Idaho Water Resources Research Institute

2025 Idaho Water Research Priorities

IWRRI Research Advisory Committee Outcomes

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2025 IDAHO WATER RESEARCH PRIORITIES

IWRRI RESEARCH ADVISORY COMMITTEE OUTCOMES

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INTRODUCTION

This report summarizes the 2025 Idaho water research priorities and outlines the IWRRI Research Advisory Committee (RAC) process for identifying and prioritizing water research projects. The report includes information about the background and composition of the RAC, the process employed to identify and prioritize research projects, and funding recommendations.

The Idaho Water Resources Research Institute (IWRRI) is one of the 54 national water research and technology centers charged with conducting applied, impactful and relevant water research across Idaho. In 2024, the Idaho legislature appropriated $1M in annual state funding to IWRRI through Senate Bill 1209 to support rigorous, actionable water research at all of Idaho's public institutions of higher learning and fund research projects accordingly. In 2025, IWRRI established the RAC to identify and prioritize water research needs across the state.

RESEARCH ADVISORY COMMITTEE

Objectives

- Identify Idaho's most pressing water challenges and research needs.
- Generate and review a wide range of research project proposals.
- Evaluate proposals based on relevance, community impact, feasibility, political considerations, and geographic coverage.
- Prioritize research projects for near-term funding
- Identify ideas for long-term research project development.
- Provide clear direction to the IWRRI Executive Board for the allocation of IWRRI's newly legislated research funding.

Structure and Composition

The RAC was assembled to reflect the geographic, institutional, and topical diversity of Idaho's water management landscape (Figure 1). Thirty-two members were invited based on their professional expertise and their ability to represent the water-related interests of their respective organizations or constituencies. Committee members represented a range of scientific expertise and policy insight across multiple sectors. The committee included representatives from state and federal agencies, tribal governments, academic institutions, utilities, conservation organizations, municipal governments, and industry. Their backgrounds include hydrology, ecology, agriculture, engineering, natural resource management, and policy development (Appendix A).

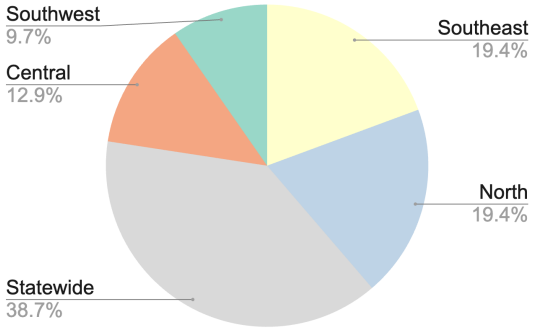

Figure 1: Geographic distribution of RAC members.

Identifying water research priorities across Idaho represents a critical first step in synthesizing water-related challenges and research needs across the state. This will be an evolving annual process, with new membership every 2-3 years. Continued input from a wide range of experts, community members, rightsholders and other stakeholders will be essential to ensure priorities remain responsive to emerging issues and local contexts.

Process (2024-2025)

As part of IWRRI's 2024–2025 outreach, the team worked with the RAC to identify, refine, and prioritize water research topics through a structured, three-part virtual meeting series supported by surveys and collaborative tools. The approach was iterative, moving from high-level challenge identification to detailed project evaluation and prioritization.

Meeting 1 | June 25, 2025: RAC members discussed major water-related research challenges facing Idaho, which were then synthesized into six overarching thematic areas (Table 1). Members were invited to develop and submit research project proposals that addressed these themes in consultation with the communities and organizations they represent.

Between Meetings 1 and 2: RAC members submitted over 90 project proposals in response to the identified challenges. Submissions came from both RAC members and the IWRRI team who drew on research needs identified from earlier stakeholder engagements (Fall 2024–Spring 2025). Project submissions were categorized according to the USGS Water Resources Research Act (WRRA) priority areas[1] and by Idaho Water Resources Board regions (Figure 2, Appendix B).

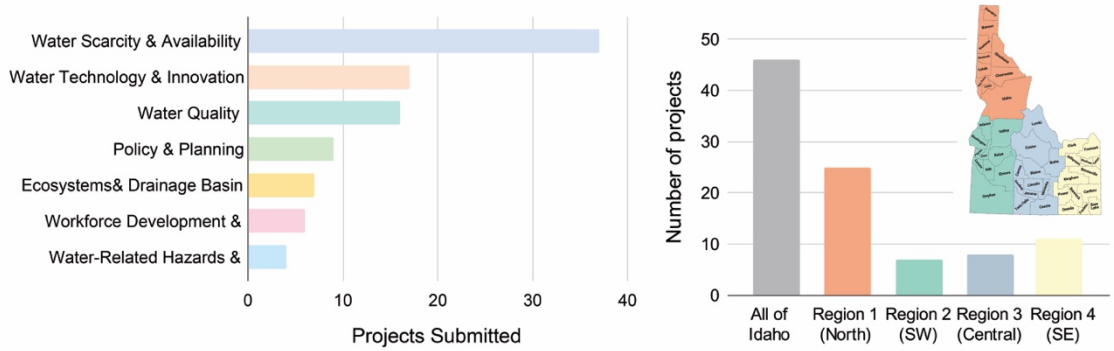

Figure 2: Number of submitted projects grouped by USGS WRRA Research Priority Area (left); and Idaho Water Resources Board (IWRB) regions (right).

Meeting 2 | July 14, 2025: The RAC was divided into three workgroups to review submitted proposals based on established evaluation criteria. Criteria included community need, geographic distribution, end-user applicability, and feasibility for one-year implementation. The workgroups then reported back to the full group on their discussion of projects.

Between Meetings 2 and 3: RAC members ranked 96 projects in each thematic category, with the number of votes in each category weighed by the number of projects submitted to each. IWRRI then synthesized the outcomes by clustering technically or geographically related projects, with the aim of reducing duplication and encouraging cross-cutting initiatives.

Meeting 3 | July 23, 2025: In the final meeting, RAC members reviewed the results of the prioritization survey (Appendix B). Strategies to integrate the top ranked projects were discussed collectively, and next steps were outlined.

After Meeting 3: RAC members completed a survey about their involvement in the research prioritization process (Appendix C).

[1] Donohue, M.J., Greene, E.A., Lerner, D.T. (2021) Water Resources Research Act Program- Current Status, Development Opportunities, and Priorities for 2020-30, USGS Circular 1488 https://pubs.usgs.gov/publication/cir1488

IDAHO'S WATER CHALLENGES

The RAC identified a broad range of Idaho's most pressing water challenges (Table 1). While this is not a comprehensive list, it captures concerns that are most frequently raised across the state.

Table 1: Primary Water Challenges in Idaho identified by the RAC

Theme	Idaho Water Challenges
Water Supply	Additional research is needed to manage the Eastern Snake Plain Aquifer. which is one of Idaho's most critical water quantity issues due to groundwater level declines and complex groundwater–surface water interactions.
	Information is needed about changes in water supply from headwater catchments statewide
	Community needs are outpacing updates to reservoir management. Prioritization and coordination are needed statewide.
Water Quality	Water quality concerns stemming from septic systems and agriculture impacts on surface water bodies and groundwater resources.
	Eutrophication and harmful algal blooms are emerging concerns for water bodies statewide, impacting drinking water sources, recreation and ecological functions.
	Current water temperature standards may be biologically outdated and poorly matched to observed conditions.
	Evaluation of water reuse standards necessary to support aquifer recharge while protecting groundwater quality is needed broadly.
Data	There are substantial needs regarding: water data interoperability and accessibility across agencies and organizations, tools & visualizations that can serve decision-makers.
	Idaho does not have the necessary spatial coverage of key observational data including weather, soil moisture, and snow data.
	Water modeling tools used for regulatory purposes have a range of limitations. The available tools are not accessible to non-technical users and decision makers.
Ecosystems	The spread of invasive species requires adaptive and rapidly deployable management strategies to protect Idaho ecosystems and native species.
	Understanding and prioritizing beneficial outcomes for aquatic ecosystems in coordination with broader water management is challenging due to divergent missions & objectives across organizations.
Education	Every Idahoan would benefit from increased understanding of the complexity of Idaho's water issues and understanding their role in sustainable water management.
	Workforce readiness (especially for state agencies) is a key need.
Growth	Increasing residential development, especially in sensitive aquifers, poses serious challenges to both water quality and long-term supply.
	Individual wells and septic systems beyond city limits is resulting in fragmented management and more challenging oversight.
	Rural communities have additional resource needs to maintain and upgrade water infrastructure to keep pace with residential development and aging infrastructure.
	Decision makers do not have consistent access to tools to quantify and evaluate the impacts of growth.

IDAHO'S 2025 WATER RESEARCH PRIORITIES

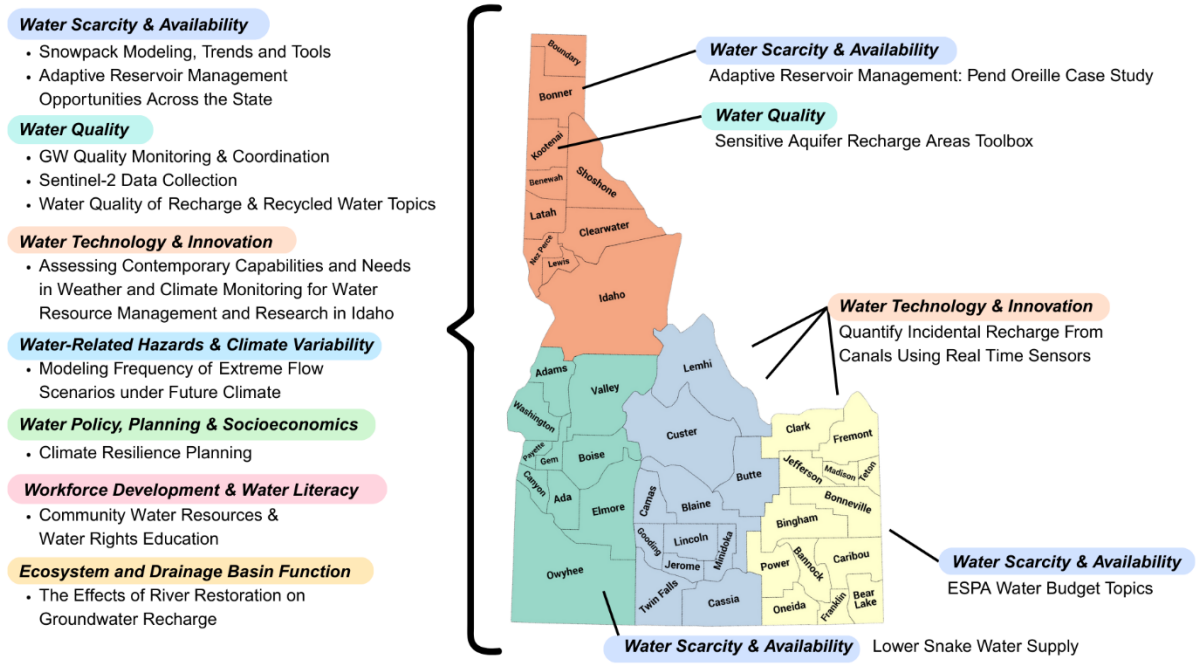

Figure 3: Priority research projects grouped by WRRA priorities highlighting both statewide (left) and regional projects (right).

Discussions about the 96 submitted projects underscored the value of integrated, transferable efforts that address multiple needs simultaneously, with consensus forming around a core set of high-priority and feasible projects (see votes in Appendix B). For example, the Eastern Snake Plain Aquifer (ESPA) Water Budget Gap Analysis was viewed as both technically important and urgent. Similarly, projects focused on evaluating snow products and data needs were highlighted for their broad applicability across the state, their importance to the West, and the confidence that they could be completed within a year. Other high-priority areas included groundwater modeling, water quality analysis of both surface and groundwater, and expanded snowpack and weather monitoring. Evaluating data gaps and opportunities for impactful research in each of these areas will be critical initial steps, with members emphasizing the importance of multi-agency alignment and collaboration, particularly where federal research and modeling overlap with state goals. RAC members also noted that initiatives such as climate resilience planning and public water literacy could benefit from dedicated working groups facilitated by IWRRI.

The final list of prioritized research topics incorporated details from the RAC discussions and input from the IWRRI Executive Board (Figure 3 & Table 2). Research Categories selected by the IWRRI Executive Board for 2025 funding include: Water Scarcity, Water Quality, Technology & Innovation, Water Hazards and Water Policy & Planning. Additional details for priority projects for funding may be found here.

Table 2: IWRRI Water Research Priorities. Projects with an (*) were grouped from submitted projects. Research Categories prioritized for 2025 funding include: Water Scarcity, Water Quality, Technology & Innovation, Water Hazards and Water Policy. Additional details for priority projects for funding may be found here.

Research Category	Priority Areas	Region	Projects
Water Scarcity & Availability	**Eastern Snake Plain Aquifer (ESPA) Water Budget**	Southeast/ Central	**ESPA Water Budget Gap Analysis** **Analysis of changes in reach gains on Snake River between Blackfoot and Minidoka** **Groundwater- Surface Water budget for Upper Snake River Basin**
	Middle Snake	Southwest	**Water supply analysis in the Snake River below Swan Falls Dam and prominent tributaries, including the Boise, Payette, and Weiser drainages** ● Historic conditions and trend analysis of annual unregulated flows at key management points (e.g., Weiser Gage or Glenwood Gage) and fill of onstream reservoirs.
	Snowpack Modeling, Trends and Tools	Statewide	**Contextualizing Current Snow Water Storage with Historical Snow/Climate Conditions** ● Develop new interactive online visualizations that support water managers. **Snowpack Monitoring with Remote Sensing*** ● Synthesize remote-sensing tools for snowpack modeling including how field observations and advanced modeling techniques are being used. Evaluate snow monitoring network in coordination with monitoring project.
	Adaptive Reservoir Management	Statewide/ North	**Adaptive Reservoir Management Opportunities across Idaho*** ● Synthesize information about existing ACOE and USBR research on forecast informed reservoir operations and adaptive reservoir management in the state. ● Summarize ACOE/USBR processes, highlight opportunities to leverage federal funding. **Case Study on Lake Pend Oreille (North Idaho)*** ● Summarize changes in lake level management though time & connection to other reservoirs in the system. ● Snow projects and resiliency projects are of relevance.
Water Quality	**Water Quality Monitoring & coordination**	Statewide	**Water Quality Trends Across Idaho** ● Synthesize existing water data (groundwater & surface water). ● Identify data gaps and opportunities for additional monitoring. ● Explore opportunities for shared data and data visualization tool usable by multiple user groups. **Data Collection for Validation of Sentinel-2 Satellite Surface Water Quality Monitoring**
	Water Quality of Recharge & Recycled Water Topics	Statewide	**Sensitive Aquifer Recharge Area Toolbox** ● Integrate geospatial data to help identify priority areas to improve groundwater quality, aquifer recharge, and other aspects of groundwater protection and management. ● Case Study: Spokane Valley Rathdrum Prairie Aquifer

Research Category	Priority Areas	Region	Projects
Water Quality (cont.)	**Water Quality of Recharge & Recycled Water Topics (cont.)**	Statewide	**Managed Aquifer Recharge (MAR) and Injection Wells*** ● Summarize existing approaches to quantify impact of MAR on water quality and evaluate current requirements. Determine if injected water needs to be treated for certain contaminants at the injection point. Identify if injection well locations should consider community source water protection plans and/or groundwater models. ● Create deliverables that are accessible to broad and non-technical audience.
			Recycled Water & Aquifer Recharge for Sensitive Resource Aquifers* ● Synthesize conditions necessary for recycled water to be used for groundwater recharge while protecting groundwater quality. ● Opportunity to highlight existing/ongoing recycled water projects in Idaho as case studies (e.g. Boise, Nampa, Post Falls).
Water Technology & Innovation	**Water Monitoring & Data Accessibility**	Statewide	**Improving Accessibility for Idaho's Water Data*** ● Visualizations of groundwater and surface water quality data, integration of multiple streamflow data sources, snowpack and weather data. ● Host community engagement activities to identify priorities. **Assessing Contemporary Capabilities and Needs in Weather and Climate Monitoring** ● Characterize the extent of Idaho's current weather and climate monitoring network to support water resource management and research. ● Assess how existing monitoring capabilities meet needs. ● Identify gaps and opportunities to expand monitoring coverage throughout the state.
		South	**Quantify Incidental Recharge From Canals Using Real Time Sensors** ● Expand monitoring in canal systems to better quantify incidental recharge and support refinement of water budgets.
Water-Related Hazards & Climate Variability	**Modeling Frequency of Extreme Flows Under Future Climate**	Statewide	● Hydrologic analysis that supports prioritization of flood management resources from the Idaho Office of Emergency Management and the Idaho Water Resources Board. ● Leverage data integration projects. ● Directly relevant for water resilience planning.
Water Policy, Planning & Socio-economics	**Climate resilience planning**	Statewide	● Evaluate the previously conducted resiliency plans related to water management that have been created in the State to support development of a water resilience plan for the State. ● Relevant related projects include historical analysis of snow, addressing data gaps in weather and flood frequency.
Workforce Development & Water Literacy	**Community Water Education**	Statewide	● Coordination across existing education efforts to identify the priority audiences and approaches.
	High-school water education	Southwest	● Expansion of "The Confluence Project," a field-based hydrology curriculum for high school students that culminates in a Youth Water Summit where students present their research.
Ecosystems & Drainage Basin Functions	**Effects of River Restoration on Groundwater Recharge**	Statewide	● Collaborate with ongoing research efforts to quantify impacts of river and wetland restoration on groundwater recharge. ● Understand how restoration impacts ecosystem transitions from disturbed to restored across varied landscapes.

Summary

The RAC process identified Idaho's 2025 water research priorities with several clear opportunities for investment:

- Additional groundwater modeling and development of water budgets is needed across the state, particularly related to the Eastern Snake Plain Aquifer (ESPA). This includes research related to groundwater-surface water interactions, and understanding how land use change and population growth affect water supply. These resources are critical to long-term resource planning and as prerequisites for effective management.
- Snowpack monitoring and modeling is critical to streamflow forecasting, reservoir operations and climate resilience planning. Synthesis of monitoring gaps, opportunities to leverage remote sensing and modeling approaches, and development of tools for water managers was widely supported.
- Water quality research, especially related to aquifer recharge and emerging contaminants, is a key interest to many Idahoans. Data-sharing and resources for communication with the public should be developed in parallel with this research for greatest impact.
- Data interoperability and accessibility is key to many state-wide research projects. Many projects depend on existing data that is siloed across organizations and agencies. A focus on data synthesis, visualization, and building tools for decision-makers will amplify research impact.

ADDRESSING IDAHO'S WATER RESEARCH PRIORITIES

The RAC process resulted in a list of high-impact water research priorities for Idaho. In August 2025, the IWRRI Executive Board reviewed and approved the projects that fall under the following categories for IWRRI funding: Water Scarcity, Water Quality, Technology and Innovation and Water Management and Resilience.

To advance these research priorities, IWRRI will issue a Request for Proposals (RFP) to Idaho faculty in August. Letters of intent will be due in early September, with full proposals reviewed using a standardized evaluation matrix. Final project selections will be approved by the IWRRI Executive Board.

Following selection, IWRRI will work closely with faculty and partners to refine Statements of Work and launch project activities. Research outcomes will be used to directly inform and address Idaho's most critical water resource challenges and shared through reports, webinars and resources hosted on the IWRRI webpage.

Appendices

Appendix A: RAC Committee Membership and Affiliations

Organization	Name	Region	Position and Expertise
Northside Canal Company	Alan Hansten	Central	North Side Canal Company, General Manager, professional engineer, oversee all operations and business activities of the company.
Bingham Groundwater District	Alan Jackson	Southeast	District Manager
Nez Perce Tribe	Allison Lebeda	North	Water Rights Program Coordinator: oversee streamflow and groundwater monitoring in homelands, review/comment on water rights, administer tribal water rights, investigate water quantity-related complaints, manage/implement grants.
Agricultural Research Station	Andrew Hedrick	Statewide	Research Hydrologist, background in snow physics and watershed hydrology, coordinate the snow research program at the USDA-ARS Northwest Watershed Research Center in Boise.
U.S. Forest Service	Ari Colvin	North	Fisheries Biologist, Idaho Panhandle National Forest
Coeur d'Alene Tribe	Ben Scofield	North	Water Resources Specialist in the Water Resources Program. My duties include managing and monitoring the Tribe's surface water resources. Much of my expertise is in aquatic invasive species management (primarily aquatic vegetation), limnology, and water quality.
Idaho State University	Colden Baxter	Southeast	Professor of Freshwater Ecology, Dept. Biological Sciences and Director, Center for Ecological Research & Education, Idaho State University
City of Boise	Colin Custer	Southwest	Water Resources Program Coordinator - Currently overseeing the City of Boise's water rights and various other water resources. Seven years of water quality and biological monitoring on the lower Boise River.
Idaho Department of Environmental Quality	Craig Cooper	Statewide	Senior limnologist, Coeur d'Alene Lake Management. Lead interdisciplinary scientific work for Idaho DEQ on CDA Lake and interactions with the basin. Broad expertise in biogeochemistry and environmental water science, ranging from oceans to groundwater. Also have a solid understanding of environmental, energy, and climate policy. Prior to DEQ, I primarily conducted research in the biogeochemistry of metals and radionuclides in sediment and groundwater.
Idahoan	Dennis Leikam	Central	Director, Environment and Safety - manage all aspects of environmental programs - fresh water, wastewater, air permitting, and long-term strategy for all of these.
University of Idaho	Erin Brooks	North	Professor in the Soil & Water Systems Department. Agricultural Engineer by training and a certified Professional Engineer in the state of Idaho. My research focuses on impacts of management water quantity and water quality as both a field experimentalist and through the development of geospatial decision support tools. I've focused on agricultural, forested, range, and residential/urban dominated ecosystems. My primary motivation is improving management in complex landscapes through applied physical, chemical, and biological science.

Organization	Name	Region	Position and Expertise
Trout Unlimited	Erin Plue	Statewide	Trout Unlimited - Idaho State Director, Overseeing Idaho restoration and policy program. I previously ran the North Idaho Program primarily doing restoration implementation and communications. My background is primarily in aquatic and forest ecology.
NRCS Snow Survey	Erin Whorton	Statewide	Water supply specialist with the NRCS Idaho Snow Survey: We maintain the SNOTEL weather station network to monitor snow water equivalent, precipitation, and various meteorological parameters across Idaho's watersheds. I communicate water supply, snowpack, streamflow conditions to various water users and to the media throughout the year.
Idaho Power	Frank Gariglio	Central	Idaho Power - streamflow forecasting, reservoir operations, hydropower forecasts, river and reservoir operations compliance
National Oceanic and Atmospheric Administration	Jason Gerlich	Statewide	Regional Drought Early Warning System Coordinator - Serve as a regional source of information for federal agency partners, tribes, states, municipalities, partner academic institutions, and other organizations on drought early warning, forecasting and outlooks, and mitigation and response planning. Advance the integration of research on drought indicators and triggers, drought impacts, and the use of drought information, with adaptation and drought resilience efforts to manage water resources, reduce vulnerabilities, and mitigate impacts.
Panhandle Health/ Aquifer Protection District	Jenny Gray	North	Aquifer Protection Program Coordinator: This position serves as the subject matter expert for the Rathdrum Prairie Aquifer (RPA) Protection Program within the Panhandle Health District. Comprehensive understanding of environmental and public health objectives, policies and rules, and serves as primary liaison for technical issues, training, and consultation concerning the RPA Protection Program.
Idaho National Lab	Kara Cafferty	Southeast	Senior Energy and Water Systems Researcher
U.S. Geological Survey	Kerri Treinen	Southeast	USGS, Hydrologist/Geochemist, Idaho National Laboratory Project Office: Water quality, fate and transport, geochemical modeling, quality assurance
Idaho Department of Fish and Game	Lance Hebdon	Statewide	Bureau Chief of Fisheries, supervise Idaho's fisheries research, hatcheries and management to conserve native fish species and make fishing better for the citizens of Idaho
Boise State University	Lejo Flores	Southwest	Professor, Boise State University, Department of Geosciences. Advance fundamental understanding of hydrologic systems – particularly snow-dominated, mountain watersheds – through basic and applied research and disseminating knowledge via peer-reviewed publications, teaching, and outreach.

Organization	Name	Region	Position and Expertise
Shoshone-Bannock Tribes	Lytle Denny	Southeast	Deputy Executive Director, Natural Resources Division, I oversee the Division's five departments: Tribal Water Resources, Tribal Department of Energy, Fish and Wildlife, Land Use, and Agricultural Extension. My role involves both internal leadership and external coordination to protect and restore Tribal lands, waters, and natural resources across the Shoshone-Bannock homelands, which span parts of Idaho, Oregon, Nevada, Utah, Colorado, Wyoming, and Montana. I work at the intersection of policy, law, and intergovernmental relations. I engage with federal, state, and local governments, as well as nonprofit and academic partners, to advance Tribal priorities. My expertise includes organizational development, legal and policy planning, and cross-jurisdictional coordination. I also bring technical experience in GIS, permitting, grant administration, spatial analysis, and Traditional Ecological Knowledge.
Idaho Dairymen's Association	Megan Satterwhite	Statewide	Director of Operations- I oversee the Association's environmental services program and manage the IDA office and staff. I work with dairy producers on nutrient management, manure handling and storage, soil and manure sampling, and regulatory compliance. I engage with research scientists to develop, prioritize, and execute IDA-funded environmental research projects.
Palouse Basin Aquifer Committee	Mike Faupel	North	Director
Idaho Department of Water Resources	Mike McVay	Statewide	Water Resources Engineer, P.E., P.G, Hydrology Section
Lakes Commission	Molly McCahon	North	Executive Director - I work for the Lakes Commission Advisory Board, who are appointed by the Governor of Idaho to advise on water-related issues in the Pend Oreille Basin. My focus area is North Idaho and its connection to the Columbia River Basin.
The Nature Conservancy	Neil Crecenti	Statewide	Agriculture Program Manager, Idaho TNC. I oversee the agriculture program, which aims to increase the adoption of agricultural conservation practices to achieve outcomes in reduced carbon emissions, improved water quality, and reduced irrigation demands. I have worked in the water arena both quality and quantity for the past 15 years including policy analysis, planning, and ecosystem service (water quality trading) program design.
Idaho Department of Water Resources	Phil Blankenau	Statewide	Idaho Department of Water Resources (IDWR) evapotranspiration (ET) analyst. I supervise the remote sensing group, maintain ET-IDWR and produce ET data and analyses.

Organization	Name	Region	Position and Expertise
Henry's Fork Foundation	Rob Van Kirk	Southeast	Science and Technology Director for the Henry's Fork Foundation. I oversee all aspects of scientific research, long-term monitoring, and data curation and provisioning conducted by a six-member team of scientists and technicians. Broad subject areas covered by our department include hydrology and water management, climate science and adaptation, aquatic ecology and limnology, fish biology, and social science. I have particular expertise in groundwater-surface water interactions, water rights administration, and mathematical and statistical modeling across disciplines.
City of Twin Falls	Robert Bohling	Central	Water Superintendent- City of Twin Falls Employed 28 years here. Class IV Water Dist. Operator- In charge of the drinking water and pressurized irrigation systems for the City of Twin Falls.
U.S. Geological Survey	Scott Ducar	Statewide	Hydrologist, I serve as project chief and project member on complex hydrologic investigations for the Idaho Water Science Center. I am a licensed Geologist in the State of Idaho and my areas of expertise are hydrogeology and streamflow statistics.
Idaho Rural Water Users Association	Shelley Roberts	Statewide	CEO of Idaho Rural Water Association: management of federal and state grants providing broad range of technical assistance statewide for municipal drinking water and wastewater service providers and industry related federal and state legislative advocacy
U.S. Bureau of Reclamation	Sophie Wilderotter	Southwest	Civil Engineer, Long Term Operations and Planning Team (Modeling)

Appendix B. Submitted Projects and Project Prioritization Results

Details on submitted projects can be found here. The table below synthesizes the top voted projects from the RAC Survey. The projects receiving < 4 votes are not included here.

PROJECT PRIORITIZATION SURVEY RESULTS	
PROJECT NAME	**PERCENT OF VOTES**
Water Scarcity & Availability	
ESPA Water Budget - Gap Analysis	17%
Improvements in Snowpack Modeling	11%
Reach gains -Blackfoot to Minidoka	10%
Groundwater-surface water budget for Upper Snake River basin	9%
Contextualizing Current Snow Water Storage Status within Historical Snow and Climate Conditions to Support Researchers and Managers:	7%
Low Snowpack in N Idaho - impacts on water & fisheries	7%
Adaptive Reservoir Management across the state of Idaho	7%
Forecast Informed Reservoir Operations (FIRO) in Pend Oreille Basin	5%
N Idaho GW studies	5%
Irrigation Efficiency & crop consumptive use quantification over time	5%
Expand snow-rain transition monitoring	4%
Modeling snowpack changes in north Idaho	4%
Impacts of Urbanization on consumptive use in the TV	4%
Integrated SW-GW models across scales for conjunctive water management	4%
MAR - assessing effectiveness of alternative recharge approaches (2)	4%
Consumptive Use Quantification in the ESPA	4%
Water Policy Planning & Socioeconomics	
Climate resilience planning	65%
Long-term water infrastructure funding	35%
Water Quality	
Statewide GW Quality Monitoring & Coordination	22%
Water Quality Trends Across Idaho	20%
Evaluation of Sentinel-2 Remote Sensing Models for Chlorophyll and Turbidity in Idaho Using Discrete Sonde Measurements and Field Spectral Data	16%
Sensitive Aquifer Recharge Area (SARA) Toolbox	14%
Recycled water & Aquifer Recharge for Sensitive Resource Aquifers	9%
MAR Injection Wells Water Quality (2)	9%
Impacts of Regenerative Agriculture practices on consumptive water use and water quality	9%
Nitrate Source pollution & isotope tracing	8%

PROJECT PRIORITIZATION SURVEY RESULTS	
PROJECT NAME	**PERCENT OF VOTES**
Ecosystems & Drainage Basin Functions	
Can river restoration mitigate wildfire?	20%
Landcover & Watershed Yield	16%
The Effects of River Restoration on Groundwater Recharge	36%
MAR - spring freshets & sturgeon	28%
Water Related Hazards & Climate Variability	
Coeur d Alene Lake modeling with natural hydrographs	14%
King Hill High Flows under future climate	14%
Modeling frequency of high flows under future climate in flood prone communities	71%
Water Technology & Innovation	
Assessing Contemporary Capabilities and Needs in Weather and Climate Monitoring for Water Resource Management and Research in Idaho	20%
Snowpack Monitoring with Remote Sensing	19%
Quantify incidental recharge from canals using real time sensors	11%
AI-Driven Insights into Surface Water Infiltration across the Eastern Snake River Plain	9%
Opportunities for energy production and behind the meter energy use in agriculture and water systems	9%
Water quality data accessibility	7%
Groundwater level data accessibility	6%
Database of streamflow's across organizations and datatypes	7%
Cloud Seeding Quantification	7%
Estimating ET on non-irrigated land	6%
Workforce Development & Water Literacy	
Community Water Resources & Water Rights Education	60%
High-school field-based water education	40%

Appendix C: RAC Reflections Survey

Following the final RAC meeting, IWRRI surveyed RAC members to gather feedback on the process and explore potential future directions. The RAC highlighted that project proposals were more difficult to fully assess when technical expertise wasn't available in the small discussion groups, leading to potential gaps in depth of understanding. IWRRI also found that some project proposals included far more detail and clarity than others. Feedback on the process highlighted that having additional time and an in-person meeting could alleviate these challenges, in addition to more clarity on what is expected in the research project submission process.

RAC Outcomes of Participation	
Increased Awareness of Statewide Water Issues	Reviewing project proposals and participating in discussions helped participants gain deeper insight into the breadth of Idaho's water challenges, and shared research needs.
Collaboration and Networking	Participants valued the opportunity to interact with professionals from across the state and across sectors. The process fostered potential collaborations and built relationships that participants hope will continue.
Effective Facilitation and Communication	Several participants praised the facilitation, reminders, and meeting materials (like slides and advanced distribution of materials), which contributed to a generally well-organized process.
Sense of Contribution to Research Direction	Participants appreciated having a voice in determining research priorities.

Looking ahead, there are additional opportunities to position projects for extramural funding and to leverage additional resources through partnerships. RAC members emphasized the importance of supporting longer-term research and engagement efforts that address complex water challenges over time. Achieving this will require identifying sustainable funding mechanisms and considering phased or multi-year project structures.

IWRRI will coordinate with the RAC to reconvene in spring 2026, alongside other in-person gatherings. The Committee will help guide how this year's selected projects (Year 1 of Legislative funding) connect to future efforts, by identifying ways to advance strong proposals not funded by IWRRI in 2025, and by ensuring that dynamic water research needs across Idaho continue to be addressed.