



# **Water Supply Bank**

2018 Report for the Board's Water Supply Bank

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## Introduction & Background

The Water Supply Bank is a water exchange program operated by the Idaho Water Resource Board (IWRB; Board), through the Director of the Idaho Department of Water Resources (IDWR), in association with water districts and IWRB-appointed local rental committees, to facilitate the acquisition and voluntary exchange of water rights, for new and supplemental water uses. The Bank is operated pursuant to Sections 42-1761 through 42-1766 Idaho Code and Idaho Administrative Code IDAPA 37.02.03 (Water Supply Bank Rules).

The Water Supply Bank program consists of two water exchange initiatives: the *Board's water supply bank* (Board's bank) and *rental pools*. The *Board's bank* facilitates the statewide lease and rental of water rights and is operated by IDWR personnel while *rental pools* facilitate the lease and rental of water rights associated with specific watersheds or water sources (e.g. river drainages and reservoir systems) and are operated by IWRB-appointed local committees.

This report summarizes operations of the *Board's bank* during calendar year 2018 and features recent data and trends specific to the:

- processing of lease and rental applications during 2018;
- administration of lease and rental transactions approved for 2018;
- productivity and work accomplishments of Water Supply Bank staff during 2018; and
- management of finances associated with operations during 2018.

## Executive Summary

Following the creation of a Water Supply Bank Specialist position during 2017, the Bank increased its operational productivity during 2018 and lessened its dependence on assistance from IDWR staff from the Water Allocation Bureau. Water Supply Bank Specialist Mary Condon was instrumental in contributing to an effort that resulted in a majority of lease and rental applications being processed by the end of summer, which in turn enabled the Bank to issue transaction conclusion notices and warrant payments in October (typically they are issued in December or January). Ms. Condon's contributions to Bank administration also enabled IDWR to reallocate Allocation Bureau staff away from the Bank, to other Departmental administrative activities, increasing efficiencies in other IDWR water right programs. Finally, the Water Supply Bank implemented a continuous improvement process during 2018, which included improving communication and coordination with Board's bank stakeholders.

## 2018 Accomplishments

Key accomplishments of the Water Supply Bank during the past year include:

- Improved efficiencies and decreased dependence of Water Allocation Bureau staff;
- Early issuance of annual warrant payments;
- Improved communications and coordination with program stakeholders; and
- Implementation of a continuous improvement framework.

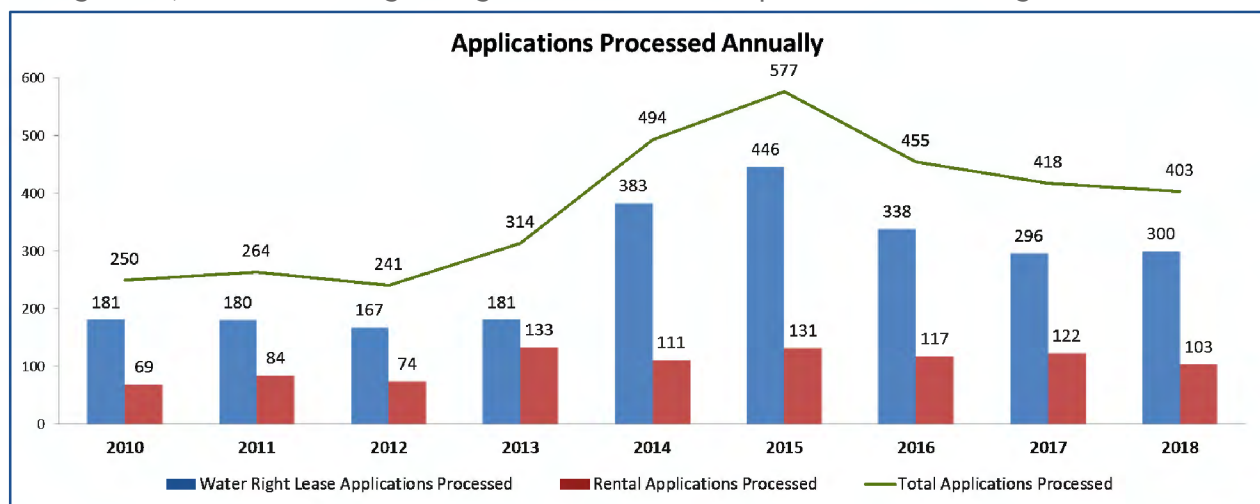
## Lease and Rental Application Processing

If a water user does not fully exercise an authorized water use during a calendar year, they can propose to lease the authorized but unused extent of their water rights to the Idaho Water Resource Board. Approved lease applications allow the IWRB to enter into contract with and to acquire from a water right holder, any unused water right authorizations proposed to be deposited into the Board's bank.

Water rights under contractual lease to the Board's bank form a supply of water from which new and supplemental water uses can be authorized, by means of an approved rental from the Board's bank. Subject to review and approval by the Director of IDWR, successful applications to rent from the Board's bank enable the Board to provide rental agreements to water users who have requested an authorization for a new or supplemental use of water.

### Summary of Lease and Rental Applications Processed Annually

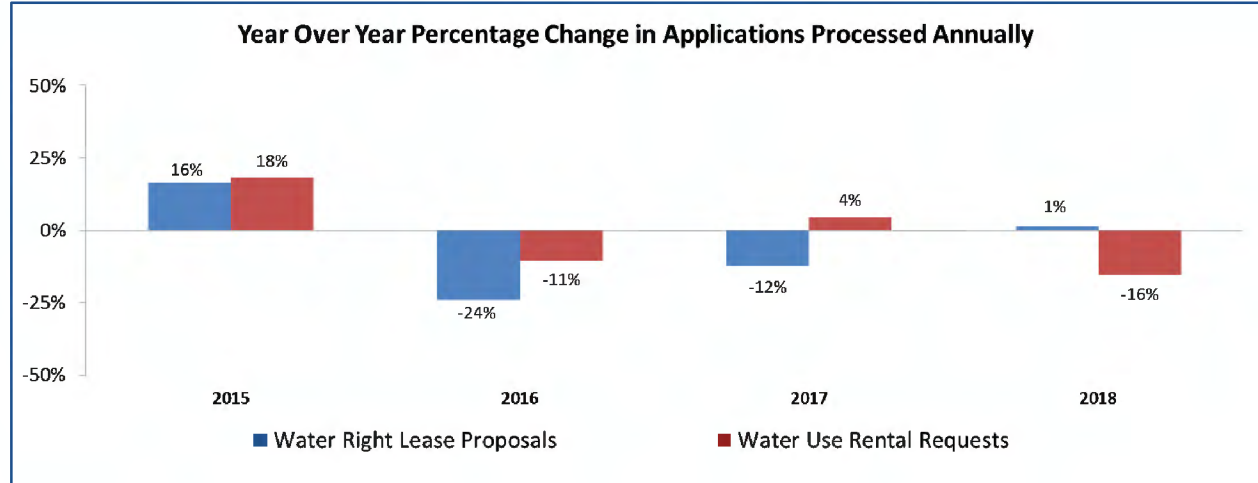
Chart 1 below summarizes the total number of water right lease proposals and rental requests that were processed by via the Board's bank during 2018, as well as during recent years. As observed in the chart, the number of lease and rental applications processed annually was relatively stable for the period of 2010 through 2012, before it began to climb significantly during calendar years 2013 through 2015, after which it again began to stabilize in the period of 2016 through 2018.



*Chart 1. Total applications processed, 2010 - 2018*

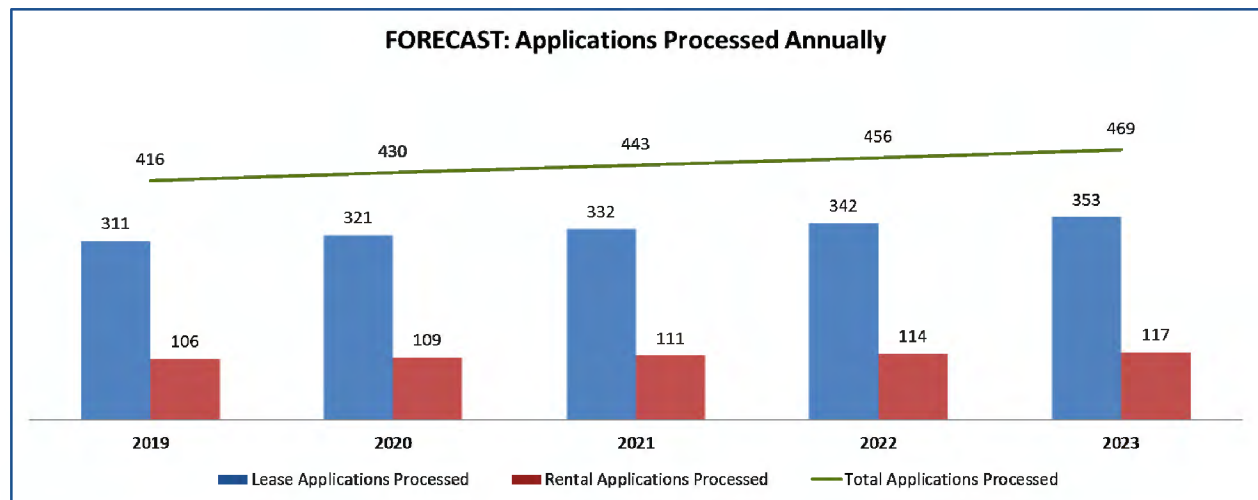
As observed in Chart 1 above, the total number of water right lease proposals processed by the Board's bank increased slightly during 2018, but remains well below the peak of 577 processed in 2015. The total number of rental requests processed annually has also declined over this same period, from a peak of 131 rentals in 2015, to 103 rentals processed during 2018. Although lease application processing has declined since 2015, year-over-year declines are slowing (see Chart 2 on the next page) and data from the past five to ten years reveals an overall increase in total applications processed annually by the Board's bank. It is anticipated that declines in annual application processing numbers will cease in the next few years, after which annual application processing numbers are expected to again begin climbing slowly and incrementally.

Chart 2 below depicts the year-over-year percentage change in annual lease and rental applications processing for the past five years.



*Chart 2. Year-over-year percentage change in annual applications processed, 2014 - 2018*

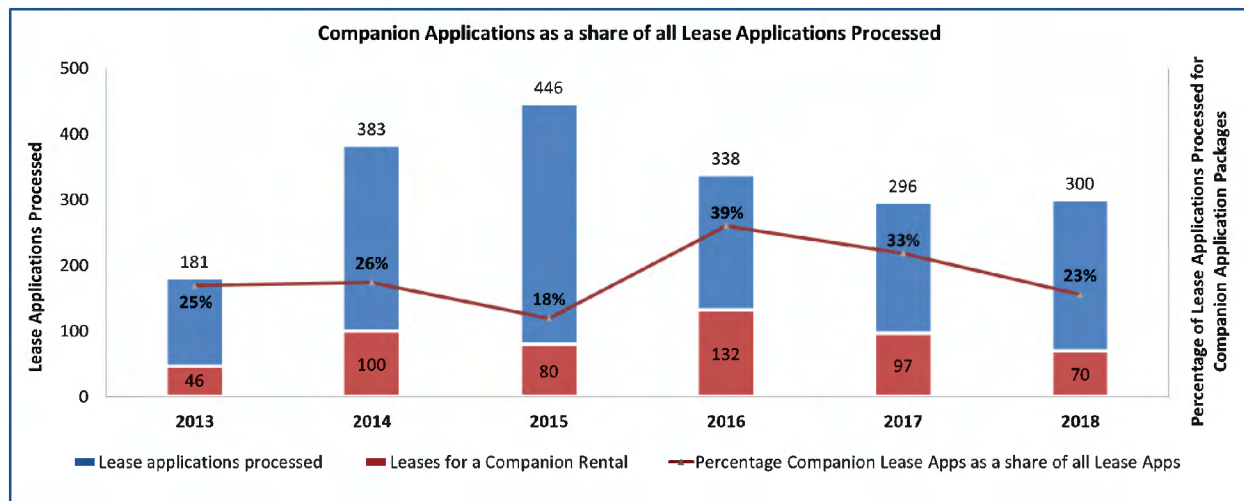
In reflecting on the five year period of 2014 through 2018, the Board's bank processed an average of 353 leases, as well as 117 rentals, annually, for a total of 469 annual applications. These five-year annual averages are more or less equivalent to the application processing numbers observed in 2016. As previously mentioned, it is assumed that declines in annual application processing numbers will soon ceased and application processing numbers will again begin to increase. Based on this assumption, if annual application processing numbers increase incrementally from their current levels and then stabilize at the recent, five year average of 469 application per year, a simple linear forecast for application processing numbers for the next five years is proposed in Chart 3 below.



*Chart 3. Forecast annual application processing numbers, 2019-2023*

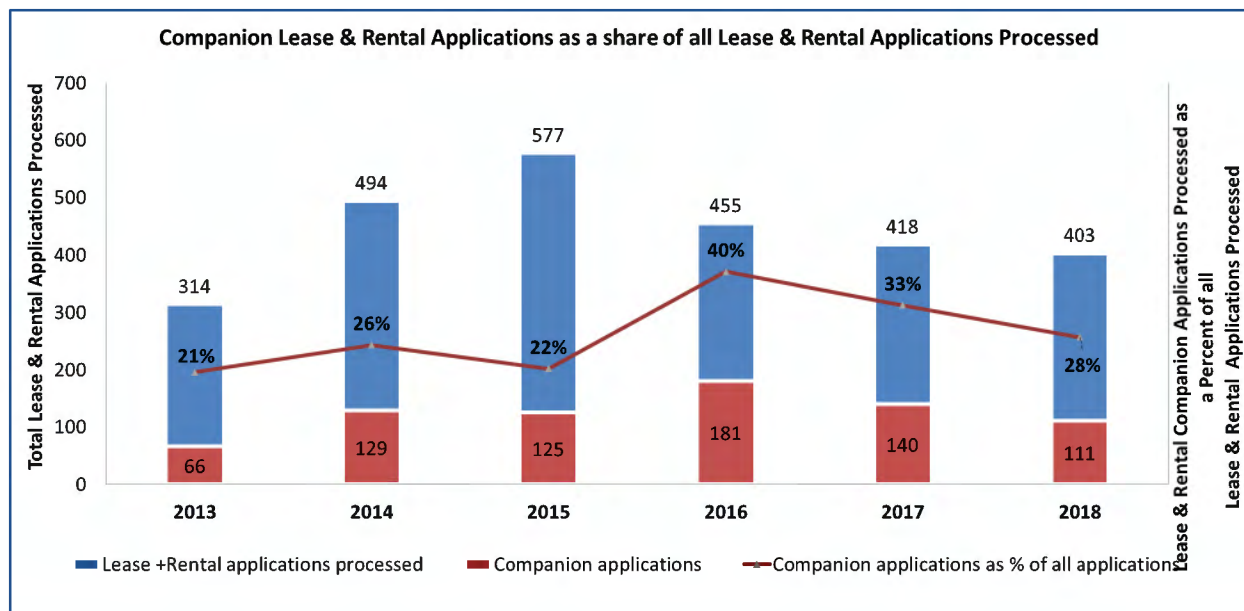
## Companion Lease-Rental Applications

Companion applications are pre-established lease/rental transactions, in which the water right lessor and the water right renter agree to a proposed transaction through the Board's bank, prior to submitting it to IDWR for review and approval. As a percentage of all applications processed, companion applications accounted for approximately one in three lease and rental applications proposed during 2018. Chart 4 plots out the water right lease proposals processed during 2018 that were exclusively deposited into the Board's bank in order to facilitate a rental.



**Chart 4. Companion applications as a percentage of lease applications, 2013-2018**

As observed in Chart 4 above, 23% of water right lease proposals processed during 2018 were intended for a specific rental request, a trending decline over the recent years. Additionally, as witnessed in Chart 5 below, when companion leases and rentals processed in 2018 (n=111) were considered against all lease and rentals submitted during 2018 (n=403) it is acknowledged that companion packages represented nearly a third of all transactions approved last year.



**Chart 5. Companion applications as a percentage of all Bank applications, 2013- 2018**



## New Applications and Renewing or Amending Applications

Some applications processed by the Board's bank during the year do not result in leases or rentals for the same year. One way in which this can occur is if a water right holder submits a lease proposal at the end of the calendar year, for the same calendar year, but the proposal is not processed until early in the next calendar year. Additionally, the Bank frequently processes lease and rental applications toward the end of the calendar year, for transactions that are not intended to commence until the next calendar year. As such, the total applications processed in a year can differ from the total number of applications approved for a specific year.

Of the 300 water right lease proposals processed during 2018, it was intended that 71% (n=213) should commence in 2018, while 86% (n=89) of the 103 rentals processed during 2018 were intended for rentals beginning in 2018. Charts 6 and 7 below depict that, of the 213 leases and 89 rentals submitted to begin during 2018, 21% (n=45) of leases were for water rights not already leased to the Bank, while the majority of leases (n=168, or 79%) were submitted to renew or amend an already active lease contract. Similarly, of the 103 rentals that requested a 2018 start date, 41% (n=36) were new applications for rentals not already approved by the Bank, while 59% (n=52) requested a renewal or amendment to an already active rental agreement.



Chart 6. New vs renewing or amending leases processed during 2018



Chart 7. New vs renewing or amending rentals processed during 2018

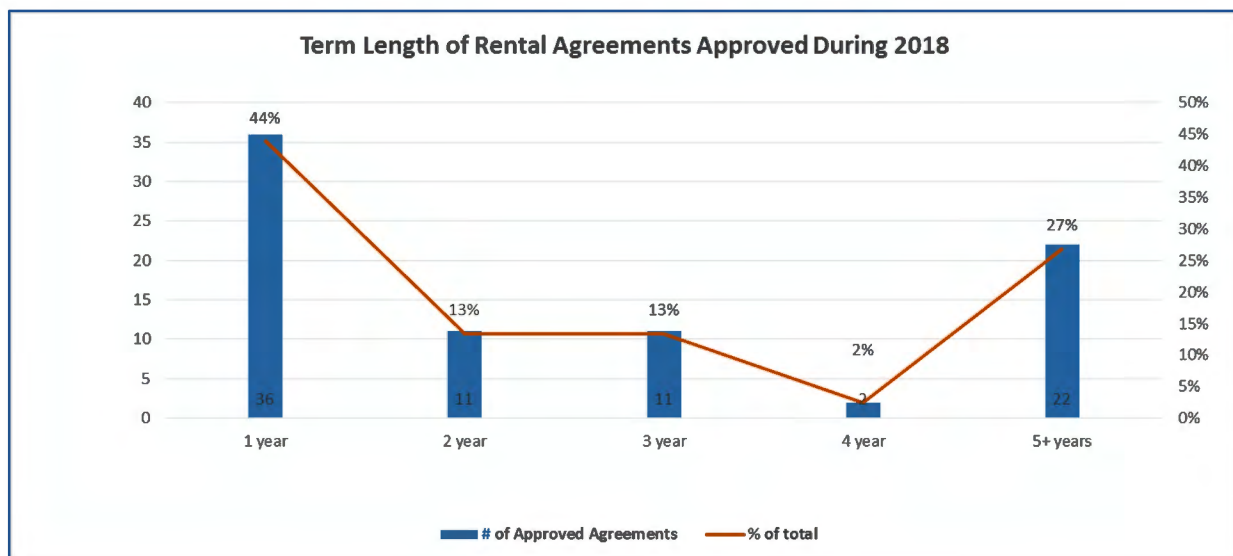
## Lease Contracts and Rental Agreement Approvals

Approved water right lease proposals become Water Supply Bank lease contracts, while approved water right rental requests become Water Supply Bank rental agreements. Water rights that share a common place of use can be leased into the Board's bank on a single lease contract, so the total number of water right lease proposals might not equal the total number of lease contracts approved. Additionally, not all lease and rental applications submitted to the Board's bank result in approvals. From the 300 water rights proposed for lease during 2018, 137 water right lease contracts were approved for 2018, of which, one third were single year leases, while more than half were leases of five or more years.

Additionally, of the 103 rental applications processed in 2018, 82 rental agreements were approved for 2018, a majority of which were only for one year in duration. Charts 8 and 9 below visualize the total number of lease contracts and rental agreements approved during 2018, along with the total number and percent of transactions approved for one, two, three, four or five-plus years.



*Chart 8. Duration of lease contracts approved in 2018, absolute and percent of all approved*



*Chart 9. Duration of rental agreements approved in 2018, absolute and percent of all approved*

In addition to the 137 lease contracts approved in 2018, 530 lease contracts were already active. As such, the 137 contracts approved for 2018 represented 21% of the sum total of 667 contracts active during 2018. Similarly, the 82 rental agreements approved for 2018 represented 46% of the sum total of 180 rental agreements that were active during 2018. These figures are charted in charts 10 and 11 on the next page.





Chart 10. New vs already approved lease contracts, active during 2018

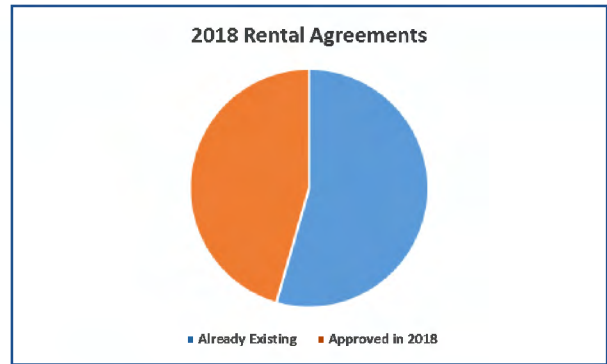


Chart 11. New vs already approved rental agreements, active during 2018

Of note, the Bank received 7 requests to cancel active lease contracts during 2018, as well as 5 requests to early terminate rental agreements approved for 2018. The 7 early-terminated lease contracts represented less than 1% of all lease contracts that would have been active during 2018, while the 5 early-terminated rental agreements represented 3 % of all rental agreements that would have been active during 2018.

## Application Processing Times

Consistent with efforts begun in 2014, the Bank processes as many rentals as early as possible. Whereas prior to 2014, the Bank processed a majority of rentals in April, May, June and July, the most active month for the execution of rental requests during 2018 was March.

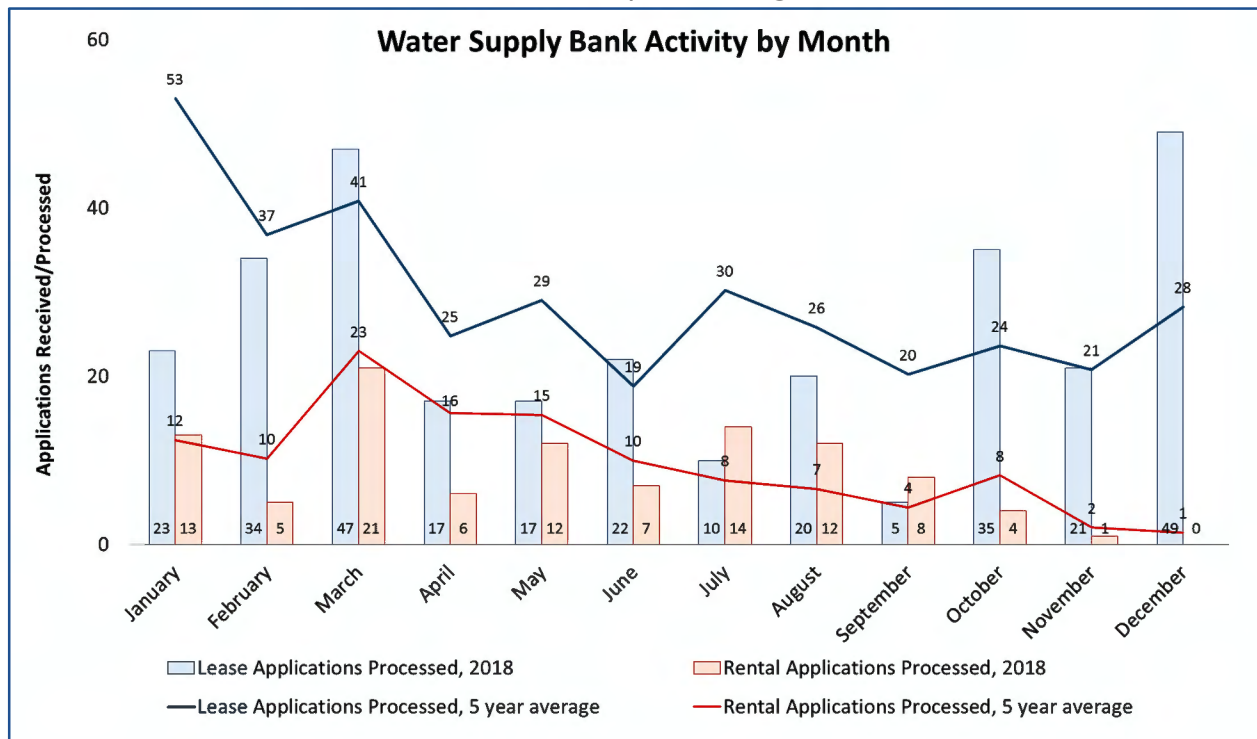


Chart 12. 2017 Application Processing & Processing Averages, 2013-2018

In Chart 12 on the preceding page, where a monthly red bar is above the red trendline, this represents a greater-than-average number of rental requests processed in that month. The payoff from this effort is that water users who submitted irrigation rental requests in 2017 and early 2018 obtained an irrigation authorization from IDWR, prior to the start of the 2018 irrigation season.

A final, notable data point is that the Board's bank experienced an overall increase in median application processing times during 2018. Beginning in 2017, the Board's bank began tracking the median number of days between when an application was formally received by IDWR, and the date it was formally withdrawn, denied, or executed as an approved lease contract or rental agreement. (Note: this is not the median number of days required to review and make a recommendation on an application, which is a smaller number, but instead, is the total number of days required to completely process and dispose of an application.)

In 2017, the median number of days that elapsed between receipt and final processing of a lease application was 20, and this number doubled to 41 days during 2018. Similarly, the median number of days that elapsed between receipt and final processing of a rental request during 2017 was 60, and this number increased to 85 days during 2018.

## Lease and Rental Transaction Management

Once lease and rental applications are approved, the Board's bank is responsible for collecting and disbursing rental payments for each year that a rental or lease is under active management. During 2018, approximately 70,000 acre feet of water was rented from the Bank, observed in Chart 13, which is roughly equivalent to the volumes of water rented in previous years.

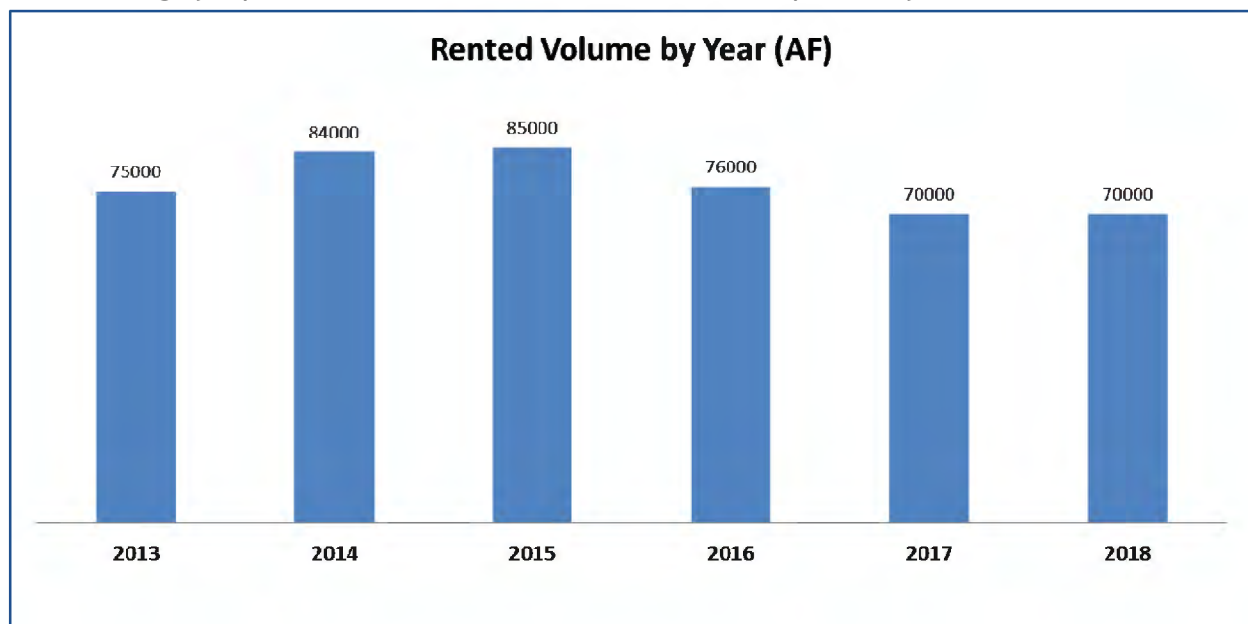


Chart 13. Annual rental volumes

Consistent with trends over the past five years, the majority of water rented in 2018 came from basins 2 (Snake River, below Milner Dam), 21 (Henrys Fork of the Snake River), 29 (Blackfoot basin), 35 (ESPA ground water from the American Falls region) and 37 (Wood River Valley & Camas Prairie).

2018				
#	Basin	Water Source	Volume	% of Total
1	2	Snake River	23000	33%
2	21	Henrys Fork	9200	13%
3	29	Blackfoot Basin	5600	8%
4	35	ESPA - American Falls	5200	7%
5	37	Big Wood River Basin	4900	7%
			47900	54%

Table 1. Most active basins, by annual acre-foot rental volumes, for 2018

Annual Average: Most Recent Five Years (2014-2018)				
#	Basin	Water Source	Volume	% of Total
1	2	Snake River	17448.4	20%
2	21	Henrys Fork	9326.667	11%
3	29	Blackfoot Basin	6997.8	8%
4	43	Raft River Basin	5100.2	6%
5	37	Big Wood River Basin	5450.2	6%
			44323.3	50%

Table 2. Most active basins, by annual acre-foot rental volumes, for the past five years: 2014-2018

Rentals from the five basins identified in Table 1 above accounted for over half of all water rented from the Board's bank during 2018. Over the last five years, basins 2 (Snake River below Milner Dam), 21 (Henrys Fork of the Snake River), 29 (Blackfoot), 43 (Raft River) and 37 (Wood River Valley & Camas Prairie) accounted for close to half of the total average annual rental volumes. Chart 14 below reports the annual average rental volumes, by basin, for the period of 2014 through 2018.

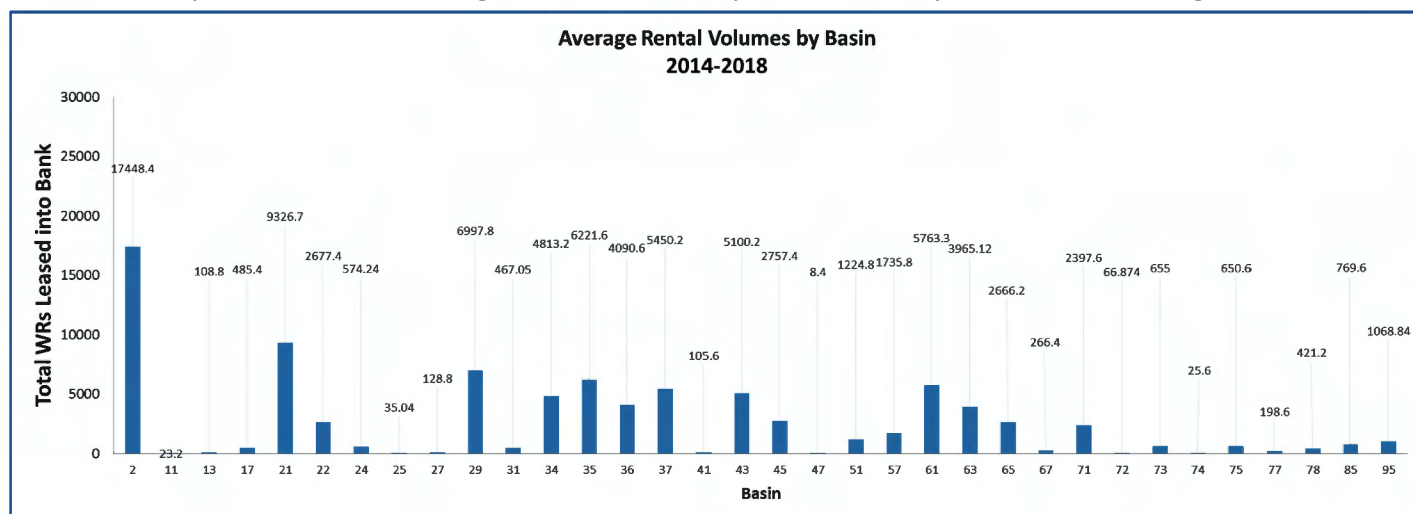


Chart 14. Average annual rental volumes, by basin, 2014-2018

## Programmatic Operations

The primary operational functions of the Board's bank are to:

- 1) process lease and rental applications;
- 2) manage active lease and rental transactions;
- 3) communicate and coordinate aspects of application processing and transaction management with program stakeholders; and,
- 4) conduct research and development work to implement program improvements and efficiencies.

## Human Resources

In 2018, 6,398 hours were logged by IDWR staff who provided Board's bank services. Chart 15 below depicts the hours logged from 2015 through 2018, as well as the full-time equivalency (FTE) of Board's bank personnel, per the total annual hours logged (one FTE = 2080 hours). Board's Bank service hours were higher in 2018 than in past years. The total hours for the Water Supply Bank Coordinator and Specialist positions accounted for close to 60% of all staff hours logged during 2018.

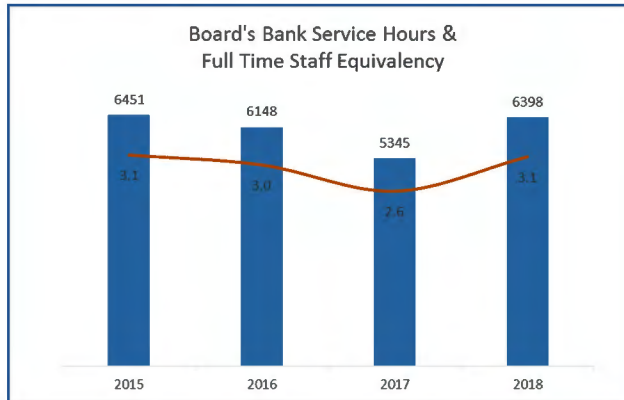


Chart 15. Board's bank service hours & FTEs

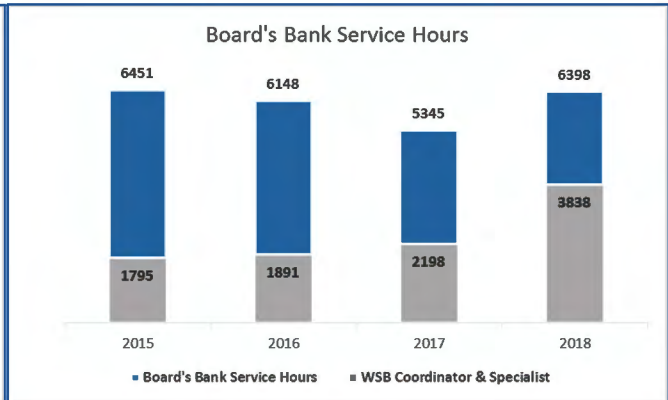


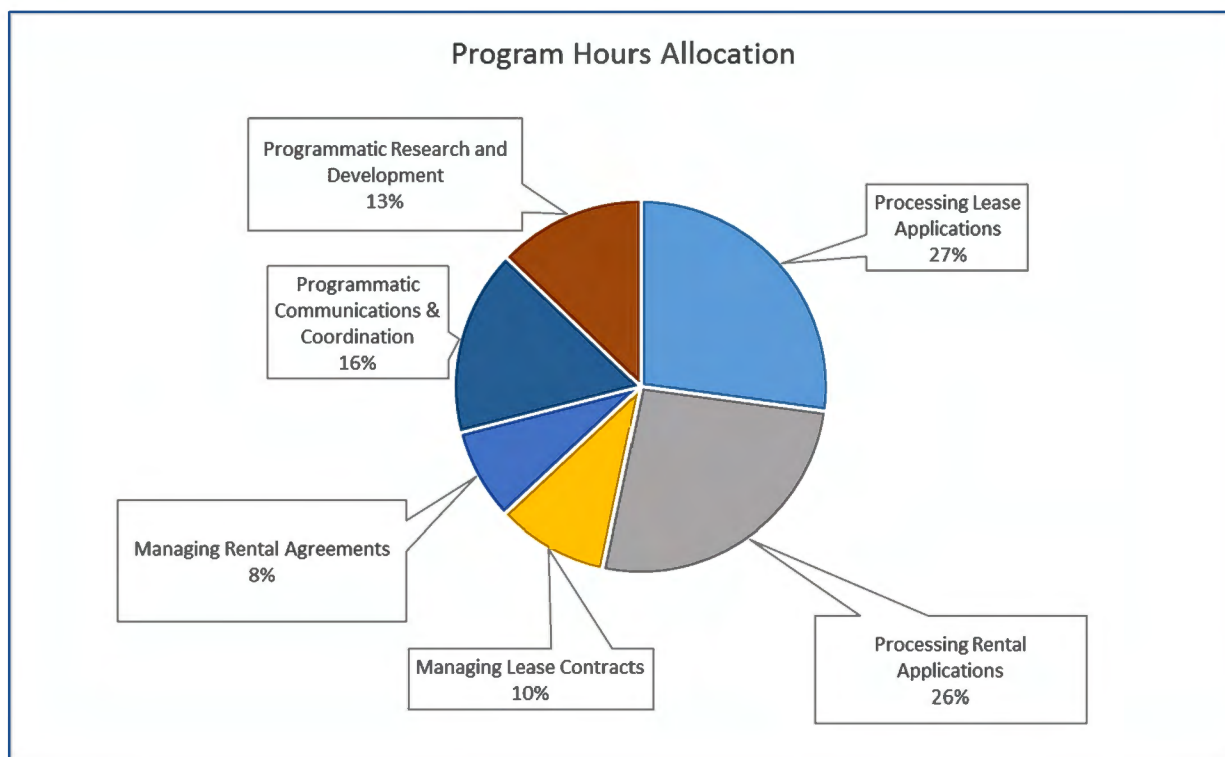
Chart 16. Board's bank service hours

## Processing Applications & Managing Transactions

By considering the specific work tasks performed by IDWR staff who provide Board's bank services, it is possible to estimate the percentage of all time allocated to specific functions. Of the 6,398 total hours logged providing Board's bank services during 2018, Table 3 below breaks down the estimated number of hours allocated to specific functions while Chart 17 on the following page visualizes these functions as a percentage of total hours utilized to provide Board's bank services.

Service Function	Hours Logged	Percent of All Hours
Processing lease applications	1,736	27 %
Processing rental applications	1,675	26 %
<b>Processing applications, total</b>	<b>3,386</b>	<b>53 %</b>
Managing lease contracts	622	10 %
Managing rental agreements	510	8 %
<b>Managing transactions, total</b>	<b>1,132</b>	<b>18 %</b>
Communications & coordination	1,034	16 %
Research & development	821	13 %
<b>All services</b>	<b>6,398</b>	<b>100 %</b>

Table 3. Board's bank service hours, by service function



*Chart 17. Board's bank services, as a percentage of all services*

## Communications & Coordination

Processing applications and managing lease and rental transactions requires coordination with various stakeholders, inside IDWR, regional water districts and across Idaho's water user community. To improve coordination amongst Water Supply Bank stakeholders, a continuous improvement process was implemented during 2018, and the following was accomplished:

- a stakeholder survey was developed and disseminated to all IDWR staff and a select number of water district staff;
- a stakeholder survey (benchmark) report was published, detailing survey findings;
- engagement sessions were held with various stakeholders at IDWR regional offices, to discuss the survey findings, and to obtain input on Water Supply Bank areas of improvement desired of stakeholders; and
- engagement reports were produced, in which priority Water Supply Bank specific research and development projects desired by stakeholders were documented.

During 2019, the Board's bank will continue to collect survey responses from the Idaho water user community at large, and additional stakeholder engagement sessions are planned.



## Financial Management

The Board's bank requires one lease application per water right and one rental application per requested beneficial use. The cost to submit a lease application is \$250. Where multiple water rights are stacked together, the bank caps the lease application filing fee at a maximum of \$500. There is no cost to submit a rental application.

Board's bank revenue increased by 7% in 2018, which is likely largely attributable to the increase in rental rates from \$17/acre foot to \$20/acre foot. Lease and rental fees from 2018 and past years are depicted in Chart 18 below.

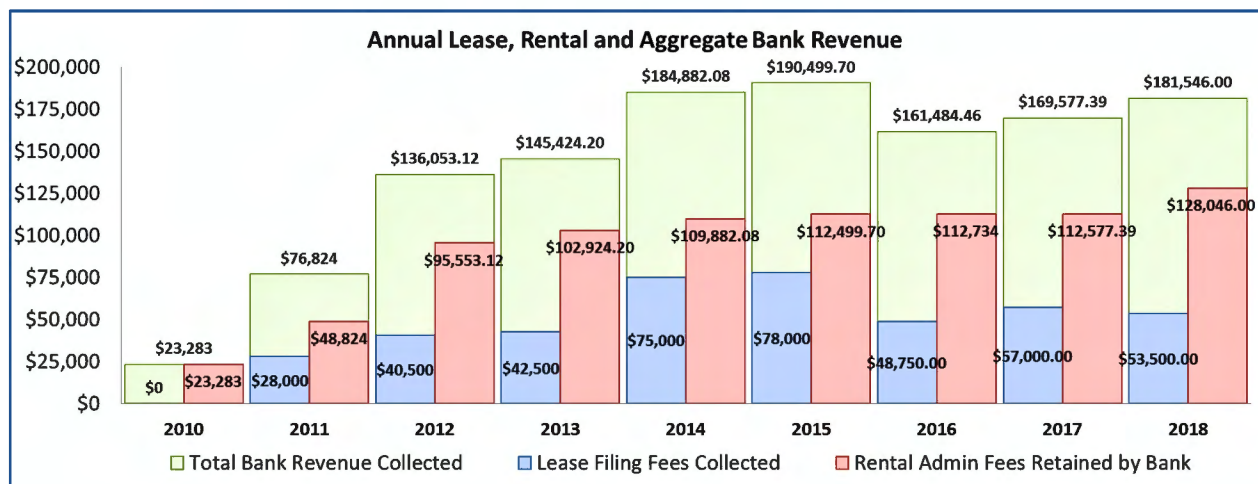


Chart 18. Annual revenue from lease application filing fees and rental admin fees

Due to a decline in lease filing fees collected during 2018, the percentage of all revenue obtained through rental fees increased, from 66% to 71%, as depicted in Chart 19 below.

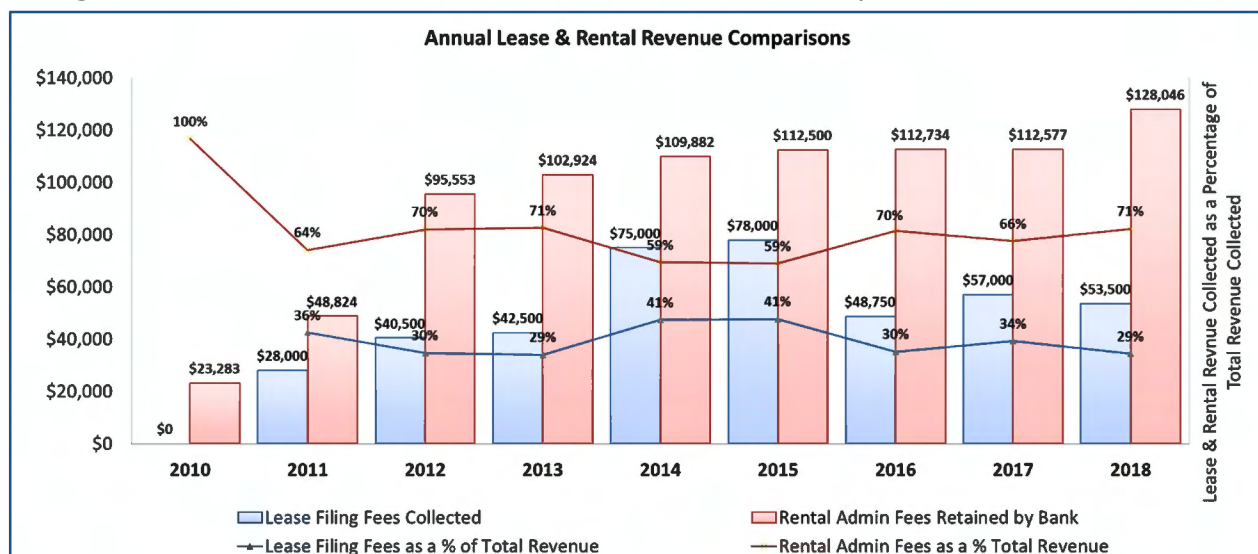


Chart 19. Annual revenue from leases and rentals as a percentage of total revenue



The 300 water rights proposed for deposit into the bank during 2018 represented a real year-over-year increase of 4 water right leases (or 1%), while the 103 rental requests processed by the Bank were a decline of 16% from the previous year high of 122 rental requests. The \$128,046 rental revenue collected during 2018 reflects admin fees for both new rentals processed and approved during 2018, as well as rentals active during 2018, but which were approved in previous years.

Of note, approximately one third of the rental revenue collected during 2018 (\$38,046) came from new rentals approved during and for 2018. Consistent with previous years, and as visualized in Chart 20, a majority of rental revenue collected last year came from already-active, multi-year rentals approved prior to 2018.

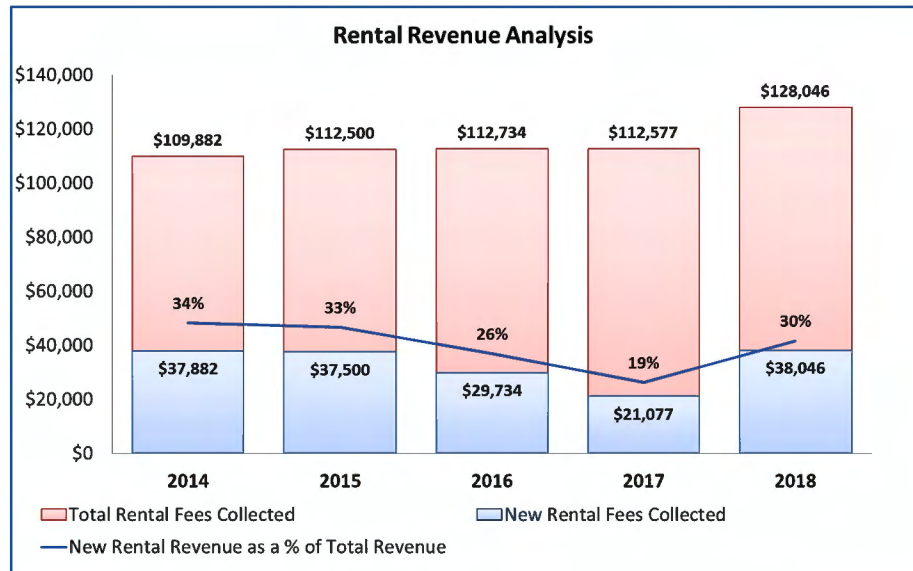


Chart 20. Rental fees collected as a percent of all rental fees

Consistent with an overall increase in rental revenue to the Board's bank during 2018, the value of water rental payments from the Bank to water right lessors (which in Idaho are called warrants) also increased during 2018. A total of \$565,500 was paid out by the Board's bank to water right lessors for 2018 rental payments, which is depicted in Chart 21 below.

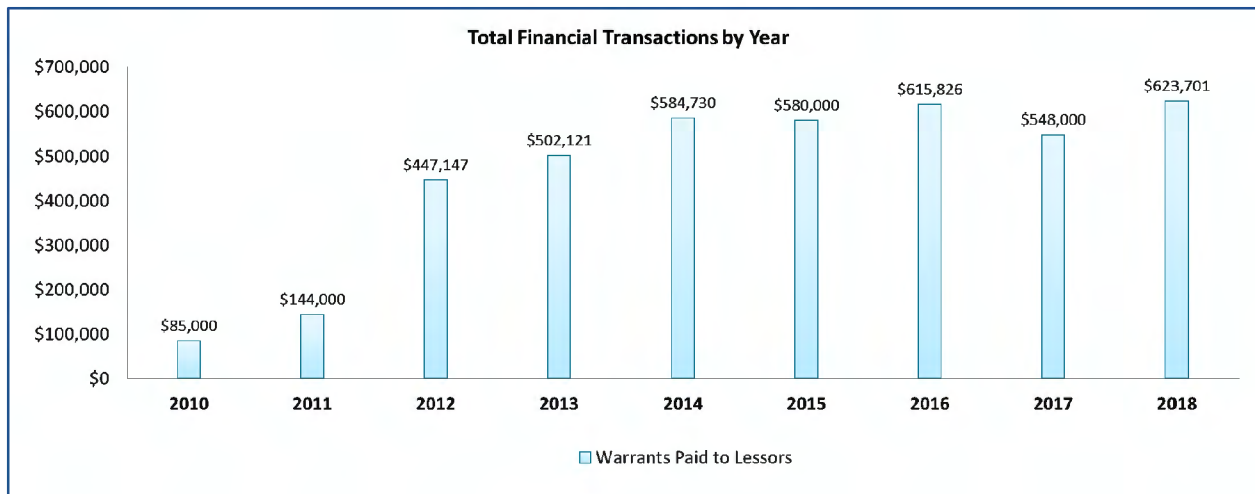


Chart 21. Annual warrant payments from the Board's bank to water right lessors, 2010-2018

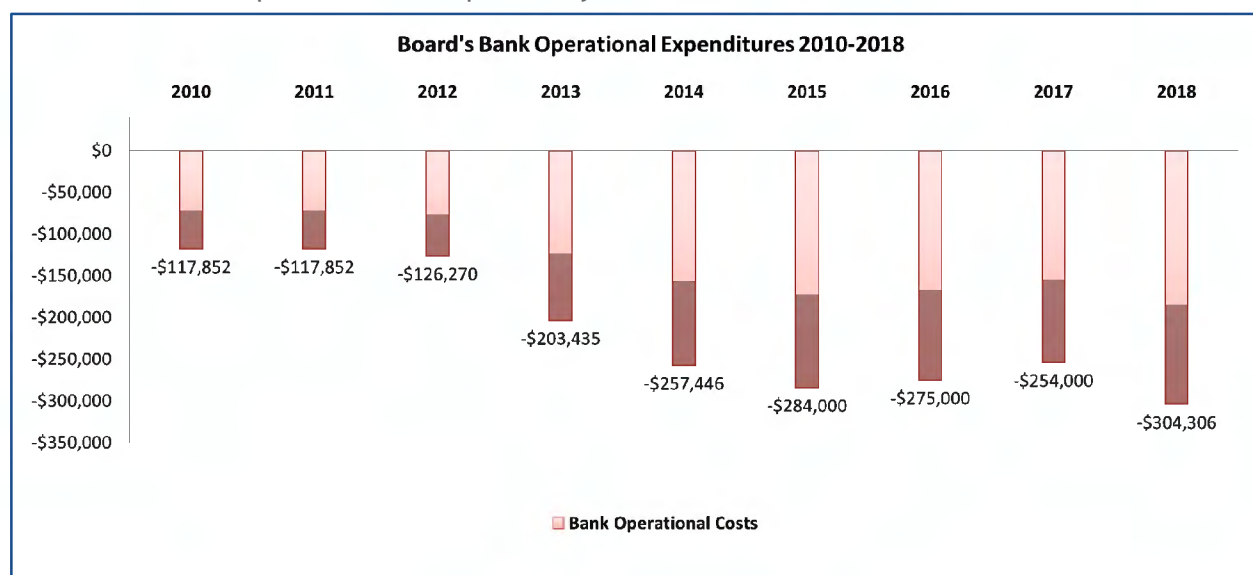
Of particular importance, the vast majority of 2018 rental warrant payments were distributed to water right lessors before the end of October of 2018. Typically warrant payments are issued in December and January.

## Programmatic Solvency

The primary expenditures necessary to operate the Board's bank include:

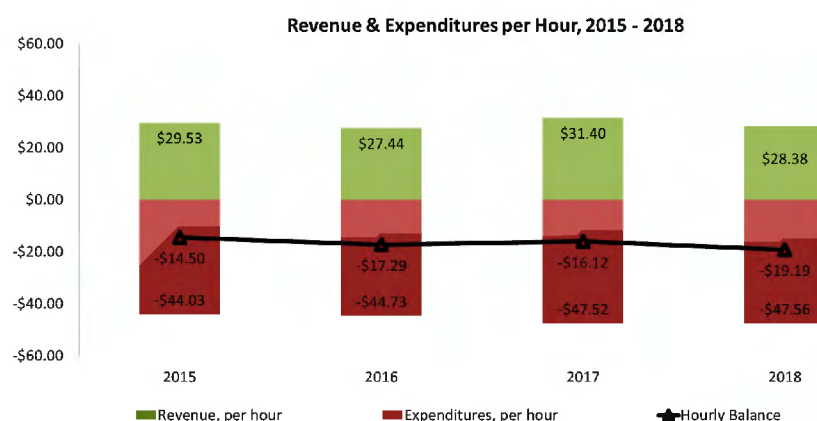
- 1) staff compensation and overhead (salaries, office equipment and office service costs);
- 2) coordination and communication charges (advertising and stakeholder engagement costs); and
- 3) resource research and development charges (technology development and maintenance costs, staff education and consulting fees);

In 2018, operational expenditures totaled \$304,306. There were no expenditures for resource research and development initiatives and 1% of expenditures (approximately \$2,000) was spent on advertising and stakeholder engagement efforts. Staff compensation and overhead accounted for the majority of expenditures during 2018. As depicted in Chart 22, 2018 expenditures represented an increase over expenditures from previous years.



*Chart 22. Annual operational expenditures, 2010-2018*

Dividing total revenue generated during 2018 (\$181,546) by total hours logged providing Board's bank services (6,398) reveals that the Bank generated hourly revenue of \$28.92. However, dividing operational expenditures (of \$304,306) by hours logged reveals the Bank incurred a negative hourly operational cost of -\$47.56. Between these two figures, Chart 23 reveals that the net hourly cost to operate the Board's bank in 2018 was -\$19.19.



*Chart 23. Annual hourly operational costs, 2015-2018*

In considering the core service functions of the Board's bank, it is possible to estimate costs required to provide specific services, which can be estimated by taking the total hours logged to provide a specific Board's bank service, and then multiplying the total by the Bank's average hourly operational cost (-\$47.56). Table 4 below summarizes costs associated with providing specific service functions within the Board's bank, as well as the revenue collected through the provision of those services, during 2018.

Service Function	Hours Logged	Annual Cost	Revenue Collected	Balance
Processing lease applications	1,736	-\$82,565	\$53,500	-\$29,065
Processing rental applications	1,675	-\$79,665	\$38,046	-\$41,619
<b>Processing applications, total</b>	<b>3,411</b>	<b>-\$162,230</b>	<b>\$91,546</b>	<b>-\$70,684</b>
Managing lease contracts	622	-\$29,585	\$0	-\$29,585
Managing rental agreements	510	-\$24,255	\$90,000	\$65,745
<b>Managing transactions, total</b>	<b>1,132</b>	<b>-\$53,840</b>	<b>\$90,000</b>	<b>\$36,160</b>
Communications & coordination	1,034	-\$49,181	\$0	-\$49,181
Research & development	821	-\$39,055	\$0	-\$39,055
<b>All services</b>	<b>6,398</b>	<b>-\$304,306</b>	<b>\$181,546</b>	<b>-\$122,760</b>

Table 4. Board's bank service costs, by service function

As observed above in Table 4, a negative operating balance of approximately -\$123,000 occurred in 2018. This amount is represented as the orange bar in Chart 24 below. The negative operating balance is the difference between revenue collected from filing and administrative fees, and operational expenditures.

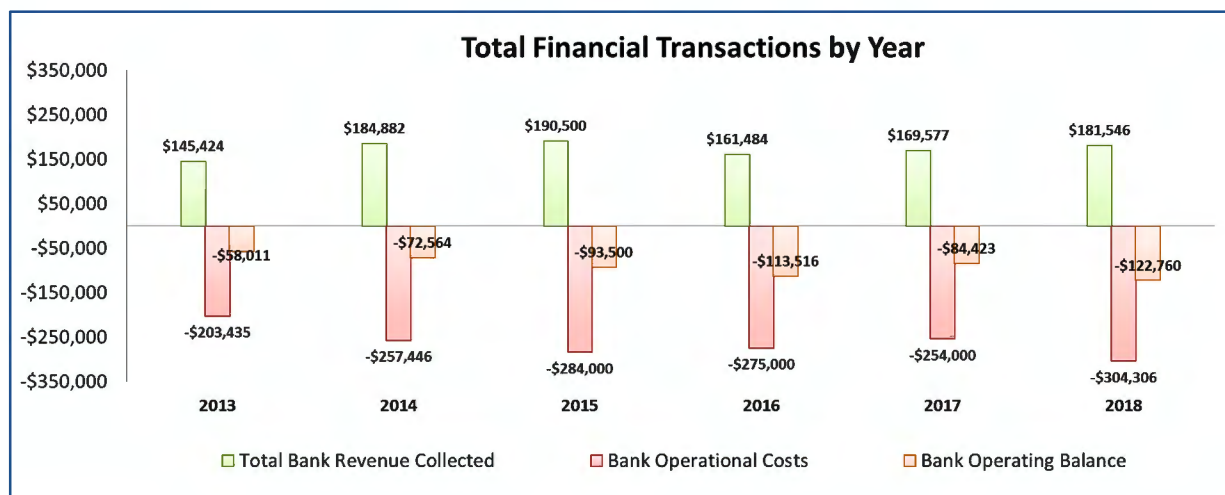


Chart 24. Board's bank operational finances, 2013-2018

## Application Fees

The Board's bank charges a filing fee of \$250 per water right (or \$500 for multiple stacked water rights) to lease a water right to the Bank, and there is no charge to file a rental application. By considering the hours logged in processing applications as well as the actual number of applications processed annually, it is possible to estimate the annual average number of hours allocated to process lease and rental applications. Multiplying annual average hours-per-application amounts by annual hourly operational cost allows for an estimate of the average processing cost per application.

Table 5 below lists the average lease and rental application processing costs for 2018.

Service Function	Hours Logged	Applications Processed	Hours per Application	Cost per Application
Processing lease applications	1,736	300	5.8	-\$275.21
Processing rental applications	1,675	103	16.3	-\$773.42
<b>Average application processing</b>	<b>3,411</b>	<b>403</b>	<b>8.5</b>	<b>-\$404.26</b>

Table 5. Board's bank application processing costs, for calendar year 2018

Per Table 5, overall during 2018, the average lease application required just under one day of staff time for full processing, and the average rental request required a little more than two days for processing. The above method comparing service hours logged, applications processed and annual average hourly operational costs incurred can be applied to data from calendar years 2015 through 2018 to reveal that, over the most recent four years, the estimated average cost to process a lease application is just under \$250, and the average cost to process a rental application is \$650. These estimates are presented in Table 6 below.

Service Function	2015	2016	2017	2018	Average
<b>Annual Applications Processed:</b>					
Leases	446	338	296	300	345
Rentals	131	117	122	103	119
<b>Annual Service Hours Logged:</b>					
Processing Leases	2,041	1,562	1,521	1,815	1,715
Processing Rentals	1,779	1,641	1,575	1,692	1,668
<b>Annual Average Hours per Application:</b>					
Leases	4.6	4.6	5.1	5.8	5.0
Rentals	13.6	14.0	12.9	16.3	14.2
<b>Annual Average Hourly Operating Cost:</b>					
	-\$44.03	-\$44.73	-\$47.52	-\$48.39	-\$45.96
<b>Average Annual Cost per Application:</b>					
Leases	-\$201.48	-\$206.70	-\$244.18	-\$275.21	-\$231.89
Rentals	-\$597.90	-\$627.34	-\$613.48	-\$773.42	-\$653.03

Table 6. Board's bank application processing costs, calendar years 2015 through 2018

## Programmatic Forecasts and Future Objectives

In order to maintain the solvency of the Board's bank, through revenue neutral or revenue positive operations, one or more of the following must occur:

- annual operational expenditures need to be controlled and kept as low as possible;
- hours logged to provide core services need to be controlled and kept as low as possible;
- filing fees for rental applications must be implemented;
- variable rental rates should be explored and considered; and
- research and development initiatives must continue, to find ways for increasing productivity, by maintaining or increasing application processing capacity without increasing overall operational expenditures or the number of hours logged to process applications.

Forecasting forward, it is reasonable to expect the Board's bank to operate with annual expenditures of approximately \$250,000 while keeping IDWR staff hours logged to the Board's bank at or below 5,200. These are the amounts associated with operation of the Bank with 2.5 FTEs. If the Board's bank can be operated with these targeted hour and operational cost amounts, average operational costs of \$48/hour can be maintained, allowing for stabilized operational expenditures, following which, the gap between revenue collected and operational expenditures incurred can be narrowed.

Chart 25 below presents a possible scenario where annual operating costs of \$250,000 and 5,200 FTE hours are slowly realized over the next five years while, at the same time, incremental increases in filing fee and rental admin fee collection amounts are also realized (filing and rental fees projected based on applications processed, per Chart 3 on page 4 of this report).

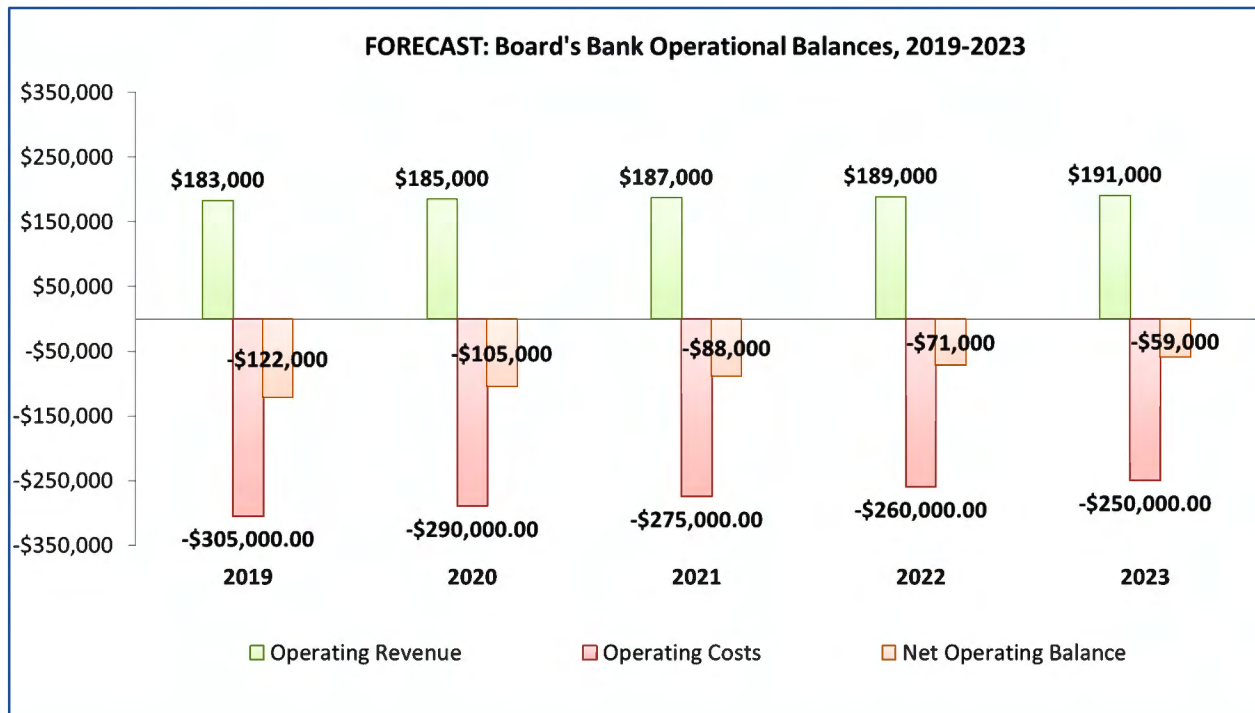


Chart 25. Forecasted Board's bank operational finances, 2019-2023

As visualized in Chart 25 on the previous page, even as the Board's bank achieves controlled expenditures of \$250,000, a negative operating balance will persist until additional administrative actions are taken, including, but not limited to: establishing a rental application filing fee, allowing for variable rental rates (to allow for increased rental fees for some rentals), and increasing productivity by investing in time and labor saving technologies.

Through implementation of the continuous improvement process initiated during 2018, the Board's bank has begun to survey stakeholders about their support for instituting a rental application filing fee. As of December 2018, fifty responses were received (primarily from IDWR staff) and more than two thirds of respondents affirmed they supported implementing a rental application filing fee, however there was no clear consensus on a specific filing fee amount. The stakeholder survey is presently being distributed to all Board's bank lessors, renters, and their representatives, so that non-IDWR stakeholder support for implementation of a rental application filing fee can also be determined.

Moving forward, the Board's bank will continue to track annual estimates of the costs associated with processing lease and rental applications, so that a reasonable, average rental application filing fee can be proposed to mirror rental application processing costs. These processing costs can be reported in the annual Water Supply Bank report for the Board's bank. Additionally, future versions of the stakeholder survey can further query Water Supply Bank stakeholders and the water user community about specific filing fee amounts, to better ascertain their support for a range of filing fee options.