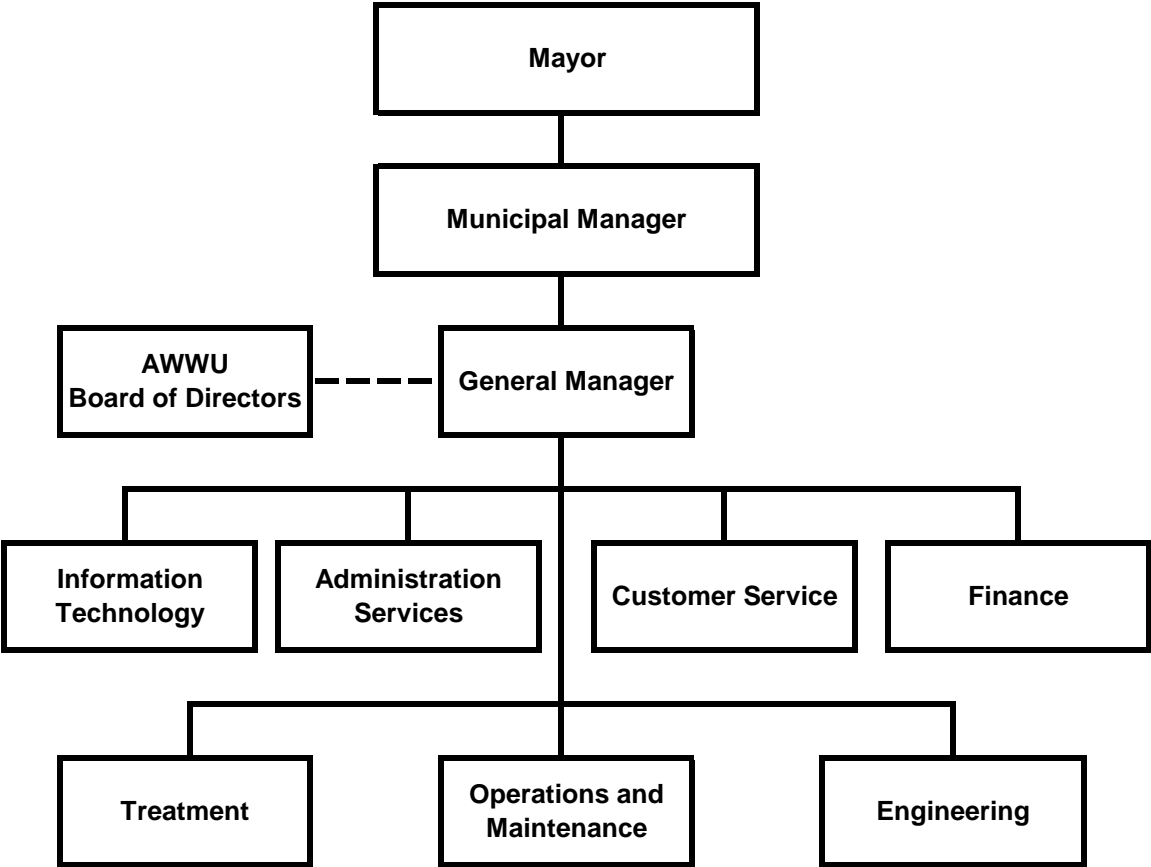


Anchorage Water & Wastewater Utility



Anchorage Water & Wastewater Organizational Overview

Overview

The Anchorage Water & Wastewater Utility (AWWU) is the largest water and wastewater utility in Alaska. AWWU currently serves the Municipality of Anchorage extending from Eklutna to as far south as Girdwood. Although they share one workforce, AWWU operates as two separate economic and regulated entities: the Anchorage Water Utility (AWU) and the Anchorage Wastewater Utility (ASU).

System Description

To provide water and sewer services, AWWU owns and operates five Treatment Facilities (2 water and 3 wastewater), approximately 1,600 miles of pipe, and over 325,000 square feet of facility space distributed throughout the Municipality. The certificated water service area covers 130.4 square miles in three distinct geographic areas, Northern Communities, the Anchorage Bowl, and Girdwood Valley. Estimates place the water service population at approximately 240,000 people via nearly 56,000 customer accounts. The certificated sewer service area is larger, encompassing nearly all of the Municipality. ASU currently provides sewer service to approximately 250,000 people via approximately 57,000 customer accounts. Additionally, AWWU receives septage pumped from on-site wastewater systems on lots in areas not directly connected to the sewer system.

AWU's three sources of water are Eklutna Lake, Ship Creek, and groundwater accessed through a system of wells in the Northern Communities, the Anchorage Bowl, and Girdwood Valley. Eklutna Water Treatment Facility (WTF) and the wells which supply Girdwood are operated year-round and serve as the primary supply sources for the Anchorage and Girdwood water systems. The Ship Creek Water Treatment Facility and the remainder of the water wells are used to augment the primary water supply, mainly in times of peak demand, as well as provide redundancy to the Eklutna source for Eagle River and the Anchorage Bowl. Of these sources, the Eklutna Water Treatment Facility now provides approximately 86% of total water production for the Northern Communities/Eagle River and the Anchorage Bowl. In Girdwood, where system demand constitutes less than 2 percent of AWWU's total water production, all water produced and distributed is from two municipally-owned and managed wells.

ASU operates three wastewater treatment facilities to treat wastewater collected in three geographically separate but commonly managed sewer systems. The largest of these is the John M. Asplund Wastewater Treatment Facility (WWTF) located at Point Woronzof. The Asplund WWTF was constructed in the early 1970's when Anchorage eliminated direct ocean discharges. It services the wastewater treatment needs of the Anchorage Bowl. The Asplund facility has received silver, gold, and platinum awards from the National Association of Clean Water Agencies for efficiency and environmental compliance. ASU is continually at work to maintain and enhance the facility. The Asplund facility operates in accordance with a National Pollution Discharge Elimination System (NPDES) permit administered by the U.S. Environmental Protection Agency (EPA). The permit, which expired in 2005 but has been administratively extended by EPA, allows discharge of effluent receiving primary treatment, in accordance with Section 301(h) of the Clean Water Act.

The Eagle River WWTF was originally built in the 1960's and upgraded several times. It services the public wastewater treatment and disposal needs within Eagle River and Chugiak.

The Eagle River facility provides biological secondary treatment and discharges treated effluent to Eagle River in accordance with a permit recently reauthorized by the Alaska Department of Environmental Conservation (ADEC), which has assumed primacy from EPA over permits for wastewater discharge to fresh water.

The third facility is Girdwood WWTF. It was originally constructed in the 1970's and also has undergone several process modifications and upgrades. The Girdwood facility provides biological secondary treatment and discharges treated effluent to Glacier Creek under an administratively extended NPDES permit administered by the ADEC. The core facility is now at the end of its useful life. Phase 1 of plant replacement and upgrades was completed in 2014. Phase 2 of the plant replacement and upgrade is being planned to conform to discharge requirements of a new permit.

Over the past two decades, investments in physical infrastructure have resulted in an increase in the value of AWU. From 1990 to present, plant in service has increased by 134% from \$355.2 million to \$831 million. This growth is primarily a result of an increasing amount of investment in transmission and distribution assets (pipelines), with lesser investments in general plant assets (e.g., structures and intangible assets).

From 1990 to present, ASU's plant in service has increased by 119% from \$301.5 million to \$660 million. This growth is primarily a result of an increasing investment in sewer collection pipeline network, followed by upgrades in sewer treatment facilities, and modest investment in pumping plant (sewage lift or pump stations), general plant (structures), and intangible assets.

Organization

The General Manager's office is responsible for overall operation of AWWU that is organized into 7 divisions:

- Administrative Services Division – provides for training, safety, and internal and external communications.
- Customer Service Division – responsible for responding to customer inquiries, billing, and collections for both utilities, issuing of permits, and field service functions.
- Engineering Division – responsible for development and execution of AWWU's capital program and for system planning.
- Finance Division – responsible for all general ledger and plant accounting, preparation of utility budgets and financial statements, and regulatory filings.
- Information Technology Division – provides support for all of AWWU's computers, network, and software systems.
- Operations and Maintenance (O&M) Division – maintains the treatment facilities and repairs all water and sewer piping and lift stations. The O&M Division also operates the wastewater collection system and is responsible for AWWU's supervisory control and data acquisition (SCADA) system.
- Treatment Division – responsible for day-to-day operation of the treatment facilities and water distribution system and for maintaining compliance with all state and federal regulations.

Anchorage Water & Wastewater Utility Business Plan

Vision

Excellence through innovation.

Mission

Providing safe and reliable water and wastewater service today and into the future.

Message

Anchorage Water & Wastewater Utility (AWWU) is investing to ensure reliable service, safeguard public health, and protect the environment, long into the future.

Services

AWWU is the largest water and wastewater utility in Alaska. AWWU currently serves the Municipality of Anchorage extending from Eklutna to as far south as Girdwood. Although they share one workforce, AWWU operates as two separate economic and regulated entities: the Anchorage Water Utility (AWU) and the Anchorage Wastewater Utility (ASU).

Business Goals

AWWU prepared an updated strategic plan in 2016. The plan includes the following goals:

- Be responsive to the needs of the community
- Be the model of innovation and efficiency in service to the public
- Be a responsible steward of ratepayer funds
- Be the employer of choice for existing and future staff

Commitments to Customers

AWWU has identified the following customer commitments which represent the outcomes or accomplishments of the Utilities' activities as viewed by the customer:

1. Provide safe drinking water that meets or exceeds all standards.
2. Protect the environment through appropriate wastewater collection, treatment, and disposal.
3. Provide reliable service.
4. Have timely, professional, and courteous interactions with customers.
5. Manage finances responsibly and transparently.
6. Set rates that fairly reflect the cost of providing service and maintaining infrastructure.
7. Deliver services affordably to promote a strong Anchorage economy.
8. Invest wisely to minimize risk and maintain service levels.
9. Continuously improve the efficiency of our operations.
10. Anticipate change and prepare for the future.

Performance Measures to Track Progress in Achieving Goals

AWWU measures progress in achieving these customer commitments using quantifiable performance measures, including the following:

1. Compliance with all State and Federal drinking water, wastewater and air standards.
2. Number of planned and unplanned water outages.
3. Sanitary sewer overflows.
4. Recordable incident rate (of lost-time injuries and accidents).
5. Execution of capital improvement budget.
6. Debt to equity ratio.

Anchorage Water & Wastewater Utility

Anchorage: Performance. Value. Results.

Mission

Supporting the public health, safety, and economic interests of the community by providing quality water and wastewater services in a responsible, efficient, and sustainable manner.

Core Services

- Reliably treat and distribute potable water for domestic, commercial, and firefighting uses throughout the certificated service area.
- Reliably collect, treat and dispose of wastewater in accordance with laws and regulations that protect public health and the environment.

Accomplishment Goals

- Provide reliable service
- Provide safe drinking water that meets or exceeds all standards
- Protect the environment through appropriate wastewater collection, treatment, and disposal.
- Fiscal responsibility and transparency with utility finances.
- Timely, professional, and courteous interactions with customers.
- Rates that fairly reflect the cost of providing service and maintaining infrastructure
- Continuous improvement in the efficiency of our operations
- Anticipate change and be prepared for the future.

Performance Measures

Progress in achieving goals shall be measured by:

1. Compliance with all State and Federal drinking water standards
/wastewater standards
/Clean Air Act standards
2. Number of planned and unplanned water outages
3. Sanitary sewer overflows
4. Recordable incident rate (as compared to the standard incident rate for water and wastewater utilities)
5. Execution of capital improvement budget
6. Debt to equity ratio

Measure #1: Compliance with all state and Federal drinking water, wastewater, and clean air standards.

| | Goal | 2017 | | Past Years | | | | | |
|--|------|------|-----|------------|-------|------|--------|-------|-------|
| | | Q2 | Q1 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 |
| Safe Drinking Water Act Compliance (%) | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Clean Water Act (NPDES permit) Compliance (%) | 100 | | | 100 | 100 | | | | 100 |
| -Asplund | | 100 | 100 | 100 | 100 | 100 | 99.8 | 100 | |
| -Eagle River | | 100 | 100 | 99.7 | 100 | 100 | 100 | 99.5 | |
| -Girdwood | | 100 | 100 | 99.7 | 99.5 | 99.8 | 99.3 | 97.5 | |
| Clean Air Act Compliance (%) (Asplund Incinerator) | 100 | 100 | 100 | 99.99 | 99.98 | 100 | 99.998 | 99.99 | 99.99 |

Measure #2: Number of planned and unplanned water outages

| Measure 2: Number of planned and unplanned water outages (customers per month) | Goal (Affected customers per month) | 2017 (monthly average) | 4 th Q 2017 (monthly average) | 3 rd Q 2017 (monthly average) | 2 nd Q 2017 (monthly average) | 1 st Q 2017 * (monthly average) | Historical monthly average | | | | |
|--|-------------------------------------|---------------------------|---|---|---|---|----------------------------|------|------|------|------|
| | | | | | | | 2016 | 2015 | 2014 | 2013 | 2012 |
| Planned Outages | | | | | | | | | | | |
| <4 hours | <20 | 5 | | | 10 | 0 | 5 | 18 | 27 | 25 | 18 |
| 4-12 hours | <20 | 94 | | | 174 | 13 | 8 | 23 | 37 | 86 | 47 |
| >12 hours | 0 | 0 | | | 0 | 0 | 0.2 | 0.2 | 0.6 | 0.3 | 0.2 |
| Unplanned Outages | | | | | | | | | | | |
| <4 hours | <20 | 17 | | | 23 | 10 | 92 | 41 | 40 | 27 | 46 |
| 4-12 hours | <50 | 41 | | | 24 | 58 | 22 | 33 | 44 | 33 | 38 |
| >12 hours | 0 | 3.5 | | | 0 | 7 | 5 | 0.2 | 3 | 8 | 4 |

* 1st Quarter 2017 was originally reported using an incomplete data set.

Measure #3: Sanitary Sewer Overflows (monthly)

| Goal | 2017 | | | | Historical monthly average | | | | | |
|------|------|----|------|-----|----------------------------|------|------|------|------|------|
| | Q4 | Q3 | Q2 | Q1 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 |
| <1.5 | | | 0.33 | 1.3 | 1.48 | 1.58 | 1.75 | 2.25 | 1.83 | 1.91 |

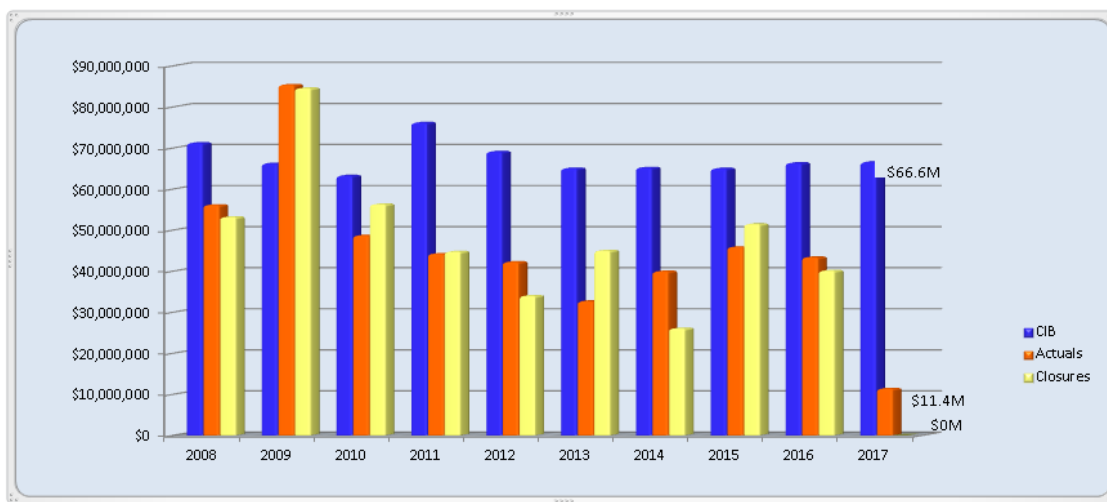
Measure #4: Number of reportable injuries and accidents

| Goal | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 |
|-------|------|------|------|------|------|------|------|
| <4.60 | | 6.08 | 5.91 | 4.47 | 5.2 | 4.4 | 1.72 |

Note: Bureau of Labor Statistics (BLS) will normally post the previous year's incidence rate during the months of June or July. AWWU falls within the utilities sector of electric power generation, transmission and distribution; natural gas distribution; and water, sewer, and other systems.

Measure #5: Execution of Capital Improvement Budget

| Goal | 2017 | Historical Information | | | | | |
|------|------|------------------------|------|------|------|------|------|
| | | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 |
| 75% | 17% | 65% | 71% | 61% | 56% | 65% | 61% |



| |
|---|
| Measure #6: Debt to Equity Ratio |
|---|

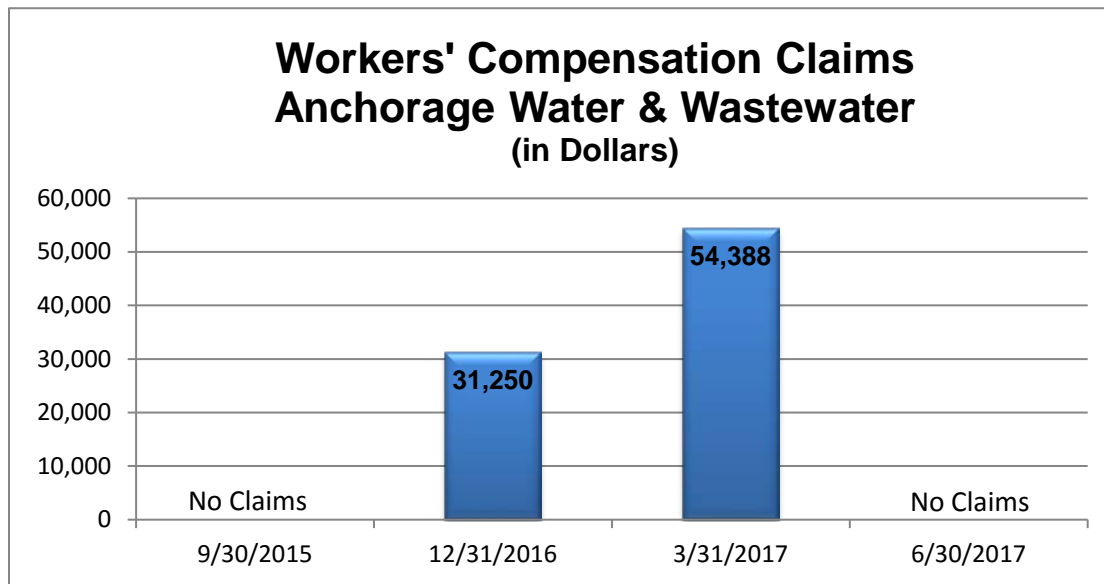
| | Goal | 2016 * | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 |
|--------------------|-------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Water Utility | 67/33 | 62/38 | 63/37 | 62/38 | 65/35 | 67/33 | 70/30 | 70/30 |
| Wastewater Utility | 67/33 | 67/33 | 67/33 | 65/35 | 67/33 | 66/34 | 68/32 | 69/31 |

*2016 is un-audited draft.

PVR Measure WC: Managing Workers' Compensation Claims

Reducing job-related injuries is a priority for the Administration by ensuring safe work conditions and safe practices. By instilling safe work practices we ensure not only the safety of our employees but reduce the potential for injuries and property damage to the public. The Municipality is self-insured and every injury poses a financial burden on the public and the injured worker's family. It just makes good sense to WORK SAFE.

Results are tracked by monitoring monthly reports issued by the Risk Management Division.



Anchorage Water & Wastewater Highlights and Future Events

Aging Infrastructure

At the current time, AWWU provides best-in-class service as measured against industry benchmarks such as drinking water compliance rate, water quality complaints, water pipeline breaks, unplanned service disruptions, compliance with discharge permits, collection system failures, and sewer overflows. However, the infrastructure required to provide water and sewer service is aging and will require significant annual capital investments to maintain service levels.

In aggregate, AWU's physical assets are considered to have about one-half of their useful lives consumed. The water transmission and distribution system pipe network consists of over 845 miles of pipe, has a weighted average age of over 35 years. Other AWU assets including treatment facilities, reservoirs, wells, booster stations, and major valve vaults are of varying age, but in aggregate, have reached just over one-half of their useful lives and have undergone or have been scheduled for major re-investment over the next 5-10 years.

ASU's sewer pipe network consists of over 759 miles of pipe and has a weighted average age of 36 years, again reflecting just over one-half of the estimated useful lives of pipe and approximately three-fifths of the estimated useful lives of other sewer plant. Unlike the water system however, some treatment facility assets are new. Within the Anchorage Bowl, more than \$40 million of treatment plant investment occurred over the past decade, much of that for new assets (e.g., new headworks, solids handling, building improvements and liquid process improvements) at the Asplund WWTF. In Eagle River, new process improvements and support systems (UV disinfection, mechanical and HVAC systems) worth over \$3 million were built over the last five years. The exception is the Girdwood WWTF, which is now over 30 years old and reaching the end of its useful life as documented by multiple studies performed since 2006.

AWWU has advanced its asset management program to manage the Utility's aging infrastructure. The primary components of AWWU's asset management program include:

- Risk based approach that categorizes AWWU's assets and evaluates each asset's class on the basis of consequence and likelihood of failure.
- Robust analysis of system performance and maintenance data to predict service lives of different asset classes.
- Business case analysis of major projects to determine solutions yielding lowest overall lifecycle costs.
- Use of state-of-the-art repair and rehabilitation technologies to reduce service disruption and reduce costs.
- Condition assessment monitoring and evaluation using both AWWU staff and specialized contractors.

Limited Customer Growth

The Anchorage economy and land-use development patterns and restrictions are such that AWWU does not anticipate significant customer growth rate for the foreseeable future. Limited customer growth represents a significant challenge for AWWU because there are few new customers to help cover the cost of maintaining infrastructure. Exacerbating the lack of customer growth is the repair and replacement of contributed plant. In the 1990's, over 70% of the plant in-service was contributed (i.e., given to AWWU or paid for by grants). Today that percentage is about 50% and decreasing steadily. Contributed plant is not included in rates for calculating depreciation costs and earning a return. However, repair and replacement of this considerable portion of our plant-in-service must be borne wholly by customers. With a very slow growth of the customer base, cost of this repair and replacement will increase over time for each customer.

There is very little AWWU can do to encourage significant customer growth without major changes in policy and community desires. Most of AWWU's customer growth will come from redevelopment of existing properties in the MOA, expansion in outlying areas (which require significant expenditures to extend infrastructure) and limited infill. Redevelopment and infill must comply with current codes and utility tariffs, which may require upgrades to existing utility service.

Aging Workforce

AWWU is typical of the industry in that we have an aging workforce. Over half of AWWU's workforce is 45 years old or more. Many of these individuals can be expected to retire in the next few years. Many of these individuals are the experienced and licensed professionals required to operate AWWU's facilities in compliance with Alaska regulations. Alaska's oil industry and the boom in oil and gas development in the lower 48 represents a significant threat to retaining water and wastewater professionals. The oil industry typically pays significantly higher wages than AWWU.

Debt

At the end of 2016, AWWU was carrying approximately \$402.7 million in total net debt. AWWU can easily service this debt and the Utility maintains healthy operating margins and debt service coverage ratios. However, compared to peer utilities, AWWU has a significant amount of debt and finances much less of its capital program with equity.

Two major factors have contributed to AWWU's current debt/equity position. First, during the 1990's, AWWU did not have rate increases and had a very modest capital improvement budget (CIB). During these years, reductions in workforce levels and improvements in worker productivity as a result of investments in appropriate technology allowed the Utility to operate effectively, but not accumulate equity.

Rate Increases Calculated, Requested, and Approved
AWWU 2004-2017

| Rate Year | Calculated Rate Increase in RRS | | Requested Permanent Rate Increase | | Approved/Stipulated Permanent Rate Increase | | Reason For Requesting Increases Less Than The Calculated Increases |
|-----------|---------------------------------|--------|-----------------------------------|--------|---|--------|---|
| | AWU | ASU | AWU | ASU | AWU | ASU | |
| 2004 | 14.20% | 8.10% | 14.20% | 8.10% | 13.60% | 8.10% | The calculated increases were requested due to the change in the MUSA calculation. |
| 2005 | 7.20% | 6.80% | 7.20% | 6.80% | 7.80% | 3.00% | The calculated increases were requested due to the change in the MUSA calculation. |
| 2006 | 12.40% | 15.00% | 8.90% | 10.60% | 6.50% | 10.60% | Policy direction to limit rate increases requested to reduce impact on customers. |
| 2007 | 15.00% | 17.80% | 14.50% | 13.00% | 7.00% | 9.50% | Policy direction to limit rate increases requested to reduce impact on customers. |
| 2008 | - | - | - | - | - | - | Rate changes were not requested by AWWU for 2008. |
| 2009 | 8.70% | 8.00% | 7.00% | 6.50% | 5.60% | 6.50% | Policy direction to limit rate increases requested to reduce impact on customers. |
| 2010 | 7.00% | 9.50% | 2.50% | 2.50% | 2.50% | 2.50% | Policy direction to limit rate increases requested to reduce impact on customers. |
| 2011 | 18.50% | 26.20% | 8.00% | 15.00% | 8.00% | 15.00% | Policy direction to limit rate increases requested to reduce impact on customers. |
| 2012 | 13.00% | 16.60% | 6.00% | 11.00% | 6.00% | 11.00% | Policy direction to limit rate increases requested to reduce impact on customers. |
| 2013 | 9.10% | 6.80% | 6.00% | 4.50% | 6.00% | 4.50% | Policy direction to limit rate increases requested to reduce impact on customers. |
| 2014 | 5.60% | 6.70% | 4.00% | 5.50% | 2.26% | 4.34% | Policy direction to limit rate increases requested to reduce impact on customers. AWWU stipulated to permanent rates lower than the rates requested. |
| 2015 | - | - | - | - | - | - | Rate changes were not requested by AWWU for 2015. |
| 2016 | - | - | - | - | - | - | Rate changes were not requested by AWWU for 2016. |
| 2017 | - | 11.90% | - | 9.50% | - | 9.50% | Policy direction to limit rate increases requested to reduce impact on customers. |

To improve its debt position, AWWU must continue to request reasonable rates and at the same time control expenses. The budget provided in this package provides just such a balance.

Wastewater Treatment Facilities Discharge Permits

The State of Alaska Department of Environmental Conservation (ADEC) assumed authority for permitting wastewater discharges for the Girdwood and Eagle River Wastewater Treatment Facilities (WWTF) in November 2008. The Eagle River WWTF permit was reissued reissuance by ADEC in 2014. The Girdwood WWTF permit is administratively extended pending reissuance by ADEC. The Utility is working closely with ADEC to ensure that a proposed upgrade to the Girdwood WWTF is consistent with terms and conditions of the new permit, when it is reissued.

Authorization of discharge into marine waters from the Asplund WWTF under the provisions of Section 301(h) of the Clean Water Act remains under the auspices of the U.S. Environmental Protection Agency (EPA). EPA is currently evaluating the Utility's application for reauthorization of the permit. The renewal process includes an evaluation by EPA to determine whether Asplund continues to meet the Clean Water Act criteria necessary to reissue a permit with a 301(h) modification allowing only primary treatment. Subsequent to a positive determination, EPA is required to consult with the National Marine Fisheries Service (NMFS) on the effects of the permit reauthorization on endangered species (i.e., the Cook Inlet beluga whale). If NMFS finds that the discharge reauthorization is likely to jeopardize continued existence of the species or adversely modify critical habitat, NMFS may impose conditions on the permit to mitigate the effects on the species. Discussions with federal agencies to-date suggest that such a finding is unlikely.

Anchorage Water & Wastewater Utility External Impacts

Wastewater Treatment Facilities Discharge Permits

The State of Alaska Department of Environmental Conservation (ADEC) assumed authority for permitting wastewater discharges for the Girdwood and Eagle River Wastewater Treatment Facilities (WWTF) in November 2008. The Eagle River WWTF permit was reissued by ADEC in 2014, and will be valid for at least five years. The Girdwood WWTF permit is administratively extended pending reissuance by ADEC. The Utility is working closely with ADEC to ensure that a proposed upgrade to the Girdwood WWTF is consistent with terms and conditions of the new permit, when it is reissued.

Authorization of discharge into marine waters from the Asplund WWTF remains under the auspices of the U.S. Environmental Protection Agency (EPA). The EPA is currently evaluating the Utility's application for reauthorization of the permit allowing only primary treatment, in accordance with criteria set out in Section 301(h) of the Clean Water Act. Subsequent to the agency's determination that the Asplund discharge meets the 301(h) criteria, EPA will consult with the National Marine Fisheries Service (NMFS) on the effects of the permit reauthorization on endangered species (i.e., the Cook Inlet beluga whale). If NMFS finds that the discharge reauthorization is likely to jeopardize continued existence of the species or adversely modify critical habitat, NMFS may impose conditions on the permit to mitigate the effects on the species. Discussions with federal agencies to-date suggest that such a finding is unlikely.

Aging Infrastructure

At the current time, AWWU provides best-in-class service as measured against industry benchmarks. However, the infrastructure required to provide water and sewer service is aging and will require significant annual capital investments to maintain service levels.

AWWU has advanced its asset management program to optimize spending on the Utility's aging infrastructure. We are performing business case analyses of major issues to determine solutions that lead to lowest overall life cycle costs, as well as extensive condition assessment monitoring and evaluation using both AWWU staff and specialized contractors. This work is expected to provide best value to ratepayers in the long term.

Anchorage Water & Wastewater Utility Workforce Projections

| Division | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| General Manager | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Administrative Services | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Customer Service | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| Engineering | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| Finance | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| Information Technology | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| Operations and Maintenance | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| Treatment | 63 | 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| Total Full Time | 282 | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Part time | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Seasonal Temporary | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Interns | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Total Temporary | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Total Positions | 294 | 295 | 295 | 295 | 295 | 295 | 295 | 295 |

Anchorage Water Utility 8 Year Summary

(\$ in thousands)

| Financial Overview | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | Actuals | Proforma | Proposed | | | | | |
| Revenues | 62,375 | 60,349 | 62,163 | 65,506 | 69,576 | 73,506 | 77,716 | 81,456 |
| Expenses and Transfers | 52,879 | 52,941 | 56,539 | 59,460 | 60,840 | 62,480 | 64,120 | 68,340 |
| Net Income (Loss) - Regulatory | 9,496 | 7,408 | 5,624 | 6,046 | 8,736 | 11,026 | 13,596 | 13,116 |
| Dividend to General Government | - | - | - | 1,860 | 2,000 | 2,880 | 3,640 | 4,490 |
| Increase in Net Assets | 9,496 | 7,408 | 5,624 | 4,186 | 6,736 | 8,146 | 9,956 | 8,626 |
| Budgeted Positions* | 294 | 295 | 295 | 295 | 295 | 295 | 295 | 295 |
| Capital Improvement Program | 32,226 | 32,963 | 32,620 | 32,860 | 34,000 | 34,755 | 35,755 | 37,000 |
| New Debt | 15,498 | 18,700 | 18,900 | 51,000 | 10,300 | 10,500 | 10,800 | 77,200 |
| Net Capital Assets (12/31) | 543,017 | 557,387 | 572,332 | 586,966 | 602,177 | 617,359 | 632,844 | 648,740 |
| Net Position (12/31) | 139,886 | 147,294 | 152,918 | 157,104 | 163,840 | 171,986 | 181,942 | 190,568 |
| Operating Cash | 36,343 | 34,750 | 32,877 | 29,603 | 27,143 | 26,124 | 27,709 | 25,734 |
| Construction Cash Pool | 4,223 | 4,455 | 268 | 28,119 | 14,444 | 142 | - | 35,665 |
| Restricted Cash | 362 | 362 | 362 | 362 | 362 | 362 | 362 | 362 |
| Total Cash | 40,928 | 39,567 | 33,507 | 58,084 | 41,949 | 26,628 | 28,071 | 61,761 |
| IGCs - General Government | 1,105 | 1,834 | 2,597 | 2,597 | 2,597 | 2,597 | 2,597 | 2,597 |
| MUSA | 7,315 | 7,991 | 8,280 | 8,510 | 8,730 | 8,960 | 9,190 | 9,420 |
| CCP Borrowings from Gen'l Govt. | - | - | - | - | - | - | - | - |
| Total Outstanding LT Debt | 227,119 | 214,163 | 222,190 | 261,400 | 257,545 | 253,269 | 249,468 | 309,097 |
| Total Annual Debt Service | 16,140 | 16,169 | 18,110 | 20,841 | 22,831 | 23,285 | 22,958 | 28,235 |
| Debt Service Coverage (Bond) | 3.22 | 2.71 | 2.64 | 2.35 | 2.24 | 2.47 | 2.72 | 2.15 |
| Debt Service Coverage (Total) | 1.85 | 1.55 | 1.35 | 1.28 | 1.30 | 1.39 | 1.54 | 1.34 |
| Debt/Equity Ratio | 62 / 38 | 59 / 41 | 59 / 41 | 63 / 37 | 61 / 39 | 60 / 40 | 58 / 42 | 62 / 38 |
| Rate Change Percent | 0.0% | 0.0% | 3.0% | 5.0% | 6.0% | 6.0% | 6.0% | 4.2% |
| Single Family Rate | 49.70 | 49.70 | 51.19 | 53.75 | 56.97 | 60.39 | 64.02 | 66.71 |
| Statistical/Performance Trends | | | | | | | | |
| Number of Accounts | 56,294 | 56,435 | 56,576 | 56,717 | 56,859 | 57,001 | 57,144 | 57,287 |
| Average Treatment (MGD) | 22.7 | 22.8 | 22.8 | 22.9 | 22.9 | 23.0 | 23.0 | 23.1 |
| Miles of Water Lines | 845 | 847 | 849 | 851 | 853 | 856 | 858 | 860 |
| Number of Public Hydrants | 6,027 | 6,042 | 6,057 | 6,072 | 6,087 | 6,103 | 6,118 | 6,133 |

* Workforce Authorized per Budget is for both Water and Wastewater utilities.

Anchorage Water Utility Statement of Revenues and Expenses

| | 2016 Actuals | 2017 Proforma | 2017 Revised | 18 v 17 \$ Change | 2018 Proposed | 18 v 17 % Change |
|--|-------------------|-------------------|-------------------|----------------------|-------------------|---------------------|
| Operating Revenue | | | | | | |
| Charges for services | 59,940,423 | 58,464,000 | 59,700,000 | 517,000 | 60,217,000 | 0.9% |
| Miscellaneous | 1,325,422 | 1,230,000 | 1,188,000 | 73,000 | 1,261,000 | 6.1% |
| Total Operating Revenue | 61,265,845 | 59,694,000 | 60,888,000 | 590,000 | 61,478,000 | 1.0% |
| Non Operating Revenue | | | | | | |
| Investment Income | 690,983 | 655,000 | 610,000 | 70,000 | 680,000 | 11.5% |
| Other Income | 418,388 | - | 150,000 | (145,000) | 5,000 | -96.7% |
| Total Non Operating Revenue | 1,109,371 | 655,000 | 760,000 | (75,000) | 685,000 | -9.9% |
| Total Revenue | 62,375,216 | 60,349,000 | 61,648,000 | 515,000 | 62,163,000 | 0.8% |
| Operating Expenses | | | | | | |
| Labor | | | | | | |
| Labor and Benefits | 19,084,688 | 15,960,000 | 16,420,727 | 915,845 | 17,336,572 | 5.6% |
| Overtime | 561,431 | 705,000 | 453,000 | | 453,000 | 0.0% |
| Total Labor | 19,646,119 | 16,665,000 | 16,873,727 | 915,845 | 17,789,572 | 5.4% |
| Non Labor | | | | | | |
| Non Labor | 8,632,876 | 8,921,000 | 9,141,716 | (2,900) | 9,138,816 | 0.0% |
| Travel | 52,296 | 80,000 | 82,500 | 2,900 | 85,400 | 3.5% |
| Transfers (MUSA and gross receipts) | 7,314,997 | 7,991,023 | 7,991,023 | 288,977 | 8,280,000 | 3.6% |
| Depreciation and Amortization | 10,838,760 | 11,260,000 | 11,510,000 | 210,000 | 11,720,000 | 1.8% |
| Total Non Labor | 26,838,929 | 28,252,023 | 28,725,239 | 498,977 | 29,224,216 | 1.7% |
| Total Direct Cost | 46,485,048 | 44,917,023 | 45,598,966 | 1,414,822 | 47,013,788 | 3.1% |
| Charges from other departments | 1,480,296 | 1,834,000 | 2,140,605 | 456,188 | 2,596,793 | 21.3% |
| Charges to other departments | (375,000) | - | - | | - | 0.0% |
| Total Operating Expense | 47,590,344 | 46,751,023 | 47,739,571 | 1,871,010 | 49,610,581 | 3.9% |
| Non Operating Expense | | | | | | |
| Interest on bonded debt | 5,217,686 | 5,120,000 | 6,097,000 | (599,000) | 5,498,000 | -9.8% |
| Amortization of debt expense | 141,357 | 200,000 | 345,000 | | 345,000 | 0.0% |
| Other interest expense | 1,496,100 | 1,800,000 | 1,678,000 | 307,000 | 1,985,000 | 18.3% |
| Interest during construction | (1,566,014) | (930,000) | (930,000) | 30,000 | (900,000) | -3.2% |
| Total Non Operating Expense | 5,289,129 | 6,190,000 | 7,190,000 | (262,000) | 6,928,000 | -3.6% |
| Total Expenses (Function Cost) | 52,879,473 | 52,941,023 | 54,929,571 | 1,609,010 | 56,538,581 | 2.9% |
| Net Income | 9,495,743 | 7,407,977 | 6,718,429 | (1,094,010) | 5,624,419 | -16.3% |
| Appropriation: | | | | | | |
| Total Expenses | | | 54,929,571 | 1,609,010 | 56,538,581 | |
| Less: Non Cash items | | | | | | |
| Depreciation and amortization | | | 11,510,000 | 210,000 | 11,720,000 | |
| Amortization of debt expense | | | 345,000 | - | 345,000 | |
| Interest during construction | | | (930,000) | 30,000 | (900,000) | |
| Total Non-Cash | | | 10,925,000 | 240,000 | 11,165,000 | |
| Amount to be Appropriated (cash expenses) | | | 44,004,571 | 1,369,010 | 45,373,581 | |

Anchorage Water Utility Reconciliation from 2017 Revised Budget to 2018 Proposed Budget

| | Appropriation | Positions | | |
|---|-------------------|------------|----------|-----------|
| | | FT | PT | T |
| 2017 Revised Budget | 54,929,571 | 283 | 1 | 11 |
| Transfers (to)/from Other Agencies | | | | |
| - Charges from other departments | 456,188 | - | - | - |
| Debt Service Charges | | | | |
| - Interest | (292,000) | - | - | - |
| - AFUDC | 30,000 | | | |
| Changes in Existing Programs/Funding for 2018 | | | | |
| - Salary and benefits adjustments | 915,845 | - | - | - |
| - Depreciation | 210,000 | - | - | - |
| - MUSA | 288,977 | | | |
| 2018 Continuation Level | 56,538,581 | 283 | 1 | 11 |
| 2018 Proposed Budget Changes | | | | |
| - Travel | 2,900 | - | - | - |
| - Other non labor | (2,900) | - | - | - |
| 2018 Proposed Budget | 56,538,581 | 283 | 1 | 11 |
| 2018 Budget Adjustment for Accounting Transactions (Appropriation) | | | | |
| - Depreciation and amortization | (11,720,000) | - | - | - |
| - Amortization of debt expense | (345,000) | - | - | - |
| - Interest during construction | 900,000 | - | - | - |
| 2018 Proposed Budget (Appropriation) | 45,373,581 | 283 | 1 | 11 |

Workforce Authorized per Budget is for both Water and Wastewater utilities.

Anchorage Water Utility
2018 - 2023 Capital Improvement Program
(in thousands)

| Project Category | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| ADOT-MOA-Emergency | 3,371 | 2,627 | 3,625 | 4,110 | 4,037 | 4,000 | 21,770 |
| Facility Master Plan | - | 650 | - | 50 | - | 250 | 950 |
| IT Hardware/Software | 2,075 | 1,350 | 1,450 | 1,450 | 1,475 | 1,450 | 9,250 |
| Miscellaneous Equipment | 850 | 850 | 850 | 850 | 850 | 850 | 5,100 |
| Other Plant & Facilities | - | - | 250 | - | 650 | - | 900 |
| Transmission/Distribution | 21,754 | 20,478 | 23,975 | 22,695 | 25,993 | 27,950 | 142,845 |
| Vehicles | 1,000 | 1,055 | 1,000 | 1,000 | 1,000 | 1,000 | 6,055 |
| Water Plant | 3,570 | 5,850 | 2,850 | 4,600 | 1,750 | 1,500 | 20,120 |
| Total | 32,620 | 32,860 | 34,000 | 34,755 | 35,755 | 37,000 | 206,990 |

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Debt | 24,620 | 24,860 | 26,000 | 26,755 | 27,755 | 29,000 | 158,990 |
| Equity/Operations | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 48,000 |
| Total | 32,620 | 32,860 | 34,000 | 34,755 | 35,755 | 37,000 | 206,990 |

Anchorage Water Utility
2018 Capital Improvement Budget
(in thousands)

| Project Title | Debt * | State/Fed Grant | Equity/ Operations * | Total |
|---|---------------|--------------------|-------------------------|---------------|
| ADOT-MOA Emergency | | | | |
| ADOT-MOA-Emergency -Water | 366 | - | 3,005 | 3,371 |
| ADOT-MOA Emergency | 366 | - | 3,005 | 3,371 |
| IT Hardware/Software | | | | |
| Customer Information System Enhancements | - | - | 1,000 | 1,000 |
| Geographic Information System Application Development | - | - | 50 | 50 |
| Hydraulic Model Upgrades | - | - | 50 | 50 |
| Information Technology Infrastructure | - | - | 600 | 600 |
| Miscellaneous Information Technology Systems | - | - | 250 | 250 |
| Work Management Software | - | - | 125 | 125 |
| IT Hardware/Software | - | - | 2,075 | 2,075 |
| Miscellaneous Equipment | | | | |
| Facility Equipment - Water | - | - | 100 | 100 |
| SCADA Equipment | - | - | 750 | 750 |
| Miscellaneous Equipment | - | - | 850 | 850 |
| Transmission/Distribution | | | | |
| 4255_Debar_Road_Wtr_Upgrade | 300 | - | - | 300 |
| 92nd Ave Intertie Zone Conversion | 750 | - | - | 750 |
| Becharof-Rakof-chirkoff Rehab | 1,710 | - | - | 1,710 |
| Boston_Street_Water_Rehab | 896 | - | - | 896 |
| E_42nd_LO_to_Piper_Water_Rehab | 1,650 | - | - | 1,650 |
| E_7th_Lane_to_Pine_Water_Rehab | 458 | - | - | 458 |
| ENLB_Augustine_Wtr_Upgr | 450 | - | - | 450 |
| Inlet_Place_Water_Rehab | 567 | - | - | 567 |
| Jewel Lake Intertie | 1,100 | - | - | 1,100 |
| Plant Oversize Improvement-Water | 25 | - | - | 25 |
| Powder Reserve WTID | 3,400 | - | - | 3,400 |
| Res 03/04 Circulation Line | 1,000 | - | - | 1,000 |
| San_Antonio_Camila_San_Rob_Water_Rehab | 1,630 | - | - | 1,630 |
| SW 260 Zone Capacity Improvements | 5,000 | - | - | 5,000 |
| TBird_Grandview_Subd_Wtr_Upgrade | 2,000 | - | - | 2,000 |
| W_43rd_Aero_to_Constellation_Water_Rehab | 818 | - | - | 818 |
| Transmission/Distribution | 21,754 | - | - | 21,754 |
| Vehicles | | | | |
| FB Tanker (94555), Vactor Truck Exc. (94947) | - | - | 650 | 650 |
| Vehicles - Water | - | - | 350 | 350 |
| Vehicles | - | - | 1,000 | 1,000 |
| Water Plant | | | | |
| Chlorine Analyzer Upgrade | - | - | 500 | 500 |
| ER Well Rehab - Norfolk, Well #8 | 500 | - | - | 500 |
| EWTF Facility Plan Recommendations | 2,000 | - | - | 2,000 |
| EWTF FTW Turbidimeter Upgrade | - | - | 70 | 70 |
| Facility Plant - Water | - | - | 500 | 500 |
| Water Plant | 2,500 | - | 1,070 | 3,570 |
| Total | 24,620 | - | 8,000 | 32,620 |

* Debt and Equity/Operations funding amounts by category are estimates and subject to change as actual loans are awarded by the State of Alaska.

Anchorage Water Utility Statement of Cash Sources and Uses

| | 2016 Actual | 2017 Proforma | 2018 Proposed |
|---|-------------------|-------------------|-------------------|
| Sources of Cash Funds | | | |
| Operating Income | 20,997,884 | 20,934,000 | 20,147,419 |
| Depreciation, net of amortization | 10,838,760 | 11,260,000 | 11,720,000 |
| Special Assessment Proceeds | 532,065 | 300,000 | 300,000 |
| State of Alaska Loan Proceeds | 9,998,202 | 9,700,000 | 9,900,000 |
| Bond/Other Loan Proceeds | 5,500,000 | 9,000,000 | 9,000,000 |
| Miscellaneous Non-Operating Revenues | (5,207) | - | - |
| Interest Received | 588,253 | 655,000 | 680,000 |
| Changes in Assets and Liabilities | 2,182,133 | 629,655 | 1,115,581 |
| Total Sources of Cash Funds | 50,632,090 | 52,478,655 | 52,863,000 |
| Uses of Cash Funds | | | |
| Capital Construction | 22,698,092 | 29,467,700 | 31,087,000 |
| Debt Principal Payment | 9,241,407 | 9,261,000 | 11,728,000 |
| Debt Interest Payments | 6,607,235 | 7,120,000 | 7,828,000 |
| MUSA | 7,314,997 | 7,991,023 | 8,280,000 |
| Total Uses of Cash Funds | 45,861,731 | 53,839,723 | 58,923,000 |
| Net Increase (Decrease) in Cash Funds | 4,770,359 | (1,361,068) | (6,060,000) |
| Cash Balance, January 1 | 36,157,709 | 40,928,068 | 39,567,000 |
| Cash Balance, December 31 | 40,928,068 | 39,567,000 | 33,507,000 |
| Detail of Cash and Investment Funds | | | |
| General Cash Less Customer Deposits | 36,343,020 | 34,750,000 | 32,877,000 |
| Construction Cash | 4,222,552 | 4,455,000 | 268,000 |
| Operating Fund Investment & Customer Deposits | 362,496 | 362,000 | 362,000 |
| Cash Balance, December 31 | 40,928,068 | 39,567,000 | 33,507,000 |

* This budgetary presentation does not include the effects of implementing Governmental Accounting Standards Board Statement No. 68, Accounting and Financial Reporting for Pensions and thus the revenues and expenses presented in this schedule differ from AWWU's GAAP basis financial statements.

Anchorage Wastewater Utility 8 Year Summary

(\$ in thousands)

| Financial Overview | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | Actuals | Proforma | Proposed | Forecast | | | | |
| Revenues | 52,906 | 56,250 | 57,550 | 61,330 | 65,170 | 68,690 | 73,220 | 77,290 |
| Expenses and Transfers | 48,306 | 49,789 | 52,553 | 56,870 | 58,270 | 60,020 | 65,750 | 67,280 |
| Net Income (Loss) - Regulatory | 4,600 | 6,461 | 4,997 | 4,460 | 6,900 | 8,670 | 7,470 | 10,010 |
| Dividend to General Government | - | - | - | - | - | - | - | - |
| Increase in Net Assets | 4,600 | 6,461 | 4,997 | 4,460 | 6,900 | 8,670 | 7,470 | 10,010 |
| Budgeted Positions* | 294 | 295 | 295 | 295 | 295 | 295 | 295 | 295 |
| Capital Improvement Program | 34,200 | 33,650 | 36,362 | 36,710 | 36,900 | 37,000 | 37,000 | 38,000 |
| New Debt | 12,815 | 16,000 | 15,000 | 64,000 | 6,000 | 6,000 | 109,000 | 6,000 |
| Net Capital Assets (12/31) | 407,185 | 422,264 | 436,793 | 454,958 | 474,058 | 487,477 | 503,105 | 521,330 |
| Net Position (12/31) | 86,052 | 92,513 | 97,509 | 101,960 | 108,840 | 117,510 | 124,980 | 134,990 |
| Operating Cash | 29,458 | 28,604 | 24,313 | 19,767 | 16,454 | 15,230 | 14,084 | 13,331 |
| Construction Cash Pool | 1,792 | 106 | - | 41,511 | 21,352 | - | 61,509 | 25,579 |
| Restricted Cash | 267 | 267 | 267 | 267 | 267 | 267 | 267 | 267 |
| Total Cash | 31,517 | 28,977 | 24,580 | 61,545 | 38,073 | 15,497 | 75,860 | 39,177 |
| IGCs - General Government | 1,501 | 1,973 | 2,597 | 2,597 | 2,597 | 2,597 | 2,597 | 2,597 |
| MUSA | 5,704 | 6,004 | 6,230 | 6,440 | 6,710 | 7,010 | 7,210 | 7,450 |
| CCP Borrowings from Gen'l Govt. | - | - | - | - | - | 6,755 | - | - |
| Total Outstanding LT Debt | 173,318 | 170,685 | 176,927 | 231,861 | 225,928 | 219,663 | 316,058 | 305,625 |
| Total Annual Debt Service | 10,470 | 11,147 | 14,456 | 17,522 | 19,947 | 20,049 | 24,260 | 27,682 |
| Debt Service Coverage (Bond) | 5.05 | 4.55 | 2.91 | 2.29 | 2.06 | 2.27 | 1.88 | 1.70 |
| Debt Service Coverage (Total) | 1.94 | 1.80 | 1.37 | 1.28 | 1.25 | 1.36 | 1.26 | 1.20 |
| Debt/Equity Ratio | 67 / 33 | 65 / 35 | 64 / 36 | 69 / 31 | 67 / 33 | 65 / 35 | 72 / 28 | 69 / 31 |
| Rate Change Percent | 0.00% | 9.50% | 2.50% | 6.00% | 6.00% | 6.00% | 6.00% | 5.00% |
| Single Family Rate | 40.72 | 44.59 | 45.70 | 48.44 | 51.35 | 54.43 | 57.70 | 60.58 |
| Statistical/Performance Trends | | | | | | | | |
| Number of Accounts | 57,163 | 57,306 | 57,449 | 57,593 | 56,816 | 56,958 | 57,100 | 57,243 |
| Average Treatment (MGD) | 27.70 | 27.77 | 27.84 | 27.91 | 27.98 | 28.05 | 28.12 | 28.19 |
| Miles of Wastewater Lines | 759 | 761 | 763 | 765 | 767 | 769 | 770 | 772 |

* Workforce Authorized per Budget is for both Water and Wastewater utilities.

Anchorage Wastewater Utility Statement of Revenues and Expenses

| | 2016 Actuals | 2017 Proforma | 2017 Revised | 18 v 17 \$ Change | 2018 Proposed | 18 v 17 % Change |
|--|-------------------|-------------------|-------------------|----------------------|-------------------|---------------------|
| Operating Revenue | | | | | | |
| Charges for Services | 51,034,547 | 54,750,000 | 55,300,000 | 820,000 | 56,120,000 | 1.5% |
| Miscellaneous | 966,107 | 900,000 | 970,000 | (45,000) | 925,000 | -4.6% |
| Total Operating Revenue | 52,000,654 | 55,650,000 | 56,270,000 | 775,000 | 57,045,000 | 1.4% |
| Non Operating Revenue | | | | | | |
| Investment Income | 494,810 | 600,000 | 480,000 | 20,000 | 500,000 | 4.2% |
| Other Income | 410,414 | - | 15,000 | (10,000) | 5,000 | -66.7% |
| Total Non Operating Revenue | 905,224 | 600,000 | 495,000 | 10,000 | 505,000 | 2.0% |
| Total Revenue | 52,905,878 | 56,250,000 | 56,765,000 | 785,000 | 57,550,000 | 1.4% |
| Operating Expenses | | | | | | |
| Labor | | | | | | |
| Labor and Benefits | 18,140,841 | 16,615,000 | 16,817,090 | 376,105 | 17,193,195 | 2.2% |
| Overtime | 393,744 | 420,000 | 419,500 | | 419,500 | 0.0% |
| Total Labor | 18,534,585 | 17,035,000 | 17,236,590 | 376,105 | 17,612,695 | 2.2% |
| Non Labor | | | | | | |
| Non Labor | 9,866,290 | 11,412,000 | 11,559,030 | (8,300) | 11,550,730 | -0.1% |
| Travel | 46,175 | 80,000 | 82,500 | 8,300 | 90,800 | 10.1% |
| Transfers (MUSA and gross receipts) | 5,704,269 | 6,003,654 | 6,003,654 | 226,346 | 6,230,000 | 3.8% |
| Depreciation and Amortization | 8,750,021 | 8,950,000 | 9,650,000 | (80,000) | 9,570,000 | -0.8% |
| Total Non Labor | 24,366,755 | 26,445,654 | 27,295,184 | 146,346 | 27,441,530 | 0.5% |
| Total Direct Cost | 42,901,340 | 43,480,654 | 44,531,774 | 522,451 | 45,054,225 | 1.2% |
| Charges from other departments | 1,501,283 | 1,973,000 | 2,123,003 | 474,248 | 2,597,251 | 22.3% |
| Total Operating Expense | 44,402,623 | 45,453,654 | 46,654,777 | 996,699 | 47,651,476 | 2.1% |
| Non Operating Expense | | | | | | |
| Interest on bonded debt | 2,996,719 | 3,000,000 | 4,024,000 | (452,000) | 3,572,000 | -11.2% |
| Amortization of debt expense | 25,448 | 60,000 | 62,000 | 38,000 | 100,000 | 61.3% |
| Other interest expense | 1,500,941 | 1,875,000 | 1,604,000 | 206,000 | 1,810,000 | 12.8% |
| Interest during construction | (620,094) | (600,000) | (510,000) | (70,000) | (580,000) | 13.7% |
| Total Non Operating Expense | 3,903,014 | 4,335,000 | 5,180,000 | (278,000) | 4,902,000 | -5.4% |
| Total Expenses (Function Cost) | 48,305,637 | 49,788,654 | 51,834,777 | 718,699 | 52,553,476 | 1.4% |
| Net Income | 4,600,241 | 6,461,346 | 4,930,223 | 66,301 | 4,996,524 | 1.3% |
| Appropriation | | | | | | |
| Total Expenses | | | 51,834,777 | 718,699 | 52,553,476 | |
| Less: Non Cash items | | | | | | |
| Depreciation and amortization | | | 9,650,000 | (80,000) | 9,570,000 | |
| Amortization of debt expense | | | 62,000 | 38,000 | 100,000 | |
| Interest during construction | | | (510,000) | (70,000) | (580,000) | |
| Total Non-Cash | | | 9,202,000 | (112,000) | 9,090,000 | |
| Amount to be Appropriated (cash expenses) | | | 42,632,777 | 830,699 | 43,463,476 | |

Anchorage Wastewater Utility Reconciliation from 2017 Revised Budget to 2018 Proposed Budget

| | Appropriation | Positions | | |
|---|-------------------|------------|----------|-----------|
| | | FT | PT | T |
| 2017 Revised Budget | 51,834,777 | 283 | 1 | 11 |
| Transfers (to)/from Other Agencies | | | | |
| - Charges from other departments | 474,248 | - | - | - |
| Debt Service Charges | | | | |
| - Interest | (246,000) | - | - | - |
| - Amortization of Debt Expense | 38,000 | | | |
| - AFUDC | (70,000) | | | |
| Changes in Existing Programs/Funding for 2018 | | | | |
| - Salary and benefits adjustments | 376,105 | - | - | - |
| - Depreciation | (80,000) | - | - | - |
| - MUSA | 226,346 | - | - | - |
| 2018 Continuation Level | 52,553,476 | 283 | 1 | 11 |
| 2018 Proposed Budget Changes | | | | |
| - Travel | 8,300 | - | - | - |
| - Other non labor | (8,300) | - | - | - |
| 2018 Proposed Budget | 52,553,476 | 283 | 1 | 11 |
| 2018 Budget Adjustment for Accounting Transactions (Appropriation) | | | | |
| - Depreciation and amortization | (9,570,000) | - | - | - |
| - Amortization of debt expense | (100,000) | - | - | - |
| - Interest during construction | 580,000 | - | - | - |
| 2018 Proposed Budget (Appropriation) | 43,463,476 | 283 | 1 | 11 |

Workforce Authorized per Budget is for both Water and Wastewater utilities.

Anchorage Wastewater Utility
2018 - 2023 Capital Improvement Program
(in thousands)

| Project Category | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| ADOT-MOA-Emergency | 3,009 | 2,340 | 3,551 | 2,566 | 3,910 | 3,435 | 18,811 |
| Collection System | 15,536 | 17,650 | 14,029 | 20,189 | 22,500 | 24,500 | 114,404 |
| Facility Master Plan | - | - | - | 700 | 500 | 250 | 1,450 |
| IT Hardware/Software | 2,100 | 1,360 | 1,465 | 1,440 | 1,465 | 1,440 | 9,270 |
| Miscellaneous Equipment | 950 | 850 | 850 | 850 | 850 | 850 | 5,200 |
| Other Plant & Facilities | 1,650 | - | - | - | - | - | 1,650 |
| Vehicles | 1,050 | 755 | 1,000 | 1,000 | 1,000 | 1,000 | 5,805 |
| Wastewater Plant | 12,067 | 13,755 | 16,005 | 10,255 | 6,775 | 6,525 | 65,382 |
| Total | 36,362 | 36,710 | 36,900 | 37,000 | 37,000 | 38,000 | 221,972 |

| Funding Source | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Debt | 26,362 | 26,710 | 27,900 | 28,000 | 28,000 | 30,000 | 166,972 |
| Equity/Operations | 10,000 | 10,000 | 9,000 | 9,000 | 9,000 | 8,000 | 55,000 |
| Total | 36,362 | 36,710 | 36,900 | 37,000 | 37,000 | 38,000 | 221,972 |

Anchorage Wastewater Utility
2018 Capital Improvement Budget
(in thousands)

| Project Title | Debt * | State/Fed Grant | Equity/ Operations * | Total |
|--|---------------|--------------------|-------------------------|---------------|
| ADOT-MOA Emergency | | | | |
| ADOT-MOA-Emergency - Sewer | - | - | 3,009 | 3,009 |
| ADOT-MOA Emergency | - | - | 3,009 | 3,009 |
| Collection System | | | | |
| 616 W. 12th Ave_1202 F St Sewer Service | 100 | - | - | 100 |
| C & D St Sewer | 320 | - | - | 320 |
| D & E St Sewer | - | - | 325 | 325 |
| Farm Ave Swr Rehab | 1,160 | - | 285 | 1,445 |
| H & I St Sewer | - | - | 345 | 345 |
| Large Diameter Sewer Manholes | 2,400 | - | - | 2,400 |
| M St Sewer | 300 | - | - | 300 |
| Mills Dr SWR Rehab | 1,875 | - | - | 1,875 |
| N, Hoyt & Bunn Alley Sewer | 495 | - | - | 495 |
| Nathan Cir Sewer Upgrade | 500 | - | - | 500 |
| Pawn Place Sewer Upgrade | 300 | - | - | 300 |
| Powder Reserve TID | 1,600 | - | - | 1,600 |
| PS 17 | - | - | 250 | 250 |
| PS 58 Improvments | 1,000 | - | - | 1,000 |
| Pump & Lift Station Improvements | 1,000 | - | - | 1,000 |
| Seppala W30th NLB Reconstruction SWR | 600 | - | - | 600 |
| Ship Creek Inverted Siphon Rehab | 200 | - | - | 200 |
| Spenard Sewer Upgr | 300 | - | - | 300 |
| Turpin Septage Receiving Station | - | - | 1,436 | 1,436 |
| W. 2nd Ave Sewer | - | - | 250 | 250 |
| W. 8th, N - P St Sewer | 495 | - | - | 495 |
| Collection System | 12,645 | - | 2,891 | 15,536 |
| IT Hardware/Software | | | | |
| Customer Information System Enhancements | - | - | 1,000 | 1,000 |
| Geographic Information Systems Application Development | - | - | 50 | 50 |
| Hydraulic Model Upgrades | - | - | 50 | 50 |
| Information Technology Infrastructure | - | - | 600 | 600 |
| Miscellaneous Information Technology Systems | - | - | 250 | 250 |
| Water Qual. Mgmt and Environmental Compliance Monitoring Reporting | - | - | 25 | 25 |
| Work Management System | - | - | 125 | 125 |
| IT Hardware/Software | - | - | 2,100 | 2,100 |
| Miscellaneous Equipment | | | | |
| Facility Equipment - Sewer | - | - | 200 | 200 |
| SCADA Equipment | - | - | 750 | 750 |
| Miscellaneous Equipment | - | - | 950 | 950 |
| Other Plant & Facilities | | | | |
| King Street Warm Storage | 1,650 | - | - | 1,650 |
| Other Plant & Facilities | 1,650 | - | - | 1,650 |

Anchorage Wastewater Utility 2018 Capital Improvement Budget

(in thousands)

| Project Title | Debt * | State/Fed Grant | Equity/ Operations * | Total |
|---|---------------|--------------------|-------------------------|---------------|
| Vehicles | | | | |
| Large Diameter CCTV Truck | - | - | 200 | 200 |
| Vactor/Combinationi Cleaner (94807) | - | - | 500 | 500 |
| Vehicles - Sewer | - | - | 350 | 350 |
| Vehicles | - | - | 1,050 | 1,050 |
| Wastewater Plant | | | | |
| AWWTF Fence and Main Gate Access Improvements | 200 | - | - | 200 |
| AWWTF Grit Rehab | 3,500 | - | - | 3,500 |
| AWWTF Reroof | 100 | - | - | 100 |
| AWWTF Resource Recovery | 750 | - | - | 750 |
| AWWTF Scum Pump & Inline Grinder | 2,292 | - | - | 2,292 |
| AWWTF Slope Beach Tower | 1,500 | - | - | 1,500 |
| AWWTF Storage | 2,250 | - | - | 2,250 |
| AWWTF Surface Drainage & Stormwater System Improvements | 200 | - | - | 200 |
| Facility Plant - Sewer | 1,000 | - | - | 1,000 |
| Plant Oversize and Betterments - Sewer | 25 | - | - | 25 |
| Security Improvements - Sewer | 250 | - | - | 250 |
| Wastewater Plant | 12,067 | - | - | 12,067 |
| Total | 26,362 | - | 10,000 | 36,362 |

* Debt and Equity/Operations funding amounts by category are estimates and subject to change as actual loans are awarded by the State of Alaska.

Anchorage Wastewater Utility Statement of Cash Sources and Uses

| | 2016 Actual | 2017 Proforma | 2018 Proposed |
|---|-------------------|-------------------|-------------------|
| Sources of Cash Funds | | | |
| Operating Income | 13,303,713 | 16,200,000 | 15,623,524 |
| Depreciation, net of amortization | 8,750,021 | 8,950,000 | 9,570,000 |
| Special Assessment Proceeds | 574,187 | 300,000 | 300,000 |
| State of Alaska Loan Proceeds | 8,815,244 | 7,000,000 | 6,000,000 |
| Bond/Other Loan Proceeds | 4,000,000 | 9,000,000 | 9,000,000 |
| Miscellaneous Non-Operating Revenues | 7,693 | - | 5,000 |
| Interest Received | 492,902 | 600,000 | 500,000 |
| Changes in Assets and Liabilities | (2,408,775) | 50,550 | 1,499,076 |
| Total Sources of Cash Funds | 33,534,985 | 42,100,550 | 42,497,600 |
| Uses of Cash Funds | | | |
| Capital Construction | 15,066,412 | 27,436,500 | 26,269,600 |
| Debt Principal Payment | 5,894,889 | 6,264,760 | 8,913,000 |
| Debt Interest Payments | 4,407,729 | 4,935,000 | 5,482,000 |
| MUSA | 5,704,269 | 6,003,654 | 6,230,000 |
| Total Uses of Cash Funds | 31,073,299 | 44,639,914 | 46,894,600 |
| Net Increase (Decrease) in Cash Funds | 2,461,686 | (2,539,364) | (4,397,000) |
| Cash Balance, January 1 | 29,054,678 | 31,516,364 | 28,977,000 |
| Cash Balance, December 31 | 31,516,364 | 28,977,000 | 24,580,000 |
| Detail of Cash and Investment Funds | | | |
| General Cash Less Customer Deposits | 29,457,679 | 28,604,000 | 24,313,000 |
| Construction Cash | 1,792,062 | 106,000 | - |
| Operating Fund Investment & Customer Deposits | 266,623 | 267,000 | 267,000 |
| Cash Balance, December 31 | 31,516,364 | 28,977,000 | 24,580,000 |

** This budgetary presentation does not include the effects of implementing Governmental Accounting Standards Board Statement No. 68, Accounting and Financial Reporting for Pensions and thus the revenues and expenses presented in this schedule differ from AWWU's GAAP basis financial statements.*

About Anchorage Water & Wastewater

Anchorage Water Utility History

From the first intake of water at Lower Ship Creek, and a few miles of woodstave water lines downtown more than 90 years ago, Anchorage's public water utility has grown into an enterprise with a net plant in service of approximately \$527 million that delivers nearly 23 million gallons of water to customers each day. The original water system for Anchorage was installed by the Alaska Railroad in 1917. In 1921, the City purchased the water system and associated water rights from the Alaska Engineering Commission. As the City expanded by annexation, the water system was extended into new areas and independent water systems previously serving the annexed areas were acquired by the City. In the 1950's, an aqueduct was drilled through the mountains north of Anchorage to supply water from Eklutna Lake to the Eklutna hydroelectric power plant along the Knik River. In 1985, AWWU tapped this aqueduct and connected a 7.8 mile long transmission main (intake portal) to provide water from the Lake to the Eklutna Water Treatment Facility. A 2.6 mile raw water line to Ship Creek was built in 1980 to replace an earlier raw water main originally constructed in 1962 for the Ship Creek Water Treatment Facility (WTF).

Anchorage Wastewater Utility History

The Alaska Engineering Commission first installed sewers in downtown Anchorage in 1916 along the lower bluff near the Alaska Railroad Depot. As Anchorage grew, construction of sewers continued and by the end of World War II, sewers were available to much of the area between Ship Creek and Chester Creek, west of Cordova Street. Greater Anchorage Area Borough (GAAB) was created in 1964, and was granted area wide sewer authority. The last major private sewer utility was acquired by the GAAB in 1972. The wastewater utility is now owned and governed by the Municipality of Anchorage as a result of unification of the City of Anchorage and the GAAB on September 15, 1975. Anchorage's public wastewater utility has grown into an enterprise with a net plant in service of approximately \$392 million.

Service

Anchorage's enjoyment of drinking water is just one part of the AWWU system. After the day's water is used, it must be treated before it is returned to the environment. The creeks and inlets downstream from Anchorage's wastewater treatment facilities are not adversely impacted by treated effluent, which is AWWU's principal measure of success. The Anchorage community benefits from the superior operation of the three wastewater treatment plants that serve its growing population.

Governance

AWWU has a seven-member Board of Directors as codified in Anchorage Municipal Code section 4.80.020. The Board is appointed by the Mayor to staggered 3-year terms, with nominees subject to Assembly approval. The Board, by code, makes recommendations to the Mayor, establishes procedures for customer complaints, and recommends changes in code to the Assembly that the Board deems necessary or desirable for the efficient operation of the Utility or for the benefit of its customers. The authority for operation and management of the Utility is under the control of the Mayor. The Board members are very experienced professionals in the fields of law, accounting, engineering, and public health, in addition to 2 at-large citizen members. Regular meetings are held monthly and are open to the public. Board meetings focus on Utility operations and highlights.

Economic Regulation and Accounting

Since 1970, both the Anchorage Water Utility (AWU) and the Anchorage Wastewater Utility (ASU) have been regulated by the Alaska Public Utilities Commission (APUC), which was renamed the Regulatory Commission of Alaska (RCA) on July 1, 1999. AWU and ASU each hold a Certificate of Public Convenience and Necessity for serving portions of the Anchorage Bowl, Eagle River and Girdwood. This commission must approve all rates and tariffs prior to implementation. They also regulate service areas and service quality. The RCA is composed of five members appointed to six-year staggered terms by the Governor of the State of Alaska and confirmed by the State Legislature.

AWWU is an Enterprise Fund. Enterprise Funds are used to account for operations where costs of providing services to the general public on a continuing basis be financed or recovered primarily through user charges or where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or change in net assets is appropriate for capital maintenance, public policy, management control, accountability or other purposes.

AWWU applies all applicable provisions of the Governmental Accounting Standards Board (GASB) which has authority for setting accounting standards for governmental entities. The accounting records of the Utility conform to the Uniform System of Accounts prescribed by the National Association of Regulatory Utility Commissioners (NARUC). The accrual basis of accounting is used for Enterprise Funds. Revenues are recognized in the accounting period in which they are earned and become measurable. Expenses are recognized in the period incurred, if measurable.

Environmental Regulation

AWWU's activities are dictated by a wide variety of environmental regulations administered by the EPA and the ADEC. Potable water produced by AWU must comply with the regulations promulgated under the Safe Drinking Water Act (SDWA). The SDWA is the main federal law governing the quality of drinking water in the United States. The ADEC has authority (primacy) to administer the SDWA regulations for the EPA. The SDWA sets standards for the chemical and microbial quality of drinking water and establishes requirements for informing the public.

ASU's activities are also dictated by a wide variety of environmental regulations administered by the EPA and the ADEC. All wastewater discharges must comply with the regulations promulgated under the Clean Water Act (CWA). The CWA is the main federal law governing discharges into the waters of the United States. The CWA requires that each treatment facility have a unique National Pollution Discharge Elimination System (NPDES) permit that specifies the discharge limits from each facility for a wide variety of chemical and biological constituents. The ADEC has authority (primacy) to issue and administer the NPDES permits for ASU's Eagle River and Girdwood WWTFs. Authority to issue and administer the 301(h) modification for the Asplund WWTF has been retained by EPA, due to the special conditions of this discharge as outlined in section 301(h) of the CWA. In addition to the CWA laws, ASU's sewage sludge incinerator must also comply with the provisions specified in Title V of the Clean Air Act (CAA). ADEC has primacy for the CAA and administers the permit for EPA.

Failure to comply with the regulations promulgated under the SDWA, CWA and CAA can result in fines and/or compliance orders and criminal charges.

Physical Plant

The John M. Asplund Wastewater Treatment Facility is one of the few facilities in the nation operating as a primary treatment facility under Section 301(h) of the Clean Water Act. The primary treatment provided by this facility removes up to 46% of the biological oxygen demand (BOD) and 80% of the solids from the influent wastewater meeting the criteria necessary for discharge to the marine waters of Cook Inlet.

The smaller Eagle River and Girdwood Wastewater Treatment facilities provide advanced secondary treatment prior to discharge to Eagle River and Glacier Creek respectively. These facilities remove up to 99% of the pollutants from the incoming wastewater prior to discharge.

In 2016, the Asplund Wastewater Treatment Facility treated an average of 26 million gallons per day (mgd). The Eagle River Wastewater Treatment Facility treated an average 1.3 mgd and the Girdwood Wastewater Treatment Facility treated 0.4 mgd. The three facilities have a combined design capacity of 61.1 mgd. The wastewater collection system has approximately 759 miles of pipes.

The Asplund Facility, built in 1972, is Alaska's largest wastewater treatment plant. As wastewater treatment technology and the demands of community growth have developed over the last two decades, utility operators and engineers have kept pace. The Asplund plant underwent major renovations in 1982, and expanded and upgraded again in 1989.

A facilities plan update was prepared in 1999. The 1999 facilities plan evaluated the existing condition of the Asplund facility and identified improvements necessary to meet the future needs of the community. The facilities plan identified over \$40 million worth of improvements to the solids handling, headworks, administration, laboratory, incineration, and thickening processes and control and power systems. AWWU undertook a majority of the recommended Asplund projects. These projects, along with careful operation, have made Asplund a modern, state-of-the-art treatment facility. In 2014, an updated Facilities plan was prepared for Asplund. The plan recommends over \$17M of additional investment in Asplund over ten years' time to rehabilitate and maintain aging infrastructure. ASU continues to maintain its smaller treatment plants. Additional projects at Eagle River and Girdwood are underway, all designed to replace, rehabilitate and provide for the near-term needs of the areas being serviced.

AWU's three sources of water are Eklutna Lake, Ship Creek and groundwater accessed through a system of wells in the Northern Communities, the Anchorage Bowl and Girdwood Valley. Eklutna Water Treatment Facility and the wells which supply Girdwood are operated year-round and serve as the primary supply sources for the two water systems. The Ship Creek Water Treatment Facility and the remainder of water wells are used to augment the primary water supply as well as provide redundancy to the Eklutna source for Eagle River and the Anchorage Bowl.

Of these sources, the Eklutna Water Treatment Facility (WTF) now provides, on average, 86 percent of total water production for the Northern Communities and the Anchorage Bowl. In Girdwood, where system demand constitutes less than 2 percent of AWWU's total water production, all water produced and distributed is from two wells.

Projects to maintain the surface water plants and AWU's wells are on-going. The purpose of these projects is multiple fold: to rehabilitate and upgrade facilities where equipment has reached the end of its useful life; to automate and increase operational efficiency of facilities; to increase yield from existing well sites; and to meet stricter federal and state regulations regarding water quality.