Meeting Notes

Project:	**Washington State Drought Contingency Plan**
Subject:	Task Force Meeting
Date:	Wednesday, July 27, 2016
Location:	Department of Ecology, Union Gap, WA
Attendees:	Jeff Marti, Ecology Nick Bond, OWSC- UW Karin Bumbaco, OWSC- UW Jon Culp, WSCC Barb Anderson, Ecology Kelsey Collins, Ecology (presenter) Melissa Downs, Ecology (presenter) Jaclyn Hancock, Agriculture Gregory McKnight, DOH (phone) Ginny Stern, DOH (phone) Andrew Graham (Facilitator), HDR Sarah Pistorese, HDR

Handouts

- Agenda
- RCW 43.83B.400: Drought conditions – Defined - Intent
- Selected stream blockages recorded during the 2015 Drought

Water Right Leasing: 2015 Drought Experience

Kelsey Collins, Ecology, provided a summary of the drought response strategies implemented in the Yakima River basin during the 2015 drought.

- Flow augmentation: For example, Kittitas Reclamation District (KRD) used their canal in 2015 to transport water from the Yakima River to augment flows in nearby tributaries.
- Water Leasing: There were two types of leasing activities:
    - Reverse auction: Involves Ecology temporarily leasing water rights from water right holders to supplement instream flows.
    - Traditional leasing: Water rights are temporarily transferred among water users. Kelsey said that it could be beneficial to establish a list of entities interested in drought year water leases and a communication strategy. It would be good to establish this list when it is not a drought year.
    - It may work better if another organization were to lead communication efforts with the public rather than Ecology, since Ecology is a government regulatory agency.
- Pump-back systems: Water that has seeped through cracks in an irrigation district's canal is recovered and returned to the canal. Scott Revell, Roza Irrigation District, said that in 2015, Roza's pump-back system recovered about 1,500 acre-feet. However, there is no guarantee that Ecology will approve the use of the pump-back systems each year. Kelsey said Roza also paid Sunnyside Valley Irrigation District's pumping costs,

which reduced Sunnyside's diversions and enabled Roza to receive additional supply of approximately 5,000 acre-feet.

- Emergency Well Program: Many irrigation districts have emergency wells that can be operated in drought years. Ecology must issue a temporary permit for these wells to be operated. Ecology's decision to approve the temporary permit considers many factors including the condition of the aquifer. These emergency wells can only be used to supplement prorated water supplies up to 70 percent. In 2015, Ecology approved approximately 50 emergency well permits totaling about 4,600 acre-feet. Users pay into a mitigation fund that Ecology uses to acquire permanent water rights.

Lake Roosevelt Drought Insurance Program

Melissa Downs, Ecology, provided a summary of the Lake Roosevelt Drought Insurance Program.

- The Lake Roosevelt Drought Insurance Program is available to interruptible water right holders that divert from the Columbia River. However, this program has never been activated.
- Activation of the program is dependent on flows in this segment of the Columbia River (if the March 1 river forecast projects a seasonal runoff volume below 60 million acre feet, then water uses are interrupted). In 2015 the flow condition did not occur, so the program was not triggered.
- Lake Roosevelt has an additional 50,000 acre-feet of storage reserved for the drought insurance program. This water is also available to supplement instream flows if needed. This additional water would offset about 11 percent of the quantity that would be subject to curtailment.
- Melissa will prepare a summary of this program for inclusion in the Washington State Drought Contingency Plan (DCP).

Stakeholder Engagement

Debrief Morning Meeting with Agriculture Interests

The Task Force summarized the key considerations discussed during the meeting with the Agriculture Stakeholder Group. Key points from the meeting include the following:

- Agriculture stakeholders already have complicated decisions to make during a drought year. It would be good if the DCP can keep conditions and requirements as simple as possible for beneficiaries in the agricultural sector.
- The 1992 DCP treats all agriculture stakeholders similar. However, there are large differences in how drought response is approached depending on the agriculture sector: irrigated agriculture, dry-land agriculture, permanent crops, west-side versus east-side farmers, areas with storage and without storage, and livestock operations. However, many agriculture stakeholders seemed to agree that the following would be helpful.
    - Early forecasts of drought conditions
    - Staged approach to moving into or out of a drought declaration.

    - Education and outreach to farmers and other water users about water efficiency measures.
- Some agriculture stakeholders would benefit from additional groundwater monitoring. This could also benefit municipal, fishery, or other sectors.
- March through May is an important time for agriculture planning. Karin Bumbaco, OWSC- UW, said that it could be beneficial to look at the water supply forecasting skill in that season and ways to potentially improve it.
- An improved communication strategy for moving into droughts and out of droughts would be beneficial. The DCP should consider communication strategies throughout the full drought timeline: before a drought, moving into drought, during drought, moving out of drought, and recovery. It should not just be a response to an "emergency" condition.
- Ginny Stern suggested we develop a graphical display of the sequence of drought development, and the response tools applicable at each stage of this sequence.
- Mitigation options in the DCP can also consider alternatives to new water storage, such as flooding fields in the winter to increase soil moisture and groundwater storage. Water right restrictions associated with these types of mitigation options would also need to be considered.
- Jeff Marti, Ecology, said that the 1992 DCP focuses on emergency response. However, some agriculture stakeholders expressed more interest in long-term measures such as education regarding improved water management practices.
- Climate change is an important concern for agriculture stakeholders. If future precipitation patterns result in less snowpack, then agriculture stakeholders will need to consider increasing storage or changing crops.
- In some areas, repeat drought experiences have built relationships among the affected water users and the agencies charged with response. In other areas, this is not true. Having relationships in place can greatly speed up the response actions. In addition, building a program in advance can help avoid competition for scarce resources when an emergency is declared.
- Nick Bond, OWSC- UW, said that it is important to remember that the DCP is intended to be a drought specific. Adaptation to changing water supply conditions will be necessary, but the DCP may be less effective if it attempts to address general water-resource management issues that are not drought-year specific. Andrew Graham, HDR, suggested that the DCP identify/acknowledge long-term water management issues, but not attempt to resolve them if they are not particular to drought.

Upcoming meetings with additional stakeholders

- The next Task Force meeting is August 17.
- Jeff said that the Tribal and Fishery Interest Stakeholder Group meeting has not been scheduled yet. Jeff is working on scheduling this meeting and will send out the meeting details soon.
- Jeff is working with Ginny Stern, DOH, to schedule a meeting with small domestic water systems. Jeff and Ginny have identified 35 potential small water system representatives.

Ginny and Greg McKnight, DOH, will draft a joint DOH/Ecology outreach letter to engage these small systems.

Review of Action Items from Last Meeting

The Task Force reviewed the action items from the May Task Force meeting. Outstanding action items discussed include the following:

- Task Force members will estimate the number of hours or equivalent full-time employees for their respective agencies used in 2015 for drought response. Alternatively, Task Force members can provide a qualitative description of drought response work performed in 2015. Jon Culp, WSCC, said that the amount of drought response was likely less than an average drought year since the legislature did not make drought response funds available until July 2015.

Status of Plan Development

High-level Content Choices for DCP

- In prior meetings, the Task Force had discussed the extent of drought impacts and vulnerabilities that the DCP would encompass. Ecology managers that Jeff has consulted think we should limit the extent of the DCP based on the intent of the legislature as outlined in the existing statutory definition of drought conditions (RCW 43.83B.400). The statute enables Ecology to take action to alleviate **hardship to water users and uses** arising **from water supply shortages due to drought conditions**. Jeff sees this as focusing on interruptions to water supplies for farms, cities, fish and wildlife. Based on this definition, the DCP would focus on water shortage impacts and not ancillary drought impacts, such as impacts from wildfire or algal blooms. For example, water quality impacts will only be considered when they pose risks to available water supply, and not if they pose challenges only for recreational use of water bodies or aesthetic issues.
- The Task Force agreed with this approach.
- Ginny suggested that the DCP include two tiers of drought impacts:
    - Tier 1: Drought impacts to water users and uses directly resulting from water shortages (e.g. reduced crop yield due to prorated water supply).
    - Tier 2: Secondary drought impacts to water users and uses that result from ancillary conditions due to water shortages (each agency or stakeholder group can identify these. They can be flagged for future work, and do not need substantial attention in the 2017 DCP).
- The DCP will consider monitoring of Tier 2 impacts that could potentially move to Tier 1 if drought conditions worsen in the future.
- Jeff will develop an initial list of Tier 1 and Tier 2 vulnerabilities. The Task Force will review and discuss this list at the August Task Force meeting.

Drought Monitoring

- Karin Bumbaco, OWSC- UW, provided an update on the drought monitoring work. This effort will involve doing a literature review on the state of drought monitoring and forecasting practices. This will include characterizing the frequency and intensity of drought, possibility of back-to-back drought years, how climate change may influence future drought conditions, and existing and potential monitoring/forecasting tools.
- Karin will draft the drought monitoring text for the DCP. A panel of Task Force members and technical experts will review this text and provide comments to Karin.
- Nick suggested that the DCP include recommendations for communicating drought forecast information.
- Karin aims to complete the monitoring section of the DCP by the end of 2016.

Vulnerability Assessment

- Jeff presented the Washington Department of Fish and Wildlife's map of 2015 drought stream blockages. This is an example of how drought impacts could be displayed in a geographic format. This would help to identify at-risk areas in the future. For example, the Yakima River basin proratable water right holders or Columbia River interruptible water right holders could also be mapped.
- Drought impact maps would need to be maintained and updated in the future as mitigation measures are implemented.
- Andrew noted that some conditions tend to repeat in the same locations; but others do not. Drought conditions vary from event to event, and will not always occur in the same places.
- Ginny commented that the effects of drought fall differently on different sectors. Susceptibility is not the same as vulnerability. Hardship occurs when you can't mitigate for an effect. So each agency representing the different social sectors affected by drought should provide input on how best to characterize the effects for the vulnerability assessment.
- Jeff plans to begin writing the Vulnerability Assessment section of the DCP. Once drafted, the Task Force members will review and provide comments/edits.
- Ginny will prepare a summary of DOH's vulnerability/susceptibility rating approach to identify high risk water systems. Ginny will also send Jeff the list water systems that are vulnerable to drought.

Next Steps

- The next Task Force meeting is August 17.
- Jeff said that the National Integrated Drought Information System (NIDIS) is preparing a Drought Warning System for the Northwest United States. Jeff will attend a workshop in September about the NIDIS Drought Warning System. Jeff will provide a summary of the NIDIS Drought Warning System at the October Task Force meeting.

Action Items

Who	What	By When
Jeff Marti	Set up a meeting with the large water utilities in fall 2017 to learn more about their system operations and monitoring/forecasting tools.	Aug 17
Jeff Marti	Arrange a meeting with tribal stakeholders.	Aug 17
Jeff Marti	Solicit input from Trout Unlimited and the water trusts.	Aug 17
All	Estimate or provide a qualitative narrative of the number of hours or equivalent full-time employees used in 2015 for drought response.	Aug 17
Morgan Mak	Determine if WAMAS could be activated prior to a drought declaration.	Aug 17
All	Identify vulnerabilities that could be mapped and come to the next Task Force meeting prepared to discuss if sufficient information is available to develop a vulnerability mapping tool.	Aug 17
Melissa Downs	Prepare a summary of the Lake Roosevelt Drought Insurance program for inclusion in the DCP.	Aug 31
Ginny Stern and Greg McKnight	Draft a joint DOH/Ecology outreach letter to engage these small systems. Send to Jeff for review.	Aug 17
Jeff Marti	Develop an initial list of Tier 1 and Tier 2 vulnerabilities.	Aug 17
Ginny Stern	Prepare a summary of DOH's vulnerability/susceptibility rating approach and send Jeff the list water systems that are vulnerable to drought.	Aug 17