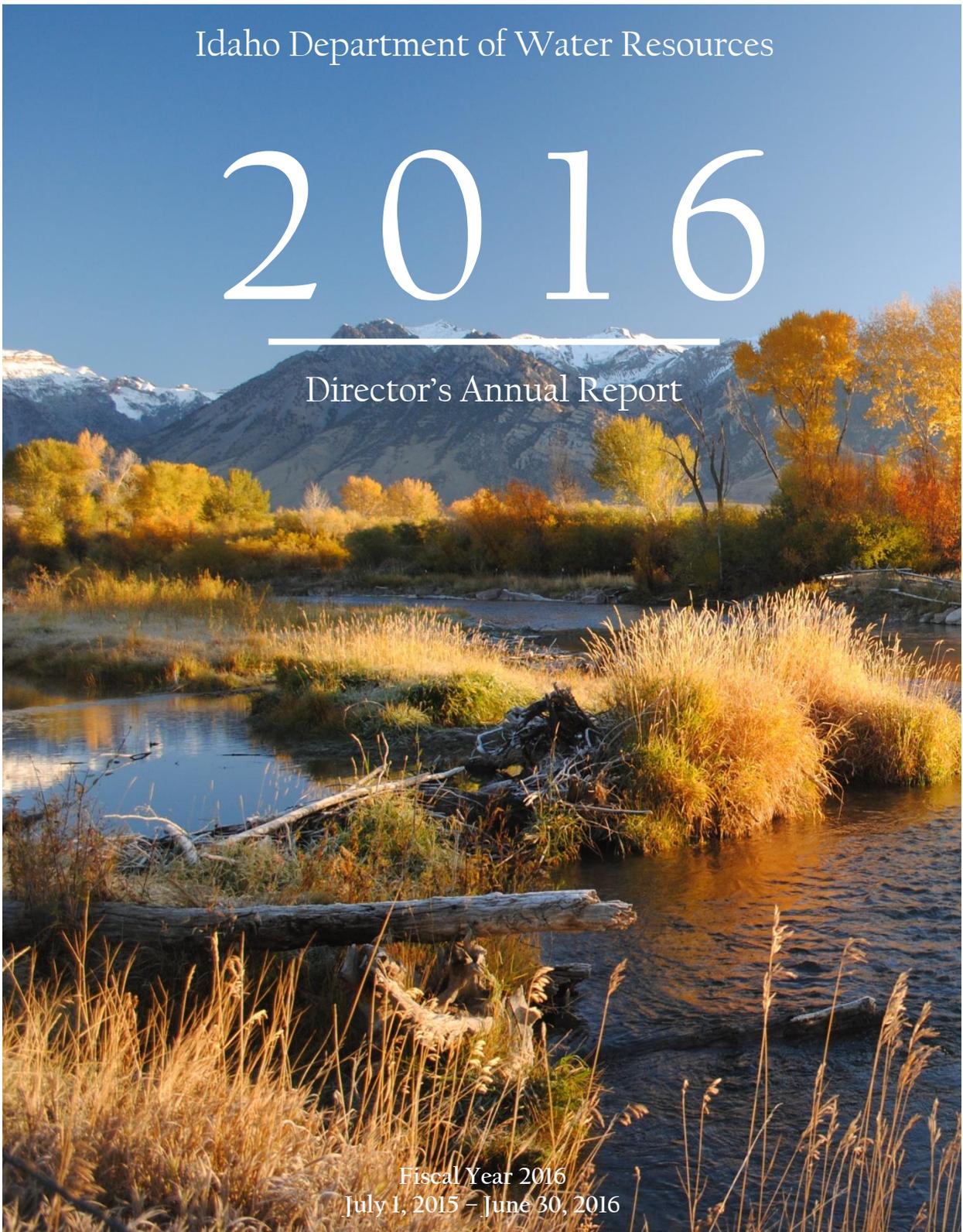


Idaho Department of Water Resources

# 2016

Director's Annual Report

Fiscal Year 2016  
July 1, 2015 – June 30, 2016



Cover Photo:  
Big Lost River near Darlington  
Courtesy of Kerrie Mathews, IDWR

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# Report Purpose

The Idaho Department of Water Resources 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 provides an overview of the Idaho Department of Water Resources' programs, activities, and accomplishments during the 2016 Fiscal Year (FY2016), which began on July 1, 2015 and ended on June 30, 2016.

Louie Lake, Valley County  
Courtesy of Lori Harris, IDWR



# Agency Mission Statement

The Idaho Department of Water Resources' mission is to serve the citizens of Idaho by ensuring that water is conserved and available for the sustainability of Idaho's economy, ecosystems, and resulting quality of life.

Snake River, Twin Falls  
Courtesy of Clinton Barnes, IDWR



# Agency Overview

**DIRECTOR**

Gary Spackman (2009–present)

**FULL-TIME EMPLOYEES**

152

**OFFICE LOCATIONS**

Boise (x2)  
Coeur d’Alene  
Idaho Falls  
Salmon  
Twin Falls

**AGENCY UNITS**

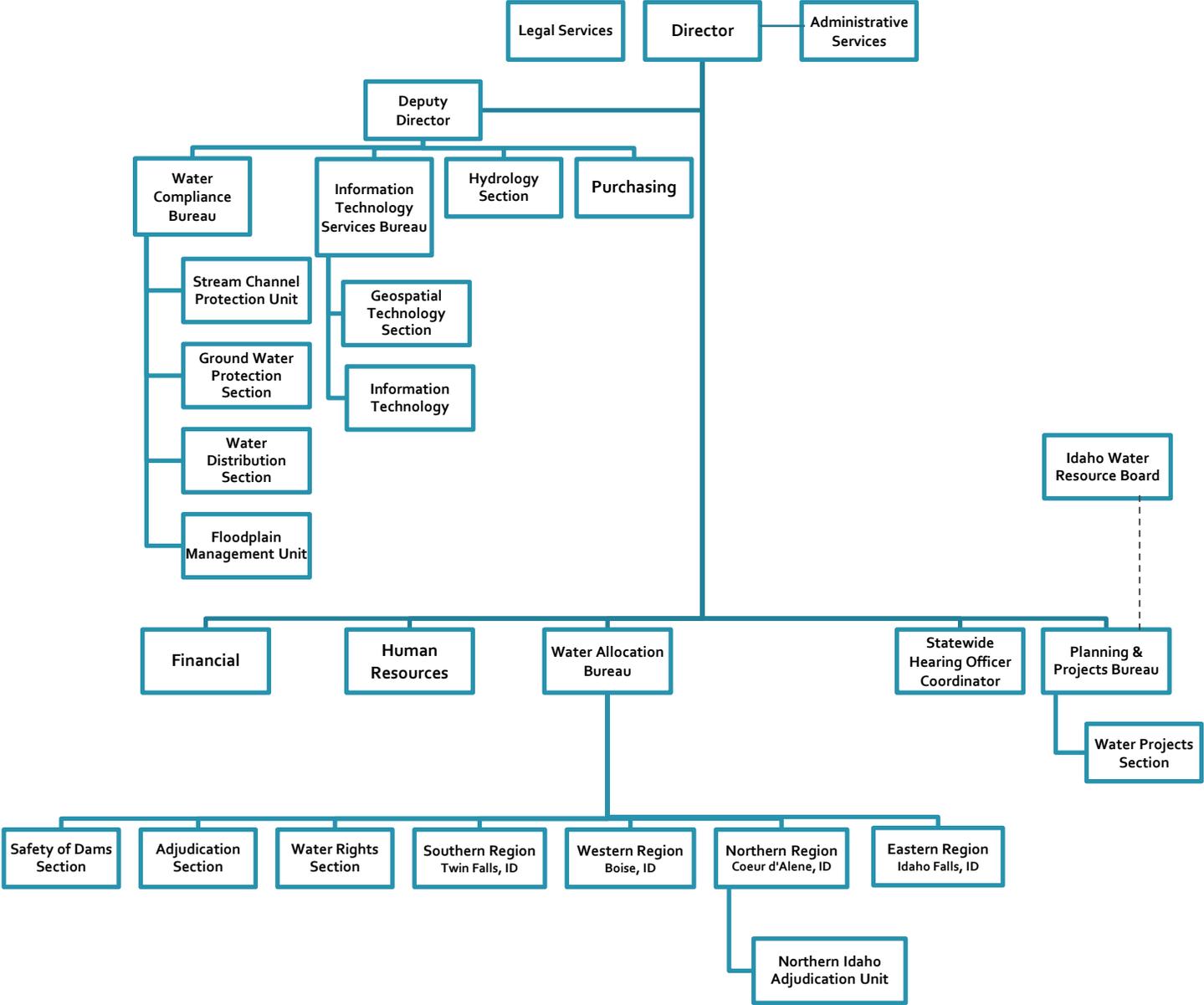
Water Allocation Bureau  
Water Compliance Bureau  
Information Technology Services Bureau  
Hydrology Section  
Idaho Water Resource Board \*\*  
Planning & Projects Bureau  
Legal Services\*  
Human Resources\*  
Financial\*  
Administration\*

Lake Cascade, Valley County  
Courtesy of Rachel Sommer, IDWR

\*\* The IWRB is not an official section of IDWR. The Director supports the IWRB as needed and assigns IDWR staff to help carry out its duties.

\*Activities for these support services are not addressed in this report.

# Organizational Chart





# Year in Review

A month-by-month summary of IDWR's activities, projects, and accomplishments during FY2016.

Alturas Lake, Blaine County  
Courtesy of Jim Bitzenburg, IDWR

# FY2016 YEAR IN REVIEW

## October 2015

### **SURFACE WATER COALITION DELIVERY CALL SETTLEMENT AGREEMENT**

On October 19, 2015, the Surface Water Coalition (SWC) and the Idaho Ground Water Appropriators finalized their historic settlement agreement to the SWC's long standing delivery call against junior ground water users of the Eastern Snake Plain Aquifer (ESPA). The settlement agreement was finalized after ten years of on-going litigation by the water users and conjunctive administration by the Department. The purpose of the settlement agreement is to stabilize and ultimately reverse the trend of declining ground water levels in the ESPA. The ground water users, represented by IGWA and its constituent ground water districts, agreed to a series of practices to address declines in the aquifer including: 240,000 acre-foot reduction in consumptive use; annual delivery of 50,000 acre-feet of storage water; reduction of the irrigation season to April 1 - October 31; mandatory measurement device installation on all ground water diversions; and continuation of existing conversion projects. In exchange, participating ground water users receive safe harbor from curtailment under the SWC delivery call. Implementation of the settlement agreement, coupled with an annual average of 250,000 acre-feet state sponsored recharge, is expected to result in a sustainable water supply and minimize harm to Idaho's economy arising from water supply shortages.

### **IWRB FUNDING AND CONSTRUCTION OF THE GREAT FEEDER (DRY BED) HEADGATES**

October saw the start of the Great Feeder Headgate reconstruction project. The Great Feeder Canal diverts water from the South Fork

of the Snake River and feeds numerous canals that in turn deliver irrigation water to a combined 80,000 acres of land in the Rigby area. The existing headgates were nearly 100 years old and needed to be replaced. Because of the Idaho Water Resource Board's (IWRB or Board) responsibility to recharge 250,000 acre-feet of surface water annually into the ESPA, the Board participated financially in this project to ensure the new headgates were built to allow winter-time operation for aquifer recharge. Studies of potential recharge sites located along the Great Feeder Canal are now underway. The Board contributed \$500,000 toward this \$1.4 million project. The project was built by DL Beck Construction and Rhodehouse Construction, both of eastern Idaho.

## November 2015

### **DESIGNATION OF THE MALAD VALLEY GROUND WATER MANAGEMENT AREA**

On November 4, 2015, the Department designated the Malad Valley Ground Water Management Area ("GWMA") in response to local concerns regarding declining ground water levels and spring flows in the Malad Valley. The Malad Valley GWMA is located in southeastern Idaho in portions of Oneida, Bannock, and Franklin Counties and includes all of the Department's Administrative Basin 15. In addition to creating an advisory committee, the order designating the Malad Valley GWMA also established a two-year temporary moratorium on processing and approval of existing and new applications for ground water appropriations within the Malad Valley GWMA. Department staff, in conjunction with the advisory committee, is currently creating a Ground Water Management Plan that will guide data

collection, water diversion measurements, enforcement activity, and the creation of a water budget for the GWMA.

## **December 2015**

### **IWRB FUNDING AND CONSTRUCTION OF EGIN BENCH RECHARGE CANAL**

During the winter of 2015-2016, a new delivery canal was constructed connecting the Henry's Fork River to the Egin Bench recharge site. The Egin Bench has long been recognized as a good site for aquifer recharge. However, in the past, water delivery had been constrained by the small size of the ditch leading to the site. Because of its responsibility to accomplish 250,000 acre-feet annually of recharge to the Eastern Snake Plain Aquifer, the IWRB partnered with the Fremont-Madison Irrigation District and the Egin Bench Canal Company to construct a new 150 cfs canal leading to the recharge site. The Board allocated \$1,036,000 for the construction of this canal, which was built by Hill & Sons, Excavating and Rumsey Construction, both of eastern Idaho.

### **CREATION OF WATER DISTRICT 143 (RAFT RIVER BASIN)**

On December 2, 2016, the Department created the Raft River Basin Water District. The Raft River Basin water district includes all ground water rights in the Raft River Basin or Administrative Basin 43 except a) ground water rights used for domestic and stock water purposes as defined by Idaho Code § 42-111 and 42-1401A(11); and b) ground water rights located within Water District 130 overlying the Eastern Snake Plain Aquifer. All of the ground water rights and development in the water district is located within Cassia County. The boundaries of the district include small portions of both Power and Oneida counties.

## **February 2016**

### **CREATION OF WATER DISTRICT 161 (MOUNTAIN HOME AREA)**

On February 29, 2016, the Department created the Mountain Home Area Water District. The Mountain Home Area Water District administers ground water rights in Administrative Basin 61 and a small portion of Administrative Basin 63 from Mayfield to Swan Falls except ground water rights used for domestic and stock water purposes as defined by Idaho Code § 42-111 and 42-1401A(11). All of the ground water rights in the water district are located within Elmore and Ada counties.

### **COEUR D'ALENE-SPOKANE RIVER BASIN ADJUDICATION (CRBA), BASIN 94 DIRECTOR'S REPORT SUBMITTAL**

IDWR filed the Basin 94 Director's Report in the Coeur d'Alene-Spokane River Basin Adjudication (CSRBA) with the CSRBA Court in February 2016. This report contained IDWR's recommendations for 1,880 claims based on state law as well as the abstract for 62 claims based on federal law. Each claimant also received a copy of the Director's recommendation for their claim. The Basin 94 Director's Report is the fourth of five basin reports to be submitted to the CSRBA. The Director's Reports for Basin 93, 92, and 91 were previously filed in March 2014, December of 2014, and February 2015 respectively. Basin 95, the final basin in the CSRBA, is projected to be filed with the CSRBA Court in two parts: Part 1 will be filed in the summer or fall of 2017 and includes Townships 50, 51, 52, 53, 54 and 55 North including the Rathdrum Prairie; and Part 2 will be filed in 2018 and includes Townships 44, 45, 46, 47, 48 and 49 North including the balance of the Coeur d'Alene Reservation.

## March 2016

### **COMPLETION OF THE A&B PUMP STATION AND PIPELINE PROJECT (\$7M IWRB LOAN)**

In the spring of 2016, the A&B Irrigation District (A&B) completed their new pump station and pipeline from the Snake River, and it was ready for use at the start of the 2015 irrigation season. A&B is located in Minidoka County and delivers irrigation water to about 66,000 acres from ground water wells in the ESPA, and about 14,000 acres from the Snake River through a pumping station. This \$11 million project included the construction of a 2<sup>nd</sup> Snake River pumping station for A&B and a 12-mile long pipeline. This project will increase A&B's capacity to deliver reservoir storage water to irrigated ground within their service area currently irrigated with ground water, thereby contributing to aquifer recovery by reducing consumptive use of the resource by A&B water users. This project should also substantially reduce pumping costs for A&B by the reduction in pumping head of several hundred feet, associated with changing the source of water from the ESPA to the Milner Reservoir on the Snake River. The Project was financed by a \$7 million loan from the IWRB and almost \$4 million in federal grant funds. The project was built by Knife River Construction of Boise.

### **YEAR TWO IWRB WINTER RECHARGE**

Winter 2015 marked the second year in a row the Idaho Water Resource Board (Board) implemented an operational-scale "winter recharge effort" for the Eastern Snake Plain Aquifer (ESPA). The largest supply of available water for recharge occurs during the winter months when irrigation is not taking place. In continuing the transition of managed recharge on the ESPA from a pilot-scale effort to an operational-scale effort, the Board, together

with partnering irrigation entities, was able to keep recharge water flowing every day during the winter. A total of 67,000 acre-feet of Snake River water was recharged. The Board's ultimate goal is to recharge an average of 250,000 acre-feet per year, which together with action by the ground water users on the eastern Snake Plain, should stabilize and recover long-standing declines in the ESPA.

## April 2016

### **SOUTH FORK CLEARWATER RIVER DREDGE MINING PERMIT - SPECIAL SUPPLEMENT**

A Special Supplement Permit for recreational mining was implemented for the first time in Idaho starting April 1, 2016. The Special Supplement is an alternative recreational mining application that allows operators to apply for consideration to obtain a permit to operate a suction dredge, in this instance on the South Fork Clearwater River (SFCR). In 2004, the Idaho Water Resource Board designated the SFCR as a State Recreational River, pursuant to Idaho Code §42-1734A. This designation limits and/or prohibits certain activities, including recreational dredge mining, in order to preserve water quality and/or wildlife habitat. The SFCR does not currently meet state water quality standards for sediment and is subject to a pollutant budget, known as a Total Maximum Daily Load (TMDL). To meet statutory requirements and state water quality standards for the SFCR, IDWR limits recreational dredge mining on the mainstem SFCR to 15 dredges from July 15 to August 15 each year. Additionally, the SFCR designation requires dredge sites to be inspected by IDWR with a fisheries biologist. Operators completing the Special Supplement may forward the same document to the US Forest Service and Bureau of Land Management as Plan of Operation for

consideration by those agencies. With the new process in place, the Department was able to issue 15 permits for recreation mining on the SFCR in 2016 for the first time since the river designation as a State Recreational River, and ensure all sites were inspected by State fishery biologists and IDWR staff.

#### **DISTRICT COURT DECISIONS IN THE BIG AND LITTLE WOOD RIVER DELIVERY CALLS**

On April 22, 2016, the SRBA District Court judge issued two decisions in the appeals filed by Sun Valley Company and the cities of Hailey and Bellevue (Cities) regarding the Big and Little Wood River delivery calls. These decisions clarify the procedural process the Department must follow when responding to a demand by senior surface water users for priority administration where the delivery calls are against junior-priority ground water rights in organized water districts, but where no area of common ground water supply has been designated. The judge determined that, because the Department's Conjunctive Management (CM) Rule 30 (IDAPA 37.03.11.030) expressly authorizes the Director to determine an area of common ground water supply and sets forth specific procedures and criteria for doing so, "when a call is made by a senior surface water user against junior ground water users in an area of the state that has not been determined to be an area having a common ground water supply," CM Rule 30 must apply to govern the call. The judge rejected the Cities' argument that the Director must dismiss a delivery call until rulemaking is successfully undertaken to designate an area of the state having a common ground water supply relative to that respective delivery call.

## **May 2016**

#### **SURFACE WATER COALITION DELIVERY CALL CURTAILMENT ORDER**

On May 18, 2016, the Department ordered the curtailment of approximately 160 ground water rights that divert from the ESPA having priority dates junior to February 8, 1989. The order was issued in response to the SWC's 2005 water delivery call. The order was issued approximately one month after the Director issued a separate order predicting a 44,200 acre-foot shortfall to certain SWC senior priority surface water rights and setting a May 3 deadline for junior ground water users to establish their ability to mitigate for the shortfall or face curtailment. The Department approved four mitigation plans for the SWC delivery call. The Department's curtailment order was limited to those ground water rights in the ESPA with a priority date junior to February 8, 1989 and not covered by one of the four approved mitigation plans. All 160 curtailed ground water rights complied with the terms of the curtailment order through non-use or by joining ground water districts or other entities already having approved mitigation plans in place.

#### **COMPLETION OF THE LAST CHANCE DIVERSION DAM RECONSTRUCTION (\$2.5M IWRB LOAN)**

In May 2016, the Last Chance Canal Company (Last Chance) completed a new diversion dam replacing their previous aging structure at their point of diversion from the Bear River. This construction project was financed by a \$2.5 million loan from the IWRB. Last Chance delivers irrigation water from the Bear River to about 30,000 acres near Grace, Idaho. The previous diversion structure was a timber structure about 100 years old. On the advice of their engineering consultants, Last Chance decided to replace it with a new roller-

compacted concrete structure. Construction started after the end of the 2015 irrigation season, proceeded through the winter, and was complete in May for the 2016 irrigation season. The project was built by Whittaker Construction.

**COMPLETION OF THE U.S. ARMY CORPS OF ENGINEER'S FEASIBILITY STUDY OF THE 300,000 ACRE-FOOT EXPANSION OF ARROWROCK RESERVOIR (DETERMINED TO BE UNFEASIBLE)**

On May 18, 2016, the Army Corps of Engineers (Corps) reported to the Idaho Water Resource Board that the proposed project of expanding Arrowrock Reservoir by 300,000 acre-feet was not financially feasible. Previously, following direction given by the Idaho Legislature in 2008 through House Joint Memorial No. 8, the Board entered into an agreement with the Corps of Engineers to carry out this investigation. For its part, the Corps had been given direction from United States Congress to study flood risk reduction and water supply on the Boise River. The Corps and the Board determined the best way to accomplish both objectives was to increase reservoir capacity in the river basin. They further agreed the best way to increase capacity would be by raising the existing Arrowrock Reservoir Dam thereby increasing the storage capacity of the reservoir. Although the joint work conducted by the Board and the Corps determined the project is technically

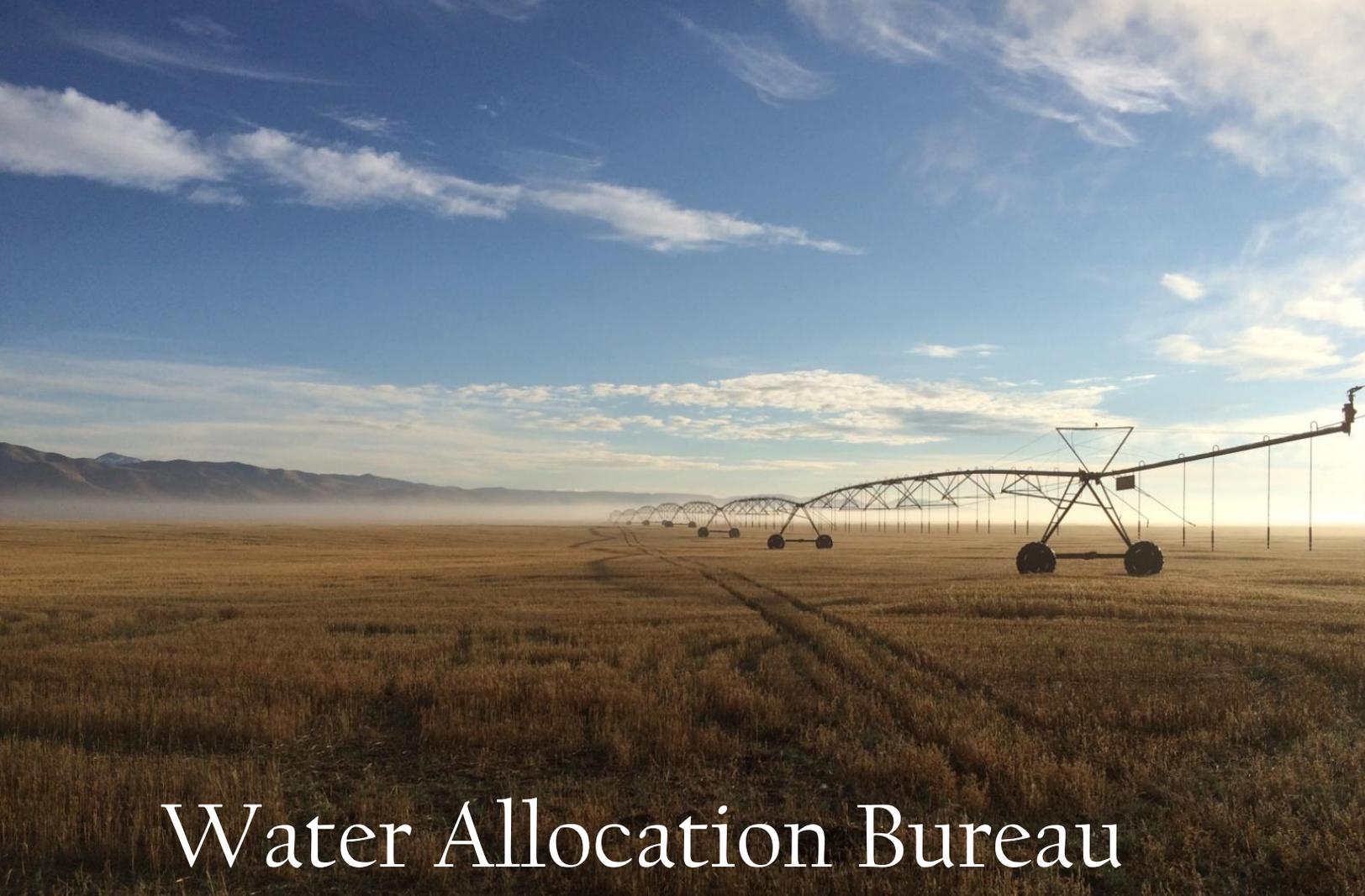
achievable, it did not meet the benefit-cost ratio test set by the Corps of Engineers.

## **June 2016**

**INITIAL COMPLETION OF THE WOOD RIVER VALLEY GROUND WATER MODELING PROJECT**

In June 2016, the US Geological Survey (USGS) in partnership with IDWR, published a report documenting a three-dimensional numerical model of the Wood River Valley aquifer system (<https://pubs.er.usgs.gov/publication/sir20165080>). The public domain model was funded by the Idaho Water Resource Board with matching funds from the federal government. With input from stakeholder representatives, the model was designed to support conjunctive administration and water resource planning. The model builds upon water budget and hydrogeologic characterization work that was performed by the USGS and funded, in part, by communities and other cooperator groups in the Wood River Valley.

During model development, the USGS/IDWR modeling team identified several data deficiencies and developed recommendations for additional work. Based on the recommendations, additional data gathering is underway to facilitate model enhancement in the future.



# Water Allocation Bureau

The Water Allocation Bureau addresses all administrative water right proposals and recommends elements of water rights during a water right adjudication.

**BUREAU CHIEF**

Jeff Peppersack

**STAFF LOCATIONS**

Boise (x2)

Coeur d'Alene

Idaho Falls

Twin Falls

**BUREAU UNITS**

Water Rights Section

Water Supply Bank Program

Adjudication Section

Safety of Dams Program

Pivot Irrigation System near Fairfield  
Courtesy of Steve Visosky, IDWR

# WATER RIGHTS SECTION

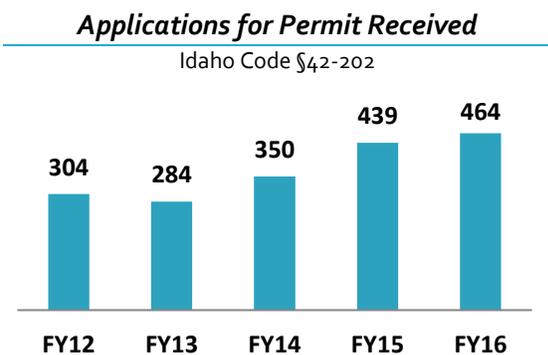
The Water Rights Section (Water Rights) oversees all aspects of water right permitting, licensing, and transferring. Water Rights considers applications for:

- new water rights (applications for permit),
- water right transfers and exchanges,
- ownership changes,
- water right licenses,
- temporary water uses, and
- temporary changes of water rights.

In addition, Water Rights archives all current state water right records and maintains a water rights database.

## Applications for Permit

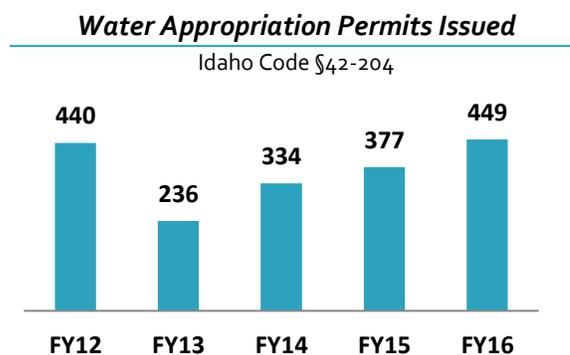
Applications for permit seek the approval of new water rights. The number of applications typically mirrors activity in Idaho’s economy. After reaching a recent low of only 284 applications filed in FY2013, the number of applications has climbed steadily to 464 in FY2016.



Because much of IDWR’s Southern and Eastern regions are closed to new appropriations, most of the applications for permit are filed in Northern and Western regions. Northern

Region accounts for 36% of the total, while Western Region accounts for 39% of the total. Of the applications filed in FY2016, ground water proposals comprised 52% of the filings, and surface water proposals comprised 48%. Applications for irrigation (197 applications) and domestic purposes (178 applications) accounted for most of the filings. Other notable beneficial uses were municipal (13 applications), commercial (18 applications), industrial (10 applications), and power (5 applications).

IDWR responded to the growth in application numbers with increased output. The number of permits issued climbed from 236 in FY2013 to 449 in FY2016, and the median processing time for a water right application remained 0.3 years. Nevertheless, the processing backlog, which was 637 applications at the end of FY2013, is still 569 applications. More than half of this backlog are protested applications that may require time-consuming hearings.

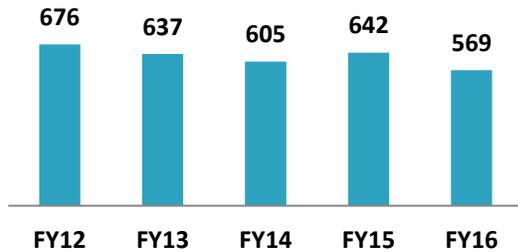


Another 657 applications are on hold due to the moratoriums mentioned above. Most of the applications on moratorium hold propose new uses from the Eastern Snake Plain Aquifer (ESPA) and tributary basins. Some ESPA applications have been held for over 20 years. Due to water supply constraints, it is not likely

that the moratorium affecting the ESPA will be lifted within the foreseeable future.

***Applications for Permit  
End-of-Year Pending Workload***

Does not include 645 applications held due to moratoriums.  
Idaho Code §42-204



In its strategic plan, IDWR has identified online filing as a priority. IDWR currently accepts only paper applications, which require significant data entry efforts, yet customers are increasingly able and willing to use the Internet to accomplish their business. To speed processing and reduce the application backlog, IDWR would like to reduce its commitment to data entry so it can spend more time on analysis and decision-making. Enabling online filing will require the elimination of legal, technical, and institutional barriers. Notable among the needs are updated rules or statutes to authorize electronic filings, an efficient Access Idaho payment method that does not penalize the filer by charging a steep transaction fee, and computer software to accept and track electronic filings.

IDWR could gain efficiency by eliminating the requirement to publish legal notice for applications proposing small domestic and stockwater uses. Currently small domestic and stockwater uses from wells are exempt from the water right filing requirement. Homeowners and stock raisers who apply for water rights are nevertheless subject to the same proposed larger notice and review process as any other

beneficial use, such as municipal or irrigation. In FY2016, eliminating the legal notice requirement for small domestic and stockwater uses from wells would have expedited 34 water right applications.

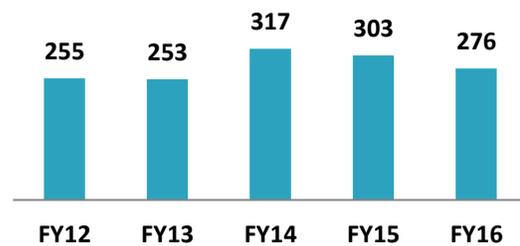
**Transfer Applications**

A transfer application proposes to change a water right element, such as the point of diversion, place of use, or purpose of use. Changes to existing water rights are important for water projects because permits for new water rights cannot be issued in many parts of Idaho, especially in the eastern and southern portions of the state.

The number of transfer applications received in FY2016 declined slightly for the second consecutive year.

***Transfer Applications Received***

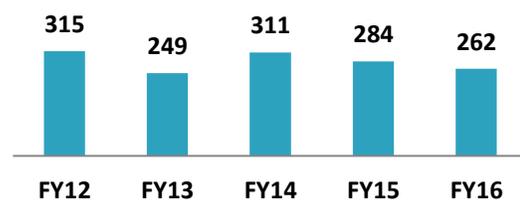
Idaho Code §42-222



The number of transfer applications resolved also declined, resulting in a 14% increase in the stockpile of unresolved applications.

***Transfer Applications Resolved***

Idaho Code §42-222

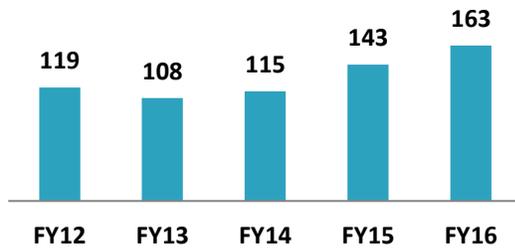


The end-of-year workload increase is at least partially attributable to competition for resources by other water right programs, such as applications for permit. Addressing growth in one program area sometimes requires reducing resources in other program areas.

The median time for resolving transfer applications remained at 0.2 years.

***Transfer Applications  
End-of-Year Pending Workload***

Idaho Code §42-222

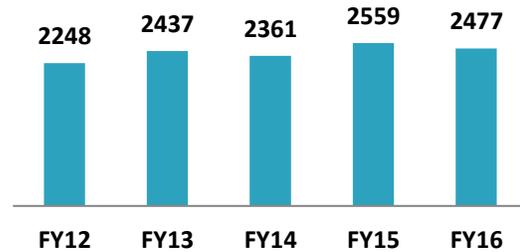


**Ownership Changes**

Maintaining current water right ownership records is critical to water right administration. It enables IDWR to communicate with water users about matters affecting their water rights. For example, water right ownership information is used to communicate about organizing new water districts, holding water district meetings, establishing ground water management areas, and responding to delivery calls. The number of water right ownership changes filed in FY2016 dipped 3% from the record high of over 2,500 set in FY2015.

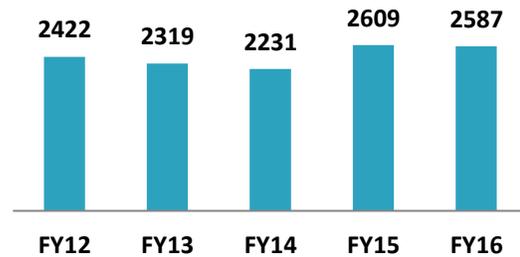
***Water Right Ownership Changes Received***

Idaho Code §42-248



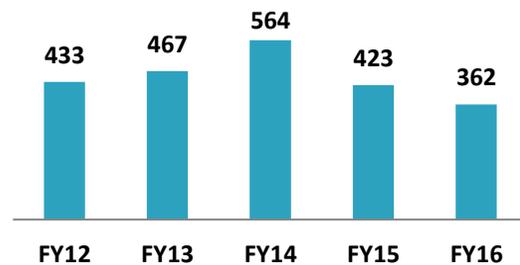
***Water Right Ownership Changes Processed***

Idaho Code §42-248



***Water Right Ownership Changes  
End-of-Year Pending Workload***

Idaho Code §42-248



New owners are required to report the ownership change to IDWR. However, the challenge is that timely compliance is not assured. To protect Idaho’s \$90 million investment in the Snake River Basin Adjudication, a better method is needed to ensure compliance with the ownership changes

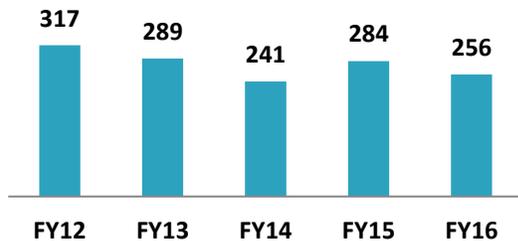
notice requirement. As a first measure, online reporting should be considered. IDWR's customers are increasingly able and willing to use the Internet to access IDWR's services. Increasing accessibility should increase compliance. Another option might be to require title companies to complete and submit water right ownership change notices for land parcel transactions with appurtenant water rights. Title companies would become adept at completing ownership change notices. As a result, the notices would be more complete and accurate than many of those currently submitted by new water right owners.

## Water Right Licensing

A water right license confirms the elements of a new water right and establishes the water right as real property. Water right licenses increase property values, and they are security to lenders and investors for operating loans or investment capital.

### Proofs of Beneficial Use Received

Idaho Code §42-219



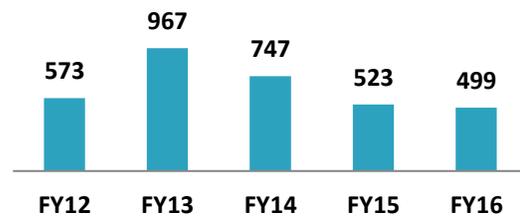
Nevertheless, for decades, IDWR assigned water right licensing a lesser priority compared to the processing of applications for permit, applications for transfers, and Water Supply Bank rentals. As a result, the unresolved licensing workload grew to 3,500 in 2011. That same year, the Idaho Supreme Court decision in *Idaho Power Company v. Idaho Department of Water Resources*, which confirmed that a water

right does not become real property until IDWR issues a license, resulted in a renewed urgency to eliminate the licensing backlog.

In 2012, the Director re-emphasized the licensing effort, in part by temporarily reassigning staff members from other IDWR functions. As a result of this additional effort, combined with a short-term reduction in the number of new permits being issued, IDWR reduced the licensing backlog to around 1,700 by the end of FY2014.

### Water Right Licenses Issued

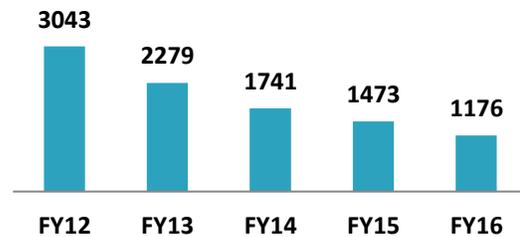
Idaho Code §42-219



In FY2015, however, the temporary reassignments could not be sustained, and the licensing momentum slowed. That trend continued in FY2016, with IDWR issuing fewer than 500 licenses for the first time since FY2011. The licensing backlog at the end of FY2016 stood at 1,176.

### Water Right Licenses End-of-Year Pending Workload

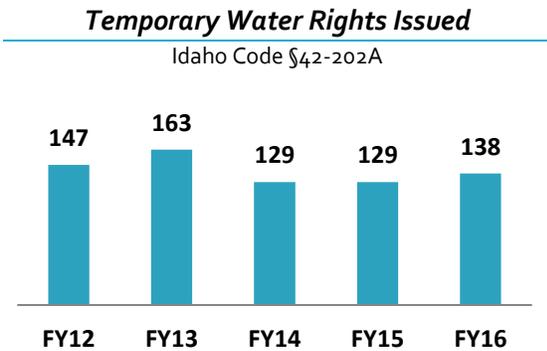
Idaho Code §42-219



The 2016 Legislature authorized IDWR to hire two additional senior water resource agents to augment the water right licensing effort. Those personnel have been hired. After a training period, they should begin to have an impact on the licensing backlog. With the additional personnel, IDWR anticipates reducing the licensing backlog to fewer than 200 by the end of FY2020.

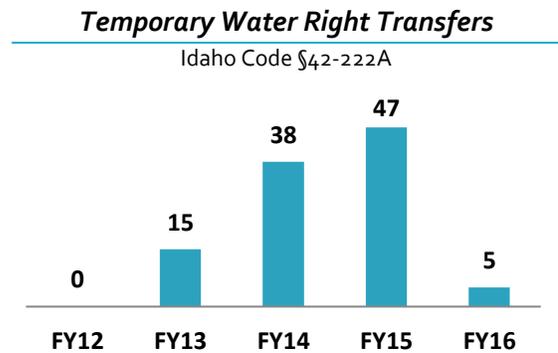
### Temporary Water Rights

Demand for temporary water rights in FY2016 remained consistent with historic levels. Temporary water rights support road construction projects, mineral exploration, and other short-term projects.



### Temporary Water Right Transfers

Due to relatively normal water supplies in 2015 and early 2016, demand for temporary water right transfers was small in FY2016. Temporary transfers allow water users to adjust their water use to meet drought conditions. While negligible in wet years, this program can require substantial effort from IDWR in dry years. This shift in focus temporarily diverts resources from other programs, especially water right licensing.



# WATER SUPPLY BANK PROGRAM

IDWR operates the Water Supply Bank (WSB) lease and rental programs for the Idaho Water Resource Board (IWRB). The WSB has two main components: 1) leases of water rights into the WSB, comparable to deposits of assets in a traditional bank, and 2) rentals of water rights from the WSB, comparable to loans from a traditional bank.

The WSB program is staffed by a Coordinator and by members of the Water Rights Section, who also work on right licensing, water right ownership changes, and other water right program initiatives. For FY2016 the total staffing effort, including the Coordinator, equaled approximately 3.09 FTEs. The WSB is funded by lease application fees and by a 10% administrative surcharge on rental transactions. In FY2016 the WSB's funding shortfall compared to staffing costs was approximately \$15,000.

In November 2015 the Idaho Water Resource Board contracted with Resource Data, Inc. (RDI) to create custom software for storing, analyzing, retrieving, and displaying WSB data. The initial version of the software, which became available for use on October 24, 2016, will increase processing efficiency for both leases and rentals.

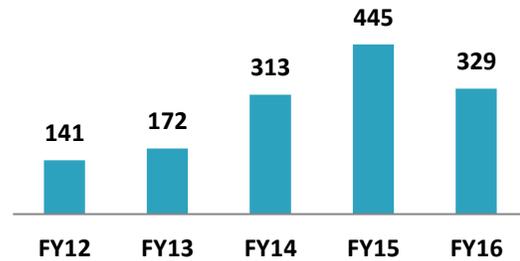
## Water Supply Bank Leases

In FY2016 demand for water supply bank leases declined approximately 26% from FY2015 requests. The number of FY2015 requests was bolstered by renewals of five-year lease agreements from FY2010, which was when the WSB converted from indefinite leases to five-year terms. Nevertheless, FY2016 demand was still more than double the FY2012 level.

In FY2016 IDWR also increased its lease output. The increase, combined with the decrease in filings, resulted in a dramatic reduction in the end-of-year workload.

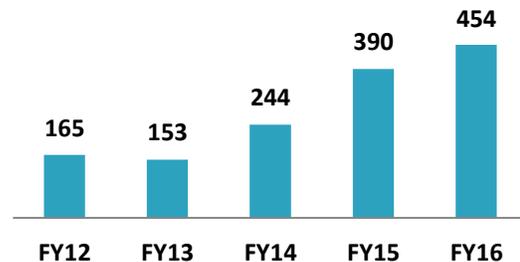
### *WSB Lease Applications Received*

Idaho Code §42-1762



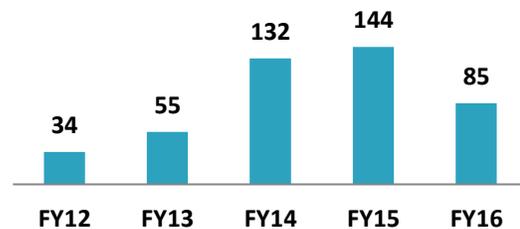
### *WSB Lease Applications Resolved*

Idaho Code §42-1762



### *WSB Lease Applications End-of-Year Pending Workload*

Idaho Code §42-1762

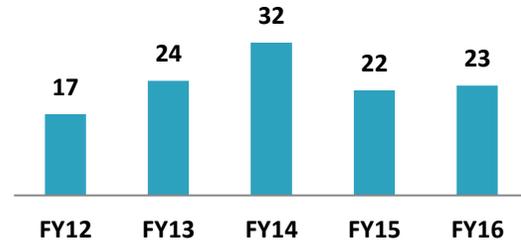


## Water Supply Bank Rentals

Demand for water supply bank rentals in FY2016 increased for the fourth consecutive year. As mentioned in connection with water supply bank leases, continuing growth in the water supply bank program competes directly with water right licensing, water right ownership changes, and other water right program initiatives for staff resources. To balance the workload, IDWR prioritizes rental application processing in the winter and early spring to address as many as possible before the beginning of the irrigation season. In the late spring, summer, and fall IDWR staff members emphasize field work and other water right processing duties.

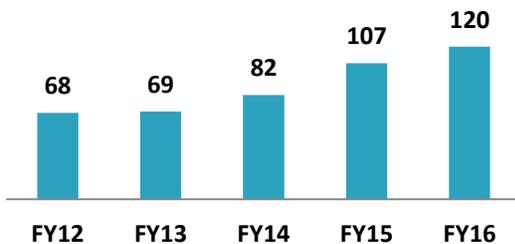
### *WSB Rental Applications End-of-Year Pending Workload*

Idaho Code §42-1763



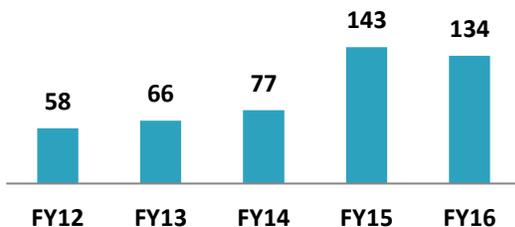
### *WSB Rental Applications Received*

Idaho Code §42-1763



### *WSB Rental Applications Resolved*

Idaho Code §42-1763



# ADJUDICATION SECTION

A general adjudication of water rights completely and accurately determines and records the existing water rights within a river basin. Following the completion of an adjudication of water rights, IDWR will have a compilation of all non de minimis water rights in the basin, and can deliver water to water users who are entitled to the water when disputes about use and delivery arise. Additionally, the water right compilation roughly estimates total water use. By more accurately estimating total water use in Idaho, IDWR can also estimate how much water is available for future development of water resources.

The Adjudication Section accepts, evaluates, and recommends the water right claims in the Coeur d’Alene-Spokane River Basin Adjudication (CSRBA), a part of the larger Northern Idaho Adjudications (NIA). The Adjudication Section also reviews and files Director’s Reports with the court for claims that were deferred in the Snake River Basin Adjudication (SRBA). Adjudication staff assigned to the NIA work out of the Northern Region office in Coeur d’Alene with support from the State Office staff in Boise. Any SRBA work is assigned to the State Office staff in Boise.

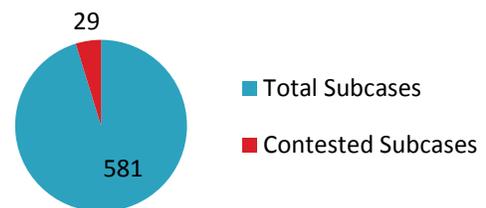
In April 2016, an updated version of IDWR’s internal claim data entry application (Create or Amend Claim) went into production. This application contains significant improvements from the previous application. The ability to create a new claim from a spatial data point in ArcMap was developed. The application will not only increase productivity, but will help ensure that data entry is complete and accurate.

## Coeur d’Alene-Spokane River Basin Adjudication

There were approximately 11,774 active claims in the database for the CSRBA basins at the end of FY2016. A total of 1,502 partial decrees were issued during FY2016.

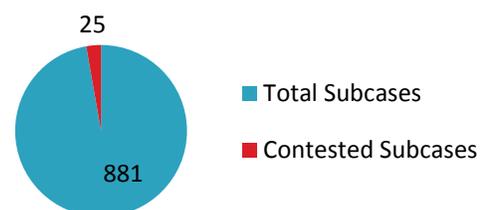
**BASIN 91:** The Director’s Report for Basin 91 was filed in February 2015. That report contained 581 recommendations. As of the end of FY2016, 31 objections filed to recommendations in Basin 91 were resolved. Still pending before the court are 29 active objections to 29 recommendations.

### Basin 91 Director’s Report Recommendations



**BASIN 92:** The Director’s Report for Basin 92 was filed December 30, 2014. That report contained 881 recommendations. As of the end of FY2016, 60 objections filed to recommendations in Basin 92 were resolved. Still pending before the court are 28 active objections to 25 recommendations.

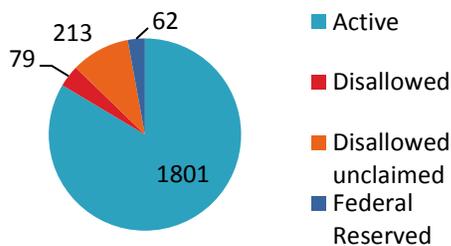
### Basin 92 Director’s Report Recommendations



**BASIN 93:** The Director’s Report for Basin 93 was filed in March 2014, and that report contained 358 recommendations. As of the end of FY2016, there were no active objections to any recommendations. There is one outstanding objection to the proposed general provisions.

**BASIN 94:** The Director’s Report for Basin 94 was submitted to the court on February 25, 2016. This report contained a total of 2,093 recommendations which included active, disallowed, unclaimed, and federal reserved claims. The deadline to file objections was July 28, 2016.

**Basin 94 Director’s Report Recommendations**

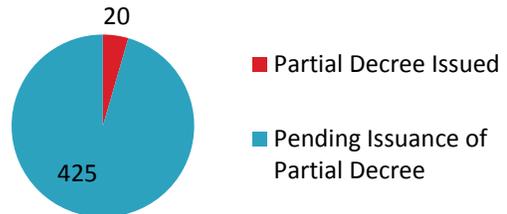


**Federal Law Based Claims**

Of the 11,774 active claims filed in the CSRBA, 446 are claims based on federal law. Three hundred and sixty-four (364) of the claims based on federal law were sent to the court in FY2014. The objection deadline for those claims was September 29, 2014, and all of the claims received multiple objections. Nineteen (19) federal reserved claims based on Public Water Reserve 107 (PWR 107) were sent to the court with submittal of the Basin 91 Director’s Report on February 24, 2015, and were partially decreed on November 13, 2015. Sixty-two (62) claims were reported to the court on September 30, 2015, when the Director’s Report for Basin 94 was filed. The final federal reserved claim in IDWR’s records will be sent to the court when the Director’s Report for the state law based claims in Basin 95 is filed.

**Federal Law Claims**

All but 1 of the 446 claims based on federal law has been sent to the court.



**Federal Law Based Claims Status Summary**

Claimant	Total Claims	Reported		Remaining Claims to Report	Partial Decree Issued	Pending Issuance of Partial Decree
		# of Claims	Date Reported			
Avista	2	2	3/27/2014	0	0	2
Bureau of Indian Affairs as Trustee for the Coeur d’Alene Tribe	353	353		0	0	353
USFS	9	9		0	1	8
BLM	82	19	2/24/2015	1	19	63
		62	2/25/2016			
<b>Total</b>	<b>446</b>	<b>445</b>		<b>1</b>	<b>20</b>	<b>425</b>

## Snake River Basin Adjudication

The "Final" SRBA late claims Director's Report was filed in December 2013. The Final Unified Decree was issued in the SRBA on August 26, 2014. As of the end of FY2016, the total number of partial decrees issued in the SRBA totaled 158,646.

**PENDING SRBA SUBCASES:** At the end of FY2016, the court identified 59 water rights waiting to be decreed. This included subcases related to reservoir refill and the Owyhee Wild and Scenic Federal Law claims.

**DEFERRED DE MINIMIS DOMESTIC AND/OR STOCKWATER USE:** The Order Governing Procedures in the SRBA for Adjudication of Deferred De Minimis Domestic and Stock Water Claims requires the water user to file a motion with the court to obtain a partial decree for a domestic and/or stockwater use that was previously deferred in the SRBA.

During FY2016, six (6) claims were filed with Motions for Determination of Deferred De Minimis Domestic and/or Stockwater Use (DDDS) bringing the overall total of claims filed with motions for DDDS to 15. Partial decrees were issued for five (5) deferred claims during FY2016, bringing the overall total partial decrees issued in connection with claims filed with motions for DDDS to nine (9).

### *SRBA Deferred De Minimis Domestic and/or Stockwater Use*

DDDS	Prior to FY2016	FY2016	Total as of FY2016
Filed	9	6	15
Partially Decreed/ Resolved	4	5	9
Pending			6

**ERROR CORRECTIONS:** Eighty-six (86) amended Partial Decrees were issued during FY2016 as the result of Error Correction Requests submitted by IDWR. At the end of FY2016, there were no open subcases related to error correction request still pending before the court.

# SAFETY OF DAMS PROGRAM

Per Idaho Code §42.1709 - 1721, the IDWR Safety of Dams Program is responsible for regulating all aspects of the approximately 450 water storage dams and 20+ mine tailings impoundment structures in Idaho for benefit of public safety. Primary duties include:

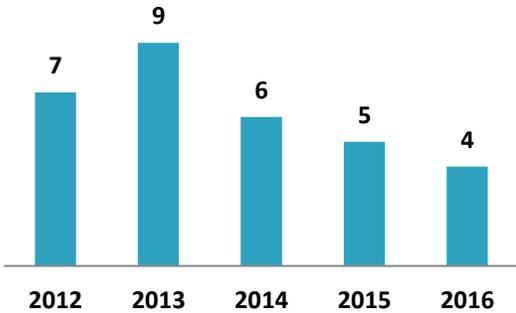
- reviewing and approving design plans for dam construction and repair;
- performing scheduled inspections of both new and existing dams;
- consulting with dam owners and county emergency personnel to update emergency action/operation plans;
- offering engineering services within the limited scope of established program duties; and
- serving as a public repository of historic design information related to dams, mine tailings structures, and other related water storage projects.

Of the aforementioned duties, regular inspection of existing dams coupled with design review and approval for new construction or repair are two of IDWR’s more important activities in terms of protecting public safety.

Dams are inspected every 1 -5 years, as determined necessary based on hazard classification. The hazard classification represents the potential consequences resulting from dam failure and uncontrolled release of water. Regular inspection and careful design review of new construction plans and specifications not only fulfill the requirements of Idaho Code §42-1712 but help ensure life and property are protected from a catastrophic dam failure.

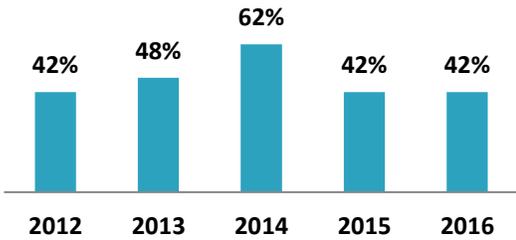
### *Design Review & Approval for New Construction/Repair of Dams*

per calendar year; 2016 through June 30



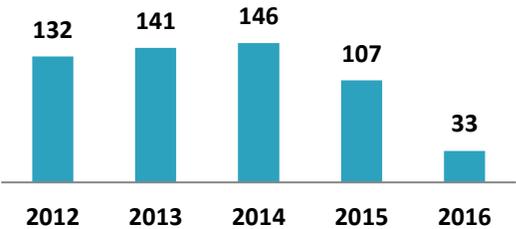
### *% of High Hazard Dams with Up-to-Date Emergency Action Plans*

per calendar year; 2016 through June 30



### *Inspections of Existing Dams*

per calendar year; 2016 through June 30



Safety of Dams staff members operate in four region offices, with the state office in Boise supervising the program's efforts. The ability of IDWR personnel to schedule inspections for all dams in a timely manner for the state's full inventory is dependent largely on program resources and the weather. However, IDWR prioritizes inspections of dams and reservoirs having the greatest potential impact to life and property. Turnover in the engineering staff at the regional offices continues to interrupt scheduled inspections. There is a learning curve associated with training and staff knowledge of existing dams and reservoirs. During periods of employee turnover, inspections for some dams are postponed. As a consequence, strict performance of some mandated tasks per Idaho Code may

not be timely completed until staff becomes available to complete the work.

To help compensate for fewer staff or disruptions caused by staff turnover, several processes and procedures have been streamlined. IDWR's regional offices now issue storage certificates for all low-hazard dams, a task once administered solely by the state office. IDWR has also updated the Safety of Dams database and provided access for data entry to all regional offices. More recently, the 2016 Legislature revised Idaho Code (42.1711) and its definition for a "regulated dam." The law removes from future inspection some of the smaller sized and less threatening water storage reservoirs located in remote areas of the state.



# Water Compliance Bureau

The Water Compliance Bureau ensures the distribution and use of the state's water resources are fair and equitable in accordance with vested water rights and Idaho law.

## **BUREAU CHIEF**

Tim Luke

## **STAFF LOCATIONS**

Boise (State Office)

Twin Falls

Salmon

## **BUREAU PROGRAMS**

Water Distribution Section

Ground Water Protection Section

Enforcement Unit

Stream Channel Protection Unit

Floodplain Management Unit

South Fork Boise River, Pine  
Courtesy of Maureen O'Shea, IDWR

# WATER DISTRIBUTION SECTION

The Water Distribution Section supervises both the delivery of water rights and the distribution of water to the water users, especially when there is insufficient water to satisfy all water rights. The Water Distribution Section has two programs to fulfill this responsibility.

- The *Water Measurement Program* supports the control and measurement of water diversion systems.
- The *Water Districts Program* assists water districts, water measurement districts, and ground water districts.

## Water Measurement Program

The Water Measurement Program establishes, maintains, and implements state water measurement and reporting standards. Staff works directly with water districts and water measurement districts to implement measurement requirements and programs.

**MEASUREMENT ORDERS:** No measurement orders were issued in FY2016.

**MEASURING DEVICES:** Five (5) new water measurement meters were approved in FY2016. Water users required by IDWR order to measure flows now have more options when installing IDWR-mandated measuring devices

## Water Districts Program

The Water Districts Program implements Idaho Code §42-604, which requires IDWR to create state water districts for public streams or water supplies for which water rights have been decreed by the courts. Idaho Code also authorizes IDWR, through the Water Districts Program, to revise the boundaries of existing

districts, combine two or more districts, and/or abolish districts, if necessary.

Nearly 100 active water districts and sub-districts exist across Idaho (see Figures 1 - 4, pages 35 – 38). Some districts include thousands of water users and others only a handful. Regardless of size, each active water district employs a watermaster who oversees water distribution within the district. It is the primary goal and responsibility of all Idaho watermasters to ensure waters of the state of Idaho are diverted and distributed to users in adherence to Idaho water law and the prior appropriation doctrine. Daily water distribution, record keeping, measurement, and general district management are the primary duties of each watermaster.

The IDWR Water Districts Program supports and supervises the water districts and watermasters by:

- combining, dissolving, or creating new water districts, ground water districts, and water measurement districts to facilitate improved water delivery;
- developing standards for district operation;
- supporting watermaster and hydrographer training through publications and live sessions;
- supporting ground water, water measurement, and water districts by mailing notices, updating water user information databases, and assisting in delivery disputes.

The following maps (pages 27 – 30) depict two new water districts added during FY2016:

- Water District 143 (Figure 3, page 29): with authority over Raft River Basin ground water rights, excluding domestic use, stock water use, and those already within Water District 130.
- Water District 161 (Figure 4, page 30): with authority over Mountain Home area (IDWR Administrative Basin 61 and a small portion of Basin 63) ground water rights, excluding domestic and stock water uses.

Administration and management of water rights, including measurement of water use, is especially important in managing ground water resources in GWMA and CGWA to bring them into equilibrium.

The new water districts were created to administer ground water uses and ground water rights within the respective ground water drainage areas. These water districts were needed to support the measurement and reporting of water use diversions. Both new water districts overlay Ground Water Management Areas (GWMA) and/or Critical Ground Water Areas (CGWA) where ground water levels are in continued decline.

Figure 1: Active Water Districts in IDWR Northern Region, FY2016

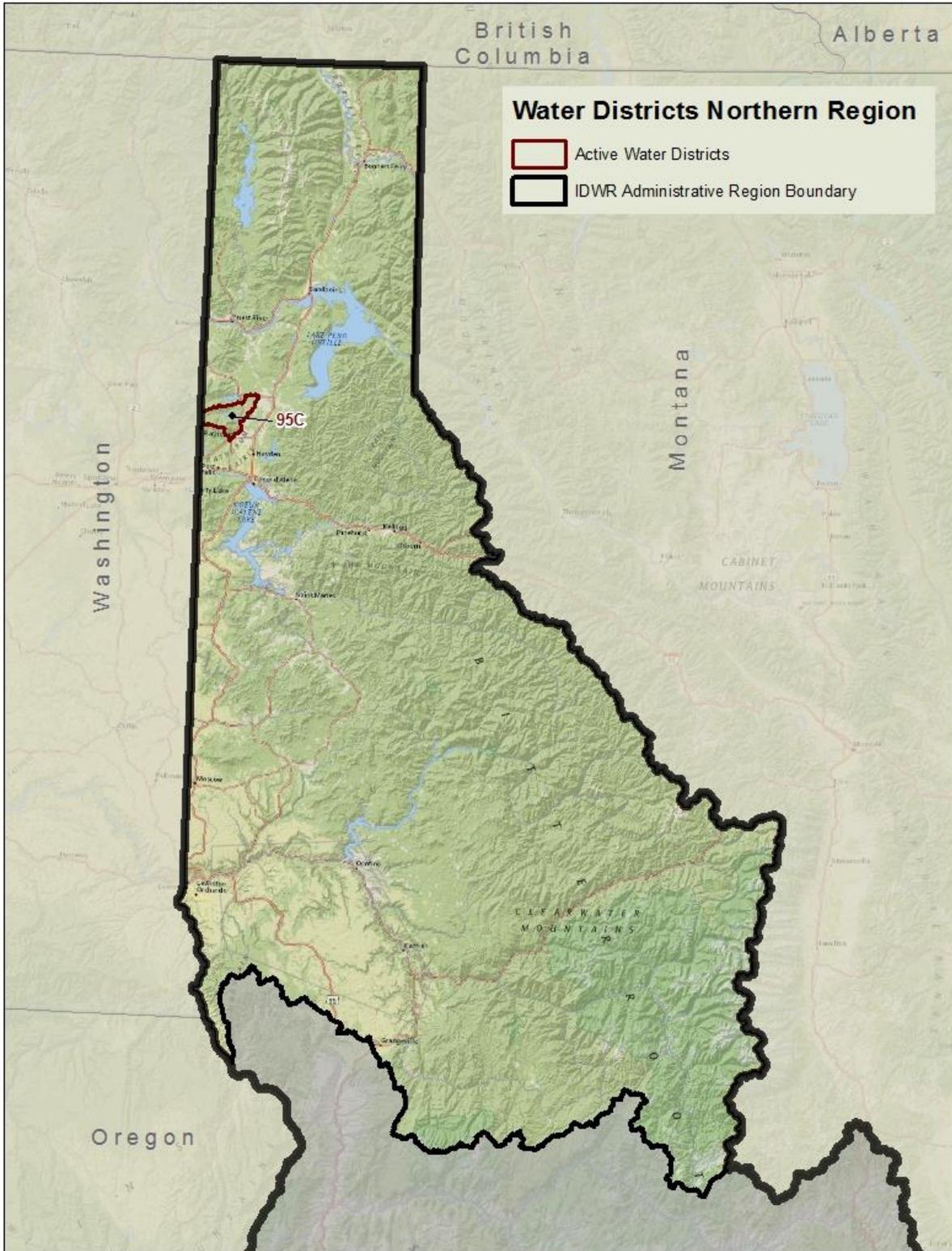




Figure 3: Active Water Districts in IDWR Southern Region, FY2016

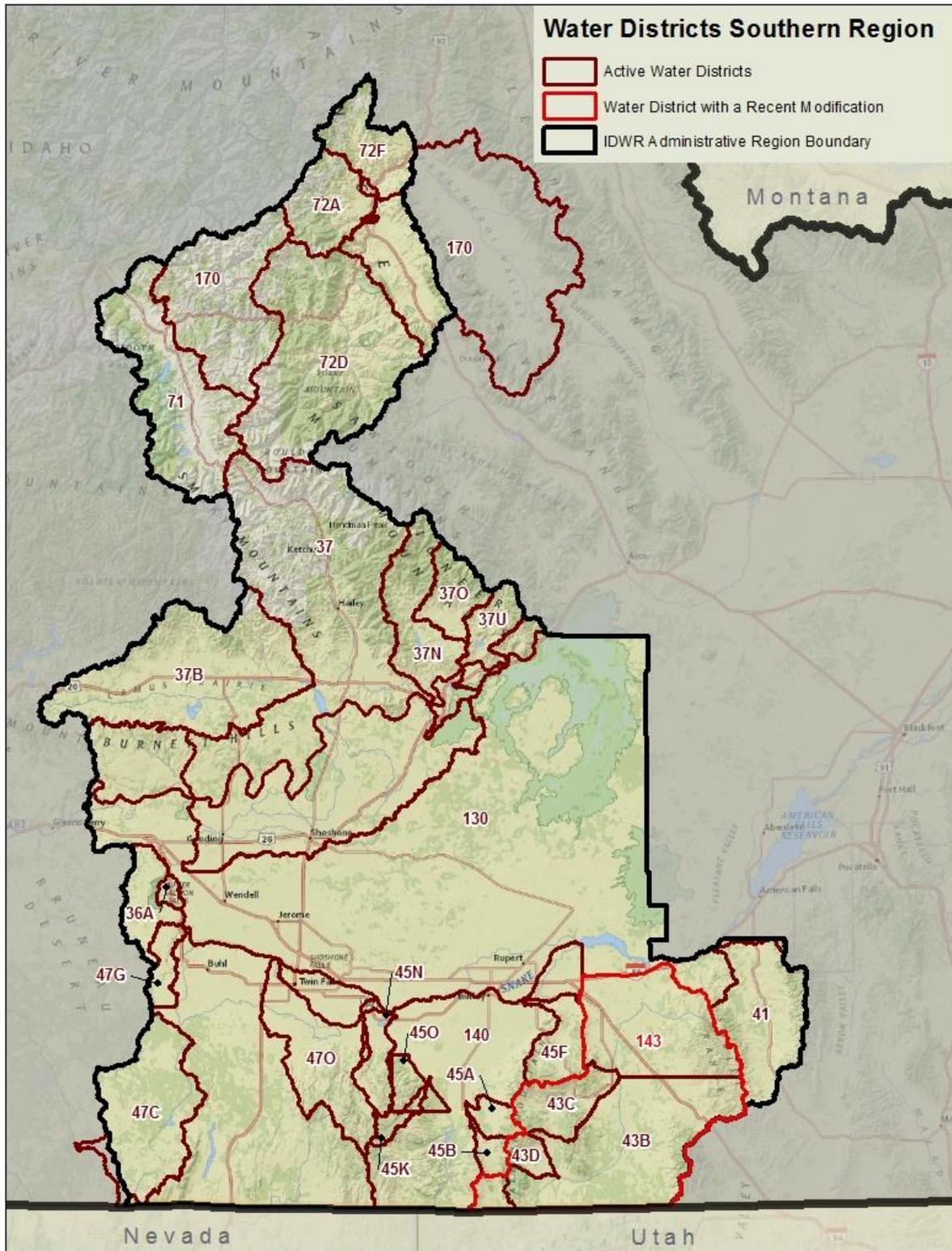
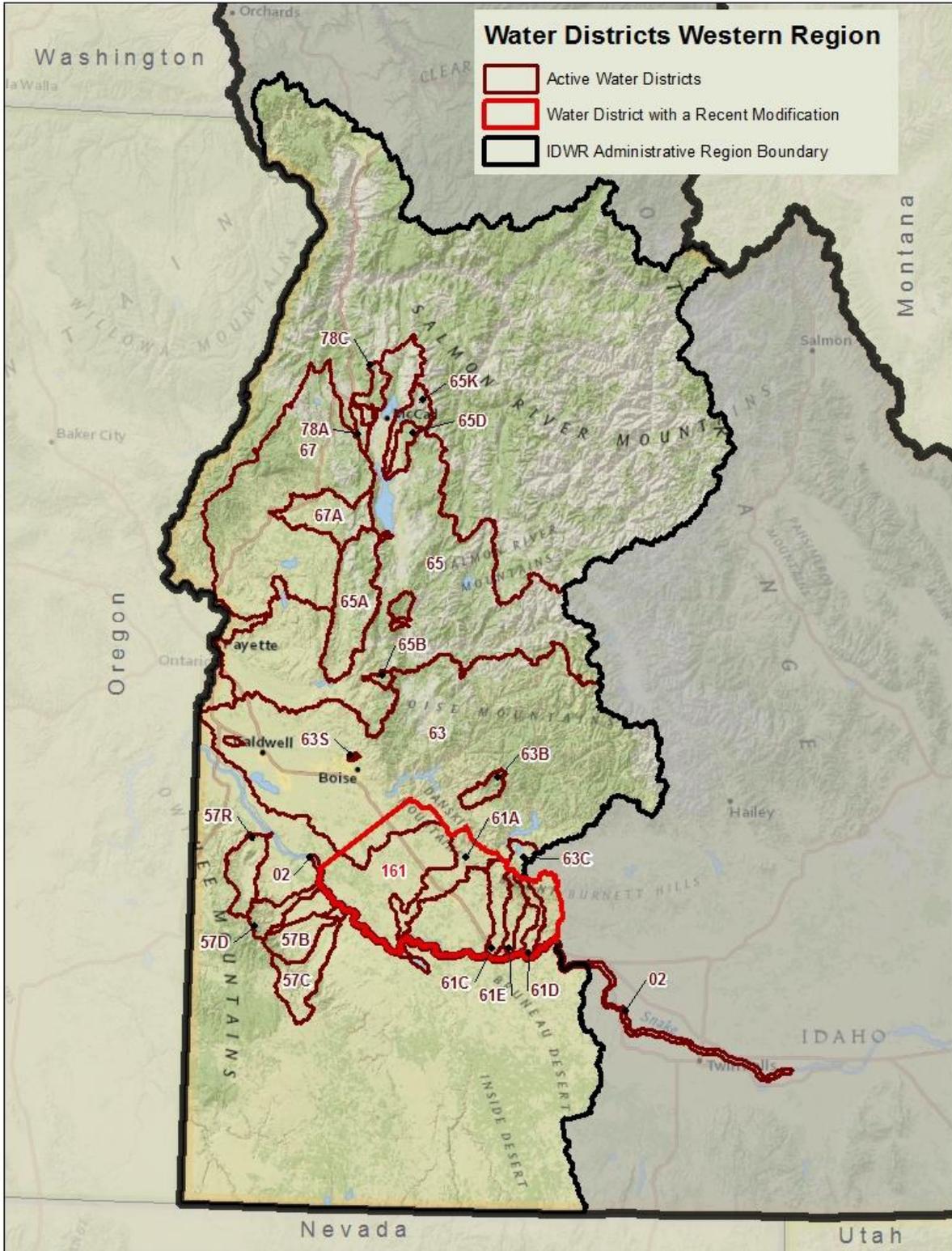


Figure 4: Active Water Districts in IDWR Western Region, FY2016



# GROUND WATER PROTECTION SECTION

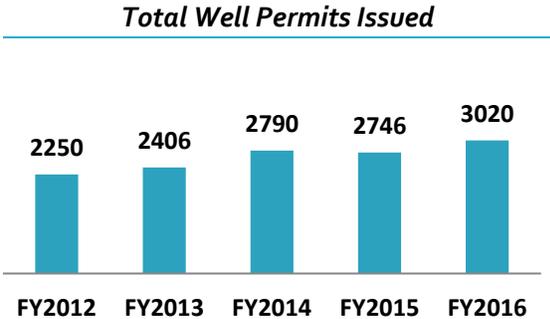
The Ground Water Protection Section regulates well construction and well driller licensing in Idaho via four programs: Well Construction Program, Underground Injection Control (UIC) Program, Geothermal Resources Program, and Driller Licensing Program.

stormwater, agricultural water, and facility heating/cooling water underground. Currently, IDWR has over 19,000 injection wells on record. Nearly 16,000 are shallow wells (<18 feet deep) and the remaining are deep wells (≥ 18 feet deep).

## Well Construction Program

The Well Construction Program supervises the construction, modification, and abandonment (decommissioning) of all non-geothermal wells, including domestic, commercial, municipal, industrial, and monitoring wells.

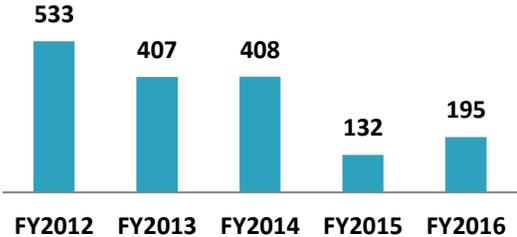
The overall number of well construction permits issued (both new construction and modification of existing wells) has generally increased over the past several years. The steady growth in new home construction over the past several years has contributed to this increase.



## Underground Injection Control Program

The Underground Injection Control (UIC) program, delegated to IDWR by the US Environmental Protection Agency (EPA) in 1985, regulates the construction, operation, and abandonment (decommissioning) of all injection wells in Idaho. Injection wells are used as a means to dispose of or store excess

### *Injection Well Applications Approved*



During FY2016, UIC staff approved 195 new or renewed injection well applications. Before approving construction, modification, or continued use of an injection well, UIC staff reviews the application, conducts a field visit (if necessary), and publicly notices the project. Reduced approvals in FY2015 and 2016 is due in part to the cyclic nature of permit expirations and renewals and deferred data entry for applications approved by non-Department entities (e.g. authorized cities or Health Districts).

The UIC staff continues to face the challenge of having only one FTE in the program after a reduction of one (1) FTE in FY2014. The duty of the UIC staff to perform tasks as required by statute is being fulfilled, although not at peak efficiency.

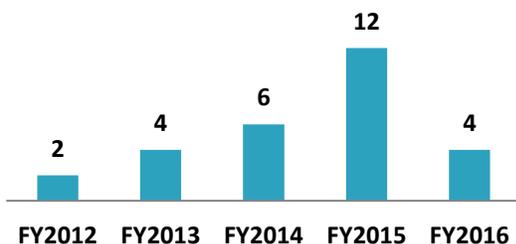
## Geothermal Resources Program

The Geothermal Resources Program regulates drilling, operation, maintenance, and abandonment (decommissioning) of all geothermal resource wells in Idaho, as outlined in Idaho Code §42-4001 - 4015. Geothermal wells are defined as any well having a bottom hole temperature of 212° F or greater (Idaho Code §42-4002). Low-temperature geothermal wells, or wells having a bottom hole temperature greater than 85° F and lower than 212° F, are not part of the Geothermal Resources Program are still regulated by the IDWR Well Construction Program.

Upon receipt of a permit application, program staff reviews the application and conducts a thorough technical evaluation before drilling can commence.

IDWR approved four (4) geothermal well applications during FY2016, which is very similar to the number of applications issued per year for the last five years with the exception of FY2015. The high number of applications issued in FY2015 is attributed to a single geothermal company, Walker Ranch Energy LLC. Walker Ranch Energy conducted geologic investigations in the early half of 2015 and submitted 12 drilling applications in anticipation of the potential need to drill up to a dozen wells.

***Geothermal Well Applications Processed***



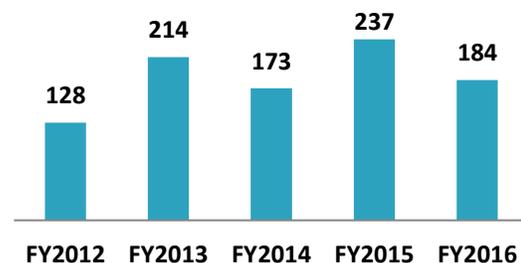
## Driller Licensing Program

The Driller Licensing Program regulates the licensing of well drillers. The program is carried out consistent with the Well Driller Licensing Rules (IDAPA 37.03.10), which establish the requirements and procedures for obtaining and renewing authorization to drill wells. Duties of staff responsible for the Driller Licensing Program include:

- reviewing and processing licensing applications;
- organizing and presenting required continuing education seminars;
- coordinating the annual license renewal of well drillers; and
- data entering and maintaining individual driller and drilling company information.

The total number of driller licenses issued per year has fluctuated from year to year since FY2012. However, over that time, the number of licenses issued has trended upwards. The recent upward trend in annual licensees issued may reflect economic growth since the recovery of the housing market and the increased need for domestic wells.

***Total Driller and Operator Licenses Issued***



The program has kept up with increases in licensing demand by implementing modern database software that automates aspects of the licensing process. The new software was

designed to be user-friendly and intuitive, to allow new or non-driller licensing staff to enter and process applications.

Although not required by the Driller Licensing Rules, program staff have a goal to process all applications with 14 days of receipt. The main obstacle preventing Driller Licensing staff from achieving this goal is the delay incurred by incomplete applications, which necessitate follow up with individual drillers, drilling companies, and/or IDWR regional staff, thereby protracting the process.

## ENFORCEMENT UNIT

The Enforcement Unit, administered by the Program Coordinator, working with state and regional office staff, address and resolve water use violations in all IDWR regulatory programs state-wide: well construction, well driller licensing, stream alteration, recreational mining, underground injection control, safety of dams, and water appropriation. Necessary enforcement activities are coordinated with or initiated by the enforcement unit. Activities include addressing complaints from the public, conducting investigations, issuing notices of violation (NOV), and conducting compliance conferences to resolve violations. The Enforcement Unit was added to the IDWR Water Compliance Bureau in FY2012 to ensure consistency in agency policies for regulatory activities prescribed by State Law. Since that time the State Enforcement Coordinator position has turned over three times.

The unit's administrative enforcement activities are conducted pursuant to Idaho Code §42-1701B. The unit must understand, administer, and enforce the statutes and rules that govern individual IDWR regulatory programs.

Recent development and implementation of an Enforcement Database by IDWR has allowed staff to store and analyze enforcement related data including complaints, enforcement actions, violation types, violation locations, penalties, and payment balances. The database also enables staff to track the progress and status of each case as well as view related digitized documents in a more effective and efficient manner than in the past. One important enforcement metric tracked by the database is the number of enforcement cases entered per year. In FY2016 50 enforcement

cases were logged representing an increase of approximately 22% when compared to FY2015. Of these 50 Enforcement Cases, 30 were resolved, with 20 still pending resolution. Also during FY2016, a total of 22 general Complaints were entered into the Enforcement Database.

# STREAM CHANNEL PROTECTION UNIT

The Stream Channel Protection Unit evaluates potential alterations to stream channels for the protection of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, and water quality. Using Idaho Code §42-3801 and the Idaho Stream Channel Protection Act requirements, the Stream Channel Protection Unit approves or denies projects involving any work being done inside the ordinary high-water mark (generally, the streambed and stream bank) of a continuously flowing stream.

The Stream Channel Protection Unit Coordinator serves at the IDWR state office and oversees the regional office staff while also completing the daily functions for the state, Western, and Southern region units. Stream Channel Protection Unit support staff serves at the Northern and Eastern regional offices.

Stream Channel Protection permits are issued for two different types of applications: Joint Application for Stream Channel Alteration Permits (Joint Applications) and Letter Permit for Recreational Mining (Letter Permit).

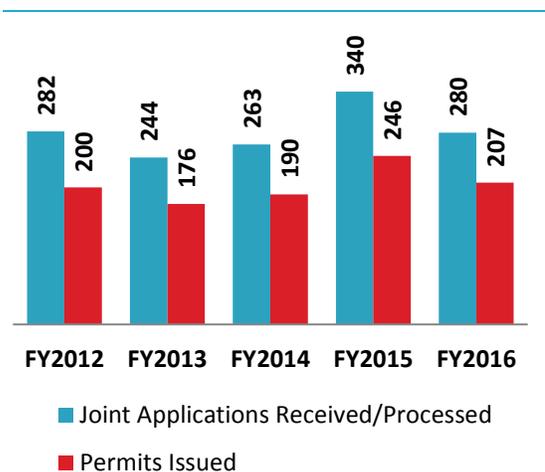
## Joint Application for Stream Channel Alteration Permits

The Joint Application permit form and process was developed in conjunction with the Idaho Department of Lands (IDOL) and the US Army Corps of Engineers (USACE) because these agencies also have jurisdictional permitting programs related to the protection of streams and wetlands. The Joint Application allows the applicant to fill out and submit one application to each agency for subsequent approval(s). Upon receipt of a complete Joint Application, the Stream Channel Protection Unit issues a

permit within 60-90 days (the timeline varies depending on the complexity of the project and the number of parties affected by the project).

During FY2016, the Stream Channel Protection Unit received, processed, and issued a similar number of Joint Applications as compared to previous fiscal years dating back to FY2012. In the chart below, some Joint Applications received very late in FY2015 will count as being received but were not reviewed, processed, or permitted before the end of the fiscal year period.

**Joint Applications Received, Processed, & Issued**



The Stream Channel Protection Unit strives to maintain a 60-day processing timeline. However, most applications take longer, as the two-and-a-half FTE positions dedicated to this program attempt to keep up with the data entry, correspondence, review, field exams, and permitting for each application. An additional FTE at the State Office in Boise would help distribute these tasks and improve approval time. Alternatively, a modernized database system would help alleviate some time and effort. The creation of the new database is

currently suspended, however, due to limited IDWR programming resources.

## Letter Permit for Recreational Mining

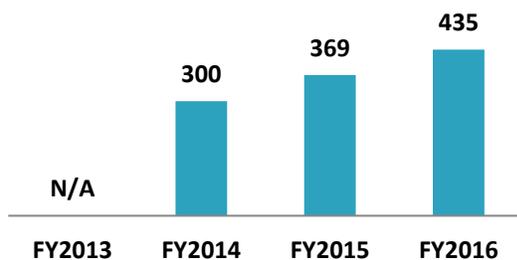
The Stream Channel Protection Act regulates the use of recreational mining equipment. Miners are required to obtain a Letter Permit for Recreational Mining (Letter Permit) from IDWR before altering any portion of the streambed. Recreational mining equipment is any implement used to dig, scrape, dredge, or otherwise move stream bed materials from below the ordinary high watermark (streambed or stream bank) in search of minerals.

Completed and signed letter permits are considered authorized by IDWR upon receipt of the permit and fee. By signing the letter permit, the applicant indicates he/she has read and understands the *Recreational Mining Stream Channel Alteration* instruction booklet and will conduct operations in compliance with the stated instructions and rules.

received via mail are compliant with the IDWR Recreational Mining Instructions' open/closed areas. This step is time consuming but also important, as it increases compliance, minimizes violations, and enhances miners' knowledge of the statutes regulating recreational mining.

A web-based Letter Permit application that implements applicant information, mapping interface, and online payment could significantly reduce staff data entry and compliance review. A web-based application process would also provide immediate and accurate approval for customers. This effort would require coordination with programming staff (or perhaps a third-party programming contractor) and Access Idaho for payment options.

### Recreational Mining Letter Permits Received



Letter Permit submittals have increased by an average of 20% per year over the past several years, increasing the staff time reviewing and processing these permits. The creation of a new data entry system in FY2014 increased data entry and record keeping efficiency. However, staff must also verify that those letter permits

# FLOODPLAIN MANAGEMENT UNIT

The Floodplain Management Unit is a single employee unit, administered by the State Floodplain Coordinator (FP Coordinator). The FP Coordinator administers the National Flood Insurance Program (NFIP) via the Community Assistance Program – State Support Services Element (CAP-SSSE), a cooperative agreement grant from FEMA (implemented via executive order by Governor Otter in June 2015).

The Floodplain Management Unit is designed to help Idaho communities and citizens by

- ensuring the flood loss reduction goals of the NFIP are met,
- building state and community floodplain management expertise and capability, and
- leveraging state knowledge and expertise in working with communities.

Additionally, State statutes that encourage communities to adopt floodplain management regulations, a Flood Protection Elevation, and a flood hazard map are found in the Idaho Code §§46-1020 through 46-1024.

The CAP-SSSE primary priority is to conduct Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs). In FY2016 eleven CAVs were conducted, one CAV opened in FY 2014 was successfully closed, three CAVs over 1000 days old remain open, as well as three CAVs from FY2014. In addition, in FY2016 47 CACs were conducted and closed. Per the CAP-SSSE, 58% of the duties of the State Floodplain Coordinator are specially designated for CAV and CAC work.

Idaho has 44 counties, 200 incorporated cities, and nine tribes of which only 172 communities

participate in the NFIP. Currently, 19 communities have adopted standards above the NFIP minimum requirements and participate in the Community Rating System (CRS).

A review of the 172 community Flood Damage Prevention ordinances is ongoing. Current standards and ordinances promote reduced risks to new and existing development in the Special Flood Hazard Areas (SFHAs)—implementing higher standards reduces homeowners' flood insurance rates.

The FP Coordinator fulfilled the CAP-SSSE Community Education, Outreach, Workshops and Other Training goals set for FY2016 by hosting six (6) floodplain-related workshops throughout the State. These workshops increase awareness and provide knowledge to local floodplain administrators and surveyors. Attendees left with resources, strategies, and a better understanding of how to increase resiliency in the event of future flooding.

- **MARCH 2:** Floodplain Administrator 101 (FPA 101) in Washington County (19 attendees)
- **MARCH 22:** FPA 101 in Jefferson County (24 attendees)
- **APRIL 7:** FPA 101 in Gooding County (19 attendees)
- **APRIL 28:** Ordinance Adoption in Jerome for Southern Idaho Regional Planning and Zoning and Administrators (9 attendees)
- **MAY 10:** Elevation Certificates in Boise for ISPLS Southwestern Section of Surveyors (28 attendees)
- **JUNE 4:** FPA 101 in Twin Falls (35 attendees)



# Information Technology Services Bureau

The Information Technology Services Bureau supports technology initiatives throughout IDWR and consists of a traditional IT section, a GIS section, and a programming section.

**BUREAU CHIEF**

Greg Mathias

**STAFF LOCATIONS**

Boise (State Office)

**BUREAU UNITS**

Geospatial Technology Section  
Information Technology\*

Spokane River, Coeur d'Alene  
Courtesy of Allen Beardslee, IDWR

\*Activities for this support service are not addressed in this report.

# GEOSPATIAL TECHNOLOGY SECTION

Idaho Code §39-120 designates IDWR as the state's leader for natural resource geographic information systems (GIS). The Geospatial Technology Section, using GIS software, provides expertise, applications, data, and analyses to evaluate well drilling applications, water right applications, compliance issues, and to refine and improve ground water modeling. This data is used by IDWR staff, the Idaho Attorney General's office, state government, local governments, and the general public. These users utilize GIS software to analyze and assess water rights, the water supply bank, IDWR administrative boundaries, well locations, proposed recharge sites, water diversion records, and surface and ground water monitoring data. The section also provides web-based tools and applications that are used by IDWR staff and the public via the IDWR website. As a section within the Information Technology Services Bureau, the Geospatial Technology section works with the Information Technology Section to provide geospatial tools, programming, and expertise to develop and maintain IDWR workflow applications.

Besides supporting business processes throughout IDWR, the Geospatial Technology Section is also specifically tasked with maintaining the repository of ground water quality data for the state of Idaho, called the Environmental Data Management System (EDMS). EDMS is set up to facilitate cooperative ground water programs among multiple state agencies. GIS staff also develops and supports data access tools for the public. Because of various entities' reliance upon the section's accuracy of information, most major projects of FY2016 encompassed improving applications and databases.

**WATER DATA EXCHANGE:** Idaho is participating with the Western States Water Council (WSWC, an 18-state advisory organization) and other western states in a data exchange project to improve access to water allocation, supply, and demand data maintained by the states. Idaho is working with the WSWC to automatically serve Idaho's water information to a central data exchange framework that in turn serves Idaho's and all other western states' water data in a common format, from a single location, in real-time to the public.

**INTERACTIVE MAP IMPROVEMENTS:** The IDWR website displays various interactive maps to the public and other agencies. These maps display information regarding well drilling, state-protected streams, evapotranspiration, flood hazard, and general mapping tools. The main focus for 2016 was to enhance existing maps to support internal and external customers and to upgrade older interactive maps to support a mobile environment. This allows the public to use the maps on desktop or mobile devices to query and retrieve accurate and detailed data.

**DATA AND TOOL IMPROVEMENTS:** In 2016, updates were made to core GIS layers used in water right processing. In addition, GIS staff updated the public land survey layer based on revised federal, state, and county data. With matching funds from USGS, the GIS section updated digital hydrography within the state for the Lemhi and Big Lost Sub-basins. The Lemhi Sub-Basin is part of the Columbia Basin Water Transaction Program.

WREdit is the GIS toolbar used throughout IDWR for many of its business processes. During FY2016, enhancements were added for water right agents, including a new tool that allows

water right agents to create place of use shapes that are buffered along a stream, providing a detailed place of use for in-stream or stock water rights. Additional work was done to enhance correlation of shapes related to business processes, facilitating the ability to link water rights with wells or measuring locations. These tools reduced application processing time and assisted in efficient data discovery.



# Hydrology Section

The Hydrology Section collects, stores, and serves hydrologic data, quantitatively analyzes data, and technically supports the administration, management, planning, and protection of the state's water resources.

**SECTION MANAGER**

Sean Vincent

**STAFF LOCATIONS**

Boise (State Office)

Snake River, Twin Falls  
Courtesy of Dan Stanaway, IDWR

# HYDROLOGY SECTION

The Hydrology Section collects, stores, serves, and analyzes hydrologic data for the Department and the state of Idaho. In addition, the Hydrology Section technically supports the administration, management, planning, and protection of the state's water resources. Section hydrologists support watermasters and water districts in the administration and delivery of water by accounting for the delivery of reservoir storage and natural stream flow according to Idaho's water right priority system. Staff develops and operates ground water models of major aquifers within the state and maintain and run a river and reservoir system operations model of the Snake River for planning purposes. The data, models, and programs run by the Hydrology Section are used for predicting water supply for the upcoming irrigation season, planning for improved utilization of water resources, and quantifying the effects of drought, recharge, and pumping on aquifer water levels and river flows. These studies and modeling efforts are often a part of a collaborative process that is important to private industry, agricultural interests, other government agencies, and IDWR in developing and refining the best scientific understanding of Idaho hydrology.

An important and ongoing project for both state and regional office staff is the data collection program. Last year, Hydrology Section staff monitored more than 1,300 sites statewide:

- Statewide Water Quality Monitoring Program (267)
- Geothermal well monitoring (33)
- Managed recharge (40)
- Aquifer water level monitoring (816)

- Stream, spring, and agricultural return-flow monitoring (203)

In addition to data collection, the Hydrology staff accomplished other important goals:

**AQUIFER RECHARGE PROGRAM:** Hydrology Section staff supported this program by assisting with recharge site characterization efforts and by applying the Enhanced Snake Plain Aquifer Model to quantitatively assess the performance potential of recharge sites in eastern Idaho.

**LEWISTON PLATEAU GROUND WATER MANAGEMENT AREA:** The Hydrology Section provided hydrologic data collection, contract management, and well drilling oversight services in support of a hydrogeologic investigation of the Lewiston Plateau. Staff also gave a presentation of findings to the Ground Water Management Area Advisory Committee.

**SWAN FALLS TECHNICAL WORKING GROUP:** Hydrology Section staff participated in regular meetings of the Swan Falls Technical Working Group and contributed to development of an improved method for estimating the Adjusted Average Daily Flow at the Murphy gaging station on the Snake River. The Hydrology Section also began managing a contract with CH2M Engineering for development of a model-based tool for predicting the flows at Murphy during the critical low-flow period in July.

**TREASURE VALLEY AQUIFER MODEL:** The Section completed a technical review of the Bureau of Reclamation's Treasure Valley Hydrologic Project steady-state aquifer model. Based on the review, the Hydrology Section is embarking on a 5-year project to collect hydrologic data

and develop a fully transient model of the Treasure Valley aquifer system. The project is being jointly funded by the Idaho Water Resource Board and the United States Geologic Survey (USGS).

**WATER RIGHT ACCOUNTING FOR BIG LOST RIVER BASIN:** Hydrology made significant progress toward development of a new Water Right Accounting program for the Big Lost River basin. Staff completed development of a database to keep track of water demand and assisted with computer program modification/validation. Staff also met several times with Water District 34 (Big Lost River) personnel in order to better understand the functional requirements of the accounting program.

**WOOD RIVER VALLEY AQUIFER MODEL:** In collaboration with the USGS, Hydrology staff completed development and documentation of an aquifer model for the Wood River Valley in June 2016. The model will be used for water resource planning and conjunctive administration.



# Idaho Water Resource Board

The Idaho Water Resource Board (IWRB or Board) is composed of eight members, each appointed by the governor for a four year term. Per Idaho Code §42-1732 – 1734, the IWRB creates and implements the state water plan, comprehensive basin planning, protected rivers designations, minimum stream flow programs, water project financing, and water supply bank leases and rentals.

The Director and other IDWR executive staff interact with the Idaho Water Resource Board in a level-working relationship. The IWRB sets long term vision and policy, and finances, constructs, and operates water projects on behalf of the state. The Director administers water rights and other regulatory functions.

Upper Payette Lake, Valley County  
Courtesy of Jennifer Strange, IDWR

# IDAHO WATER RESOURCE BOARD

The IWRB is not an official section of IDWR. The Director supports the IWRB as needed and assigns Planning and Projects Bureau and Information Technology Services Bureau staff to help carry out its duties. The IWRB and IDWR also collaborate on court appeals, administrative rules adoption, water bank administration, and water right negotiations with the Federal government and Indian Tribes.

In addition to its planning and designating authority, the IWRB also provides financial assistance for water development and conservation projects. The IWRB has two accounts, water management and revolving development, from which it makes loans and grants. A third account, the Secondary Aquifer Planning, Management, and Implementation Fund, was added by the Idaho Legislature in 2010 (Idaho Code § 42-1780). This fund was established for technical studies, project management services, hydrologic monitoring, measurement, Comprehensive Aquifer Planning and Management, and most recently, aquifer stabilization and sustainability projects. The IWRB can also issue debt in the form of revenue bonds, where the proceeds are loaned to the entity requesting financial assistance. The loan repayments are the revenue used to repay the debt service on the bonds.

Over the past several years, the Idaho Legislature has directed funding to the IWRB to support water sustainability and aquifer stabilization efforts. In 2014, the Idaho Legislature passed and approved House Bill 479 which appropriated \$15 million one-time funds to the IWRB to support a Water Sustainability and Aquifer Stabilization Initiative and “to ensure water availability for existing uses and to provide water supplies for

future economic development.” Through House Bill 547, the 2014 Idaho Legislature also directed \$5 million annually from the cigarette tax (first disbursement in July 2015) to support statewide aquifer stabilization efforts, and it approved a one-time supplemental appropriation for FY2016 of \$500,000 for aquifer recharge through Senate Bill 1190.

The 2015 Idaho Legislature passed and approved Senate Bill 1402 which appropriated \$5 million annually from the General Fund and \$2.5 million one-time funds from the Economic Recovery Reserve Fund to the IWRB to support Water Sustainability (first disbursement in July 2016).

In 2016, the Idaho Legislature passed and approved Senate Concurrent Resolutions 136 and 137. Senate Concurrent Resolution 136 reaffirmed the importance of the program and directed the IWRB to develop managed recharge capacity for an average of 250,000 acre-feet annually in the ESPA by December 31, 2024. Senate Concurrent Resolution 137 recognized that stabilizing and enhancing aquifer levels are in the public interest and directed the IWRB to take actions in aquifers across the state to stabilize and enhance aquifer levels thereby maintaining water supply for consumptive and non-consumptive uses and minimizing harm to Idaho's economy arising from water supply shortages.

The following table (page 58) lists the projects authorized by the IWRB in FY2016 and includes several projects intended to support the Water Sustainability and Aquifer Stabilization Initiative. The table does not reflect ongoing projects authorized prior to FY2016.

**Projects & Expenditures Authorized by the IWRB in FY2016**

<b>Project</b>	<b>IWRB Project Expenditure</b>	<b>Funding Source*</b>
<b>Water Sustainability and Recharge Projects (HB479, HB547, SB1190)</b>		
<i>FY2016 ESPA Managed Recharge Conveyance Costs</i>	\$452,121	Sec Fund
<i>ESPA recharge infrastructure improvements</i>	\$4,381,108	Sec Fund
<i>ESPA recharge investigations</i>	\$92,497	Sec Fund
Cooperative Cloud Seeding Program in partnership with Idaho Power Company	\$200,000	Sec Fund
Palouse Basin Water Supply Alternatives Project	\$100,000	Sec Fund
Elmore County Water Supply Study	\$65,000	Sec Fund
Lewiston Deep Aquifer Investigation	\$90,000	Sec Fund
Star Sewer and Water Reuse Study	\$25,000	Sec Fund
Spokane River Forum Conference	\$5,000	RDA
Ground Water Conservation Grants	\$40,212	Sec Fund
Swan Falls Forecasting Tool	\$95,000	Sec Fund
<b>Loans</b>		
<i>St. John's Irrigating Company</i>	\$1,429,775	RDA
<i>Bee Line Water Association</i>	\$600,000	RDA
<i>Outlet Water Association</i>	\$100,000	RDA
<i>Magic Valley Ground Water District and The North Snake Ground Water District</i>	\$6,900,000	RDA
<i>Producers Irrigation Company</i>	\$173,000	RDA
<i>Last Chance Canal Company</i>	\$2,500,000	RDA
<b>Idaho Water Transactions Program</b> (funded through the Idaho Fish Accord and the Columbia Basin Water Transactions Program)		
<i>Badger Creek Water Transaction</i>	\$4,000	RDA
<i>Pole Creek Water Transaction</i>	\$60,250	RDA
<i>2016 Bohannon Creek Water Transaction</i>	\$15,268	RDA
<i>Little Mud Creek and Pahsimeroi River Transactions</i>	\$22,445.44	RDA
<i>Pratt Creek Transaction</i>	\$87,643.63	RDA
<i>Lemhi 2016-2017 Water Right Subordination Agreement</i>	\$180,086.70	RDA
<b>TOTAL</b>	<b>\$17,918,407</b>	

\*This table highlights the IWRB account through which the project was authorized and associated legislative appropriation where applicable - Revolving Development Account (RDA), Secondary Aquifer Planning, Management, and Implementation Fund (Sec Fund).



# Planning & Projects Bureau

The Planning and Projects Bureau primarily supports IWRB programs, including the State Water Plan, water project development and funding, minimum stream flows, natural and recreational river designations, comprehensive basin and aquifer planning, and coordination of the Water Supply Bank.

**BUREAU CHIEF**

Brian Patton

**STAFF LOCATIONS**

Boise (State Office)

Boulder Creek, McCall  
Courtesy of Mathew Weaver, IDWR

# PLANNING AND PROJECTS BUREAU

The Planning and Projects Bureau is responsible for oversight and administration of large-scale initiatives on behalf of the IWRB. Projects include the Water Resource Sustainability and Aquifer Stabilization Initiative and continued implementation of the Eastern Snake Plain Aquifer Comprehensive Aquifer Management Plan (ESPA CAMP). The ESPA CAMP includes expansion of managed recharge on the Eastern Snake Plain Aquifer, evaluating new water storage reservoirs throughout the state, supporting ground water model development in critical basins, and undertaking projects in the Upper Salmon River basin. These projects provide flows needed for recovery of ESA-listed anadromous fish species, including alleviating water use conflicts between the needs of fish and irrigated agriculture. In general, this Bureau supports IWRB efforts to provide solutions to water use conflicts that may have severe statewide economic and natural resource impacts.

The Planning and Projects Bureau accomplishes these over-arching goals through various on-going programs.

**WATER PROJECT FINANCING:** The IWRB Financial Program finances the construction and development of state-wide water projects. This program fulfills two main objectives: 1) assists water users to keep water storage and delivery systems operating and in good working order, and 2) allows the IWRB to facilitate financing and acquisition of real property to provide solutions in the public interest.

**STATE WATER PLAN:** The State Water Plan, and component basin and aquifer plans, seeks to ensure that through cooperation, conservation, and good management, future conflicts will be

minimized and the optimum use of the state's water resources will benefit the citizens of Idaho currently and in the future.

**WATER STORAGE STUDIES:** The IWRB investigates potential storage projects to make the best use of available water supplies and provide maximum flexibility to manage and operate these resources.

**AQUIFER STABILIZATION STRATEGIES:** The ESPA CAMP identified a number of strategies to promote aquifer stabilization including managed aquifer recharge, ground water to surface water conversions, demand reduction, cloud seeding, and continued monitoring and measurement. The IWRB supports all of these activities and endorses stakeholder partnerships to leverage resources, including federal funds. The IWRB is also pursuing opportunities to provide support in other basins statewide that have declining aquifers or have existing or potential conjunctive administration water use conflicts such as the Treasure Valley, Mountain Home, Wood River Valley, Big Lost, Raft River, Malad Valley, Rathdrum Prairie, Palouse Basin and Lewiston Plateau aquifers.

Managed recharge continues to be a robust tool for ESPA CAMP implementation and aquifer stabilization. Since 2009, the IWRB recharge program has resulted in an annual average of over 67,500 acre-feet of recharge on the ESPA. The implementation of an operational-scale ESPA Managed Recharge Program in 2014 has significantly increased the volume of managed recharge over the winter months. Managed recharge contributes to reducing the declining aquifer levels and spring flow to the Snake River thereby helping to resolve long-term water management conflicts and meet the State's

obligations to maintain minimum flows at the Murphy Gage which are dependent on spring discharges from the ESPA.



*Winter recharge: MP31 Recharge Site off of AFRD2's Milner-Gooding Canal, Dec. 2015*

Historically, surface water is delivered for ground water recharge before and after the irrigation season, when the canal systems are free of irrigation water. During the 2015-2016 recharge season, the IWRB worked with several irrigation companies to deliver Snake River water during the non-irrigation season and winter months, to expand the period of recharge. In partnership with the water users, the IWRB initiated technical studies and construction projects to improve the managed recharge capacity across the Eastern Snake Plain.

Staff also continued development and implementation of a monitoring program that includes water quality testing, measurement of recharge water delivery, groundwater levels, and return flows to the Snake River. Data from these efforts is critical for the evaluation of aquifer response and for assessment of effects of recharge activities. Staff will continue to pursue opportunities to increase annual

recharge volume through: 1) improved system capacity, and 2) infrastructure enhancement to facilitate delivery of water under winter conditions. The increase in overall recharge capacity is necessary to capture winter flow and flood control releases that would otherwise flow past Milner Dam.



*Spring recharge on the North Side Canal, Mar. 2016*

New storage is another long-term water management strategy intended to help Idaho meet current and future water demands and lessen the potential for future water conflicts. Staff continues to evaluate potential project size and benefits of the Weiser Galloway Project with different operating options that include hydropower, additional water supply, regional economic development, flow augmentation for anadromous fish recovery, flood control, and recreation. The IWRB also continue to partner with the US Army Corps of Engineers on the Boise River Feasibility Study to evaluate raising Arrowrock Dam on the Boise River for flood control and water supply and is considering options for including the Bureau of Reclamation in investigation of additional storage in the Boise River drainage.



*Aerial View of Island Park Dam  
Photo courtesy of US Bureau of Reclamation*

Evaluating state-wide storage options is ongoing. In Eastern Idaho, an evaluation of additional storage in the Island Park Reservoir continues. It is estimated that a raise of the reservoir pool elevation could provide approximately 30,000 acre-feet of new storage for use in the basin and the ESPA. Staff was also directed to investigate options for increased storage in Priest Lake in North Idaho to improve flexibility in the management of lake levels and downstream river flows.

Statewide aquifer modeling, monitoring and measurements are also supported by the IWRB and IDWR staff. Efforts have been focused on the Eastern Snake Plain Aquifer Model, the Wood River Valley Ground Water Flow Model Project, the Treasure Valley Ground Water Model, and the Spokane Valley Rathdrum Prairie Model. In 2016, the IWRB dedicated additional funding in a number of basins to support model development and expanded measurement efforts for model calibration.

Legislative support over the past several years has been instrumental in helping advance the above mentioned projects as well as initiate new

efforts to ensure availability of water for future economic development statewide.

In Northern Idaho, the IWRB funded the Palouse Ground Water Basin Water Supply Alternatives Project to help decision makers in determining the most promising ways to achieve water sustainability. Additionally, the IWRB funded the Lewiston Regional Deep Aquifer Study to help local stakeholders determine if their water supply is sustainable over the long term. To help address water sustainability in the Mountain Home area, the IWRB purchased senior Snake River water rights from the Simplot Company to secure reliable water supplies for the Mountain Home Air Force Base (MHAFB), a significant contributor to the state's economy. In 2015, staff initiated the design and development of the pipeline project to deliver the treated drinking water to the MHAFB. This project is ongoing in coordination with the MHAFB and the local community. To help address aquifer decline issues beyond the base, the IWRB also provided funding for a study initiated by Elmore County to identify additional potential sources of water supply to the basin.

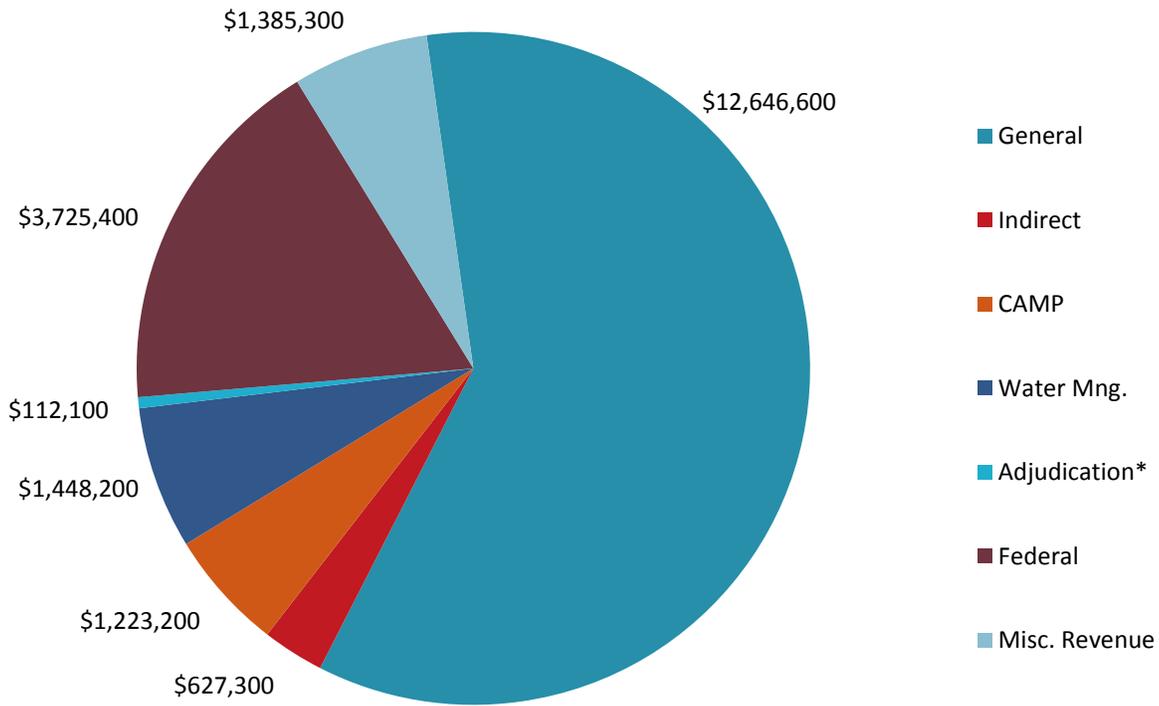


# Financial Summary

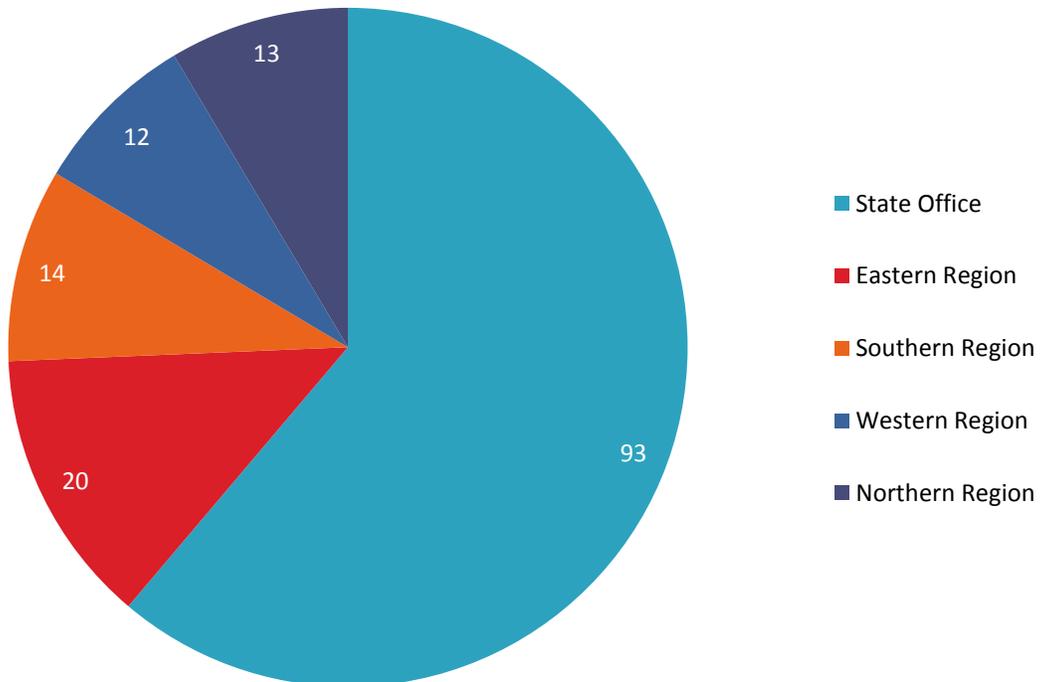
An overview of IDWR's major expenses during FY2016.

Oneida Narrows Reservoir, Franklin County  
Courtesy of Chelsey Serrano, IDWR

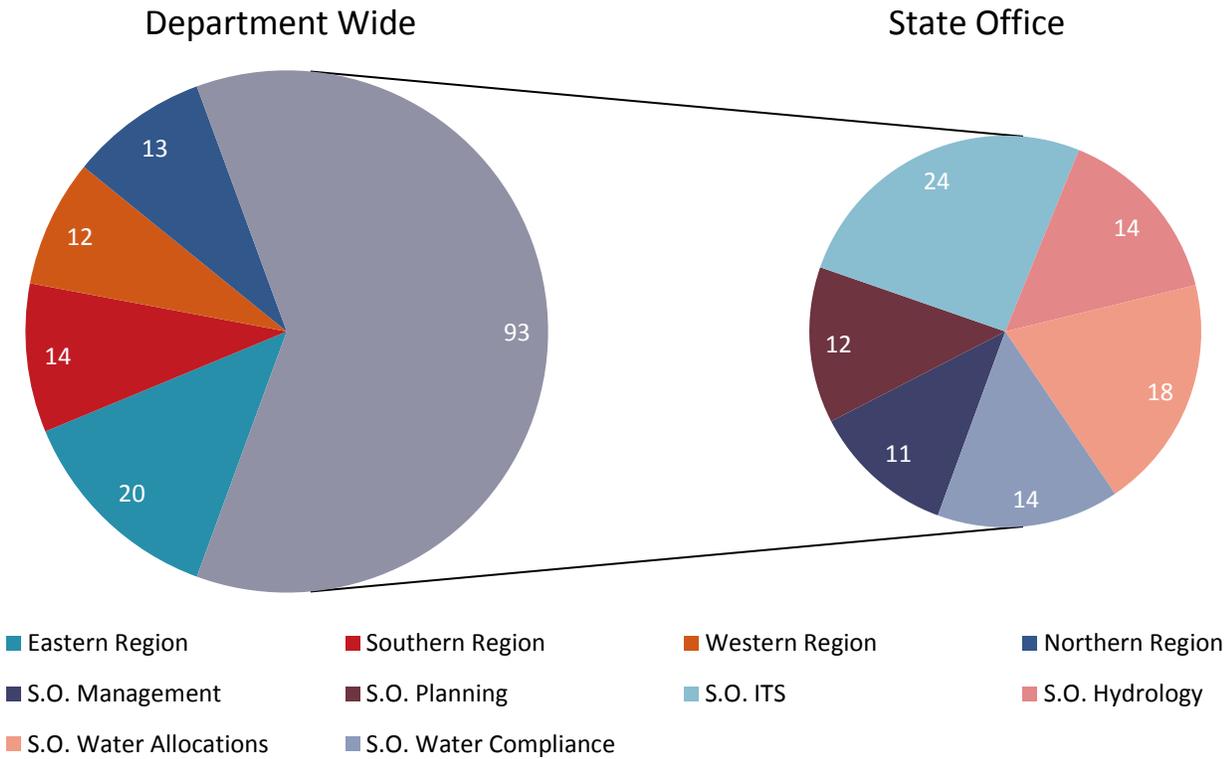
## FY 2016 Agency Budget by Fund



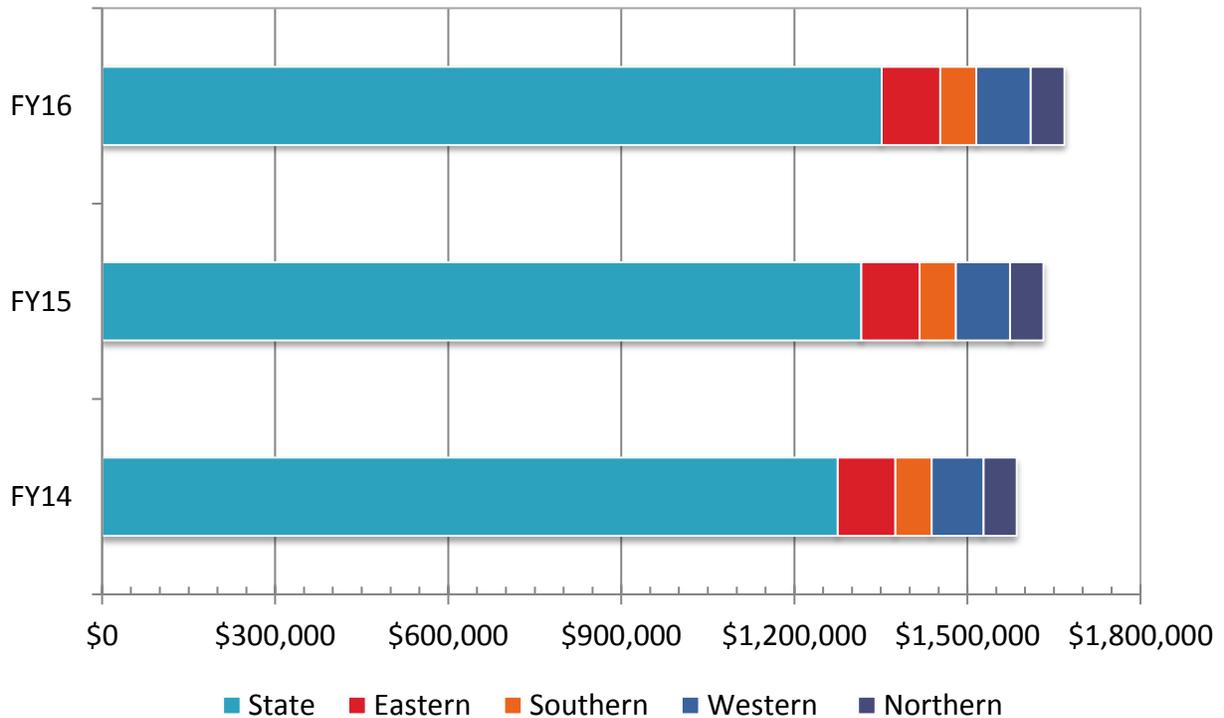
## FY 2016 FTE Breakdown by Region



## FY 2016 FTE Breakdown by Regional Office and State Office Sections



## Fiscal Year Annual Rent by Region





# Director's Recommendations

An overview of IDWR's accomplishments during FY2016 and the Director's recommendations for the upcoming fiscal year.

Moyie River near Moyie Springs  
Courtesy of Evan Roda, IDWR

# DIRECTOR'S PREVIOUS RECOMMENDATIONS & IDWR ACCOMPLISHMENTS FOR 2016

## Recharge

The Director of the Idaho Department of Water Resources (IDWR) and the Idaho Water Resource Board (Board or Water Board) must prioritize recharge of ground water in the Eastern Snake Plain Aquifer with surface water diverted from the Snake River.

**RECOMMENDATION:** Beginning in approximately FY2017, reassign personnel resources to ensure that project assessment, selection, construction, and monitoring of these projects accomplishes the goal of an annual average of 250,000 acre-feet of ground water recharge within approximately six years.

**ACCOMPLISHMENT:** Several major construction projects were completed or are near completion for recharge to the Eastern Snake Plain Aquifer with surface water from the Snake River. First, a concrete flume for the Milner-Gooding Canal was repaired so the flume could accommodate winter deliveries of recharge water in the canal. Second, an additional outlet from the Milner-Gooding Canal at Milepost 31 was being constructed, which will increase the release capacity at the site for recharge to approximately 500 cfs. Third, facilities to protect the Milner-Gooding Canal Milepost 28 hydropower plant from ice damage in winter deliveries were completed. Fourth, in the upper part of the aquifer, the initial phase of the Egin Bench Recharge project was completed.

## Conjunctive Management

The Surface Water Coalition and the holders of ground water rights authorizing diversion of ground water from the Eastern Snake Plain

Aquifer have been litigating about how junior priority ground water rights should be regulated to supply water to the senior surface water right holders. The ground water users and the surface water users have struck an agreement to address the long term reductions in spring flows contributing to the surface water supply. The parties are weary of litigating and want to find a solution with the help of IDWR.

**RECOMMENDATION:** Require installation of measuring devices on all wells as contemplated by the agreement. Create a ground water management area to buffer the litigating parties from each other and to implement long term strategies to manage the resource (the Eastern Snake Plain Aquifer) instead of annually determining whether or not there may be curtailment and/or a corresponding mitigation obligation.

**ACCOMPLISHMENT:** The Director issued an order requiring installation of measuring devices for all ground water diversions located in the Eastern Snake Plain Aquifer area. The Director also issued an order creating a ground water management district. The creation of the district is being challenged through administrative and judicial forums.

## Ground Water in Other Basins

**PALOUSE BASIN:** Elevations of ground water in and around the City of Moscow are declining. In partnership with the Palouse Basin Aquifer Committee, the Water Board funded the compilation and evaluation of existing studies by the Palouse Basin Aquifer Committee to

narrow the possible alternatives and to develop an action plan.

**RECOMMENDATION:** The City of Moscow and the University of Idaho in Moscow must find alternative sources of municipal water, probably a surface water source, to assure future growth in the area.

**ACCOMPLISHMENT:** Through partial Idaho Water Resource Board funding, the Palouse Basin Aquifer Committee is reviewing past studies and narrowing the alternatives for additional water supplies to the area.

**MOUNTAIN HOME AREA – ELMORE COUNTY:** Elevations of ground water underlying the Mountain Home area and other parts of Elmore County continue to decline at a rate of approximately two feet per year. IDWR is currently forming a water district in the area to include ground water rights. Ground water diversions must be reduced by either curtailment or developing remote surface water supplies to replace ground water diversions. As a part of the need for reduction in ground water diversions, the Water Board contracted with an engineering firm to evaluate the cost and prepare preliminary plans for a pumping plant and pipeline to deliver Snake River water to the Mountain Home Air Force Base and a treatment plant to deliver water to the base. The Air Force is working with the Water Board on a water delivery agreement to the base.

**RECOMMENDATION:** Encourage the City of Mountain Home to operate the facilities and deliver the Snake River surface water to the base and perhaps to the City of Mountain Home as municipal water.

**ACCOMPLISHMENTS:** The Water Board and the Air Force Base are moving forward with

planning and agreements necessary to construct a water delivery system by 2021. Discussions with the City of Mountain Home are ongoing. The City of Mountain Home needs to find a Snake River water right for delivery through the pipeline and decide if it wants to participate in the pipeline project.

## **Bear River Adjudication**

In the Bear River Basin, many water right disputes or legal questions about water ownership cannot be resolved until the water rights are determined and administered.

**RECOMMENDATION:** The water rights in the Bear River Basin must be adjudicated.

**ACCOMPLISHMENTS:** The Bear River water users cannot agree to initiate the Bear River adjudication.

## **Priest Lake**

Last year's warm and dry weather created a water administration crisis for Priest Lake and Priest River. The Director was faced with either shutting off the outlet to maintain lake levels, resulting in drying-up Priest River, or allowing the lake levels to decline below a statutorily mandated minimum summer pool elevation. In addition, manual operation of the outlet gates is becoming more difficult because the outlet operator is aging and may not be able to continue his work in future years.

**RECOMMENDATION:** Seek landowner support and subsequent legislation to modify the Priest Lake outlet structure to retain a few inches of additional water during anticipated drought years. Automate the outlet structure gates so the gates can be operated from a remote location.

**ACCOMPLISHMENTS:** The Idaho Water Resource Board has contracted with an entity to conduct the initial engineering and hydrologic analysis and develop alternatives for addressing the problem. The Board is working with Bonner County and the Lakes Commission on the public outreach component.

## **Treasure Valley Ground Water**

Because of demands on the ground water resources in the Boise River Basin, the hydrogeology of the area must be better defined to evaluate proposals for use of water.

**RECOMMENDATION:** Build a transient, three-dimensional model for the ground water aquifers in the Boise River Basin.

**ACCOMPLISHMENTS:** IDWR is compiling data for input into the ground water model. IDWR and the USGS are committed to jointly construct the model. IDWR and the USGS have agreed to jointly development the model.

## **Storage**

Additional storage is needed in the Snake River, Boise River, and other river basins to more reliably deliver water for irrigation, to supply water for flow augmentation, and to mitigate for declines in flow caused by ground water pumping.

**RECOMMENDATION:** Prioritize raising Island Park Dam for an additional 30,000 acre-feet of water. Complete the benefit/cost assessment of the proposed Galloway Dam and decide whether to move forward.

**ACCOMPLISHMENTS:** Preliminary environmental and survey work for increase in storage in Island Park Reservoir is ongoing. The Water Board has delayed assessment of the proposed Galloway Dam because of other priorities.

# DIRECTOR'S RECOMMENDATIONS FOR 2017

## Recharge

The Director of the Idaho Department of Water Resources (IDWR) and the Idaho Water Resource Board ("board" or "water board") must prioritize recharge of ground water in the Eastern Snake Plain Aquifer with surface water diverted from the Snake River.

**RECOMMENDATION:** Finish construction work for the Milepost 31 outlet in the Gooding Canal. Develop a plan for bypassing the Dietrich Drop Hydropower Plant in the Milner-Gooding Canal. Begin work for hydropower bypasses in the Northside Canal. Complete evaluations of several potential recharge projects in the Upper Basin and prioritize their implementation.

## Conjunctive Management

The Surface Water Coalition and the holders of ground water rights authorizing diversion of ground water from the Eastern Snake Plain Aquifer have been litigating about how junior priority ground water rights should be regulated to supply water to the senior surface water right holders. The ground water users and the surface water users have struck an agreement to address the long term reductions in spring flows contributing to the surface water supply. The parties are weary of litigating and want to find a solution with the help of IDWR.

**RECOMMENDATION:** Finalize creation of a ground water management area. Form a water user advisory committee to draft a ground water management plan and begin scoping meetings.

## Priest Lake

Previous warm and dry weather years created a water administration crisis for Priest Lake and

Priest River. The Director was faced with either shutting off the outlet to maintain lake levels, resulting in drying-up Priest River, or allowing the lake levels to decline below a statutorily mandated minimum summer pool elevation. In addition manual operation of the outlet gates is becoming more difficult because the outlet operator is aging and may not be able to continue his work in future years. The present snow water equivalent in the Priest River/Priest Lake Basin is significantly below normal. The low snow water portends another year of water crisis in the Priest Lake Basin.

**RECOMMENDATION:** Complete initial project data gathering and scoping. Determine best project alternative and assess cost and financing. Carefully monitor and regulate lake levels.

## Treasure Valley Ground Water

Because of demands on the ground water resources in the Boise River Basin, the hydrogeology of the area must be better defined to evaluate proposals for use of water.

**RECOMMENDATION:** Begin constructing the ground water model. Continue to gather data.

## Storage

Additional storage is needed in the Snake River, Boise River, and other river basins to more reliably deliver water for irrigation, to supply water for flow augmentation, and to mitigate for declines in flow caused by ground water pumping.

**RECOMMENDATION:** Complete preliminary assessment for increasing storage in Island Park Reservoir. Move to design phase.

## **Water Rights**

Backlogs in water right licensing has plagued IDWR for decades. In addition, other water right processes were sometimes backlogged. Processing has been streamlined and consideration and approvals have been expedited.

**RECOMMENDATION:** Reduce licensing backlog to less than 1,000.

## **Mountain Home Air Force Base Pipeline**

The Water Board acquired a Snake River water right and is selecting an entity to manage selection of the best delivery/treatment option and to track approvals necessary for construction. Complete environment assessment by the fall of 2017. Design for pipeline and treatment facility should be complete by the end of 2017.

**RECOMMENDATION:** Begin construction of the pipeline and water treatment facility.



**IDAHO DEPARTMENT OF WATER RESOURCES**

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