Oregon
Tina Kotek, Governor

Water Resources Department
725 Summer St NE, Suite A
Salem, OR 97301
(503) 986-0900
Fax (503) 986-0904
www.Oregon.gov/OWRD

OWRD's Surface Water Information Modeling System (SWIMS)
Technical Advisory Group Meeting (TAG) #1 – MEETING SUMMARY
Date: July 15th, 9:00 – 11:00 am
Location: Virtual

WELCOME, MEETING PURPOSE AND INTRODUCTIONS

Each Oregon Water Resources Department (OWRD) staff member and Technical Advisory Group (TAG) member made their introduction and gave a brief background of their position and experience.

PROJECT STAFF	TAG MEMBERS
Ryan Andrews, Senior Hydrologist	Adam Stonewall, USGS (OWSC), Surface Water Specialist
Jordan Beamer, Assistant Surface Water Section Manager	Christopher Konrad, USGS (WWSC), Research Hydrologist (retired)
Cortney Cameron, Senior Hydrologist	Jon Haynes, USGS (OWSC), Hydrologist
Annette Liebe, Technical Services Division Administrator	Sara Goeking, USFS, FIA National Program Manager
Junjie Chen, Hydrologist (Water Availability Analyst)	Sayantan "Monty", Desert Research Institute, Assistant Research Professor
Cheng Wei Huang, Senior Water Resources Data Developer	Spencer Swaske, ODFW, Deputy Habitat Administrator
Rachel LovellFord, Surface Water Hydrology Program Manager	Peyman Abbaszadeh, PSU, Assistant Professor
Linda Ray, TSD Admin Specialist, Meeting Recorder	Rick Parsons, Parsons Water, Certified Water Right Examiner
	Rob Annear, Annear Water Resources, Certified Water Rights Examiner
	Terra Metta, ODEQ, Hydrogeologist
	Ken Eng, USGS (WRMA), Hydrologist
	Kristin Mikkelson, USBR, Hydrologic Engineer

Attendee: Amanda Wozab, ODEQ, NW Region Cleanup Manager

Jordan Beamer, OWRD Surface Water Section Assistant Manager gave a brief history of the development of the TAG group, motivation for the project, and the member expectations for this project. The SWIMS project is divided into three components:

A. **Project core team** composed of OWRD staff members from the Surface Water/Hydrology Section and Information Services.

B. **TAG members** external "subject matter experts" each coming from different fields of science, background and experience. As the project progresses, the TAG members will be asked to provide feedback on the modeling framework being developed by the project core team.

C. **Public participation meetings** will provide an opportunity for the project team to share the progress of the project and allow feedback from the public.

Technical Advisory Group EXPECTATIONS:

- All TAG meetings will be recorded and posted on the SWIMS webpage: Oregon Water Resources Department : SWIMS : State of Oregon
- Meeting materials and summaries will be posted on the website.
- TAG meetings will be summarized at future public meetings to reflect how the project team considered TAG feedback and implemented it into the project.
- Membership is expected to continue through July 2027.
- TAG meetings will be held virtually unless a hybrid option is requested by members.
- TAG meetings will be held quarterly (the first Tuesday of each quarterly month).

TECHNICAL ADVISORY COMMITTEE (TAG) - TEAM CHARTER

Ryan Andrews, OWRD Hydrologist, presented the TAG charter and overview of the project. The goal is to develop and implement an updated version of the Surface Water Modeling System (SWIMS). The software that has been used since the 1990s is called WARS (Water Availability Reporting System) and it contains a database and reporting tool that needs to be updated. There are four components of the update:

- Modeling framework
- Software system (control modeling framework)
- Database
- Reporting Tool

The modeling framework is the primary interest as the project begins. It includes data input, methods, and processes to produce information for decision making. The goal is to build off the current system in WARS and bring it up to current standards while building a model that can also be used for future years to come.

Ryan presented an outlined engagement model for this project:

1. Project staff will collect feedback from TAG members to inform development of water availability modeling framework (the result will be captured in technical memos). The TAG will meet quarterly with project staff to discuss the technical memos that are proposed and provide a discussion for feedback to staff as they move forward with developing the model.
2. Maximize participation during meetings. These meetings are focused on providing an opportunity for feedback, so maximum engagement by TAG members is anticipated.
3. Option to comment on technical memo with written feedback. Ryan emphasized that written feedback is not an expectation from TAG members. But members that want to provide written feedback should use that as an additional opportunity to engage with the project team.

TAG Charter: Question and Answers

Several TAG members emphasized the importance of transparency when approaching the project and the importance of creating a model that allows results to be reproduced by other agencies and users. The goal should also be to create a model that the "reader" can use and independently follow the logic of the model.

There was a question about wordage in the TAG scope that mentioned policy development and clarification on that term. Project staff emphasized that policy changes or rulemaking is not part of this project, the goal is to focus on the model and develop an updated version. As staff make decisions on the development of the model, they are required to adhere to state statutes or mandated rules.

A TAG member cautioned against using PDF versions of the data that can get out of date when edited. Project staff member, Cheng Wei Huang is developing a platform to provide version controls and system management to ensure data is up to date. Cheng Wei is also working with Michael Smith, OWRD Information Technology in developing the platform.

WATER AVAILABILITY MODEL (WARS) and SURFACE WATER INFORMATION MODELING SYSTEM (SWIMS) OVERVIEW

The WARS approach was developed and implemented in the 1990s and has not evolved since it was created. Modeling decisions were made based off the science and data that was available at that time. The WARS model itself was

originally developed because of a directive from the State Legislature to limit appropriations and situations of regulation.

Challenges of project

- Currently available information represents an older climate period (1958-1987)
- Requires finer resolution
- Water use information needs to be updated
- The current gage network is designed for water management rather than science and lacks information on natural flow conditions
- There is a backlog of streamflow records to be published
- The current system for updating model and maintaining the system is semi-functional

Expected outcomes

- Water availability for 1991-2020
- Updatable, repeatable water availability workflow
- Software system for performing updates
- Modeling framework informed via TAG
- Peer-reviewed Open File Report

Project timeline

- 2025 | Inception: understand the risks and decisions to be made and outline requirements
- 2025-2027 | Elaboration: analyze information and specify the model and system requirements
- 2027-2028 | Construction: build the system
- 2028-2029 | Transition: formally calculate water availability
- 2029 | Close-out: Implement changes into Department operations

WARS & SWIMS: Question/Answer

A TAG member asked about incorporating third party data (i.e. data from ranchers, farmers, Bureau of Land Management, Department of Environmental Quality, etc.) OWRD staff will discuss the option of accepting external data. The topic of "third party data" will be included in the discussion at the next TAG meeting in October.

A TAG member asked about identification of areas around the state that are "data poor" and the need for new gages to be installed to collect that data. OWRD staff stated that there are a few conditions that slow the process of collecting data in those areas. Accessibility is one key factor as there are some areas around the state that staff cannot physically access the location and collect the data. There are also restrictions on federal land which increase time to install a gage due to processes and permits. The project team will identify gaps and install new gages based off of the information collected from the current WARS system and consider how to update the new model when data is lacking.

Next Steps

- The next TAG meeting will be on October 7, 2025. A list of future dates and individual calendar invites will be sent out by OWRD staff to the TAG members following this meeting.
- The subject of "third-party" data will be included as agenda future agenda item.

Members are encouraged to reach out to Ryan Andrews, Ryan.M.Andrews@water.oregon.gov if they have questions or concerns.