

SBx7-7 Project U5 Process Water Workgroup Meeting #1
Meeting Summary
July 7, 2010
9:30 AM – 2:30 PM

*All documents can be found at <http://www.water.ca.gov/wateruseefficiency/sb7/>
Please send all comments and inquiries to the project staff email: wue@water.ca.gov*

Welcome

The first meeting of the SBx7-7 Project U5 Process Water Workgroup was held on July 7th, 2010 in Sacramento and via Webinar. Facilitator Charlotte Chorneau, Center for Collaborative Policy, California State University Sacramento (CCP), welcomed workgroup members and participants. Nicole Ugarte, CCP, managed the audio/visual and took notes of the day's discussions.

Ms. Chorneau reviewed the meeting agenda and materials. The objectives of the meeting were to (1) review charge and scope of the group's work, (2) provide an overview of the SBx7-7 process water regulations, and (3) identify and begin discussing key issues and direction of process water regulations. She explained any topics not covered during the meeting would be discussed at the next meeting, scheduled for August 3rd.

Manucher Alemi, Chief of the Department of Water Resources (DWR) Water Use and Efficiency Branch and USC Co-Chair, welcomed the group and thanked them for their participation. Mr. Alemi explained that DWR was tasked to implement the Water Conservation Act of 2009, SBx7-7, and that the process water regulation was identified as an emergency rule-making process. Though public participation is not required in an emergency rulemaking process, the members of the workgroup were invited to ensure that stakeholders are involved as the regulation is developed. Mr. Alemi reiterated that DWR was ready to learn from the group's input.

Presentation of Statute and Workgroup Charge

Kent Frame, Senior Land and Water Use Scientist for DWR, presented the background and the charge of the workgroup. The SBx7-7 language regarding process water is relatively open-ended; therefore DWR sought stakeholder input to identify what the regulation should address. If the group reaches consensus, the group can make a recommendation to DWR. The final decision for the regulation rests with DWR, though DWR will consider the group's guidance and expertise.

Mr. Frame went on to review the provisions of the statute to be addressed by the workgroup. The statute defines process water as water used for producing a product or product content or water used for research and development. Mr. Frame encouraged the workgroup to discuss the definition to ensure nothing has been overlooked. The statute also allows a water supplier to exclude process water in its gross water use calculation if the supplier has a *substantial percentage* of industrial water use in its service area to avoid *disproportionate burden*. Mr. Frame explained the Office of Administrative Law (OAL), which will be reviewing and approving the regulation, recommends providing a numerical percentage value to define *substantial* and *disproportionate*. Other provisions for the group to discuss are what cannot be required, emergency drought declarations, and how the local agency may provide technical assistance to existing process water customers. The statute does not address new customers, and Mr. Frame clarified that language is often left out of statutes in order to address the issue during a rule making process.

Mr. Frame described the group's tentative timeline:

- Through August: writing first draft of regulation
- October: submit emergency rule making
- 10 days later: submit regular rule making
- December: End of 45-day comment period
- Respond to comments
- April: submit Final Statement of Reasons
- May 2011: adopt regulation

Mr. Frame acknowledged that the U3 methodologies will be posted in October. DWR anticipates that the statement of reason posted in October will likely be close to the final document.

Ms. Chorneau added that a draft of the regulation will be available prior to the next meeting for the group's review and comments.

Comments:

- Patty Krebs, Industrial Environmental Association, noted that the CII Taskforce will examine best management practices (BMPs) including process water. She observed the Taskforce and this workgroup seem to address the same topic on parallel tracks.
 - Mr. Frame explained the CII Taskforce is required to submit methodologies in June, including process water. If the workgroup waited for the CII Taskforce to complete their work, the water agencies would not have the time to include compliance measures in their Urban Water Management Plans. The legislature allowed for the emergency rule making process in order to help local water agencies meet their deadline. The workgroup is developing regulation, which would trump any conflicting BMPs from the CII Taskforce.
- Jack Hawks, California Water Association, asked if the workgroup will become part of the CII Taskforce.
 - Mr. Alemi responded that the rule making process is a separate project. He added that the CII Taskforce had not been convened yet, but the members of the CII Taskforce will have the opportunity to review and comment on the draft regulation. All information on the CII Taskforce can be found on the DWR website.
- Steven Toth, BP Carson Refinery, asked what provisions cannot be required.
 - Mr. Frame stated a local agency cannot require a manufacturing process to alter its process to be more efficient, though the agency can provide technical assistance in water use efficiency.

Presentation of the Rule Making Process

Gwen Huff, DWR, gave a brief overview of a rule making process. Generally, the State Legislature authorizes an action (in this case, SBx7-7) for a responsible party to enact. This includes taking public comment, and is constrained by the Administrative Procedures Act (APA), which dictates the procedure to make legislation into code. Afterward, the OAL reviews the responsible party's process to ensure legislation and the APA has been followed, and the legislation becomes enforceable regulation.

The formalized procedure begins after the legislature grants authority and preliminary activities have been accomplished. An emergency rule making process stays in effect for 180 days only, and then expires. The deadline cannot be extended. DWR will submit the regular rule making statement of intent ten days later,

which gives the OAL that time to review comments. DWR will not have to respond to any comments during those ten days, unless requested by OAL.

The regular rule making process formally begins with the submission of the statement of intent. There is a 45-day comment period, and DWR may be asked to hold a public hearing. Ms. Huff later clarified that anyone can request a public hearing. DWR will consider and respond to all comments, and if substantial changes occur, an additional public draft will be required for public comment. Without substantial changes to the draft, a final statement of reasons is submitted to the OAL. The OAL is also the authority to determine if the changes are substantial enough for an additional public comment draft.

Discussion of Statute Provisions

Mr. Frame suggested the group bring up any questions or elements to consider as DWR begins writing the draft regulation:

Definitions

Process Water

Mr. Frame presented how the legislative language defined process water. He asked the group to consider what should be addressed in the regulatory language. He described that the workgroup will address water agency supplied water, which can include raw or potable water. The workgroup will not address recycled water.

- Craig Bolier, Nalco, asked how to differentiate between industrial and process water.
 - Mr. Frame acknowledged there is overlap, and specified that process water contributes to production and industrial water is provided in the industry's service.
- Trudi Hughes, California League of Food Processors (CLFP), asked how agricultural water and sanitization are categorized.
 - Mr. Frame noted that agricultural water will be addressed by another group, and that sanitation is process water, because it is part of the production process and not the final product itself.
- Anita Milman, National Resources Defense Council (NRDC), asked that the regulation is clear for agencies to understand what is considered industrial water.
 - Mr. Frame related the definition will be specified in the regulation. Based on the group's input, a narrative describing commercial versus industrial water.
- Ms. Hughes asked if there will be options for validation, and asked what the cost of metering would be.
 - Mr. Frame affirmed the workgroup should discuss options for validation. He mentioned metering could be an option, but there other methodologies to consider.
 - Ms. Milman responded that commercial meters are a few hundred dollars, plus staff time. There are also PG&E smart meters that self-read and self-report.
- Jennifer Kreusch, Johnson & Johnson, noted that water in co-generating systems is included as process, and asked why the regulation would discourage water heating generation.
 - Mr. Alemi clarified that water in co-generating systems would not be penalized. If that water is considered process water, it can be excluded from the gross water calculation, which would benefit the agency.
- Ms. Krebs communicated she was not comfortable with the process water definition because it did not include cooling towers.
 - Mr. Frame responded that the group can discuss cooling towers. He advised that the group does not stray from the definition in the statute, but language can be included in the criteria for process water uses.

Substantial Water Use

Mr. Frame explained that 4% of total water use had been suggested as a substantial amount of process water use, which would deduct process water from the agency's gross figure. The intent of excluding process water was to avoid undue burden on areas with high industrial use but low population. The percentage was determined by taking the top quartile of urban water agencies that provided sufficient data in order to complete the analysis. Approximately half of reporting agencies did provide sufficient data; the other 50% did not report CII use. Mr. Frame affirmed he would bring an analysis of how the 4% was determined at the next U5 Workgroup meeting.

- Ms. Hughes suggested using a percentage range to determine substantial water use. She noted many of the users in the Central Valley use different amounts of water seasonally for food processing.
- Mr. Frame noted the amount and type of data is limited, and asked for suggestions for different methods to determine how water is discharged.
 - Amy McNulty, Irvine Ranch Water District (IRWD), responded that discharge permits would help agencies who don't have the capability to identify residential from commercial customers to type their customers.
- Ms. Krebs shared that most facilities do not have a uniform way of metering, so evaluating discharge sewer volumes would be more accurate than meter quantities.
- A participant noted that urban potable water can also include groundwater or recycled water; therefore volumes should be calculated from use rather than discharge.
- Richard Harris, East Bay Municipal Utility District, reminded the group that the data should be used to establish if a utility would fall out of compliance due to its process water use. He also talked about the importance of accounting for economic changes when calculating Gallons Per Capita Daily (GPCD).
 - Mr. Alemi reported that the U3 Urban Stakeholder Committee (USC) will address compliance, and that he would flag the issue for the project manager.
- Chris Brown, California Urban Water Conservation Council, recommended looking for jumps in the data rather than dividing by quartiles; a break in the data may indicate which agencies would be affected by significant process water use. He added that most agencies lump CII customers together, and bill to a particular rate. End use would not be an accurate metric for water use.
- Sean McNeil, City of Santa Rosa, suggested that data should be clumped by population size in relation to industrial water use.
 - Ms. Milman offered to investigate alternative metrics to interpret the data.
- Mr. Harris strongly recommended that the group avoid linking the substantial definition to water savings. He pointed out that setting the substantial bar at 4% would only affect 20 out of 400 agencies in the state.

Cooling Towers

- Mr. Hawks told the group that the State Water Board may have a provision on cooling towers. He added retro-fitting may be required.
 - Mr. Kent reported that he'll look at the Water Board's involvement
- A participant pointed out that some agencies use ocean water for cooling purposes, and they would have to redo their system.

Several participants raised scenarios where process water would be difficult to determine, including the water used to transport tomatoes, the water used by the Silicon Valley data centers, and if the water is used to condense ammonia in the cooling tower, though never enters the system. Ms. Krebs presented the following uses:

Cooling Tower Process Water-related Uses:

- testing and rinsing products

- testing, cleaning and operation of equipment and machinery
- cutting friction in machinery and processes
- cooling tower water often comes directly into contact with the part or product being manufactured
- cooling towers support chilled water systems for the purpose of supporting temperature and humidity sensitive rooms such as laboratories and cleanrooms
- cooling tower water is essential to co-generation facilities
- cooling tower water is essential to keep laboratories and server rooms cool
- cooling tower water is used to maintain data centers
- cooling towers are used for temperature control to maintain required material and chemical characteristics (i.e., viscosity) tied to production of a product

Heating and Air Condition Process Water Related Uses:

- industrial facility air conditioning and heating units are integrated into product/process-related uses and functions
- heating, such as for furnaces or kilns, are sometimes part of the manufacturing process

Several participants also voiced their concern about using terminology such as cooling towers, noting more efficient systems should be incentivized. Mr. Harris recommended using the terminology *cooling process*, to include the way cooling is used in production. A few members thought the terminology might be too narrow. Mr. Frame noted that the regulation will be clear on what is considered part of the cooling process, including towers.

Incidental Water Use

Mr. Frame asked the group to comment on ways to estimate incidental uses. He noted that the legislation's definition specifies that incidental water use should be included. He especially asked if estimating water use on a per-employee basis would be accurate

- Ms. Hughes recommended looking at industry averages, based on facility size and number of employees.
- Ms. McNulty reported that water allocations for customers are often based on square footage and ET data, which wouldn't include irrigation levels or how much water is being applied. She recommended strong partnerships and information sharing between the agency and the customer in order to separate process water from incidental water.
- Ms. Milman asked how an industrial client's partial self supply and partial water utility-supplied water will be addressed.
 - Mr. Frame indicated the U3 Project Urban Stakeholder Committee will address how to allocate base and gross water use.
- Mr. Hawks asked how customers will be calculated into the baseline methodology.
 - Mr. Frame replied this issue was part of considering what is *substantial*. The regulation should address breaking out sources, as well as how to quantify and verify water from a particular source.
- Mr. Brown said there are examples of self-supplied industries, where they take potable treated water for domestic water in use and the process water is self-supplied.
 - Mr. Frame responded that the process water definition does not include incidental water use and there needs to be provisions that exclude this type of water use.
- Mr. Harris noted temperature or the season influences incidental water use, and recommended that if incidental water use is at a small enough percentage, it should not have to be quantified. He cited an example where large refineries use less than half a percent for their incidental water use, and emphasized that good calculations do not require metering.

- Ms. Milman observed that a defined method is necessary in order to track data; however, historical data cannot be recreated for agencies that do not have meters.
- Mr. Brown recommended that agencies provide data to support their business water estimations, as agencies tend to overestimate in order to avoid not meeting demand.
- Mr. Alemi asked the group if using existing measured data per employee would be sufficient for excluding incidental water use.
 - Ms. Milman expressed that tracking the employment records in order to determine the baseline would be burdensome.
- Ms. Hughes asked if there was a standard deduction based on average employee information.
 - Mr. Frame responded that the OAL often does not approve prescriptive language, and DWR's task is to craft criteria for agencies to break out incidental water use.
- Ms. Krebs reiterated that there is not a level for comparing different customers' meters due to the various ways they are operated. She also emphasized that facilities prefer to work on the local level.
 - Mr. McNeil reminded the group that the water agencies will report to DWR, not the customers.
- Mr. Frame asked if the group would support applying a baseline of 55 gallons per day as incidental water use.
 - Mr. McNeil thought that there would be too much variation for use and flow fixtures to have a rule apply evenly.
- Ms. Hughes suggested that DWR provide a range of options to calculate incidental water use.

It was noted that incidental water use is difficult to calculate for agencies with less sophisticated billing software, and the group discussed how to best incentivize water savings. It was further noted that water agencies will have numerous ways to meet their target, and the group asked for a brief overview of how all the SBx7-7 draft methodologies fit together. *See below.*

Water as Part of a Product

Mr. Frame sought to further clarify water used as part of a product. He cited examples such as if a manufacturer were to process water and include in the final product, or if the product is repackaged into another product. He asked for the group's feedback if these types of examples would still be considered as process water.

- Mr. McNeil voiced that the water considered as process water would only include the water used within the facility
- Mr. Bolier mentioned the water used to make a computer chip would be process water.
- Kevin Olsen, Nalco, added that water included in chip manufacturing would be difficult to reduce, but there are ways to save water in the cooling process.
 - Ms. Krebs responded that cooling is an important part of the production process, and that many organizations would not have the ability to retrofit their facilities.
 - Mr. Frame reminded the group that the regulation cannot require suppliers to change the production process.
- Ms. McNulty encouraged including language to promote the best available technology and recycled water when available.
 - Some participants noted that these provisions are already mandates in State law.

Other Issues/Concerns

Mr. Frame asked the group to raise any other thoughts that had not yet been discussed:

- Mr. Bolier asserted that there are opportunities to conserve water beyond a per capita basis, particularly incentives in new technologies. He felt that the regulation should more directly incentivize manufacturers to reduce water in their production.

- Elizabeth Bettencourt, CUWCC, noted that the group can identify ways to conserve urban water, but without the authority to identify industrial water BMP's, there is no authority to regulate the production process without more legislation.
 - Mr. Frame did acknowledge that the group is limited to what they have been tasked to address. The group can offer guidance to set the criteria for what is considered substantial process water, which would impact how much water is excluded from the gross calculation.
 - Ms. Huff added that the CII Task Force will have the authority to set the BMP's.
- Mr. Harris requested that the group discuss substantial water use and a provision for changes in demand related to the economy's condition. He also suggested that DWR elaborate on the meaning of a new or existing customer, as retrofitting cooling equipment for the production process may not change the process itself.

Draft Methodology Overview

Mr. Alemi gave a brief overview on the draft methodologies. He explained a supplier will calculate a baseline from which to reduce water use by 20% by 2020. The law accounts for three methods to calculate the 2020 target: by gross water use, by total water delivered to customers divided by the service area population, or calculated by GPCD. In calculating the baseline, if the process water contributes to a substantial portion of the industrial water use, then the supplier is permitted to subtract that amount from the gross water use. By doing so, the supplier would be exempted from needing to reduce water in a sector than cannot be realistically reduced. Ms. Chorneau clarified that the draft methodologies are part of the U3 project.

Closing Remarks

Mr. Alemi thanked the group for their continued interest and sincere comments. He affirmed that staff is actively listening, and appreciated the constructive and effective work together. A draft structure for the regulation will be sent out to the group via email prior to the next meeting.

Adjourn

Attendance

In room:

David Arruta, USSRA
 Elizabeth Betancourt, CUWCC
 Craig Bolier, Nalco
 Dong Chen, DWR
 Patti Krels, Industrial Environmental
 Association
 Jack Hawks, CWA

Trudi Hughes, CLFP
 Sean McNeil, City of Santa Rosa
 Amy McNulty, IRWD
 Noe Meza, Central Contra Costa Sanitary
 District
 Anita Milman, NRDC
 Kevin Olson, Nalco

Webinar:

David Almeida, San Diego Regional EDC
 Gigi Bealkowski, LifeScan
 Peter Brostrom, DWR
 Ray Cardwell, Contra Costa Water District
 Elizabeth Clatfelter, Municipal Water District of

Orange County
 Brad Clauss, Johnson & Johnson Consumer
 Companies Inc.
 Mitch Dion, Rincon MWD
 Luis Generoso, City of San Diego

Scott Hawley, BP
David Isaacson, WaterWise Consulting, Inc.
Jennifer Kreusch, Johnson & Johnson
Ed Kriz, City of Roseville
Nancy Noe, Johnson & Johnson
Joe Patterson, San Diego State University

Enrique Silva, LADWP
Bekele Temesgen, DWR
Steven Toth, BP Carson Refinery
Jori Tulkki, Gen-Probe Incorporated
John Woodling, Regional Water Authority

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