

MINUTES OF MEETING NO. 11
State Water Resources Control Board Division of Drinking Water
Advisory Group for Expert Panel on Direct Potable Reuse
June 15, 2016

Chair Garry Brown called to order the eleventh meeting of the Advisory Group to the Expert Panel on Direct Potable Reuse (DPR), held on behalf of the State Water Resources Control Board's (SWRCB) Division of Drinking Water (DDW), at 10:30 a.m. on June 15, 2016, at the CalEPA Building in Sacramento, California. The meeting was facilitated by the National Water Research Institute (NWRI).

Advisory Group Members Present:

- Garry Brown, Chair, Orange County Coastkeeper
- Randy Barnard, California State Water Resources Control Board
- Amy Dorman, City of San Diego
- Conner Everts, Environmental Justice Coalition for Water
- Jim Fiedler, Santa Clara Valley Water District
- Julie Labonte, San Diego Regional Chamber of Commerce
- Al Lau, Padre Dam Municipal Water District
- Bruce Macler, U.S. EPA
- Traci Minamide, City of Los Angeles, Bureau of Sanitation
- Keith Solar, San Diego County Taxpayers Association
- Ray Tremblay, Los Angeles County Sanitation Districts
- Francis Spivy-Weber, California State Water Resources Control Board
- Andria Ventura, Clean Water Action

Advisory Group Members Participating Remotely from a Public Location:

- Edward Moreno, California Conference of Local Health Officers

Advisory Group Members Absent:

- Keith Solar, San Diego County Taxpayers Association
- Michael Wehner, Orange County Water District

Others Present:

- Mark Bartson, CA State Water Resources Control Board, Division of Drinking Water
- Robert Brownwood, CA State Water Resources Control Board, Division of Drinking Water
- Annette Caraway, CA State Water Resources Control Board, Office of Operator Certification
- Jeff Carson, CWCA North Section/City of Hayward
- Jing Chao, CA State Water Resources Control Board
- Lawrence Dimock, CDCR/CIM (State)
- Suzanne Faubl, National Water Research Institute
- Devi Fuller, DSRSD/Advisory Committee
- Michael Garabedian, Friends of the North Fork
- Steven Garner, CA-NV Section of American Water Works Association

- Monte Hamamoto, Silicon Valley Clean Water
- Melanie Holmer, MWH
- Craig Johns, California Resource Strategies
- Rosa Lau-Staggs, City of Fresno
- Chander Letulle, CWEA/Inland Empire Utilities Agency
- Laura McLellan, CA State Water Resources Control Board, Division of Water Quality
- Rich Mills, CA Department of Water Resources
- Jeff Mosher, National Water Research Institute
- Phil Oshida, U.S. EPA Office of Ground Water and Drinking Water
- Toni Pezzetti, CA Department of Water Resources
- Tom Richardson, RMC Water and Environment
- Toby Roy, San Diego County Water Authority
- Sherly Rosilela, CA State Water Resources Control Board
- Rick Staggs, City of Fresno/CASA/OOC Advisory Committee
- Jennifer West, WateReuse California

Remote Participants (via GoToMeeting webinar and/or teleconference):

- Faraz Asad, CA State Water Resources Control Board, Division of Drinking Water
- Robert Been, CA State Water Resources Control Board
- Jarma Bennett, CA State Water Resources Control Board
- Shane Carlsen, California Water Environment Association
- Mickey Chaudhuri, Metropolitan Water District of Southern California
- James Crook, Division of Drinking Water's Expert Panel on Direct Potable Reuse
- Andrew DiLuccia, CA State Water Resources Control Board
- Gina Dorrington, Ventura Water
- Maureen Hamilton (no affiliation provided)
- Katherine (no surname or affiliation provided)
- Dawn Koepke, McHugh Koepke & Associates
- Joyce Lehman, Metropolitan Water District of Southern California
- Lora Lyons, CA State Water Resources Control Board
- Alec Mackie, California Water Environment Association
- Maria Mariscal, San Diego County Water Authority
- Mandy Mok, CA State Water Resources Control Board
- Kristine Morris (no affiliation provided)
- Peter (no surname or affiliation provided)
- Megan Plumlee, Orange County Water District
- Om Prakash (no affiliation provided)
- Paul Rochelle, Metropolitan Water District of Southern California
- Sebastien (no surname or affiliation provided)
- Theresa Slifko, Metropolitan Water District of Southern California
- Tama Snow (no affiliation provided)
- Kurt Souza, CA State Water Resources Control Board
- Austin Straus, Los Angeles Department of Water and Power
- Shradha Upadhayay, Metropolitan Water District of Southern California
- Deb Wirkman, SBC Global
- Erica Wolski, CA State Water Resources Control Board

1. WELCOME, INTRODUCTIONS, AND REVIEW OF AGENDA

Garry Brown, Chair of the Advisory Group, called the meeting to order and acknowledged members of the public participating via teleconference and webinar. He noted that Advisory Group Member Edward Moreno of the California Conference of Local Health Officers was participating via conference call from a publicly noticed remote location. He also noted that two Advisory Group Members were absent: Keith Solar of the San Diego County Taxpayers Association and Michael Wehner of the Orange County Water District. He reviewed the agenda and asked the Advisory Group for comments on the agenda. No comments were offered.

Garry Brown also thanked NWRI for their role in facilitating the Advisory Group process, and expressed special thanks to Jeff Mosher and Suzanne Faubl for the essential roles they performed to assist the Advisory Group in preparing the final report and meeting its state-mandated task.

2. REVIEW AND APPROVAL OF MINUTES FROM PREVIOUS MEETING

The minutes of Advisory Group Meeting #10, held on April 8, 2016, were presented to the Advisory Group. A motion was made to approve the minutes. The motion was seconded and approved unanimously.

3. PUBLIC COMMENTS, INCLUDING ON MATTERS NOT ON THE AGENDA

The Advisory Group Chair invited public comments from all attendees and remote participants. No comments were offered at this time. The Chair noted that attendees would have the opportunity to offer comments on each agenda item during the meeting.

4. UPDATE ON DDW PROGRESS AND DEADLINES

Mark Bartson, Supervising Sanitary Engineer with the SWRCB Division of Drinking Water (DDW), presented an update on the activities of DDW related to the Expert Panel on DPR. A summary of his presentation is provided below:

Completion of the Advisory Group Report:

- The Advisory Group is developing the final report with an emphasis on the essential “feasibility of developing criteria” recommendations and rationale.
- The report will meet the charge of providing recommendations regarding the feasibility of developing regulations.

Advisory Group Recommendations:

- The Advisory Group recommendations that are most relevant to the feasibility of developing health-protective criteria for DPR will be highlighted in DDW’s DPR feasibility report.

Plan for Public Workshops:

- DDW will hold workshops in September in Sacramento and Southern California.
- DDW will confirm dates before end of July 2016.
- DDW will discuss workshop content and format with NWRI, the DPR Expert Panel co-chairs, and the Advisory Group chair.

Next Steps:

- DDW will work to meet specific milestones and statutory deadlines.

- The Advisory Group's final report is due to DDW by June 30, 2016.

QUESTION from Jim Fiedler: After June 30, did you say that you will have a statement included in the Feasibility Report released on September 1?

RESPONSE from Mark Bartson: The Expert Panel has done a lot of the scientific work and will have a recommendation on the feasibility of developing DPR criteria. The DDW feasibility report will tie the recommendations from both the Expert Panel and Advisory Group reports together.

RESPONSE from Randy Barnard: As Mark said, the report that is being talked about is by DDW. The reports from the Expert Panel and the Advisory Group will be addendums to the DDW report. Also, the research recommendations will be included. All that will be packaged into the DDW feasibility report that will be sent to the State Water Board.

COMMENT from Fran Spivy-Weber: The State Water Board will be considering a resolution that will probably come out in August or September with an update on revisiting the general recycled water policy that the regional boards operate under. The point of the resolution will be to identify the areas that need to be updated in the recycled water policy. A lot of research and project efforts have occurred since 2009 when the recycled water policy was adopted. Lastly, regarding research, both the Division of Water Quality (DWQ) and DDW are reviewing research priorities.

COMMENT from Mark Bartson: The research memorandum that will be released on June 30, 2016, will provide a good indication of the main research recommendations of the Expert Panel on DPR. DDW will coordinate with DWQ on research. Brian Bernados of DDW has also been working with DWQ on research needs.

QUESTION from Julie Labonte: Will the report that will be submitted on June 30 be posted on the DDW website? Or will it be an internal draft?

RESPONSE from Mark Bartson: We will post the key research recommendations memorandum by June 30, 2016.

RESPONSE from Jeff Mosher: The Expert Panel report will still be a draft at that point. The final report is expected by September 1, 2016.

QUESTION from Andria Ventura: In our last meeting we touched on the potential for all of us to be involved as the State Board looks at this and as the process moves forward. Will we touch on that again before we adjourn today? Many of us are interested in exploring that possibility.

RESPONSE from Jeff Mosher: During Agenda Item 8, "Wrap-Up and Next Steps," we will discuss the schedule for after the two reports are finalized and provided to DDW.

QUESTION from Garry Brown: We have been so focused on this feasibility report being due on December 31 and it seems there should be some publicity or press event. Maybe it could be combined with the resolution that Fran Spivey-Weber referred to?

RESPONSE from Mark Bartson: DDW staff is working with the State Water Board Office of Public Affairs on options. We are proud of all the work that has gone into this effort and the

DDW feasibility report will reflect that in a positive way. We need to review the options for outreach on the reports and the recommendations.

QUESTION from Jeff Mosher: Is there something being planned from an water industry point of view?

RESPONSE from Jennifer West: WateReuse California has been planning to utilize our chapters in Los Angeles and the Bay Area to do special meetings on the topics. We will invite all our membership to attend and learn what is in the report and provide comments during the public comment period. We will see if Expert Panel members would like to be there and answer questions. This will probably happen in September. The Los Angeles Chapter and Sand Diego Chapters are interested in holding meetings on this topic.

QUESTION from Jennifer West: Does the public comment period as planned provide enough time for an appropriate review? Is there any flexibility to extend the deadline? We want to work with the State Board to get WateReuse California members involved.

QUESTION from Toby Roy: When will the Surface Water Augmentation (SWA) criteria be released for public comment?

RESPONSE from Randy Barnard: Mike McKibben, who is writing the regulations, says he expects for the SWA regulations to be posted in end of summer or early fall 2016.

QUESTION from Phil Oshida: You are going to hold two workshops. Who is the audience for those workshops and what is their purpose?

RESPONSE from Mark Bartson: The audience is the public and stakeholders. Our main purpose is to provide the higher level takeaway messages and explain the overall process and the outcomes.

QUESTION from Bruce Macler: I was curious about this policy statement. Will there be drafts released or are you just taking up the question?

RESPONSE from Fran Spivy-Weber: The State Water Board is addressing possible changes to the recycled water policy. There will be plenty of opportunities for commenting, and there will be a lot of work on this in the fall. The resolution will be mostly topics that the State Water Board has identified that either are not in the current policy, or are in the current policy but have changed dramatically. Over the next year the State Water Board will need to do California Environmental Quality Act (CEQA) and economic analysis.

COMMENT from Mark Bartson: The next big step with the workshops will be talking to the Advisory Group chair, Garry Brown, and determining how everything will fit together.

5. ADVISORY GROUP DISCUSSION – RECOMMENDATIONS TO DDW

Jeff Mosher of NWRI addressed the Advisory Group and invited them to discuss their suggestions for the most recent version of the recommendation report, which was distributed to all members on June 14, 2015. He emphasized that the purpose of the discussion was to ensure that all Advisory Group members agree with how the recommendations are written.

Following is a summary of the comments put forth during the discussion of the draft recommendations.

Section 2: Recommendations on Topics Directly Related to Determining the Feasibility of Developing Regulatory Criteria for Direct Potable Reuse

2.1 Advanced Treatment Operator Training and Certification

2.1.1(b). Ray Tremblay asked for clarification regarding the training level to be required for wastewater operators. It was agreed to suggest a minimum Grade Three for both water and wastewater certification.

2.1.1 (c). General discussion regarding what type of experience is required to apply for certification. In question was whether operators would need a certain amount of experience with either a drinking water or wastewater treatment facility, or if they would need to have hands-on experience at an Advanced Water Treatment Facility (AWTF).

- **QUESTION from Julie Labonte:** Could we add something that says the operator needs to have experience working in DW and WW facilities?
 - **RESPONSE from Traci Minamide:** I thought we meant experience working in an AWTF. I think they should have that experience. But I know it makes it difficult to hire staff for a facility.
 - **COMMENT from Julie Labonte:** I like the idea in concept, but in practice, you would have limited training opportunities. Everyone would need to train at existing facilities, such as Orange County Water District (OCWD).
 - **COMMENT from Bruce Macler:** I agree with Julie. If individuals take classes at the appropriate level, then they don't need the hands-on experience at an AWTF.
 - **RESPONSE from Jeff Mosher:** Remember, these individuals already have Level III Drinking Water or Grade 3 Wastewater certification. As a result, they will have operator experience. Also, the Advanced Treatment certification is the minimum requirement to enter one of these positions; these individuals will also undergo additional training at their place of employment.
- **QUESTION from Brian Bernados:** A different way to look at it is this: a number of places have advanced technologies that they are using such as UV, ozone, and reverse osmosis. And those are not only in Orange County or Terminal Island. Traci, is that they type of experience you're looking for?
 - **RESPONSE from Traci Minamide:** I don't think that increases the number of candidates.
 - **RESPONSE from Jeff Mosher:** This question will need to be worked through as part of the program development. Saying that experience is needed makes sense, but I'm not sure you need to say it has to be at a permitted AWTF. The experience could be a training workshop. The burden will be on the agency that does the hiring to make sure these people are appropriate.
 - **COMMENT from Julie Labonte:** We may not want to define experience using certification. I had a wastewater operator certification would not be appropriate to operate a facility.
- **QUESTION from Traci Minamide:** When we talk about AWTF, do we mean potable reuse?
 - **RESPONSE from Jeff Mosher:** In this context, yes, because we are talking about DPR.
 - **QUESTION from Traci Minamide:** Should we clarify that?
 - **RESPONSE from Randy Barnard:** It's self-explanatory because of the title of the report. If it ever becomes a program that we are developing we'll have to revisit that question.

2.3 Research on Low-Dose Exposure to Chemicals

Jeff Mosher commented that the language in this recommendation has changed over the past few revisions of the report. He asked the lead author, Andria Ventura, if she had discussion points.

- **COMMENT from Andria Ventura:** The second bullet point seems fair to me, but it doesn't mention being proactive. But it's understandable that it is difficult to be proactive on regulations that don't exist. We could add that "facilities should be encouraged to be more proactive on pollution prevention."
 - **RESPONSE from Jeff Mosher:** That is partially covered in source control. As written, I think this is meaningful. Fran Spivy-Weber mentioned the recycled water policy addresses contaminants of emerging concern (CEC), and a CEC Panel was convened. The results of the CEC Panel were incorporated into the State's plan to continue to track chemicals and re-run that process every five years. If this issue is going to be revisited, it can be addressed under the revisions to the recycled water policy.

- **QUESTION from Andria Ventura:** My concern comes back to public confidence. We hear a lot about monitoring, and about regulated and unregulated contaminants, but that doesn't get us to solutions of those problems. If we are talking about source control elsewhere, I thought we should get more ahead of the issue. Some of these constituents may be more of a problem in recycled water than they would be in other sources of water. I want to be clear on that point. And I want to know from others in this business if it would be important. Do we need to mention that as we look at these kind of contaminants, then it could affect cost? Is that an important point or not?
 - **RESPONSE from Jeff Mosher:** This is a drinking water issue. Let's ask Amy Dorman if the City of San Diego thinks about whether they need to add additional treatment for a constituent that occurs at a very low level.
 - **RESPONSE from Amy Dorman:** We do it to comply with regulations.

- **COMMENT from Andria Ventura:** I'm not thinking of a specific chemical. The truth is, when you go to board meetings for drinking water providers, you hear that we are learning more about CECs, and we are doing the best we can at any moment, and as we learn more there will be pressure to increase treatment. The increased treatment translates to increased costs and consumer water rates, and we get pushback from our customers. So not only do we have issues related to safety, but also the costs. We took that line out of the rationale.
 - **RESPONSE from Bruce Macler:** Costs are being discussed in the TMF recommendation.
 - **COMMENT from Jeff Mosher:** I'm hearing a different issue. Is cost a factor when it comes to public health and water quality? Agencies invest in treatment when needed.
 - **RESPONSE from Andria Ventura:** When a drinking water standard is set, it's supposed to be as close to the public health goal as feasible. We do not expect significant health impacts. With CECs that will eventually be regulated, we are going to need to set maximum contaminant levels (MCLs).
 - **QUESTION from Jeff Mosher:** I want to understand what your concern is. Is it that agencies may not invest in water quality?
 - **QUESTION from Andria Ventura:** Is it beneficial to agencies to have it stated in here that we need to stay on top of this issue because it has both public health and cost effects down the line?
 - **RESPONSE from Jeff Mosher:** Water agencies understand public health. Once you make a decision regarding your treatment goals, then

you need to figure out the costs. When you are identifying the risk and the need for public health protection, that's your focus.

- **QUESTION from Andria Ventura:** Jim Fiedler from Santa Clara Valley Water District is a water provider. Is it beneficial for him to have in this report a sentence that says we have to consider this cost?
 - **RESPONSE from Jim Fiedler:** We are always mindful of costs. We cover that in the recommendation on triple bottom line assessment. This recommendation is on low dose chemical contaminants, and as we address this problem there are multiple ways to respond to it. We don't want the public to think that we are only looking at the least-cost option. Providing safe drinking water is our main purpose.
- **COMMENT from Jeff Mosher:** Lose dose exposure is a valid concern, and it's a research area that needs to be pursued.
- **QUESTION from Fran Spivy-Weber:** This is a question for the group: Is it clear that this is an iterative process? We don't just investigate once. We continue to investigate over time.
- **QUESTION FROM Bruce Macler:** Are we suggesting a six-year review period of regulations?
 - **RESPONSE from Jeff Mosher:** In the CEC Panel process they use a spreadsheet model and input the known health values – it's not a regulation. And they don't say it should be regulatory; they just say this review process should be conducted by the State Water Board on an iterative basis.
 - **COMMENT from Fran Spivy-Weber:** This policy is coming up for review.

No changes were made to this recommendation.

2.4 DPR Research Priorities for California

- **COMMENT from Randy Barnard:** In the last round of edits we changed “enough information exists to implement DPR projects” to “may exist.” We do not want the public to think we are making a definitive statement. Using “may” makes it seem more like an opinion than a statement.
- **QUESTION from Traci Minamide:** Could we also include a one-sentence description of bioassays?
 - **RESPONSE from Jeff Mosher:** What is important in this recommendation is the use of high frequency throughput human cell line bioassays. You can run 100 of these on an automated analyzer. This is rather than using animal cells or whole animals.
 - **COMMENT from Jim Fiedler:** At the State Water Board research workshop in October 2015, we talked about bioassays using animal cell based bioassays.
 - **RESPONSE from Jeff Mosher:** The animal cells are often used for issues of environmental concern. We currently conduct toxicology studies on animals and try to translate it to humans. The same issue goes for the bioassay. If you use human cells or animal cells you still need to be able to make linkages to the potential human health significance.

ACTION ITEM: Insert a brief description or definition of high-throughput human cell line bioassays in Section 2.5. NWRI will email the definition to all AG members to verify consensus.

- **COMMENT from Phil Oshida:** I'm not sure how clearly you want to define this. The time frame will be long to determine what the bioassay results mean for human health. To define it today, what it should be, will be tough. In three years you will change that definition.
 - **RESPONSE from Jeff Mosher:** The definition could be general.
 - **COMMENT from Randy Barnard:** Maybe we don't have to define it here. If you look at the document as a whole, the Expert Panel report talks about bioassays, so it's defined in the report itself. So why go into the extra work in the Advisory Group report?

- **QUESTION from Traci Minamide:** But what do we mean by this recommendation? It seems like even the Advisory Group members don't know what exactly what we are recommending.
 - **RESPONSE from Jeff Mosher:** In this context, "bioassays" is used to refer to cell lines, and "bioanalytical tools" encompasses everything including whole animals.

- **QUESTION from Tom Richardson (RMC Water and Environment):** What should SWRCB do? You say they should study it, and then you say they should support the research. Which is it?
 - **RESPONSE from Fran Spivy-Weber:** SWRCB will support research. We're not going to conduct the research ourselves.
 - **COMMENT from Tom Richardson:** There is an ebb and flow on what you are going to do and what you are going to track and study.
 - **RESPONSE from Jeff Mosher:** There may be an issue with semantics. We say "the State Board will" and then the State Water Board says we're not going to do it themselves, rather they are going to sponsor the research.
 - **RESPONSE from Randy Barnard:** The way it is written here is fine. We understand the intent.
 - **COMMENT from Jeff Mosher:** Randy Barnard has done a good job in reviewing this draft. What I understand is that DDW is comfortable with the recommendation.

The recommendation was edited to clarify the use of the word "analytically." A definition of "bioassays" will be added after the Advisory Group has had an opportunity to review the language proposed by Jeff Mosher of NWRI.

2.6 Building Capacity (Technical/Managerial/Financial [TMF])

The Advisory Group did not request edits to the recommendation.

2.7 Monitoring and Outreach Related to Public Health and Safety of DPR

There was a brief discussion regarding some of the issues with the Consumer Confidence Report (CCR) recommendation. An audience member noted that some people do not have confidence in the reports from their water agencies. Bruce Macler said that the CCR is a means to ensure accountability, and agencies are required to report once a year on what they measured and what it means.

The Advisory Group did not put forth questions or request edits to the recommendation.

2.8 Changes to the Consumer Confidence Report (CCR)

- **COMMENT from Mark Bartson:** This recommendation says the CCR should be extended to DPR, but the drinking water plant already has a CCR.

- **RESPONSE from Jeff Mosher:** Yes, but the wastewater plant is not required to provide a CCR.
- **QUESTION from Bruce Macler:** The intent is to expand the CCR to include the new source of water, and the monitoring associated with that.
 - **COMMENT from Andria Ventura:** The CCR now requires that the agency tell the customer the source of the water.
- **QUESTION from Phil Oshida:** The question is, what are the monitoring requirements for the wastewater plant? It's like we are calling two things CCRs but they are not the same thing.
 - **RESPONSE from Randy Barnard:** This is just a recommendation to remind us as we are drafting the regulations to determine which of the regulations will be expanded into the CCR requirements.
 - **COMMENT from Jeff Mosher:** What's nice about the CCR is it's a requirement that everyone does. In Florida they have reporting requirements on all the reuse facilities. We don't have that in CA. There's an initiative with the State Water Board to create a database with voluntary information.

No changes were made to this recommendation.

2.9 Regulatory Approach to Environment Impacts

- **COMMENT from Audience Member:** This recommendation contains the wording "DPR projects may affect the environment." Everything else in the report acknowledges that DPR projects will affect things.
 - **RESPONSE from Randy Barnard:** I'm OK with how it is written.
- **COMMENT from Fran Spivy-Weber:** Those streams that are effluent-dominated, if you start pulling the effluent out for treatment, it could have an effect on the river. That's what this is about.
 - **RESPONSE from Jeff Mosher:** One thing you wanted to emphasize was that you need to be able to coordinate the different regulatory requirements.
- **QUESTION from Andria Ventura:** Is this the issue that came up regarding the changes in environmental flows? I'm thinking in terms of the delta as well. Wasn't that put into Section 3? In a way these two topics correspond.
 - **RESPONSE from Jeff Mosher:** This recommendation was not meant to specify one environmental impact. It's more to remind people to be cognizant of all the potential impacts.

No changes were made to this recommendation.

Section 3: Recommendations on Topics Not Directly Related to Determining the Feasibility of Developing Regulatory Criteria for Direct Potable Reuse

3.1 Potable Reuse Terminology

Jeff Mosher commented that this document has been reviewed by the ad hoc committee on potable reuse terminology as well as the entire Advisory Group. It is not intended to provide standardized definitions,

but rather working definitions. An audience member commented that there are some terms in this report that are not in the appendix (i.e., the acronyms).

No changes were made to this recommendation.

ACTION ITEM: Correct the reference in to the Terminology for Potable Reuse Document (“Appendix A” should be “Appendix B”).

3.2 Scientific Quality and Public Availability of Support Documentation

Jeff Mosher explained that the intent of this recommendation addresses two separate issues. One, that the Advisory Group is asking the State Water Board to consider information that has been scientifically reviewed without requiring that it’s been peer reviewed. Two, that the information used to inform the State Water Board’s decisions should be available publicly.

- **COMMENT from Phil Oshida:** The hard part is that we get a lot of information from a lot of people, and it’s good to have a fairly high bar. There are interest groups that will provide what looks like scientific information based on a lot of “facts” that they want you to consider, and it’s difficult to say why you are accepting information from one organization rather than another.
- **QUESTION from Jeff Mosher:** Brian, do you conduct a rigorous review of proposed projects?
 - **RESPONSE from Brian Bernados:** Yes, and we may have them do trial studies.
 - **COMMENT from Phil Oshida:** It would be nice to provide a more defensible rationale for the State Water Board to use.
 - **COMMENT from Bruce Macler:** There were questions about the need for the peer review requirement at the last meeting.
 - **RESPONSE from Phil Oshida:** The issue may be “to the extent feasible.” I don’t know if there is a bright line.
 - **COMMENT from Jeff Mosher:** I’m not sure the Advisory Group is positioned to say anything more definitive.
 - **COMMENT from Cindy Forbes (SWRCB):** We have done a good job requiring demonstration projects. If an agency runs two test runs and one looks OK and one does not, then we make them go back and do it again.

No changes were made to this recommendation.

3.3 Communications and Public Outreach

- **COMMENT from Andria Ventura:** This is a good section, and I made a comment initially that we should move away from advocating for DPR, and that was taken out. I’m concerned with where it says, “In addition, it should be shown that DPR is the best option for that community” because I think that could be misread. We want to show the public the rationale as to why it has been deemed to be the best option.
 - **RESPONSE from Garry Brown:** I agree. This recommendation was written from the standpoint that once you have decided to do DPR, then this is how you proceed.
 - **COMMENT from Andria Ventura:** We might want to say that once it’s been decided that DPR is the best option, then that rationale should be presented to the public.
- **QUESTION from Andria Ventura:** How do you do a case-by-case permit once the criteria are established? Is there a place where we can say there was a general consensus that DPR needs to

move forward, but there was some concern about allowing case-by case permits without established criteria?

- **RESPONSE from Jeff Mosher:** The agencies like this flexibility and I give them credit for doing it. The case-by-case basis is the issue.
- **QUESTION from Andria Ventura:** But case-by-case based on what? That’s what people want to know. I could foresee an NGO pushing back on a project under these circumstances if they don’t trust the fact that we have an established criteria.
 - **RESPONSE from Jeff Mosher:** Case-by-case does involve meeting certain criteria, but agencies would prefer to have a regulation because it gives them certainty.
 - **RESPONSE from Randy Barnard:** On these one-off projects, the agency also is required to hold a public comment period. So it does get addressed.
- **COMMENT from Andria Ventura:** I think we need to reflect that while we have general agreement in this group that we want to see DPR move forward, that this is an item where we did not have complete agreement and there was some concern expressed by some of the members.
 - **COMMENT from Jeff Mosher:** The State Water Board can and does issue permits this way. We could add that a portion of the Advisory Group stated that having regulations in place was the preferred method, and expressed concern that the community may push back on this work.
 - **COMMENT from Jim Fiedler:** There’s a statement that we may find ourselves pursuing permits on a case-by-case basis in advance of the DPR regulations.
 - **COMMENT from Garry Brown:** We wouldn’t have GWRS today if we didn’t have the option to approve projects on a case-by-case basis.
 - **COMMENT from Julie Labonte:** We should have an open discussion to see who supports this.
 - **COMMENT from Jeff Mosher:** Early in the process we said we would try for consensus. The question here is, do we have consensus on adding an additional sentence into the recommendation.
 - **COMMENT from Andria Ventura:** I want to acknowledge that not everyone supported this.
 - **COMMENT from Julie Labonte:** I agree with Bruce, if we are going to say something about permitting on a case-by-case basis, it will be in recommendation 3.10.
- **COMMENT from Garry Brown:** Regarding the statement that DPR is “the best” option versus “a viable” option. If it has been decided that DPR is the best option by the community then the public outreach will reflect that. I’ve never been to a public hearing at a board where they are recommending to spend millions of dollars on a “viable” option.

The recommendation was edited to clarify that the project proponent would require support from its customers. In addition, the language regarding the SWB’s ability to permit DPR projects on a case-by-case was removed.

3.4 Determining Feasibility of a Project (Triple Bottom Line)

- **QUESTION from Traci Minamide:** Wasn’t the point of this recommendation that we wanted to consider multiple avenues of assessment?
 - **RESPONSE from Jeff Mosher:** Is it important to assess the feasibility or the financial factors. It would be more useful to make this recommendation more general and then mention triple bottom line as a potential analysis. We can take TBL out of the title and

make some changes to broaden the applicability of the recommendations. Keith Solar is the lead author on this recommendation; we will call him tomorrow and discuss.

This recommendation was edited to provide a more open-ended recommendation regarding feasibility analyses (i.e., TBL is one potential type of analysis).

3.5 Environmental Justice

Andria Ventura commented that she was under the impression that the Advisory Group had specific plans for advancing a research project through the Water Environment and Reuse Foundation (WE&RF), as they are now mentioned in the recommendation.

No changes were made to this recommendation.

3.6 Comparison of DPR and Other Alternatives

- **COMMENT from Julie Labonte:** This recommendation describes a method to justify your decisions, so it's along the lines of an alternative analysis.
- **COMMENT from Audience Member:** You mention a coastal inland distinction in the last paragraph. This speaks to the fact that water can be more expensive in Southern California. Then DPR is more feasible in Southern California than in Northern. Cost is a factor.
 - **RESPONSE from Jeff Mosher:** The application of DPR is very specific, and there are lots of places that are successful in what they've done and so they don't need DPR. And in other communities, DPR is all they can do because they have limited options.
 - **COMMENT from Andria Ventura:** I think Northern California is also very interested in DPR.
 - **COMMENT from Fran Spivy-Weber:** Even if other sources of water are less costly than DPR, Northern California is just as likely to do it.
 - **RESPONSE from Jeff Mosher:** You may be willing to pay a lot more for that reliability. So something that costs less may be less reliable and may only be there nine months out of the year.
- **QUESTION from Tom Richardson:** Regarding the order of these recommendations: it could be argued that the economic viability could be presented earlier in the document. Is there some logic to the flow of these recommendations as to where each should go in the report?
 - **RESPONSE from Jeff Mosher:** We can look at the order of both sections and reorganize the recommendations to follow some logic.

No changes were made to this recommendation.

3.7 Convening an Expert Panel and Stakeholder Group to Advise the State Board in Developing Criteria

- **QUESTION from Garry Brown:** Could this recommendation extend the whole process another year or two, until when there is a final product?
 - **RESPONSE from Jeff Mosher:** Having a panel or stakeholder group might accelerate the process. But if DDW is required to do so that might tie their hands. Agencies are comfortable with the regulations being developed while they are undergoing this review.

- **QUESTION from Randy Barnard:** Was the point to continue using this Advisory Group? If we need to bring together another panel and stakeholder group, it will be for a specific reason, and they would be tailored to fit that purpose.
 - **RESPONSE from Jeff Mosher:** The State Water Board might benefit from this process.
 - **COMMENT from Andria Ventura:** The State Water Board might make a more informal process that doesn't require legislative updates.
 - **RESPONSE from Randy Barnard:** We can live with the recommendation as written. It's in the section that is outside the scope of what the AG was supposed to address anyway.

No changes were made to this recommendation.

3.8 Effects of DPR on Environmental Flows

No comments. No changes were made to this recommendation.

3.9 Effects of DPR Projects on Water Rates

Since the last iteration, Randy Barnard changed the word "potential" to "possible."

No comments. No changes were made to this recommendation.

3.10 Phasing of the Potable Reuse Regulations

- **COMMENT from Jeff Mosher:** If I had to describe in simple terms what we are trying to achieve here with this recommendation, I would say that agencies want flexibility to pursue these projects and not be constrained by an arbitrary schedule. That was the initial intent.
 - **RESPONSE from Julie Labonte:** This recommendation is to encourage the regulators to continue that approach. Because of the difficulty of defining direct potable reuse, we should take it in sections. It's such a big undertaking.
 - **COMMENT from Randy Barnard:** The way we are drafting the regulations, it is a continuum. There should not be a project that falls outside of these treatments. At the end of the characteristics of a Surface Water Augmentation (SWA) project, there's a line where you fall into DPR.
- **QUESTION from Jeff Mosher:** So what should we try to be addressing here?
 - **RESPONSE from Julie Labonte:** We want a pathway for permitting in the interim.
 - **COMMENT from Jeff Mosher:** You have the pathway. It is the case-by-case basis or one-off permit.
 - **RESPONSE from Julie Labonte:** The first version of this recommendation included text about an exception to be added to the SWA rule, but that wording was taken out.
 - **COMMENT from Randy Barnard:** Even if there is an exception in the SWA rule, the project would still fall under the SWA.
 - **RESPONSE from Julie Labonte:** We understand that it will take years for you to come up with the next regulation for DPR. Agencies that can demonstrate protection of public health would like to proceed without having to wait two years.

- **COMMENT from Jeff Mosher:** We seem to be trying to make it so specific, and it is causing difficulty for others to understand what is being asked for. Also, Randy wants to delete “alternative.”
- **COMMENT from Andria Ventura:** The real issue here is the “case-by-case basis.” How are we trying to define what the project is?
 - **RESPONSE from Randy Barnard:** Case-by-case now would be for DPR only. Because we will already have the SWA regulations.
 - **COMMENT from Andria Ventura:** I would not go the legislative route. Jeff hit on the fact that we need the criteria to make the best decisions, and some members wanted that stressed.
 - **RESPONSE from Jeff Mosher:** The idea is that we have not done that sort of thing in the rest of the document, (i.e., include a minority opinion). If we start doing that, then a lot of issues could be opened up to get things into the recommendations that aren’t in there now.
 - **QUESTION from Julie Labonte:** Are you concerned that these one-offs will not have sufficient public participation?
 - **RESPONSE from Andria Ventura:** The reality is that most of the people and communities moving on this are going to do the best possible job. It is a major investment. But I get asked too many times “what would you base that decision on if you don’t have the criteria?” It’s a valid question that comes up all the time.
 - **RESPONSE from Randy Barnard:** It’s not the water provider that gets to decide what gets permitted. We base that on our case studies and the performance of other projects already out there. These projects are required to have an expert panel and public participation.
- **QUESTION from Fran Spivy-Weber:** What criteria did you use to approve OCWD’s GWRS?
 - **RESPONSE from Bob Hultquist (SWRCB):** We wanted something that was at least as safe as conventional supplies. Then we engaged scientific advice on how to address chemical threats and chemical pathogens. We put all this together and held public hearings and then came up with the requirements, including extensive monitoring to look for anything else.
 - **COMMENT from Garry Brown:** I participated in the process that Bob is describing, and I was the only non-expert on the panel. We started meeting in 2004 and the plant opened in 2008. Considering the amount of hearings and the number of people who attended, it’s hard for me to see your concern of a lack, because that was so over protective.
 - **RESPONSE from Fran Spivy-Weber:** But nobody knows that. That’s the problem.
 - **COMMENT from Garry Brown:** I think GWRS is a far greater success than anyone thought it would be. From witnessing that, I’m not saying your concern isn’t valid, but I’m not sure it’s the real issue.
- **COMMENT from Audience Member:** Friends of the North Fork agree with what Andria Ventura is saying. What caused me concern on the case-by-case basis was that when I read the legislation, for augmenting surface flows, they wanted uniform statewide criteria.

- **RESPONSE from Fran Spivy-Weber:** The legislature said they wanted a feasibility report for DPR.
 - **COMMENT from Audience Member:** I disagree with the basis for the case-by-case approach.
 - **RESPONSE from Bruce Macler:** There is a process already in place for case-by-case, and it's transparent.
 - **COMMENT from Andria Ventura:** I am uncomfortable with the statement. Maybe we should say that the process for case-by-case would be based on some articulated state criteria. The recommendation would be that it would be established before the case-by-case moves forward.
 - **RESPONSE from Randy Barnard:** To address your comment concerning the case-by-case permit versus the regulations: We have the case-by-case option because we don't have regulations in place, but there is specific criteria. Once the regulations are in place, the case-by-case option goes away.
- **COMMENT from Tom Richardson:** The topic is phasing of the potable reuse regulations. That means there is one type of potable reuse that is more attractive. If the State Water Board is going to address this incrementally, it has nothing to do with the case-by-case option.
 - **RESPONSE from Julie Labonte:** If you break the continuum up, each chunk is a two-to four-year process.
 - **COMMENT from Randy Barnard:** The whole purpose of case-by-case approval came up in the context of getting the regulations in place so that projects could move forward. We wanted to alleviate people from going to legislation in order to get the regulations written so that they could get their project permitted. The feasibility report that is coming out will address what is feasible in terms of developing the DPR regulations.
 - **COMMENT from Andria Ventura:** I'm thinking a regulation and a criteria are two different things. I don't need to have the law in place to move forward. I wanted it clarified to see that case-by-case does involve meeting specific criteria even though it's not a formal regulation.
- **COMMENT form Rich Mills:** When Whittier-Narrows was approved, and Water Factory 21, they were both case-by-case. There weren't any published criteria. There was a groundwater recharge panel in the late 1970s. Since then, each case-by-case decision was based on some experience for those two categories of projects. They were not approved in a vacuum with zero experience. Since there was a scientific advisory report in the 80s, there were draft recharge regulations that were used as a *de facto* regulation, and the case-by-case was compared against that. And the draft regulations themselves were changed and republished. In a few cases there was a Statement of Reasons published. There is a push for case-by-case that goes beyond this and that could be the reason for hesitation. If you are trying to build public support, then pushing the envelope too fast is not a recipe for that. Having the scientific discussion and the expert panel report on the SWA and establishing the feasibility criteria will help to move this incrementally.
 - **COMMENT from Cindy Forbes:** Bob Hultquist mentioned to me that DDW does have a process, the impaired water source policy. That's for water that we would not have previously considered to use as a water source.
 - **QUESTION from Jeff Mosher:** Andria, would you like to see a copy of that policy?
 - **RESPONSE from Andria Ventura:** Yes, I would.

ACTION ITEM: Provide the impaired water policy to Andria Ventura.

- **COMMENT from Jim Crook:** The presumption is that when the feasibility report is complete, it will recommend that it is feasible to develop this criteria for DPR. We will need to wait several years before we get the regulations. We are trying to do two things with this last one: looking at developing the source water for a drinking water source, and not discouraging entities from pursuing potable reuse projects.
 - **COMMENT from Julie Labonte:** The first two sentences of the recommendation accomplish what we are trying to convey.
 - **RESPONSE from Jeff Mosher:** There's potentially no changes that have to be made here regarding the case-by-case basis.
 - **QUESTION from Jing Chao:** Are you providing a recommendation to phase the potable reuse recommendations?
 - **RESPONSE from Julie Labonte:** The bullet that says “consider developing separate criteria” addresses this issue. Trying to tackle all this at once doesn't make sense.
 - **RESPONSE from Randy Barnard:** I interpreted it that the Advisory Group proposed that DDW segment the regulations.
 - **RESPONSE from Jeff Mosher:** That will be taken under consideration and DDW will figure this out.
- **QUESTION from Andria Ventura:** Where it says “in addition, any future legislature should not delay the consideration by regulators of new potable reuse projects.” How would you stop that?
 - **RESPONSE from Julie Labonte:** It's just a message to anyone who may want to do this.

8. WRAP UP

Jeff Mosher of NWRI provided a summary of the project's progress to date.

- The Expert Panel is still working diligently to complete their tasks. Specifically:
 - The Panel has met every month since January.
 - Briefing papers have been drafted for all chapters.
 - The Panel members are preparing for the final meeting on June 30.
 - We are communicating directly with DDW staff on some issues.
- Status of the Final report:
 - The Panel submitted the full working draft to NWRI last week (~350 pages).
 - The Panel co-chairs have reviewed the entire report.
 - The report is being reassembled today and will be redistributed on Friday.
 - The Panel will work through all the comments submitted by the Panel members.
 - A final opportunity will be provided for Panel to comment on everything in the report.
 - Four Panel members are staying two days after the meeting to finish writing the report.
 - NWRI will spend 10-12 days finishing the editing and formatting.
 - Final report will be delivered to DDW on July 15.
- **COMMENT from Mark Bartson:** One more item related to the Advisory Group. DDW will post the final recommendation report online when it is available.
- **QUESTION from Audience Member:** You are writing a report that will go to the legislature?
 - **RESPONSE from Mark Bartson:** Over the past eight months, we've been working on this report, but we have been waiting on the important technical details to complete our work.

- **COMMENT from Garry Brown:** This has been a great experience, and has allowed us to work with and become friends with a lot of smart professionals. We are ready to continue moving forward with this process.
 - **COMMENT from Jeff Mosher:** Garry, thank you for your leadership. We appreciate the work of everyone on the Advisory Group. I think we succeeded in accomplishing what DDW asked us to do.

- **MEETING ADJOURNMENT**

The final meeting of the Advisory Group for the Expert Panel on Direct Potable Reuse adjourned at 3:20 pm on June 15, 2016.