

Appendix F: Beta Pilot Portal User Testing

Oregon Water Data Portal Phase 2

The OWDP team performed two rounds of Beta User Testing on the Pilot Portal. One in January 2025 and one in May 2025. Each round had three participants from different user groups. These sessions were performed virtually over Zoom with the participant being led by Janine's questions and sharing their screen while Janine and Carrie observed and took notes. Below are the results of the two testing sessions.

User beta testing – pilot Oregon Water Data Portal summary from January 2025

Beta testers:

- Cheng-Wei Huang, Sr. Surface Water Resources Data Developer, Oregon Water Resources Department
- Paul DeMaggio, Water Resources Engineer, Jackson Soil and Water Conservation District
- Jenny Severson, GIS Specialist, Farmer Conservation Alliance

Oregon State University Staff:

- Janine Salwasser, Institute of Natural Resources
- Carrie Hertel, Center for Applied Systems and Software

Jan. 7-8, 2025

Browsers used: Chrome (2), Edge

Operating Systems: Windows (3)

Note: one user was operating off of his phone hotspot with low bandwidth.

Beta testing questions

Is it clear what the purpose of this platform is?

All three users thought the purpose was clear.

Suggestion: Keep the about the OWDP on the landing page as is. Add a sentence or two about the plans for moving from pilot beta to pilot to the full-fledged Oregon Water Data Portal.

- Keep in beta mode through June 30, 2025.
- Conduct second round of beta testing in spring 2025.
- Launch pilot Oregon Water Data Portal July 1, 2025.
- Move beyond pilot once funds are secured to fully develop OWDP.

Looking across the top menu bar, what are you most interested in accessing?

Maps and Tools and Water Categories were the two selected first. No one selected "Catalog" immediately.

Translation or other formats

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Is there information you expected to see, but didn't?

Two of the users were specifically looking for a "Data" button.

Suggestion: Change name of "Catalog" to "Data Catalog" and have results show filtered data resources. Change [URL](#) to go specifically to filtered data from "data catalog" tab.

Going to the Catalog, is the information presented clearly?

All three users thought the catalog information and layout was clear. The preference was to see the data resources first. Note: this was already the default selection.

Suggestion: Have results show data resources by default (not all resources).

Choose a dataset to view. Do you see an easy way to download this dataset?

Datasets selected for viewing by the users included: Water Rights by Type WGS84, Gaging Stations WGS84, Groundwater Management Area So Willamette Valley, Restoration Projects OWRI, Storage Water.

None of the users thought it was clear to find an easy way to download datasets, especially if there are multiple layers associated with a data resource. Selecting a single layer is more straightforward for getting to the data download. However, with the single layer data resources, you lose the ability to see where the metadata can be accessed.

One user response to the suggestion that perhaps you could use a tutorial to educate folks on how to download: I not sure how many folks will take the time to go through a tutorial (but might be nice to have just in case, in the Resources section?), so it seems like the best bet is to have instructions or prompts embedded in the webpage at each step. For example, for data sets consisting of multiple layers, maybe include a prompt near the dataset name that says something like "Open list to download items".

Suggestion: Provide some directions to help guide the user to download the data and access the metadata. Could create a tutorial or add some help on the OWDP landing page. The 3 parts covered in the tutorial could be the 1) I want to section, 2) row of buttons at top for single layer, 3) layers section. Included embedded help responses on the data pages.

For ESRI input: When it is a single data layer, provide the intermediate page that has the metadata link. If there are multiple layers, direct people to where/how to download and access the metadata more explicitly. Also, add an option to download data in the "I want to" section, and ideally add an intermediate step if a user is interested in a subset of layers (or all) if a data resource has multiple layers (note: not possible yet with ESRI).

Going to the Water Categories, what category is of greatest interest?

One user selected Water Quality. Wants to just go straight to a list of data. Felt like it is a lot of text all at once. Likes that it is a central spot for a lot of information. Wanted to see information and data about the 303d listed streams. Wondered why ODFW Stream Flow Restoration Map not under Stream Health instead.

Two users selected Surface Water. One user expected to see data on drought. There was also thought that the seasonal patterns text could be inaccurate or missing information. Some months are missing in the seasons. Expected some data in Seasonal Patterns about drought.

Suggestion: Add 303 D and Drought.gov drought data as featured datasets (or tool); Check on accuracy of seasonal patterns description.

Two users were also interested in the Infrastructure water category. Wanted to see data on irrigation districts.

Suggestion: Link to the data catalog from each of the water categories with that filter (i.e. show list of surface water datasets when you are in the surface water category). Add featured data, featured maps and tools, and

featured documents for each water category. Need consistency with information organization across the categories.

Going to the Maps and Tools, find the Internet of Water Data Integration pilot tool to get water information for an area of interest.

All users eventually found this tool, but they all felt that they weren't sure what data was featured. Only one of the users was able to bring up the data for a specific location. Station data only showed up as grey dots.

Specific locations explored were:

- Tumalo CR BL.
- Antelope CR near Eagle Point, OR.
- Little Butte CR at Eagle Point, OR.

One user did not have a need for any real-time data (or tools). Irrigators might be able to use real-time data. The greatest need is for access to data streaming services and/or data downloads with the ability to add own attributes.

Suggestion: Provide some explanatory text about the data the tool features, include tool name in tool. Keep the same base map that is in use now. Need quicker performance. Provide an easy link back to the OWDP. Add "Gauging" in front of station (if it is).

Are there any water tools that you use on a regular basis that should be featured from the OWDP?

All three users frequently use the OWRD Water Rights Mapping Tool.

Two of the users were interested in the Oregon Water Map Viewer but were not current users. One already uses data from the Oregon Explorer map viewer and suggested that the Water Map viewer include ODFW ESH dataset, Stream classification maps, FEMA 100-year floodplain maps and 303D listed rivers. These datasets are already included in the Oregon Water Map Viewer, so we don't need to add them. We might consider creating a filtered view with specific data layers of interest by OWDP users.

Suggestion: Add OWRD groundwater rights mapping tool (already in catalog); Add BOR Agrimet weather stations and water use; Add NWCC SNOWTEL interactive mapping tool; Add any 303D water tool. From the Maps and Tools, add a "See all tools" after the gallery.

Going to the Resources section, are these helpful resources?

Main ones were there. Needs some grouping by type of resource and perhaps some subtitles and descriptions. It wasn't clear how these resources differ from those listed in the Water Categories section. Add more information about Place-based planning in Oregon. Felt like "Featured Resources" good place to push some statewide tools. Add header "Additional Resources" under the featured ones? or have a complete list of tools below and the featured ones duplicated at top. Featured ones could be based on new updated or seasonal relevance.

Suggestion: Re-title as "Additional Resources" with groupings and labels (Document resources, Addl. Data resources); find a better way to inform what the Resources are and why they are different. Add the Reservoir Capacity – Army Corps of Engineers "teacup" report. Feature the place-based planning map from OWRD and links to more information. Add some introductory text to the Resources landing page as to what these resources are. For Featured Resources change to Featured Documents.

Where would you go to address the question: What do we know about surface water quality and are there concerns?

Two users selected the Water Quality card from the Home Page. Doesn't jump out right away where to go, but both users selected the EPA tool: How's My Waterway. They used the tool to find a location of interest to learn about surface water concerns in a watershed. Both liked the tool data and location report. No one used the search bar to address this question.

One user selected both the Water Quality and the Surface Water category from the Home Page. Wasn't bothered having to go to both places to see what data was available from both categories. Did have trouble finding the data and metadata to answer the question.

Suggestion: Feature the How's My Waterway Tool in the Water Quality category and add this tool to the Maps and Tools section.

For the OWDP, do you have any general feedback on ease of use, display, etc.?

All three users like the user experience of the Pilot Oregon Water Data Portal.

"Looks really nice. Pretty intuitive to use."

"Looks lovely, polished and professional."

"Pretty easy to use, convenient."

How do you envision using the Oregon Water Data Portal?

Jenny would come here to look for water data that can be downloaded and/or streamed into my maps to support Farm Conservation Alliance writers while they are developing NEPA documents. "I would come here for all things water."

Cheng-Wei would use it for accessing data and learning about new water information resources related to surface water management and other water categories for his work with the Oregon Water Resources Department.

Paul would like to use it in a way where he could click on a watershed and have stream flow and reservoir data and stream types and all things related to water. Would be good to see what is going on at a HUC 8, 10 or 12. He often works with new landowners by going through a map exercise with them and showing them their water resources on and near their properties (how the streams are classified, what the water rights are, where the 100-year floodplain extends, if there are essential salmonid habitats present, etc.)

Any other feedback?

- Other useful water tools used in other states were data.colorado.gov.
- When a user is in the Catalog, it is unclear what the relationship is between Data, Documents and Apps and Maps AND the Top OWDP Menu: Catalog, Maps and Tools, and Resources. Are all the Apps and Maps listed in the Maps and Tools section? Likewise are all the Documents listed in the Resources section?
- Make it easy to scrub data and use data from different sources with a new tool.
- How can the user know that they have the most recent dataset in the catalog? Do they need to go back to the source to find out?
- On landing page, could add Featured Maps and Tools, Data, Resources.
- Initial thought that there is a ton of data in there. Once a certain map was found, they would probably just link directly to it rather than coming all the way through portal again.

- Make it clear that it is a Beta version – add language to OWDP landing page.
- Link the survey with the beta version feedback; consider adding a prompt: What are you looking for and did you find it?
- I've realized that my fantasy water portal would be one where all the data is available directly from that portal. I find it burdensome to make many clicks and get redirected to other portals. Once I've discovered a data source, I'll just go directly to that data source in the future.
- To address the previous bullet, I'm wondering if more data could be added directly for download from your portal rather than re-directing someone to another portal. Of course keep all the other apps/portals for their additional data and functionality, but maybe pick one or two key data pieces from each app that would also be available for download directly from your new portal. For example, maybe [this data](#) could be downloaded directly from your portal rather than only sending folks to How's My Waterway. Another example might be flood zones - the FEMA website is somewhat challenging and takes time so it might be nice to provide a dataset that folks could access immediately. Esri has curated/derived data, such as the [flood hazard area hosted feature layer](#) that is derived from FEMA's data that could be made more accessible. This type of service would create more traffic on the new portal.

Glitches experienced

- Internet of Water Data Integration pilot tool wouldn't load for Cheng-Wei. He was using his cell phone as a hotspot with low bandwidth. Could have been the problem.
- When Paul picked "Water Rights by Type WGS84" data for downloading, there is a gap between the header and content so we were waiting for something to appear (map/logo). Also summary had duplicates listed of data layers. [13:00 Paul].
- From the Maps and Tools section the USGS national water dashboard pop up took over the screen, pulled them down to that section right off. Can we turn the pop up off?
- Where DEQ Water Monitoring Program is listed in the Water Quality category the DEQ link is broken (under FAQs "Where can I find Water Quality data?")

Do you feel the pilot OWDP is ready for a beta launch this month?

All three users said YES. But, need to make a few adjustments to make it easier to access data and metadata, as well as better organize information in the Water Categories section and Resources section. Change Catalog to Data Catalog. Add an "Additional Resources" subtitle on the Resources landing page below the Featured Documents section.

Suggestions: add data and metadata access tutorial; make the Catalog tab change to Data Catalog; prominently indicate beta; edit survey questions. Plan to launch beta version in January.

User beta testing – pilot Oregon Water Data Portal summary report from May 2025

Beta Testers:

- Francisco Guerrero, Sr. Technical Analyst for Planning Unit, Oregon Water Resources Department
- Ani Kasch, GIS Specialist, Farmers Conservation Alliance
- Sheryn Olson, Inter-tribal Monitoring Data Project Coordinator, Columbia River Inter-Tribal Fish Commission
- Jiaming Yang, Data Systems Specialist, Columbia River Inter-Tribal Fish Commission

Oregon State University Staff:

- Janine Salwasser, Institute for Natural Resources
- Carrie Hertel, Center for Applied Systems and Software

Beta tests conducted May 19, 2025, and May 22, 2025 (one hour per beta tester).

Browsers used: Chrome (2), Edge

Beta tester background:

- Ani helps irrigation districts modernize their systems and provides minor analysis, maps, and data support. Irrigation districts use this data for grant applications and other purposes. They also work in other states (not just Oregon).
- Francisco has a background in water resources and is currently developing technical assistant packages to support water planning groups in Oregon.
- Sheryn helps data professionals among the four CRITFC tribes to do data management and learn from each other, and Jiaming helps maintain and develop an in-house database, that has an SQL backend and web front end.

Beta testing questions (number of beta testers commenting in parenthesis):

Is it clear what the purpose of this platform is?

- All three tested understood the purpose of the platform from the home page.
- Two of the users had the Atlas pop-up in a confusing/annoying way when the home page was initially accessed.
- One user commented that the Oregon Water Data Portal is quite a broad topic, but assumed it was limited to freshwater (although it doesn't specify). The Columbia River is brackish, and so saltwater data is of interest.

Suggestions for improvement:

- Remove the Atlas from the home page. (2)
- Put the purpose higher up on the home page. (1)
- Remove the Water Categories from the home page. (1)
- Include a Call to Action on the home page. (1)
- Make the home page simpler with less text and redundancy. (1)

Looking across the top menu bar, what are you most interested in accessing?

- Data Catalog. (2)
- Maps & Tools. (1)
- Resources (0) – one user commented "not sure what this means."

Is there information you expected to see, but didn't?

- "About" in the menu instead of the text in the home page. (1)
- "People" in the menu, who is behind this project? (1)
- "Help" in the menu. (1)

Going to the Data Catalog, is the information presented clearly?

- Yes, but could be improved. (3)
- Prefers list view (not card view) as default. (2)
- Card view was overwhelming due to the large number of unfiltered results. (1)
- Results were ordered by relevance, what does relevance really mean? (1)
- User did a search for "streamflow" and didn't get any results. Maybe this word isn't a key word? Datasets did come up for "discharge" and "live stream gauges", people might not be familiar with these technical terms for streamflow.

Suggestions for improvement:

1. Use list view as default data catalog view. (2)
2. Facilitate web scraping. (1)
3. Make it easier to download data. (1)
4. Make it easier to access feature services. (1)
5. Display data categories first (e.g., filter data) vs. unfiltered list. (1)

Where would you go to access and download datasets, and what dataset is of greatest interest to you?

- USGS Stream Temperatures. (2)
- Live Stream Gauges. (1)
- There was confusion about how to access certain data layers when they are part of a collection, which Carrie clarified was due to the limitations of the Esri tool used. When the water rights data was opened it was hard to know what to click on. A user has to click on a layer to then have the map open, and that is not always obvious within a data collection. Note: this was also experienced in the first round of beta testing in January 2025.

Suggestions for improvement:

- First impressions are that it needs better organization in some way. (2)
- Add to the keywords with more commonly used words (e.g. streamflow). (1)
- Make it easier to stream data with easy access to feature services. (1)
- Make it easier to access data layers within a collection. (1)

Going back out to the OWDP Home page, find the “OWDP Atlas” tool. Choose a dataset to view. Is this a useful tool?

- Yes, useful and helpful. (3)
- “A map helps to see if there is data in a specific location.” (1)
- Some confusion about terminology and layer management with multiple data sets. (1)
- Liked that you can click on a site and get more information. Said “oh cool” when a location was clicked. (1)
- Liked the symbology presented. (2)
- Seeing the data spatially displayed helps visual learners. (1)

Suggestions for improvement:

- Add more visual elements and expand the data visualization capabilities of the Atlas tool. The team agreed this was a promising direction but would need further testing with more data sets to determine default layer settings and user experience. (1)
- Remove the tool from the home page, since the tool is featured in the Maps and Tools section. (1)
- Some technical issues with clicking on data points in the embedded map were encountered, which Carrie suggested might be related to the tool's design. The group agreed that the Atlas tool could be improved by defaulting to open in a new tab rather than the current homepage. (2)
- Add more data layers. (3)

Going to the Water Categories, what category is of greatest interest?

- “Most of them.” (1)
- Aquifers (1) “Groundwater useful because it is often more localized.”
- Surface and/or Water Quality (1); “depends on the person and what they are doing on a given day”. Note: Tried to search for PFAs or Toxics. It searched in the data catalog for probably what was in a category page (and therefore not included in the search).
- Water Quantity (1) – “Curious about the difference between water quantity and surface water.”
- Comment was made that “Learn More” is used a lot and often doesn’t really mean much. What are you learning more about? (1)
- Comment was made that there is a lot of data here, “nice work.” (1)
- Water categories section on home page is redundant since it is featured in the top menu. On the home page, “the way the pages are sectioned in the water categories isn’t organized and then you have to read every little thing. They need to be sorted/organized in a way that makes sense (alphabetical?). It just looks unordered.” (1)

Suggestions for improvement:

- Address inconsistency experienced in the links – prefers links to open in a new tab. (2)
- Reduce the font size for “Data/Tools/Learn More/FAQs”. (1)

- Add more text to the "learn more" section that explains what you will learn. (1)
- Add more water categories: Climate and Hydrology and Water Use and Rights. (1)
- Remove the explore more buttons and add more text about the item. (1)
- Provide some order to the water categories and use less text. (1)
- Remove the water categories from the home page. (1)

Going to the Maps and Tools, find the Internet of Water Data Integration pilot tool to get water information for an area of interest.

Is the data helpful in its current format?

- No. (3)
- "There aren't any labels or a legend." (3)

How could it be more helpful?

- In the text for the Atlas, delete the first sentence. It's too obvious. (1)
- For the API, say source. (1)

Suggestions for improvement:

- Remove the Map/User Interface from the Maps and Tools section and just feature the Atlas – keeping the API/Source information. (3)
- Suggested a paragraph introduction in the map. (1)
- Add a legend. (3)

Are there any water tools that you use on a regular basis that should be featured from the OWDP?

- [DOGAMI Lidar Viewer](#) (for less than perfect canal data). (1)
- HUC data often to understand where the watersheds are. (1).
- SNOTEL tool. (1)
- [StreamNet](#) has where all of the dams are and that would be really helpful. (1)
- Yakama STAR online: [Home | Status and Trends Reporting](#) (1) for status and trends of fish and habitat within Yakama Nation.
- One user thought of tools as some code that does something vs. a map. A tool should have a purpose (ie. hammer). Is there anything in the tools list that is actually a tool? (1)
- Confirmed that clicking on "all tools" correctly leads to the apps and maps section of the catalog. (1)

Suggestions for improvement:

- Change "maps and tools" to "apps and maps" to better reflect the nature of the content. (1)
- Add the recommended tools listed above. (3)

Going to the Resources section, are these helpful resources?

- What are these resources for.... Planning? Conceptual development? "Feels like I am going to the grocery store, but I don't know what aisle or what I am shopping for." (1)
- "Water related and irrigation related are not always the same." (1)

What else should be added?

- More categorization and graphics that go with the additional resources. (2)
- Provide a "quick glance" without having to scroll all the way down to find out what he is going to find. (1)
- Consider adding [Justice 40 census bureau data and information](#) (no streaming feature service right now). (1)

Where would you go to address the question: What do we know about surface water quality and are there concerns?

- One user went to the top menu Water Categories -> Surface Water -> didn't find what they were looking for so backed out and went to Water Categories -> Water Quality -> Surface Water Sources Map. Then went to the catalog and searched "Surface"; didn't find it, searched "quality" and picked the Oregon Water Quality Standards. They were looking for the underlying data, but acknowledged that other users might be looking for something that is published.
- Another user went to the OWDP Home page > Water Quality categories and selected the Oregon Water Quality Index and the Integrated report on surface water quality. Navigated in there to see that the Alsea is impaired, but couldn't really tell what about it was without some additional digging. Didn't understand what the items were easily.

For the OWDP, do you have any general feedback on ease of use, display, etc.?

- Prefers list view for the data catalog (not cards). (2)
- Sometimes the links open in a tab and sometimes not (IoW map opens a tab with no back button). (2)
- Feedback on the homepage layout, suggesting improvements to the menu structure and call-to-action clarity, while also noting that the "About" page should be more prominent. (1)
- Organize by A-Z the tools, data, and resources. (1)
- One user really liked using the search in the Data Catalog.
- In general, the site is a little text heavy. (1)
- In the resources section, use less text and include maybe logos. (1)

How do you envision using the Oregon Water Data Portal?

- Ani would use it if she were looking for data or if she didn't know a data source (for example: an application that requests information on "winter wildlife" areas or endangered species and critical habitat for NW pond turtle). She often goes to databases and looks for something Oregon specific and water specific, this is how she would use the data catalog. The OWDP would be another source if she were trying to find something where she didn't know where it is for her clients (irrigators).
- Francisco would use the OWDP pilot for developing technical assistance packages. He wants to build workflows that can automatically search for and download data and metadata, so they can be incorporated into technical reports with proper traceability. He gets planning questions for what he is

doing from place-based water planning groups. He wondered if the OWDP can help answer some of these questions.

- Sheryn, Inter-Tribal Monitoring Data Project Coordinator, and Jiaming, Data Specialist, both of the Columbia River Inter-tribal Fish Commission (CRITFC), would use the OWDP as a centralized place where they can access water data to support the four tribes of CRITFC.

Any other feedback?

- For the home page, make it simpler, remove redundancies, remove the Atlas, add a "help" button, move up the survey "Help shape Oregon's water data portal future", add more about who are you, what are you doing and what can we do for you. (1)
- Improve usability by ensuring consistent back-button functionality. (2)
- Improve the "Learn More" section with more specific educational content. (1)
- Likes how the categories help narrow it down. More categories could be good. Knows some would exist in multiple categories. (1)
- The way people interact with data is more visual. The atlas is a good direction to go. Ways to visualize more available data sets onto the atlas. (1)
- Add enhancements such as clearer categorization of resources, better navigation, and the addition of a "people" section to provide contact information and context about the data's creators. (1)

Do you feel the pilot OWDP is ready to move out of the beta version?

- All beta testers said "Yes."
- "It's useful as it is now."
- "Much better than sites out there right now that are not Beta."
- "It is cool."

Final notes: the discussions highlighted that while some limitations were due to the pilot's ESRI-based constraints, their feedback would inform future iterations of the platform if they could not be addressed during the pilot phase. Each of the beta testers had an opportunity to comment on the draft summary beta test report before it was finalized.

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