



Water Supply Bank

2019 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/or reservoir systems) and are operated by IWRB-appointed local committees.

This report summarizes operations of the *Board's bank* during calendar year 2019 and features recent data and trends specific to the:

- processing of lease and rental applications during 2019;
- administration of lease and rental transactions approved for 2019;
- productivity and work accomplishments of Water Supply Bank staff during 2019; and
- management of finances associated with operations during 2019.

Executive Summary

The Bank maintained operational productivity levels in 2019 and invested more time into researching and developing new and improved technology tools that will enable productivity gains in future years. During the past year, the total number of hours committed to providing Bank services was reduced, from 6,400 in 2018, to 5,700 this past year, and the Water Supply Bank Coordinator and Specialist worked to ensure that the proportion of Allocation Bureau IDWR staff time required to assist in providing Bank services did not increase—it remained at 40% of all accounted for service time. Additionally, the median number of days required to process a rental in 2019 was lowered to 52 days in 2019, a reduction from the 60 days required in 2017, and the 85 days required in 2018.

2019 Accomplishments

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

- **Faster rental application processing times realized in 2019;**
- **Continued early issuance of annual warrant payments and rental fee reminders;**
- **Continued reduction in overall hours required to provide full Banking services;**
- **Reduced operational costs and annual operating balances realized in 2019.**

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 2019, 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 climbing significantly between 2013 through 2015, after which, annual application amounts stabilized again during 2016 through 2019.

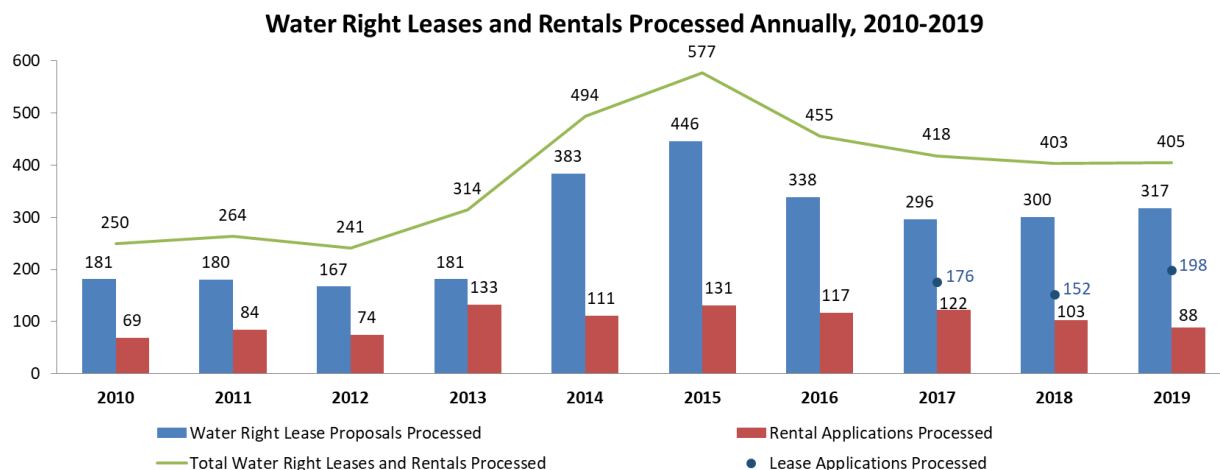


Chart 1. Total applications processed, 2010 - 2019

As observed in Chart 1 above, the total number of water rights proposed and processed for lease by the Board's Bank has remained steady in recent years, equating to approximately 300 annually since 2017. Additionally, also since 2017, the Bank has tracked the actual number of water right lease applications processed as separate and distinct from the number of water rights proposed for lease annually (a single lease application can be for one or more water rights). Thus, Chart 1 above also reveals that 198 unique lease applications were processed during 2019 (for which 317 water rights were proposed for lease), an increase over the 152 and 176 lease applications processed in 2018 and 2017, respectively. Chart 2 on the next page plots these new leases and rental statistics.

**Lease and Rental Applications Processed Annually, 2017-2019 &
Water Rights Leased Annually, 2017-2019**

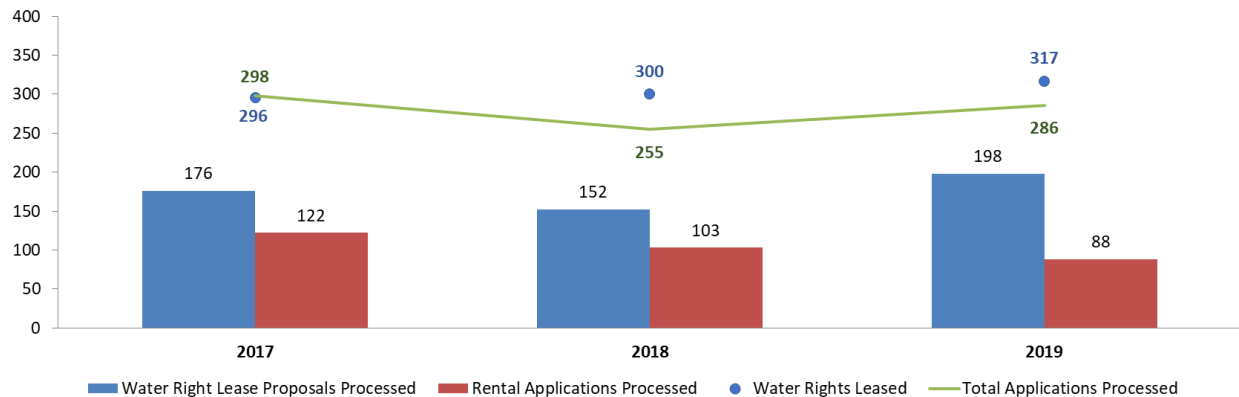


Chart 2. Total applications and water right leases processed, 2017 - 2019

As is evidenced by Chart 2 above, there has been a decrease in the total number of rental applications proposed and processed annually, however, there has been a relatively stable number of lease applications proposed and processed in recent years.

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. Typically, of the total number of water rights leased to the Bank in a given year, between one in three to one in four water rights is leased to specifically allow for a companion rental application. In 2019, more than one third of the 317 water right leases processed by the Bank (n=122) were intentionally leased to authorize a specific, companion rental application.

Companion Application Water Right Leases as a share of all Water Right Leases

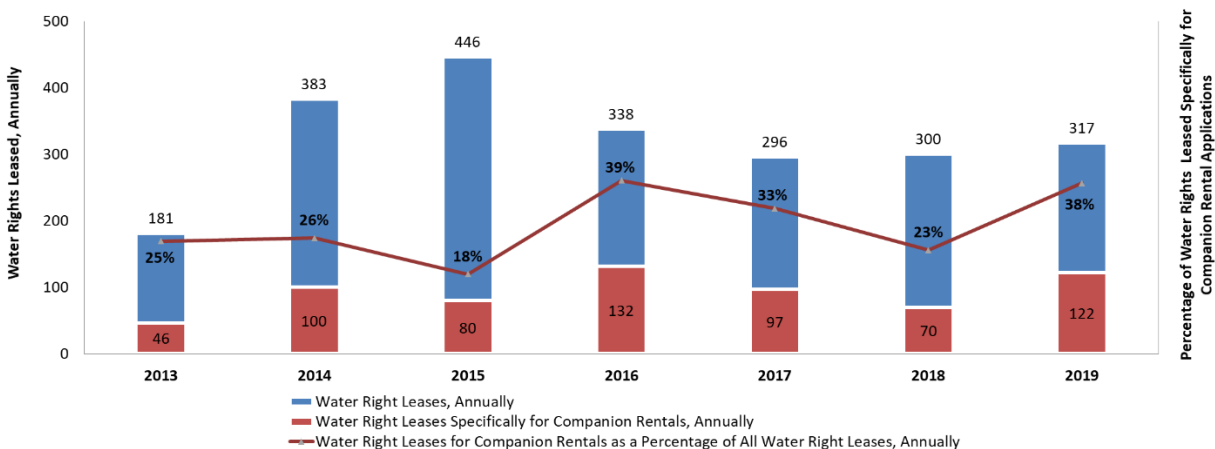


Chart 3. Companion applications as a percentage of lease applications, 2013-2019

Consistent with peaks in companion lease applications processed in both 2016 and 2019, so too did companion rental applications surge as a percentage of all rental applications processed in those same years. Chart 4 below plots out the total number of companion rental applications processed in recent years, as a percentage of all applications processed in recent years.

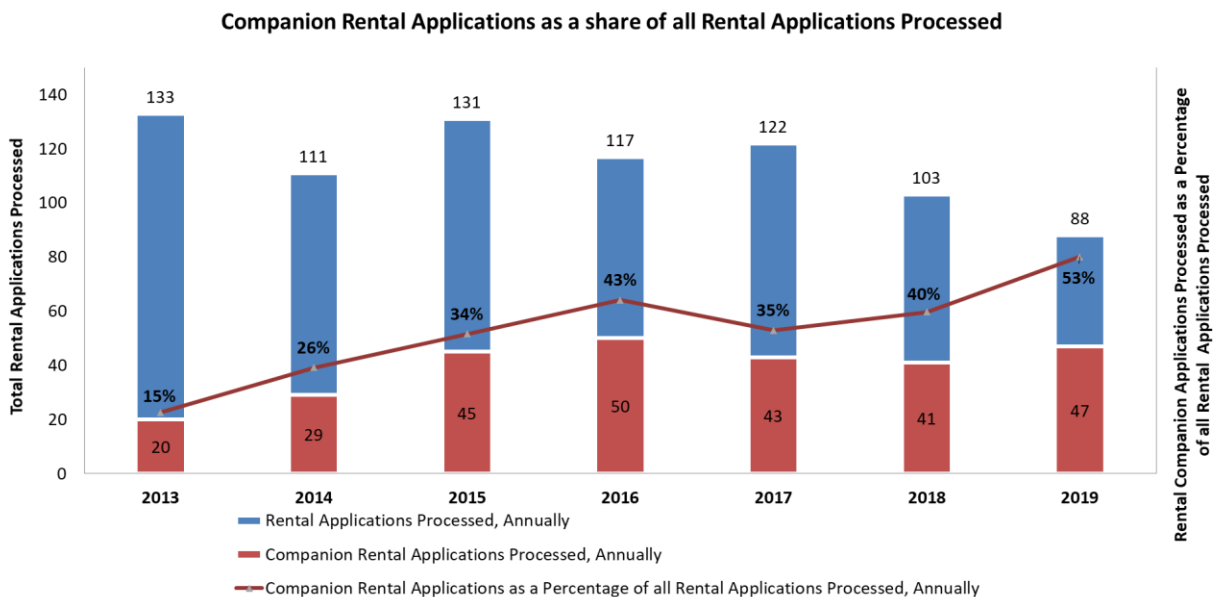


Chart 4. Companion applications as a percentage of all rental applications, 2013- 2019

It is notable that even as the annual number of rental applications has declined slowly during recent years, the total number of pre-established companion rental applications being proposed to the Bank has remained steady (approximately 40-50 annually). Moreover, because of the reduction in total rentals processed during 2019, companion lease-rental transactions represented more than 50% of all rental proposals processed last year. Foreseeably, companion rental applications will continue to comprise a significant, and perhaps ongoing majority of all rental applications to be processed.

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 317 water right leases processed by the Bank during 2019, it was intended that 71% (n=226) should be for leases commencing in 2019, while 4% (n=13) were processed for 2018 leases, and 25% (n=78) should be for 2020 leases. Additionally, of the 88 rental requests processed during 2019, fully 100% of the rentals were for 2019 rentals.

Furthermore, Chart 5 below depicts that, of the 317 leases processed in 2019, 30% (n=95) of the leased water rights were never previously leased to the Bank, while a majority of leases (n=222, or 70%) were submitted to renew or amend previous water right lease contracts. Similarly, Chart 6 reveals that of the 88 rentals processed in 2019, 45% (n=40) were new applications for rentals not previously approved by the Bank, while 55% (n=48) were a renewal or amendment to a previously approved rental agreement.

2019 Water Right Leases

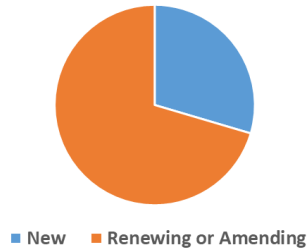


Chart 5. New vs renewing or amending leases processed during 2018

2019 Rental Requests

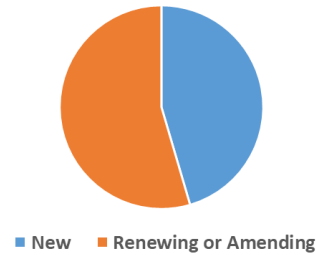


Chart 6. New vs renewing or amending rentals processed during 2018

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. Of the 317 water right lease proposals processed during 2019, 187 water right lease contracts were approved for 2019. Chart 7 below depicts that, of the 187 lease contracts approved for 2019, approximately one quarter were for single year leases, while close to two-thirds of lease contracts were for five or more years.

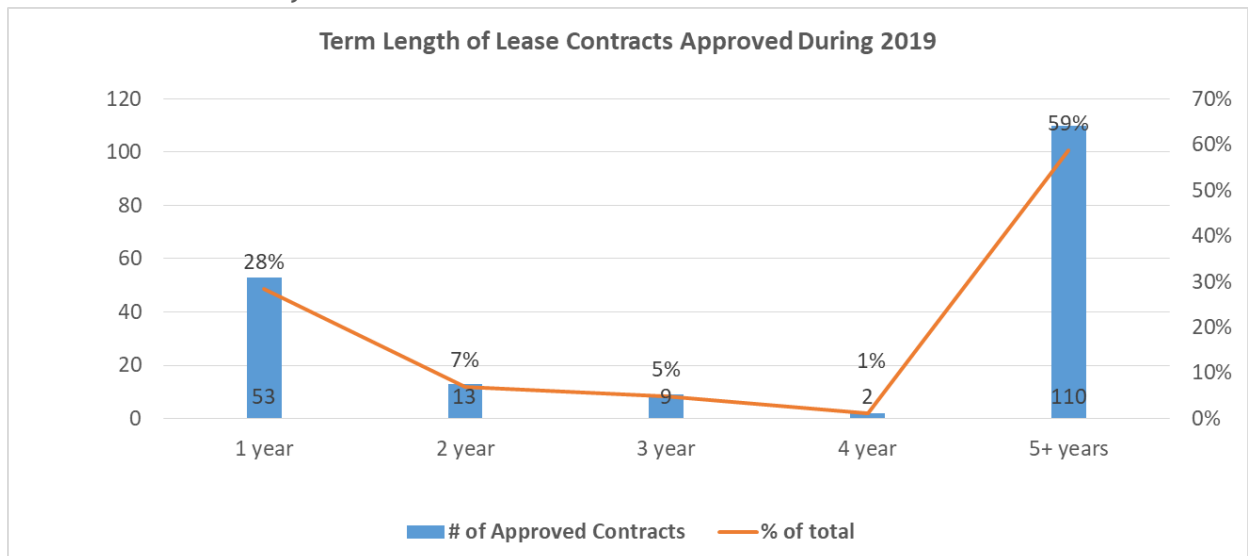


Chart 7. Duration of lease contracts approved for 2019

Additionally, of the 88 rental applications processed and approved in 2018, a majority were for only one year in duration. Chart 8 below visualizes the total number of rental agreements approved during 2019 and reveals that most were approved for a single year.

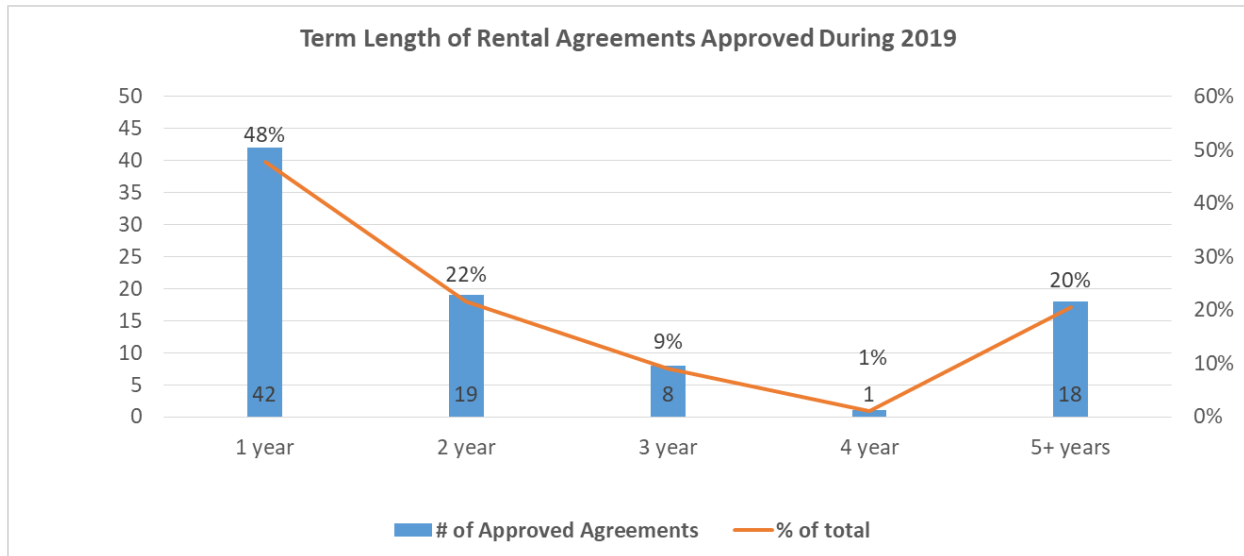


Chart 8. Duration of rental agreements approved in 2018, absolute and percent of all approved

Reflecting on 2018 and 2019 contract and agreement duration data reveals that the share of all contracts approved for one year in duration decreased in 2019 to 28% (from 32% in 2018), while the share of contracts approved for five or more years increased to 59% (from 53% in 2018). However, the share of agreements approved for one year increased to 48% in 2019 (from 44% in 2018), while the share of agreements approved for five or more years decreased to 20% (from 27% in 2018).

Furthermore, 187 contracts were approved in 2019 while 493 contracts were already active, for a sum total of 680 lease contracts active during 2019. Similarly, 88 rental agreements were approved for 2019, while 100 agreements were already active, for a sum total of 188 agreements active during 2019. The proportions of new lease and rental approvals compared to approvals made in previous years are captured in charts 9 and 10 below.



Chart 9. New vs already approved lease contracts, active during 2019

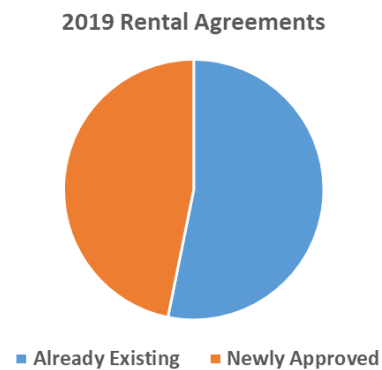


Chart 10. New vs already approved rental agreements, active during 2019

Of note, the Bank early-terminated seven lease contracts during 2019, as well as one rental agreement.

Application Processing Times

The Bank endeavors to process all applications as quickly as possible, on a first-come, first-served basis. Generally, the stages associated with application processing include: 1) receipt of an application and preliminary review for completeness; 2) active review of an application, resulting in a recommendation of approval or denial; and 3) completion of application processing through the execution of a lease contract or rental agreement with a water user. The length of time required to fully process an application is a function of the time required to move through the three above referenced application processing stages, and it is notable that the time which elapses between steps one and two can vary greatly based on the number of applications that may be present in the application processing, at any given time, when an application is initially received.

In an effort to better understand efficiencies and time commitments associated with application processing, in 2017, the Bank began tracking the time required to complete all work associated with steps two and three for all applications processed. Table 1 below summarizes the median length of time required to fully review and finalize a lease and rental application. During 2019, approximately one to two months was required to finalize the review of a lease application, while two to three months was required to finalize review of a rental request.

| Year | Median Time Required to Process a Lease Application | Median Time Required to Process a Rental Application |
|------|---|--|
| 2019 | 45 days | 52 days |
| 2018 | 41 days | 85 days |
| 2017 | 20 days | 60 days |

Table 1. Median Time Required to Process Lease and Rental Applications, 2017-2019

Lease and Rental Transaction Management

During 2019, approximately 63,000 acre feet of water was rented from the Bank, which is a decline from the volumes of water rented in previous years.

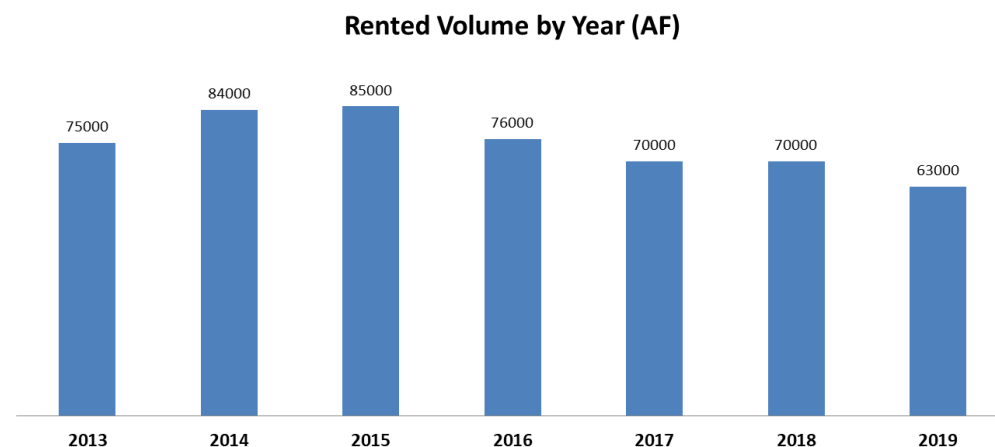


Chart 11. Annual rental volumes

Consistent with recent trends, the majority of water rented in 2019 came from basins 2 (Snake River, below Milner Dam), 21 (Henrys Fork of the Snake River), 35 (ESPA ground water from the American Falls region) and 29 (Blackfoot basin).

| 2019 | | | | |
|-------------------------------|-------|-----------------------|--------|------------|
| # | Basin | Water Source | Volume | % of Total |
| 1 | 2 | Snake River | 19,541 | 31% |
| 2 | 21 | Henrys Fork Basin | 9,445 | 15% |
| 3 | 35 | ESPA - American Falls | 7,118 | 11% |
| 4 | 29 | Blackfoot River Basin | 4,397 | 7% |
| 5 | 43 | Raft River Basin | 3,987 | 6% |
| 2019 Rental Volume: 63,000 AF | | | 44,488 | 71% |

Table 2. Most active basins, by annual acre-foot rental volumes, for 2019

| Annual Average: Most Recent Five Years (2014-2018) | | | | |
|--|-------|-----------------------|--------|------------|
| # | Basin | Water Source | Volume | % of Total |
| 1 | 2 | Snake River | 17,448 | 23% |
| 2 | 21 | Henrys Fork Basin | 9,327 | 12% |
| 3 | 29 | Blackfoot River Basin | 6,998 | 9% |
| 4 | 35 | ESPA - American Falls | 6,222 | 8% |
| 5 | 61 | Mountain Home Basin | 5,763 | 7% |
| Average Five Year Rental Vol: 77,000 AF | | | 45,758 | 59% |

Table 3. Most active basins, by annual acre-foot rental volumes, 2014-2018

In the most recent five years preceding 2019, basins 2, 21, 29 and 35 were also, on average, the most popular water sources for water rights rented from the Bank. Chart 12 below plots out the average annual rental volumes, by basin, for water rights rented from the Bank, along with the volumes of water rented from those same basins during 2019.

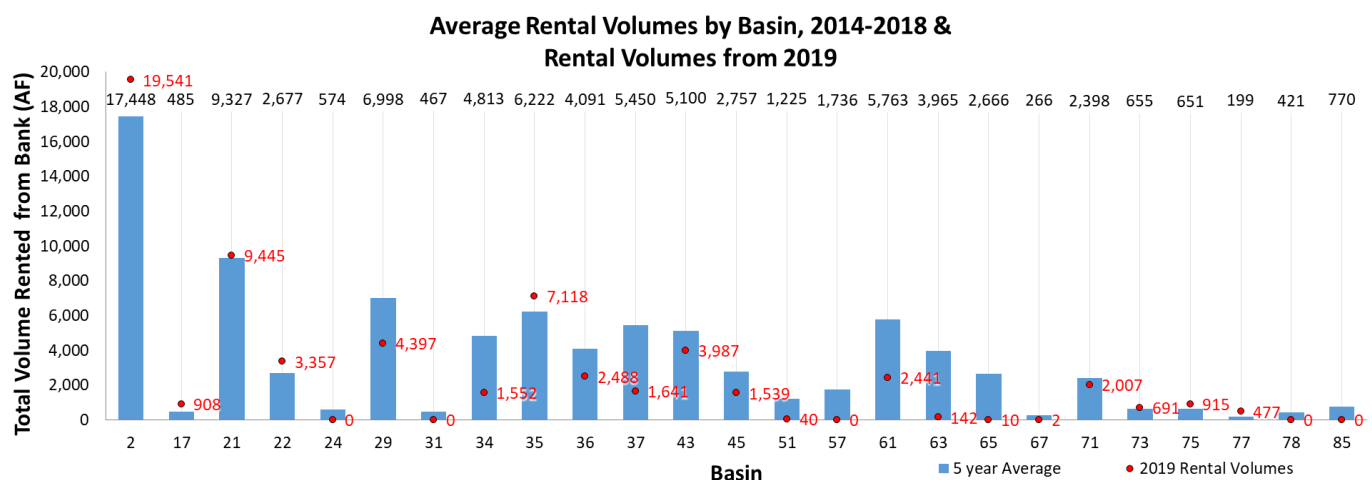


Chart 12. Average annual rental volumes, by basin, 2014-2018, and rental volumes for 2019

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 2019, 5,565 hours were logged by IDWR staff in providing Board's bank services. Chart 13 below depicts the hours logged from 2015 through 2019, 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 lower in 2019 than in past years. The total hours for the Water Supply Bank Coordinator and Specialist positions accounted for close to 65% of all staff hours logged during 2019.

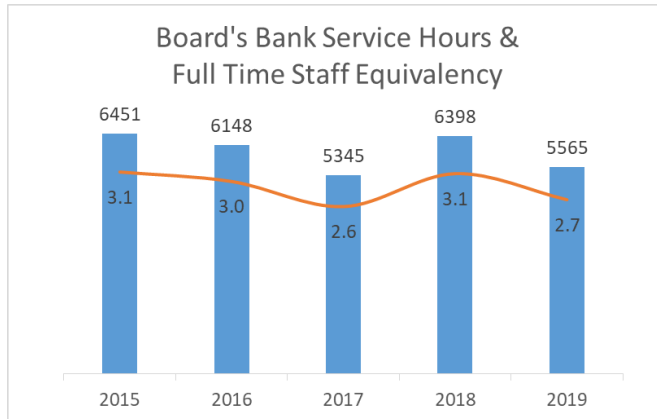


Chart 13. Board's bank service hours & FTEs

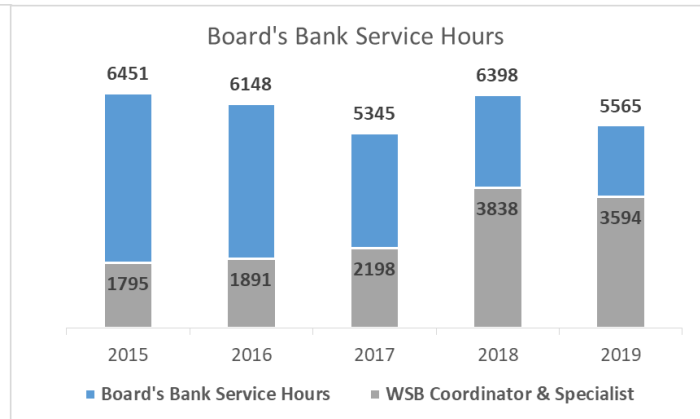


Chart 14. Board's bank service hours

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 5,565 total hours logged providing Board's bank services during 2019, Table 4 below breaks down the approximate 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 | 1,400 | 25.2 % |
| Processing rental applications | 1,650 | 29.6 % |
| Processing applications, total | 3,050 | 54.8 % |
| Managing lease contracts | 490 | 8.8 % |
| Managing rental agreements | 400 | 7.2 % |
| Managing transactions, total | 890 | 16.0 % |
| Communications & coordination | 575 | 10.3 % |
| Research & development | 1050 | 18.9 % |
| All services | 5,565 | 100.0 % |

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

Program Hours Allocation during 2019

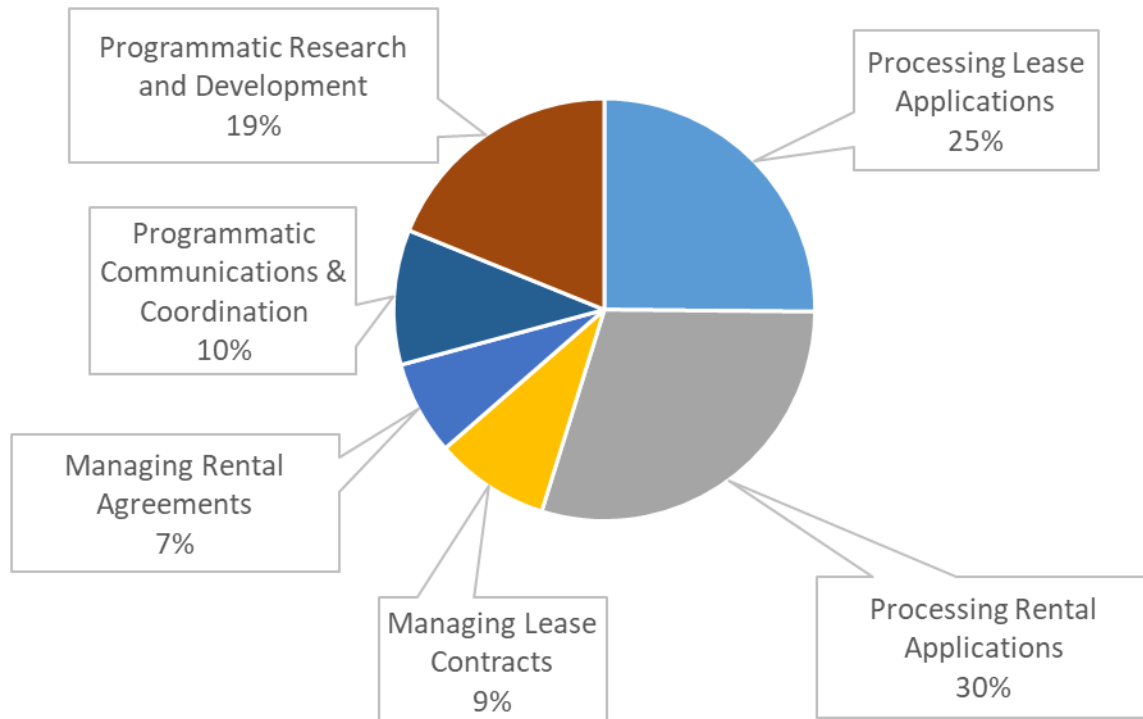


Chart 15. Board's bank services, as a percentage of all services, during 2019

Communications & Coordination

During 2018, the Water Supply Bank engaged IDWR regional office staff, and select Water District watermasters, to obtain insights on ways to improve programmatic coordination. Following up on recommendations gathered during the engagement sessions, the Bank invested time during 2019 to develop new technology resources for state and regional office IDWR staff and water district staff. Specifically, the Bank developed and improved the following coordination tools during 2019:

- Water Supply Bank lease status was integrated into the internal, enterprise, water right information search tool used by all IDWR staff;
- Water district lease and rental reports were developed, allowing for the automated reporting of all water rights leased and rented from the Bank, specific to water districts;
- Automated application processing tracking reports; and
- Automated rental agreement payment reports and warrant payment disbursement reports.

Financial Management

The cost to lease a water right to the Water Supply Bank is \$250, however when two or more water rights can be collectively leased together into the Bank on a single application, the maximum fee for a multi-water right lease application is \$500. There is no fee to submit a rental application; the Bank collects rental revenue by levying a 10% surcharge on the rental fees for rental agreements. In 2019, the Bank revenue increased for lease filing fees but declined for rental administrative fees, as represented in Chart 16 below.

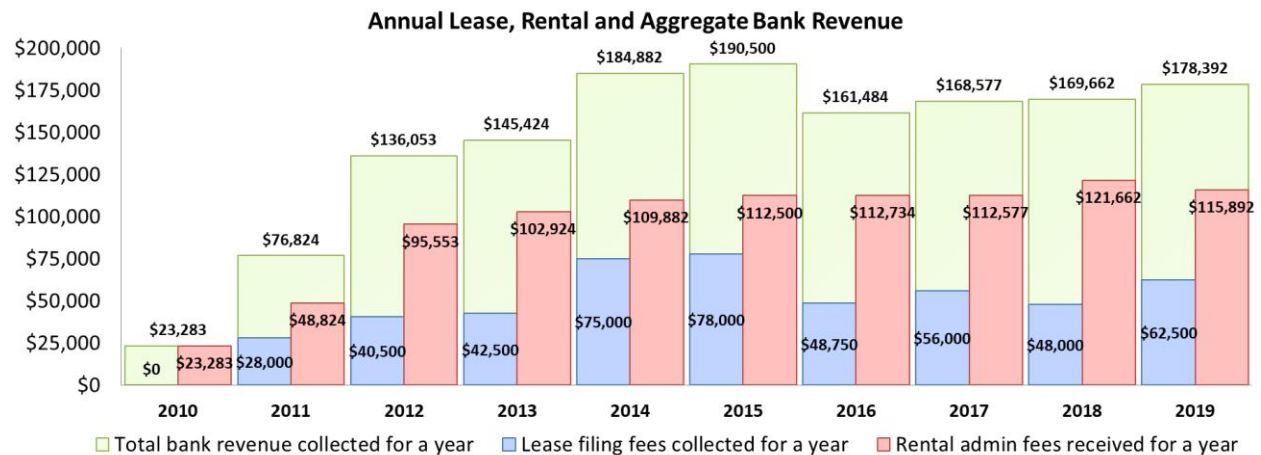


Chart 16. Annual revenue from lease application filing fees and rental admin fees

It should be noted that the lease and rental fees reported in Chart 16 above for 2017 and 2018 are adjusted from the amounts reported in previous years. The adjustment is to reflect the amounts received for transactions which are specifically intended to commence in given year. For example, although it was previously reported that \$53,500 in lease filing fees were receipted in 2018, of that amount, \$28,250 was receipted for leases which were intended to start in 2018, while \$28,250 was receipted for leases intended to start in 2019. Chart 17 below breaks down all revenue received for transactions specific to a year, as split between payments for leases and payments for rentals.

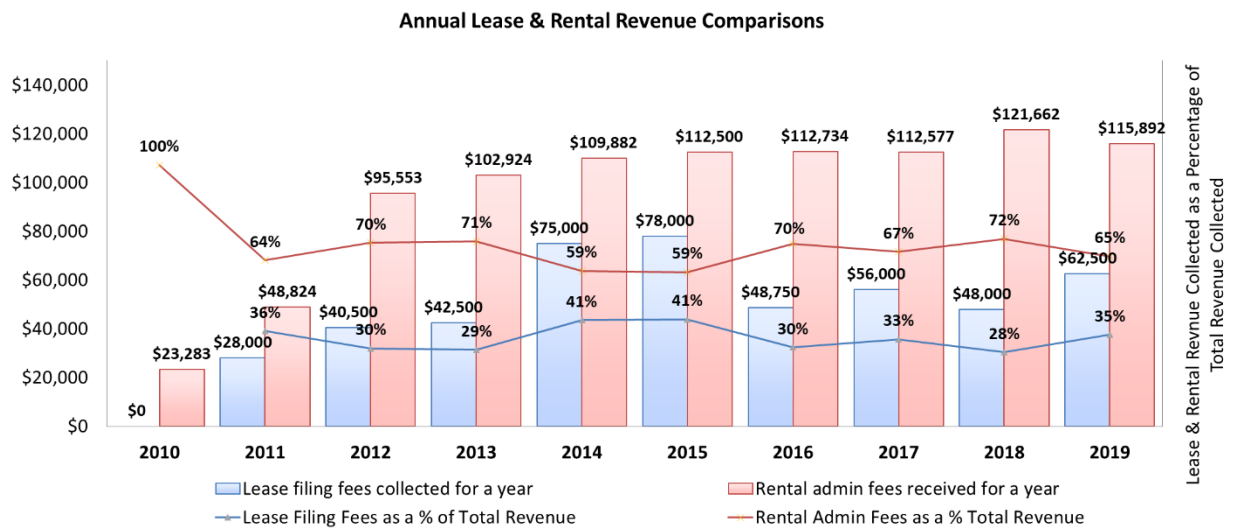


Chart 17. Annual revenue from leases and rentals as a percentage of total revenue

Consistent with a slight decline in rental administrative fee revenue collected, there were fewer warrant payments distributed by IDWR to water right holders whose water rights were the basis for approved rentals.

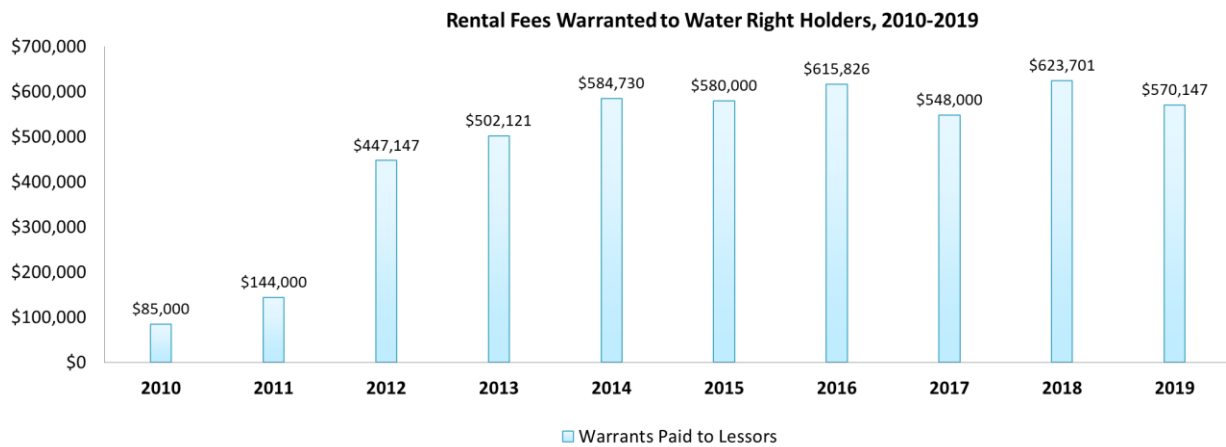


Chart 20. Annual warrant payments from the Board's bank to water right lessors, 2010-2019

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 2019, operational expenditures totaled \$276,948, of which 3% (\$7,500) went to contracting for Water Supply Bank administrative services. Staff compensation and overhead accounted for the majority of expenditures. As depicted in Chart 21 below, 2019 expenditures were more or less equivalent to annual expenditures realized between 2015 through 2019.



Chart 21. Annual operational expenditures, 2010-2019

Dividing total revenue generated for 2019 (\$178,392) by total hours logged providing Board's bank services (5,565) reveals that the Bank generated hourly revenue of \$32.06. However, dividing annual operational expenditures (\$276,948) by 5,565 hours logged reveals the Bank incurred a negative hourly operational cost of -\$49.77. The difference between these figures is visualized in Chart 22 below.

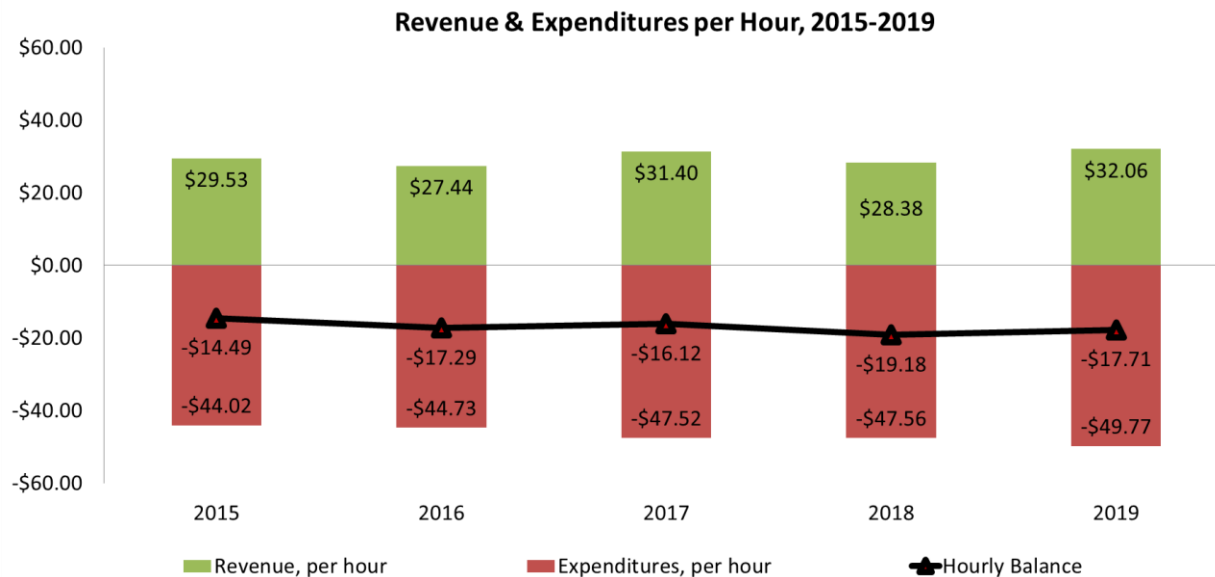


Chart 22. Annual hourly operational costs, 2015-2019

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 calculated by multiplying the total hours logged providing a specific service by the Bank's average hourly operational cost in 2019 (-\$50.49). Table 5 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 2019.

| Service Function | Hours Logged | Annual Cost | Revenue Collected | Balance |
|---------------------------------------|--------------|-------------------|-------------------|------------------|
| Processing lease applications | 1,400 | -\$69,670 | \$62,500 | -\$7,170 |
| Processing rental applications | 1,650 | -\$82,110 | \$58,200 | -\$23,910 |
| Processing applications, total | 3,050 | -\$151,780 | \$120,700 | -\$31,080 |
| Managing lease contracts | 490 | -\$24,387 | \$0 | -\$24,387 |
| Managing rental agreements | 400 | -\$19,908 | \$57,692 | \$37,784 |
| Managing transactions, total | 890 | -\$44,295 | \$57,692 | \$13,397 |
| Communications & coordination | 575 | -\$28,615 | \$0 | -\$28,615 |
| Research & development | 1,010 | -\$52,259 | \$0 | -\$52,259 |
| All services | 5,565 | -\$276,949 | \$178,392 | -\$98,557 |

Table 5. Board's bank service costs, by service function

As observed above in Table 5, a negative operating balance of approximately -\$98,557 occurred in 2019. This amount is represented as the orange bar in Chart 23 below. The negative operating balance is the difference between revenue collected from filing and administrative fees, and operational expenditures.

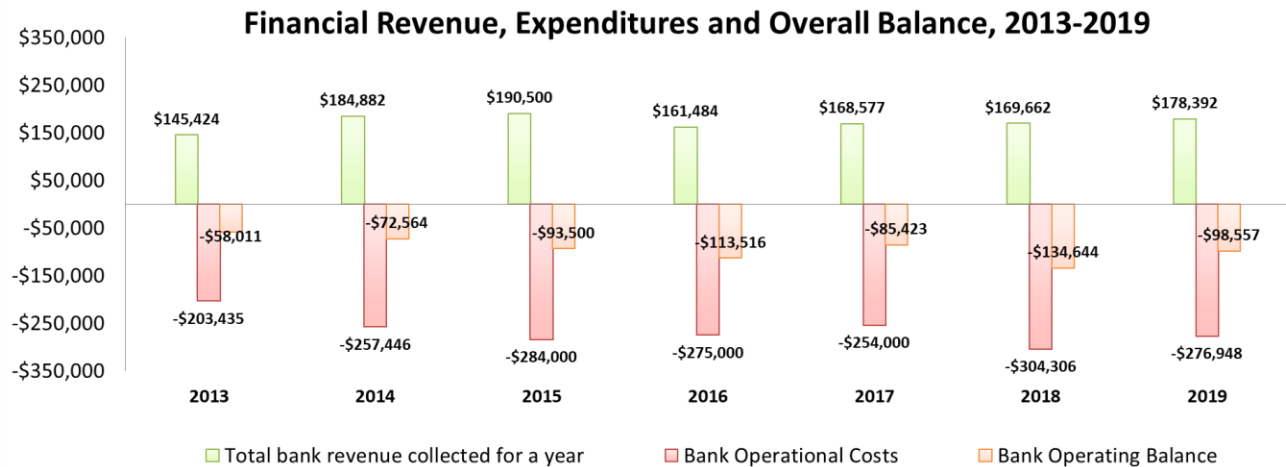


Chart 23. Board's bank operational finances, 2013-2019

Application Fees

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 6 below lists the average lease and rental application processing costs for 2019.

| Service Function | Hours Logged | Applications Processed | Hours per Application | Cost per Application |
|--------------------------------------|--------------|------------------------|-----------------------|----------------------|
| Processing lease applications | 1,400 | 198 | 7.1 | -\$351.90 |
| Processing rental applications | 1,650 | 88 | 18.8 | -\$933.19 |
| Total/Average processing sums | 3,050 | 286 | 10.6 | -\$530.77 |

Table 6. Board's bank application processing costs, for calendar year 2019

Per Table 6, overall during 2019, the average lease application required just under one day of staff time for full processing, and the average rental request required two and half 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 2019 to reveal that, over the most recent five 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 7 on the next page.

| Service Function | 2015 | 2016 | 2017 | 2018 | 2019 | Average |
|--|-----------|-----------|-----------|-----------|-----------|-----------|
| Annual Applications Processed: | | | | | | |
| Leases | *446 | *338 | 176 | 152 | 198 | **175 |
| Rentals | 131 | 117 | 122 | 103 | 88 | 112 |
| Annual Service Hours Logged: | | | | | | |
| Processing Leases | 2,041 | 1,562 | 1,521 | 1,815 | 1,400 | 1,679 |
| Processing Rentals | 1,779 | 1,641 | 1,575 | 1,692 | 1,650 | 1,687 |
| Annual Average Hours per Application: | | | | | | |
| Leases | *4.6 | *4.6 | 5.1 | 5.8 | 7.1 | **6.0 |
| Rentals | 13.6 | 14.0 | 12.9 | 16.3 | 18.8 | 15.3 |
| Annual Average Hourly Operating Cost: | | | | | | |
| | -\$44.03 | -\$44.73 | -\$47.52 | -\$48.39 | -49.77 | -\$46.89 |
| Average Annual Cost per Application: | | | | | | |
| Leases | -\$201.48 | -\$206.70 | -\$244.18 | -\$275.21 | -\$351.90 | -\$255.89 |
| Rentals | -\$597.90 | -\$627.34 | -\$613.48 | -\$773.42 | -\$933.19 | -\$709.07 |

Table 7. Board's bank service function annual average costs, 2015 - 2019

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.

In 2018, it was forecast that the Board's bank could reasonably be expected to operate with annual expenditures of approximately \$250,000, with IDWR staff hours logged to the Board's bank held 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 targets, average operational costs of \$48/hour might be maintained, allowing for stabilized operational expenditures, following which, the gap between revenue collected and operational expenditures incurred can be narrowed.

Chart 24 on the next page plots actual annual operational amounts against targeted operational amounts. During 2019, the Bank failed to collect the targeted revenue amount, however operating costs and operational balances exceed targets. As such, the Bank is on track to realize our target, annual operational balance objectives by 2023.

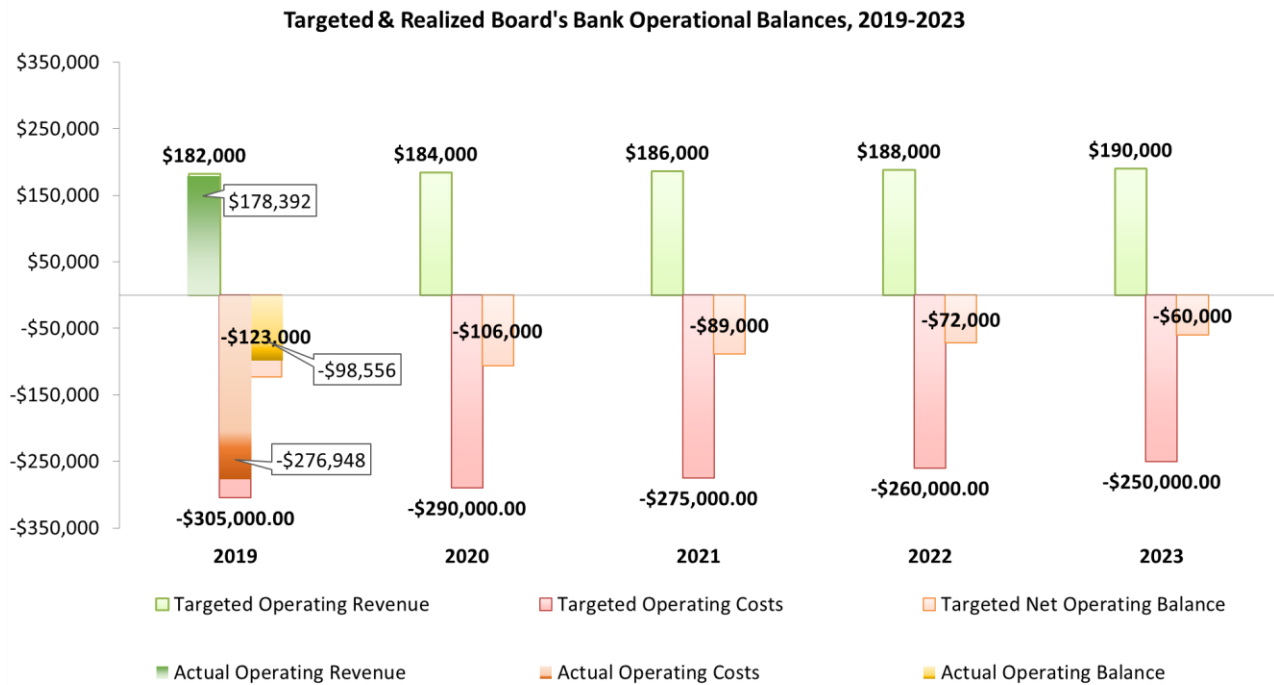


Chart 25. Targeted and realized Board's bank operational financial amounts, 2019-2023

Even as the Board's bank strives to achieve controlled expenditures of \$250,000, a negative operating balance is expected to persist until additional administrative actions are undertaken, 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 saving technologies.

Through implementation of a continuous improvement and stakeholder engagement process undertaken during 2018, the Board's bank surveyed stakeholders about their support for instituting a rental application filing fee. Through three engagement efforts, it was revealed that a majority of respondents affirmed support for implementing a rental application filing fee, however there was no clear consensus on a specific filing fee amount.

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. We will also begin reporting on the minimum, maximum and median dollar per acre-foot, dollar per acre and dollar per cubic-foot-per-second amounts approved for rental agreements since 2017. These processing costs and dollar per water unit rental amounts can be reported in the annual Water Supply Bank report for the Board's bank.

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