



**ARROW  
UTILITIES**

**ANNUAL  
REPORT  
2023**

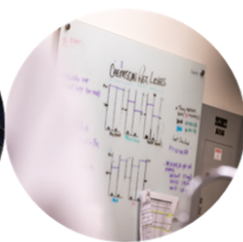
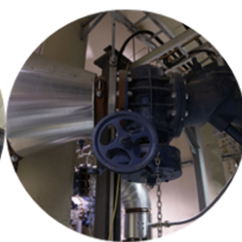


**Sustainable  
Wastewater  
Solutions** ➤



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# CEO Remarks

On behalf of ARROW Utilities, it is with great pleasure that I present to you the 2023 Annual Report. This comprehensive document serves to illuminate the notable achievements and milestones accomplished by ARROW throughout the past year, underscoring our unwavering commitment to serving the region, adhering to our strategic plan, and meeting environmental targets.

In 2023, we made substantial strides in advancing the strategic priorities set forth by the Board, harmonizing visionary directives with administrative endeavors. Through concerted efforts across all departments, ARROW successfully executed various programs and emergent continuous improvement initiatives, exemplifying our dedication to operational excellence.

The Engineering department achieved significant milestones with the completion of multiple transmission main projects and plant site endeavors, further enhancing our asset management and replacement programs. These efforts included ongoing condition assessments, wet weather flow management, and the implementation of our CIPP programs.

Regulatory Services played a pivotal role in supporting numerous regional commercial and industrial entities in their wastewater management endeavors, encompassing concentrations and sampling requirements. Meanwhile, the Lab diligently met both regulatory sampling mandates and operational troubleshooting needs throughout the year.

Health and Safety initiatives remained paramount, as continuous improvement opportunities were identified, culminating in the re-certification of our Environmental Management System in 2024. Operations tirelessly managed influent wastewater flows year-round, adeptly navigating routine operations and surges in flow during inclement weather events.

Communications and Stakeholder Relations fostered proactive collaboration with operations and member municipalities, facilitating effective wastewater communications and project messaging across the region. Corporate Services maintained their commitment to enhancing budget delivery mechanisms, ensuring fiscal responsibility and transparency.

As we embrace technological advancements to modernize our processes and services, we remain steadfast in prioritizing best practices that balance efficacy with efficiency, empowering informed decision-making at every juncture. Our focus on workforce and succession planning continues to evolve, enabling us to attract and retain top-tier talent while fostering a culture of resilience and well-being among our employees.

In conclusion, the 2023 Annual Report underscores ARROW Utilities' ongoing dedication to excellence, innovation, and sustainable growth. We extend our deepest gratitude to our stakeholders for their unwavering support and partnership as we embark on the journey ahead.

Kate Polkovsky, CEO

**ARROW Utilities is committed to protecting the environment and public health through the provision of responsible wastewater transmission and treatment services. We strive to exceed regulated standards for wastewater, serving as environmental leaders and enabling community and business growth.**



# ENGINEERING



## Design and Construction

### Completed:

- The Parkland Pumpstation HVAC Project – Initiated in response to a failure in the existing HVAC system.
- St. Albert Pump Station (SAPS) Upgrades – Two pumps were added to support redundancy and growth, as well as electrical upgrades occurred.
- Spruce Grove Wet Weather Facility Phase 1 – Construction was completed on improvements to allow for more control from the plant. This included a pump station and a force main pipe, as well as safety improvements on the site.
- Gibbons Pump Station – 1 pump was removed at end of life and replaced.
- Area 20 in the plant: One blower installed for redundancy purposes.
- Area 41 in the plant & Fort Saskatchewan Pump Station Gas Detection System Upgrade: Aged systems which were experiencing malfunctioning and maintenance issues were upgraded.
- Bioreactor Valve Actuator Replacement: One valve actuator was replaced to improve air supply control.
- Fort Saskatchewan Pump Station & Gibbons Pump Station Flow Sensor Installation: Flow sensors were installed to detect rupture disc failures.

## Engineering Studies

- Morinville Pump Station lifecycle inspection – completed in 2023 and under internal review for prioritization of work.
- Defoamer Study - Explored options of a suitable defoamer for the digester control. Completed in 2023, the report is currently under internal review.
- Customized training program – A capital project customized training program was awarded to improve our trainings to operators for newly upgraded facility operating. Depending on a project's complexity, the program will be providing training videos, developing SOPs, and create training quizzes etc. So far there are 9 capital projects included in the program to be completed by the end of 2025.

### In Progress:

- An ALUM System Upgrade, to allow for increased treatment capacity for phosphorous as well as more controls with flow metering and improved mixing at dosing locations, was designed in 2023 and will be completed in early 2024.
- Train 4 was awarded and began design and construction. Excavation and some foundation work were completed in 2023 with project completion expected in Q4 of 2025.
- The 5kV switchgear project was awarded in late 2022. Preliminary work began in 2023 although due to supplier delays, work is now expected to be completed in Q2 of 2024.
- An upgrade is required in the biogas supply to reduce condensation and corrosion. Design was continued in 2023 with construction awarded and initiated.
- Air Products Pumphouse Design and Construction – Engineering is providing project management support and design input to the pump house which will be a contributed asset to ARROW upon completion in 2024.
- Air Products Water Line – Engineering is providing project management support and design input into the water line. This water line is approximately 10 km long and will be a contributed asset upon completion in 2024.
- Boiler Biogas Pipeline and Condensate Room – This is the final phase of the Waste Gas Burner Facility project, which aims at replacing existing biogas piping (which is in very poor condition) with new stainless-steel piping to prevent potential pipe integrity failure and serious safety incidents. Construction will resume in 2024.
- Fort Saskatchewan Pump Station - Required to address aging equipment and inefficient and inadequate standby power for meeting the pump station's needs in the event of a utility power outage. Supply issues have delayed completion.

## Other Activities

- Process Engineering
- Regional wet weather strategy
- Subdivision and industrial connection reviews
- Asset Management and Geographical Information System (GIS)
- System Modelling and Growth Planning
- Technical Advisory Committee





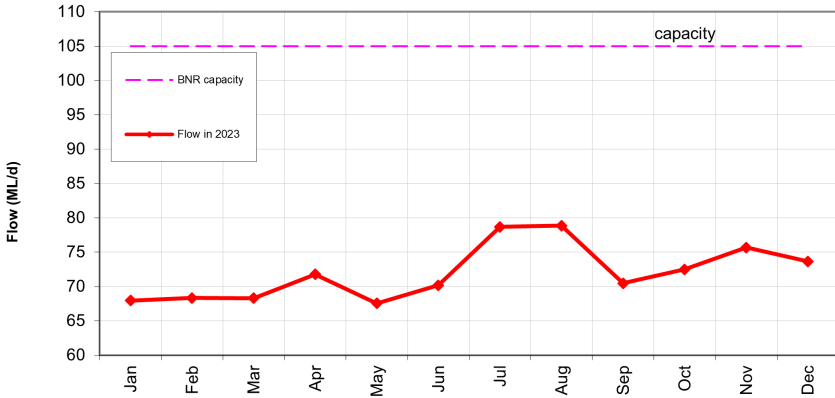
# OPERATIONS & MAINTENANCE

AVERAGE DAILY INFLUENT FLOWRATE  
**72 MLD**

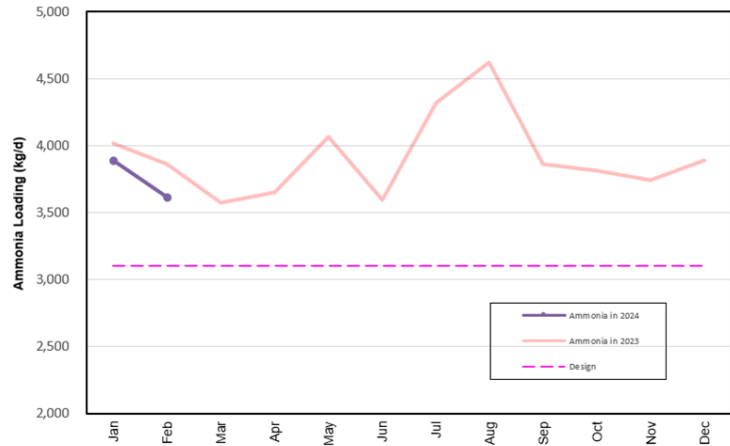
TOTAL BIOSOLIDS  
**5659 Dry Tonnes**

CCTV FOOTAGE  
**13+ KMS**

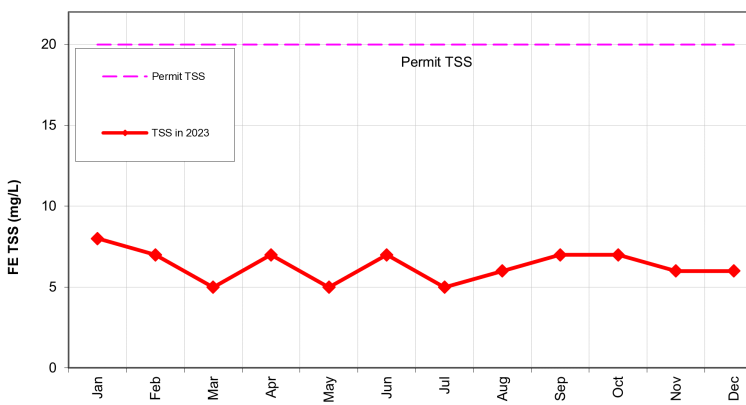
Monthly Influent Flow



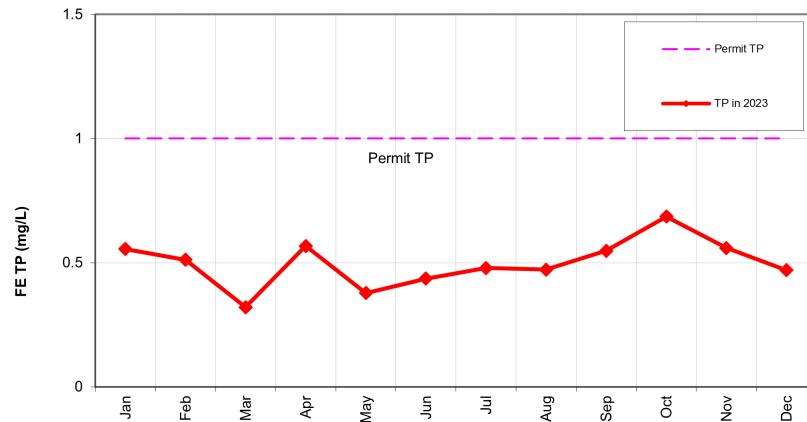
Monthly Influent Ammonia Mass Loading



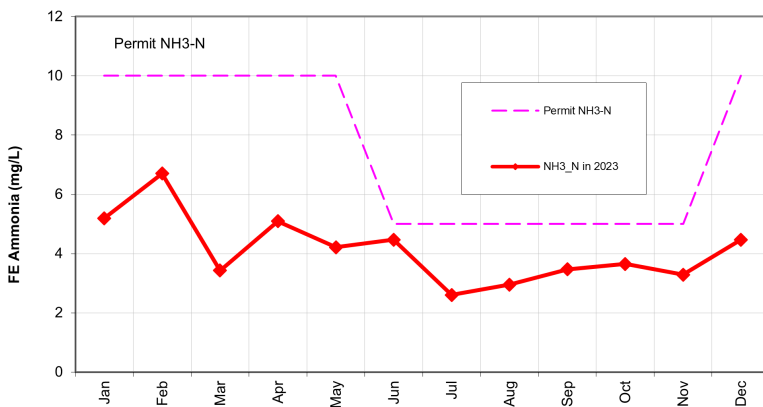
Monthly Effluent Total Suspended Solids



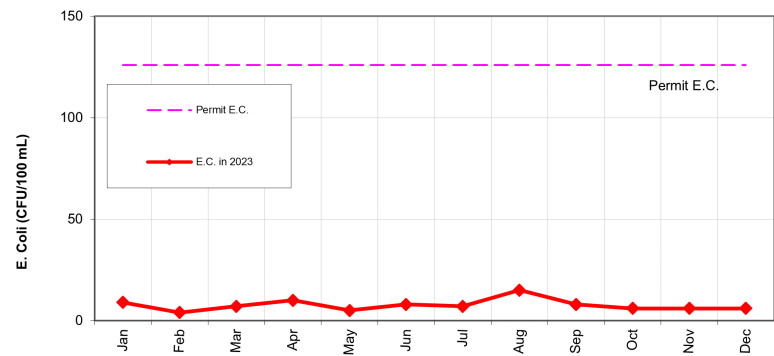
Monthly Effluent Total Phosphorus



Monthly Effluent Ammonia



Monthly Effluent E. Coli



# REGULATORY SERVICES

## Source Control Program

- Continue to apply the “Sectors of Concern” approach to inspections including 1568 industrial, commercial, and institutional (ICI) facilities within the region. Main inspection focus areas were food service operations, automotive, and oil and gas and its supporting services.
- A technical study was conducted to evaluate residential and non-residential waste at all hauled waste septage receiving stations and how it affects treatable contaminant loading to the wastewater treatment plant. The final report concluded gaps are present and will require further collaborative work with the member municipalities through the Hauled Waste Subcommittee.
- Ongoing discussions with two large industrial heartland facilities to determine the feasibility of them discharging their wastewater to ARROW Utilities in the future.

## Did you know...

- 319 ICIs were inspected on the Quality of Wastewater Bylaw, and 94% were in compliance?
- Monitoring of the wastewater streams from ICI facilities, including the 5 septage receiving stations in the region, showed a compliance of 78%?



## Health and Safety Management System

- Timely incident investigations and implementation of corrective and preventive actions was a priority for strengthening our incident response practice.
- Between March and August there were 14 environmental incidents which included a variety of treatment plant bypasses, transmission pipeline breaks, and sanitary sewer overflows.

## Other Activities

- Support any requirements of Alberta Environment & Protected Areas
- Advancing the Wet Weather Management Strategy
- Support EPCOR in revising the regional North Saskatchewan River Water Diversion License
- Supporting the North Saskatchewan Watershed Alliance



## Laboratory Services

- Maintained accreditation to the international standard for Testing and Calibration Laboratories (ISO/IEC 17025:2017).
- Supported the Alberta COVID-19 Wastewater Monitoring Program.
- Developed a Biosafety Manual in accordance with the Public Health Agency of Canada’s Pathogen and Toxin Licence issued to ARROW Utilities’ laboratory to continue microbiological analysis (E.coli).
- Improved operational efficiencies while adhering to daily compliance testing as per Alberta Environment and Protected Area’s approval and routine process samples.

The number of samples processed in the lab in 2023:

**6498**

## Environmental Management System (EMS)

- Three-year recertification achieved to the international standard for EMS (ISO 14001:2015); audit identified zero nonconformances and some opportunities for improvement related to emergency drill preparedness, performance evaluation of environmental objectives, documentation access, and continual improvement.
- Conducted annual compliance evaluation of applicable environmental legislation and the needs and expectations of ARROW’s interested parties. Seven internal evaluators audited 13 compliance obligations and identified three nonconformances related to communications within the Regional Exchange Agreement, need for document protocols in alignment with the Environmental Protection & Enhancement Act approval, and WHMIS requirements.



Established in 2023, the Communications, IT and Stakeholder Relations (COMMSRIT) department is responsible for enabling the administrative and technical requirements required to support the necessary internal and external functioning and relationships of the organization, while providing strategic advice.

# COMMUNICATIONS

## Internal Communications

- Introduced quarterly employee newsletter and bi-weekly briefs to keep staff informed
- Introduced monthly tailgates where employees are provided lunch in appreciation of their hard work and the CEO is available to answer any questions.
- Updated employee on-boarding processes and created employee handbook

## Stakeholder Relations

- Advocacy and awareness work continued to bring about a greater government and community understanding on the need for a plant expansion.
- We enhanced our focus on responding to community inquiries and concerns in a timely and consistent format, including building a community response plan for significant issues.
- We focused on building relationship with key community partners to increase opportunities for collaboration.
- In recognition of the importance of aligning our working relationship with member municipalities, formalized a number of regular communications, initiated a Communications Advisory Committee for member municipalities, and adjusted our business practices regarding budget to provide more lead time for members to plan in consideration of projected rates.

## Strategic Services

To enhance operational effectiveness and board governance we:

- Revitalized the development of board package content
- Added 'Board Briefs' that are shared with Board representatives and CAOs immediately after each meeting
- Enhanced the Board structure to include 4 committees
- Introduced the development and prioritization of operating business cases for budget development

## Information Technology

- In addition to supporting the ongoing operations and maintenance of the transmission system and wastewater treatment plant, new software was introduced this year to provide a ticketing system that would support IT requests, manage human resource onboarding, training, and offboarding, and support customer service requests and complaints. For enhanced site security, we also introduced a visitor management system.
- Perhaps most importantly, we embraced a proactive cyber posture with the completion of an Arctic Wolf Managed Risk project. This offers substantial benefits for improving ARROW Utilities' cybersecurity posture. This service goes beyond traditional vulnerability assessments by continuously scanning networks, endpoints, and cloud environments for a wider range of risks including risky software, misconfigurations, and exposed accounts. The Information Technology work group now has a comprehensive understanding of the attack surface, empowering staff to proactively address vulnerabilities and harden defenses. The project culminated in a tailored Risk Dashboard, providing real-time visibility into the security landscape. A dedicated Concierge Security Team deciphers complex data, delivering easy-to-understand risk scores and insightful reports. This actionable intelligence prioritizes patching efforts, guides posture improvement, and empowers informed decision-making. By proactively mitigating digital risks, Arctic Wolf Managed Risk helps ARROW Utilities stay ahead of cyber threats and confidently navigate the evolving security landscape. During this project ARROW Utilities also deployed Arctic Wolf's Managed Awareness. This program equips employees to combat cyber threats. Through engaging microlearning content, realistic phishing simulations, and personalized coaching, employees gain the skills to recognize and avoid social engineering attacks, reducing human error as a security vulnerability. The program measures individual and overall performance, identifying areas for improvement and fostering a culture of security awareness. This empowers employees to report suspicious activity and make security-conscious decisions, ultimately strengthening ARROW Utilities' overall cyber resilience.

## Did you know....

That in 2000, the organization changed its name from the Alberta Capital Region Sewage Commission to the Alberta Capital Region Wastewater Commission?

Then, in 2023, the name was changed again to **ARROW Utilities: A Capital Region Commission?** Despite the name change, our mission remains the same: providing an essential service to residents and industries by processing and reclaiming water, and growing the circular economy.



# FINANCIALS

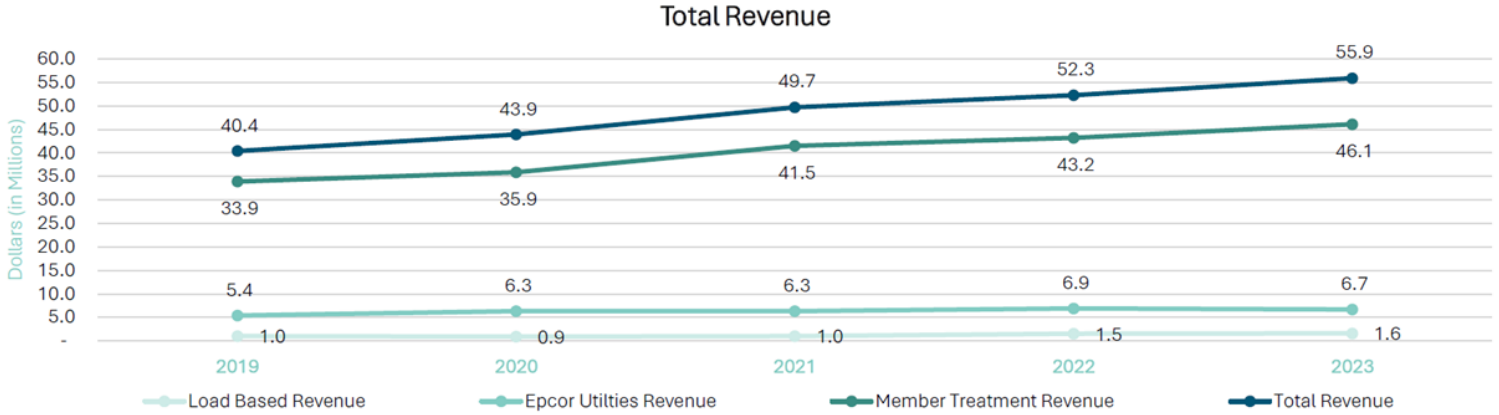
## Revenues

ARROW Utilities generated \$55.9 million in gross revenues in 2023 which is an increase of \$3.6 million compared to prior year (\$52.3 million in 2022) and \$1.9 million over budget (\$54.1 million in 2023 budget).

\*\* Member Treatment Revenue increased by \$2.9 million year over year.

\*\* Epcor Utilities Revenue remained fairly consistent with a decrease of about \$200 thousand year over year.

\*\* Load Based Revenue remained fairly consistent with an increase of about \$100 thousand year over year.

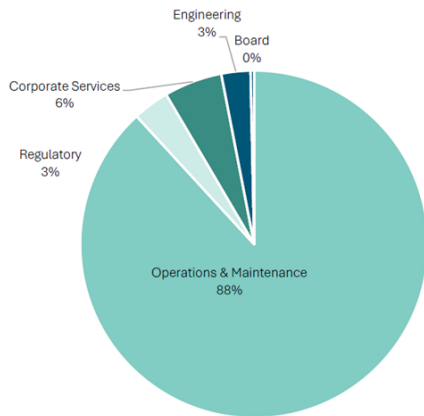


## Expenses

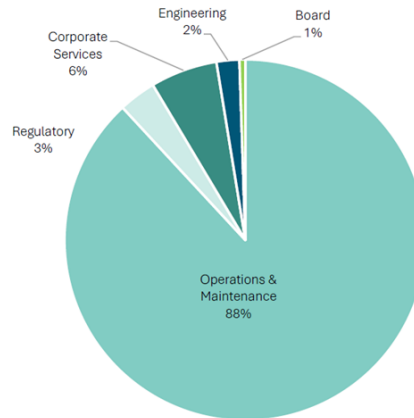
ARROW Utilities incurred \$48.9 million in expenses in 2023 which is an increase of \$7.2 million compared to prior year (\$41.7 million) and \$16.8 million over budget (\$32.0 million).

\*\* Operations & Maintenance increased \$6.3 million year over year due primarily to unexpected repairs.

2022 Expense by Department



2023 Expense by Department



## Statement of Operations

For the fiscal year ended December 31,  
(in 000's)

	2019 (Actual)	2020 (Actual)	2021 (Actual)	2022 (Actual)	2023 (Actual)	2023 (Budget)
<b>Revenues</b>	\$ 40,448	\$ 43,890	\$ 49,688	\$ 52,263	\$ 55,908	\$ 54,053
<b>Operation and Maintenance</b>						
Amortization	7,895	9,399	9,048	9,435	9,265	-
Biosolids management	5,375	6,320	5,690	6,182	10,038	6,313
Contract maintenance and materials	2,504	2,380	2,213	3,114	4,263	3,053
External treatment	7,703	8,250	8,337	9,556	9,795	9,866
Financing costs	1,257	1,278	1,298	1,291	1,942	-
Other	532	590	596	720	1,075	892
Salaries and benefits	3,312	3,472	3,457	3,604	3,707	3,642
Utilities	2,163	2,089	2,419	2,887	2,966	3,050
	30,741	33,778	33,058	36,789	43,051	26,816
<b>Board</b>	98	117	112	139	257	143
<b>Corporate Services</b>	1,956	2,114	2,077	2,256	2,925	2,552
<b>Engineering</b>	1,027	899	959	1,130	997	995
<b>Regulatory Services</b>	1,307	1,311	1,298	1,402	1,629	1,539
<b>Total Expenses</b>	35,129	38,219	37,504	41,716	48,859	32,045
<b>Excess of Revenues over Expenses</b>	\$ 5,319	\$ 5,671	\$ 12,184	\$ 10,547	\$ 7,049	\$ 22,008



# FINANCIALS

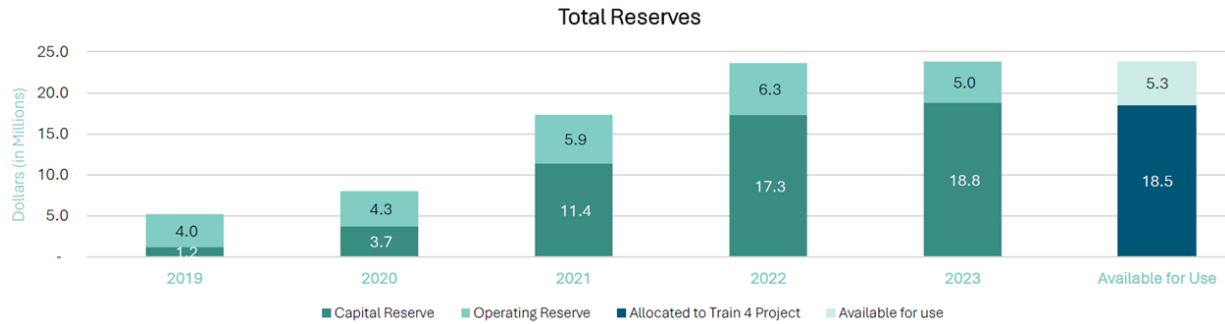
## Equity in Tangible Capital Assets and Total Accumulated Surplus

The equity in tangible capital assets increased \$6.8 million to \$187.8 million while total accumulated surplus increased by \$7 million to \$211.6 million.

Tangible capital assets  
Accumulated amortization  
Long-term debt  
  
Equity in tangible capital assets  
Capital reserve  
Operating reserve  
  
Total accumulated surplus

	(in 000's)	
	2023	2022
Tangible capital assets	\$ 438,836	\$ 390,741
Accumulated amortization	- 163,574	- 155,112
Long-term debt	- 87,461	- 54,516
<b>Equity in tangible capital assets</b>	<b>187,801</b>	<b>181,113</b>
Capital reserve	18,828	17,208
Operating reserve	4,997	6,255
<b>Total accumulated surplus</b>	<b>\$ 211,626</b>	<b>\$ 204,576</b>

\*\*The 2023 capital reserve has \$18,539 currently allocated to the Train 4 MBR Plant upgrade project.

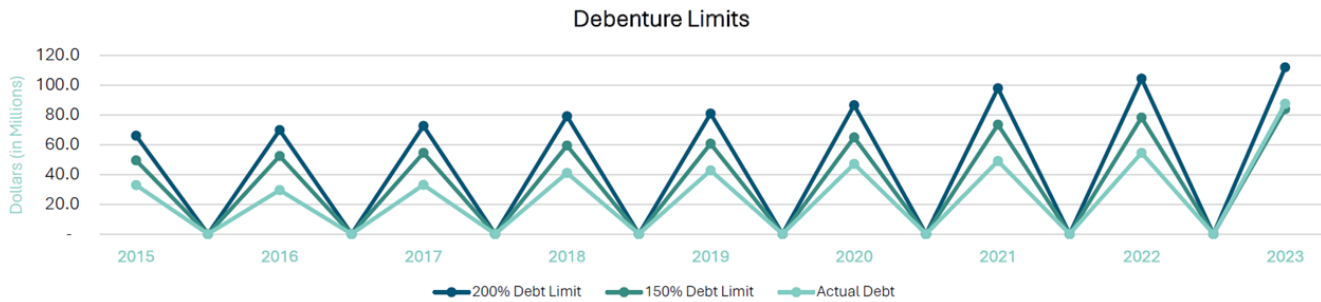


Total debt limits - 150% (Board Limit)  
Total debt  
  
Remaining (coverage) of debt  
  
Debt servicing limit  
Debt servicing  
  
Remaining of debt servicing

	(in 000's)	
	2023	2022
Total debt limits - 150% (Board Limit)	\$ 83,862	\$ 78,191
Total debt	- 87,461	- 54,516
<b>Remaining (coverage) of debt</b>	<b>-\$ 3,599</b>	<b>\$ 23,675</b>
Debt servicing limit	\$ 19,568	\$ 18,245
Debt servicing	- 10,363	- 6,678
<b>Remaining of debt servicing</b>	<b>\$ 9,205</b>	<b>\$ 11,567</b>

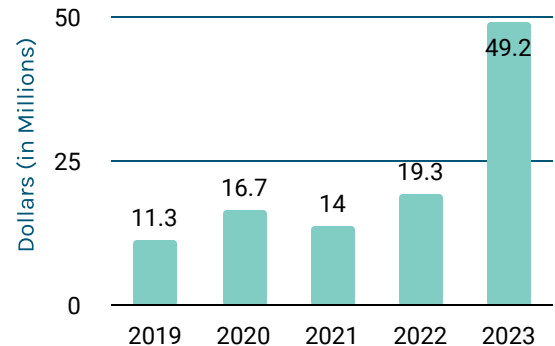
## Debentures

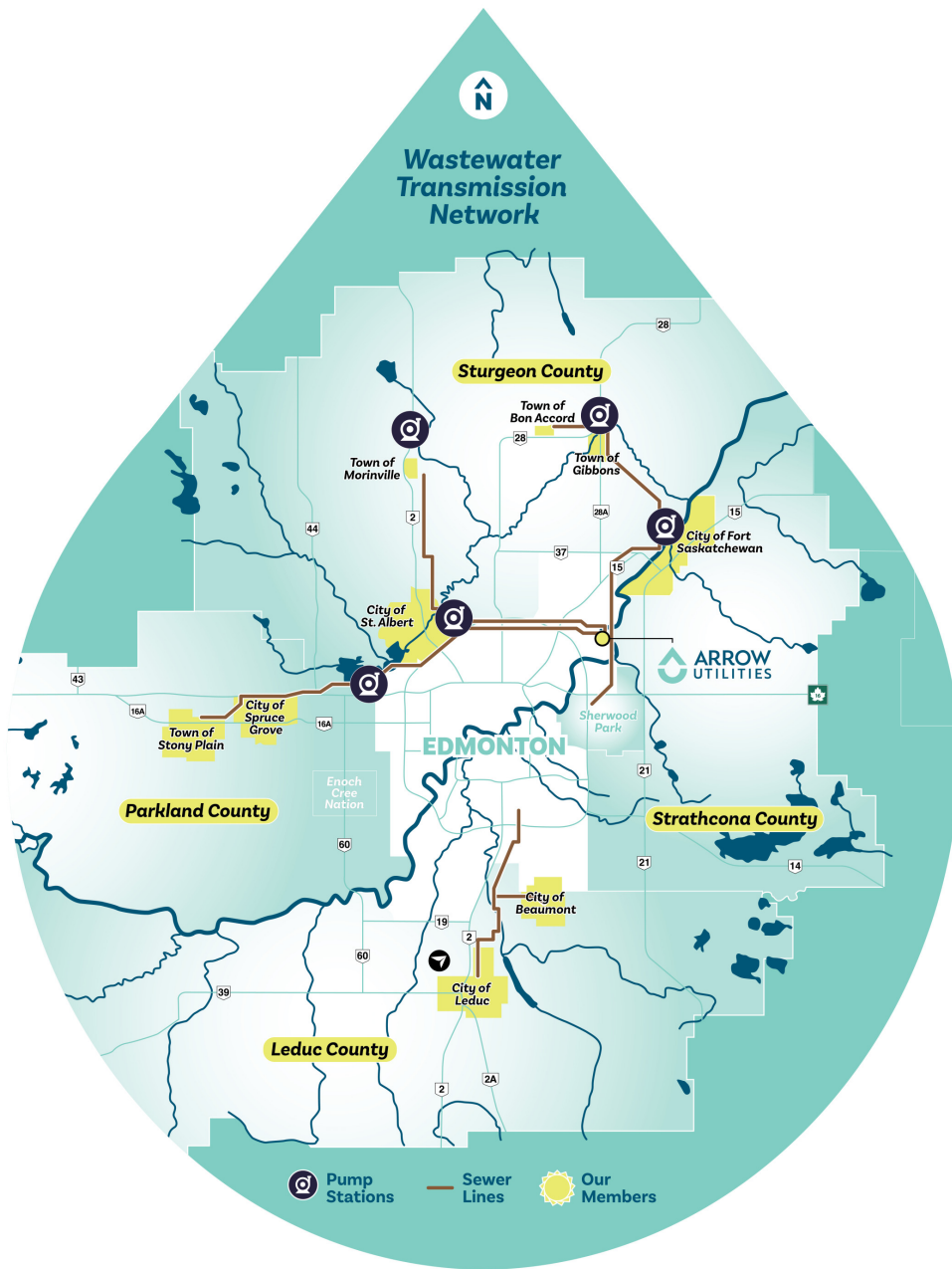
Debentures increased by \$32.9 million (%) to \$87.5 million (\$54.5 million in 2022) to a debt to revenue percentage of 156%. Arrow Utilities issued \$38 million in new debentures and paid down \$5.1 million in principle on outstanding debentures.



## Capital Projects (000's)

	2023 (Actual)	Project To Date	Total Project Estimates	Remaining Future Costs
Plant Upgrade and Wastewater Reuse	\$ 10,400	\$ 10,400	\$ 165,900	\$ 155,500
PSTS Rehab / Replacement, by Big Lake	12,450	12,450	18,700	6,250
SERTS N Twinning Upgrade	9,300	9,300	10,800	1,500
FSPS Generator and MCC System	2,700	2,700	4,500	1,800
Spruce Grove WWF - Phase I (PS, FM, and Lagoon)	2,900	2,900	2,900	-
Biogas Pipeline Replacement and Gas De-Moisture	600	600	2,800	2,200
Sky Feeder Breaker Replacement (6)	150	150	2,450	2,300
Alum System Upgrade	1,450	1,450	1,450	-
PLPS HVAC System Upgrade	1,300	1,300	1,300	-
SAPS Pumping / Electrical Upgrade	450	450	450	-
Gibbons Pump Replacement	450	450	450	-
Blower Motors	375	375	375	-
Waste Gs Burner System Upgrade	50	50	250	200
START Replacement (905GR067 to 905GR069)	120	120	120	-
Unplanned Line Replacement	5,950	5,950	-	5,950
Annual Minor Capital	500	500	-	500
<b>Total Capital Requirements</b>	<b>\$ 49,145</b>	<b>\$ 49,145</b>	<b>\$ 212,445</b>	<b>\$ 163,300</b>





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