MEETING SUMMARY
Executive Order B-37-16
Water Shortage Workshops

August 31, 2016 | Sacramento, CA

CA Department of Water Resources | State Water Resources Control Board | CA Department of Food and Agriculture | CA Public Utilities Commission | CA Energy Commission

Prepared by the Center for Collaborative Policy (CCP)

Meeting Objectives

- Present and receive comments on a framework and key concepts that would result in Water Shortage Contingency Plans (WSCP) that water suppliers are able to implement quickly and effectively during statewide droughts as directed in EO B-37-16.

A. Background

On May 9, 2016, Governor Edmund G. Brown Jr. issued Executive Order B-37-16 (EO). This EO builds on the conservation accomplished during the recent drought and implementation of the Governor's California Water Action Plan and temporary statewide emergency water restrictions to establish longer-term water conservation measures, including permanent monthly water use reporting, new permanent water use standards in California communities, and bans on clearly wasteful practices (e.g., hosing off sidewalks, driveways, and other hardscapes). The full text of the EO can be found online at http://www.water.ca.gov/wateruseefficiency/conservation/.

The EO designates several responsibilities to the Department of Water Resources (DWR), California State Water Resources Control Board (SWRCB), Department of Food and Agriculture (CDFA), California Public Utilities Commission (CPUC), and Energy Commission (CEC) (collectively, the EO State agencies) to satisfy the EO Directives. The EO State Agencies have been working in project teams (collectively, the EO Project Teams) to address the various components outlined in the EO Directives.

The EO specifically directs DWR and SWRCB to consult with urban suppliers, local governments, environmental groups, and other partners to update requirements for water shortage planning, directly in relation to EO directives #8, #9 and #10:

> **EO #8**: *The Department shall strengthen requirements for urban Water Shortage Contingency Plans, which urban water agencies are required to maintain. These updated requirements shall include adequate actions to respond to droughts lasting at least five years, as well as more frequent and severe periods of drought. While remaining customized according to local conditions, the updated requirements shall also create common statewide standards so that these plans can be quickly utilized during this and any future droughts.*
>
> **EO #9**: *The Department shall consult with urban water suppliers, local governments, environmental groups, and other partners to update requirements for Water Shortage Contingency Plans. The updated draft requirements shall be publicly released by January 10, 2017.*

> **EO #10**: *For areas not covered by a Water Shortage Contingency Plan, the Department shall work with counties to facilitate improved drought planning for small water suppliers and rural communities.*

This meeting was a public workshop to discuss and receive suggestions on a framework for the development of Water Shortage Contingency Plans (WSCPs). Several members of the Urban Advisory Group (UAG) were in attendance, though the workshop was heavily comprised of public members representing water agencies. DWR staff provided presentations on proposed concepts for WSCP framework design, then looked to participants to provide input and offer suggestions on how this framework might be structured.

Workshop Summary

(*Refer to Appendix A for the meeting presentation slides and Appendix B for the Draft Discussion Paper for improving WSCPs*)

Unless noted otherwise, responses are from the WSCP Project Team, which includes CA Department of Water Resources (DWR), State Water Resources Control Board (SWRCB), CA Department of Food and Agriculture (CDFA), CA Public Utilities Commission (CPUC), and CA Energy Commission (CEC) (collectively EO State Agency staff and independent consultants.

B. Recurring Themes

- Participants expressed support for the general framework and understanding for why the State wants a coordinated response to a water shortage emergency; however they shared several concerns with the possible process and details on how to implement the new requirements.
- What is the timeframe for implementing the new WSCP requirements, and what is the expected change in level of effort?
- What exactly are the shortcomings of the current WSCP assessments? Will DWR evaluations of WSCP be made available? Water agencies cannot offer specific suggestions without shared understanding of others' WSCPs and DWR's review.
- Water reliability assessment information that appears to be lacking in the current WSCPs may be readily available in other documents that water agencies provide to EO State Agencies.
- A singular percentage reduction standard applied statewide does not work. It can cause unintended consequences (e.g., less cooperation from customers).
- Expand the definition of stages beyond reduction measures. Allow for flexibility in what might trigger WSCP stages and how suppliers respond to an emergency (beyond demand reduction). A supplier may switch to groundwater or invoke a water transfer. If the State imposes a statewide conservation standard, suppliers cannot transfer water to those that may need it.
- Scenario-planning needs to be linked to the likelihood of its occurrence for a water agency.
- Enacting a statewide or regional conservation mandate seems unnecessary if each supplier has its supplier-specific triggers for the WSCP stages, and suppliers implement their specific actions for a particular emergency stage.
- The State should help local water suppliers communicate with one another and other local agencies (e.g., County Office of Emergency Services) to develop a coordinated regional response to water emergencies. The State agencies should also ensure they communicate with one another to share data to develop a shared approach to these water shortages issues.

- "Long-term demand reduction" implies the State wants to cap supply augmentation investments. Consider rephrasing it as, "long-term investment for short-term drought response capabilities."
- Clearly differentiate that the long-term conservation and efficiency efforts to achieve established water targets are very different from how a supplier might respond to an emergency though it's WSCP.
- In order to ensure customer compliance and plan accordingly, water suppliers require transparency from the State regarding what may trigger a regional or statewide reduction mandate. This transparency requires the same level of detail that suppliers must provide in their UWMPs and WSCPs. If water agencies know exactly what might trigger State intervention, they can better plan to avoid such an outcome.

C. Welcome, Introductions, and Agenda Review

Diana Brooks and Kent Frame, DWR, welcomed attendees to the Water Shortage Workshop and reviewed the meeting objectives.

D. Overview of EO Directive Implementation and Developed Framework

(Refer to presentation slides 2-9, Appendix A)

Kent Frame, DWR, reviewed EO Directives #8 and #9 (*Refer to Appendix C*), which outline DWR's responsibilities to strengthen local drought resilience. He then presented the WSCP Project Team's proposed framework to address the EO Directives, including a table demonstrating the possible flow of actions between the State and urban suppliers to plan, assess and respond, and report WSCPs (as part of Urban Water Management Plans [UWMP]) and assessments.

Stephanie Lucero, Center for Collaborative Policy Facilitator, reviewed the agenda, meeting ground rules, and provided webinar instructions. She emphasized emailing written comments to wue@water.ca.gov and reviewed the websites where meeting materials and updates will be posted. She informed participants that the primary purpose of the meeting was to provide an opportunity for the EO State agencies to receive stakeholders' input on WSCP framework development.

A. Overview of Executive Order B-37-16 Directive Implementation

Mr. Frame briefly described the context for the EO and the EO directives associated with the topic of this workshop, including the context for developing a draft WSCP framework per existing statutory language. He then reviewed the activities taken to date and future planned activities by the EO State Agencies that will serve to meet the directives outlined in the EO.

Mr. Frame next described the focus of the WSCP framework, and emphasized the importance of ensuring the framework includes standards, and assures quick response by agencies in times of emergency. Key feedback on the draft WSCP framework received by UAG members and the public at the 08-31-16 Sacramento workshop was shared, before a framework overview was provided.

He then projected a diagram and described the following four key components (or phases) of a WSCP, and the corresponding roles of the urban supplier and state agencies:

1. Plan
2. Assess

3. Respond
4. Report

B. WSCP Framework: Planning and Assessing Supply and Demand

A review of the proposed responsibilities related to WSCP framework planning was provided. *(Refer to presentation slides 10-14, Appendix A)*

Discussion from Workshop participants was prompted with two questions related to **planning**:

1. *When performing drought risk analysis, should temporary supply augmentation sources be included before or after assessing actual or projected supply?*
2. *Where is WSCP consistency across a region or the state needed?*

And three discussion questions related to assessing supply and **demand**:

1. *Does the basic draft framework adequately improve local drought planning and better accountability and meet the objective of EO#8?*
2. *What may be other key objectives of EO#8?*
3. *How could a water supplier quickly implement and fund a WSCP?*

Clarifying Questions

- Did previous meetings discuss the difference between retailers and wholesalers, and how that differentiation might affect the structure in WSCP requirements?
    - Response: We received a few comments that we should be aware of the differences between retailers and wholesalers. For now, the team is looking at the overall framework.
- What exactly are the shortcomings of the current WSCP assessments?
    - Response: Based on our WSCP reviews thus far, assessments vary widely. Plans do not conduct a thorough risk assessment of supply and demand scenarios or planning over successive years. The EO calls for increased preparedness for more frequent or severe droughts; most assessments use the three driest years on record, which does not consider drought duration or frequency. Also, several plans did not identify what might trigger a response action. The goal is to help suppliers explore more accurate scenarios and be able to respond more quickly and effectively.
- Are the WSCPs that lack robust planning out of compliance? Are EO State Agencies working to bring these water agencies into compliance with the Urban Water Management Planning Act (UWMPA)?
    - Response: Currently DWR can only review a UWMP for completeness. UWMPs can have all the information to be “complete” and still lack the details and planning elements to be effective. Suppliers are often encouraged to comply with UWMP requirements to be eligible for funding.
- When will suppliers need to submit UWMPs with the new WSCP requirements?
    - Response: The next UMPW update will occur in 2020; however depending on if/how the current drought continues, suppliers may need to implement the new WSCP actions as early as next year.

- Will DWR's evaluations of WSCPs be made available? Water agencies cannot offer specific suggestions without shared understanding of others' WSCPs and DWR's review.
    - Response: The Project Team has been reviewing WSCPs from 2015 and 2010 UWMPs. They have been focused on developing the framework, but intend to provide an updated analysis. The plans vary widely, and identifying who had water problems before 2015 and why presents a substantial challenge. We plan to conduct one-on-one interviews with the agencies DWR reviewed to better understand their situation. We welcome suggestions from anyone who knows of an agency who had a water problem and how the agency addressed it.
    - [UAG Member]: The unexpected 25% reduction mandate likely affected water agencies' UWMPs significantly, which could explain some of the variance among plans.
- Does the action flow chart (*Refer to Slide 8*) indicate that DWR will review plans and send back if the plans do not meet the new criteria on the five-year basis; this will be in addition to suppliers complying with SWRCB's annual stress tests? How have DWR and SWRCB divided the roles and responsibilities for this effort?
    - Response: Those details have yet to be determined. We have a Reporting, Compliance, and Enforcement (RCE) team charged with addressing issues such as these.
- How does DWR envision integrating standardized requirements into the WSCPs while still providing flexibility for each supplier?
    - Response: The current framework the team is proposing includes standardized stages in response to an emergency. Those stages demand a reduction based on local assessment. Local agencies will have flexibility in how they achieve that reduction. Suppliers may operate at different stages depending on the range of the emergency. In the more extreme and widespread emergencies, the State may institute a regional (or at the very extreme, a statewide) "stage."
- Will all suppliers need to prepare WSCPs, even those who do not currently have an UWMP?
    - Response: The EO Directive includes all suppliers with 3000 or more connections or who supply 3000 or more acre feet of water annually. However, EO Directive #10 instructs DWR to work with the counties to develop drought contingency plans for areas not covered by WSCP, including small water suppliers and rural communities.
- How does DWR define a "region" in this UWMP/WSCP context?
    - Response: Currently the team uses the term broadly. It may refer to a county, a hydrologic region, etc. We will discuss how we will define it within the EO context.
- What emergency would warrant a State-mandated regional response that would apply to individual water supplier?
    - Response: For example, a grand jury issued a report that suppliers in Santa Barbara County could have responded to Lake Cachuma's over-withdrawal if the suppliers had coordinated at a regional level.
    - [UAG Member]: Keep in mind that a statewide percentage reduction would not have improved these suppliers' resource management or infrastructure. That State should explore other methods to address the issue (e.g., streamline water transfers, provide funding, offer facilitation to reach a solution, etc.).

Discussion

1. Does the basic draft framework adequately improve local drought planning and better accountability and meet the objective of EO #8?

Participants expressed support for the general framework; however they shared several concerns with the possible process and details on how to implement the new requirements:

- DWR's review of WSCPs needs to clearly describe what and how WSCP requirements need to be strengthened to address the current plans' shortcomings.
- Water reliability assessment information that appears to be lacking in the current WSCPs may be readily available in other documents that water agencies produce:
    - Agencies' water supply master plan or a supply reliability analysis that outlines what actions to take under the worst case scenario
    - Suppliers' annual supply and demand analysis that they report to their Board of Directors.
    - Public Water System Statistics (PWSS) reports
    - Data reporting to SWRCB
    - California Public Utilities Commission (CPUC) reporting
    - CPUC and California Energy Commission (CEC)'s standards for resource planning and obtaining additional resources when needed
- Allow for flexibility in what criteria might trigger WSCP stages. Water agencies' water portfolios vary across the State and regions.
- [UAG Member]: The discussion paper states that WSCPs need more specific criteria for triggering stages and actions, which seems to contradict the following statement that stages need to have ranges of demand reduction targets. Ideally, this rigorous planning will help avoid a mandated statewide reduction from the State.
- If each supplier has its supplier-specific triggers for the WSCP stages, and suppliers implement their specific actions for a particular emergency stage, then enacting a statewide or regional conservation mandate seems unnecessary.
    - [Facilitator]: Summarizing discussions thus far: the EO State Agencies expressed that the intent for the new WSCP requirements is to avoid a statewide mandate (such as the recent % reduction mandates by previous Executive Orders) by preventing such an extreme emergency; however the State cannot ignore that such an emergency *might* occur. Many of the water agencies attending these workshops have robust plans. The intent is to build upon lessons learned. If you have a great model for the WSCP Project Team to consider, be sure to send that information to Kent Frame as soon as possible so the team can incorporate that into their recommendations.

2. What may be other key objectives of EO #8?

- EO State Agencies should not "manage to the lowest common denominator." Requirements should build California's resiliency to water shortages and not just aim to bring suppliers into compliance.
- [EO State Agencies]: Include the climate change risk projections that the California Water Commission recently approved for dams.
    - Response: The WSCP Project Team is exploring paleo records to understand historical trends in water availability.
- Standardized stages may possess certain complications; however it also provides an opportunity for water suppliers to engage customers and raise public awareness.

- [EO State Agencies]: We acknowledge that future mandates will occur; we want to ensure how those mandates are implemented will be more coordinated and effective than the recent drought response.

3. How could a water supplier quickly implement and fund a WSCP?

- The San Diego County Water Agency's drought response plan may serve as a useful case study of a successful program. The agency achieved a 36% reduction in water use.
- Avoid meshing supply-risk planning too much with drought-response planning. Risk planning often involves additional bureaucratic/administrative steps to implement, and drought response actions need to launch rapidly in an emergency.

E. Planning; Assessing Supply and Demand

(Refer to presentation slides 10-14, Appendix A)

Discussion

1. When performing drought risk analyses, should temporary supply augmentation sources be included before or after assessing actual or projected supply?

- The stress test may not necessarily help suppliers prepare for a worst case scenario (e.g., suppliers often use the drought in the 1970s as a worst case scenario for which to plan).

2. Where is WSCP consistency across a region or the State needed?

- The State should provide technical assistance to suppliers with fewer resources to conduct simulations that help predict future water availability. This will support greater consistency among WSCPs if more agencies have access to the same tools.
    - However, the State should also allow agencies to use a variety of models (e.g., different climate change models) to assess potential impacts from climate change.
- The stages should give suppliers more flexibility in how they respond to an emergency beyond demand reduction. A supplier may switch to groundwater or invoke a water transfer. If the State imposes a statewide conservation standard, suppliers cannot transfer water to those that may need it.
- WSCPs could include fiscal policy guidelines to avoid massive rate escalations during a drought. In Roseville, the agency established a fiscal reserve policy to stability rates during the drought because customers reacted so negatively to rate increases.
    - <u>Response</u>: This suggestion relates to the recently-passed SB 814, which requires urban water suppliers establish a rate structure or an excessive water use ordinance.
- Suppliers and the State should incorporate climate change impacts into their planning (e.g., plan for a ten-year drought) and catastrophic events (e.g., fires, earthquakes, etc.).
    - Suppliers should use scenarios that have a greater probability of occurring in their area. Historical data may be irrelevant in one area; another location may have a very low probability of experiencing a ten-year drought.
- Small communities on the outskirts of urban areas often suffer dry wells first. This is a predictable issue for which the State and suppliers can plan. WSCPs should include methods for transporting water to these communities in an emergency (e.g., drought, fires, etc.). The State should provide the technical and coordination assistance to prepare a region for this situation.
    - State agencies, County Office of Emergency Services, and water agencies need to meet and coordinate to prepare for drought emergencies. The response to the recent drought was often inhibited by tangled miscommunication.

- Another example: the Sustainable Groundwater Management Act (SGMA) has been motivating local agencies to develop more coordinated systems to achieve groundwater sustainability for the whole basin.
- Improved coordination among State and local agencies and a wider array of available strategies to address an emergency seems more aligned with the watershed-level management approach.

F. Responding and Reporting

(Refer to presentation slides 15-19, Appendix A)

Discussion

1. Are the local and State responses adequate?

- Suppliers need flexibility to use various strategies to adjust consumers' behavior that work for their local community (e.g., customers in one region did not significantly respond to the percentage reduction target).
- Since suppliers vary widely in their supplies and capabilities, perhaps EO State Agencies should explore a model stage rather than standardized WSCP stages. Then regions who need to work together can develop partnerships and other agencies can select models that suit their needs. This subtle difference offers agencies greater flexibility in their responses.
- The State must describe what may trigger a regional or statewide reduction mandate with the same level of detail that suppliers must provide in their UWMPs and WSCPs. If water agencies know exactly what might trigger State intervention, agencies can better plan to avoid such an outcome.
- Do EO State Agencies have enough resources to implement the proposed new WSCP requirements and/or conduct qualitative review of WSCP?
    - Response: That is partly why DWR is proposing to use the existing UWMP process for most of this effort.
- Is the State mandating "efficiency" or "conservation" objectives (*Slide 16*, *Appendix A*)?
    - Response: Perhaps the slide should say "conservation" rather than efficiency. The ultimate purpose for the WSCP is to increase efficiency and conservation. We wanted to create a link in the response to the EO "Use Water Wisely" effort with urban supplier-based targets within statewide standards. Therefore, in the case of an emergency that triggers statewide concern, the State's response would relate to those targets to assist responsive implementation. It also allows flexibility for agencies who already have good water conservation (e.g., would only need to conserve by 15% rather than 25%).
- SB X7-7 was a multi-year process that addressed long-term demand management; efficiency measures and targets achieved over a long period of time make sense in this context. Achieving long-term targets does not seem to relate to short term responses in the WSCPs.
    - SB X7-7's long-term targets are different from the WSCP *emergency* response process.
- "Long-term demand reduction" implies the State wants to cap supply augmentation investments. Consider phrasing it as, "long-term investment for short-term drought response capabilities."
- DWR and SWRCB are requesting similar data; they need to share data to develop a more coordinated and aligned approach in response to that data.
- Have EO State Agencies considered the fire emergency management and response system as a model for WSCPs?
    - Flood control response uses a similar system.

    - Response: The State utilized the SEMS structure of the first time to address this drought, and parties were not well-prepared or coordinated. A lot of lessons learned emerged from that experience.

2. Is the proposed level of reporting to the State sufficient?

- [UAG member]: What is realistic for the State to evaluate compliance? What are the repercussions for noncompliance? The State needs a robust compliance analysis and assistance process to help suppliers develop UWMP/WSCPs that considers large-scale and complex variables such as impacts on the watershed level, snowpack, climate change, etc.
    - [Facilitator]: Compliance evaluation, noncompliance repercussions, and technical assistance are all important topics for the RCE Project Team to discuss.

3. What would make reporting easier to submit and analyze?

- What is the extra level of effort to conduct/document/submit annual assessments and submit WSCPs with new requirements every five years with UWMPs?
    - Response: Uncertain at this point. Our proposal calls for an annual assessment that presumably would inform long-term planning. The supplier conducts the annual assessment internally unless an emergency invokes the WSCP. The intent is to use and improve existing systems to minimize changes in the level of effort.

G. Proposed State Standardized WSCP Stages

(Refer to presentation slides 20-21, Appendix A)

Discussion

1, How do we define baselines to evaluate conservation savings?

- If water suppliers already conduct highly-efficient water use practices, what is left to do if the State mandates another XX% reduction?
    - Efficient practices often means purchasing and using more efficient appliances and technology. There is always an opportunity to use those appliances less often (i.e. conservation).

2. What elements are incorporated into a trigger?

- [UAG member]: I still have some concerns about the statewide and regional triggers; however they can help the State identify where to target its resources. Specific questions about the triggers include:
    - How will the State use the statewide and regional triggers?
    - When do agencies conduct the assessments (should not be during winter)?

3. At what point does a trigger elicit a WSCP Stage?

- The current WSCPs already include a 50% shortage provision.
- The term "mandate" triggers water suppliers' apprehension about the level of State oversight and restrictions.
    - Response: We hear and understand your concerns. The proposed actions are not set in stone; we wanted to elicit your feedback on our initial thoughts. The WSCPs' goal is for the State to be prepared for the major, large-scale crises that warrant State response. What we hear from you is that the State needs to explicitly describe those triggers and what the mechanism for implementation might be.
    - [Facilitator]: The RCE Project Team will also discuss these issues.
- Consider redefining "stages." Normally "stages" refers to the hydrologic conditions of supply and demand, rather than the response to those conditions.

H. Closing Comments

Kent asked attendees to send the WSCP Project Team examples, case studies, reports, notes, etc. that will help the Project Team better understand what information currently exists and how others have approached their water shortage contingency planning.

I. Attendees

Full Name	Affiliation
Jim Peifer*	City of Sacramento
Laurel Firestone*	Community Water Center
Conner Everts*	Environmental Justice Coalition for Water
John Woodling*	Regional Water Authority
Chris Brown	CB Consulting
John Brady	Central Coast Water Authority
Jim Mulligan	City of Roseville
Kelye McKinney	City of Roseville
Mary Lou Cotton	Consultant
Chris Dundon	Contra Costa Water District
Kim Lin	Contra Costa Water District
Stefanie Olson	Dublin San Ramon Services District
Paul Schubert	Golden State Water Company
John Mills	Office J S Mills
Mike Rossiter	Peterson Brustad, Inc
Linda Yager	Placer County Water Agency
Amy Talbot	Regional Water Authority
Carlos Smith	Sacramento County Water Agency
Greg Bundesen	Sacramento Suburban Water District
Tracy Hemmeter	Santa Clara Valley Water District
Carrie Pollard	Sonoma County Water Agency
Gary Arant	Valley Center MWD / San Diego CWA

**UAG Member*

Agency and Consultants

Name	Agency / Organization
Diana Brooks	Department of Water Resources
Kent Frame	Department of Water Resources
Dave Todd	Department of Water Resources
Gwen Huff	Department of Water Resources
Fran Spivy-Weber	State Water Resources Control Board
Kathy Frevert	State Water Resources Control Board
Greg Young	Tully & Young
Leah White	Tully & Young

Yung-Hsin Sun	MWH
Stephanie Lucero (Facilitator)	Center for Collaborative Policy
Stephanie Horii	Center for Collaborative Policy

The following Agencies/Organizations attended via Webinar:

Akel Engineering Group, Inc
Alameda County WD
BAWSCA
Brown and Caldwell
BVWD
California Building Industry Association
Camrosa Water District
CCWD
City of Fairfield
City of Modesto
City of Pittsburg
City of Roseville
City of Ventura Water
Coastside Water District
CPUC
Del Oro Water Company
DWR
EBMUD
Great Oaks Water Company
Kennedy/Jenks Consultants
LADWP
Manage Water Consulting, Inc.
North Marin Water District
OMWD
San Francisco Public Utilities Commission
San Jose Municipal Water System
San Jose Water Co.
San Juan Water District
SDCWA
Solano County Water Agency
Sweetwater Authority
Tuolumne Utilities District
VOMWD
Water Systems Consulting, Inc.
West Basin MWD

J. List of Appendices

- Appendix A – Presentation Slides
- Appendix B – Draft Discussion Paper for Improved WSCP
- Appendix C – Executive Order B-37-16

Appendix A - Presentation Slides

EXECUTIVE ORDER B-37-16

Making water conservation a California way of life

Water Shortage Contingency Planning Workshop

August 31, 2016 – Sacramento

September 1, 2016 – Orange County

EXECUTIVE ORDER #8 STRENGTHENING LOCAL DROUGHT RESILIENCE

- *(EO#8) The Department shall strengthen requirements for urban Water Shortage Contingency Plans, which urban water agencies are required to maintain. These updated requirements shall include adequate actions to respond to droughts lasting at least five years, as well as more frequent and severe periods of drought. While remaining customized according to local conditions, the updated requirements shall also create common statewide standards so that these plans can be quickly utilized during this and any future droughts.*
- (EO#9) *The Department shall consult with urban water suppliers, local governments, environmental groups, and other partners to update requirements of Water Shortage Contingency Plans. The updated draft requirements shall be publicly released by January 10, 2017.*

Appendix A

CONTEXT FOR DEVELOPING DRAFT FRAMEWORK

Existing statutory language

CWC §10632(a): *The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier. (1) Stages of action…, (2) Estimate of minimum water supply for next 3 years…, (3) actions for catastrophic event…,(4)…(9)…*

CWC §10631(c): *(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.*

CWC §10635(a): *Every urban water supplier shall include…an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years.*

Connect and improve these directives in existing statute

3

OVERVIEW OF ACTIVITIES

To-date:

- Statewide listening sessions
- Urban Advisory Group (UAG) meeting
- Review sampling of existing WSCPs (2010 and 2015)
- Develop initial framework

Planned

- WSCP workshops (current/planned)
- UAG meeting (Sep. 19 and 20, others)
- Continued review of existing WSCPs
- Continued framework refinement and added detail
- Develop recommendations for public report

4

Appendix A

LISTENING SESSIONS AND UAG FEEDBACK

- Provide flexibility in local contingency planning
- Keep local flexibility for response measures.
- Incorporate both supply diversification and demand management approaches.
- Comprehensive approach that balances various customer group demands, finances, supply management, and risk.
- WSCP guidance to illustrate ideas, lessons learned, and likely savings.
- Focus standards on required content and allow suppliers to determine triggering criteria for shortage responses.
- Consider requiring drought rate structures.

5

PROPOSING FRAMEWORK THAT INCLUDES STANDARDS AND ASSURE QUICK RESPONSE

Focus of framework is to:

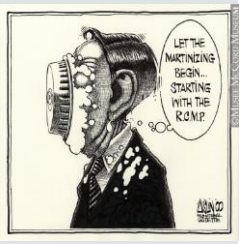
- Assure urban water suppliers undertake good drought preparedness **planning**, that reflects common standards, and ensures quick implementation to react to longer lasting and more severe periods of drought, and local flexibility.
- Require urban water supplier to have clear **accountability** to the State as well as its customers that it is undertaking appropriate actions; building on existing reporting structures

Appendix A

FRAMEWORK OVERVIEW (EMPHASIZE THIS IS A PROPOSAL)

Plan

- Supplier-specific WSCP actions within standardized WSCP stages
  - "Drought-risk" assessment process
  - Triggering criteria
  - Staged response strategies tailored to local conditions



Assess and Respond

- Evaluate shortage risk per WSCP process
- Implement WSCP when certain conditions are triggered

Report

- Submit to DWR with UWMP (update every 5 years)
  - WSCP
  - "Drought risk" assessments (long-term and annual)
- Post UWMP, WSCP and assessments on supplier's website
- (if mandated by defined triggers) Submit additional information to State

Red Flagged	URBAN SUPPLIER		STATE AGENCIES
Plan	1. Develop WSCP 2. Develop drought-impacted supply scenarios 3. Develop response triggers 4. Assure rapid implementation		1. Develop regional "drought concern" triggers 2. Define approaches to be used by supplier for long-term and annual "drought-risk" assess. 3. Create standardized WSCP Stages
Assess	Long-term "drought-risk" Assessment	Annual "drought-risk" Assessment	1. Assess regional water conditions and compare to State triggers 2. Assess supplier-reported monthly data in relation to State triggers
Respond	Long-term actions to address risk	WSCP Stages Targets	1. Mandate regional efficiency targets 2. Implement Reporting/Compliance/Enforcement (RCE) procedures
Report	1. Own website 2. To DWR w/ UWMP - WSCP - 20-yr assessment - past annual assess.	1. To State: regular monthly (EO#3) and annual reporting 2. To State (if required or triggered): - Current annual assessment - Additional data (to inform RCE procedures)	

Appendix A

Discussion Session 1:

Questions:
1. Does the basic draft framework adequately improve local drought planning and better accountability and meet the objective of EO#8?

2. What may be other key objectives of EO#8?

3. How could a water supplier quickly implement and fund a WSCP?

URBAN SUPPLIER

Plan

- Water Shortage Contingency Plan
- Key WSCP elements
- Assure ability to quickly implement
- Response strategies reflect supplier-specific circumstances and opportunities

Appendix A

STATE AGENCIES

Plan

- Develop regional drought-concern triggers
- Develop triggers associated with supplier reporting
- Define guidelines for water supplier's "drought risk" assessment
- Create standardized WSCP Stages

URBAN SUPPLIER

Assess

- Long-term "drought-risk" assessment (20-years)
  - Understand near, mid-, and long-term risk under supply scenarios
  - Reflect projected demand
  - Provide basis for annual "drought-risk" assessment
  - Update every 5-years and submit with UWMP
  - Improve linkage between CWC§10635, §10631 and §10632
- Annual "drought-risk" assessment
  - Relate to 20-year assessment
  - Understand current-year risk
  - Consider risk over next 5 years (as appropriate)
  - Simplified to undertake annually
  - Useful results to relate to response triggers
  - Retain for submittal with UWMPs

Appendix A

STATE AGENCIES

Assess

- Assess statewide and regional water conditions
  - U.S. Drought portal
  - Snow surveys
  - Bulletin 120 updates
  - Others (yet developed?)
  - SWP and CVP allocations
  - Local surface supplies
  - Groundwater elevations/trends
- Assess supplier-reported monthly data
- Evaluate urban purveyor WSCP compliance

Discussion Session 2:

Questions:

1. When performing drought risk analysis, should temporary supply augmentation sources be included before or after assessing actual or projected supply?

2. Where is WSCP consistency across a region or the state needed?

Appendix A

URBAN SUPPLIERS

Respond

- Long-term "drought-risk" assessment results
  - Drive planning and investment decisions for long-term demand reduction measures and supply augmentation projects
  - Direct short-term drought response strategies
  - Helpful for communications with elected officials and customers
- Annual "drought-risk" assessment results
  - Trigger response strategy
    - Temporary supply augmentation (if any already in place)
    - WSCP Stage corresponding with supply/demand assessment
  - Self-monitor responses for compliance with goals
  - Collect data for reporting (may already be doing this)

STATE AGENCIES

Respond

- When regional/Statewide concern is triggered:
  - Mandate regional efficiency objectives
  - Review and assess supplier reporting to evaluate whether mandate will/is helping meet State's objective
  - Implement State level "Reporting, Compliance, Enforcement" (RCE) procedures
- When supplier(s) trigger a concern
  - Mandate efficiency objective
  - Implement State level "Reporting, Compliance, Enforcement" (RCE) procedures

Appendix A

URBAN SUPPLIERS

Report

- Submit to DWR every 5-years as part of UWMP reporting
  - WSCP (as updated each 5-year period)
  - Long-term "drought risk" assessment documentation
  - Past annual "drought-risk" assessments for intervening years since last UWMP update
- If the Local/State triggers a mandatory WSCP Stage, effected suppliers submit to State:
  - Current annual "drought-risk" assessment
  - Additional data (to inform State's RCE procedures)

STATE AGENCIES

Report

- Maintain online reporting system
- Review reports
- Provide period updates of overall implementation
- Post results at website(s)
- Provide feedback and guidance to suppliers
- Carry out RCE, as needed

Discussion Session 3:

Questions:
1. Are the local and State responses adequate?

2. Is the proposed level of reporting to the state sufficient?

3. What would make reporting easier to submit and analyze?

PROPOSED STATE STANDARDIZED WSCP STAGES

- EO's water waste prohibitions apply at all times
- Standardized WSCP Stages (locally identified actions for each stage)
  - Stage 1 – minimum of 5% up to 10%
  - Stage 2 – up to 20%
  - Stage 3 – up to 30%
  - Stage 4 – up to 40%
  - Stage 5 – up to 50%
  - Stage 6 – beyond 50%
  - Any actions necessary for catastrophic supply interruptions

Discussion Session 4:

Questions:
1. How do we define baselines to evaluate conservation savings?

2. What elements are incorporated into a trigger?

2. At what point does a trigger elicit a WSCP Stage?

LOOKING FORWARD:

Comments
- Email: WUE@water.ca.gov
- Address: DWR, Water Use and Efficiency Branch
  P.O. Box 942836
  Sacramento, CA 94236-0001

Actions
- Additional WSCP workshops (current/planned)
- UAG workshop (Sep. 19 and 20, others)
- Continued review of existing WSCPs
- Continued framework refinement and added detail
- Develop recommendations for public report

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DRAFT: Discussion Paper 1, Initial Understanding, Approach and Recommendations for Improved Water Shortage Contingency Planning

[*Note: This paper is still a work in progress and represents DWR and SWRCB staff's initial understanding of the EO's directives #8 and #10, outlines its draft approach, and sets forth the framework for developing recommended standards for improving urban and rural community drought planning and readiness. The materials presented in this draft discussion paper are based upon preliminary understanding of provisions in the Executive Order B-37-16, and are not considered to be DWR's official position. DWR invites comment and input on the draft materials and identified questions as presented in this paper.*]

Executive Order B-37-16 (hereafter "EO"), issued by Governor Brown on May 9, 2016, includes directives to strengthen the drought resilience of water suppliers and rural communities through improved requirements for water shortage planning and development of statewide standards to allow quick response to the on-going and any future droughts. Specifically, the EO directs the Department of Water Resources (DWR) and the State Water Resources Control Board (SWRCB) to consult with urban suppliers, local governments, environmental groups, and other partners to update requirements for water shortage planning. DWR and the SWRCB are also coordinating with the other State agencies as part of a collective effort to implement the many directives of the EO.

This discussion paper provides the staff's understanding of two of the EO directives, outlines its approach to addressing these directives, and sets forth the framework for developing recommendations.

1.0 EO B-37-16 Directives for Strengthening Local Drought Resilience

The EO had many specific actions directing the SWRCB and DWR (collectively, the "Agencies") to implement an array of measures to help make water conservation a California way of life. This paper focuses on the subset of directives to DWR targeting measures to strengthen local drought resilience. Specifically, the EO included:

> EO #8: *The Department shall strengthen requirements for urban Water Shortage Contingency Plans, which urban water agencies are required to maintain. These updated requirements shall include adequate actions to respond to droughts lasting at least five years, as well as more frequent and severe periods of drought. While remaining customized according to local conditions, the updated requirements shall also create common statewide standards so that these plans can be quickly utilized during this and any future droughts.*
>
> EO #9: *The Department shall consult with urban water suppliers, local governments, environmental groups, and other partners to update requirements for Water Shortage*

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Contingency Plans. The updated draft requirements shall be publicly released by January 10, 2017.

EO #10: *For areas not covered by a Water Shortage Contingency Plan, the Department shall work with counties to facilitate improved drought planning for small water suppliers and rural communities.*

2.0 DWR Staff's Understanding of EO Directives

To enable DWR to proceed with developing recommendations to effectively strengthen local drought resilience, DWR staff studied the directives to highlight and understand specific sentences and the possible intent of wording. The resulting understanding and fundamental objective of each directive is described in the following subsections.

2.1 EO #8: Strengthen Requirements for Water Shortage Contingency Plans

The opening statement of EO#8 indicates that urban water agencies are required to maintain Water Shortage Contingency Plans (WSCP). However, current statutes only direct a defined group of urban purveyors to provide a water shortage contingency "analysis" as a component of Urban Water Management Plans (UWMPs) updated every five years – but not an actual WSCP. Specifically, the California Water Code (CWC), as part of the Urban Water Management Planning Act (UMWPA), states:

> *CWC Section 10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier.*

This code section is only applicable to an "urban water supplier," defined as a "supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually" (CWC §10617). According to DWR, there are approximately 440 urban water suppliers in the State who are subject to this statute.

While CWC §10632 only requires documenting the analysis, the section does require suppliers include several elements in the analysis, such as (a) stages of action to be undertaken in response to water supply shortages, (b) an estimate of minimum water available during the next three years, and (c) a draft water shortage contingency resolution or ordinance.

DWR's UWMP guidance document[1] helps water suppliers navigate the UWMPA statutes, suggesting narratives and considerations, and providing some tables for documenting the analysis. But, the guidance notably admits the complexities in shortage contingency planning and does not put forth minimum statewide standards beyond those specified already in CWC §10632. However, this list of required elements will be considered by DWR staff during development of the EO#8 standards.

In many instances, urban water suppliers document the shortage contingency analysis in an official WSCP, and include the WSCP as part of its UWMP submittal to DWR. But, as

[1] 2015 Urban Water Management Plan: Guidebook for Urban Water Suppliers, CA Dept. of Water Resources, January 2016 (http://www.water.ca.gov/urbanwatermanagement/docs/2015/UWMP_Guidebook_Mar_2016_FINAL.pdf)

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summarized later in this subsection, WSCPs are varied in their form, approach and functionality, in part due to lacking statewide standards.

Building upon the requirements of CWC §10632, DWR staff also considered the provisions of CWC §10631(c) and CWC §10635(a) – additional provisions of the UMWPA that directly relate to how an urban water supplier evaluates and represents water supply shortage circumstances. These sections state:

> *CWC §10631. (c)(1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) An average water year. (B) A single-dry water year. (C) Multiple-dry water years.*
>
> *(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.*
>
> *CWC §10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years.*

Water supplier-specific UWMPs completed every 5 years are intended to help suppliers assess projected supply and demand conditions, which should facilitate identifying and implementing appropriate long-term actions as well as establishing "contingency actions" should actual near-term supply or demand conditions fall outside the established projections.[2]

However, these statutory requirements, especially CWC §10635(a), generally result in an urban supplier only looking at specific snapshots in time, which may misrepresent the risk of more frequent water supply shortage conditions due to droughts lasting at least five years or more frequent and severe periods of drought. For instance, Table 7-3 (shown below) presents the information an urban supplier must submit to DWR as part of its 2015 UWMP reporting.[3]

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals					
Demand totals					
Difference	0	0	0	0	0
NOTES:					

[2] "Contingency actions" are generally defined as provisions implemented upon an unforeseen event or circumstance, such as an emergency outage or system failure, or supply or demand conditions that are outside of the supply and demand variances generally anticipated as part of longer term planning analysis contemplated in the UWMP.

[3] Table 7-3 is presented in the *2015 Urban Water Management Plans: Guidebook for Urban Water Suppliers*, DWR, January 2016, p. 7-10.

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While any one of the 5-year increments may show a surplus or shortage between supply and demand, the analysis behind the values often does not evaluate the potential frequency of shortage or the likely variance in supply conditions year-after-year, especially severe shortages that may compound from a prolonged drought.

The statutory requirement to address multiple dry years potentially provides a framework for this frequency analysis, but urban suppliers generally only characterize supplies based upon a historic three-year record rather than any predictive representation of potential variance in supplies as may occur in the upcoming 20+ year period.

Ideally, the urban supplier should evaluate an annual sequence of plausible water supply and demand conditions to understand its potential risk to shortage frequency and severity – a finding that cannot be interpreted through the 5-year incremental snapshots of supply and demand comparisons.

2.1.1 Lessons from DWR Listening Sessions

The three public listening sessions hosted by DWR in early June 2016 provided an opportunity for DWR staff to garner feedback and input from stakeholders affected by the EO. From these sessions, DWR staff synthesized the following key considerations for strengthening local drought resilience:

- Provide flexibility in local contingency planning
- WSCPs should include a portfolio of measures from which suppliers can implement, depending on the supplier's unique situation
- Drought resilience should incorporate both supply diversification and demand management approaches
- Statewide standards must consider that local drought management necessitates a comprehensive approach that balances customer demands, water supplier finances, supply management and risk tolerance, which can vary by supplier and over time.

DWR staff's main take-away from this synthesis of feedback is that any regulations or statewide standards should focus on setting forth appropriate methodologies and identified necessary WSCP elements, but not dictate specific response strategies or risk tolerance thresholds.

However, DWR staff also recognizes that any regulations or standards must set forth a mechanism to hold urban purveyors accountable for the fiduciary responsibility to its customers to provide reliable water supplies for most predictable circumstances.

2.1.2 Summary of Findings from WSCP Reviews

An additional source of information to help DWR staff consider frameworks to address the objective of EO#8 are actual WSCPs submitted by water suppliers.

WSCPs from a sampling of water suppliers associated with 2010 and 2015 UWMPs were reviewed. To ensure the samples recognized the diversity of water purveyors, the sample set has at least one purveyor from every hydrological region of the state, includes large and small purveyors, and is representative of the different types of water sources used by purveyors. In total, 11 purveyors were selected that had WSCP's from the 2010 and 2015 UWMPs. Both 2010 and updated 2015 WSCPs were reviewed for the sample group.

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Several key findings are noted based upon review of differences between each supplier's two plans, as well as differences among water suppliers. The key findings are:

- It is critical for Purveyors to identify a specific set of criteria related to the purveyor's water supplies to inform when specific stages of the WSCP should be enacted. The triggering criteria should reflect the purveyors unique water supply makeup ensuring that actions are taken at the appropriate time. For instance, a trigger could relate to supply conditions such as water storage levels, carry-over flexibility, precipitation and runoff projections, trends in groundwater levels, etc.
- Based on the samples, a range should be used in the demand reduction targets (e.g. "save up to X%" rather than just "save X%"). By providing a range for each stage, these purveyors are better situated to comply with possible future State mandates that may set targets that do not match specifically defined percentages (e.g. during 2015, the SWRCB required purveyors to save percentages such as 28% or 32%, thus a range of targeted demand reduction would help purveyors adapt than if they had strict targets such as 20% or 30%).
- Several purveyors did not include a specific quantitative method for measuring demand reductions in their 2010 plans. However, by 2015, all of the sampled purveyors had included a method to track reductions.
- Separation of customer types can be a tool for purveyors to navigate the political and customer relation issues that can arise when implementing demand reduction measures.
- Plans can distinguish between short-term shortages and long-term shortages. This design presents another tool for purveyors to enact the most effective actions for the actual shortage circumstances. However, for some purveyors, the potential of entering several short water shortage stages throughout a single year, could be difficult due to frequent customer communication and the potential for customer confusion.
- Plans should include purveyor-specific demand reduction actions in addition to customer demand reduction actions.

2.2 EO #10: Facilitate Improved Drought Planning for Small Suppliers and Rural Communities

[to be added]

3.0 Draft Framework and Recommendations

[additional discussion to be added that will present draft framework and resulting recommendations to be included in the January 2017 report]

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