water are too limited and should screen for the full set of chemicals used in today's oil production.

Cawelo Water District, North Kern Water District, Jasmin Mutual Water District, and Kern-Tulare Water District (herein after Districts) are located within the Tulare Lake Basin and receive oil field produced water. These discharges of produced water to the Districts are regulated by Waste Discharge Requirements which conditionally allow the water to be used for irrigation and require extensive monitoring.

Recycling of water is encouraged by State policy as a means to supplement California's limited water supply, provided the water is suitable for the intended use. The Central Valley Water Board (Water Board) encourages the recycling of produced water for irrigation, if suitable for reuse. Since food safety is outside the expertise of the Water Board, the Board has taken a proactive approach by convening a Panel of experts in human health and environmental toxicology to ascertain the possible food safety risks associated with using produced water on crops. The Water Board has also contracted with a technical/science advisor to develop and coordinate and/or implement food safety related work plans, and further advise the Board on food safety related issues. The Water Board has engaged a neutral third-party facilitator to support the project.

Project Purpose and Scope

The Board's objective from the Panel is to seek input in the area of human health and safety of food crops irrigated with oil field produced water. The primary technical focus of the Panel is to address food safety at the point of harvest. Panel tasks will include providing input on the identification of constituents of concern, giving guidance on data

collection and analysis methods for short and long-term studies; providing an assessment of study results. In addition to these primary tasks, the Panel will identify data gaps to direct future research to achieve specific goals and procure practical outcomes regarding management of this produced water. The Water Board will consider Panel recommendations, guidance, and opinions when developing and implementing the oil fields' regulatory program and orders that address the use and application of oil field produced wastewater to irrigate crops for human consumption.

Project Outcomes

It is anticipated that Water Board staff will produce a "White Paper" or series of "White Papers" that represent the written documents described under the Project Purpose. The document(s) will be subject to review and editing by Panel members and will be discussed during a public meeting where interested persons can present their concerns to the Panel, Water Board staff, and representatives of other State agencies. The public meeting will be noticed and may be attended by members of the Central Valley Water Board.

Meeting Schedule

Working meetings of the Panel are anticipated to be held every other month in 2017 and beyond as needed. It is anticipated public meetings with the Panel will be held quarterly until the project is completed. The Water Board in coordination with the Panel will develop a date-specific, long-term meeting calendar for the process. The Panel calendar will be posted on the Central Valley Water Board website. Most meetings will be held at Water Board offices in Rancho Cordova, but may be held at other locations with the meeting location noticed on the Central Valley Water Board website.

Roles and Responsibilities

The Water Board will:

1. Consider feedback from Panel Members in an open and receptive fashion, providing explanation and rationale for Board decisions to act or not act upon Panel input.
2. Communicate information about the Panel and Water Board process with the public.
3. Provide technical and administrative staff support to the Panel, including development of materials, maintenance of a website, publication of meeting notes, and similar.
4. Develop text and work products (as necessary).
5. Provide and update a project timeline and schedule to help manage deadlines.
6. Communicate to the Panel likely comments, actions, and recommendations from the Water Board on food safety related activities.

Panel Members will:

1. Review and provide recommendations on technical issues relevant to assessing food safety of crops irrigated with produced water.
2. Provide perspectives and feedback to the Water Board, including scientific justification and rationale.
3. Develop resources or text, or provide other assistance to Water Board staff and facilitators as appropriate.
4. Consistently participate in Panel and public meetings.
5. Help identify, review, verify, and critique data, assumptions, analysis and methods used by the Water Board and others in support of food safety assessment.
6. Evaluate short- and long-term conditions related to food safety issues.
7. Seek consensus on proposals and/or recommendations.

Facilitator(s) will:

1. Serve as a professional neutral and be responsible to manage dialogue in meetings and oversee the provisions of this charter.
2. Design, implement and refine (as needed) a consensus-seeking process.
3. Facilitate meetings and sub-element meetings as necessary.
4. Receive input on items of a personal or process nature from Panel Members. (Technical issues will be discussed in open session of the Panel).
5. Ensure that all points of view held by Panel Members are heard and considered.
6. Provide assistance to Panel Members requesting help with communications.
7. Prepare and distribute meeting agendas, attendance sheets, and meeting summaries.
8. Address and resolve ongoing conflicts in the Panel process.
9. Facilitate information gathering and sharing in coordination with the administrative project support.
10. Distribute information to the contact list in coordination with the administrative project support.

Technical/Science Advisor will:

1. Extend internal Water Board expertise on food safety related issues.
2. Work as a liaison between Water Board staff and the Panel.
3. Advise and oversee future sampling activities, and similar.

Communication

When communicating outside of Panel meetings, Members will speak only for themselves when asked about the Panel progress, unless there has been adoption of concepts or final recommendations by the Panel that have been agreed to be publicly released by the Panel. Suggested text for such statements may be developed by Water Board and facilitators or may be offered by a Member.

The Water Board will make a good faith effort to send out meeting agendas and materials at least seven days prior to Panel meetings, both public and working. Standing agenda items include a project status update and a review of topics to be discussed at subsequent public meetings. Water Board staff will send out meeting summary notes within three weeks after each meeting.

Email and media releases will be available on the Central Valley Water Board's website to ensure robust communication about Project activities takes place. Panel information, meeting materials, and other project documents will be posted on the Central Valley Water Board website.

Values & Principles

Water Board staff and Panel Members will seek to:

- Establish a common factual base and vocabulary to address issues in an efficient and respectful manner.
- Ensure a thorough understanding of their interests and the interests / perspectives of the other Panel Members.
- Problem solve in good faith, with the intent to satisfy as many of the varied interests of all Members possible.

While all parties are expected to act in good faith, it is expressly understood that no Member or Member organization of the Panel is asked to waive any right, or to forego any obligation related to food safety issues. To facilitate these values and principles, Panel Members agree to the following:

- To the extent possible and without jeopardizing any legal rights or activities, any Member of the Panel who anticipates taking an action which will impact either the Panel process or other Members engaged in the process, will disclose their action in advance (such disclosure is not intended to restrict action but to inform other participants).
- In the interest of preserving working relationships within the Panel process, such disclosure will be made at the earliest time possible.
- In those circumstances in which for whatever reason, advanced disclosure of an intended action is not possible, Panel Members are asked to attempt to mitigate any negative consequences of an intended action by taking steps such as consultation with staff or facilitators, concurrent special notification to interest groups, and/or similar.

Decision-Making

As a voluntary partnership of diverse Members and organizations, the Panel does not have the authority to make or implement binding decisions. However, Panel Members do have the authority to make recommendations and provide targeted guidance. As a multi-

interest collaborative process, Panel Members are encouraged to bring their organizational and/or personal interest into the process, as well as take reasonable and appropriate steps to reach consensus while accepting the following constraints

1. Panel Members have limited resources and time to participate in the stakeholder process.
2. The Water Board is responsible to determine regulatory actions about food safety concerns of using produced water on food crops.
3. The Water Board cannot guarantee any outcome from the proposed project and will maintain their discretion to issue orders related to the use of produced water.
4. The Panel and individual members may choose not to support actions taken by the Water Board.

Consensus-Seeking Decision Method

Regarding food safety recommendations, it is in the best interest of the Panel and the Water Board for the Panel to achieve broad agreement. Therefore, the Panel should seek to reach consensus on these recommendations, however, consensus is not required. Should consensus not be achieved in early conversations, the Panel will decide (through facilitated steps) how much more effort to put into achieving a consensus recommendation about a discussion topic.

The consensus decision method is based on principles of “consensus with accountability”. Consensus with accountability asks all Panel Members to try to reach consensus. In the event a Member must reject a proposal, that Member is expected to provide a counter proposal that legitimately attempts to achieve their perspective, and the perspectives of the other Members. When seeking consensus, the Panel will not vote but will seek mutually acceptable and beneficial conclusions.

Straw Polls: Members and the facilitator(s) will use straw polls to assess the degree of preliminary support for an idea before it is submitted as a formal recommendation for final consideration by the Panel. Members may indicate only tentative approval for a preliminary proposal without fully committing to its support.

Consensus Recommendations: The Panel will be deemed at consensus when all Members express ability to either support a proposal / recommendation, or at a minimum express a willingness to “live with” a proposal / recommendation and not reject it.

If consensus cannot be reached, decision-making will defer to a majority rule method. In these circumstances, Members opposed to a recommendation will be allowed to prepare statements to the Water Board expressing their perspectives about the recommendation.

Operating Guidelines

The Panel will utilize standing operating guidelines to ensure efficient and respectful

discussions. Panel Members agree to:

- Listen and openly discuss issues with others who hold diverse views
- View disagreements as problems to be solved rather than battles to be won
- Not engage in stereotyping and personal attacks on other Members, support staff, or participating members of the public
- Not ascribe motives or intentions of other Members, support staff, or participating members of the public
- Respect the integrity and values of other Members, support staff, or participating members of the public
- Keep commitments once made
- Honor meeting times
- Appreciate humor but not engage in humor at the expense of others.

Open Process

Some meetings of the Panel will be open to the public. At each public meeting, the public will be given an opportunity to comment. This will be a facilitated process and occur at specified times on the agenda. Members of the public are expected to adhere to the same operating guidelines as Panel Members.

Project Participants

Expert Panel Members:

- Dr. Stephen Beam - California Department of Food and Agriculture
- Dr. Andrew Gordus - California Department of Fish and Wildlife
- Mark Jones – U.S. Army Corp of Engineers
- Dr. Gabriele Ludwig - Almond Board of California
- Dr. Barbara Petersen - Exponent
- Dr. Seth Shonkoff - PSE Healthy Energy, UC Berkeley, Lawrence Berkeley National Laboratories
- Dr. Bruce Macler – US Environmental Protection Agency
- Dr. David Mazzera – California Department of Public Health
- Dr. Ken Kloc – Office of Environmental Health Hazard and Assessment

Food Safety/Oil Field Produced Water Project Team:

- Clay Rodgers - Central Valley Water Board, Assistant Executive Officer
- Dale Harvey - Central Valley Water Board, Supervising Engineer
- Rebecca Asami - Central Valley Water Board, Engineering Geologist
- Josh Mahoney - Central Valley Water Board, WRC Engineer

Other Agencies and Representatives:

- Dr. Karl Longley – Chair Central Valley Water Board
- Raji Brar – Member Central Valley Water Board
- John Borkovich - State Water Resources Control Board
- Robert Habel - Division of Oil Gas and Geothermal Resources
- Dr. William Stringfellow, Lawrence Berkeley National Laboratories –

Technical/Science Advisor to the Central Valley Water Board

Facilitation Staff

- Dave Ceppos - Center for Collaborative Policy, California State University Sacramento
- Alex Cole-Weiss - Center for Collaborative Policy, California State University Sacramento

Note: Dr. Petersen's participation on the Panel is currently funded by CalFLOWS. Dr. Petersen was nominated to the Panel by Chevron and her initial work from inception of the Panel to October 18, 2016 was funded by Chevron.