

ICICLE STRATEGY

Icicle Work Group Meeting

Confluence Technology Center, 285 Technology Center Way #102, Wenatchee¹

Thursday, April 11, 12:30 – 3:00pm

A G E N D A

12:30-12:40pm	Welcome, Introductions, Agenda Review, Decisions Requested Today
12:40 - 1:45pm	City of Leavenworth Source Replacement and Water Conservation Plan <ul style="list-style-type: none">• Presentation from City• Q&A / Discussion
1:45 – 1:55pm	BREAK
1:55 – 2:10pm	IWG Outreach Plan <ul style="list-style-type: none">• Leavenworth Engagement Night (May 7)• Icicle Strategy Open House – local (planning for June)• West-side Icicle Strategy Open House (planning for June/July)• Newsletter
2:10 – 2:45pm	Short Updates <ul style="list-style-type: none">• COIC project• Eightmile Lake Dam Rebuild EIS• Lake release coordination for 2024 / Decision support tool• Icicle Creek Reach Assessment• Tribal Fishery Improvements• OCR 2025-2027 Capital Budget Development
2:45 – 2:55pm	Public Comment
2:50 – 3:00pm	Wrap Up, Next steps, Adjourn <ul style="list-style-type: none">• Upcoming meeting dates<ul style="list-style-type: none">○ Steering Committee meeting – May 9, 2024○ IWG – June 13, 2024 – field trip?

¹ Zoom link available upon request to ccarlstad@nhcweb.com

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Members/Alternates Present: Theo Burgoon, TU; Shon Smith, Chelan County Commissioner; Nate White, WDFW; Carl Florea, City of Leavenworth; Cory Kamphaus, Yakama Nation; Mike Kaputa, Chelan County; Dan Wilkinson, COIC; Levi Jantzer, IPID; Mat Maxey, USFWS; Bill Gale, USFWS; Chuck Brushwood, CTCR; Jason Breidert, CTCR; Greg McLaughlin, WWT; Tom Tebb, ECY-OCR (online); Melissa Downes, ECY-OCR; Nicole Ahlem, BOR; Chris Duke, BOR; Brock Hoenes, WDFW; Shaun Seaman, ICWC Tom Wachholder, City of Leavenworth; Dan Gilyard, WRRD/FS; Daryl Hardner, IPID

Guests Present: David Ortman (online); Margie Van Cleve (online); Adam Neff, RH2 (for Leavenworth presentation)

Staff/Consultants Present: Dan Haller, Aspect Consulting; Kelsey Mach, Aspect Consulting; Mary Jo Sanborn, Chelan County; Abby Hendrickson, Chelan County; Cynthia Carlstad, Facilitator; Ingrid Ekstrom, ECY-OCR

City of Leavenworth Source Replacement and Water Conservation Plan

Tom Wachholder and Adam Neff (RH2) presented the City's investigation into a source replacement for the City's Icicle Creek diversion, and updates on a water conservation plan. Concurrently, a utility rate study has been in process and a leakage analysis was just finished.

Source replacement

Analysis of current data suggests that Leavenworth sits on a 'good' pocket of groundwater. But only two primary areas were identified as locations for potential wells: Leavenworth National Fish Hatchery, and the area across the Wenatchee River near E. Leavenworth Rd. Neither location offer attractive options for a new well which should meet the following criteria:

- at least 100ft radius around the well
- able to produce 250 gal per minute

They have discussed expanding the search area downstream near Peshastin, but that brings issues of transmission into play.

Source resiliency to drought and climate change

Leavenworth's water production is generally 50/50 groundwater and surface water (Icicle Creek), both of which will be impacted by climate change. The area of ideal well locations is also heavily impacted by flow levels in the Wenatchee River. Based on projections, both high and low emission climate scenarios will lead to earlier spring run-off and therefore drought conditions in later summer, leading to a potential for the city to have water shortages. Both the Wenatchee River and Icicle Creek watersheds above Leavenworth have minimal aquifers but do have water storage in lakes and glaciers. Augmenting Lake Wenatchee storage has been studied (most recently in 2011), but there are no active plans to pursue it.

Conservation Potential

Average leakage over the past 3 years was 20.7% for the system. If the city is able to bring that down by 10%, it would save 115 ac-ft year which would be significant.

Almost half of the City's current water use is for irrigation. Converting irrigation source water for the cemetery, golf course, and other large public irrigated areas could save up to 24 ac-ft per year from the City's domestic supply. However, if converted to irrigation water (like COIC or IPID) this would not result in a net reduction in water use for the Icicle watershed.

Grass lawn replacement could also conserve outdoor water use. A lawn replacement program requires significant oversight and data from other areas have shown that results are typically less than expected as incentives are typically not enough to entice people to participate.

The City's base rates are some of the highest in the County (\$73.78 in the City and \$92.20 for areas outside the City limits), however it also has the highest base allotment (7,500 gallons per month). Leavenworth also has the lowest rates in the County for excess water use (use over the base allotment), ranging from \$1.08 per 1,000 gallons to \$2.95 per 1,000 gallons.

Recommendations:

The RH2 report makes the following recommendations:

1. System wide-
 - a. Address leakage and aim for 10% reduction
 - b. Conservation based water rate study
2. Specific projects
 - a. Convert cemetery back to irrigation water
 - b. Continuous water level monitoring in wells
3. Future consideration
 - a. Explore storage alternatives
 - b. Enhanced water shortage response plan

Q&A / Discussion:

- Has city looked at creating a lawn watering schedule for landowners?
 - Yes, but currently the focus is to get landowners to voluntarily conserve water before having to instill a mandatory schedule
- How much of the 20% leakage is due to conveyance vs connections?
 - Unclear, conveyance seems to be the biggest culprit but some connections may contribute.
 - The system is also very old so survey accuracy cannot be 100%.
- Can leakage be counted towards recharging the aquifer?
 - Not likely, it is not considered a large or active recharge for the aquifer
- Has there been any decline in productivity for wells in the area?
 - Some, usually fixed by repairing those wells
 - There isn't currently data that suggest that the aquifers are not recharging- but there also isn't any data that they are
- What about water savings from the lawn buy-back (Water Smart Gardens) program? Irrigation study?

- There's a lot of variability when it comes to irrigation- getting information out on how much irrigation is realistically needed may be the first step.
 - Could be something to include in the lawn buy-back program when landowners don't want to remove their lawns entirely
- Would also be helpful to have an irrigation breakdown on the biggest users of irrigation water
- Would this be a good opportunity to run a marketing campaign to engage the community in these conservation practices?
 - Yes, need public outreach materials to get the word out about actual irrigation needs and best water practices- could nexus with the Water Smart Gardens Program
- According to the graph, the city is allowed to withdraw 5cfs from Icicle Creek?
 - Yes, but currently only withdrawing ~2cfs .

IWG Outreach Plan

Leavenworth Engagement Night- May 7

- There will be Icicle Strategy presence at the upcoming engagement night highlighting the Water Smart Gardens program. The Icicle River Middle School principal will also be there to discuss the recent demonstration garden project.

Icicle Strategy Open House – local

- This open house would be a localized social event for work group members to engage with the public and discuss projects completed and upcoming. Fall is looking like the most ideal time for an event like that.

Seattle Icicle Strategy Open House- planning for June/July

- Planning a meeting in Seattle at the Good Shepherd Center in Wallingford to engage the larger environmental community. Doodle poll will be going out within the month for this to dial in on a date.

Newsletter

- Newsletter coming out early May- will send to Cynthia's interested parties list as well as all IWG members. Will highlight SWISP, IRMS demonstration garden, and the Water Smart Gardens program. Goal is to have two newsletters per calendar year and highlight different projects and updates/events.

Short Updates

COIC project- Construction meetings have begun and crews are already starting to clean /clear-cut the ditch to laying pipe in the fall. Shareholder coordination will be led up by Dan Wilkinson. 3-party agreement and water acquisition are still in process.

Eightmile Lake Dam Rebuild EIS- Ecology is wrapping up comment responses, expecting late May/early June for final EIS.

Lake release coordination for 2024 / Decision support tool- possibility of having to release early this year due to flow levels. There are data loggers for the lakes now so there is consistent data to rely on.

Icicle Creek Reach Assessment- working through contracting, expect to start this summer.

Tribal Fishery Improvements- pickets are in, the hatchery is just waiting for fish to get upstream. Bathroom designs are being reviewed and looking at fall for install. Geomorphic habitat work in the historic channel is scoped for Natural Systems Design. The hatchery is also trying to move forward with installing a PIT Tag array in that section.

OCR 2025-2027 Capital Budget Development- OCR is starting the development process, asking \$52M for OCR for projects: 25M for Odessa groundwater, Walla Walla implementation, and Icicle. Looking at \$5-6M ask for the Icicle, there will be a need to discuss prioritization and OCR is anticipating that a lot of this allotment will go to Eightmile Lake Dam rebuild.

LNFH SWISP Phase II on Pipeline Rehab- inspections happening at the end of April which will inform the design for this project. Hatchery hoping to solicit in late fall/early winter for spring 2026 construction.

Public Comment

No Public Comment