

DRAFT Agenda

Dungeness Reservoir Work Group Meeting

Date: Wednesday, April 17, 2024, 10-12pm

Location: Online

Agenda:

1. 10:00-10:05: Welcome (County)
2. 10:05-10:25: Water Rights Memo and WEAP model updates (WWT)
3. 10:25-10:40: County updates
4. 10:40-11:10: Seismic desktop review (Anchor QEA)
5. 11:10-11:15: Next Meeting

Attendees:

(City of Sequim) Meggan Uecker, Ann Soule

(Clallam County) Steve Gray, Rhiana Barkie

(Jamestown S'Klallam Tribe) Hansi Hals, Shawn Hines, Randy Johnson

(Irrigators) Ben Smith, Fred Mitchell

(Clallam Conservation District) Kim Williams

(WDFW) Danielle Zitomer, Kiza Gates

(Ecology) Angela Johnson

(Anchor) David Rice

(WWT) Jason Hatch, Hannah McDonough

(Shannon and Wilson) Chris Kemp

WWT UPDATES

- I. Water Rights Memo: The goal of the memo is really to bring together all of the permissions, authorizations, and water rights that would be necessary to operate the reservoir and protect the flow (foregone diversions in the river).

Outline of what memo is trying to address:

- a. Water Sources—senior water rights, max allocation cited in Dungeness Water Rule
- b. Memorandum of Agreement—form that a new agreement would take; irrigators and Ecology.
- c. Highland Irrigation District and Eureka Company Water Rights—senior water rights that currently use HID diversion
- d. Storage Permit
- e. Flow Restoration
- f. Other Assertions by Ecology

Steps so far: Discussion with Ecology (ECY), trying to make sure Washington Water Trust was capturing their responses so that they had a chance to go back and provide additional comments on that. Then discussion with the Dungeness Water Users Association (DWUA) since water rights are the principal water rights and the authorizations center around their diversion, conveyance, and use. They had a chance to take a look at the memo, then shared it with Jamestown S'Klallam Tribe (JSKT)

and they provided comments. The end goal is to bring to the workgroup a memo reviewed by the parties that the uses center around.

Timeline—Hopeful to have meeting (April 29-May 3) to include JSKT, DWUA, County, ECY, WWT, hopeful to then have something more to present May 15th

Jason asked if Ben or Hansi had anything to add about the memo process and timeline, and neither had anything to add

II. WEAP Updates

a. Stakeholder Meetings

- i. Met with Anchor to discuss reservoir operations and how that looks in the model.
- ii. Met with JSKT and Point No Point Treaty Council to discuss climate projection data included in the model so that they have better direction on what to include in the model.
- iii. Met with Sequim and WSWF to discuss hydrology downstream of the reservoir and incorporating that into the model so that it more closely resembles the real world.
- iv. Met with Ben Smith, who helped with troubleshooting WEAP schematics so that the visuals more clearly resemble actual reservoir operations and discussed irrigation demand data to select most representative years for baseline operations and conditions.

Hansi: As much as possible, rather than having WEAP meetings with individual parts of the workgroup, can we have the conversation with everybody at the same time so we're able to know what's decided in real-time? Atleast a notice so that if people want to listen they can? Concerned that there's information being lost between different parts.

Hannah: That's a good point. We presented it to the whole group at the last meeting to ensure no information is lost between the different parts. We also recognize that certain partners have deeper levels of expertise and so that's why we met with them individually, so that we could focus on those respective areas. But I do see value in Hansi's suggestion and want to take it into consideration for the next round, because I do think there will be more of these meetings.

Ben: Following on Hansi's thought, if we add the word "committee" on a group meeting it would probably be with the same individuals with whom WWT had individual meetings, but it would still be a helpful step to have that as a committee separate from the workgroup. A lot of times we come up with great ideas or feedback when we hear concerns from others.

Jason: All thumbs up on all these comments.

Hannah: There is a comment in the chat suggesting we record all meetings and I think this could be a good idea.

We are also getting closer to having some downstream inputs and outputs so I have some better information there. Just a note, the model has not been updated yet from any of the conversations that we had last week. We have just taken notes and listed out what we plan to update in the model, other

than what Doug was doing in real time which was changing the schematic based on Ben's feedback and incorporating the stakeholder feedback, and that is still to come.

Hannah: Also we met with Tyler Burkes (ECY) and now have some new data to include based on the years we talked about with Ben Smith (2018, 2020, 2021).

- b. Model schematic refinements
- c. Downstream inputs/outputs
- d. Updated irrigation data
- e. Representative years—2018, 2020, 2021—based on Tyler Burke (ECY) and Ben Smith conversations.
- f. Climate projections
 - i. Used only RCP 8.5
 - ii. 2030-2060 (these years will be aggregated for near-term view) and 2050-2080 (aggregated into second climate projection)

Hansi: What will 2018, 2020, 2021 be used for?

Hannah: Those years are what are representative of irrigation withdrawal data, so we'll then see of those years which has the most complete ECY data set and then we'll use that as the irrigation withdrawal data for all of the scenarios moving forward.

Hansi: And that works for modeling? Don't you usually need a sample of 10 or more?

Hannah: The one representative year that can be looped is what SEI has requested, so we're looking for one year of really solid data.

Ben: Hansi, one problem/challenge we run into with years before that: as an example Dungeness Irrigation District did some pretty aggressive piping projects that were finished around 2017 time, so using historic data before that is not going to be nearly as representative of where they are going forward. That's why we feel shrinking it down to one year is more accurate moving forward.

Hannah: Any other questions on updated information? [There were none]

- g. Next Steps
 - i. Finalize the model with stakeholder data—will probably need final committee meeting to make sure we're all on the same page about what is going into the model
 - ii. Include scenarios that were requested by work group during last workgroup meeting
 - 1. HID unused water right for filling
 - 2. Adjusting the diversion rates that go to fill reservoir
 - 3. Calculating excess water able to serve aquifer recharge, additional irrigation demands, and river flow restoration purposes
 - iii. Document model inputs and assumptions
 - iv. Provide training for future model use outside of work with SEI

Hansi: What is timing? Are we thinking by June?

Hannah: Still working on contracting, so no exact deadline. Don't think we'll have anything by May 15th, June is probably better estimate.

COUNTY UPDATES

- I. Property Acquisition
 - a. Board has given approval
 - b. Anticipate purchase in late summer/early fall
 - c. Cleanup anticipated in October
- II. FY23 Congressional Directed Spending
 - a. Purpose: HID Main Canal Piping
 - b. Entity: NRCS
 - i. Some of you have received PIFR notifications regarding this project
 - ii. NRCS will also have to conduct a watershed plan
 - iii. County and Highland Irrigation District working together on this, will be meeting with NRCS later on to discuss next steps

Randy Johnson: What will the County do with the property if the reservoir system is never constructed?

Rhiana: The County plans to use the site as a public park as well.

Steve: It's always been on the table to continue to be a park. DNR wants to sell it all as one unit (396 acres) and we don't need that much for a reservoir operation. It's currently very popular for recreation, so we see that continuing. It can certainly provide an opportunity in the future with funding and planning involved for other parks and rec facilities. Also City of Sequim will have their stormwater infiltration facility on site for aquifer recharge. So those are two uses in the planning as we proceed forward and try to make this project a reality.

SEISMIC INVESTIGATION UPDATE

David: This is intended to be a high-level update of the work that subconsultant Shannon and Wilson (S+W) has done to look into more detail at the seismic hazards at the site. S+W produced a report that will be finalized in the coming weeks. It has lots of good, detailed science and information. For folks that think of geology as a hobby, you'll probably love to go through the details of the report. We won't go through that level today, but we do have Chris Kemp online today. He's the geologist that oversaw the effort for Shannon and Wilson and is available to answer questions. Otherwise, we want to keep this high-level and then give folks who want the details the opportunity to go through report when it's finalized. If people want to have more information later, Chris will be more than happy to discuss.

David: Why are we doing this? You may recall there was a 2007 study that pointed out a "Sequim Fault", but there wasn't really an explanation or supporting information for why this was identified as such. It was for this reason that the County went out to another consultant to do a high-level feasibility review of the site. They looked at available geologic information (including the 2007 study), walked the site with USGS geologists, looked at geologic maps and did some initial review of Lidar topography. Their scope was limited, but based on what they did they could find no explanation of why the line was identified as Sequim Fault, nor did they find identifiable evidence (from their site visit) of faulting in the project area. They acknowledged their scope had limitations, and so recommended that a geologist be on site to look for soil anomalies from excavations as construction took place. Anchor QEA, in an effort to inform their

design, hired Shannon and Wilson to do a seismic geologic reconnaissance of the site, anticipating they would confirm the findings of the previous study.

S+W, in spring of 2023, did a few things: walked the site, looked into more detail at the lidar topography on site, and through that they did identify some subtle linear topographic features (lineaments) that could suggest the presence of faults. The geology of the North Olympic Peninsula has a history of glaciation and alluvium material deposited over glacial deposits, and so knowing that S+ W was able to identify the lineaments. Anchor QEA consulted with S+W and the Dam Safety Office (DSO) to plan how to proceed and came up with the phased approach.

Step 1 of the phased approach included presenting results of the seismic geologic reconnaissance from Spring 2023, and then next was the detailed desktop review using lidar data that is much more detailed than that available to the public. They reviewed: all the available studies they could find related to seismic activity in the area, geologic mapping they could find in the Dungeness River Valley, and the lidar data to see if there was any evidence of the lineaments extending to the east or west of the site, and if the lineaments really indicate subsurface fault movement. They also tried to develop a comprehensive understanding of the history of the site and the way the geology was formed. All that information fed into a report that they developed. We're reviewing the draft now and the final report is anticipated in the coming weeks.

Key findings:

Findings support the hypothesis that there is an active fault zone crossing the proposed reservoir site. Based on that, they were able to refine mapping to identify primary, secondary, and distributed secondary deformation zones where findings suggest that fault rupture could cause deformation. Also mapped what they call the low probability deformation zone, where there is no evidence found of past deformation.

Preliminary displacement estimates are provided for primary, secondary, distributed secondary deformation zones as well as a set of recommendations on how to proceed in the project.

Recommendations [refer to meeting recording for more information on the visual to which David refers]: Shift reservoir south so that the primary embankment and reservoir are within the low probability deformation zone. Red is primary, orange is secondary, yellow is distributed secondary, green is the low probability deformation zone. The reservoir would be shifted to the green zone to greatly reduce the risk of impacts from seismic activity.

As a reminder, Option D was developed based on neighbor feedback. It lowers embankments and puts more water below ground level. Option D specifically was also developed when the spring 2023 seismic recon was conducted that identified the lineaments, which is why it was shifted south (while also working around the BPA easement). Now that more refined information regarding the lineaments is known, what is needed is to look at what it would take to construct a reservoir in the area that is drawn out in the dashed black line that will be called Option E.

Other recommendations: There will have to be some additional seismic hazard analyses to support design, and also excavation slopes should be observed during reservoir construction by a licensed geologist.

Next steps: Finalize the report. Evaluate reservoir configurations that would be entirely within the low probability deformation zone. Meet to review findings and proposed path with ECY's DSO. Review and revise the Phase 2 geotechnical exploration to reflect revised reservoir configuration. Press forward with design analyses and geotechnical exploration. Also, one thing that held up further geotechnical exploration was DNR didn't want to give permission to do borings and test pits. Property acquisition will allow the Phase 2 geotechnical exploration to continue.

Questions and Discussion:

Ben: Can you pull up the map page that shows the green zone? I'm curious, what is the limiting factor on the west side of triangular portion that would keep that from extending out?

David: We have to stay a certain distance from the bluff, and we will be constructing it to control seepage from the reservoir, but at some point there would be potential to destabilize the bluff if we got too close to it. That's a good example of something we'll have to evaluate and fine tune the extent of the reservoir.

Shawn Hines: With the new location, are you going to be considering smaller reservoir size options? That looks kind of tight.

David: Yes. We'll have to go through a process of figuring out what actually fits in the area, and what does that mean about how much water we can release and when. The original 1600 number was based on a release of 25 cfs constantly over 31 or 32 days. So when we did this initial exercise with option D, that was between 1400-1500 acre-feet, with the thought that if we want to get to 1600 acre-feet we can raise the embankment a little or dig a little deeper. But also we do need to have a discussion with BPA, so one question for this group is if anybody knows who to contact in BPA or have experience with them? The powerlines aren't really as high as you might expect power transmission lines to be, only about 25-30 feet off the ground. Building an embankment up off the ground would put us too close to them. Plus, we'd also like to know if we can do something under them. Chris, is there anything in the science that I didn't describe correctly?

Chris: I appreciate that David, but I don't have further to add.

Steve: Just a couple add-ons. Yes, we plan on getting the report finalized based on what you see in this slide. We're looking to Anchor and S+ W for the refinement. A key recommendation in the report is that we can certainly design a reservoir further to the north, but given the findings it would need to be designed with a lot of displacement in mind, and would require trenching that may or may not give any further information. The only part of the report that's going to be finalized is this creation of an "Option E", and then meet with DSO. Getting the property acquired is key to allowing for any additional borings that may be needed with this shifting of the reservoir further south.

Ben: Also want to bring up that it's my understanding that downgradient homeowners are much more comfortable with Option D, so I think going with this scenario helps address neighbor concerns.

Davied: That is correct, when we presented the different options before they were a lot more comfortable with Option D. As we refine this, we'll find out that yes more of the storage will be below-ground, which is something they wanted, and the embankment won't be as tall as in the preliminary design, and it won't be as close to their back fence.

Randy Johnson: As you create more and more storage underground, does that mean you would have to go from 100% gravity flow to a certain amount of pumping?

David: No, we've identified what the elevation would need to be from a number of different scenarios. Even though it looks pretty flat when you get out there, the elevation decreases quite a bit from south to north, by tens of feet.

Hannah: Just wanted to bring up what we were talking about in chat. Chris Kemp is making his email available for any questions.

Steve: Bring questions to us, we can bring them to Anchor and Chris.

Fred: On the most southern triangle shape location, where is Highland's ditch compared to that now?

Anchor: Their ditch comes right on the edge of road to about southern tip of triangle. Another feature that's a bit constraining is that the bluff comes in to where that black line is. That's where that dump material is.

Steve: I would anticipate us having that final report here by early May?

David: Yes

Steve: And so then we will put it on the website. We should have it available for people to look at details before the next workgroup meeting.

GENERAL DISCUSSION PERIOD

Hansi: Could you remind us on the funding? Are the dates being extended?

Rhiana: Ecology grant amendment will be completed soon. It will extend the deadline of the current grant through March of 2026. We do not have any looming deadlines with our funding, we are on track with all of it.

Hansi: What about the cost-benefit analysis—is the County still not going to do another one?

Steve: The County does not currently plan on doing another one. The one we did before was required as part of application requirements for the FEMA grant. We want to see how FEMA is in terms of their RFI review. Right now there's no direction or need to proceed with another cost-benefit analysis from FEMA. As we proceed further--and looking at budget creep with funding--that was one reason the seismic reconnaissance was important, was to evaluate that whether we still had a viable, feasible project. As we proceed forward in the project and get more information, and have more developments, then it would probably be appropriate to revisit the need for a benefit-cost analysis.

Hansi: I agree that we need more info first. I think that will better inform. I am uncomfortable being on the record with benefits and costs at this point until we have further information available.

Steve: Yes, we will have updated costs as we further refine the reservoir design. One thing that has helped is that since we applied for the FEMA grant, we have received other funding sources (such as the

NRCS Congressional Directed Spending), so I think we are still within the range in terms of budget, but we do have more work to do there. Regarding the Tribe's concerns regarding the benefits to low flows and fish benefits, hopefully we'll get more of those answers with the WEAP model results. I think we've all got the news on the drought season here, and we're all in agreement that this project will assist with climate resiliency, but the WEAP model will help us better understand how the reservoir will operate under the water rule and under the anticipated climate scenarios.

Hansi: One more plug in for adaptive management plan. Something we've talked about for mitigating ESA impacts, it is something that Jamestown is looking forward to reading.

Steve: We might need to have a meeting with the Tribe, and invite water users, to discuss what that could look like because many of the issues you have raised are current issues outside of the reservoir construction. Would that be something the Tribe is interested in?

Hansi: Yes, and adding the State Department of Fish and Wildlife would be useful too.

Ben: Most of you know that we're currently having some aggressive challenges to piping in the area. I'm concerned about that being a successful challenge, what kind of precedent does that present for future piping projects, including the piping going into this reservoir project? Irrigators at this point have been willing partners for all the piping projects. Over the last 20 years, we've been told piping is the right thing to do, and we agree. We do not have the financial wherewithal to defend ourselves against this, and we need financial support from somewhere to help irrigators defend our right to continue piping projects. Please contact me if there are thoughts, directions, or funding sources you know of.

Steve: I don't know of any money. I think piping within the ditch project, particularly the upstream piping, my understanding is that previous studies show that these pipes aren't really a major impact on infiltration and loss, especially not compared to downstream areas, so probably not as much impact. I do think you're right and that we should figure out how to do some good outreach on this.

Kim Williams: Just wanted to step in and say that what Ben is really asking for is help with legal fees, because I know that is a limiting factor on applying for grant funding. A lot of grants will not cover that.

Ben: Yes, we've found a good water attorney, that will be about \$8700 for the white paper that address the domestic wells and prescriptive easement parameters. That's a smaller ticket item up front that will be very beneficial, and then if this goes to court that number will be significantly bigger. The irrigators can't afford that, and so we'd have to step back, and then we (not just the irrigators) all lose in that scenario.

Danielle: Ben, I don't have an answer or any legal fee knowledge. However, I can ask folks in my leadership if there is an option to reach out to WDFW legal, given that we are a project partner for some of the piping funding. Don't know if it would be applicable in this but I'll ask.

Hansi: As Danielle mentions that, it occurs to me this is not the first basin that has ESA and irrigation issues. Do you have models from other basins that we can piggy-back off of? You're not reinventing the wheel here.

Ben: Yes, that's the kind of work we're doing with the water attorney.