



Meeting Notes

Project:	Washington State Drought Contingency Plan	
Subject:	Task Force Meeting	
Date:	Friday, April 15, 2016	
Location:	Department of Ecology, Lacey, WA	
Attendees:	Jeff Marti, Ecology Barbara Anderson, Ecology Morgan Mak, EMD Jon Culp, WSCC Andrew Graham (Facilitator), HDR	Karin Bumbaco, OWSC- UW Gregory McKnight, DOH Ginny Stern, DOH Jaclyn Hancock, Agriculture Teresa Scott, DFW

Handouts

- Agenda
- FERC/Reservoir Projects with Fish Flow Requirements
- Summary of Other State Drought Plans

Content of the Draft 2005 Drought Contingency Plan

- Since the last meeting, participants have reviewed the 2005 (Draft) Drought Contingency Plan, as it applies to their respective agency. Andrew Graham asked each participant to comment on their review of the 2005 plan, as it applies to their respective agency. This does not need to include discussion of the various task forces, since we will later revisit whether to include similar task forces in the new plan. Instead they should address whether the actions listed would be useful in the 2015 drought or a new drought in the future. Andrew also noted that the 2005 plan contains some actions that appear to be applicable to both drought and non-drought periods. He suggested we focus only on actions needed when entering, within, or exiting a drought period. Karin Bumbaco (OWSC) suggested the plan should be written as though staff implementing drought-response actions are new and had never been in that role before.
- Jeff reminded the group that key objectives for the updated DCP include making it more action-oriented, recognizing how those actions unfold over the course of a drought, and staging materials/agreements in advance to speed up response actions.
- Teresa Scott (WDFW) asked if their comments should address only actions that require special funding due to drought. This led to discussion of how the time frame of droughts usually makes it impossible to hire staff in response, because there is not enough time to hire and train them. She noted that the actions listed for WDFW in the 2005 plan seem more detailed than necessary. Some are actions they take every year; while others do not reflect the actions taken in 2015. She noted that stream temperatures can be a problem in drought years. DFW staff work to monitor streams for temperatures that would stress fish, and look for ways to reduce this effect.

- Greg McKnight suggested the plan establish ways to reduce “red tape” around certain actions, and he gave the example of water rights associated with municipal water system interties. Teresa gave another example: legal authorities related to addressing fish barriers that occur at low flow levels.
- Greg and Ginny Stern discussed DOH actions listed in the 2005 plan. It’s important to have vulnerabilities defined, assignments known, and agreements in place in advance of a drought. Typically we think of municipal supply as the main response item for DOH. But in 2015, many of the municipal suppliers did not need assistance. Instead there were other issues, like water quality effects on body-contact recreation; shellfish contamination, West Nile fever, and heat effects on personal health.
- Jaclyn Hancock (Agriculture) noted that many actions in the 2005 plan for her agency do not seem feasible. There is a lot of discussion of the USDA Farm Service Agency (FSA). They don’t have the ability to carry out many of the actions identified. The State Department of Agriculture has very limited staff available for drought response, and yet it is a huge priority. This led to discussion of how cross-training multiple staff could be a valuable approach, so when droughts do occur there are multiple staff who can be pulled away from other duties temporarily, while controlling the impact on other agency functions (for Agriculture and other agencies).
- We discussed possibly estimating the FTE workload that occurred within each agency during the 2015 drought.
- The Conservation Commission is not listed in the 2005 plan. Jon Culp said during 2005 the Conservation Commission purchased soil-moisture monitoring equipment that could be deployed to private landowner sites. They coordinated with local conservation districts to identify acquisitions of water for stream flows, for example by landowners giving up their second cutting of hay crops. They helped identify other ways farmers could conserve water. In 2015, the main activity was education, in coordination with WDFW. The late action on funding made it impossible to purchase equipment as in 2005. Jon noted that the CC depends heavily on conservation districts, tribes and other local staff as a resource. Those entities tend to be funded by grants that require them to make progress on their funded projects, so they do not have much ability to shift staff to other activities during a drought. It could be possible to do more if the CC could disburse pass-through money to local partners.
- The Office of the Washington State Climatologist also is not listed in the 2005 plan. Karin Bumbaco suggested their role in the Water Supply Availability Committee (WSAC) be described. They serve as a resource to agencies and stakeholders for weather and climate information, and provide information on historical, present, and future drought conditions. In 2015 they provided a weekly report. They also liaison with federal agencies and experts in other states. She suggests that the new drought contingency plan include information that dovetails with the drought early warning system currently under discussion for the Pacific Northwest. She also noted that the 75% criterion for a drought declaration does not describe the time frame to be considered. And perhaps the new plan should address how dry conditions can affect demand for water, as well as supply. Karin also suggested the new plan include information on past droughts, at least

in an appendix, noting that Colorado's drought plan provides an example of this. OWSC could prepare this if desired.

- Jaclyn Hancock suggested that monitoring of ground water resources be done, both during droughts and to better understand long-term trends. Ginny suggested we hear more about Ecology's existing ground water monitoring network at a future meeting.
- Andrew said he and Jeff will ask participants now to red-line the prior plan with further comments. He'll send out specific directions.

Policy Considerations for the Drought Contingency Plan

- Jeff introduced several policy issues for consideration by the Task Force.
 - Is it appropriate to rely on the same base periods used by the National Weather Service to define Normal? Or should the entire period of record be considered?
 - What should we say regarding the effects of climate change on normal?
 - Our statute specifies "average", but NWS uses "median." Does this concern us?
 - Is the watershed the most appropriate geographic unit of consideration?
 - How does one define normal water supply for an area defined by political boundaries (e.g., County, State)?
 - How should "normal" be applied in the context of groundwater? What is the baseline?
 - How should normal water supply be assessed for areas for which forecasts are not available?
 - How should storage be factored into the evaluation of either normal water supply or hardship (e.g., percent of average storage or should we look at naturalized runoff only)?
 - How should the state consider areas where natural water supply is exceeded by human demands even in average years?
- The group discussed these points briefly, reserving further discussion for a subsequent meeting. Points covered included:
 - A drought is a hydrological event. A "drought emergency" is a state administrative action. We should be clear on this distinction. Some hydrological droughts do not result in a drought emergency declaration by the Governor. The 2005 Drought Contingency Plan includes some actions that can be taken even without an emergency declaration.
 - High water temperatures that cause harm to fish can also occur without either a hydrologic drought or an emergency declaration.
 - How should we determine whether an aquifer is affected by drought? Aquifers respond very differently than surface waters, and from one aquifer to another.
 - Some areas of the state have water supply affected more by rainfall conditions than by snowpack. For example, southwestern Washington falls in this category.
 - Soil moisture is an important factor in droughts, yet it is not among the formal conditions used to prompt a drought declaration.

- It would be useful if we had flexibility to consider seasonal conditions, not just annual conditions as suggested in the definitions under WAC 166-030.
- WRIA's make good sense as a geographic basis for drought conditions. However the public is more likely to understand county-based areas. One compromise approach would be to declare any county in drought if it contains a portion of a WRIA in drought (similar to USDA drought declarations).
- In 2015 too much time and energy was spent on the "drought declaration" and this took time away from actual drought response.
- It may be useful to move to a system where the State has progressive "stages" of drought, similar to those used in municipal water system water shortage contingency plans. Other states have multiple stages (e.g. Kansas, Texas).
- The use of the "hardship" criterion is difficult to measure and tends to slow down the process for declaring a drought emergency. Could this be eliminated? (i.e. via a change in RCW).
- The conditions that triggered a drought declaration sometimes end before the effects (and response actions) end. Perhaps "recovery" could be the final stage in a multi-stage approach.
- Perhaps the drought declaration could be characterized drought in each area of the state based on the type of resource impacts experienced. For example a drought could affect stream flows and fish without causing significant harm to water supplies in a given area.

Drought Indices

- Jeff displayed slides summarizing information currently used for determining whether the conditions for a drought declaration are met, focusing on the hydrologic aspect.
- Karin Bumbaco presented slides on the U.S. Drought Monitor (DM), which is a collaborative product of the National Drought Mitigation Center (comprised of academic partners), NOAA (Climate Prediction Center, NCEI), and Joint Agricultural Weather Facility (USDA & NOAA). It is operated by volunteer experts. It provides a weekly snapshot of actual conditions from the prior week, so it is not a predictive tool. She explained the components used in establishing the five levels of drought defined in the DM. She noted that it does not include either snowpack or water storage.
- The DM has strengths and weaknesses. While it is not a predictive tool, it is valuable for providing composite depiction of drought conditions, and could be useful in communicating drought conditions in different phases of drought, or even as a factor in deciding whether to let a drought declaration expire
- It would also be useful to examine similar tools used by certain states.
- Andrew provided a one-page handout summarizing indices used by Texas, Colorado and California in determining drought conditions. This comes from a longer memo Sarah Pimorese distributed to the Task Force. The other states' full plans are available online. Generally the three states summarized use multiple data sources in determining drought. Some of them convene an "expert panel" to make the determination.

Upcoming Meetings



Andrew listed upcoming meetings and events in April – July.

Action Items

Who	What	By When
All	Estimate the number of hours or FTEs used in 2015 for drought response, by agency.	TBD
Andrew/Jeff	Send directions for red-lining of prior plan.	
All	Carry out red-lining as directed.	
Jeff	Consider providing information on Ecology's ground water monitoring network.	