



Bulletin 74 Technical Advisory Committee Plenary #4 Meeting Summary

Plenary Meeting #4

February 28, 2022, 1:00 – 4:00 pm

Virtual Meeting

Meeting Summary

The California Department of Water Resources (DWR) hosted the fourth DWR Bulletin 74 Update Project Technical Advisory Committee (TAC) meeting with support from the Kearns & West facilitation team and Luhdorff & Scalmanini Consulting Engineers (LSCE) technical team. For a full list of attendees, please see the end of the summary.

This meeting summary contains a general description of presentation topics and summaries of opening remarks and question-and-answer sessions.

Welcome, Introductions, and Agenda Review

Julie Leimbach, Kearns & West Facilitator, welcomed attendees to the fourth TAC Plenary meeting and reviewed the following meeting objectives:

- Close out Phase 2 Focus Groups.
- Celebrate TAC achievements, reflect on TAC meetings, and share expectations for the Updated Well Standards.
- Orient TAC members to upcoming Public Review Phase.

Opening Remarks

Kamyar Guivetchi, Chief of DWR Division of Statewide Integrated Water

Management, provided his written opening remarks:

Thank you for joining us to close out Phase 2 of the Bulletin 74 Technical Advisory Committee Process. I have heard from our Bulletin 74 Team that the Phase 1 & 2 Focus Group discussions were incredibly engaging and informative. The Focus Groups provided a unique setting for sharing a range of points of view and experience from various sectors. In the Teams' view, the Focus Group discussions hold immeasurable value and have advanced the update well beyond what would have been possible absent those discussions.

The Well Standards are an important component of making groundwater sustainable in California. The Standards are being updated to reflect industry best practices and current state of knowledge to be protective of groundwater in a way that is enforceable.

This CA Well Standards Update is unique – for the first time it includes all Well Types – Water Wells/Dry or Abandoned Wells/Monitoring Wells/Cathodic Protection Wells/and Geothermal Heat Exchange Wells. In addition to becoming a One-Stop-Shop, this combined Update is improving the consistency among well standards, and it will lighten the burden on stakeholders by merging multiple update processes.

As this process winds down, our Team is ramping up their efforts to revise the draft Standards, as they will share with you today. We will continue to engage with you until we release the Public Review Draft, so this isn't goodbye; even though the bulk of your efforts as a Technical Advisory Committee is by in large complete.

Thank you for recognizing the importance of updating CA Well Standards/and for bringing to the TAC the perspectives of your broader constituencies, including – drillers, designers, well owners, manufacturers, and regulators. Your participation has guided us in

developing effective and protective well standards for California. Thanks to our State agency partners, the Facilitators, the entire Bulletin 74 Team (staff and consultants), and Julie Haas, our Project Manager.

Congratulations and a big thanks to each of you!

Phase 2 Reflection: Focus Groups and TAC Achievements

Julie Haas, DWR Senior Engineer and Project Manager for the DWR Bulletin 74 Update Project, thanked and acknowledged the DWR Project Team, Technical Consultant Team, Facilitation Consultant Team, and the TAC. She noted the TAC's achievements from Phase 2, including:

- Providing technical input on revising the Well Standards for the Technical Consultant Team's consideration.
- Identifying define gaps in research.
- Clarifying different and diverging views with respect and professionalism.
- Providing feedback on the first Technical Review Draft that will inform revisions to the Draft Well Standards.
- Identifying sections of the Standards that could be more consistent, correct, and clear.
- Generating new solutions as alternatives to existing draft language that could meet multiple expressed interests.

Haas then introduced other DWR Bulletin 74 Update Project Team members to celebrate achievements and give reflections on the Phase 2 Focus Group and TAC meetings.

Eric Gorman provided the following reflections on the Water Wells Focus Group meetings:

- DWR prioritized the most important and, at times, controversial topics

for feedback from the Focus Groups.

- Focus Group members respected this process and provided valuable feedback on specific sections that the Project Team will consider in revising Bulletin 74.

James Walker provided the following reflections on the Monitoring Wells Focus Group meetings:

- Conversations were illuminating and insightful.
- TAC members recognized and respected conflicting viewpoints.
- Constructive discussion followed when there was initial disagreement on an issue.

James Albertoni provided the following reflections on the Cathodic Protection Wells Focus Group meetings:

- There was little disagreement between Focus Group members.
- There seemed to be very little resistance to most of the changes.
- Vent hole size and well location vs potentially hazardous locations seem to be the most difficult areas to create meaningful change.

Haas provided the following reflections on the Geothermal Heat Exchange Well (GHEW) Focus Group meetings:

- The GHEW Focus Group was well prepared and provided detailed alternatives that were constructive and helpful in nature.
- GHEWs are different from the other well types. The Focus Group members were very patient and respectful as the Project Team learned about those differences.
- The similarities and differences between each well type became more apparent throughout the meetings. These distinctions need to be acknowledged in the Updated Well Standards as the Project Team

strives to make the entire document more unified and consistent.

Polling Question

The TAC members participated in polling question #1. Polling questions and responses are included in Appendix A.

Looking Forward: Revising the Draft Well Standards

Till Angermann, LSCE Principal Hydrogeologist, spoke about how TAC feedback received through Focus Group discussions will be used to reshape the Draft Well Standards. TAC input was useful and prompted the Project Team to reflect on whether the language used matched the intent, the reasonableness and efficacy of the draft language, and how all the details make a whole. The Project Team will continue to work on enhancing the structure of the Well Standards to clearly distinguish between universal sections and well-type specific sections.

Angermann noted that no singular solution can address all comments made by Focus Group members. In many cases, valid technical arguments could be made for opposing positions. The Project Team will rely on DWR's legislative mandate and the Bulletin 74 Update Guiding Principles to make decisions and revise the Draft Well Standards.

Scott Lewis, LSCE Principal Geologist, reviewed next steps. The Project Team will:

- Review discussions, suggestions, and other input from Phase 2 Focus Group meetings.
- Review written comments and input from TAC members.
- Solicit additional assistance from TAC members and industry experts.
- Prepare the Preliminary Administrative Draft Well Standards.

Lewis reviewed the following guidance for providing written comments on

select sections of the TAC Review Draft (Section 2, 5, Appendices, and Modifications document), which must be submitted by TAC members by the end of March 2022:

- Please provide comments or and information on only the sections as requested by the Project Team.
- Edits, suggestions, or disagreements should include a rationale/explanation and provide solutions or recommendations.
- There will be an opportunity to provide comments for other sections during the Public Review Period (September 2022).

Haas reviewed the timeline for preparing the Updated Well Standards.

- June 2022 - Administrative Draft
- September 2022 - Public Review Draft
- December 2022 – Final Standards

Haas stated that the Administrative Review Draft will be reviewed by the following entities:

- DWR
 - Division of Engineering
 - Legal
 - Publications and Graphics
 - Executive
- State Water Resources Control Board and Regional Water Boards
- California Natural Resources Agency
- Governor’s Office (TBD)

Haas stated that the TAC will be invited to reconvene two more times in plenary to preview the Public Review Draft and Final Standards prior to their

release.

Throughout the drafting process, Haas said the Project Team will continue to be responsive to the DWR Bulletin 74 mandate, Vision, and Guiding Principles. Haas took this opportunity to review the Vision (*Updated Well Standards that are enforceable, protective, and based on current state of knowledge and best practices*) and drew attention to the limited scope of Bulletin 74 per the Water Code mandate.

Question and Answer Session

- Question (Q): Is the next task for TAC members to provide written comments, suggestions, and solutions?
 - Answer (A): Yes, TAC members can provide written comments through the end of March 2022.
- (Q): At the final Water Wells Focus Group meeting, there was an outstanding issue that the Focus Group did not have time to discuss. Will Focus Group members be able to provide comments on this topic?
 - (A): Yes, the Project Team will email the Water Wells Focus Group members with instructions on providing additional comments on this outstanding issue.

Polling Questions

The TAC members participated in polling questions #2 and #3. Polling questions and responses are included in Appendix A.

Next Steps for TAC Input

Leimbach reviewed next steps for TAC members:

- Provide written comments on selected sections:
 - Modifications to General Sections v.2 (new)
 - Section 2 Definitions

- Section 5 Materials
- Appendices
- Review Focus Group meeting summaries.
- Update their constituents and gather input.

Leimbach clarified the relationship of the three versions of the TAC Review Draft reviewed by the Focus Groups.

Public Review Phase Overview

Leimbach reviewed future opportunities for public input.

- March – July 2022: DWR Comment Portal. As time allows, DWR will consider comments provided via the Comment Portal.
- September - October 2022: Public Review process and solicitation of formal written comments. Two Virtual Public Review Meetings.

Question and Answer Session

- (Q) Did the GHEW Focus Group review excerpts of the most recent version of the TAC Review Draft?
 - (A): Yes, the GHEW Focus Group reviewed the most recent version of the TAC Review Draft.
- (Q) How can the DWR Comment Portal be accessed?
 - (A): The DWR Comment Portal can be accessed at this web address:
https://docs.google.com/forms/d/e/1FAIpQLSfK1qZ4_GRDCMiX7KgVSCmX29F9C-dNt82qHwBoe4Dp3-Y7vQ/viewform.
- (Q) Can Focus Group members gather comments internally with their constituent organizations from April through July?
 - (A): The Wells Standards will be under administrative review

from April through July 2022. Comments should be reserved for the Public Review Process, following the release of the Public Review Draft.

Closing

Haas thanked the Focus Group members for devoting their time and energy to benefit their sectors, communities, and the State as a whole. She noted that although TAC members may disagree on certain specifics, all agree on the importance of protecting our State's groundwater resource. She hopes the TAC process provides momentum for this community to work together beyond the completion of the Well Standards Update and continually improve the state of practice and knowledge.

Attendance

* Denotes California Groundwater Association Representative

+ Denotes California Conference of Environmental Health Directors Representative

Denotes Groundwater Resources Association of California Representative

Technical Advisory Committee

- Ed Anderson, Baroid Industrial Drilling Products
- Chris Beegan, Water Boards – Division of Water Quality (STORMS unit)
- Dana Booth, Sacramento County
- Kevin Brown, Water Boards - SF Bay
- Aaron Button, Water Boards - GAMA Program
- Kassy Chauhan, Fresno Irrigation District/North Kings Groundwater Sustainability Agency
- Chris Coppinger, Geoscience Support Services Inc.
- Bill DeBoer, Montgomery and Associates #
- Randy Dockery, Terracon (formerly with Gregg Drilling LLC)
- Mike Duffy, Valley Water
- Adrienne Ellsaesser, Blackwater Consulting Engineers, Inc.
- Larry Ernst, Affinity Engineering
- David Field, Orange County Water District
- Randy Galisky, Kinder Morgan
- Christopher Guerre, Department of Toxic Substances Control
- Thomas Henderson, Eastern Municipal Water District
- Mark Howard, Layne Christensen Company

- Vicki Jones, Merced County Department of Public Health +
- Misty Kaltreider, Solano County, Department of Resource Management
- Russell Kyle, Kyle Groundwater
- Kevin McGillicuddy, Roscoe Moss Company
- Dan McGrew, Farwest Corrosion
- Steve McKim, American Construction and Supply, Inc.
- Tylor McMillan, Tylor McMillan's Well Service, LLC *
- Lisa Meline, Meline Engineering Corporation
- Michelle Myers, Alameda County Water District
- Travis Pacheco, Torrent Resources
- Keith Packard, East Bay Municipal Utility District
- Michael Palmer, de maximis, inc.
- Ali Rezvani, Water Boards - Division of Drinking Water
- John Ricker, County of Santa Cruz Health Service Agency (Former) +
- Patrick Sarafolean, Minnesota Department of Health
- Adnan Siddiqui, Regional Water Quality Control Board, Los Angeles Region 4
- Allan Skouby, GeoPro, Inc.
- Jim Strandberg, Woodard & Curran #
- Steve Turner, LADWP
- Jeremy Wire, Geoconsultants, Inc. *
- Amy Woodrow, Monterey County Water Resources Agency
- Joe Zilles, Kleinfelder, Inc.

Department of Water Resources (DWR)

- James Albertoni
- Eric Gorman
- Kamyar Guivetchi
- Julie Haas, Project Manager
- Bryant Platt
- Jason Preece
- Debbie Spangler
- David Sullivan
- James Walker

Luhdorff & Scalmanini Consulting Engineers (LSCE)

- Till Angermann
- Scott Lewis

Kearns & West Facilitation Team

- Maria Bone
- Sharon Hu
- Jack Hughes
- Julie Leimbach
- Heather Williams

Appendix A: Poll Results

The appendix contains a paragraphed summary of responses submitted by TAC members.

Poll #1: What new views or concepts changed your perspective?

Learning and hearing from different sectors

- Hearing the perspectives from actual well drillers and related practitioners (not just regulators).
- Just learning about how California regulates wells has enriched my perspective on well regulation in general. There are many differences between what California does and what my state does.
- Did not have a change in perspective but was surprised at many of the viewpoints presented.
- I learned a lot from others
- DWR's openness to engage the industry
- I appreciated the openness of all TAC participants.

New information and best practices

- Advancements in well destruction procedures
- Well design considerations and techniques to improve protection of groundwater quality
- I learned a lot more about GHEWs and was impressed that the industry seemed to have the issues well in hand.
- In relation to water supply wells, I was appreciative of hearing there is likely limited flow in non-developed regions of gravel pack.

Bulletin 74 Content and Scope

- The primary goal being groundwater protection

- The push to emphasize future destruction in the design of wells is very much appreciated as well.

Other

- Concerns with CEQA (e.g., ministerial issues)
- I do not really have a change in perspective on the standards. My goal was to provide education to DWR and I hope that was beneficial.

Poll #2: What single change proposed in the TAC Review Draft would have the most positive impact on your work?

Site Planning

- E-logs!
- Minimum separation distances
- Elogs for all alluvial wells
- Clarification in the Regulations as it relates to those wells installed as part of a Superfund site.
- Setbacks
- Due diligence for well site location selection to prevent pollution entering groundwater

Design

- No longer cross screening wells
- Well markers
- Clarify well seal depth and material
- Logging for well design
- Well marking
- Accurate Well Completion Reports

Construction and Destruction

- Well construction and destruction
- Updated well destruction standards that reflect newer technology
- Having a uniform standard for perforation requirements for well destruction.
- Inclusion of well destruction standards

Materials

- More flexibility in sealing materials for ground loop systems in lieu of Mix 111.

Other

- Specific, measurable changes are helpful for regulators.
- Will provide additional guidance to CP industry for deep anode design parameters.
- Just having an updated Well Standard
- Exempting stormwater infiltration wells.
- Updating of the standards

Poll #3: What single change in the TAC Review Draft would be the most challenging or difficult for you to implement in your work?

General Requirements

- Waivers and variances review and issuance.
- How to conduct variances to the standards since the update focused on streamlining the standards to state only the requirements and not necessarily the intent or objective of the standard.
- Variances

Design

- IDing and sealing off poor quality waters from high quality waters.

Materials

- Initial acceptance/change in grout mix for shallow annular seals (switch to sand/cement).
- If neat cement and concrete are no longer allowed, transitioning to sand-cement seals.
- Sand Cement slurry only in the to 50 feet

Destruction

- Ground Loop destruction, depending on the situation and requirements.

Bulletin 74 Update Format

- Inclusion of different standards.
- Discretionary vs. ministerial