

DIRECTOR'S ANNUAL REPORT | FY 2024



IDAHO DEPARTMENT OF
WATER RESOURCES

Taller gates on Priest Lake Outlet Dam provide more flexibility in water management.





The Idaho Department of Water Resources (IDWR) Director's Annual Report fulfills the requirement of Idaho Code §42-1704:

"The director [of the Idaho Department of Water Resources] shall make and render to the governor, annually, or oftener, if required, full and true reports of the work performed by the department, which reports shall contain any recommendations he may have to make in reference to legislation affecting the department."

This report is an overview of the Idaho Department of Water Resources' programs, activities, and accomplishments during the 2024 Fiscal Year (FY24), which began on July 1, 2023, and ended on June 30, 2024.

IDWR Mission: To serve Idahoans by ensuring their water is conserved and available to sustain Idaho's economy, ecosystems and resulting quality of life.

IDWR Vision: To achieve excellence in water management through innovation, efficiency, planning and communication.

For more information on the activities and programs, see IDWR's website at: <https://idwr.idaho.gov/>

Or scan this QR code with your smartphone to visit IDWR's website:





Director Mathew Weaver

FROM THE DIRECTOR

I am pleased to present the Idaho Department of Water Resources' annual report for the period July 1, 2023, through June 30, 2024. This year was marked by both significant challenges and important accomplishments for Idaho's water users and our agency.

Governor Brad Little's statewide Water Summit brought renewed focus to the collaborative work required to secure Idaho's water future. Consistent with this vision, the Department initiated claims taking in the Bear River Basin adjudication—an essential step toward ensuring clarity and certainty in water rights administration across the region.

We also continued our commitment to reducing regulatory burdens through the

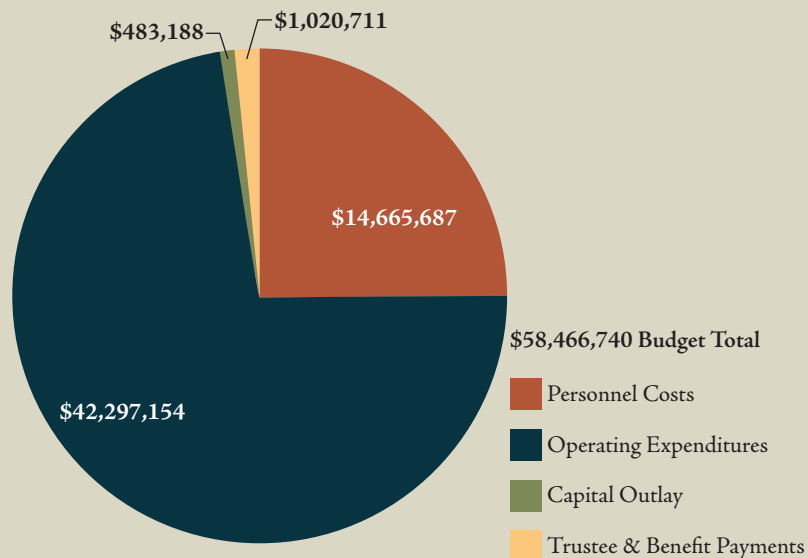
state's Zero-Based Rulemaking initiative, streamlining rules while maintaining the protections and predictability that Idaho's water users rely on.

Idaho experienced its fourth warmest year on record, and the resulting pressures on water supply underscored the importance of the State's proactive investments in water sustainability. I am proud to report strong performance in state-sponsored managed recharge, cloud seeding operations, and the development and funding of long-term water sustainability projects.

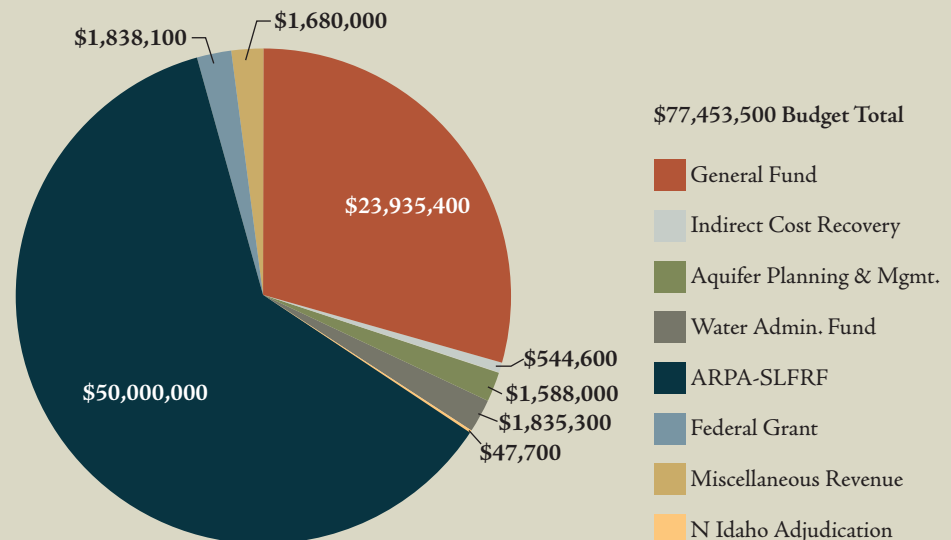
Thank you to the many partners and water users who continue to work with us to steward Idaho's water resources wisely and responsibly.

Mathew Weaver, *Director,*
Idaho Department of Water Resources

FY 2024 EXPENDITURES



FY 2024 APPROPRIATION



HIGHLIGHTS IN FY 2024

IDAHO WATER SUMMIT WITH GOV. BRAD LITTLE.

Held in August 2023, Idaho legislators and water users learn about the status of Idaho's water resources statewide, including surface and groundwater resources.

THE IDAHO WATER RESOURCE BOARD (IWRB) APPROVES NINE REGIONAL WATER SUSTAINABILITY PROJECTS STATEWIDE FOR A TOTAL OF \$59.4 MILLION.

Top 5 projects:

1. American Falls Spillway Rehabilitation - \$12.5 million in IWRB funding; \$23.1M total cost
2. Gooding Flood Control - \$4M; total cost \$40M
3. Nampa Reuse pipeline - \$3M; total cost \$180M
4. New York Canal lining - \$25M; total cost \$50M
5. North Fremont Canal System - \$7.8M; total cost \$19M

IDWR CREATES NEW GROUNDWATER DISTRICT.

In FY 24, IDWR created Groundwater District 129 in the Portneuf River Basin, where 600 groundwater rights will be administered. It is one of the first tributary basins to be added to the ESPA Area of Common Groundwater Supply.

BEAR RIVER ADJUDICATION LAUNCHED MAILING OUT 1,600 NOTICES TO WATER USERS, ENCOURAGING THEM TO ENGAGE IN THE PROCESS.

IDWR continues to work on adjudication proceedings in Northern Idaho's Clark Fork-Pend Oreille Basin, Coeur d'Alene-Spokane Basin and Palouse Basin.

RULEMAKING – SIMPLIFYING REGULATIONS.

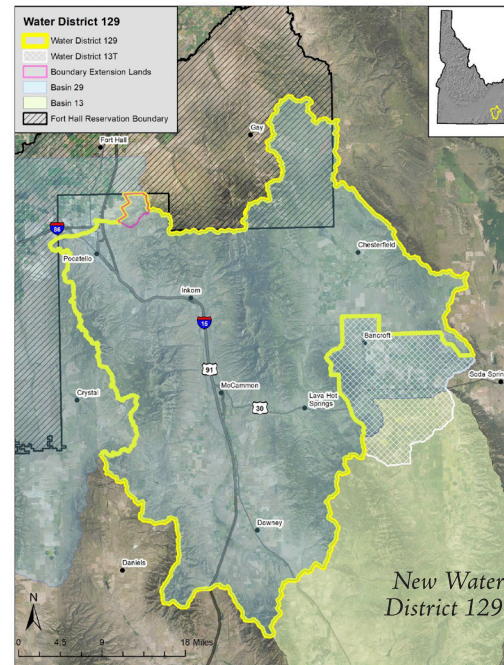
IDWR continued work on Zero-based rulemaking under the Director's 5-year plan.

LAUNCHED THE TREASURE VALLEY GROUNDWATER MODEL.

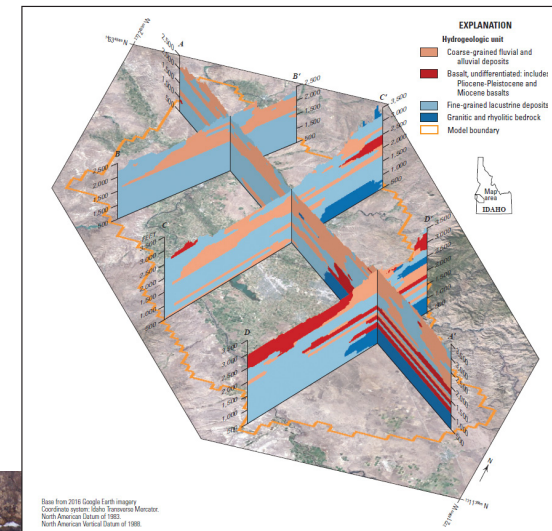
The \$5M project created a tool for the planning and administration of surface and groundwater in the Treasure Valley. Staff also began the development of a Groundwater Model for the Big Lost River Basin.

IWRB RECHARGES 384,610 ACRE FEET OF WATER INTO THE ESPA.

Upper Snake flood-release flows make that possible.



TREASURE VALLEY GROUNDWATER FLOW MODEL



Wilson Canyon Recharge



Shoshone Recharge Basin

IDAHO WATER YEAR IN REVIEW

2024 WATER YEAR (October 1st – September 30th)

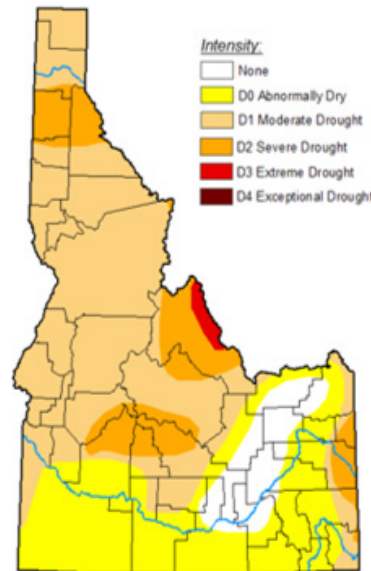
Water Year 2024 in Idaho was shaped by unusually warm temperatures, below-average precipitation, and variable snowpack, all of which influenced the state's overall water supply.

Despite ranking as the fourth warmest year on record, strong reservoir carryover from 2023 and targeted aquifer recharge helped sustain water availability for much of Southern Idaho.

Northern Idaho experienced continued drought and below-normal streamflows. Many Southern Idaho basins maintained irrigation deliveries, though challenges remain for some reservoir storage-dependent systems heading into Water Year 2025.

IDAHO - DROUGHT

U.S. Drought Monitor

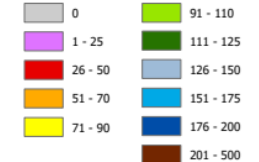


IDAHO - PEAK SNOWPACK

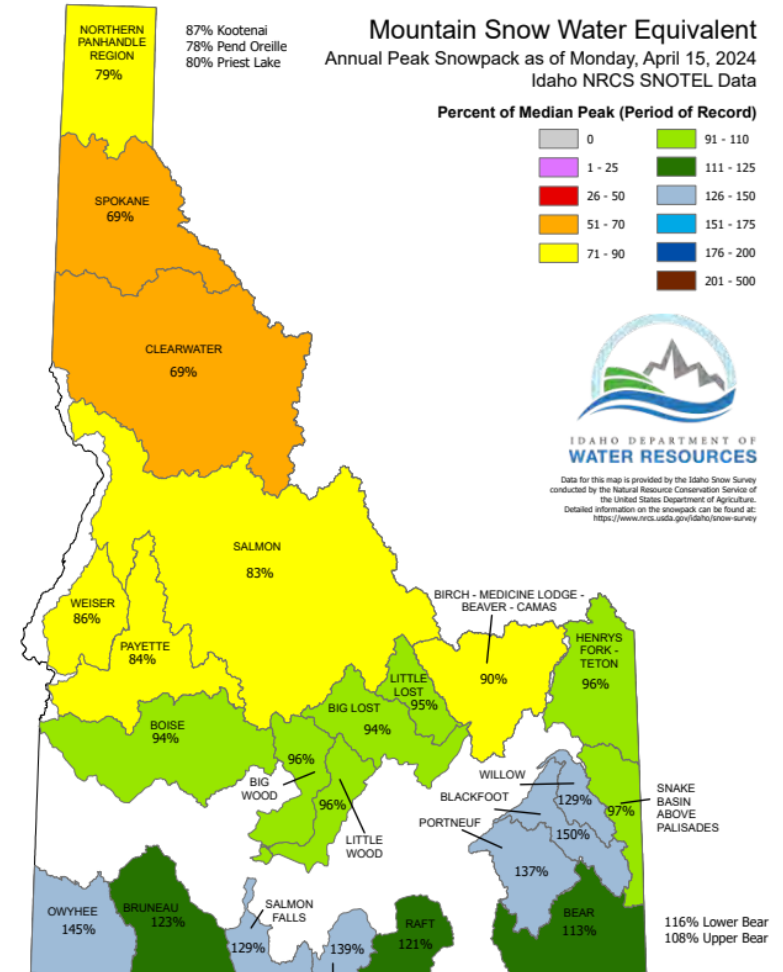
April 15, 2024

Mountain Snow Water Equivalent
Annual Peak Snowpack as of Monday, April 15, 2024
Idaho NRCS SNOTEL Data

Percent of Median Peak (Period of Record)

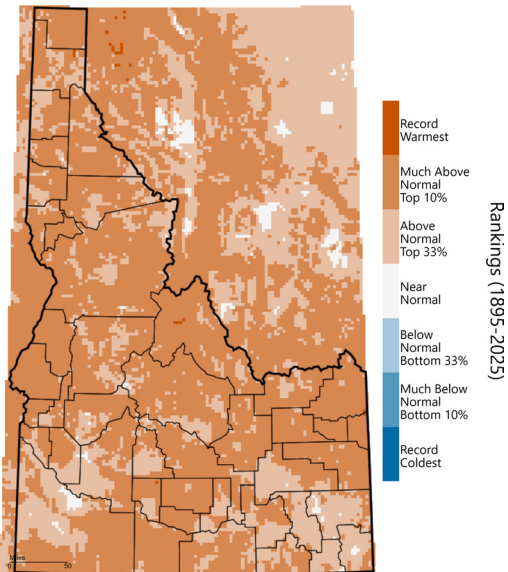


IDAHO DEPARTMENT OF
WATER RESOURCES
Data for this map is provided by the Idaho Snow Survey
conducted by the Natural Resource Conservation Service of
the United States Department of Agriculture.
Detailed information on the snowpack can be found at:
<https://www.nrcs.usda.gov/idaho/snow-survey>



IDAHO - MEAN TEMPERATURE

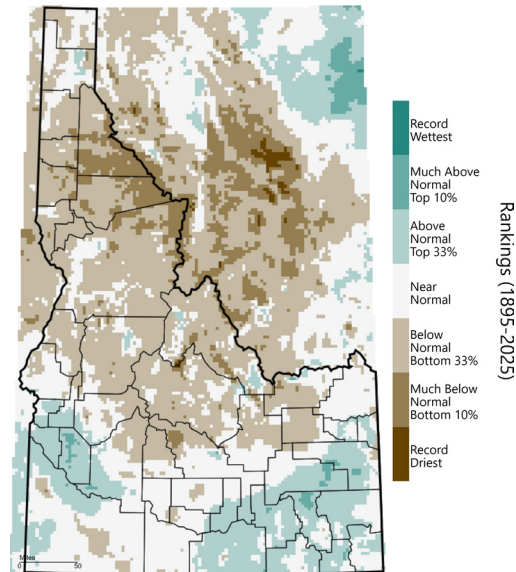
October 2023-September 2024, Percentile



WestWide Drought Tracker, WRCC, Climate Engine, Data Source: PRISM Final, created 05 Apr 2025

IDAHO - PRECIPITATION

October 2023-September 2024, Percentile

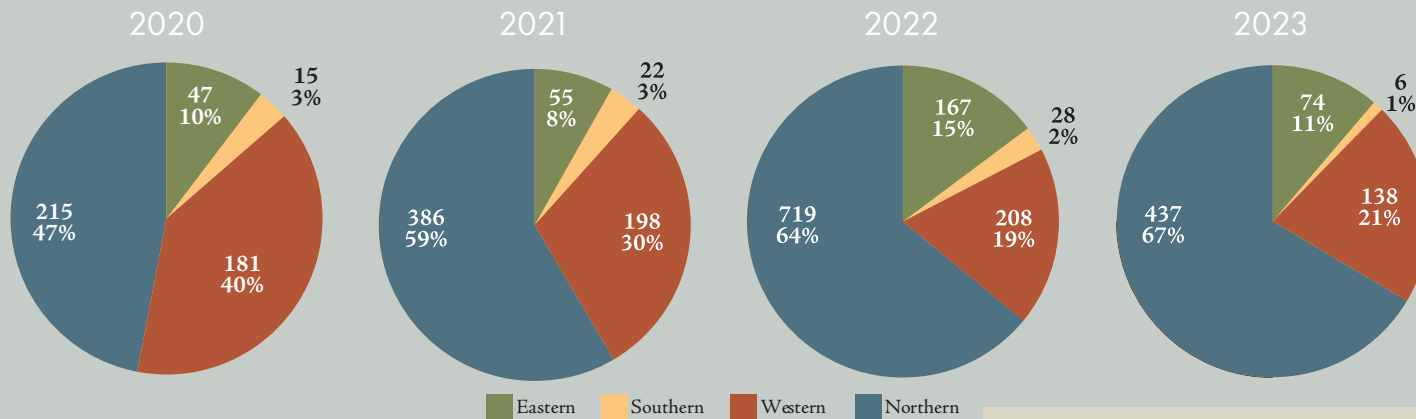


WestWide Drought Tracker, WRCC, Climate Engine, Data Source: PRISM Final, created 05 Apr 2025

4TH WARMEST YEAR ON RECORD IN WATER YEAR 2024

Temperatures were just 2.3°F below the record set in 1934.
Annual temperature in the 97.6th percentile statewide.

APPLICATIONS FOR PERMIT RECEIVED BY REGION



WATER ALLOCATION BUREAU

WATER RIGHTS PROGRAM

Water Rights staff processed 3,381 filings of all types in FY24.

APPLICATIONS FOR PERMIT 627 Received
510 Issued

WATER RIGHT LICENSES 313 Proofs of Beneficial Use Received
417 Issued

WATER RIGHT TRANSFER APPLICATIONS 217 Received
244 Resolved

OWNERSHIP CHANGES 2,306 Received
2,210 Processed

THE WATER ALLOCATION BUREAU FULFILLS IDWR'S PRIMARY RESPONSIBILITY TO SUPERVISE THE APPROPRIATION AND ALLOCATION OF WATER IN IDAHO FOR BENEFICIAL USE.

Program Highlights

Bear River Basin Adjudication

- Sent notice of claims taking to 8,229 property owners in Basin 13.

Clark Fork- Pend Oreille River Basin Adjudication

- Completed over 1,049 recommendations to claims filed in Basin 97;
- Director's Report submitted to the court for Basin 97, Part 1, in FY25.

What's next: The Kootenai River Basin. The 2024 Idaho legislature passed HB 687 authorizing the IDWR Director to petition the Adjudication Court to commence an adjudication of water rights in the Kootenai River Basin, the last basin to be adjudicated in the state.

ADJUDICATION PROGRAM

The state of Idaho is a national leader in the adjudication of water rights by a court of law.

There are currently four adjudications occurring in Idaho – taking claims in the Bear River Basin, and finishing up the Palouse Basin, Coeur d'Alene-Spokane Basin, and Clark Fork-Pend Oreille Basin.

ADJUDICATION NOTICE OF CLAIMS 2,923 Received
2,133 Completed Recommendations

Chesterfield Spillway Inspection



Streambank Repair

WATER COMPLIANCE BUREAU

WATER DISTRIBUTION SECTION

Water Measurement is crucial to track the management of Idaho's water and to ensure that water rights are fulfilled on the basis of first in time, first in right.

In FY24, the Director issued three measurement orders: two for recently modified water districts within the Eastern Snake Plain Aquifer (110 and 120) and one for Water District 65, Payette River & Tributaries.

Groundwater use measurements: 7,200 diversions where automated real-time water measurement data is reported, including nearly 5,000 wells in the ESPA.

The Water Districts Program supervises the distribution of water. IDWR is legally required to create water districts for public water supplies after water rights have been adjudicated in a basin. **There are 99 active water districts and sub-districts across Idaho.** Watermasters, elected by local water users, ensure water users divert water consistent with Idaho law.

In FY 24, IDWR created, expanded and modified three water districts, including the newly created District 129 in the Portneuf River Basin, where 600 groundwater rights will be administered.

GROUNDWATER PROTECTION SECTION

FY24 Groundwater Protection Section Highlights

| | |
|---|-------|
| TOTAL WELL CONSTRUCTION PERMITS ISSUED | 4,342 |
| PERCENTAGE OF PERMITTED WELLS INSPECTED | 28% |
| TOTAL WELL DRILLER LICENSES ISSUED | 190 |
| TOTAL INJECTION WELL APPLICATIONS PERMITTED | 167 |

Well Construction Program - 88% of the FY24 well construction permits issued were for domestic purposes.

Driller Licensing Program - 190 driller and operator licenses issued.

Underground Injection Control Program regulates the construction, operation, and decommissioning of all injection wells in Idaho. Currently, there are nearly 21,000 active injection wells on record with IDWR.

ENFORCEMENT UNIT

| | |
|------------------------------------|----------|
| NUMBER OF NEW CASES | 57 |
| NUMBER OF CASES RESOLVED OR CLOSED | 87 |
| TOTAL NOV's | 12 |
| PENALTIES COLLECTED | \$52,262 |

STREAM CHANNEL PROTECTION SECTION

The Stream Channel Protection Section evaluates proposed alterations to stream channels to protect water quality, fish and wildlife habitat, aquatic life, recreation, and aesthetic beauty.

FY24 Highlights

| | |
|---|-----|
| STREAM CHANNEL ALTERATION PERMITS RECEIVED | 367 |
| TOTAL STREAM CHANNEL ALTERATION PERMITS ISSUED | 222 |
| TOTAL RECREATIONAL MINING LETTER PERMITS ISSUED | 228 |

Joint Application for Stream Channel Alteration Permit - In FY24, program staff approved 80% of all projects meeting minimum standards criteria within 60 days of application receipt, and conducted pre- or post-construction inspections on 43% of the total approved projects.

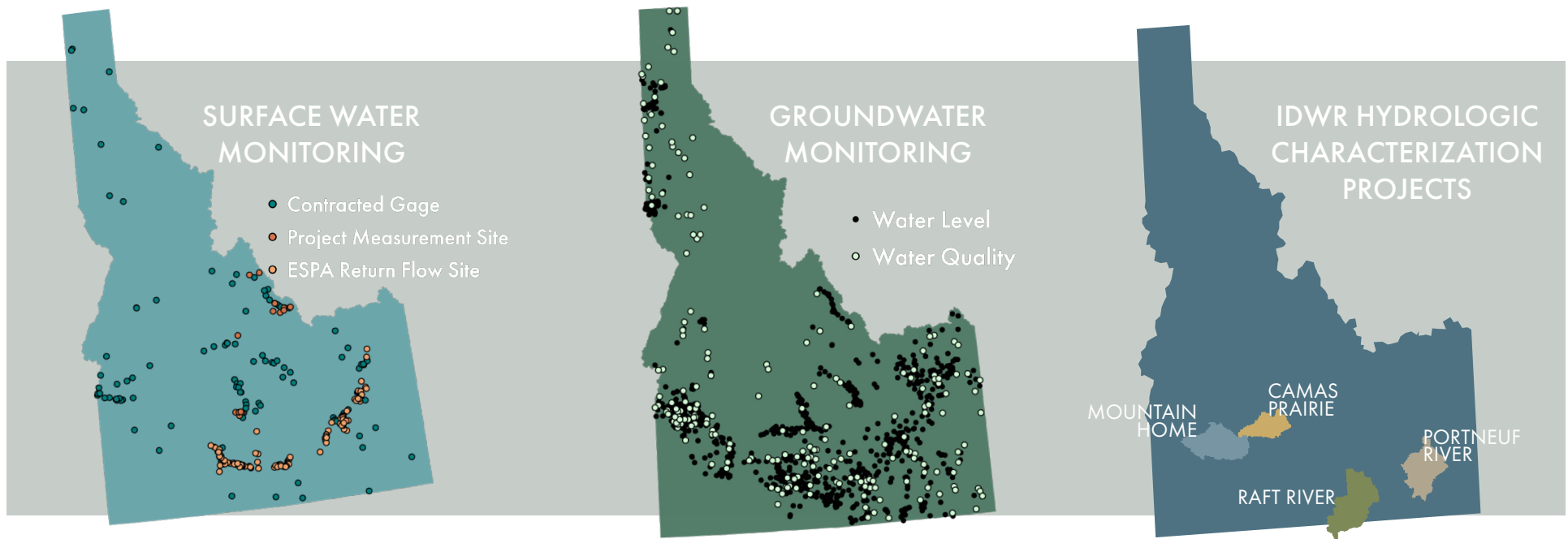
Letter Permit for Recreational Mining - In FY24, IDWR issued 228 Recreational Mining Letter Permits.

Floodplain Management Unit - The State National Flood Insurance Program (NFIP) Manager responded to approximately 790 technical assistance requests and completed 12 training opportunities across the state.

SAFETY OF DAMS PROGRAM

IDWR regulates approximately 400 water storage dams and nearly 20 mine tailings impoundment structures in Idaho, focusing on ensuring public safety.

Dam Inspections - In FY24, IDWR inspected 122 dams statewide and issued an equal number of inspection reports and storage



TECHNICAL SERVICES BUREAU

HYDROLOGY

IDWR staff analyzes hydrology data to help monitor and characterize the state's aquifers and river systems. Hydrology also supports watermasters and water districts in the administration and delivery of surface and groundwater in accordance with Idaho's water right priority system.

Sophisticated water models: Hydrology supports many IDWR and IWRB initiatives, including the creation, use and maintenance of groundwater flow and reservoir operations models to support water resource management and conjunctive administration of surface and groundwater resources.

Four models currently in use:

- Spokane Valley – Rathdrum Prairie – SVRP 1.0
- ESPA – ESPAM 3.0
- Wood River Valley – WRV 1.2
- Treasure Valley – TV1.1

Forecasting Water Supply: Hydrology staff works with IDWR's partner agencies to track snowpack and predict streamflow and reservoir levels by river basin each water year through the Idaho Water Supply Committee during the winter months. The collaborative group includes experts from IDWR, Bureau of Reclamation, U.S. Army Corps of Engineers, Idaho Power Co., National Weather Service and NRCS Snow Survey and the NOAA Northwest Forecast Center.

IDWR Hydrologic Data Collection

- Collected hydrologic data at more than 1,600 sites statewide.
- Expanded the Monitoring Network to include 110 real-time stream and agricultural return flow sites.
- Collected water quality samples from 205 wells through the Statewide Ground Water Quality Monitoring Program.
- Expanded the Statewide Water Level Monitoring Program network to 974 routinely monitored wells, including 45 low temperature geothermal wells.

Water Rights Accounting

Hydrology staff accomplished the following water right accounting work for the 2023 irrigation season for Water

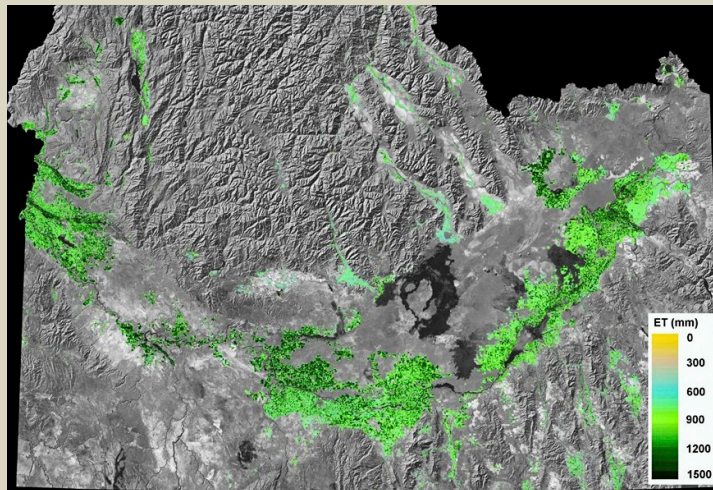
Districts 11, 34, 63, and 65. Supported water users in determining real-time reservoir allocation and priority date projections.

Detailed Hydrologic Characterization Projects

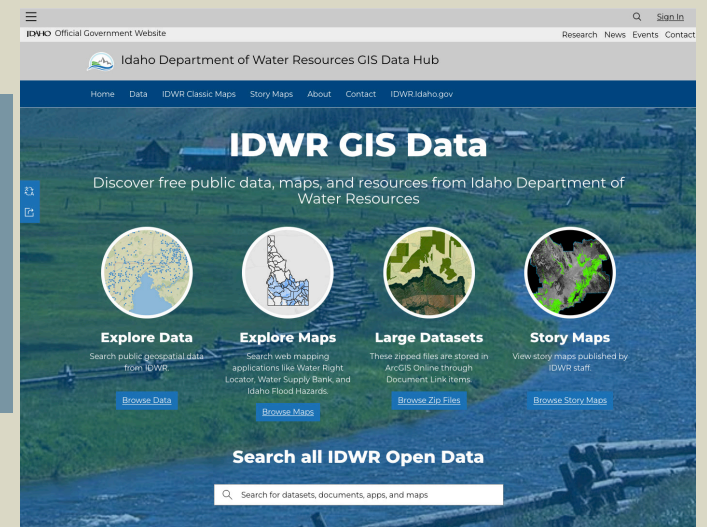
Raft River Basin, Camas Prairie Basin, Mountain Home Plateau, Portneuf River Basin

- Characterize the surface and groundwater hydrology of each basin
- Streamflow measurements
- Synoptic groundwater level monitoring events
- Installation of new monitoring wells
- Development of a hydrogeologic framework and aquifer water budget

MAPPING EVAPOTRANSPIRATION (ET)



GIS DATA AND TOOLS ARE FOUNDATIONAL TO MANY OF THE DEPARTMENT'S CORE DUTIES AND RESPONSIBILITIES. THE DATA AND TOOLS ALSO ARE AVAILABLE TO THE GENERAL PUBLIC.



GEOSPATIAL TECHNOLOGY SECTION

Geographic Information System (GIS) software tools assist IDWR employees in analyzing and assessing water rights, determining IDWR administrative boundaries, locating wells, and collecting field data.

GIS data and tools are foundational to many of the Department's core duties and responsibilities. The data and tools also are available to the general public.

The GTS serves department data through the *Idaho Department of Water Resources GIS Data Hub*, which is available from the IDWR home page.

Evapotranspiration (ET) Related Projects

The Department uses satellite-based Evapotranspiration (ET) data in hydrology, water resources planning, and water administration. Evapotranspiration data is also a large

component of water budgets built into IDWR groundwater models and other projects. Due to the expansion of hydrologic work in Idaho, the need for ET data is increasing.

- ✦ **Satellite-based ET Data Creation:** In FY24, GTS published ET data covering the Eastern Snake Plain for the 2022 growing season. GTS staff also rewrote the model code to increase the rate of data production.
- ✦ **Evapotranspiration Ground Truthing Measurement Project:** With funding from the IWRB, the Department developed a 4-year project to install and operate three eddy covariance (EC) stations on agricultural land on the eastern Snake Plain. In FY24, GTS and Hydrology staff requested proposals from qualified contractors to install, maintain, and process the data from the EC stations. The University of Idaho ("U of I") was selected as the contractor for the project.

- ✦ **Evapotranspiration Idaho Technical Transfer:** The Department and the public have relied on the U of I's crop water need data distributed through the U of I's ET Idaho website, since 2007. In FY21, IDWR and the U of I embarked on a multi-year effort to update the crop water need data and the code for producing the data. In FY24, the Department began hosting the new dataset on the ET-IDWR website.

Large GIS Database and Data Creation Projects

Many of IDWR's businesses rely on having the correct data in the correct format available for staff use. Development of essential datasets for IDWR staff use is a primary responsibility of the GTS.

- ✦ **Camas Prairie Irrigation Delineation:** In FY24, GTS staff completed an irrigated land use classification for the Camas Prairie area for 2021.

- ✦ **Random Forest Land Use Modeling:** GTS staff developed an automated method of classifying irrigation status using random forest modeling, greatly reducing staff time associated with classifying irrigation use over large areas. In FY24, GTS staff utilized this automated approach to classify irrigated lands in the Eastern Snake Plain, the Bruneau-Grandview area, the Mountain Home Plateau, and the Raft River Basin.
- ✦ **Historical Imagery Georectification:** To verify historical water use and support claims taking in the Bear River Basin Adjudication, GTS staff geo-rectified 355 historical aerial images from the 1950s through the 1970s. This effort completed the Bear River Basin historical imagery archive, which spans over two decades and includes more than 1,000 geo-rectified images.



Galloway Diversion

"THE IDAHO WATER RESOURCE BOARD IS RESPONSIBLE FOR PLANNING THE CONSERVATION, DEVELOPMENT, USE, AND MANAGEMENT OF WATER RESOURCES IN THE STATE OF IDAHO."



Bannock Feeder Headgate

PLANNING & PROJECTS BUREAU

The Planning & Projects Bureau implements projects assigned by the Idaho Water Resource Board (IWRB).

WATER PROJECTS SECTION

Grant Programs include:

- Regional Water Sustainability Projects - \$270M+ in project needs statewide, \$59M allocated for projects in fiscal 2024.
- Aging Infrastructure Grants – 38 projects approved for \$18.7M to modernize crumbling water infrastructure, improve water efficiency and water conservation.

- Flood Management Grants – 10 projects approved for \$702,304.

- Water Project Loans: \$913,500 in new loans approved.

ARPA boosts funding for water projects! The 2019 Idaho Legislature set aside approximately \$250 million of the State's American Rescue Plan Act (ARPA) Funds for use by the IWRB to support large water projects. The IWRB has allocated \$250M to specific projects due to be completed by 2026.

TWO NEW GRANT PROGRAMS COMING IN 2025: GROUNDWATER TO SURFACE WATER CONVERSION GRANTS AND THE ESPA TELEMTRY & MONITORING GRANTS.

IWRB Managed Aquifer Recharge program for the Eastern Snake Plain Aquifer (ESPA):

The IWRB Managed Recharge Program is a key strategy to support the stabilization and sustainability of the ESPA with strong financial support from the Idaho Legislature and Gov. Little.

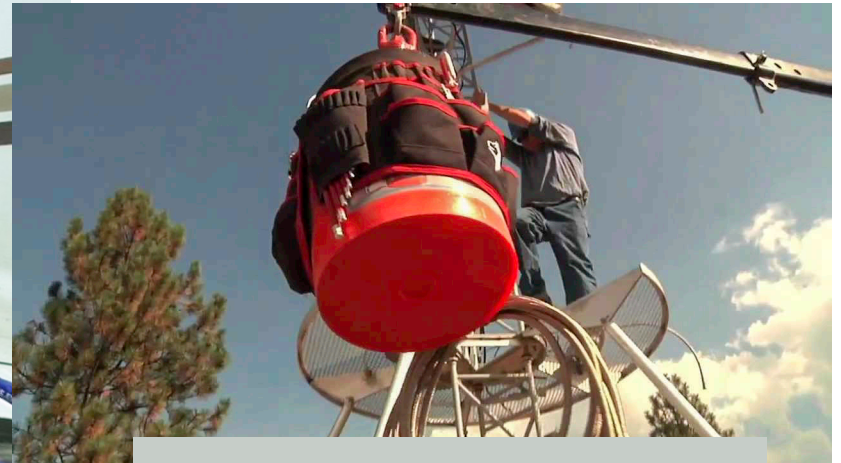
Positive Impact on the ESPA: Ongoing aquifer-recharge activities since 2014 have caused an increase in water volume of 800,000 acre-feet from 2023 to 2024.



North Side Pumping Company Pipeline Installation

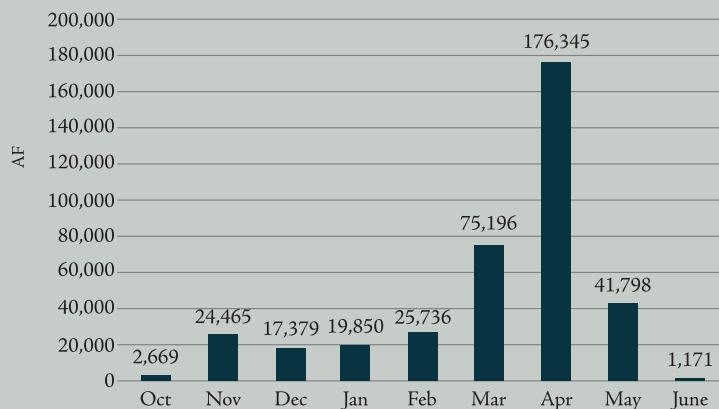


Cloud Seeding Flares

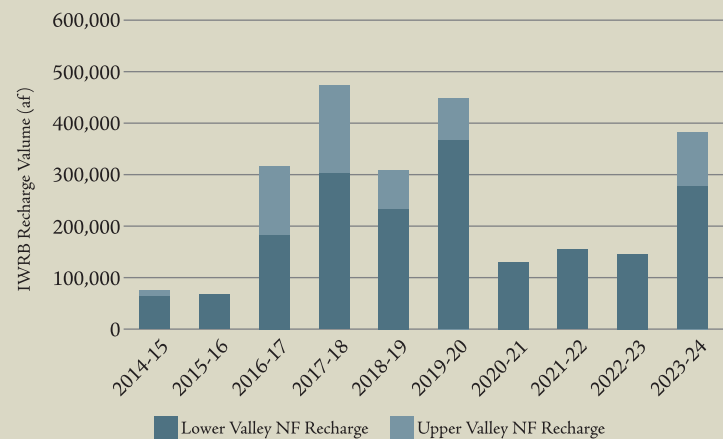


DEPENDING ON WINTER WEATHER, THE IDAHO COLLABORATIVE CLOUD SEEDING PROGRAM INCREASES WATER FLOWS IN THE SNAKE RIVER BASIN BY AN AVERAGE OF 1.25 MILLION ACRE-FEET PER YEAR.

2023-2024 BOARD NATURAL FLOW ONLY RECHARGE
UPPER AND LOWER VALLEY
TOTAL = 384,610 AF



IWRB ESPA RECHARGE PROGRAM - WATER RECHARGE
TEN YEAR ANNUAL TOTALS

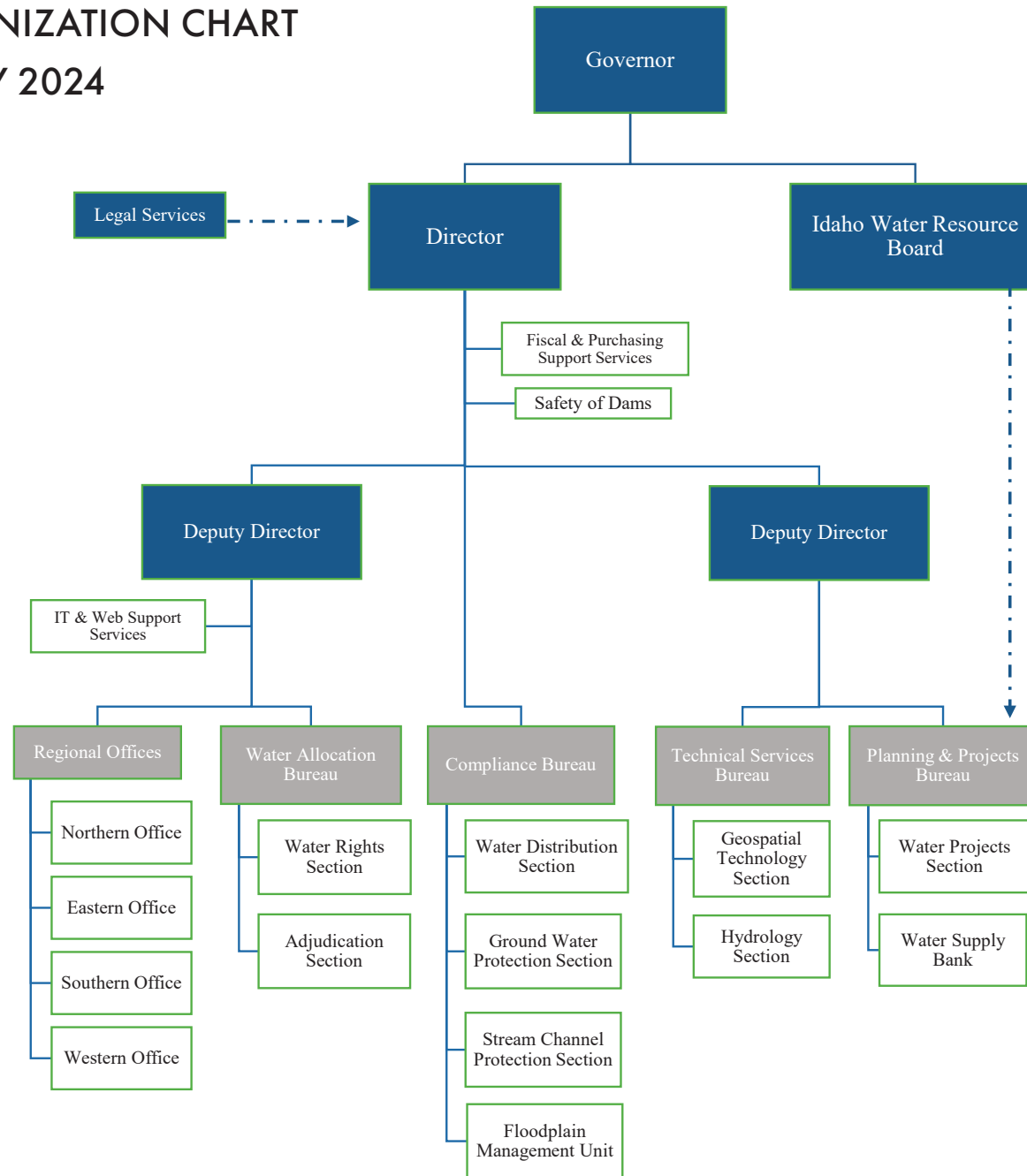


Cloud Seeding Program

The IWRB contributes financially to the Idaho Collaborative Cloud Seeding Program with Idaho Power Co. and Upper Snake water users. Cloud-seeding occurs in five basins: the Boise, Payette, Wood, Upper Snake, and Bear River (pilot project) basins.

IDWR ORGANIZATION CHART

FY 2024





IDAHO DEPARTMENT OF
WATER RESOURCES

322 E Front Street, Boise, ID 83702