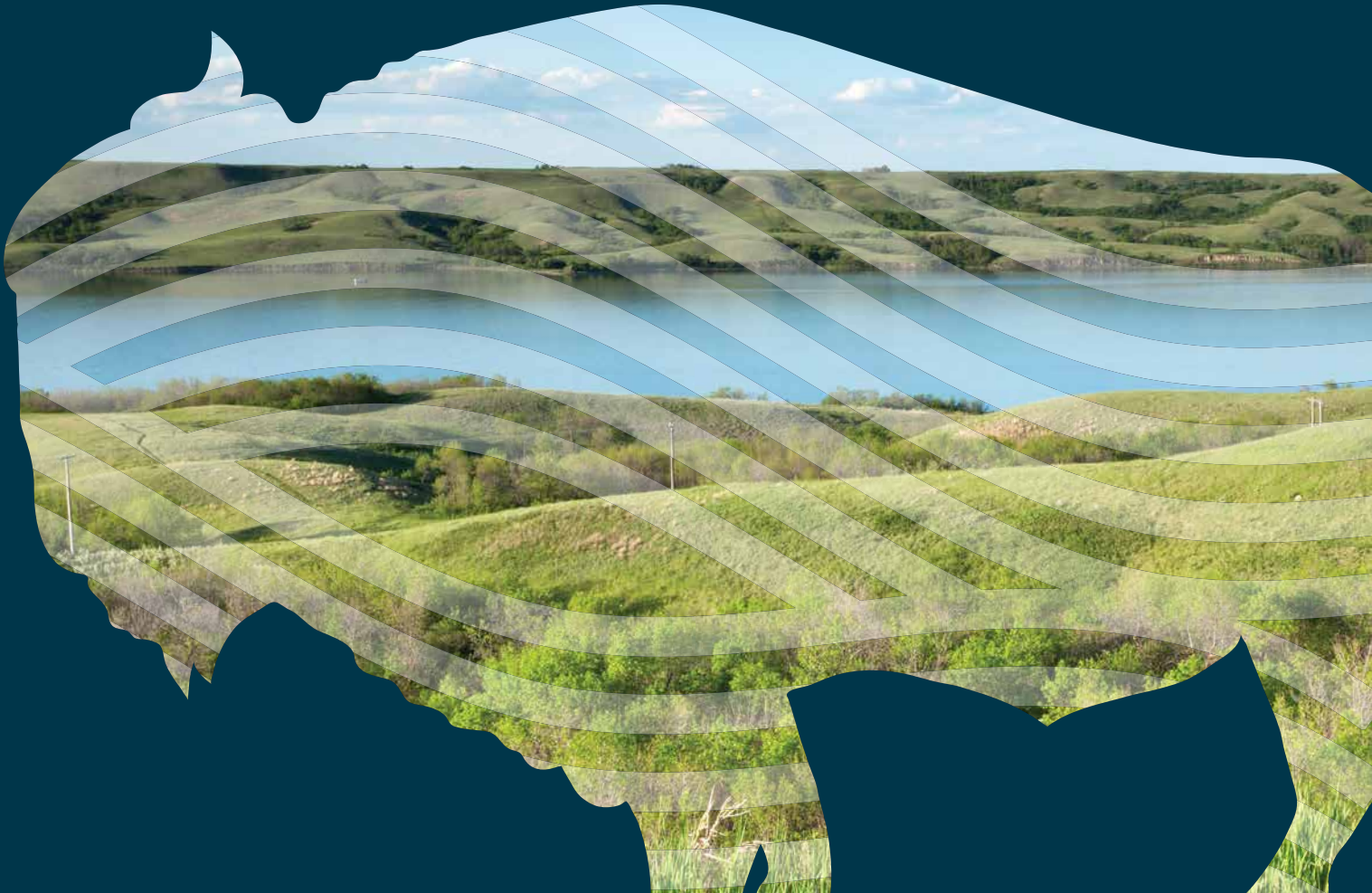


# The Work Behind the Water You Trust.

Buffalo Pound Water Treatment Corporation



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## Land Acknowledgement

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We acknowledge that the Buffalo Pound Water Treatment Plant is located on treaty land, referred to as Treaty 4 Territory, and is beneficiary of this treaty. The treaty was signed with 35 First Nations across Southern Saskatchewan and parts of Alberta and Manitoba and encompasses the traditional lands of the Cree, Sauteaux, Dakota, Nakota, Lakota and the homeland of the Métis Nation. We respect and honour the Treaties that were made on all territories. We acknowledge the harms and mistakes of the past and are committed to moving forward in partnership with First Nations in the spirit of conciliation and collaboration.



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▶ THE WORK BEHIND THE  
WATER YOU TRUST.

# About this Report

This report summarizes our activity and the major events we experienced at the Buffalo Pound Water Treatment Plant throughout 2025. It outlines our mission, goals, achievements and areas of concern. Intended as an information source for city administration personnel, elected officials and the general public, this report also contains our Audited Financial Statements and Drinking Water Quality and Compliance Report.





► LIFE IN EVERY DROP

# Who We Are

The original Buffalo Pound Water Treatment Plant was built between 1951 and 1955 and has been providing the people of Regina, Moose Jaw and surrounding areas with healthy, clean, potable water ever since. In 2016, we underwent a major organizational change when we officially became the Buffalo Pound Water Treatment Corporation—a non-profit corporation jointly owned by the Cities of Regina and Moose Jaw and governed by an independent Board.

We are an expertly operated, independent and trusted entity that contributes to the health and well-being of our customers by providing a sustainable and reliable source of water. We have been a leader in the delivery of safe, high-quality drinking water since the mid 1980s. Our team has received numerous Water Quality Awards and continues to make significant progress in improving the quality of water provided to more than 300,000 consumers across southern Saskatchewan. Though we have genuine experts on our team—and we're really good at what we do—our successes as a water treatment plant are due in large part to how much we care about the health and well-being of the people we serve.

Buffalo Pound Water is really in the business of health. Yes, water is what we do. But the impact is so much bigger. A healthy water supply leads to healthy people. Healthy people create healthy communities. Healthy communities make for a healthy society. The work we do every day touches every citizen, every home, every school, every business and every living thing that relies on water from us. Life as we know doesn't exist without the important work we do.







## About Our Plant

Our plant draws water from Buffalo Pound Lake, a shallow reservoir constructed on the Qu'Appelle River. Water levels in Buffalo Pound Lake are maintained by the release of water from the Qu'Appelle Dam on Lake Diefenbaker. While we remain a leader in the delivery of high-quality water, our plant has exceeded the projected life of a typical water treatment plant. It needs upgrading and renewal to ensure we continue to deliver sufficient high-quality water to the people who rely on us. In 2017, we began planning a Plant Renewal Project to augment or replace the existing water treatment processes and physical plant.

### **This project is:**

- Helping to address the increasing challenges faced in treating the lake water
- Ensuring our plant meets current and future regulatory requirements
- Ensuring the long-term viability of our plant; and
- Ensuring a reliable supply of potable water for our customers long into the future.

By addressing aging infrastructure issues, the Plant Renewal Project is helping fulfill our mandate for generations to come. As of the end of 2025, the Plant Renewal Project is nearly 95% complete. Commissioning, deficiencies and final configuring is underway and should be completed early 2026. The new administration building is anticipated to be completed in 2027.

# Mandate

The Corporation will reliably and efficiently provide safe, high quality and affordable drinking water to the Cities.

# Mission

To provide for the Cities of Regina and Moose Jaw, a reliable and affordable supply of safe, high-quality drinking water that meets the needs and expectations of consumers.

# Goals

- Treated water that meets the quality expectations of the citizens of Moose Jaw and Regina, as well as meeting or exceeding all government-regulated parameters.
- Operational practices and controls that ensure a continuous and safely-treated supply of water within an environmentally responsible and cost-efficient operation.
- Judicious monitoring of the treated water from the plant to the Cities. Appropriate monitoring of the water in Buffalo Pound Lake, the Upper Qu'Appelle River and Lake Diefenbaker to identify long-term trends and areas of concern to protect the water supply.
- Water quality research to identify possible chemical and microbiological contaminants and to test and implement the best available treatment technologies, thus ensuring that the Water Treatment Plant can meet current and future expectations for regulated parameters.

# Values

Safety • Team Culture • Process Driven • Innovation  
Continuous Improvement • Operational Excellence

# Vision

Buffalo Pound Water is an expertly operated, independent and trusted entity that will be positioned to provide sustainable and reliable water as a critical service for generations to come.

# Board of Directors

Our Board of Directors oversees the management of our activities and takes reasonable steps to ensure we achieve the objectives identified in the Cities of Moose Jaw and Regina Unanimous Membership Agreement.

The Board delegates the day-to-day operations to our President & CEO, Ryan Johnson.

**MAJOR AREAS OF RESPONSIBILITY FOR OUR BOARD INCLUDE:**

- strategy and budgets
- human resources (including the mandate for collective bargaining)
- risk management
- financial information
- system and internal controls
- material commitments
- monitoring and reporting
- code of conduct and conflict of interest
- communications
- material corporate policies
- board effectiveness

Our Board is accountable to the Cities of Regina and Moose Jaw and reports to them semi-annually.

Made up of eight members, our Board meets six times per year, or at the call of the Chair. During 2025, a total of 10 meetings were held. This included six regular Board meetings, one special Board meeting, the Board Retreat, the Annual General Meeting and mid-year meetings with the Cities of Regina and Moose Jaw.

Board members are provided with meeting material in advance. As a standing agenda item, the Board has the option to hold in-camera sessions without management present where all Board members can participate.

Board members receive remuneration in line with the Provincial Crown Investments Corporation tier 2 salary schedule.

**The Buffalo Pound Water Board of Directors (the “Board”) was created in 2016 by the Unanimous Membership Agreement, which replaced the previous Buffalo Pound Water Administration Board in 1951. The Unanimous Membership Agreement is between the Cities of Regina and Moose Jaw (the “Owners”) and the Corporation.**

BOARD TENURE		
BOARD MEMBER	POSITION	TERM ON BOARD
Greg McIntyre	Board Member	April 2025 – April 2028
Jim Dundas	Board Member	April 2025 – April 2028
Grant Ring	Board Member	April 2018 – April 2027
Ben Boots	Board Member	April 2017 – April 2026
Daryl Posehn	Board Member	April 2017 – April 2026
Patricia Warsaba	Board Chair	April 2020 – April 2026
Pat Wilson	Board Member	April 2023 – April 2026
Jessica Theriault	Board Member	April 2023 – April 2026



**BOARD COMMITTEES**

**The Board of Directors has four standing committees:**

- Finance and Audit Committee, comprising three members. This committee meets one week prior to regular Board meetings or at the call of the Committee Chair, as required.
- Capital Projects Committee, comprising four members. This committee holds four meetings a year or at the call of the Committee Chair, as required.
- Governance Human Resource Committee, comprising three members. This committee meets at the call of the Committee Chair, as required.
- Nominating Committee, comprising three members. This committee meets at the call of the Committee Chair, as required.



**Ben Boots**  
Board Member



**Daryl Posehn**  
Board Member



**Grant Ring**  
Board Member



**Greg McIntyre**  
Board Member



**Jessica Theriault**  
Board Member



**Jim Dundas**  
Board Member



**Patricia Warsaba**  
Board Chair



**Pat Wilson**  
Board Member

**Buffalo Pound Water is an expertly operated, independent, and trusted entity, that will be positioned to provide sustainable and reliable water as a critical service for generations to come.**

# Message from the Board Chair



**Over the 70 years, the Buffalo Pound Water Treatment Plant has been a leader in the delivery of high-quality drinking water, receiving numerous water quality awards. The quality water successes are due in large part to the water treatment expertise of the employees of the Corporation.**

As Chair of the Board of Buffalo Pound Water Treatment Corporation, I am pleased to present our annual report for 2025. This past year has been marked by significant achievements as we continue our commitment to providing safe, reliable, and sustainable water for more than 300,000 Regina, Moose Jaw and area residents.

It was a year to celebrate the 70th anniversary of the Buffalo Pound Water Treatment Plant. As a result of significant efforts by the federal and provincial governments and the Cities of Regina and Moose Jaw, the Plant was commissioned in 1955. Over the 70 years, the Buffalo Pound Water Treatment Plant has been a leader in the delivery of high-quality drinking water, receiving numerous water quality awards. The quality water successes are due in large part to the water treatment expertise of the employees of the Corporation.

The Plant has undergone three major capacity and process improvements since its original construction. Last upgraded more than 30 years ago, the multi-million dollar Plant Renewal Project commenced in 2020 will enable the plant to continue delivering water for at least the next 25 years and ensures the Corporation is able to meet its mandate long into the future.

The Plant Renewal Project continued throughout 2025, with the majority of construction now completed, other than the administration building. Our dedicated team worked diligently to ensure that safe and reliable water was delivered throughout this last phase of construction and commissioning. The hard work and expertise of the entire staff and management, led by President & CEO Ryan Johnson, have been key to the success of the Plant's operations throughout construction.

Heartfelt gratitude to two retiring board members, Ben Boots and Daryl Posehn. Ben's knowledge of water treatment supply and treatment plant expertise as a previous Plant Superintendent and Plant Engineer was unique and invaluable to the Board. Daryl's executive level energy sector experience

and expertise in the areas of operations leadership, business growth and corporate governance was valued as the Corporation continued to ensure that best practices were always maintained. Ben and Daryl will both be missed. We thank them for their many years of service and wish them the best.

Looking ahead, we remain focused on our strategic goals and our values of safety, team culture, accountability, process driven, innovation and continuous improvement as the Plant transitions to new processes and procedures. The Board is confident that, with the ongoing support of our skilled management, staff and stakeholders, we will meet future challenges and continue to meet our mission of providing a reliable and affordable supply of safe, high quality drinking water.

On behalf of the Board of Directors, I wish to thank our employees and stakeholders for their ongoing trust and collaboration. Together, we are ensuring a safe and sustainable water future for all.

Sincerely,  
**Patricia Warsaba, K.C.**  
 Chair, Board of Directors  
 Buffalo Pound Water Treatment Corporation

# Message from the President & CEO

On behalf of the management team and staff of the Buffalo Pound Water Treatment Corporation, I am pleased to present the 2025 Annual Report, marking our 70th year of providing safe and reliable drinking water to the Cities of Moose Jaw, Regina and surrounding communities. Our commitment to delivering a dependable and affordable supply of high-quality water to more than 300,000 residents remained at the forefront of our work throughout the year.

## OPERATIONAL HIGHLIGHTS

**Regulatory Compliance:** The Corporation maintained full compliance with all applicable regulatory requirements, continuing our longstanding record of producing safe drinking water for the region.

**Operational Performance:** Despite a year characterized by significant operational transitions, we successfully met our commitments under the Unanimous Membership Agreement and the Mandate set by our member Cities. Our teams ensured consistent delivery of high-quality water while working within the constraints of major construction activity. We participated extensively in contractor-led commissioning and training activities, and we are pleased to note that no taste or odour events originated from the Plant during the year.

**Progress on the Plant Renewal Project:** By year-end, the contractor had completed the majority of the process-related work. Key milestones included the completion of the Ozone System and the Biological Activated Carbon Filtration System—two foundational components of the renewed treatment process.

## CHALLENGES ENCOUNTERED

**Commissioning Complexity:** The introduction and integration of numerous new systems created disruptions throughout 2025, leading to reduced treatment capacity at various times as commissioning progressed.

**Regulatory Pressures:** Although performance related to total suspended solids and chlorine residual discharge improved markedly compared to prior years, isolated exceedances still occurred and remain a focus area.

**Operational Demands:** Over the course of the project, our operators were required to run the plant through nine different process configurations—an extraordinary challenge that they met with professionalism and resilience. Their adaptability has been critical to maintaining reliable service throughout the project.

**Project Disputes:** The Corporation and contractor have now begun the process of addressing and resolving outstanding project-related disputes.

## FINANCIAL OVERVIEW

**Operating Surplus:** The Corporation ended the year with an operating surplus of approximately \$1.75 million. This positive result was driven by lower chemical, utility and sludge management costs as well as higher-than-anticipated water sales. The surplus contributes directly to rebuilding the operating reserve, which was substantially depleted in 2023.

**Capital Position:** Capital reserves totaled \$10.06 million at year-end. This is mainly required to support the costs associated with the Plant Renewal Project.

## LOOKING AHEAD

**Completion of the Plant Renewal Project:** With the primary process work now completed, the remaining scope for the contractor includes finishing the administration building, addressing outstanding deficiencies, transitioning temporary systems to their final configuration and commencing the two-year process validation period. These final steps will position the Corporation to deliver enhanced water with process redundancy, increased resiliency to climate change, improved environmental performance, and increased system capacity to meet future demands.

**Operational Transition in 2026:** A major focus for 2026 will be the full operational handover of the Plant from the contractor. With direct control restored, we will begin refining operations to achieve improved efficiency and long-term optimization.

I would like to extend my sincere appreciation to the entire Buffalo Pound



Water Treatment Corporation team. Their dedication, professionalism and perseverance over the past three years—during one of the most complex and demanding periods in the Corporation's history—have been exceptional.

I would also like to thank the Board of Directors for their continued guidance, oversight and support, which remain vital to ensuring the Corporation fulfills its mission.

We invite all stakeholders to explore the full Annual Report to gain deeper insight into our achievements, challenges and priorities for the years ahead. Together, we continue to ensure the delivery of safe, reliable, high-quality water to our communities.

**Ryan Johnson, CD, M.A.Sc., P.Eng.**  
President & CEO  
Buffalo Pound Water Treatment Corporation

# Out of Scope Staff



**Left to Right: Ryan Johnson, President & CEO; Laurie Wilkinson, Office Manager; Allan Dlugan, Project Manager; Harry Gahra, Manager, Maintenance & Engineering; Blair Kardash, Manager, Laboratory & Research; Keith Guillaume, Manager, Operations & Safety; Abi Yusuf (CMM Union), Financial Reporting Advisor II; Gene Berezowski, Plant Foreman; Kevin Koch, Maintenance Foreman**

## Location

Our plant is located approximately 30 kilometres northeast of the City of Moose Jaw, Saskatchewan, on Highway No. 301, 17 kilometres north of the intersection with Highway No. 1.

PO Box 944, Moose Jaw, Saskatchewan, S6H 2V2  
Phone 306-694-1377  
Website [www.buffalopoundwtp.ca](http://www.buffalopoundwtp.ca)

## Management Team

**Ryan Johnson**, President & CEO  
**Keith Guillaume**, Operations & Safety Manager  
**Harry Gahra**, Maintenance & Engineering Manager  
**Blair Kardash**, Laboratory & Research Manager  
**Laurie Wilkinson**, Office & Board Support Manager

Management staff can be reached by email via our website.

# Strategy Map 2024 to 2027

<p><b>Vision</b></p> <p><b>Where are We Going</b></p> <p>Buffalo Pound Water is an expertly operated, independent and trusted entity that is positioned to provide sustainable and reliable water as a critical service for generations to come.</p>	<p><b>Mission</b></p> <p><b>Why We Exist</b></p> <p>To provide for the Cities of Regina and Moose Jaw, a reliable and affordable supply of safe, high-quality drinking water which meet the needs and expectations of consumers.</p>	<p><b>Values</b></p> <p><b>How We Operate</b></p> <ul style="list-style-type: none"> <li>• Safety</li> <li>• Team Culture</li> <li>• Process-Driven</li> <li>• Innovation</li> <li>• Continuous Improvement</li> <li>• Operational Excellence</li> </ul>	<p><b>Mandate</b></p> <p>The Corporation will reliably and efficiently provide safe, high quality and affordable drinking water to the Cities.</p>
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## How We Progress Toward the Achieving the Vision

By 2027, commissioning of renewed Plant is complete, and we are focused on the future.

<p><b>Core Services</b></p> <p><b>Water Quality</b></p> <p>Meet regulatory requirements and customer expectations 100% of the time.</p> <p><b>Water Quantity</b></p> <p>Meet customer demands.</p>	<p><b>Key Operational Projects</b></p> <p><b>Commissioning &amp; Plant Renewal</b></p> <p>Renewed Plant Project reaches its completion</p> <p><b>Operational Readiness</b></p> <p>Renewed Plant processes are transformational</p>	<p><b>Goals</b></p> <p><b>1. Quality</b></p> <p>Treated water meets or exceeds quality expectations and all government parameters.</p> <p><b>2. Quantity</b></p> <p>Environmentally responsible, cost-efficient practices ensure a continuous, safe supply of water.</p>	<p><b>3. Monitoring</b></p> <p>Judicious monitoring of treated water from the Plant to the end of the distribution systems.</p> <p><b>4. Research</b></p> <p>Water quality research and implementation of the best available treatment technologies.</p>
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<p><b>People</b></p> <p><b>Operational Excellence Culture</b></p> <p>High performance culture to operate</p> <p><b>Retention and Development</b></p> <p>Engaged, effective, developed and diverse workforce</p> <p><b>Board Governance</b></p> <p>Evaluation, Development, Succession</p>	<p><b>Operational Processes</b></p> <p><b>Safety Culture</b></p> <p>Growth and continuous improvement of the Safety Management Systems</p> <p><b>Environmental Stewardship and Sustainability</b></p> <ul style="list-style-type: none"> <li>• Environment</li> <li>• Social</li> <li>• Governance</li> <li>• Sustainability</li> </ul>	<p><b>Financial &amp; Risk Management</b></p> <p><b>Financial Operation Performance</b></p> <p><b>Asset Management</b></p> <p>Risk-based management</p> <p><b>QMS Management</b></p> <p>Proactive continuous improvement practices</p>	<p><b>Who We Serve</b></p> <p>Regina, Moose Jaw and surrounding region.</p> 
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Our Strategic Plan for 2024-2027 is seen above. Our Key Performance Indicators (KPIs) use targets set through the Strategic Plan's Balanced Scorecard. These are reviewed and adjusted by our Board at the Annual Board Retreat.

All targets in our Strategic Plan were met at year-end except:

- i) The City of Regina operated their wells 20 times withdrawing 670.33 ML of water due to construction activities putting temporary limits on our capacity.
- ii) The Employee Engagement Survey will be undertaken in 2026.

The 2024-2027 Strategic Plan was implemented January 1, 2024.

# Year in Review



## Our Source of Water

Water for Regina and Moose Jaw comes from Buffalo Pound Lake, a shallow reservoir in the Qu'Appelle Valley, part of the Upper Qu'Appelle River. The lake is 29 kilometres long and one kilometre wide, with an average depth of just three metres. Its surface area of 2,900 hectares gives it a capacity of 90 million cubic metres at the full supply level of 509.3 metres above sea level.

Water levels in Buffalo Pound Lake are controlled by the Saskatchewan Water Security Agency and maintained through water releases from the Qu'Appelle Dam on Lake Diefenbaker. In recent years, the mean annual release from Lake Diefenbaker has ranged from 1.8 to 5.3 m<sup>3</sup>/s. Rain, snowmelt and floodwaters from the Moose Jaw River have impacted water quality. The lake is also affected by discharges from upstream cities (point sources) and agricultural and recreational activities (non-point sources).

Buffalo Pound Lake is generally free of industrial pollution but is naturally rich in nutrients such as phosphate, nitrogen and dissolved organic carbon, which promote the growth of phytoplankton—typically green algae and diatoms in winter and green algae and cyanobacteria in summer. Weed growth can also be extensive. Algae and weeds pose treatment challenges, requiring higher chemical usage and potentially causing undesirable tastes and odours. Additionally, groundwater and surface runoff contribute minerals to the lake and watershed.

## OUR WATER TREATMENT PROCESS

Raw water from Buffalo Pound Lake undergoes multiple treatments to remove impurities such as algae, bacteria, clay particles and dissolved organic materials. The goal is to produce safe, clear, odour-free and aesthetically pleasing drinking water.

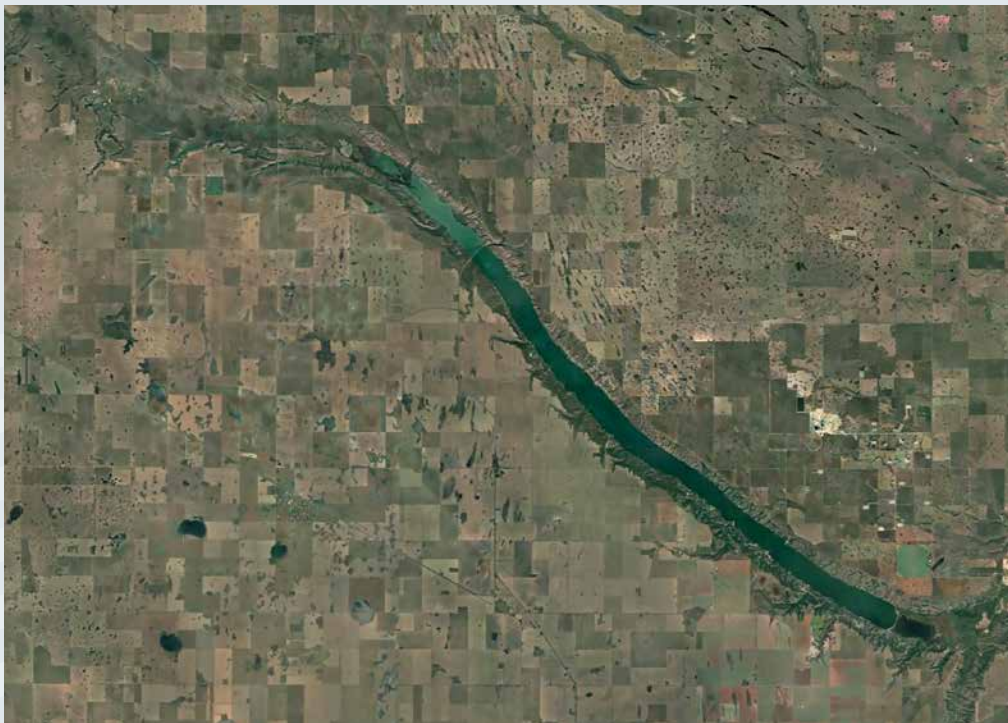
Water enters a pumping station on the lake's southeast shore through two submerged intakes. It is then pumped via two pipelines, measuring 1.05 and 1.35 metres in diameter, to our Plant, rising 82 metres over a three-kilometre span. At our Plant, water is split into two streams for initial treatment—cascade de-gasification, coagulation/ flocculation, clarification, ozonation and quenching—before recombining for filtration, ultraviolet disinfection and chlorination.

### Cascade De-Gasification

Excess dissolved gases in raw lake water—mainly produced by photosynthetic cyanobacteria and algae—are removed through cascade operation. As water flows over a series of steps, excess gases escape, preventing the formation of gas bubbles that could disrupt clarification and filtration.

### Coagulation and Flocculation

During summer, polyaluminum chloride is vigorously mixed into the water to neutralize suspended particles, forming a fluffy precipitate (floc) that traps algae, organic carbon and fine



**Buffalo Pound Lake is 29 kilometres long and one kilometre wide, with an average depth of just three metres.**

particles. The water is then gently stirred in flocculation tanks to allow the floc to grow larger and denser before removal.

### Clarification

Floc-laden water enters dissolved air floatation clarifiers, where over 95% of impurities float to the top as sludge while clear water is drawn from the bottom. The sludge is pumped to settling ponds, where it separates into clear water (returned to the lake) and solid waste (removed for disposal).

### Ozonation

Ozonation is an advanced oxidation process that uses ozone (O<sub>3</sub>)—a powerful, on-site generated gas—to rapidly disinfect water and break down contaminants. It effectively destroys bacteria, viruses and parasites, while reducing colour, taste and odour issues. For the first time in its history, the Plant now has a year-round taste and odour control process. Ozone also breaks down natural organic matter to smaller molecules which provide food for heterotrophic bacteria that must thrive in the downstream biologically activated filters.

### Ozone Quenching

To prevent safety hazards associated with ozone off-gassing and prevent downstream oxidation of equipment (such as pipes and rubber seals), calcium thiosulfate is added to neutralize or quench residual dissolved ozone. Quenching also prevents destruction of the essential bacteria that must thrive in the downstream filters.

### Biologically Active Carbon (BAC) Filtration

The BAC filters combine granular activated carbon (GAC) with beneficial bacteria called heterotrophs to remove organic contaminants through simultaneous adsorption and biodegradation. As water passes through, the carbon adsorbs organic compounds, which are then metabolized by heterotrophs, effectively regenerating the carbon and

extending filter life. BAC is highly effective at reducing odour-causing compounds and physically removing remaining floc from clarification. As trapped floc and excessive bacterial growth accumulates, filters are periodically cleaned through backwashing with air and clean water.

### Disinfection

Water undergoes two disinfection stages: ultraviolet (UV) treatment to inactivate protozoa, followed by chlorination to eliminate bacteria and viruses. Before distribution, chlorine levels are adjusted to maintain disinfection and prevent contamination in pipelines.

## ENVIRONMENTAL PROTECTION AND CONSERVATION

Like any large industrial facility, our plant has the potential to impact the environment. We have systems in place to manage process wastes, including aluminum-based water treatment sludge, laboratory and solid waste, and sewage.

- We use a significant amount of electrical energy. To reduce our carbon footprint, we purchase only green power from SaskPower and have added on-site solar generation, lowering environmental impact and operating costs.
- Our sludge lagoons effectively manage aluminum-based water treatment sludge. The natural freeze-thaw cycle dewater sludge, creating a nearly dry material that is transported to a landfill or stockpiled on-site. We are among the few water treatment plants in Canada with this capability.
- Laboratory and solid wastes are managed through contracted disposal agencies, including specialized firms for hazardous waste.
- We recycle fiber-based materials and metals.
- Sewage is treated in on-site lagoons. The primary lagoon has a geotextile fabric and bentonitic clay liner to prevent seepage.

Like any large industrial facility, our plant has the potential to impact the environment. We have systems in place to manage process wastes, including aluminum-based water treatment sludge, laboratory and solid waste, and sewage.



# Environmental Strategy Map

VISION	MISSION	MANDATE
As an essential service provider, BPW is committed to protecting the environment and public health through the provision of responsible potable water generation. We strive to exceed regulated standards, minimize our carbon footprint and stand as a leader in sustainable water treatment.	BPW will minimize our carbon footprint and treatment process waste by optimizing plant operations, and land and water use. We are committed to innovation and continual process improvement.	The Corporation will reliably and efficiently provide safe, high quality and affordable drinking water to the Cities.

VALUES					
Safety	Team Culture	Accountability	Process Driven	Innovation	Continuous Improvement
We are pro-active in our approach towards avoiding ecological contamination and environmental damage.	Through education, documentation and engagement, we foster understanding and commitment from all staff to be environmentally sustainable.	We ensure proper, efficient & effective usage of resources to operate a sustainable entity with the environmental impacts considered.	We optimize plant processes to maximize water recycling, "right-size" lake water withdrawals, and minimize wastewater production.	We improve our environmental footprint through innovative designs that maximize process effectiveness and utilize green technologies.	We improve environmental performance through effective measurement and development of KPIs.

GOAL	TARGET	TACTIC
Use 100% renewable power	All electricity used in the plant, administration building, pumping stations and outbuildings come from carbon-free sources.	Utilize Solar Power and purchase SPC "Green" power to supplement demand.
Increase energy independence and decarbonize emergency backup power systems through renewable and low-carbon energy sources.	Phase 1: Invest in 2.2-megawatt solar array providing up to 10% of total electricity needs of the entire Plant. Phase 2: Double solar capacity 4.5-megawatts. Phase 3: Invest in battery storage and backup diesel generator biofuel conversion.	Seek opportunities for grants and utility provider incentives to fund expansion of on-site renewable energy production and storage. Identify mechanical, storage and cost requirements to convert backup diesel generators to biofuel.
Develop resource conscious maintenance and operations program and procedures.	Ensure that equipment purchases are highly energy efficient, operate as efficiently as possible, and achieve expected useful life.	Purchase energy efficient equipment. Install energy monitoring system track usage and predict equipment failure. Maximize the service life of equipment providing replacement parts are still available. Recycle decommissioned equipment at the end of service life.
Minimize water content of sludge/solids disposal to landfill.	Water treatment process solid waste to contain less than 50% water content before diverting to landfill.	Stockpile sludge until the solids content exceeds 50%. Freezing of lagoon sludge in Winter and adequate drying (draining/evaporation) in Summer. Utilize new drying technologies and processes as they become commercially available.
Be recognized as a leader in low-carbon emissions and wastewater discharge.	Plant ranked above 50% of peers according to national benchmarking targets set by <a href="http://nationalbenchmarking.com">nationalbenchmarking.com</a> .	Optimize use of renewable energy. Maximize water recycling process in design of new plant to minimize wastewater discharge. Continual technical process improvements for water recycling controls.
Encourage public engagement and education about sustainable water management and resource conservation.	Develop public training, education, and promotion programs.	Work with municipal stakeholders to encourage promotion of the plant's sustainable operations through civic communications and inclusion of plant performance in Annual Reports. Collaborate with local school boards to develop a program that would be beneficial to their students. Engage with universities on research, training, internship, and education opportunities. Promote public education through news releases, web content and public tours of the plant.

# Plant Operations and Maintenance

## WATER PRODUCTION AND SALES

Water Production and Sales (in megalitres) were as shown in Table 1. (See also related Graphs 1 and 2) Total sales to the Cities in 2025 were 29,401.14 ML to Regina and 5,288.97 ML to Moose Jaw. Sales to Regina increased 5.58% from 2024 and sales to Moose Jaw increased 1.16%.

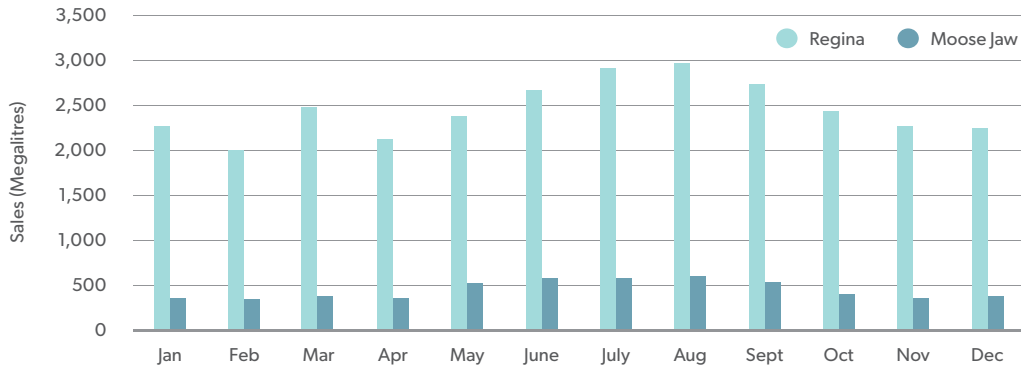
Sales to SaskWater Corporation in 2025 increased by 2.21% to 178.72 ML. Sales to SaskWater represent less than one percent of our production.

Graph 2 shows annual water production since the plant began operation in 1955.

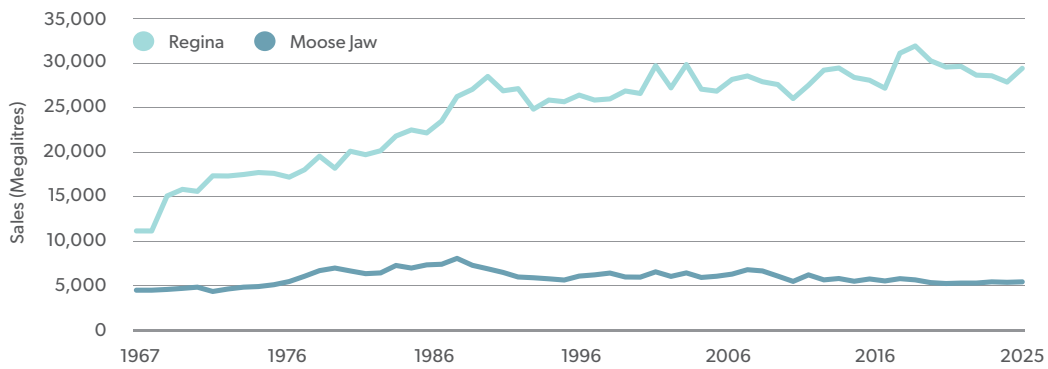
**Table 1 | 2025 Water Sales (Treated) In Megalitres (ML)**

MONTH	REGINA	MOOSE JAW	SASKWATER CORP	TOTAL
January	2256.4	358.6	14.2	2629.1
February	1988.3	339.7	12.4	2340.4
March	2479.5	376.2	13.9	2869.6
April	2116.7	360.4	13.3	2490.4
May	2382.5	501.5	16.9	2900.9
June	2666.0	570.7	19.2	3255.9
July	2864.8	569.7	18.2	3452.8
August	2987.0	578.0	18.6	3583.6
September	2675.8	504.4	14.5	3194.7
October	2432.0	396.5	12.6	2841.1
November	2284.3	353.8	12.2	2650.3
December	2275.7	379.5	13.0	2668.1
	<b>29409.1</b>	<b>5289.0</b>	<b>178.7</b>	<b>34876.8</b>

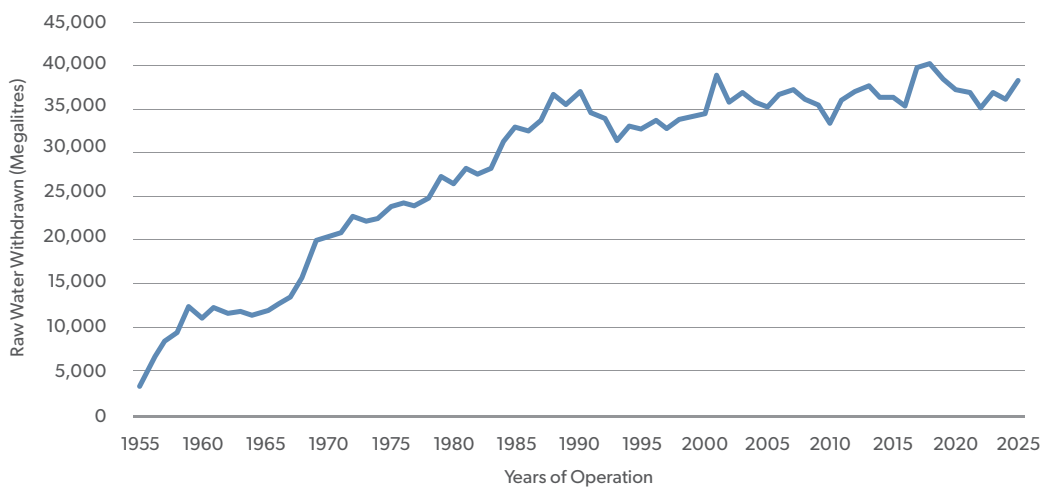
**Graph 1 | Monthly Potable Water Sales to Regina & Moose Jaw - 2025**



**Graph 2 | Annual Potable Water Sales to Regina & Moose Jaw - 1967-2025**



**Graph 3 | Annual Raw Water Withdrawn from Buffalo Pound Lake - 1958-2025**



# Operations



We modify our processes throughout the year based on the changing water quality in Buffalo Pound Lake to ensure our customers receive the best product possible.

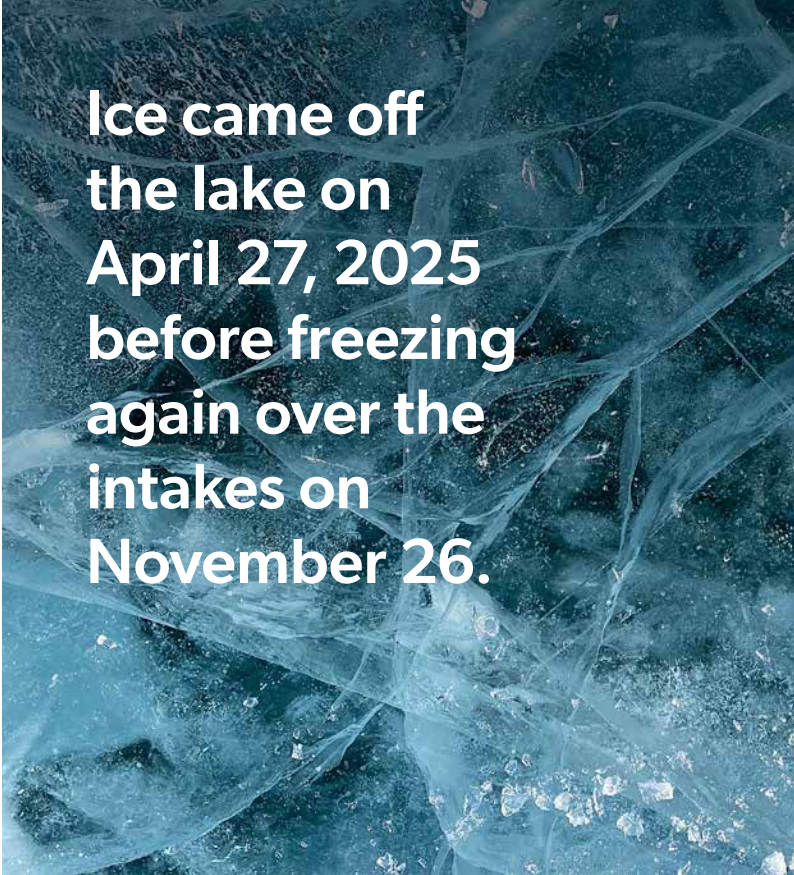
The lake water quality has improved in terms of mineral content, as measured by total dissolved solids, since 2015. Dissolved organic carbon also decreased but has since stabilized. In 2015, we saw some of the highest concentrations of organics and minerals in Buffalo Pound Lake's history. Full lake water quality details can be found in the Additional Water Quality Monitoring section (page 44) of this report.

With the decrease in dissolved organic carbon concentration and the discontinuation of prechlorination in April 2025, we have seen a sustained reduction in trihalomethanes in our treated water. In 2025, our clearwell trihalomethanes concentration averaged 15 µg/L compared to 78 µg/L in 2015.

In March 2025, the multimedia filters were removed from service and the deep bed carbon filters (DBCFs) took over the role as filtration units. The DBCFs were originally placed into operation in July 2024 for tasted and odour removal by adsorption. Problems with very fine media particles in the top media layers of each filter resulted in a series of production problems in May and June that resulted in the City of Regina having to use their emergency well water system. Removal of the media causing the partial blockages eventually solved the production problem.

In May 2025, the new ozone injection facility was placed on-line which became the primary taste and odour removal process. Ozone oxidizes larger naturally present organic molecules to smaller components that provide food for heterotrophic bacteria that live within and on the carbon media present in the DBCFs. Heterotrophic bacteria have now made the filters biologically active which act as a secondary process of taste and odour removal. This combination of ozone and biologically active filters provides effective, year-round taste and odour removal for the first time in our Plant's history.

There are five dissolved air flotation units that were in use throughout 2025. These units use microbubbles to remove solids, replacing previous clarifiers that relied on gravity and settling. Dissolved air flotation units better remove lighter particles such as algae, are not susceptible to short-circuiting or high effluent turbidity due to temperature thermoclines, and remove suspended solids more efficiently. Most of the time, the quality of dissolved air flotation clarifier effluent met turbidity expectations which is required so the downstream filters can produce adequate quantities of water without requiring frequent backwashes.



**Ice came off  
the lake on  
April 27, 2025  
before freezing  
again over the  
intakes on  
November 26.**

Dissolved air flotation clarifier skimmers remove particulate matter (coagulant sludge) from raw water. The skimmed sludge is pumped to residuals settling ponds, where it settles, and the clear water overflow returns to Buffalo Pound Lake. For the first time, sludge from the two new summer ponds was successfully excavated in 2025 and the sludge residuals were moved to an onsite drying area for further dewatering. The summer ponds will be returned to service in May 2026. No sludge was hauled to the Moose Jaw landfill. The Corporation is currently working with a consulting engineering firm to design and construct an onsite monofil so hauling to landfill can be discontinued longterm.

Conversion of the legacy recycle building into a backwash equalization tank was completed in Q4 2025. All backwash water from the BACs now flows to the equalization tank and then on demand is pumped to an active thickener. Floc and debris in the backwash water settles out in the thickener and the cleaner supernatant is returned to process for retreatment. The thickened floc and debris is periodically pumped directly to a settling pond. When optimized in 2026, this system will substantially reduce wastewater going to the ponds. There will no longer be a continuous overflow of wastewater from the active residuals pond, ensuring our Plant complies with quality requirements for wastewater entering the environment.

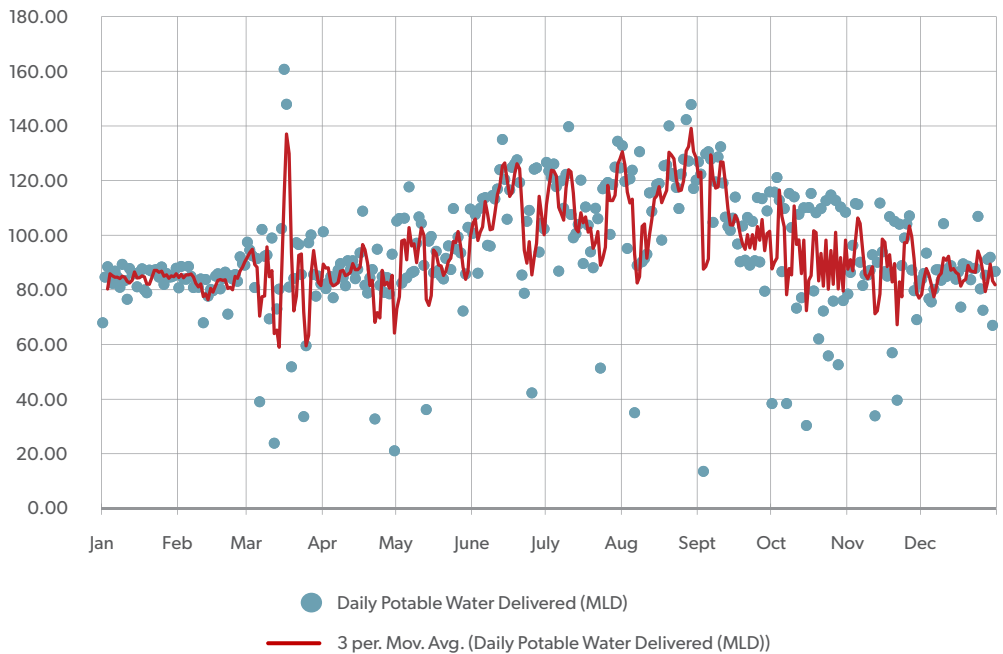
**PLANT CAPACITY**

The Buffalo Pound Water Treatment Plant (BPWTP) provides potable water to the City of Regina, the City of Moose Jaw, SaskWater and Buffalo Pound Provincial Park. Given our size and typical requirements, we measure the daily production of water by how many million litres of water is produced—or megalitres per day (MLD). The construction work completed at the end of 2025 provides the full design footprint expected to provide a firm treatment capacity for warm water to 220 MLD (summer peaks).

Total plant demand is primarily from the City of Regina and the City of Moose Jaw (their combined annual average daily flow in 2025 is 94.5 MLD with a 2025 total supplied demand of 34,500 ML). SaskWater and the Buffalo Pound Provincial Park currently represent only a very small portion of total flow—less than one percent (an average of 0.55 MLD with a 2024 total supplied demand of 200 ML). Average daily flows are their highest from June to September while falling to lower average daily demand from November to April. Due to construction activities, there were a few days when the plant flows were reduced due to planned shutdowns and were often planned at the lowest flow demand periods of the year.

In 2025, our maximum flow to the Cities was 161 MLD, reached on March 16, while our minimum flow to the Cities was 13.5 MLD on September 3. For the maximum flow, this was following an extended shutdown to refill the City of Regina and City of Moose Jaw storage reservoirs. For the minimum flow, this was during a significant plant shutdown connected to the plant renewal construction work. In fact, when reviewing the daily potable water sales graph provided below, there were at least 20 plant shutdowns followed by higher flows to recover (note the 20 data points below 60 MLD). These shutdowns were planned and necessary events to bring online new treatment process components as well as decommission the old processes taken out of service during the Plant Renewal Project. This project has been underway since mid-2022 with the new process largely in place by the end of 2025. Future years will not see the level of shutdowns seen in 2025 as it was the year most new process components were fully engaged.

**2025 Daily Potable Water Sales - Regina and Moose Jaw (MLD)**



**CAPITAL PROJECTS**

Capital projects are infrastructure projects focused on capacity, performance or renewed assets necessary for operational resilience. These projects are typically undertaken when the scope extends beyond internal staffing and resources. For the most part, the recent and current capital projects are interrelated in their focus towards complete plant renewal. The Board of Directors maintains a committee to oversee these capital projects at the portfolio level. In 2025, the Capital Project Committee oversaw the construction progress and early commissioning activities for the Plant Renewal Project, the combination of the DCS Controls Upgrade with the Plant Renewal Project, development of plant areas unaffected by the Plant Renewal Project and integration of the new solar panel system providing up to 10% of plant electrical requirements.

**PLANT RENEWAL PROJECT**

The Plant Renewal Project work has evolved for longer than the past decade from identification of the need for a plant renewal or replacement, to portions of the facility undergoing renewal (lake pump station, distribution, power supply) or addition (backup power generation, UV disinfection), to current construction activities occurring on the main plant area and covered in the Plant Renewal Project process graphic to the right.

The main efforts of this project are to guarantee long term water treatment capacity and stability, increase firm treatment capacity from 205 MLD to 220 MLD (with every main system still having full redundancy), increasing capacity of the Plant through

replacement and expansion of the process evaporation/settling ponds, changing the older style clarification process to the more robust Dissolved Air Flotation (DAF) clarification, adding ozonation, changing the Granular Activated Carbon (GAC) filters into Biological Activated Carbon (BAC) filters, providing a new administration building for maintenance, equipment storage, laboratory, offices and related personnel requirements, and providing a general overall renewal of the existing plant. In advance of the Plant and site renewal, almost 23 acres of land was purchased late in 2021 to make room for the necessary expansion.

The main Plant renewal construction activity, starting in June 2022, saw onsite construction work grow substantially in 2023 with several critical facility components being modified or newly commissioned. The highest construction activity, starting late in 2023, has continued through 2024 with all key unit operations fully functional by the end of 2025.

Major process systems now being used in operation from the main Plant renewal include a renewed pretreatment area with upgraded coagulant supply system, five DAF clarifiers, a new multi-train ozone contactor, an updated chlorine feed facility, eight BAC filters, a new water recycle system and a new process evaporation/settling ponds system handling the thickened biosolids.

**PLANT RENEWAL BACKGROUND**

The Plant Renewal Project has been developed by following the stages of the recommended Progressive Design Build (PDB) procurement method. This work has been progressed by an integrated team of Corporation staff with the owner’s advocate and supported by a legal advisor (Aird & Berlis) and fairness advisor (RFP Solutions). Jacobs (with KGS and Carollo) as the owner’s advocate, assisted in finalizing the terms and value of the construction work and continued to provide technical consulting services while overseeing the contractors’ efforts for construction and commissioning of the project.

The Graham-Aecon joint venture team (GAJV) were the successful progressive design build contractors for this project. The engineering designers being used are Stantec and Associated Engineering. The final project cost at the time of award came in at \$325M, of which \$295M covers construction and equipment costs and \$30M is for engineering. This project sought substantial grant funding through the federal and provincial governments since the start of the progressive design build process and has been fortunate to receive ICIP (Investing in Canada Infrastructure Program). This was announced in 2021 for a total government grant (federal and provincial) of \$163.4M. This funding required BPWTC to cover at least \$60M in additional funds, which has been confirmed through a loan supported by both Regina and Moose Jaw. By the end of 2025, the process area is largely

**Plant Renewal Project Process**



complete with the only significant remaining work being the second phase of the administration building. Key milestone achievements in the Plant Renewal Project in 2025:

#### Key milestone achievements in the Plant Renewal Project in 2025:

- **February:** Staff moved to new maintenance, laboratory and administration offices
- **March:** BAC fully operational, removal of multimedia filters and prechlorination, low lift pumps partially commissioned
- **May/June:** Startup of ozone contactors (primary benefit is taste and odour control)
- **July:** Low lift pumping system full tuning completed. BAC maximum flow testing confirmed
- **August:** New coagulant feed pumps operational in pretreatment area
- **September:** Filter aid and thiosulphate chemical additions systems commissioned in final location
- **November:** Supernatant return / biosolids concentration system online

In attaining these key milestones, there were many process disruptions. At least 20 process shutdowns were related to construction work tie-ins and equipment start-ups. Several more shutdowns occurred due to programming glitches and new equipment commissioning needs. Of these, work on the previously installed DAF systems and the chlorine feed system were particularly challenging. Even a couple of weather events impacted the operation and incoming raw water quality, making treatment conditions more difficult. That said, our new water treatment process has been established, making operations more stable even though work remains in optimizing the plant for the next couple of years.

Heading into 2026, it is expected that the process will be functioning with all items in the plant renewal design in place so we can enter the two-year optimization period. Construction will continue outside the process area including the completion of the administration building and services within the property of the water treatment plant. While some commissioning and/or fine-tuning efforts will occur throughout the year, it is anticipated that the level of construction personnel will be reduced and eventually limited to non-process activities by mid-year.

#### OTHER PROJECTS

##### Control System Upgrade Project

This project was started in advance of the plant renewal project in 2019 due to the existing system approaching end of life conditions. It was decided that the plant control system needed to move from a Supervisory Control and Data Acquisition (SCADA) system to the Distributed Control System (DCS) platform. By 2022, the plant renewal project design was completed, and its control system criteria were incorporated

into the full new DCS design. Procurement of the equipment necessary for this project started arriving in late 2022. During 2023, equipment deliveries were completed as were the addition of operation control screens and programming and debugging for all commissioned processes for the Plant Renewal Project. Throughout 2024-25, control system upgrades have been paced to match the construction work areas, provide ongoing support to commissioning activities and modify the controls to match actual operational needs. Towards the latter half of 2025, the focus of programming effort supported commissioning, troubleshooting and optimization efforts. A continuing maintenance contract with the control systems programmer will be set up for this effort to go forward.

##### Key improvements made with the DCS control system:

- Commissioning of the new process systems: coagulant feed, DAF, ozone, BAC, chlorine feed, and chemical addition (most within 2025)
- Migration of lake pump station and distribution pumps from old SCADA to new DCS was initiated in 2024 but has been better optimized in 2025. Some work remains in these areas and includes some of the secondary systems
- Troubleshooting and optimization work were especially complex for BAC and chlorine systems
- Connection of the building management system (BMS) to the DCS system so that building conditions are monitored along with process conditions
- Ongoing training and clarification of DCS functions with operations and maintenance
- Steady improvement with plant shutdowns and restoration of service activities. By the end of the year, these were mostly driven by operations and maintenance following established SOPs

##### Addition of Orthophosphate and Fluoride Feed Systems

As the main Plant Renewal Project moves towards completion, there were additional requests to improve the potable water leaving the plant by the addition of very small concentrations of orthophosphate and fluoride. The orthophosphate addition is being added to the water based upon studies that show this material helps to coat the interior walls of pipes and plumbing fixtures that may otherwise release lead into the water. There is a current study underway with the water being produced at Buffalo Pound Water Treatment Plant to identify the dose needed to provide adequate coating. The fluoride is being added to the water in small doses to meet the requests of our major customers.

Both additional chemical feed systems have gone through design through 2025. The location will be in our new chemical building. The design will be ready for tendering in early 2026 with these systems going into operation in 2027. These feed systems will be controlled with the plant DCS.

# Plant Safety

The Safety Management System (SMS) within the Corporation continued to operate in 2025. The SMS is being combined with other management systems as part of the Corporation’s overall integrated management system implementation. This system is enhancing training effectiveness through document control, notification alerts and employee engagement.

The Occupational Health Committee (OHC) consists of four in-scope and four out-of-scope staff. The committee meets every 10 weeks. The OHC conducts inspections every 10 weeks of all buildings and properties, ensuring safety standards are being met. The OHC has made it a priority to ensure that the in-scope staff represent all divisions of the Corporation; those being maintenance, operations and the laboratory.

The Plant Renewal Project continued through 2025 with constant communication being maintained with the Graham-Aecon safety team to ensure any incidents or opportunities for improvement

were being discussed. The Corporation worked well with the contractors on site with both parties assisting each other when something needed to be rectified along with maintaining effective communication.

The Corporation holds weekly toolbox meetings, bi-monthly staff meetings and, as required, stand-up safety reviews if situations arise that need immediate attention. In total, 43 weekly meetings were held covering various safety topics and challenges within the Corporation.

The Corporation reported zero lost time incidents, two no-lost-time incidents and five near misses. The incidents and near misses followed the SMS Incident Investigation Procedure and corrective action was implemented.



# Asset Management

The Corporation’s asset management strategy focuses on aligning the Corporation’s asset investments with its strategic goals, ensuring efficient and effective resource utilization. It encompasses activities like maintenance, asset life cycle management and replacement planning to support the Corporation’s commitment to providing reliable, affordable, high quality drinking water. The asset management approach is integral to achieving the Corporation’s broader strategic objectives, enhancing decision-making processes across all asset life cycle stages, from procurement to disposal.

As the Plant Renewal Project nears completion, the focus is shifting to onboarding new assets and safely decommissioning legacy equipment to ensure reliable and uninterrupted water delivery. Preventative maintenance strategies are being developed and implemented through the computerized maintenance management system to support long term asset performance. This includes training maintenance and operations staff on new processes and equipment, identifying and standardizing critical spare parts, and updating maintenance procedures and documentation to align with the renewed plant infrastructure.

VISION	MISSION	MANDATE
BPW is an expertly operated, independent, and trusted entity that will be positioned to provide sustainable and reliable water as a critical service for generations to come.	To provide for the Cities of Regina and Moose Jaw a reliable and affordable supply of safe, high-quality drinking water that meets the needs and expectations of consumers.	<ul style="list-style-type: none"> <li>• Safety</li> <li>• Process-Driven</li> <li>• Continuous Improvement</li> <li>• Team Culture</li> <li>• Innovation</li> <li>• Operational Excellence</li> </ul>

ASSET MANAGEMENT POLICY					
• Customer Focused	<ul style="list-style-type: none"> <li>• Compliant</li> <li>• Cost Effective</li> </ul>	<ul style="list-style-type: none"> <li>• Risk Based</li> <li>• Knowledgeable</li> </ul>	• Continually Improving	<ul style="list-style-type: none"> <li>• Systematic</li> <li>• Collaborative</li> </ul>	<ul style="list-style-type: none"> <li>• Capable</li> <li>• Sustainable</li> </ul>

ASSET MANAGEMENT STRATEGY					
Strategy and Planning	Decision Making	Lifecycle Delivery	Risk and Review	Asset Information	Organization and People

## ASSET MANAGEMENT OBJECTIVES



# Risk Review

Through our formal Risk Management Framework, our management team is responsible for identifying, analyzing and evaluating risk while our Board reviews our top risks and determines if the appropriate controls and mitigations are in place. To ensure we provide our customers with the highest quality product, we look at the entire system—from source water to customer boundary—in our risk assessment process.

## AGING INFRASTRUCTURE

Our Plant has seen numerous expansions and upgrades since it first became operational in 1955. As it continues to age, there is a risk of increased equipment failure, which could cause service impacts, compromise regulatory compliance, or increase operations and maintenance costs.

## REGULATORY CHANGES

The supply of drinking water requires strict compliance with health, safety and environmental regulations. Federal and provincial regulators continually review and update regulations and there is always the potential for changes in regulations. Changes to regulations may require us to invest in new, or upgrades to existing, infrastructure and/or could increase operation and maintenance costs.

## THIRD PARTY INFLUENCES

Damage or other negative influences are a consistent source of risk for us. Damage to infrastructure and/or contamination of the watershed could cause service impacts, compromise regulatory compliance, or increase operations and maintenance costs.

## CLIMATE AND WEATHER

Changes in climate and weather conditions, extreme or moderate, are potential sources of risk.

## GENERAL BUSINESS

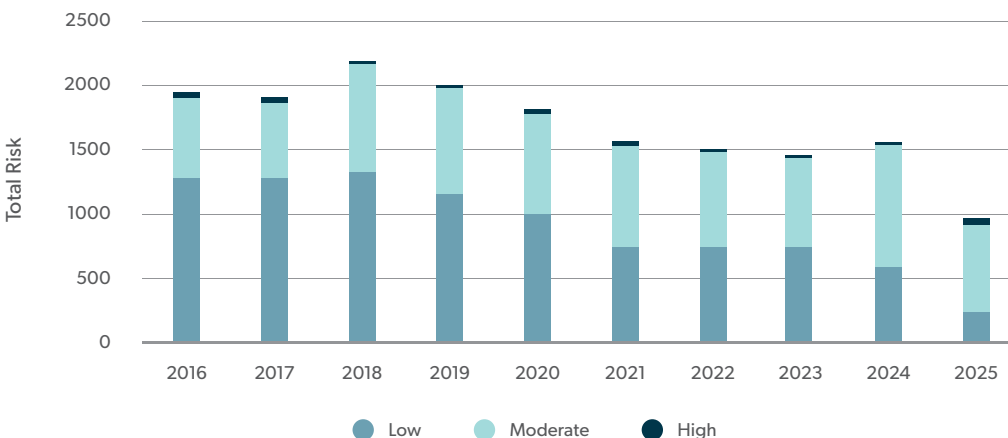
There are several types of general business risks we face. These include, general economic conditions, human resource management, reputation, purchasing and information systems.

We address risk with a number of strategies, including:

- Capital Investments
- Operations Procedures
- Enhanced Maintenance
- Emergency Response Plans
- Communication with Third Parties
- Transfer of Risk

The Corporation monitored 39 identified risks in 2025. Many of these, however, will be mitigated through our Board’s actions around capital investment, operational procedures, enhanced maintenance, emergency response plans, communications and risk transference. The risk profile decreased from 1550 in 2024 to 955 in 2025.

## Risk Profile



# Benchmark Initiative



The National Water and Wastewater Benchmarking Initiative (NWWBI) is the official benchmark for Canadian water, wastewater and stormwater utilities. It helps utilities measure achievements across financial, environmental and social goals. By participating in the NWWBI, we can compare our performance with similar water treatment utilities across Canada. Although participation is optional, we have been involved since 2014, demonstrating our commitment to continuous improvement through shared insights and best practices.

Collecting and processing nationwide utility data is complex and typically takes around eight months. While the data is usually a year behind, it remains valuable for identifying areas for improvement. Data for 2023 was gathered in 2024 and analyzed in Spring 2025, with 2025 data currently being collected and evaluated.

Periodically, the Corporation assesses its performance against its peers and then takes action by identifying areas for improvement.

In the NWWBI system, the operational data is collected around six categories of goals:

- Ensure Adequate Capacity
- Meet Service Requirements with Economic Efficiency
- Protect Public Health and Safety
- Protect the Environment
- Provide a Safe and Productive Workplace
- Provide Reliable Service and Infrastructure

Each of these goals includes several sub-measures, and it is up to the utilities to decide which goals and sub-measures to focus on. The measures/key performance indicators established under each goal have been defined to allow for like-for-like

comparisons among the utilities. The results of each sub-measure are plotted individually and compared with other similar water treatment plant measures. Each graph includes 25th percentile, median and 75th percentile lines, which help utilities gauge their performance against peers. The NWWBI continuously adds measures to its database and reviews each sub-measure annually to decide whether it should remain in the system or be enhanced. As a result, some sub-measures presented in previous years may not carry over into the following year. Measuring performance against peers needs to be balanced with operating contexts and an organization's strategic priorities, as performance below the 25th and above the 75th percentile is not necessarily inferior or superior. Only significant measures aligned with corporate strategy are discussed under each goal.

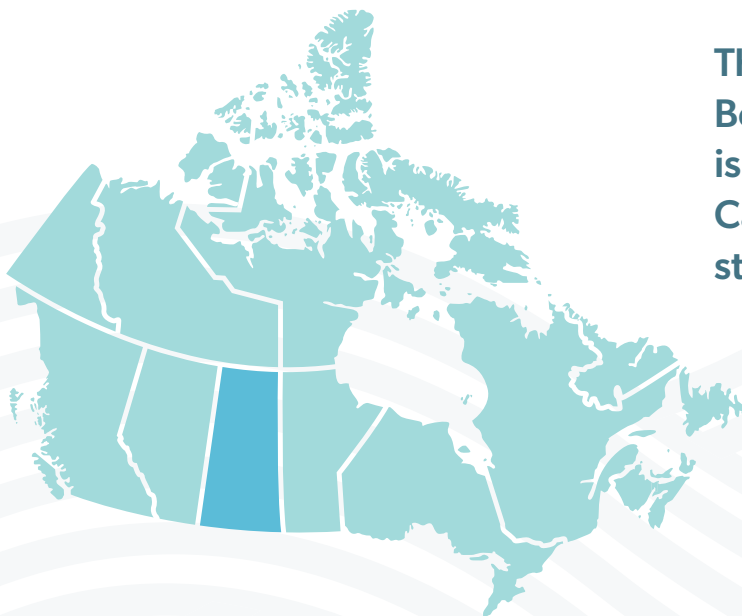
1. Average Day Demand/Rated Capacity
2. Days Plant Operated above 90 % Capacity
3. Days Plant Operated above 100 % Capacity
4. Total Raw Water Abstracted/Existing Licensing Capacity

In 2023, the maximum daily production was 143 ML, while the average daily demand was 89 ML. The total water production was 34,021 ML, slightly exceeding the 2022 total of 33,962 ML.

#### ENSURE ADEQUATE CAPACITY

The objective of this goal is to ensure that the utility has sufficient capacity to meet the customer demand. This goal consists of following sub measures.

Regina's water consumption decreased by 77ML (a 0.27% reduction), Moose Jaw's demand increased by 150 ML (a 2.9% rise) and SaskWater's usage dropped by 16 ML (a 6.55% decline).



**The National Water and Wastewater Benchmarking Initiative (NWWBI) is the official benchmark for Canadian water, wastewater and stormwater utilities.**

The old plant's total capacity was 205 MLD, but in 2023, construction sequencing and filter process modifications reduced this capacity considerably. Based on historical average daily demand and future production modeling, the charts in this goal demonstrate that the new Plant's firm capacity of 220 MLD is sufficient for future needs and is in line with rest of the utilities across the country. Additionally, the new Plant's total capacity of 250 MLD provides confidence that even if demand spikes significantly due to weather conditions, the Plant can meet those requirements.

### MEET SERVICE REQUIREMENTS WITH ECONOMIC EFFICIENCY

The aim of this objective is to ensure that the utility provides value to its customers. The goal consists of the following subsequent sub-measures.

1. Annual O&M Cost as a Percentage of Replacement Value
2. Chemical Cost/Volume Treated
3. Energy Consumed/ML Treated
4. Energy Costs/ML Treated
5. FTEs Relative to Volume Treated
6. O&M Cost + Capital Reinvestment Cost/ML Treated
7. O&M Cost/ Relative to Volume Treated

In 2023, the annual O&M cost was \$16.02M and was higher than 2022 (\$13.04M). The decrease in annual O&M cost as percentage of replacement value measure over the last few years is a result of updating the estimated replacement value of the Plant assets. The revised cost of replacing the entire facility now stands at approximately \$400M. Previously the replacement cost was estimated to be \$200M.

The consumption of chemicals varies from year to year and is highly dependent on raw water quality. In 2023, the Plant's chemical costs increased significantly compared to 2022. Total chemical expenditures rose from \$1.90M in 2022 to \$3.12M in 2023. The largest increase was in alum, which more than doubled from \$1.53M to \$2.69M. Chlorine costs also rose, from \$251,412 to \$388,350. In contrast, spending on powdered activated carbon decreased from \$105,600 to \$23,152, while polymer costs saw a modest increase. The overall rise in chemical costs was primarily driven by higher alum usage, due to raw water quality challenges and operational demands during the Plant's renewal and upgrade activities.

Energy consumed metric includes electricity and natural gas consumption at the plant. Compared to other similar plants, the Plant has higher energy demand due to the elevation difference between the lake and Main Plant. Although in 2023, the plant production was similar to 2022. In 2023, the electricity consumption increased from 1.99Mkwh to 2.19Mkwh and natural gas from 42,732GJ to 50,630GJ due to construction activities. The general rate increased also lead to higher energy cost.

FTE relative to volume treated metric remains consistent with other years and closely tracks the median of the rest of the plants in the country.

Increase in O&M cost (\$16.02M vs \$13.04M) and capital cost (\$127M vs \$57M), but similar water production in 2023 compared to 2022, led to an increase to the O&M Cost + Capital Reinvestment Cost/ML Treated and O&M Cost/relative to volume treated measure.

### PROTECT PUBLIC HEALTH AND SAFETY

The objective of this goal is to characterize the raw water and treated water quality. The goal consists of several sub measures.

1. Average Annual Treated Water Turbidity
2. Percentage of Total Organic Carbon (TOC) removal
3. Total Coliform Occurrence in Treated Water
4. Average Total Chlorine Residual

The sub-measures in this goal have been significantly revamped compared to previous years and some metrics that were previously trended are no longer trended.

Raw water turbidity at Buffalo Pound Lake in 2023 was generally very low and stable with monthly averages ranging between 0.05 and 0.16 NTU.

Buffalo Pound Lake water is naturally rich in nutrients and dissolved organic carbon (DOC) which contributes to TOC levels and influences treatment needs. TOC removal in 2023 averaged around 60–80% efficiency with seasonal highs above 90%. This reduction directly lowered disinfection by-product formation and helped the plant stay within regulatory limits. Planned upgrades (ozone +BAC) will provide even more robust control in future years.

In 2023, free chlorine residual in treated water was normally maintained between 1.1 and 1.4 mg/L with the plant maintaining higher levels when UV disinfection was offline for construction.

### PROTECT THE ENVIRONMENT

The objective of this goal to achieve sustainability in our operations. This goal consists of three sub measures.

1. GHG Emissions form Energy Consumed/ML Treated
2. Water Wasted During Treatment Process
3. Percent of Backwash Waste Treated

The higher energy consumption in 2023 was driven by construction activities and less-than-optimal operation of distribution pumps (throttling) which also contributed to increased GHG emissions. Beyond the Plant's baseline energy demand, the operation of both the distribution and lake pump, particularly their impact on demand charges, has a significant effect on overall power usage.

To strengthen the facility's environmental sustainability, several initiatives have been introduced. As part of the Plant Renewal Project, the administration building is designed to incorporate LEED building standards.

SaskPower has been actively expanding green energy infrastructure and introducing programs to promote sustainable energy use. The Corporation is participating in the Renewable Subscription Service, and currently all of the Plant's energy is sourced from green power. To further diversify, the Corporation has completed an onsite solar project that can supply up to 10% of the Plant's demand, depending on operating conditions. Over the long term, it is expected that approximately 90% of the Plant's power will be provided through the Renewable Subscription program, and 10% from onsite solar generation.

In 2021, the Corporation reintroduced its water recycling process, leading to significant reductions in water wastage compared to prior years. In 2023, however, water wastage increased due to the UV system being offline and recycling suspended during Plant Renewal construction activities. Once the Plant Renewal Project is complete, water wastage is expected to decline to approximately 3.5%, primarily through enhanced recycling within the plant. This increased recycling will not only reduce wastage but also improve energy efficiency by lowering the volume of water that must be pumped from the lake.

The percentage of backwash treatment measures indicates how much wastewater is treated before being released into the environment. At the Plant, all wastewater passes through the process lagoons before it is discharged to the environment.

### PROVIDE A SAFE AND PRODUCTIVE WORKPLACE

The objective of this goal to secure the sustained well-being of the employees while optimizing the utilization of Plant resources for the long term. The goal consists of the following sub measures.

1. Total Overtime Hours/Total Paid O&M Hours
2. Cost of Overtime Hours
3. Field Accidents with Lost Time
4. Lost Hours due to Field Accidents
5. Sick Days Taken
6. Unavailable O&M Hours/Total Paid O&M Hours

In 2023, overtime hours and costs increased due to Plant Renewal activities, and are expected to remain elevated until construction is complete and processes are optimized.

There was no lost time in 2023, but the Corporation lost 11 hours due to two minor incidents which required employees to seek first aid.

Sick time decreased significantly in 2023. Although overall usage has gone down, it is still affected by individual situations such as medical or family emergencies and surgeries that require



longer recovery periods. These factors can cause year-to-year fluctuations, but the overall trend shows strong workforce health and effective attendance management.

The unavailable O&M Hours measure includes sick, vacation, training, LTD and union hours and it remains within the trend.

### PROVIDE RELIABLE SERVICE INFRASTRUCTURE

The objective of this goal is to ensure the long-term viability of the operations. The goal has following sub measures

1. Capital Reinvestment/Replacement Value
2. Total Maintenance Hours/ML Treated
3. Unit Filter Run Volume
4. Unplanned Hours That Plant Could Not Operate at Rated Capacity

The Plant Renewal Project has continued to drive growth in the capital reinvestment/replacement measure. In 2023, capital investment doubled from 2022, with \$127 million spent, strengthening this measure significantly.

Total maintenance hours per megalitre treated remained steady compared to the previous year. With the addition of new equipment, the Corporation expects this measure to rise in the coming years as the equipment experiences typical early stage failures.

Filter performance declined significantly in 2023 compared to previous years. To commission the DAF, the filter water head was lowered, which reduced performance. In addition, the filters were less effective at treating DAF effluent compared to clarifier treated water, as clarified filter water turbidity is typically about half that of DAF water.

During October and November 2023, high winds increased raw water turbidity beyond the capacity of the old filters, limiting the plant's ability to meet Regina's demand and forcing the city to use its wells for three days. The new BAC filters are expected to better manage such events in the future.

# Balanced Scorecard

## Core Services

### OUTCOME

The desired outcome of this theme is to monitor the two main purposes of the plant. All strategy map objectives contribute to the achievement of meeting the targets of water quality and water quantity. This is the ultimate measure of how the plant is fulfilling its mandate and achieving its strategy.

OBJECTIVES	MEASURE	TARGETS (HIGH LEVEL)					
		2023	2024	2025	2026	2027	
<b>Water Quality</b> Meets regulatory requirements and customer expectations 100% of the time.	% Regulatory requirements met	100	100	100	100	100	All strategy map objectives contribute to these core services as initiatives, therefore there are no additional initiatives in this section.
	% Taste and odour quality met	100	100	100	100	100	
<b>Water Quantity</b> To deliver water that meets customer demand 100% of the time.	% Customer demand met without compromising quality	100	100	100	100	100	

### Description and 2025 Update

#### WATER QUALITY OBJECTIVE:

**a) Ensure regulatory monitoring according to Permit to Operate**

- Water Quality Objectives are being met with no issues experienced.

**b) Taste and odor of water leaving the plant less than 8 TON (Threshold Odor Number) (Operations & Lab)**

- Taste & Odour Objectives are being met with no issues experienced. 100% of taste and odour quality met for the year.

#### WATER QUANTITY OBJECTIVE:

**Reliability (Operations, Maintenance) including e.g. Immediate reporting of failure of critical assets (Maintenance)**

- Water Quantity Objectives were close to meeting objectives. The City of Regina had to operate their wells on 20 occasions and withdrew 670.33 ML due to temporary limitations on the Plant’s capacity from construction activities, water main breaks, and filter performance issues during commissioning.

# Balanced Scorecard

## Key Operational Project

### OUTCOME

The desired outcome of this theme is to focus on the plant renewal commissioning and the operational readiness activities.

OBJECTIVES	MEASURE	TARGETS (HIGH LEVEL)					INITIATIVES <small>*Accountabilities cascaded to Managers' objectives</small>
		2023	2024	2025	2026	2027	
<b>Commissioning</b> Plant Renewal Project reaches its completion.	Commissioning			Completed			
	Validation period					Completed	
<b>Operational Readiness</b> Renewed plant processes are transformational.	Fully prepared and capable 100%		Ongoing	Ongoing	Ongoing	Ongoing	Monthly scorecard provided to Chair; provided to Board bi-monthly. Rebrand of BPWTC.
						Completed	

### Description and 2025 Update

#### COMMISSIONING OBJECTIVE:

The commissioning and plant renewal project is targeted for completion 2025. This includes the successful completion of the Validation Phase. Old assets decommissioned.

- Project is proceeding and commissioning is occurring as processes are completed. Major components commissioned in 2025. Jacobs estimates that substantial completion in January 2027, and process validation completed in January 2029.

#### OPERATION READINESS OBJECTIVE:

Organization is fully prepared and capable of executing new production processes. As it evolves, we will have different processes starting and stopping. By 2027, the processes will be stable.

- In progress with Plant Renewal. All major treatment processes have been commissioned and are in operation with remaining work consisting of recycling, sludge thickening, moving temporary works to final configuration, deficiencies, asbestos removal/demolition of old tower and completion of the Phase 2 Administration Building construction. Substantial completion estimated for January 2027, process validation completed in January 2029 and process improvements commence after January 2029.

### 2027 Objective

Explore the future opportunities, public awareness, and rebrand aspect (and how it is resourced) of BPWTC in alignment with Saskatchewan's 2030 Growth Plan and ESG reporting.

- Looking at rebranding in 2027 with Plant Renewal substantial completion. The project is aligned to Saskatchewan 2030 Growth Plan. Future opportunities will be looked at as the Plant Renewal Project is completed.

# Balanced Scorecard

## Operational Processes

### OUTCOME

The desired outcome of this theme is to ensure the operational processes contribute to the achievement of water quality and water quantity through a safety culture and environmental stewardship and sustainability.

OBJECTIVES	MEASURE	TARGETS (HIGH LEVEL)					INITIATIVES <small>*Accountabilities cascaded to Managers' objectives</small>
		2023	2024	2025	2026	2027	
<b>Safety Culture</b> Growth and Continuous Improvement of the Safety Management System.	a) Loss time	a) 0	a) 0	<b>a) 0</b>	a) 0	a) 0	<ul style="list-style-type: none"> <li>• Conduct external audit.</li> <li>• Maintain Bronze; Strive to achieve Silver by 2027.</li> <li>• Encourage reporting of all incidents and near misses.</li> </ul>
	b) First aid	b) 0	b) 0	<b>b) 0</b>	b) 0	b) 0	
	c) Near miss reporting	c) 100%	c) 100%	<b>c) 100%</b>	c) 100%	c) 100%	
	d) Property damage	d) 0	d) 0	<b>d) 2</b>	d) 0	d) 0	
	e) Audit	e) Bronze	e) Bronze	<b>e) Bronze</b>	e) Bronze	e) Silver	
<b>Environmental Stewardship &amp; Sustainability</b> Environment, Social, Governance, Sustainability.	Sustainability Strategy 100% implemented.			<b>Updated</b>		Completed	Implement Sustainability Strategy.
	ESG 100% reported.		Completed	<b>Completed</b>	Completed	Completed	ESG last page of this BSC.

### Description and 2025 Update

#### SAFETY CULTURE OBJECTIVE:

The Safety Culture objective involves the initiatives of an external audit, the ability to maintain the bronze level, strive to achieve the silver level, all while encouraging the reporting of all incidents and near misses. Next employee engagement survey, ask about incident and near miss reporting e.g. How safe do I feel in reporting a near miss?

- There have been no safety incidents involving the Corporation's staff except an employee who was put into a dangerous situation under the GAJV's control and activities related to ozone in 2025. There were two property damages (recycle pump gallery flood and overhead door failure in shop). There have been five near misses involving the GAJV.

#### ENVIRONMENTAL STEWARDSHIP & SUSTAINABILITY OBJECTIVE:

The initiatives to achieve this objective are included as ESG in the last section of the Balanced Scorecard.

- The attached ESG is now being used for reporting purposes.

# Balanced Scorecard

## People

### OUTCOME

The desired outcome of this theme is to ensure all people practices are in support of the employees’ ability to ultimately deliver on the plant’s core services.

OBJECTIVES	MEASURE	TARGETS (HIGH LEVEL)					INITIATIVES <small>*Accountabilities cascaded to Managers’ objectives</small>
		2023	2024	2025	2026	2027	
<b>Retention and Development</b> Engaged, effective, developed, and diverse workforce that fosters a high performance culture.	Engagement Score %	75% 2022		<b>75%</b>		75%	<ul style="list-style-type: none"> <li>• Conduct employee engagement survey 2025.</li> <li>• Update staff succession plan 2026.</li> <li>• 100% employee development plans in place. Employees participate in training and require training e.g., ISO 17025, and operator certification.</li> <li>• Integrate high performance practices into everything we do.</li> </ul>
	Participation Rate%	77% 2022		<b>80%</b>		90%	
	Retention 90% (+/-10%)	90%	90%	<b>90%</b>	90%	90%	
	Develop Workforce Diversity Plan		Completed				
<b>Board Governance</b> Evaluation, Development, Succession.	Complete	Achieved	Achieved	<b>Ongoing</b>	Ongoing	Ongoing	<ul style="list-style-type: none"> <li>• Board evaluation: July – September annually.</li> <li>• Board development: Education planning.</li> <li>• Board succession.</li> <li>• Annual review of bylaws, policies, governance manual, etc.</li> </ul>

### Description and 2025 Update

#### RETENTION AND DEVELOPMENT OBJECTIVE:

Develop a Workforce Diversity Plan, beginning with how BPWTC defines diversity and inclusion and then set the workforce vision long term with action items.

- The Corporation’s Diversity Policy is in place and the Board’s Diversity Policy was updated in 2024. The retention rate for 2025 was 95%.
- Employee Engagement Survey will be done in 2026 due to the Plant Renewal Project and Collective Bargaining.

#### OPERATIONAL EXCELLENCE CULTURE OBJECTIVE:

Integrate high performance practices into training and development plans.

- Completed for 2025 and integrated into standard practices.

#### BOARD GOVERNANCE OBJECTIVE:

Complete Board Evaluation, Development and Succession Planning annually with independent third party.

- Completed for 2024 and integrated into standard practices. 2025 evaluation and 2026 recruitment process have been completed. The Board transitioned to a self-evaluation process in 2025.

# Balanced Scorecard

## Financial and Risk Management

### OUTCOME

The desired outcome of this theme is to ensure the plant meets its fiduciary commitments and management of its practices and assets.

OBJECTIVES	MEASURE	TARGETS (HIGH LEVEL)					INITIATIVES <small>*Accountabilities cascaded to Managers' objectives</small>
		2023	2024	2025	2026	2027	
<b>Financial Operation Performance</b>	Budget variance +/- 5%	Achieved	Ongoing	<b>Ongoing</b>	Ongoing	Ongoing	
<b>QMS</b> Proactive continuous improvement practices.	QMS % procedure compliance, document, training	Progressing	Progressing	<b>Progressing</b>	Completed		Proactive continuous improvement practices.
<b>Asset Management</b> Risk-based Management.	CMMS	Progressing			Completed		
	BCP	Achieved	Ongoing	<b>Ongoing</b>	Ongoing	Ongoing	

### Description and 2025 Update

#### FINANCIAL OPERATION PERFORMANCE OBJECTIVE:

Manage the operations appropriately.

- We are projecting a surplus of \$1.7M. The savings are generally due to increased water sales and reduced chemical, utility and waste sludge management costs. We do not anticipate large surpluses in the future. The surplus will replenish the operating reserve that was depleted in 2023.

#### QMS OBJECTIVE:

This objective focuses on the proactive continuous improvement practices throughout the plant. As will many objectives in the Balanced Scorecard, it integrates closely with the objectives in the People Theme and the Operational Processes Theme.

- In progress and no concerns for 2026 completion.

#### ASSET MANAGEMENT OBJECTIVE:

The two initiatives to achieve this objective are: CMMS Computerized Maintenance Management System (completed but needs to be updated as renewal project evolves), and the BCP Business Continuity Plan (the risk management of keeping our business operating. Updated annually as a living document.)

- In progress and no concerns for 2026 completion.

# Balanced Scorecard

## Environment | Governance | Social | Sustainability

### OUTCOME

The desired outcome is to be a municipal utility leader in ESG reporting. ESG is operationalized throughout the objectives in the balanced scorecard.

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE REPORTING PRACTICES		
<b>GOAL</b> To report on ESG practices	<b>TARGET</b> Leader in municipal utilities.	<b>HOW TARGET WILL BE ACHIEVED</b> Operationalize the ESG practices throughout the balanced scorecard.

ENVIRONMENT						
OBJECTIVES FOR REPORTING	TARGETS (HIGH LEVEL)					INITIATIVES <small>*Accountabilities cascaded to Managers' objectives</small>
	2023	2024	2025	2026	2027	
Infrastructure projects that will benefit the environment		Leader in Best Practices Reporting	Leader in Best Practices Reporting			
Protecting natural capital		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			
Reduce environmental impact		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			
Reduce waste at the plant		Progressing to Best Practices in Reporting	Progressing to Best Practices in Reporting			

### Description and 2025 Update

#### INFRASTRUCTURE PROJECTS THAT WILL BENEFIT THE ENVIRONMENT

- Plant renewal, green energy, and more. Currently 100% green power completed which includes onsite solar and plant renewal in progress.

#### PROTECTING NATURAL CAPITAL

- Every drop of water goes back to the environment.

#### REDUCE ENVIRONMENTAL IMPACT

- Solar on site, reducing the carbon footprint and more.

#### REDUCE WASTE AT THE PLANT

- This is optimizing processes while still meeting regulatory requirements as well as quantity requirements. For example, save 10% power then we have 10% less to convert to green, use less water. Paused with Plant Renewal. In December, the reduction in the amount of water used in the treatment process started.

# Balanced Scorecard

## Environment | Governance | Social | Sustainability Continued

GOVERNANCE						
OBJECTIVES FOR REPORTING	TARGETS (HIGH LEVEL)					INITIATIVES <small>*Accountabilities cascaded to Managers' objectives</small>
	2023	2024	2025	2026	2027	
Diverse workforce		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			
Contributing to economic reconciliation and engagement		Progressing to Best Practices in Reporting	Progressing to Best Practices in Reporting			
Social procurement		Progressing to Best Practices in Reporting	Meeting Best Practices in Reporting			
Social Responsibility		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			

### Description and 2025 Update

#### DIVERSE WORKFORCE

- Diversity policy for recruitment, retention and development is in place.

#### CONTRIBUTING TO ECONOMIC RECONCILIATION AND ENGAGEMENT

- Started working directly with indigenous communities through water operators. Had members from three indigenous communities attend a site tour in 2024. Updated Procurement Policy in early 2025 which includes indigenous considerations. Need to start engaging with indigenous contractors and suppliers in 2025. Procurement training occurred in July for staff.

#### SOCIAL PROCUREMENT

- Proposals to determine points allocated to indigenous economic reconciliation, social procurement, and environmental factors. Vendors demonstrate how they meet the Corporation's ESG efforts. Updated the Procurement Policy in early 2025. Procurement training occurred in July for staff.

#### SOCIAL RESPONSIBILITY

- Act in a way that positively impacts the communities that we live and work in, including our employees. Our water rates are sustainable, the CBA is fair and we have a positive relationship with the IS and OOS staff.

# Balanced Scorecard

Environment | Governance | Social | Sustainability Continued

SOCIAL						
OBJECTIVES FOR REPORTING	TARGETS (HIGH LEVEL)					INITIATIVES <small>*Accountabilities cascaded to Managers' objectives</small>
	2023	2024	2025	2026	2027	
Conduct a PESTLE during the strategic planning process		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			
Risk mitigation		Leader in Best Practices Reporting	Leader in Best Practices Reporting			
Employee engagement		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			
EDI policy		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			
Board Annual Peer and Self Performance Review		Leader in Best Practices Reporting	Leader in Best Practices Reporting			
Board – ESG is a competency		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			
Alignment with Saskatchewan's Growth Plan		Meeting Best Practices in Reporting	Meeting Best Practices in Reporting			

## Description and 2025 Update

### CONDUCT A PESTLE DURING THE STRATEGIC PLANNING PROCESS

- Part of the strategic planning process.

### RISK MITIGATION

- Well established system in place and reviewed quarterly by management team; annually by the Board and audited every 3 years by external consultant..

### EMPLOYEE ENGAGEMENT

- The survey is done every 3 years with a high response rate.

### EDI POLICY

- Equity provides the support for diversity and inclusion at the Board and Corporation – Policies in place and followed.

### BOARD ANNUAL PEER AND SELF PERFORMANCE REVIEW.

- Well established process which is followed by the Board with a third-party external consultant.

### BOARD – ESG IS A COMPETENCY

- The first year of reporting started in 2024.

### ALIGNMENT WITH SASKATCHEWAN'S GROWTH PLAN

- Plant Renewal Project was set up to align with the Saskatchewan Growth Plan to have the capacity to meet growth to 2050.

# Regulatory and Government Affairs

One of the four main goals for the Corporation is to provide quality research to identify possible chemical and microbiological contaminants and to test and implement the best available treatment technologies, thus ensuring that the Water Treatment Plant can meet current and future expectations for regulated parameters. The Corporation has an ISO/IEC 17025:2017 accredited laboratory equipped with a full suite of analytical capabilities used for monitoring water quality from source to tap, drinking water compliance requirements, and investigating root causes of treatment problems caused by various contaminants. Also, the Corporation furthers its research goal by partnering with the two Saskatchewan Universities. The School of Environment and Sustainability at the University of Saskatchewan has expertise in monitoring and investigating climate change effects on important prairie lakes. Since Buffalo Pound Lake is one lake that the University is monitoring for climate induced long term water quality changes and is the source water for the Water Treatment Plant, supporting its research is a natural fit for the Corporation. For the past 12 years, the Corporation

has worked with Dr. Helen Baulch (University of Saskatchewan, School of Environment and Sustainability & Global Institute for Water Security) and Dr. Jason Venkiteswaran (Wilfrid Laurier University, Department of Geography and Environmental Studies). The University of Regina, Faculty of Engineering & Applied Science, has expertise in developing practical uses for water treatment sludge residuals, an environmentally significant waste product of water treatment plants. In 2022, the Corporation partnered with Dr. Jinkai Xue at the University of Regina to find potentially useful applications for sludge residuals and eliminate disposal in Moose Jaw's landfill.

The Corporation provides funding and in-kind maintenance and laboratory services to both Universities. Funding is also leveraged through the Mitacs Accelerate Grant Program, NSERC, Global Water Futures, and by Canada Foundation for Innovation.



# Human Resources

## STAFF

We employed 37 permanent staff in 2025 including eight out-of-scope staff, nine operating staff, five laboratory technologists, seven journeyman maintenance staff persons, six maintenance persons, and two buildings and ground staff.

## ADMINISTRATION SUPPORT

The administration services agreement we have with the City of Regina included a Financial Analyst. This position provides internal financial support for us with duties ranging from auditing services, business case development and financial reporting.

## COMMUNICATION STRATEGY

Our first communications strategy was developed and implemented in 2021.

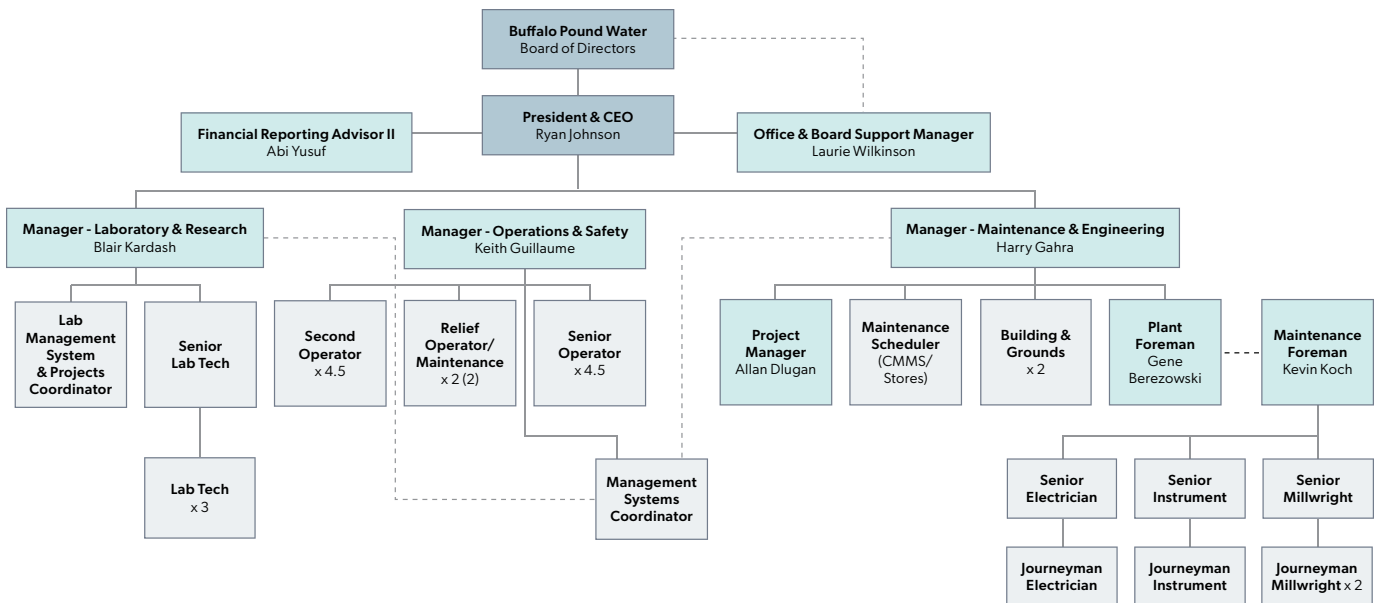
## WATERSHED PROTECTION

We continue to be involved in consultation processes dealing with watershed protection in the Upper Qu'Appelle River and Buffalo Pound Lake.

**The UNIFOR Local No. 595 Collective Agreement is in place until December 31, 2028.**

**Our staff participate in the Regina Civic Employees Pension Plan.**

## Buffalo Pound Water Organizational Chart



# Research Activities 2025<sup>1</sup>

## Emerging Contaminants

### PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Per- and polyfluoroalkylated substances (PFAS) are synthetic chemicals which are used in a wide variety of industrial and consumer products such as adhesives, cosmetics, cleaning products and in specialized chemical applications such as aqueous film forming foams used to extinguish petroleum fuel fires. PFAS are also used in water-, stain- and oil-repellent coatings for fabrics and paper. Due to their widespread use in everyday products, most Canadians are exposed to low levels of PFAS from the air, soil, indoor dust, food, water and various consumer products.

Over the past few years, PFAS have received media and academic attention because ingestion of high levels of these substances has been linked with negative health effects in animal studies. Effects commonly reported in animal studies include effects on the liver, immune system, kidney, reproduction, development, endocrine system (thyroid), the nervous system and metabolism (lipids, glucose homeostasis, body weight) including liver damage and impacts on neurological development. Outcomes of human epidemiological studies involve similar endpoints.



The International Agency for Research on Cancer has classified Perfluorooctanoic acid (PFOA) as carcinogenic to humans (Group 1) and PFOS as a possible human carcinogen (Group 2B).

In 2018, Health Canada published a drinking water guideline maximum acceptable concentration (MAC) for PFOA and PFOS of 0.2 µg/L and 0.6 µg/L respectively. Saskatchewan did not adopt the MAC but the BPWTP has been required to test its treated water annually for PFOS and PFOA since 2017. In 2019, Health Canada also published drinking water screening values (DW-SVs) for nine other PFASs which were not required for testing in Saskatchewan. The screening values are a rapid assessment to identify a level at which no health effects are expected.

In August 2024, Health Canada finalized a group objective for PFAS in drinking water which is set at 30 ng/L based on the sum of the concentration of 25 selected PFAS.<sup>2</sup> Health Canada describes the objective as a temporary measure until a guideline is developed. The objective sets out a goal for a maximum level of a contaminant in drinking water, taking into account available treatment technology and analytical methods. The agency recommends that water treatment strives for PFAS levels as low as reasonably achievable. It is unlikely Saskatchewan will adopt the group objective anytime soon given its newness and it is not a health-based guideline.

In response to the increased attention to PFAS and regulatory concerns, the BPWTC initiated quarterly monitoring of 48 individual PFASs on its treated and source waters since 2022. The monitoring includes the 25 substances that make up the new group objective (PFOS, PFOA, and nine with DW-SVs included), and 13 others. Table 1 summarizes the group objective for PFAS as a sum of the concentration of the 25 selected PFAS and an annual average (quarterly samples) of each substance for both source and treated water over the past three years. The average annual detection limit for each substance is also included. The sum of the concentrations of 25 selected PFAS were slightly above overall detection limit in the source water in 2023 and 2025, and the treated water in 2023 but all were well below the group objective of 30 ng/L. At present, PFAS are not a concern for the BPWTC and detected substances don't pose a risk to the public based on the current Health Canada group objective. This study will continue in 2026. PFAS remediation research using water treatment residuals commenced in 2025. Refer to section RESEARCH PARTNERSHIPS WITH SASKATCHEWAN'S UNIVERSITIES - University of Regina for details.

<sup>1</sup> Sections within this report have been edited using: xAI. (2026). Grok [Large language model]. <https://grok.x.ai/>

<sup>2</sup> <https://www.canada.ca/en/health-canada/services/publications/healthy-living/objective-drinking-water-quality-per-polyfluoroalkyl-substances.html>

**Table 1: Per- Polyfluoroalkyl Substances (PFAS): Health Canada PFAS - Drinking Water Group Objectives**

Analyte	Year	Avg. Conc. (ng/L) 2025			Avg. Conc. (ng/L) 2024			Avg. Conc. (ng/L) 2023			
		Analyte Acronym	D.L	Treated	Source	D.L	Treated	Source	D.L	Treated	Source
eicosafuoro-3-oxaundecane-1-sulfonic acid, 11-chloro-		11Cl- PF3OUdS	0.4	<0.4	<0.4	2	<2	<2	1	<1	<1
fluorotelomer sulfonic acid, 4:2		4:2 FTS	1.0	<1.0	<1.0	2	<2	<2	1	<1	<1
fluorotelomer sulfonic acid, 6:2		6:2 FTS	3.0	<3.0	<4.0	2	<2	<2	1	<1	<1
fluorotelomer sulfonic acid, 8:2		8:2 FTS	1.0	<1.0	<4.0	2	<2	<2	1	<1	<1
hexadecafluoro-3-oxanonane-1-sulfonic acid, 9-chloro-		9Cl- PF3ONS	0.4	<0.4	<0.4	2	<2	<2	1	<1	<1
hexafluoropropylene oxide dimer acid, (GenX)		HFPO-DA	4.0	<4.0	<4.0	10	<10	<10	23	<23	<23
nonafluoro-3,6-dioxaheptanoic acid		NFDHA	4.0	<4.0	<5.0	2	<2	<2	2	<2	<2
perfluoro-3-methoxypropanoic acid		PFMPA	0.4	<0.4	<0.4	2	<2	<2	1	<1	<1
perfluoro-4-methoxybutanoic acid		PFMBA	0.4	<0.4	<0.4	2	<2	<2	1	<1	<1
perfluorobutanesulfonic acid		PFBS	1.0	<1.0	<1.0	2	<2	<2	1	<1	<1
perfluorobutanoic acid		PFBA	2.0	<2	2.8	7	<7	<7	2	<2	<2
perfluorodecanoic acid		PFDA	2.0	<2.0	<2.3	2	<2	<2	1	<1	<1
perfluorododecanoic acid		PFD <sub>o</sub> A	2.0	<2.0	<2.0	2	<2	<2	1	<1	<1
perfluoroheptanesulfonic acid		PFHpS	2.0	<2.0	<2.5	2	<2	<2	1	<1	<1
perfluoroheptanoic acid		PFHpA	1.0	<1.0	<1.0	2	<2	<2	1	1	1
perfluorohexanesulfonic acid		PFHxS	2.0	<2.0	<2.5	2	<2	<2	1	<1	<1
perfluorohexanoic acid		PFHxA	0.4	1.3	1.5	2	<2	<2	1	1	1
perfluorononanoic acid, 4,8-dioxa-3H-		ADONA	0.4	<0.4	<0.4	2	<2	<2	1	<1	<1
perfluorooctanesulfonic acid		PFOS	2.0	<2.0	<2.0	2	<2	<2	1	<1	<1
perfluorooctanoic acid		PFOA	1.0	<1.0	<1.0	2	<2	<2	1	<1	1
perfluoropentanesulfonic acid		PFPeS	2.0	<2.0	<2.0	2	<2	<2	1	<1	<1
perfluoropentanoic acid		PFPeA	2.0	<2.0	<2.0	2	<2	<2	1	1	1
perfluoroundecanoic acid		PFUnA	1.0	<1.0	<1.0	2	<2	<2	1	<1	<1
perfluoro(2-ethoxyethane)sulfonic acid		PFEESA	0.4	<0.4	<0.4	2	<2	<2	1	<1	<1
pRef. Method: EPA 5371 (mod) & MECP E3457		Σ 25 PFAS:	1.5	<1.5	4.3	3	<3	<3	2	3	5

## Additional Water Quality Monitoring

### RAW WATER

The analyses required in the Permit to Operate on treated water represent only a portion of those carried out at the Plant. Staff also carry out regular monitoring of raw water quality as this would provide early warning of natural and anthropogenic chemicals that could impact treated water quality. Most anthropogenic chemicals (those that are derived from human activities, as opposed to those naturally occurring) are contracted out to ISO/IEC 17025:2017 accredited laboratories capable of providing analyses as low as parts per trillion. Ninety-two pesticide and herbicide compounds and 48 perfluoroalkylated substances were also tested. Most of those are without Health Canada Guidelines. The Plant’s laboratory also conducts regular analyses throughout the year for benzene, toluene, xylenes and ethylbenzene that would indicate spilled gasoline or diesel fuels. Thus far, Buffalo Pound Lake does not seem impacted to any level of concern for the above suites of chemical pollutants.

Routine raw water quality testing (conducted twice per month) indicates broad-based improvements in lake quality since 2015. These gains stem from sufficient water flows from Lake Diefenbaker and controlled releases from Buffalo Pound Lake. Additionally, at or below-average rainfall since 2017 has minimized accumulations of dissolved minerals and allochthonous (soil-derived) organic matter due to reduced erosion in the watershed surrounding Buffalo Pound Lake and the Upper Qu'Appelle River System.

Over the past year, total dissolved solids (TDS) rose slightly by 3%. In contrast, dissolved organic carbon (DOC)—an analytical

measure of organic matter—has remained relatively stable since 2019. Since 2015 (one of the worst years on record for raw water quality in terms of dissolved minerals and organic matter), TDS and DOC have declined by 40% and 47%, respectively.

As shown in Figure 1, annual average discharges through the Qu'Appelle Dam from Lake Diefenbaker increased by 194% from 2015 to 2021 (from 1.8 to 5.3 m<sup>3</sup>/s). Since the 2021 peak, discharges have fallen by 43% to 3.1 m<sup>3</sup>/s in 2025. Yearly average concentrations of TDS and organic carbon, which illustrate these raw water quality improvements, are summarized in Figures 1 and 2, respectively.

The decline in source water organic carbon, combined with water treatment plant process enhancements (discontinuation of prechlorination in April and implementation of ozonation to initiate biofiltration during the summer of 2025), has driven an 81% reduction in trihalomethanes (THMs) at the plant since 2015. THM levels averaged 78 µg/L in 2015 but dropped to 15 µg/L in 2025.

### WASTEWATER MANAGEMENT AND RESIDUALS HANDLING

Solids recovered from clarification and filter backwashing processes are settled in ponds and historically have been transported to the Moose Jaw landfill for disposal. Excess wastewater continuously flows over containment weirs into the local environment and eventually returns to Buffalo Pound Lake. The ponds were designed and constructed more than 30 years ago, when plant flows were lower and environmental regulatory limits on process wastewater quality did not apply.

Since the introduction of a regulatory monitoring and compliance schedule in 2017, process wastewater has been monitored weekly for total suspended solids (TSS) and free and combined

**Raw Water TDS vs Qu'Appelle Dam Discharges**

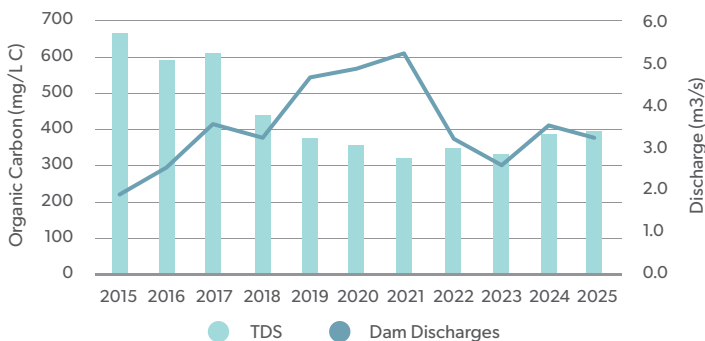


Figure 1: Shown is the annual average of TDS in Buffalo Pound Lake and discharges from the Qu'Appelle Dam. TDS is the amount of organic and inorganic materials dissolved in water. Waters with high TDS generally are less suitable for drinking water and is why the Health Canada has an aesthetic objective (AO) of ≤500 mg/L (SK OA ≤1,500 mg/L). Regular and adequate releases of relatively good quality (low TDS) water from the Qu'Appelle Dam improves water quality in BP Lake.

**Raw Water TOC and DOC**

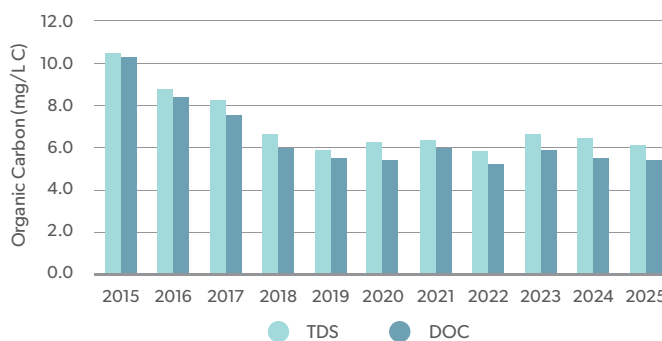


Figure 2: Shown are the annual averages of TOC and DOC in Buffalo Pound Lake. Higher concentrations of organic matter result in higher coagulant doses necessary to produce drinking water by the BPWTP. When DOC reacts with chlorine in water treatment, disinfection by-products such as THMs are produced. Regular and adequate releases of water from the Qu'Appelle Dam with relatively low levels of TOC/DOC, reduces and stabilizes TOC/DOC concentrations in BP Lake which reduces treatment costs and THMs.



Figure 3: The layout of the new ponds as part of Plant Renewal. Total pond volume will be sufficiently increased to contain all wastewater inflows and eliminate the current practice of continuous overflow. When combined with substantial reductions of wastewater produced by the upgraded plant, the hydraulic and sludge overloading problems that plague the current lagoon system will be resolved. Non-compliances of environmental regulations for residual waste discharged to the environment will be a thing of the past. This will maintain a healthy watershed ecosystem and ensure source water protection for aquatic life and downstream users. NOTE: Refurbishment of Winter Pond B 602A was descoped from the project in 2025.

chlorine. Total and dissolved aluminum are measured monthly, and twice a year, samples are submitted for acute lethality evaluation. Results of these analyses are reviewed by the Water Security Agency (WSA).

The process wastewater did not demonstrate acute trout lethality in 2025. The overall compliance rate for free and combined chlorine was 100% and 98%, respectively. There was only one instance of solids residuals (measured by TSS and not to exceed 25 mg/L) in pond overflow exceeding compliance requirements, which confirms historical outcomes: while the ponds are operating in continuous overflow mode, they cannot consistently meet existing quality requirements. In this instance, high winds during sample collection were the root cause of the noncompliance. There were two instances of noncompliance while free water was being drained through Winter Pond A's underdrain system in preparation for freezing sludge over the winter months. As a result, a notice of concern has been issued to the design-builder. Overall, there was a 95% TSS compliance rate in 2025.

As a significant portion of the plant renewal project, substantial improvements to wastewater management were mostly

completed in 2025. Figure 3 illustrates the final design and layout of the new pond system. Total sludge volume capacity has increased approximately threefold, from 16,000 m<sup>3</sup> to over 46,000 m<sup>3</sup>. This minimizes sludge thickness, enabling full freezing in winter and subsequent water reduction via a sophisticated underdrain system after thawing the following spring. The freeze-dried sludge can then be excavated annually using standard equipment, preventing the year-over-year overloading that affects the current system. Total full-supply volume will also nearly triple, from approximately 68,000 m<sup>3</sup> to 199,000 m<sup>3</sup>, providing full containment of all process wastewater and eliminating continuous overflow. This containment will be supported by in-plant process efficiencies that reduce wastewater volumes by a factor of 22, from 7,000 m<sup>3</sup>/d (2023 average) to an annual average of 318 m<sup>3</sup>/d. With no continuous overflow and annual excavation of freeze-dried sludge, solids carryover into the environment—due to wind effects and overloading—will be eliminated. Moreover, all wastewater will be nonchlorinated.

The two new summer ponds were both completed and placed into service in 2023. Winter pond A was completed and put



Figure 4: Construction of Summer Ponds A and B (right) were completed in 2023. Construction of Winter Pond A was completed in November 2024 (left centre) and a smaller than originally designed Winter Pond B (upper left) was completed in June 2025.

into service in November 2024. Winter Pond B (which no longer includes Pond 602A) was completed in June 2025; refurbishment of Pond 602A was descope from the project. Commissioning of the plant's backwash water recycling system began in December 2025 and is expected to be in permanent operation in Q1 2026. Continuous overflow of wastewater will therefore persist until the summer ponds are reactivated in May 2026. Refer to Figure 4.

Wastewater process improvements within the main plant to eliminate hydraulic overloading in the ponds is underway. The first major reduction occurred following the commissioning of five dissolved air flotation (DAF) clarifiers in 2023 and 2024; DAF clarifiers generate less wastewater to remove skimmed surface sludge than traditional settling clarifiers which require frequent pumping of sludge from a bottom sump. The most significant reduction will occur in Q1 2026, when all backwash water from the deep-bed carbon filters is treated via a thickening process to remove most particulates. The clarified portion—comprising the majority of the backwash volume—will be recycled and retreated, while the settled and thickened sludge (containing only a small volume of wastewater) will be pumped to the active pond.

Draining of ponds no longer in active service now occurs through the underdrain system. Each underdrain is lined with nonwoven geotextile material and granular fill to filter out most solids from the drain water, ensuring consistently improved wastewater quality prior to environmental discharge. After initial drainage of free water, the remaining sludge freezes over winter and is redrained post-thaw. The resulting freeze-dried

sludge is excavated and transferred to another on-site area for further drying. In 2025, excavated sludge from the summer ponds remained on-site, discontinuing disposal at the Moose Jaw landfill. Management is collaborating with an engineering consultant to design and construct a sludge monofil sufficiently sized for on-site storage over the next few decades.

Once all improvements are commissioned and deficiencies are resolved by the design-builder, the pond system will achieve full compliance with environmental quality requirements for wastewater discharged to the environment. Sludge handling costs will also decrease substantially.

#### **WATERSHED MONITORING FOR EROSION AND AGRICULTURAL ANTHROPOGENIC INFLUENCES**

The most significant influencer of stable long term water quality in Buffalo Pound Lake comes from regular controlled releases of water diverted from Lake Diefenbaker through the Qu'Appelle Dam. The relatively good quality water flows from the dam in a south westward direction and into the semi arid region consisting of the Upper Qu'Appelle River and Buffalo Pound Lake. The Upper Qu'Appelle River is surrounded by light soils that are eroded as water travels through the system resulting in progressively higher levels of suspended and dissolved solids including humic derived organic carbon and phosphorus all of which can impact water treatment operations and final drinking water quality. As a result, and typically on an annual basis, the BPWTP laboratory monitors water quality upstream of the water treatment plant.

In 2025, one sampling survey across seven sites was conducted to examine changes in water quality as water travels through the Upper Qu'Appelle (UQ) Regional Watershed, including Buffalo Pound Lake. As shown in Figure 5, the sites included Q1 (Lake Diefenbaker via the Riverhurst Ferry), four locations along the Upper Qu'Appelle River (Q2: Qu'Appelle Dam; Q3: Eyebrow; Q4: Keeler; Q5: Marquis), Q6 (west arm of Buffalo Pound Lake), and Q7 (plant's raw water intake). The survey occurred on July 28 and 29, while releases from the Qu'Appelle Dam were  $5.1 \text{ m}^3/\text{s}$ —slightly lower than the average May-through-September seasonal flow rate of  $5.2 \text{ m}^3/\text{s}$ .

As expected, and shown in Table 2, some erosion occurred in the Upper Qu'Appelle River (Q2 through Q6), as measured by mostly progressive increases in total suspended solids (TSS), total dissolved solids (TDS), dissolved organic carbon (DOC), and total phosphorus (TP). In previous years' studies, the highest concentrations for these parameters occurred at Q6, which functions as a solids-settling area (inset within Figure 5) as river flow decreases upon entering the lake. However, in July 2025, only DOC and TP followed this traditional pattern; TSS and TDS still indicated normal upstream erosion. Overall, the current

management of flow releases from the Qu'Appelle Dam has resulted in adequate source water quality near the plant intakes in Buffalo Pound Lake (Q7) to alleviate treated drinking water quality concerns. TDS and DOC concentrations remained below the plant's source water targets of  $<450 \text{ mg/L}$  and  $<8.0 \text{ mg/L}$ , respectively. Source water with TDS  $<450 \text{ mg/L}$  ensures that treated water remains below Health Canada's aesthetic objective of  $<500 \text{ mg/L}$ . DOC concentrations  $<8 \text{ mg/L}$  limit chlorination byproduct formation (especially trihalomethanes) at consumer taps to below Health Canada's maximum acceptable concentration (MAC) of  $0.100 \text{ mg/L}$  (annual average of quarterly samples). There are no health-related guidelines for TSS or TP, but both are important for assessing overall erosion in the Upper Qu'Appelle River and surrounding watershed. Phosphorus is also an important nutrient for agricultural crop production, but in Buffalo Pound Lake, it promotes blooms of cyanobacteria, which can produce a variety of toxins—especially microcystins—that are harmful to humans and animals. Buffalo Pound Lake is surrounded by extensive crop-farming operations.

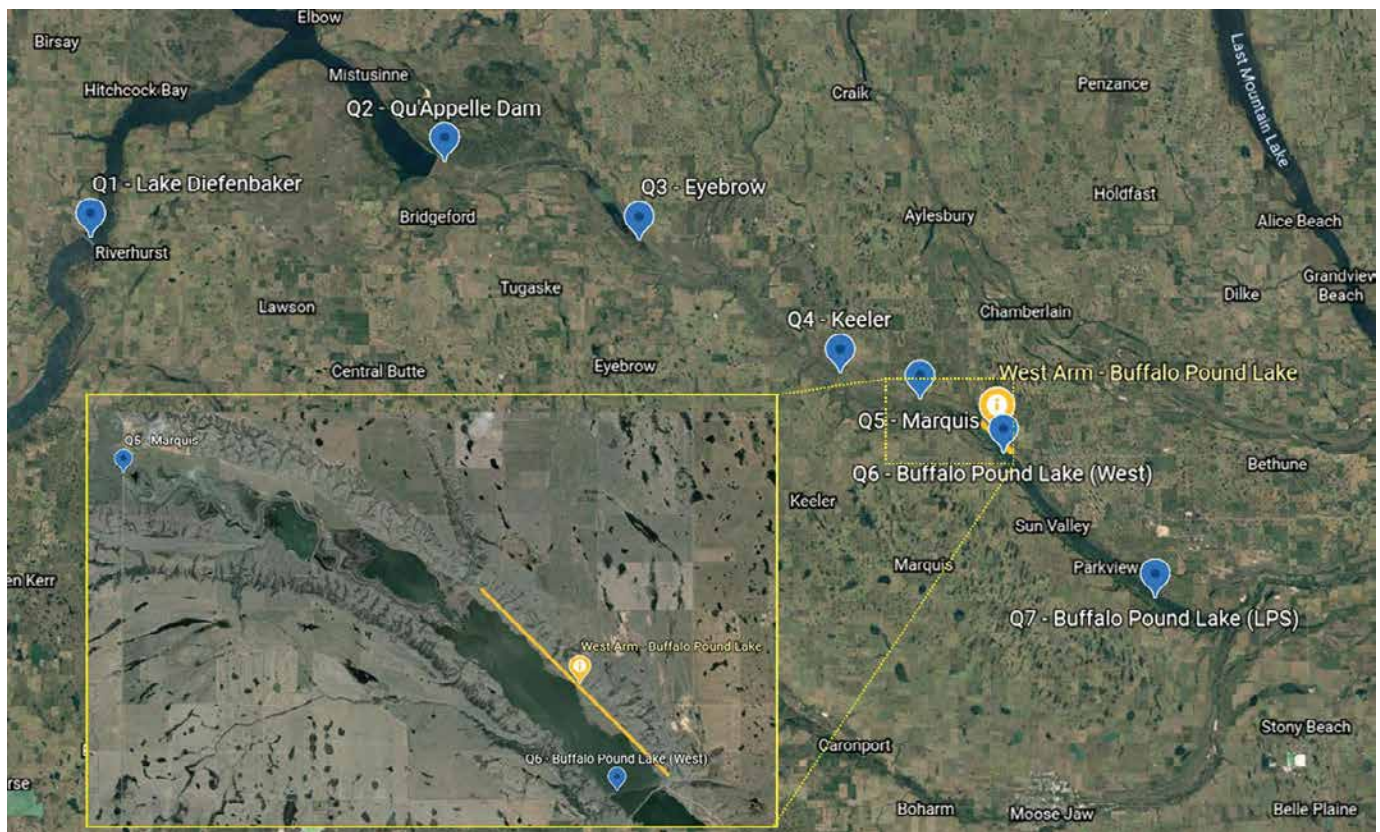


Figure 5: Upper Qu'Appelle Sampling Locations. The inset shows a close up of Q6 – West Arm of Buffalo Pound Lake that functions as a settling area for the erosion solids contained within the flowing water from the Upper Qu'Appelle River.

**Table 2: TSS, TDS, DOC, and TP Concentrations for July’s Survey. All concentrations are in mg/L.**

Parameter	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
TSS	0	0	19	34	41	26	15	N/A
TDS	248	250	270	240	274	268	316	<450
DOC	3.1	3.3	3.7	3.7	3.6	4.8	5.7	<8.0
TP	0.012	0.017	0.042	0.075	0.103	0.119	0.080	N/A

Sampling for various anthropogenic compounds (herbicides and pesticides) was carried out during the July survey, as shown in Table 3. The regulated herbicides for broadleaf weed control—2,4-D and MCPA—were detected from Q2 through Q7. The average concentration across all sites for 2,4-D and MCPA were 0.000026 mg/L (26 ng/L or parts per trillion [ppt]) and 0.000006 mg/L (6 ng/L or ppt), respectively. Concentrations

of 2,4-D and MCPA were far below drinking water guidelines, and none were detected in the plant's treated water (refer to the Compliance Report). Nonregulated fungicides azoxystrobin and propiconazole were also detected from Q2 through Q7, with average concentrations of 0.000004 mg/L (4 ppt) and 0.000021 mg/L (21 ppt), respectively.

**Table 3: Anthropogenic Concentrations for July’s Survey. All concentrations are in mg/L.**

Parameter	Q2	Q5	Q6	Q7	Average of All sites	MAC Drinking Water
2,4-D	0.000032	0.000028	0.000021	0.000025	0.000026	0.10 (Interim)
MCPA	0.000006	0.000006	0.000005	0.000005	0.000006	0.19
Azoxystrobin	0.000004	0.000004	0.000004	0.000004	0.000004	N/A
Propiconazole	0.000016	0.000014	0.000054	<0.000009	0.000021	N/A

## Research Partnerships with Saskatchewan’s Universities

One of the four main goals for the Corporation is to provide quality research to identify possible chemical and microbiological contaminants and to test and implement the best available treatment technologies, thus ensuring that the Water Treatment Plant can meet current and future expectations for regulated parameters. The Corporation has an ISO/IEC 17025:2017 accredited laboratory equipped with a full suite of analytical capabilities used for monitoring water quality from source to tap, drinking water compliance requirements, and investigating root causes of treatment problems caused by various contaminants. Also, the Corporation furthers its research goal by partnering with the two Saskatchewan Universities. The School of Environment and Sustainability at the University of Saskatchewan has expertise in monitoring and investigating climate change effects on important prairie lakes. Since Buffalo Pound Lake is one lake that the University is monitoring for climate induced long term water quality changes and is the source water for the Water Treatment Plant, supporting its research is a natural fit for the Corporation. For the past 12 years, the Corporation

has worked with Dr. Helen Baulch (University of Saskatchewan, School of Environment and Sustainability & Global Institute for Water Security) and Dr. Jason Venkiteswaran (Wilfrid Laurier University, Department of Geography and Environmental Studies). The University of Regina, Faculty of Engineering & Applied Science, has expertise in developing practical uses for water treatment sludge residuals, an environmentally significant waste product of water treatment plants. In 2022, the Corporation partnered with Dr. Jinkai Xue at the University of Regina to find potentially useful applications for sludge residuals and eliminate disposal in Moose Jaw’s landfill.

The Corporation provides funding and in-kind maintenance and laboratory services to both Universities. Funding is also leveraged through the Mitacs Accelerate Grant Program, NSERC, Global Water Futures, and by Canada Foundation for Innovation.

## UNIVERSITY OF SASKATCHEWAN - AGRICULTURAL DRAINAGE IMPACTS ON BUFFALO POUND LAKE WATER QUALITY

### Background and Key Project

Since 2022, Saskatchewan's Water Security Agency (WSA) has been developing the Agricultural Watershed Stewardship Policy (AWSP)<sup>3</sup> to regulate agricultural drainage. In 2023, stakeholders including the Buffalo Pound Water Treatment Corporation (BPWTC), City of Regina, and Dr. Helen Baulch learned of the approved Marquis Conservation and Development Project (Marquis C&D & shown in Figure 7), which will drain ~185 km<sup>2</sup> of fertile land—roughly the size of Regina—directly into Buffalo Pound Lake. This lake supplies drinking water to ~25% of Saskatchewan's population. The project's final scope remains unconfirmed by WSA, but it raises alarms about exacerbating water quality issues in the Upper Qu'Appelle River–Buffalo Pound Lake catchment.

### Stakeholder Concerns and Meetings

In 2023–2024, BPWTC, Regina representatives, and Dr. Baulch met repeatedly with WSA's agricultural and drinking water teams. Key worries include:

- Man-made drainage from croplands and wetlands adding dissolved minerals, nutrients (e.g., phosphorus, nitrogen) and organic solutes during high inflows.
- Combined with reduced, higher-quality flows from Lake Diefenbaker (used for flood control), this could prolong poor water quality episodes.

- Potential risks to the water treatment plant's ability to deliver aesthetically acceptable water, despite ongoing upgrades.

### Historically, high natural catchment inflows during wet periods have caused:

- Regulatory exceedances of disinfection byproducts like trihalomethanes (THMs) and haloacetic acids (HAAs), which are potential carcinogens formed when chlorine reacts with organics.
- Mineral buildup leading to increased hardness, unpalatable water, corrosion and pipe scaling.
- Nutrient-driven cyanobacterial blooms producing toxins, taste/odor issues and treatment challenges.

### WSA's Response and Commitments

As regulator for drinking water compliance, lake levels and agricultural drainage, WSA has engaged actively with stakeholders. They are now considering:

1. AWSP planning to prevent drainage from severely degrading lake quality which may revoke licences.
2. Balancing water quality with inflows from Lake Diefenbaker during elevation/flood management.
3. Establishing lake-specific water quality thresholds for drinking water protection.
4. Supporting research collaborations with BPWTC and the University of Saskatchewan.

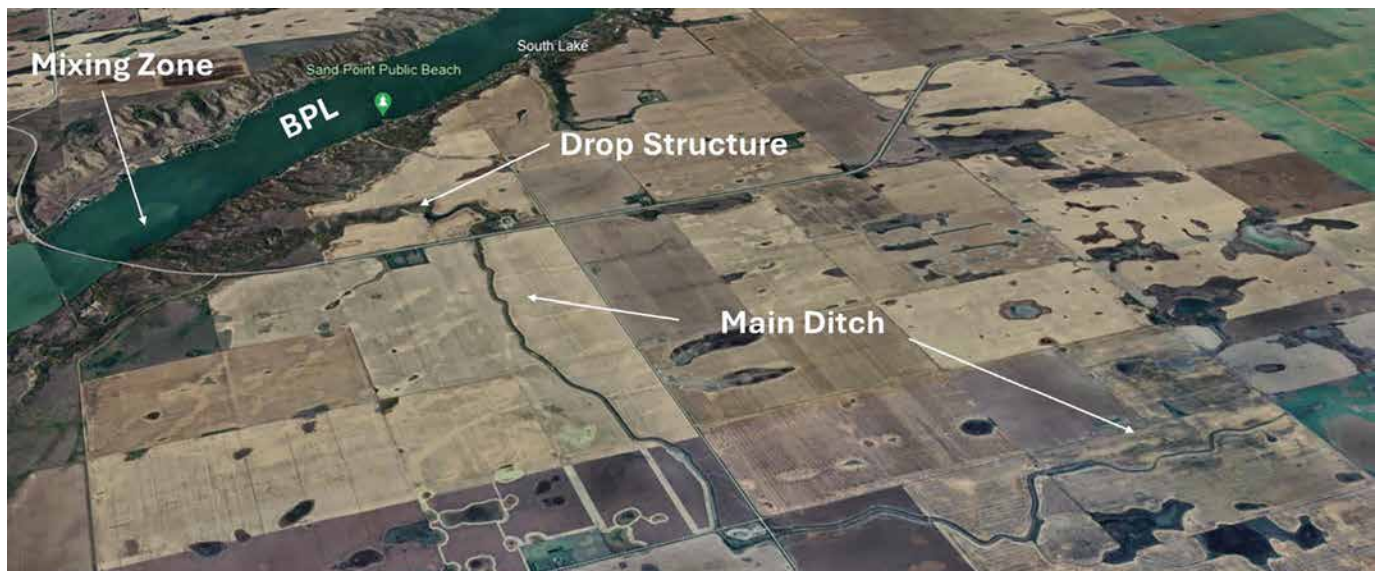


Figure 7, Google Earth Image: The Marquis C&D project main ditch starts ~7.8 km SW of Highway 2 causeway (bottom right) and drains into Buffalo Pound Lake on the downstream side of that causeway (mid upper left).

<sup>3</sup> <https://www.wsask.ca/7147-2/>

WSA confirmed additional drainage approvals in the catchment and a multi-phase irrigation project that could return water upstream of BPWTC's Lake Pumping Station. Initially lacking a monitoring plan, WSA has since partnered with Dr. Baulch on an effluent monitoring protocol for Marquis C&D. Spring 2025 sampling occurred (full data pending), with multi-year monitoring planned. Stakeholders urge WSA to back the long-term BPWTC-Baulch research partnership.

### Research and Future Guidance

Three recent peer-reviewed papers by Baulch's team<sup>4,5,6</sup> link high catchment inflows with low Diefenbaker releases to prolonged water quality decline. Ongoing work includes flow models to optimize Diefenbaker releases for faster quality recovery post-floods, while maintaining levels and control.<sup>7</sup>

A \$325M upgrade to BPWTC's plant (completion 2026) will reduce THMs, HAAs and algal byproducts year-round—but cannot address high source-water minerals, underscoring the need for upstream management.

### Critical Water Quality Thresholds

BPWTC monitors these lake thresholds, which could inform future Diefenbaker flow decisions:

- Total Dissolved Solids (TDS) >450 mg/L (vs. WSA's aesthetic objective of <1,500 mg/L; Canada's public health AO is <500 mg/L).
- Dissolved Organic Carbon (DOC) >8 mg/L (no regulations, but linked to higher THM/HAA risks).
- Specific Ultraviolet Absorbance (SUVA) >2.25 L/mg-m (indicates reactive DOC; exceeds raise THM exceedance risk above 100 µg/L annual average).

### UNIVERSITY OF SASKATCHEWAN – GRADUATE STUDENT BENEFITS FROM U OF S AND BPWTC PARTNERSHIP

Since 2014, Dr. Helen Baulch from the University of Saskatchewan's School of Environmental Sustainability has maintained an academic-industrial research partnership with the Buffalo Pound Water Treatment Plant (BPWTP). This collaboration has supported graduate research on long-term water quality variations in Buffalo Pound Lake (BPL), a hydrologically managed drinking-water reservoir, using over 30 years of biweekly monitoring data from the Plant's laboratory.

### Danielle Spence's PhD Research

Danielle Spence, one of Dr. Baulch's graduate students, completed her PhD in September 2025. Her dissertation focused



Figure 8: Danielle Spence at her PhD thesis defence in September 2025. (Photo: <https://news.usask.ca/images/2025/third.jpeg>)

on BPL's vulnerability to climate-driven water-quality extremes, which complicate drinking-water treatment and increase operational costs. Her work utilized generalized additive models (GAMs) to analyze the influences of:

- Climate variability (e.g., El Niño–Southern Oscillation [ENSO] and Pacific Decadal Oscillation [PDO])
- Nutrient loading
- Flow management decisions

These models disentangled drivers of phytoplankton biomass (measured by chlorophyll a) and key indicators of drinking water treatability.

Her research comprised two complementary studies, detailed below.

### Study 1: Phytoplankton Biomass and Algal Blooms

- **Key Findings:**
  - Documented a doubling of mean chlorophyll a concentrations from 1992–1997.
  - Observed shifts in bloom timing: smaller spring blooms, larger summer blooms, and recently, higher late fall/early winter blooms.
- **Drivers:**
  - The 1990s biomass increase aligned with strong, warm El Niño events and wetter periods, leading to nutrient-rich runoff from BPL's agriculturally dominated catchment.
  - During high local inflows, the Water Security Agency reduces inflows from the upstream, nutrient-poor Qu'Appelle River supply reservoir (Lake Diefenbaker) to prevent flooding. This inadvertently worsens blooms by limiting dilution from cleaner Lake Diefenbaker waters.

<sup>4</sup> <https://doi.org/10.1002/ecs2.4472> .

<sup>5</sup> <https://harvest.usask.ca/server/api/core/bitstreams/eb28c8e5-971e-4999-9ed2-620c50c8b489/content> .

<sup>6</sup> <https://doi.org/10.5194/hess-29-1449-2025>

<sup>7</sup> <https://doi.org/10.3390/w14040584> .

## Study 2: Interannual Variability in Drinking Water Treatability Indicators

- **Indicators Analyzed:** Odour, turbidity, dissolved organic carbon (DOC) and total dissolved solids (TDS).
- **Key Findings:**
  - Identified years where annual means of each indicator significantly exceeded long-term averages.
- **Drivers (via GAMs):**
  - ENSO and PDO: Explained deviations in all indicators
    - Cool/wet phases elevated turbidity, odour, and DOC.
    - Warm/dry phases elevated all four indicators.
  - Hydrological management and nutrient inputs: Also contributed to deviations across indicators.

## Overall Implications and Recommendations

- **Interactions Driving Extremes:** ENSO/PDO modes, nutrient pulses and flow management interact to cause extreme water quality swings in BPL.
- **Predictability and Mitigation:**
  - Monitoring ENSO/PDO phases can provide short-term predictability for these swings.
  - Integrating water-chemistry into real-time flow decisions (e.g., adjusting Lake Diefenbaker inflows) can dampen algal bloom intensity, potentially reducing DOC and turbidity based on flow rates.
- **Broader Resilience:**
  - As extreme climates intensify, these findings offer the first long-term, GAM-based evidence for proactive, water quality-informed reservoir management to mitigate risks, lower treatment costs, and build resilience for BPL and BPWTP.
  - Nutrient management practices robust to climate change are essential for source water protection.

## Publications and Resources

Danielle Spence's work is documented in two open-access publications and her thesis.<sup>8, 9, 10</sup>

## UNIVERSITY OF REGINA - WATER TREATMENT SLUDGE VALORIZATION

Annually, BPWTC generates just over 1,500 metric tonnes (MT) or ~4 MT/d of dry solid waste residuals that eventually must be transported and disposed in the Moose Jaw landfill, 25 km away. The annual cost of residuals management at the Plant exceeds \$1M.

The plant's water treatment residuals (WTR) contain large quantities of potentially useful elements—primarily aluminum, along with silicon, calcium, magnesium, iron and manganese. These elements, especially aluminum and silicon, are key ingredients in several construction materials, such as bricks and concrete. In addition, sludge may be used to produce water treatment filter and adsorption materials, such as ceramsite.

Since 2022, the Corporation has partnered with Dr. Jinkai Xue, Assistant Professor at the University of Regina's Faculty of Engineering & Applied Science, to study WTR valorization. Financial investments were made to identify feasible solutions for transforming solid sludge residuals into value-added products. In 2023, this research yielded results: a value-added product called ceramsite was created and tested at Dr. Xue's Cold-Region Water Resource Recovery Laboratory (CRWRRL). Ceramsite is a ceramic-like material made from various ratios of the plant's WTR and clay. The porous material, as shown in Figure 10, has demonstrated to be an effective adsorption media to remove phosphorus from challenging water matrices<sup>11</sup> and holds potential for absorbing other contaminants.<sup>12</sup> A patent application for WTR-based ceramsite was filed in January 2025.

Additional research at the CRWRRL has demonstrated that two carcinogenic PFAS components, PFOA and PFOS, are adsorbed by WTR. In 2024, the BPWTC committed support for research to commercialization project entitled "Development of a facile and cost-effective strategy to tackle Aqueous Film-Forming



Figure 9: Excavating equipment preparing water treatment sludge (residuals) for removal from a settling pond at the BPWTP.

<sup>8</sup> <https://pubs.rsc.org/en/content/articlelanding/2025/va/d5va00094g>,

<sup>9</sup> <https://www.sciencedirect.com/science/article/pii/S004896972502426X>

<sup>10</sup> <https://harvest.usask.ca/items/9669ae17-c249-471d-afed-5c39a972754c>

<sup>11</sup> <https://www.researchsquare.com/article/rs-4558561/v1>

<sup>12</sup> <https://doi.org/10.1021/acsestwater.4c00344>

Foams (AFFF) pollution in soil and water.” The project aims to produce a novel, integrated process that enables the remediation of a broad spectrum of PFAS from both water and soil. It will also produce ceramsite as a value-added byproduct that can be used as an adsorbent to treat water and wastewater, and ultimately as a nutrient-rich fertilizer or landscaping mulch.

According to a five-year plan, the resulting technology should be fully validated, patent-protected, spun-out of the University of Regina (UofR) Cold-Region Water Resource Recovery Laboratory



Figure 10: Ceramsite granules made with water treatment sludge and clay. (Credit: CSCE/SCGC Moncton 2023, paper # 8270.)

**Ceramsite is a ceramic-like material made from various ratios of the plant's WTR and clay. The porous material, as shown in Figure 10, has demonstrated to be an effective adsorption media to remove phosphorus from challenging water matrices**

(CRWRRRL) and commercialized through a Saskatchewan-registered company called EcoLoop Sustainable Technologies Limited (EcoLoop). BPWTC and the Regina Airport Authority (YQR) are industrial partners and investors.

**There are three primary reasons for the BPWTC to support this project.**

- It provides an excellent opportunity to address the costly challenge of managing and disposing of large quantities of WTR produced during the treatment process.
- It offers the potential for a revenue stream for each of the founding partners. New and more stringent PFAS regulations are driving investment in PFAS remediation technologies, with the global market size expected to grow considerably. The global total addressable market (TAM) is currently valued at US\$10 billion and is projected to reach US\$20 billion by 2036, with a compound annual growth rate (CAGR) of 8%.
- It contributes to societal well-being through the recycling of waste materials and the elimination of toxic contaminants (PFAS) from soil and water.

YQR premises have significant PFAS-contaminated groundwater and clay-based soil resulting from the aviation industry's use of PFAS-based aqueous film-forming foam (AFFF) for fuel fire suppression. Scientific evidence links certain PFAS components to liver toxicity, immune system problems and some cancers in humans, making environmental PFAS contamination a growing concern. Environmental regulations continue to evolve and may become more stringent. Currently, there are no cost-effective methods to remove PFAS from water and soil, so YQR is being proactive by supporting this research to find a lower-cost alternative for remediating its premises.

Significant provincial and federal government grant funding will be required to support this research and achieve commercialization. In 2025, BPWTC, YQR, CRWRRRL and U of R collectively invested cash funds through SAFE<sup>13</sup> mechanism and provided in-kind contributions to the startup company, EcoLoop, founded by Dr. Xue. These investments were a requirement to secure a \$450,000 grant from the Saskatchewan Advantage Innovation Fund (SAIF). The project also received NSERC Alliance and Saskatchewan Agriculture Development Fund / Saskatchewan Cattle Association / Western Dairy Research Collaboration grants of up to \$375,000 and \$255,301, respectively. Funding from organizations outside the four principal investors is contingent on achieving various milestones outlined in the grant applications. Additional research grants are being sought.

<sup>13</sup> SAFE: Simple Agreement for Future Equity (SAFE) is an investment contract between a start-up and an investor that gives the investor the right to receive equity of the company on certain pre-agreed triggering events, such as a: Future equity financing (known as a qualifying financing or next equity financing), usually led by an institutional venture capital (VC) fund, or sale of the company. ([https://ca.practicallaw.thomsonreuters.com/w-013-6889?transitionType=Default&contextData=\(sc.Default\)&firstPage=true#:~:text=A%20SAFE%20is%20an%20investment,Sale%20of%20the%20company.](https://ca.practicallaw.thomsonreuters.com/w-013-6889?transitionType=Default&contextData=(sc.Default)&firstPage=true#:~:text=A%20SAFE%20is%20an%20investment,Sale%20of%20the%20company.))

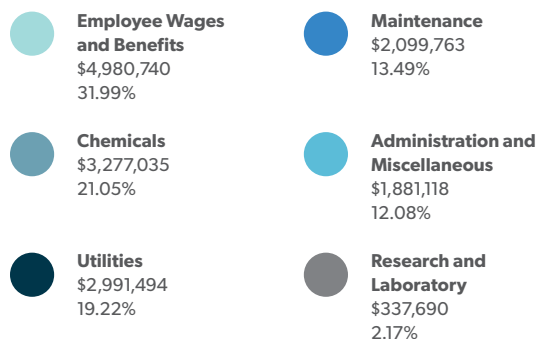
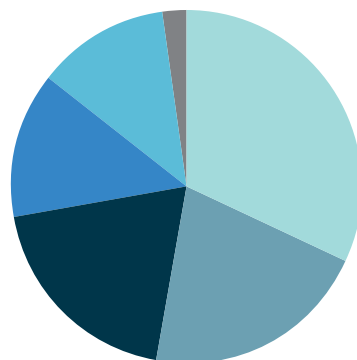
# Operations Budget

Financial Highlights	Year ended December 31, 2024	Year ended December 31, 2025	% Change		
<b>Water Rates (ML)</b>					
Cities	\$ 400.00	\$ 461.50	15.4%		
SaskWater	\$ 400.00	\$ 461.50	15.4%		
<b>Capital Water Rates (ML)</b>					
Cities	\$ 361.50	\$ 373.80	3.4%		
SaskWater	\$ 676.11	\$ 1,027.74	52.0%		
<b>Power (kwh)</b>					
Cities	\$ 0.16900	\$ 0.18024	6.7%		
SaskWater	\$ 0.18590	\$ 0.19826	6.6%		
<b>Operations (\$ million)</b>					
Total Revenue	14.51	17.32	19.4%		
Total Expenditures	14.80	15.57	5.2%		
Surplus (Deficit)	-0.29	1.75			
Operating Reserve	0.98	2.74			
<b>Capital (\$ million)</b>					
Total Revenue	122.24	14.45	-88.2%		
Total Expenditures	100.19	61.46	-38.7%		
Surplus (Deficit)	22.05	-47.01			
Capital Reserve	57.07	10.06			
<b>Water Sales (ML)</b>					
	Forecasted (2024)	Actual	Forecasted (2025)	Actual	% Change (2024)
Regina	29,600.0	27,847.2	28,595.0	29,409.1	2.8%
Moose Jaw	5,125.0	5,228.1	5,204.0	5,289.0	1.6%
SaskWater	210.0	174.9	191.0	178.7	-6.4%

**Notes**

1. The Operating Reserve is intended to offset the impact of wet years or years with low water sales.
2. The Capital Reserve is intended to complete projects that are in progress with the bulk of it to fund the generational Plant Renewal Project and fund emergency repairs.

**Graph 4  
Expenses for 2025  
as a Percentage of  
the Total Budget**



# Drinking Water Quality and Compliance Report

## INTRODUCTION

The Water Security Agency requires each permittee to monitor water quality as stipulated under its Permit to Operate a Waterworks. Permittees are also required to prepare an annual report to their customers and the Saskatchewan Water Security Agency (WSA) summarizing the analytical results of the monitoring in a report entitled "Drinking Water Quality and Compliance Report."

For more information about the meaning and type of sample refer to the Water Security Agency's "Municipal Drinking Water Quality Monitoring Guidelines, or the associated website <https://publications.saskatchewan.ca/#/products/112864>.

The guidelines for Canadian drinking water quality are developed by the Federal-Provincial-Territorial Committee on Drinking Water and are published by Health Canada. The province of Saskatchewan utilizes the guidelines in issuing Permits to Operate for regulated waterworks. Guidelines for chemical and physical parameters are either:

1. health based and listed as a Maximum Acceptable Concentration (MAC);
2. insufficient toxicological data to establish a MAC with reasonable certainty, or when it is not feasible, for practical reasons, to establish a MAC at the desired level and listed as an Interim Maximum Acceptable Concentration (IMAC).
3. based on aesthetic considerations and listed as an Aesthetic Objective (AO); or
4. established based on operational considerations and listed as an Operational Guidance (OG) value.

Throughout this document the analytical values are reported as well as the units of measure. Many parameters are not detectable in the treated water. Wherever the "less than sign" (<) is used it is followed by the method detection limit. This means that the parameter was not detected at or above the level indicated.

The Buffalo Pound Water Treatment Plant was fully compliant with the requirements for sample submission as defined in the Permit to Operate a Waterworks No. 00050083-09-00.

## Water Quality Standards – Bacteriological Quality

According to its Permit to Operate a Waterworks, the Plant is required to analyze one sample every week from the treated water for bacteriological quality. Results of that sampling follow. All required samples were submitted over the year, none of which had detectable coliform or background organisms.

Parameter	Limit	Number of Samples Submitted	Number of Samples Exceeding Limit
Total Coliforms	0 per 100 ml	52	0
Background Organisms	<200 per 100 ml	52	0

## Water Quality Standards – Filter Turbidity

The Plant is required to monitor the effluent turbidity from eight deep bed carbon filters on a continuous basis. The turbidity from each individual filter shall be less than 0.3 NTU, 95% of the time. The turbidity shall not exceed 0.3 NTU for more than 12 consecutive hours and shall never exceed 1.0 NTU. If, on those occasions when the monthly average of the source water turbidity is less than 1.5 NTU, the water turbidity levels from each filter must be less than 0.2 NTU, 95% of the time, the turbidity shall not exceed 0.2 NTU for more than 12 consecutive hours and shall never exceed 1.0 NTU.

The Plant's Distributed Control System (DCS) automatically generates an alarm if a filter effluent turbidity exceeds 0.2 NTU or 0.3 NTU. If the turbidity exceeds 0.4 NTU at any time or if there is no flow detected in the turbidity analyzer, the Plant's DCS automatically closes the filter effluent valve, turning off the filter.

By maintaining these turbidity requirements, the Plant receives a credit of 2.0 log removal of viruses and 3.0 log removal of giardia cysts and cryptosporidium oocysts.

## Water Quality Standards – Fluoride

Under normal operating conditions, fluoride is added to treated water destined for the City of Moose Jaw. However, fluoride was not added in 2025 due to operational complexities caused by the Plant Renewal Project. It is anticipated that fluoride addition to Moose Jaw will resume in 2026.

**Water Quality Standards – Disinfection**

To ensure adequate disinfection, the Plant must monitor both ultraviolet (UV) dose and chlorine residual of the treated water on a continuous basis. The UV dosage and UV transmittance must be greater or equal to 5.8 mJ/cm<sup>2</sup> and 85% respectively for the Plant to receive a minimum 2.0 log cryptosporidium inactivation credit. In addition, free chlorine residual in the treated water during the height of plant renewal construction in 2025 was kept in a range of 1.7 to 2.3 mg/L thereby insuring a minimum credit of 2.0 log inactivation of viruses. At no time can the free chlorine residual be less than 0.1 mg/L in the water entering the distribution systems.

In the event that the UV system fails, the SCADA activates an alarm of the condition and a minimum 0.5 log removal and/or inactivation of Giardia disinfection requirement must then be obtained. Operators add additional free chlorine above the normal operating range of 1.1 to 1.5 mg/L leaving the clearwells to achieve the temporary disinfection requirement. The amount of additional free chlorine residual required depends on flow rates, pH and water temperature. Operators use Contact Time (CT) tables

within applicable Standard Operating Procedures (SOPs) and/or spreadsheet calculators to determine the minimum free chlorine residual and maximum plant flow required. When the UV system is returned to service and meets the minimum UV dosage and transmission requirements, the facility again receives a minimum 2.0 log cryptosporidium inactivation credit. Free chlorine residual of the treated water is returned to the normal range and sufficient to achieve a minimum 2.0 log inactivation of viruses. Plant flows are also returned to normal to meet full demand.

When the UV and chlorine systems are working normally, the Supervisory Control and Data Acquisition (SCADA) and Distributed Control System (DCS) will automatically shut off pumping to the Cities if the free chlorine residual exiting the clearwells is less than 0.9 mg/L depending on seasonality. If the UV system becomes inoperable, the low chlorine residual setpoint to automatically shut off pumping to the Cities is adjusted by operators as outlined in the applicable SOPs depending on maximum flow rate, pH and water temperature. This ensures that the minimum disinfection requirements are met in the treated water.

**Water Quality Standards – Chemical – General**

As part of the Plant’s “Permit to Operate” a general chemical analysis is required once in every three-month period from the treated water. Only two of these parameters have an established MAC. Eight others have an Aesthetic Objective (AO) which is desirable but has no impact on human health. Four analytes have no MAC or AO but are collected upon the request of the WSA.

Parameter (mg/L) unless stated	Feb. 24* (RRPL)	May 12	Aug 11	Nov. 17	MAC	No. of Samples Exceeding MAC or AO
Nitrate	0.4	0.24	0.30	0.40	45	0
Fluoride	0.13	0.13	0.12	0.11	1.5 AO	0
Alkalinity	191	156	125	134	500	0
Chloride	38	35.1	38.9	40.0	250	0
Hardness	278	218	185	208	800	0
Magnesium	30	23	21.4	22.8	200	0
pH (pH units)	7.5	7.50	7.39	7.33	7.0 to 10.5	0
Sodium	47	40.9	46.1	43.6	300	0
Sulphate	140.3	111.1	116.9	22.2	500	0
Total Dissolved Solids	559	390	390	374	1500	0
Carbonate	ND	ND	ND	ND	None*	
Calcium	62	49.5	39	45.5	None*	
Conductivity (uS/cm)	722	610	585	624	None*	
Bicarbonate	233	190	153	163	None*	
Potassium	8	5.2	5.9	5.6	None*	

ND – Not Detected  
None\* No MAC or AO but requested by the WSA

### Water Quality Standards – Chemical – Health

The Plant is required to sample the treated water for the following parameters once in every three-month or six-month period. Sixteen of these parameters have an established MAC. Three parameters have guideline values which establish a target that could be expected from well-functioning water treatment plants or are aesthetic objectives for the taste or appearance of treated water. Silver is included here upon request of WSA.

Parameter (mg/L) unless stated	Feb 24	May 20	Aug 19	Nov 17	MAC	No. of Samples Exceeding MAC
Antimony	<0.0002	<0.0002	0.0002	0.0002	0.006	0
Arsenic	0.0005	0.0004	0.0008	0.0004	0.010	0
Barium	0.072	0.063	0.063	0.056	1.0	0
Boron	0.06	0.05	0.05	0.05	5.0	0
Bromate	<0.005	NT	<0.005	NT	0.01	0
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	0.005	0
Chromium	<0.0005	<0.0005	<0.0005	<0.0005	0.050	0
Copper	0.0005	<0.0002	<0.0002	<0.0002	2.0	0
Cyanide	0.001	NT	0.001	NT	0.200	0
Lead	<0.0001	<0.0001	<0.0001	<0.0001	0.010	0
Manganese	0.0009	0.0026	0.0010	0.0013	0.12	0
Mercury	<0.000001	NT	<0.000001	NT	0.001	0
Selenium	0.0005	0.0003	0.0003	0.0004	0.010	0
Uranium	0.0009	0.0004	<0.0003	0.0003	0.020	0
					Operational Guidance Value or Aesthetic Objective	Number of Samples Exceeding Guideline
Aluminum	0.048	0.062	0.110	0.038	0.1 (annual average)	0
Iron	0.0016	0.0006	0.0006	0.0013	0.3	0
Silver	<0.00005	<0.00005	<0.00005	<0.00005	None*	0
Zinc	<0.0005	<0.0005	0.0006	0.0006	5.0	0

\*Health Canada has not established a guideline as drinking water is not a significant source of silver.  
NT = not tested

**Water Quality Standards – Pesticides**

Once per year, the Plant is required to have the treated water analyzed for the following pesticides. Fourteen of the parameters listed below have an established MAC or IMAC (interim MAC).

Highlighted chemicals were withdrawn from the Canadian Drinking Water Quality Guidelines in January 2022 but are currently required for testing in Saskatchewan.

Parameter (mg/L)	Sep 15	MAC	IMAC	Number of Samples Exceeding Limit
Atrazine	<0.0002		0.005	0
Bromoxynil	<0.0002		0.005	0
Carbofuran	<0.0002	0.09		0
Chlorpyrifos	<0.0002	0.09		0
Dicamba	<0.001	0.12		0
2,4-D	<0.001		0.1	0
Diclofop-methyl	<0.001	0.009		0
Dimethoate	<0.005	0.02		0
Malathion	<0.0002	0.19		0
MCPA	<0.001	0.10		0
Pentachlorophenol	<0.002	0.06		0
Picloram	<0.001		0.19	0
Trifluralin	<0.0002		0.045	0

**Water Quality Standards – Disinfection By-Product – Total Trihalomethanes**

As part of the Plant’s “Permit to Operate,” an analysis for total trihalomethanes (TTHMs) is required once per month from the treated water. The MAC is 0.1 mg/L or 100 ug/L (parts per billion) for the sum of four trihalomethanes on an annual average. The annual average of monthly total trihalomethanes was 44 ug/L which is well below the MAC.

Parameter (µg/L)	Jan. 13	Feb. 3	Mar. 17	Apr. 14	May 21	Jun. 9
Chloroform	17	16	17	11	11	8
Bromodichloromethane	7	7	8	6	7	5
Dibromochloromethane	2	2	3	3	4	3
Bromoform	<1	<1	<1	<1	<1	<2
Total Trihalomethanes	26	25	28	20	22	16
	Jul. 14	Aug. 14	Sep 15	Oct 14	Nov 17	Dec. 15
Chloroform	10	7	6	2	<2	<2
Bromodichloromethane	5	5	4	2	<2	<2
Dibromochloromethane	3	3	3	2	<2	<2
Bromoform	<2	<2	<2	<2	<2	<2
Total Trihalomethanes	18	15	13	6	<2	<2

### Water Quality Standards – Disinfection By-Product – Haloacetic Acids (HAA<sub>5</sub>)

The Plant is obligated to sample haloacetic acids every three months. The annual average of quarterly samples was 23 µg/L and well below the MAC of 80 µg/L which is also based on an average of four samples.

Parameter (mg/L)	Feb. 24	May 20	Aug. 19	Nov. 17	Annual Average	MAC (Average)
Chloroform	12	<10	<10	<10	<10	80

### Water Quality Standards – Synthetic Organics

The Plant is required to submit one sample per year for analysis for various organics originating from industrial activities.

Highlighted chemicals were withdrawn from the Canadian Drinking Water Quality Guidelines in January 2022 but are currently required for testing in Saskatchewan.

Parameter	<sup>1</sup> Aug. 25, Sep. 15 / (mg/L)	MAC (mg/L)	IMAC (mg/L)	Number of Samples Exceeding Limit
Benzene	<0.0005	0.005		0
Benzo(a)pyrene	<0.00001	0.00001		0
Carbon Tetrachloride	<0.002	0.005		0
Dichlorobenzene 1,2	<0.0005	0.200		0
Dichlorobenzene 1,4	<0.0005	0.005		0
Dichloroethane 1,2	<0.0005		0.005	0
Dichloroethylene 1,1	<0.0005	0.014		0
Dichloromethane	<0.0005	0.050		0
Dichlorophenol 2,4	<0.001	0.900		0
Ethylbenzene	<0.0005	0.14		0
Monochlorobenzene	<0.0005	0.08		0
<sup>1</sup> Perfluorooctanesulfonate	<0.000002	*		0
<sup>1</sup> Perfluorooctanoic Acid	<0.000001	*		0
Tetrachloroethylene	<0.0005	0.01		0
Tetrachlorophenol 2,3,4,6	<0.001	0.1		0
Trichloroethylene	<0.0005	0.05		0
Trichlorophenol 2,4,6	<0.002	0.005		0
Vinyl Chloride	<0.0005	0.002		0
Xylenes	<0.0005	0.09		0

\*under development by Health Canada.

### Water Quality Standards – Radiological

The Plant is required to submit one sample per year for the measurement of gross alpha and gross beta activity. Should those measures exceed the MACs, an additional larger sample must be submitted for the estimation of contributions to activity from various individual radioisotopes. Additional analyses were not necessary as the gross alpha and gross beta activity were both less than the MAC.

Parameter	Sep. 15	MAC
Gross Alpha (Becquerel/L)	<0.21	0.5
Gross Beta (Becquerel/L)	0.18±0.04	1.0

### Water Quality Standards – Microcystin

The Plant is required to submit monthly samples from May through October for Microcystin LR or Total Microcystin toxins from both the raw and treated water. Microcystins may be produced by various cyanobacteria. The microcystin MAC for drinking water is 1.5 ug/L.

Date	Microcystin (µg/L)	
	Raw Water	Treated Water
May 12	0.1	<0.1
Jun 9	0.3	<0.1
Jul 14	0.9	0.1
Aug 11	0.3	0.1
Sep 08	0.2	<0.1
Oct 14	0.3	0.2

### Raw Water Analysis Giardia and Cryptosporidium

Although not a regulated water quality parameter, the Plant is required to sample the raw water on a quarterly basis for the presence of *giardia* spp. and *cryptosporidium* spp. which are waterborne protozoa. *Cryptosporidium* oocysts and *giardia* cysts were not detected in the four raw water samples.

Date	Giardia (cysts per L)	Cryptosporidium (oocysts per L)
Feb 25	<0.1	<0.1
May 25	<0.1	<0.1
Aug 25	<0.1	<0.1
Nov 24	<0.1	<0.1

## PERMIT TO OPERATE: POSSIBLE NONCOMPLIANCES

### Filter Turbidity

Four incidents occurred in 2025 in which deep-bed carbon filter (DBCF) effluent turbidity may have exceeded one NTU for a short period while effluent was flowing to production. These events took place on March 25, August 21, August 28 and September 15. All were associated with commissioning of the DBCFs after they became the sole mechanism for removing particulates from clarified water, taking over from the legacy multimedia filters in March.

Following an extensive investigation after each event, the common root cause was identified as water flow deviations in the turbidity meters monitoring each filter's effluent quality during the initial (drainage) stage of backwashing. During drain mode, the water depth above the filter media decreases, which also reduces head pressure and causes decreasing flow—including no flow—through the turbidity meter. These flow fluctuations likely triggered sensor anomalies, registering as high turbidity (>1 NTU), although the actual quality of water draining from the filter was most likely unaffected and remained compliant.

To address the issue during draining, the turbidity monitoring system was modified as follows:

- Replumbing to reduce water friction and head loss within the flow path to the turbidity meters
- Addition of electronic monitoring for turbidity meter water flow, which automatically closes the filter effluent valve and diverts flow to waste if meter flow drops to zero and/or if turbidity exceeds operator-controlled thresholds, currently set at 0.4 NTU

Despite these events, adequate disinfection was maintained for all treated water leaving the plant, resulting in no public health concerns. All incidents were reported to the Water Security Agency (WSA).

2025 - Buffalo Pound Water Quality Data: Raw Lake Water

PARAMETERS	UNITS	JAN AVG	FEB AVG	MAR AVG	APR AVG	MAY AVG	JUN AVG	JUL AVG	AUG AVG	SEP AVG	OCT AVG	NOV AVG	DEC AVG	YEAR AVG	YEAR MIN	YEAR MAX
<b>PHYSICAL</b>																
Colour (Apparent)	Pt/Co	5		5	6	8	9	15	18	15	8	8	6	9	5	20
Conductivity	µS/cm	684	712	719	640	587	568	549	562	570	585	609	634	613	539	720
Bench Diss. Oxygen	mg/L	9.62		9.05	11.20	8.84	8.31	6.66	7.06	5.06	9.82	11.65	10.89	8.64	3.70	11.79
Bench Diss. Oxygen	%	70.7		69.4	95.2	88.4	87.9	77.4	78.3	53.0	83.9	84.0	78.7	79.0	39.2	102.3
ON-LINE Diss. Oxygen	%	86.2		81.7						95.2		86.6	97.2	89.0	66.2	107.5
Odour	T.O.N.	26	16		40	47	50	53	53	84	30	25	22	42	16	100
pH	pH units	8.16	7.95	7.98	8.21	8.41	8.56	8.50	8.43	8.40	8.39	8.36	8.27	8.30	7.84	8.65
Temperature	°C	2.6	2.7	4.0	7.3	14.1	18.0	22.0	21.1	18.3	9.5	3.2	1.9	10.7	1.0	23.5
Turbidity	NTU	0.91	0.83	1.33	2.60	2.53	3.42	4.08	5.62	4.86	4.31	3.15	1.36	2.90	0.68	8.36
TDS	mg/L	488	572	443	392	372	355	332	356	377	393	372	366	396	316	572
TSS	mg/L	<5	<5	<5	<5	<5	<5	10	8	10	<5	<5	<5	<5	<5	18
Langelier Saturation Index	pH units (calc)	0.17	-0.01	0.11	0.41	0.59	0.72	0.67	0.57	0.49	0.31	0.29	0.17	0.40	-0.01	0.76
<b>MAJOR CONSTITUENTS</b>																
Alkalinity(p)	mg/L CaCO3	<	<	<	1	2	4	4	3	1	3	<	<	2	<	5
Alkalinity(total)	mg/L CaCO3	195	213	210	191	174	158	146	149	150	158	163	174	172	144	213
Bicarbonate	mg/L	238	260	256	230	209	185	168	176	182	187	199	213	206	167	260
Carbonate	mg/L	<	<	<	2	2	4	5	3	1	3	<	<	2	<	6
Calcium	mg/L	56.6	62.0	57.3	52.4	49.1	43.5	38.1	40.1	39.5	43.2	46.1	49.7	47.5	37.2	62.0
Magnesium	mg/L	28.3	30.0	28.0	24.9	22.6	22.1	20.9	21.6	21.0	21.8	22.9	25.0	23.8	20.7	30.0
Hardness (total)	mg/L CaCO3 (calc)	257.7	278.4	258.2	233.1	215.5	199.6	181.1	189.0	185.0	197.6	209.4	227.1	216.6	179.8	278.4
Sodium	mg/L	48.8	47.0	49.7	43.8	40.6	42.6	42.3	44.3	42.8	42.4	44.2	48.0	44.4	39.1	51.1
Potassium	mg/L	6.31	8.00	5.97	5.47	5.23	5.47	5.61	5.92	5.54	5.47	5.58	6.05	5.79	5.09	8.00
Sulphate	mg/L	135.0	141.4	142.6	121.9	111.2	113.3	115.3	117.8	118.3	118.9	122.4	128.5	122.9	109.7	144.5
Chloride	mg/L	22.0	23.1	23.5	19.8	18.1	17.7	17.8	18.3	19.1	19.1	19.4	20.4	19.7	17.4	23.6
<b>TRACE CONSTITUENTS</b>																
Aluminum (dissolved 0.45µ)	ug/L	6		5	<2	9	26	12	14	10	4	12	5	9	<2	29
Aluminum (Total)	ug/L	20	10	16	56	70	158	84	166	105	87	81	35	78	10	213
Ammonia N	mg/l N	0.06	0.11	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.11
BOD (5-day)	mg/L	1.79		0.70	2.37	3.25	2.08	3.41	3.60	3.67	3.03	2.47	2.15	2.59	0.70	3.67
Bromide	mg/L	0.06		0.05	0.04	0.06	0.05	0.04	0.10	0.09	0.07	0.06	0.03	0.06	0.01	0.10
Chlorophyll a	µg/L	4	1	11	11	7	15	28	34	35	22	14	11	17	1	43
Fluoride	mg/L	0.20	0.19	0.20	0.18	0.17	0.17	0.17	0.19	0.20	0.19	0.19	0.20	0.19	0.15	0.20
Iron (dissolved)	mg/L	<0.001		0.002	<0.001	0.002	0.001	0.002	0.002	0.001	0.002	0.001	0.002	0.001	<0.001	0.003
Iron (Total)	mg/L	0.015	<0.001	0.024	0.052	0.059	0.113	0.073	0.149	0.122	0.090	0.062	0.030	0.071	<0.001	0.158
Manganese (dissolved)	mg/L	0.017	0.019	0.036	0.004	0.002	0.004	0.005	<0.001	<0.001	0.002	0.001	0.001	0.010	<0.001	0.049
Manganese (Total)	mg/L	0.032	0.050	0.068	0.055	0.037	0.033	0.055	0.069	0.080	0.021	0.011	0.008	0.046	0.008	0.080
Nitrate	mg/L	0.11	0.40	0.14	0.10	0.06	0.08	0.10	0.05	0.07	0.10	0.08	0.14	0.11	0.04	0.40
Organic N	mg/l N	0.5	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.7
Raw TOC	mg/L C	5.6	5.5	5.8	5.9	5.5	5.7	6.8	7.5	7.1	6.1	5.8	5.8	6.1	5.0	8.2
Raw DOC (GF diss)	mg/L C	5.6	5.6	5.6	5.1	4.9	5.2	5.4	5.8	5.8	5.3	5.0	5.2	5.4	4.7	6.0
PreFM DOC (GF diss)	mg/L C	5.6	5.8	5.7										5.7	5.4	5.9
UV absorbance @ 254nm	Abs 10cm	0.771	0.788	0.819	0.782	0.753	0.780	0.801	0.828	0.839	0.810	0.749	0.774	0.792	0.730	0.856
SUVA	L / mg m	1.380	1.407	1.461	1.521	1.539	1.515	1.478	1.423	1.454	1.537	1.492	1.499	1.479	1.310	1.606
PreFM UV abs @ 254nm	Abs 10cm	0.657	0.685	0.696										0.678	0.650	0.702
Phosphate(ortho)	µg/LP	5	<3	6	<3	7	8	<3	6	6	4	<3	3	4	<3	15
Phosphate(total)	µg/LP	25	20	31	38	53	70	67	99	94	63	51	42	56	20	105
Silica (SiO3)	mg/L	0.51		1.22	1.62	1.25	0.99	3.27	5.79	7.50	7.35	6.08	5.77	3.70	0.51	7.89

2025 - Buffalo Pound Water Quality Data: Raw Lake Water

PARAMETERS	UNITS	JAN AVG	FEB AVG	MAR AVG	APR AVG	MAY AVG	JUN AVG	JUL AVG	AUG AVG	SEP AVG	OCT AVG	NOV AVG	DEC AVG	YEAR AVG	YEAR MIN	YEAR MAX
<b>TRACE CONSTITUENTS</b>																
<b>PreFM</b>																
TTHM's (total)	µg/L(calc)	18	20	17	<	<	<	<	<	<				5	<	25
Chloroform	µg/L	11	12	11	<2	<2	<2	<2	<2	<2				3	<2	14
Bromodichloromethane	µg/L	5	6	5	<2	<2	<2	<2	<2	<2				<2	<2	8
Chlorodibromomethane	µg/L	<2	2	<2	<2	<2	<2	<2	<2	<2				<2	<2	3
Bromoform	µg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2				<2	<2	<2
<b>BIOLOGICAL</b>																
Blue Green Algae	per millilitre	41.7	<11.1	15.5	161.1	950.0	1726.7	4977.8	7388.9	17000.0	1444.5	477.8	155.6	3188.9	<11.1	36000.0
Green Algae	per millilitre	102.8	122.2	342.2	2194.4	2105.6	948.9	5488.9	15222.2	20533.3	10083.3	5505.6	5533.3	6116.8	22.2	33666.6
Diatoms	per millilitre	330.6	88.9	655.6	1133.3	1005.5	355.6	761.1	1138.9	1422.2	1527.8	644.5	302.2	815.0	<11.1	3555.6
Flagellates	per millilitre	63.9	33.3	228.9	394.5	883.3	193.3	1466.7	1777.8	1422.2	1111.1	883.3	293.3	756.0	22.2	3555.6
Crustaceans	per litre	58	17	18	65	149	96	33	29	21	33	59	58	55	10	280
Nematodes	per millilitre	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	55.6	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	222.2
Rotifers	per millilitre	<11.1	<11.1	<11.1	<11.1	27.8	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	66.7
Other	per millilitre	<11.1	<11.1	<11.1	<11.1	88.9	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	355.6
Total Green & B-G	per millilitre	144.5	122.2	357.8	2355.5	3055.6	2675.6	10466.7	22611.1	37533.3	11527.8	5983.3	5688.9	9305.7	22.2	69666.6
<b>BACTERIOLOGICAL</b>																
Total Coliforms (MPN)	per 100 mL	<1	<1	1	7	4	24	289	1190	701	96	42	12	214	<1	1553
E. coli (MPN)	per 100 mL	<1	<1	<1	1	<1	2	7	9	15	5	<1	<1	4	<1	49
Standard Plate Count	per 1 mL	2	1	3	14	15	10	367	450	458	47	16	4	123	1	600
<b>CHEMICAL DOSES</b>																
Overall Coagulant Dose as Dry Alum Equivalent	mg/L DAE (Calc)	58.0	58.0	53.0	65.7	74.0	68.3	79.7	82.8	82.8	82.8	82.8	67.1	71.0	51.8	82.8
Alum/Raw DOC	ratio	10.38	10.35	9.53	12.82	15.07	13.36	14.70	14.23	14.35	15.74	16.50	13.03	13.44	8.97	17.58
Chlorine-pre	mg/L	2.0	2.7	2.0										2.2	<	3.7
Chlorine-intermed	mg/L															
Chlorine-post	mg/L	1.9	1.7	1.7	2.4	2.2	2.3	2.8	2.7	2.6	2.0	2.5	2.8	2.3	0.6	3.5
Plant Flow	mLD	94	96	99	95	117	117	128	126	120	108	93	91	107	60	160
Qu'Appelle Dam Flow	m3/s	1.4	1.6	1.7	<	5.2	5.5	5.1	5.2	4.9	1.9	2.1	2.1	3.1	<	5.8
Fluoride (Set Point for MJ)	mg/L															
CPAC Dose - Dry Alum Equivalent	mg/L DAE (Calc)	58	58	53	66	74	68	80	83	83	83	83	67	71	52	83
CPAC Train A	mg/L	28	28	25			30	39	40	40	40	40	32	35	25	40
CPAC Train B	mg/L			27	32	36	33	39	40	40	40	40	32	35	25	40
Polymer Train A	mg/L	0.15	0.15	0.15			<	<	<	<	<	<	<	0.04	<	0.15
Polymer Train B	mg/L			0.15	0.08	0.04	<	<	<	<	<	<	<	0.02	<	0.15
Total Chlorine dose	mg/L (Calc)	3.9	4.4	3.7	2.4	2.2	2.3	2.8	2.7	2.6	2.0	2.5	2.8	2.9	1.7	5.2
Date BAC's ON				24-Mar										15-Mar	6-Mar	24-Mar
Date BAC's OFF														26-Feb	18-Feb	7-Mar
Date Ice ON Lake												26-Nov		26-Nov	26-Nov	26-Nov
Date Ice OFF Lake					27-Apr									27-Apr	27-Apr	27-Apr
<b>CHLORINE RESIDUALS EXIT PLANT (WEEK AVG.)</b>																
Free Chlorine (CW)	mg/L (calc)	1.67	1.49	2.06	1.81	1.63	1.61	1.61	1.74	1.67	1.94	2.06	1.89	1.76	1.42	2.32
Combined Chlorine (CW)	mg/L (calc)	0.27	0.30	0.37	0.23	0.22	0.26	0.34	0.32	0.30	0.22	0.23	0.29	0.28	0.15	0.43

2025 - Buffalo Pound Water Quality Data: Treated Water

PARAMETERS	UNITS	JAN AVG	FEB AVG	MAR AVG	APR AVG	MAY AVG	JUN AVG	JUL AVG	AUG AVG	SEP AVG	OCT AVG	NOV AVG	DEC AVG	YEAR AVG	YEAR MIN	YEAR MAX
<b>PHYSICAL</b>																
Colour (Apparent)	Pt/Co	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Conductivity	µS/cm	693	722	736	709	610	599	562	585	588	610	624	655	641	562	736
Diss. Oxygen	mg/L	11.10		8.89	11.14	9.28	10.42	9.17	8.65	9.87	11.49	13.21	12.75	10.54	8.65	13.21
% Sat. Diss. Oxygen	%	82.1		68.8	91.5	93.8	105.6	106.0	98.7	101.1	101.1	96.4	92.2	94.3	68.8	106.0
Odour (Dechlorinated)	T.O.N.	2	2		3	4	3	2	2	2	2	1	3	2	1	5
PreBAC Odour	T.O.N.	6	6		9	8	10	11	14	21	12	11	11	11	5	22
Odour Removal by Coagulation and Filtration	%	74.0%	62.5%		75.4%	84.2%	88.9%	89.7%	72.4%	74.5%	60.9%	51.9%	48.6%	71.7%	40.0%	97.3%
Odour Removal Overall	%	91.2%	87.5%		90.7%	91.6%	94.7%	95.4%	95.7%	97.5%	94.0%	94.2%	88.2%	93.1%	81.5%	98.0%
PreFM pH	pH units	7.99	7.80	7.79										7.86	7.70	8.03
Coagulation pH - Channel 2	pH units	7.51	7.50	7.52	7.64									7.52	7.45	7.64
Clearwell pH	pH units	7.58	7.47	7.47	7.58	7.47	7.49	7.26	7.32	7.22	7.36	7.34	7.45	7.42	7.17	7.76
Temperature	° C	3.3	3.3	4.2	7.0	13.8	18.3	21.8	21.1	18.1	9.6	2.7	2.3	10.5	1.4	22.5
Turbidity	NTU	0.07	0.09	0.12	0.24	0.24	0.16	0.17	0.13	0.11	0.08	0.09	0.11	0.13	0.07	0.30
Total Dissolved Solids	mg/L	430	559	424	428	390	360	342	390	380	396	374	386	405	342	559
Total Suspended Solids	mg/L	<5		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Langelier Saturation Index	pH units (calc)	-0.46	-0.51	-0.49	-0.13	-0.34	-0.36	-0.65	-0.54	-0.78	-0.62	-0.88	-0.75	-0.54	-0.88	-0.13
<b>MAJOR CONSTITUENTS</b>																
Alkalinity(p)	mg/L CaCO3	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
Alkalinity(total)	mg/L CaCO3	173	191	193	168	152	137	122	126	124	135	134	151	149	121	193
Bicarbonate	mg/L	211	233	235	205	185	167	148	154	151	165	163	184	182	148	235
Carbonate	mg/L	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
Calcium	mg/L	54.1	62.0	54.4	56.9	49.5	48.0	36.8	38.8	38.1	44.2	45.5	49.4	48.1	36.8	62.0
Magnesium	mg/L	26.4	30.0	26.7	27.7	23.0	21.8	21.2	21.4	20.9	22.7	22.8	25.0	24.1	20.9	30.0
Hardness (total)	mg/L CaCO3 (calc)	243.8	278.4	245.8	256.1	218.3	209.6	179.2	185.0	181.2	203.6	207.5	226.3	219.6	179.2	278.4
Sodium	mg/L	46.8	47.0	49.4	49.1	40.9	42.6	42.5	46.1	43.1	48.5	43.6	47.9	45.6	40.9	49.4
Potassium	mg/L	5.67	8.00	5.89	5.88	5.21	5.55	5.67	5.93	5.61	5.76	5.55	6.04	5.90	5.21	8.00
Sulphate	mg/L	132.6	140.3	145.9	134.1	111.1	113.4	114.6	116.9	118.2	116.8	122.2	129.1	124.6	111.1	145.9
Chloride	mg/L	36.8	38.0	38.0	37.3	35.1	33.5	33.8	38.9	38.7	39.5	40.0	38.1	37.3	33.5	40.0
<b>TRACE CONSTITUENTS</b>																
<b>Clearwell</b>																
CW Aluminum (dissolved 0.45µ)	µg/L	18		24	35	70	67	79	60	51	30	21	25	44	18	79
CW Aluminum (total)	µg/L	20	95	50	72	79	129	95	68	57	32	38	77	76	20	178
Aluminum (particulate)	µg/L (Calc)	2		26	37	9	8	16	8	6	2	17	52	17	2	52
MMF A Aluminum (total)	µg/L	36			35	77	159	92	71	82	32	52	58	69	32	159
MMF L Aluminum (total)	µg/L	32			37	78	156	91	62	62	28	35	86	67	28	156
PreBAC Aluminum (dissolved)	µg/L	24			108	212		125	88	116	30	49	70	91	24	212
PreBAC Aluminum (total)	µg/L	26			3	345		408	405	690	1231	548	1194	539	3	1231
Ammonia N	mg/L N	0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05
Bromide	mg/L	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoride	mg/L	0.14	0.13	0.15	0.15	0.13	0.12	0.12	0.13	0.13	0.12	0.11	0.13	0.13	0.11	0.15
Iron (dissolved)	mg/L	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron (total)	mg/L	<0.001	<0.001	0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.002
Manganese (dissolved)	mg/L	<0.001		<0.001	0.004	0.002	0.002	0.001	<0.001	<0.001	0.002	0.001	<0.001	0.001	<0.001	0.004
Manganese (total)	mg/L	<0.001	<0.001	0.003	0.006	0.002	0.002	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	0.013
Nitrate	mg/L N	0.12	0.40	0.18	0.14	0.05	0.09	0.07	0.07	0.07	0.11	0.08	0.13	0.13	0.05	0.40
Organic N	mg/L N	0.2	0.3		0.3	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.3

2025 - Buffalo Pound Water Quality Data: Treated Water

PARAMETERS	UNITS	JAN AVG	FEB AVG	MAR AVG	APR AVG	MAY AVG	JUN AVG	JUL AVG	AUG AVG	SEP AVG	OCT AVG	NOV AVG	DEC AVG	YEAR AVG	YEAR MIN	YEAR MAX
<b>TRACE CONSTITUENTS</b>																
<b>Clearwell (Continued)</b>																
CW TOC	mg/LC	3.2	3.5	3.8	3.0	2.8	2.8	2.7	2.7	2.8	2.5	2.4	2.9	2.9	2.3	4.1
CW DOC (GF diss)	mg/LC	3.3	3.7	3.8	3.1	2.8	2.8	2.7	2.7	2.8	2.4	2.5	2.9	2.9	2.3	4.4
PreBAC TOC (GF diss)	mg/LC	3.6	3.6	4.1	3.7	3.8	3.8	3.8	3.9	4.2	3.6	3.1	3.7	3.7	3.1	4.6
PreBAC DOC (GF diss)	mg/LC	3.6	3.7	4.0	3.6	3.3	3.6	3.5	3.5	3.6	3.1	2.9	3.4	3.4	2.9	4.2
TOC Removal by Coagulation & Filtration	% Removal	35.4%	33.3%	30.4%	36.2%	44.0%	44.6%	52.5%	47.6%	40.5%	41.3%	45.9%	36.8%	41.0%	26.0%	62.8%
DOC Removal by Coagulation & Filtration	% Removal	35.1%	30.8%	28.8%	30.3%	41.1%	40.1%	39.3%	40.0%	38.0%	40.6%	41.3%	35.1%	36.9%	24.7%	50.9%
DOC Removal Overall	% Removal	41.7%	34.3%	31.7%	39.3%	43.7%	46.0%	50.4%	53.3%	52.3%	54.0%	51.0%	43.2%	45.7%	21.3%	56.6%
TOC Removal Overall	% Removal	43.1%	37.1%	35.4%	48.3%	48.9%	51.6%	59.7%	64.0%	60.7%	59.4%	58.2%	49.7%	52.1%	28.9%	67.1%
CW Organic Carbon (diss @ 254nm)	Abs 10cm	0.353	0.379	0.457	0.327	0.295	0.226	0.197	0.194	0.202	0.208	0.225	0.271	0.272	0.169	0.499
PreBAC Organic Carbon (diss @ 254nm)	Abs 10cm	0.444	0.482	0.527	0.511	0.460	0.241	0.245	0.240	0.266	0.274	0.288	0.337	0.343	0.221	0.553
Phosphate(ortho)	µg/LP	<3	<3	<3	<3	3	4	<3	<3	<3	<3	<3	<3	<3	<3	4
Phosphate(total)	µg/LP	<3	<3	5	9	12	6	7	5	<3	<3	<3	<3	4	<3	12
Silica (SiO3)	mg/L	0.44		1.22	1.65	0.98	2.28	2.02	4.60	6.51	7.22	5.70	5.48	3.46	0.44	7.22
THM's (total)	µg/L(calc)	25	25	26	20	23	19	16	14	13	4	<	<	15	<	30
Chloroform	µg/L	16	16	16	11	12	9	8	7	6	2	<2	<2	8	<2	18
Bromodichloromethane	µg/L	7	7	8	6	7	6	5	5	4	<2	<2	<2	4	<2	9
Chlorodibromomethane	µg/L	<2	2	3	3	4	4	3	3	3	<2	<2	<2	2	<2	4
Bromoform	µg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
<b>PREBAC</b>																
THM's (total)	µg/L(calc)	21	22	15	<	<	<	<	<	<				5	<	29
Chloroform	µg/L	13	13	9	<2	<2	<2	<2	<2	<2				3	<2	17
Bromodichloromethane	µg/L	7	7	5	<2	<2	<2	<2	<2	<2				<2	<2	9
Chlorodibromomethane	µg/L	2	2	<2	<2	<2	<2	<2	<2	<2				<2	<2	3
Bromoform	µg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2				<2	<2	<2
<b>BACTERIOLOGICAL</b>																
Blue Green Algae	per millilitre	<11.1		<11.1	<11.1	11.1	<11.1	33.3	<11.1	11.1	<11.1	<11.1	<11.1	<11.1	<11.1	33
Green Algae	per millilitre	<11.1		<11.1	100.0	<11.1	<11.1	11.1	44.4	33.3	<11.1	44.4	22.2	23	<11.1	100
Diatoms	per millilitre	<11.1		<11.1	<11.1	<11.1	<11.1	11.1	<11.1	<11.1	11.1	<11.1	<11.1	<11.1	<11.1	11
Flagellates	per millilitre	<11.1		<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1
Crustaceans	per litre	<3		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Nematodes	per millilitre	<11.1		<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1
Rotifers	per millilitre	<11.1		<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1
Other	per millilitre	<11.1		<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1
<b>CHEMICAL DOSES</b>																
Total Coliforms (MPN)	per 100 mL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
E. coli (MPN)	per 100 mL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Standard Plate Count	per 1 mL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Combined Chlorine (CW)	mg/L (calc)	0.27	0.30	0.37	0.23	0.22	0.26	0.34	0.32	0.30	0.22	0.23	0.29	0.28	0.15	0.43

# Financial Statements





## BUFFALO POUND WATER TREATMENT CORPORATION

# Management's Responsibility

## Management's Responsibility

To the Chair and Members of the Board of Directors of the Buffalo Pound Water Treatment Corporation:

Management is responsible for the preparation and presentation of the accompanying financial statements, including responsibility for significant accounting judgments and estimates in accordance with Canadian public sector accounting standards and ensuring that all information in the annual report is consistent with the statements. This responsibility includes selecting appropriate accounting principles and methods, and making decisions affecting the measurement of transactions in which objective judgment is required.

In discharging its responsibilities for the integrity and fairness of the financial statements, management designs and maintains the necessary accounting systems and related internal controls to provide reasonable assurance that transactions are authorized, assets are safeguarded and financial records are properly maintained to provide reliable information for the preparation of financial statements.

The Board of Directors and the Finance and Audit Committee composed entirely of Directors who are neither management nor employees of the Organization. The Board is responsible for overseeing management in the performance of its financial reporting responsibilities, and for approving the financial information included in the annual report. The Board fulfils these responsibilities by reviewing the financial information prepared by management and discussing relevant matters with management and external auditors. The Committee is also responsible for recommending the appointment of the Organization's external auditors.

MNP LLP is appointed by the Chair and Members of the Board of Directors of the Buffalo Pound Water Treatment Corporation to audit the financial statements and report directly to them; their report follows. The external auditors have full and free access to, and meet periodically and separately with, both the Committee and management to discuss their audit findings.

March 25, 2026



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President and Chief Executive Officer

## BUFFALO POUND WATER TREATMENT CORPORATION

# Independent Auditor's Report

## Independent Auditor's Report



To the Chair and Members of the Board of Directors of the Buffalo Pound Water Treatment Corporation:

### Opinion

We have audited the financial statements of Buffalo Pound Water Treatment Corporation (the "Corporation"), which comprise the statement of financial position as at December 31, 2025, the statements of operations, statement of changes in net financial liabilities and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Corporation as at December 31, 2025, and the results of its operations net financial assets and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

### Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Corporation in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Corporation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Corporation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Corporation's financial reporting process.

#### MNP LLP

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## BUFFALO POUND WATER TREATMENT CORPORATION

# Independent Auditor's Report

## Independent Auditor's Report *(continued from previous page)*

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### Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Corporation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Corporation to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Regina, Saskatchewan  
March 25, 2026

*MNP* LLP

Chartered Professional Accountants

**MNP**

## BUFFALO POUND WATER TREATMENT CORPORATION

Statement of Financial Position (In dollars)


As at December 31

	2025	2024
<b>FINANCIAL ASSETS</b>		
Cash and cash equivalents	16,440,141	24,917,960
Investments (Note 3)	-	35,000,000
Accounts receivable		
City of Regina	2,117,945	2,053,420
City of Moose Jaw	322,740	859,319
GST receivable	3,095,169	5,275,167
Other	44,805	53,734
Provincial and Federal Government	8,170,070	8,913,848
	30,190,870	77,073,448
<b>FINANCIAL LIABILITIES</b>		
Accounts payable and accrued liabilities	9,439,396	15,133,991
Employee benefit obligations (Note 4)	865,212	828,343
Long term debt (Note 8)	138,678,786	143,675,067
Asset retirement obligations (Note 6)	295,495	2,820,820
	149,278,889	162,458,221
<b>Net financial liabilities</b>	<b>(119,088,019)</b>	<b>(85,384,773)</b>
<b>NON-FINANCIAL ASSETS</b>		
Inventory of chemicals	337,866	261,491
Tangible capital assets (Note 5)	398,469,139	355,676,150
<b>Accumulated surplus (Note 7)</b>	<b>279,718,986</b>	<b>270,552,868</b>

Contingent liabilities (Note 11)

See accompanying notes.

SIGNED ON BEHALF OF THE BOARD


  
Board of Director Chair


  
Board Member-Chair of Finance and Audit Committee

SIGNED ON BEHALF OF THE CORPORATION


  
President and CEO

## BUFFALO POUND WATER TREATMENT CORPORATION

# Statement of Operations (In dollars)

For the year ended December 31

	Budget	2025	2024
<b>REVENUE</b>			
Operating contributions			
City of Regina	13,196,600	13,572,320	11,138,887
City of Moose Jaw	2,401,600	2,440,856	2,091,252
SaskWater	88,100	82,471	69,948
Capital contributions			
City of Regina	10,688,800	10,993,138	10,066,769
City of Moose Jaw	1,945,300	1,977,014	1,889,969
SaskWater	196,300	183,658	118,231
	28,516,700	29,249,457	25,375,056
Power charges	962,500	1,008,120	1,014,186
Miscellaneous revenue	15,650	20,223	9,301
SaskPower - demand response program	170,050	198,679	188,060
Interest	400,000	1,300,503	2,131,674
Government contributions	8,913,200	4,142,919	57,057,215
	38,978,100	35,919,901	85,775,492
<b>EXPENSES</b>			
Employee wages and benefits (Schedule 1)	4,645,050	5,017,607	4,831,628
Amortization of tangible capital assets	-	4,928,979	4,650,215
Asset retirement obligations (Note 6)	-	1,003,616	3,121,353
Utilities (Schedule 1)	3,700,000	2,991,494	3,145,222
Chemicals (Schedule 1)	4,177,500	3,277,035	2,943,222
Equipment maintenance (Schedule 1)	2,527,800	1,573,612	2,222,486
Miscellaneous (Schedule 1)	724,350	1,102,957	799,504
Laboratory supplies and research (Schedule 1)	400,400	337,690	273,745
Building and ground maintenance (Schedule 1)	196,700	271,761	107,253
Administration (Schedule 1)	471,600	506,402	483,600
Interest expenses and bank charges (Schedule 1)	5,881,092	5,742,630	4,255,892
	22,724,492	26,753,783	26,834,120
<b>Surplus</b>	16,253,608	9,166,118	58,941,372
Accumulated surplus, beginning of year		270,552,868	211,611,496
<b>Accumulated surplus, end of year</b>		279,718,986	270,552,868

See accompanying notes.

## BUFFALO POUND WATER TREATMENT CORPORATION

# Statement of Changes in Net Financial Liabilities (In dollars)

For the year ended December 31

	2025	2024
Surplus	9,166,118	58,941,372
Acquisition of tangible capital assets	(47,721,969)	(91,400,104)
Amortization of tangible capital assets	4,928,979	4,650,215
Consumption of inventory of chemicals	3,277,035	2,943,222
Acquisition of inventory of chemicals	(3,353,409)	(2,946,080)
Use (acquisition) of prepaid expenses	-	2,645
Increase in net financial liabilities	(33,703,246)	(27,808,730)
Net financial liabilities, beginning of year	(85,384,773)	(57,576,043)
<b>Net financial liabilities end of year</b>	<b>(119,088,019)</b>	<b>(85,384,773)</b>

See accompanying notes.

## BUFFALO POUND WATER TREATMENT CORPORATION

Statement of Cash Flows (In dollars)

For the year ended December 31

	2025	2024
<b>OPERATING ACTIVITIES</b>		
Surplus	9,166,118	58,941,372
<b>Non-cash item</b>		
Amortization of tangible capital assets	4,928,979	4,650,215
<b>Net change in non-cash working capital balances</b>		
in accounts receivable	3,404,759	26,010,522
in accounts payable and accrued liabilities	(5,694,594)	(13,663,194)
in employee benefit obligations	36,869	71,563
in asset retirement obligations	(2,525,325)	2,820,820
in inventory of chemicals	(76,375)	(2,859)
in prepaid expenses	-	2,645
<b>Cash provided by operating activities</b>	<b>9,240,431</b>	<b>78,831,084</b>
<b>CAPITAL ACTIVITIES</b>		
Acquisition of tangible capital assets	(47,721,969)	(91,400,104)
<b>INVESTING ACTIVITIES</b>		
(Redemption) purchase of investments	-	(35,000,000)
<b>FINANCING ACTIVITIES</b>		
Payment of long-term debt	(4,996,281)	(4,294,618)
Advances of long-term debt	-	55,000,000
Cash provided from financing activities	(4,996,281)	(50,705,382)
<b>(Decrease) increase in cash position</b>	<b>(8,477,819)</b>	<b>3,136,362</b>
<b>Cash and cash equivalents, beginning of year</b>	<b>24,917,960</b>	<b>21,781,598</b>
<b>Cash and cash equivalents, end of year</b>	<b>16,440,141</b>	<b>24,917,960</b>

See accompanying notes.

**BUFFALO POUND WATER TREATMENT CORPORATION**

# Notes to the Financial Statements (In dollars)

For the year ended December 31, 2025

## 1. BASIS OF OPERATIONS

Buffalo Pound Water Treatment Corporation (the "Corporation") was incorporated under *The Non-Profit Corporations Act, 1995* on January 1, 2016. The City of Regina owns 74 Class A voting memberships and the City of Moose Jaw owns 26 Class A voting memberships of the Corporation. The City of Regina and the City of Moose Jaw entered into a Unanimous Membership Agreement effective January 1, 2016.

The Corporation is responsible for reliable and efficient provision of safe, high quality and affordable drinking water to the City of Regina and the City of Moose Jaw. The Corporation is a not-for-profit organization, and is not subject to either federal or provincial income taxes.

## 2. SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Corporation are the representation of management and have been prepared in accordance with Canadian public sector accounting standards.

The significant accounting policies used in the preparation of these financial statements are summarized below:

### Use of Estimates

The preparation of financial statements in conformity with Canadian Public Sector Accounting Standards requires management to make estimates and use assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the year. Actual results could differ from those estimates. Significant estimates include the amortization of tangible capital assets, employee benefits obligations and asset retirement obligations.

### Budgets

Operating and capital budgets reflect the amounts approved by the Corporation's Board of Directors on September 25, 2024.

### Employee Benefit Obligations

Employee benefit obligations relating to severance or retirement benefits are recognized to the extent that they are vested and could be taken in cash by an employee on termination. The obligations have been determined on an actuarial basis using the projected benefit method prorated on services. Experience gains/losses are amortized over the estimated average remaining life of the employee group.

### Pension Benefit Obligations

The Corporation is one of the sponsors of a multi-employer defined benefit pension plan. The Corporation follows defined benefit accounting under which pension expense is limited to the Corporation's contributions to the plan.

### Inventory of Chemicals

Inventory of chemicals are valued at the lower of net realizable value and average cost.

### Contributions

Contributions are considered government transfers and are recognized in the financial statements as revenues and expenses in the period in which events giving rise to the transfer occur, providing the transfers are authorized, eligibility criteria have been met and reasonable estimates of the amounts can be made.

Operating and capital contributions for water consumed based upon the following established rates:

## BUFFALO POUND WATER TREATMENT CORPORATION

# Notes to the Financial Statements (In dollars)

For the year ended December 31, 2025

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

	2025	2024
General water rate, \$ per megalitre	461.50	400.00
Electricity rate, \$ per kilowatt hour	0.18024	0.16900
Capital water rate, \$ per megalitre	373.80	361.50

### Asset Retirement Obligations

A liability for an asset retirement obligation is recognized as the best estimate of the amount required to retire a tangible capital asset (or a component thereof) at the financial statement date when there is a legal obligation for the Corporation to incur retirement costs in relation to a tangible capital asset (or a component thereof), the past transaction or event giving rise to the liability has occurred, it is expected that future economic benefits would be given up, and a reasonable estimate of the amount can be made. The best estimate of the liability includes all costs directly attributable to the asset retirement activities, based on information available at December 31, 2025. The best estimate of an asset retirement obligation incorporates a present value technique, when the cash flows required to settle or otherwise extinguish an asset retirement obligation are expected to occur over extended future periods.

When a liability for an asset retirement obligation is initially recognized, a corresponding asset retirement cost is capitalized to the carrying amount of the related tangible capital asset (or component thereof). The asset retirement cost is amortized over the useful life of the related asset.

At each financial reporting date, the Corporation reviews the carrying amount of the liability. The Corporation recognizes period-to-period changes to the liability due to passage of time as accretion expense. Changes to the liability arising from revisions to either the timing, the amount of the original estimate of undiscounted cash flows or discount rates are recognized as an increase or decrease to the carrying amount of the related tangible capital asset.

### Financial Instruments

The Corporation's financial instruments are measured as follows:

FINANCIAL STATEMENT COMPONENT	MEASUREMENT
Cash and cash equivalents	Cost
Investments	Cost
Account receivable (excluding taxes)	Amortized cost
Accounts payable and accrued liabilities	Cost or amortized cost
Long-term debt	Amortized cost

All financial assets are assessed for impairment on an annual basis. When a decline is determined to be other than temporary, the amount of the loss is reported in the statement of operations.

All financial instruments are initially measured at fair value. The fair value of a financial instrument is the amount of consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act. The fair value of a financial instrument on initial recognition is the transaction price, which is the fair value of the consideration given or received.

All of the corporation's financial instruments are subsequently measured at amortized cost following initial recognition. Transaction costs related to financial instruments classified as amortized cost are added to the carrying value of the investment.

### Credit Risk

Credit risk is the risk of financial loss to the Corporation if a customer or counterparty to a financial instrument fails to meet its contractual

## BUFFALO POUND WATER TREATMENT CORPORATION

# Notes to the Financial Statements (In dollars)

For the year ended December 31, 2025

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

obligations. The Corporation's credit risk is primarily attributable to accounts receivable. This risk is limited as accounts receivable is due mainly from the City of Regina, the City of Moose Jaw and the Federal and Provincial Government.

### Liquidity Risk

Liquidity risk is the risk that Corporation will not be able to meet its financial obligations as they become due. The City of Regina staff on behalf of the Corporation manages liquidity risk by continually monitoring cash flow requirements to ensure that it has sufficient funds to meet obligations when they become due. The Corporation has established operating and capital rates which are calculated using a full cost recovery model that will generate sufficient revenues to cover the operating costs and capital investments.

### Interest Rate Risk

Interest rate risk is the risk that value of a financial instrument might be adversely affected by a change in interest rates. Changes in market interest rates may have an effect on the cash flows associated with some financial assets and liabilities, known as cash flow risk, and on the fair value of the other financial assets and liabilities, known as price risk.

Exposure on the Company's long term debt is managed by using declining balance interest rate swaps. The Corporation entered into interest rate swap agreements to fix the interest rates on its respective term loans which are disclosed in Note 8.

### Tangible Capital Assets (TCA)

Tangible capital assets are recorded at cost which includes all amounts that are directly attributable to acquisition, construction, development or betterment of the asset. The cost, less residual value, of the tangible capital assets are amortized on a straight-line basis over their estimated useful lives as follows:

#### General

Vehicles and equipment	6 to 20 years
Office and information technology	10 to 15 years

#### Infrastructure

Plants and facilities	5 to 40 years
Roads	15 years

Assets under construction are not amortized until the asset is available for productive use.

Tangible capital assets received as contributions are recorded at their fair value at the date of receipt and also are recorded as revenue.

## 3. INVESTMENTS

The Corporation's investments consist of guaranteed investment certificates (GIC's) that were fixed term and nonredeemable with an average interest rate of 3.42% and average days to maturity of 76 days. The last investment matured on October 20, 2025.

## 4. EMPLOYEE BENEFIT OBLIGATIONS

The employee benefit obligations accrued at year end are as follows:

	2025	2024
Vacation pay	652,212	601,343
Vested termination payments	213,000	227,000
	<b>865,212</b>	<b>828,343</b>

## BUFFALO POUND WATER TREATMENT CORPORATION

# Notes to the Financial Statements (In dollars)

For the year ended December 31, 2025

## 4. EMPLOYEE BENEFIT OBLIGATIONS (Continued)

Based upon an agreement with UNIFOR Local 595, termination payments for union employees vest after 10 years of service and upon retiring with unreduced pension. The amount payable on termination after vesting is 20 hours pay for each completed year of service.

In 2017, the Board of Directors approved a decision to end the vesting of termination payments for out-of-scope employees as of December 31, 2017. Out-of-scope employees were provided the option to have their severance paid out on December 31, 2017 or to elect to defer the payment until they leave the Corporation. For employees who elected to defer, the payment will neither increase nor decrease from the December 31, 2017 assessment.

An actuarial valuation of vested sick leave and severance payments was completed using the projected benefit method at December 31, 2025. The actuarial valuation was based on assumptions about future events including employee turnover and mortality, wage and salary increases, sick leave usage and interest rates. These rates are consistent with superannuation plan. The discount rate used to determine the unfunded employee benefit was 4.15% and the inflation rate was 2.25%. Compensation rates for employees are assumed to increase at an average rate of 3.25% per annum plus merit and promotion thereafter.

The Corporation is a member of the City of Regina Civic Employees' Superannuation and Benefit Plan (the Plan), which is overseen by its own Administrative Board. All eligible permanent and probationary employees of the Corporation are members of the Plan. This multi-employer Plan provides defined retirement benefits and is integrated with the Canada Pension Plan (CPP). The Plan provides a lifetime monthly pension based on an employee's years of service and the average of the best three consecutive years of earnings for service before 2016. For service after 2015, a best-five-years average is used. For 2025 employees contributed 8.25% (2024 - 8.80%) of their earnings below the CPP maximum and 12.25% (2024 - 13.10%) of earnings above the CPP maximum. The Corporation's contribution rates were set as 8.25% (2024 - 9.80%) of their earnings below the CPP maximum and 12.25% (2024 14.60%) of earnings above the CPP maximum..

Financial statements as at December 31, 2024 indicate the Plan had a surplus of net assets of \$245,379,000 (2023 \$165,658,000).

The Plan is a multi-employer defined benefit plan; therefore neither benefits nor contributions are segregated by employer. The Plan has been accounted for using the method appropriate for defined contribution plans and, as such, the amount of pension expense is equal to the contributions required for the year. Pension costs of \$361,147 (2024 - \$420,840) based on employer contributions were expensed during 2025.

The Corporation is a member of the Regina Civic Employees' Long-term Disability Plan (the Disability Plan). Financial statements as of December 31, 2024 indicate a surplus of net assets available for benefits of \$19,258,000 (2023 - \$22,199,000).

The Long-Term Disability Plan is a multi-employer plan and consequently, identification of individual employer's assets is not available from the Disability Plan managers. Accordingly, no portion of the surplus has been recognized as an asset or expense reduction in the financial statements. For all permanent employees, disability benefits are based on 75% of the member's salary and will be paid either throughout the duration of the disability until recovery, until the member elects voluntary early retirement, reaches age 65 or upon death, whichever occurs first. The Disability Plan has been accounted for using the method appropriate for defined contribution plans and, as such, the amount of benefit expense is equal to the contributions required for the year. Member contributions are made to the Plan at a rate of 0.46% with the employer matching contributions.

As well, the Corporation provides for additional coverage to its employees through the Out-of-scope Employment and Benefits policy and the Collective Bargaining Agreement in the event of work-related permanent injury or illness (causing disablement). The Corporation provides for a lump-sum payment (one month per year of service) to its out-of-scope employees in the event of work-related injury or illness causing permanent disablement. In addition, the Corporation provides for a lump-sum payment (two weeks per year of service) to its in-scope employees in the event of work-related injury or illness causing permanent disablement through Article 30. The Corporation recorded disability premium costs for 2025 of \$17,335 (2024 - \$16,850). Dental and medical plans are also provided for most employees and are paid by the Corporation.

## BUFFALO POUND WATER TREATMENT CORPORATION

# Notes to the Financial Statements (In dollars)

For the year ended December 31, 2025

## 5. TANGIBLE CAPITAL ASSETS

	Net Book Value	
	2025	2024
<b>GENERAL</b>		
Land	253,869	253,869
Vehicles and equipment	903,386	709,081
Office and information technology	15,857	11,064
<b>INFRASTRUCTURE</b>		
Plants and facilities	74,610,864	78,978,471
Roads	226,534	256,739
<b>Assets under construction</b>	<b>322,458,629</b>	<b>275,466,926</b>
	<b>398,469,139</b>	<b>355,676,150</b>

## 6. ASSET RETIREMENT OBLIGATIONS

The Corporation's asset retirement obligations, are comprised of the requirement to dispose of asbestos in a building. In 2024, management became aware of asset retirement obligations that were not previously identified and accounted for these obligations as a change in estimate. In 2025, the estimated cost of remediation was further increased by \$1,003,616 and accounted for as a change in estimate.

The Occupational Health and Safety Regulations, 1996 outlines the legal obligation to remove it. The Corporation has recognized an obligation relating to the removal of the asbestos in the building. The cost is based on the presently known obligations obtained through assessments.

In 2025, no accretion was recorded as costs represent current dollars.

	2025 Opening Balance	Revisions in Estimate	Liability Settled	2025 Accretion Expense	Ending Balance
Building (Asbestos)	2,820,820	1,003,616	3,528,941	-	295,495

## BUFFALO POUND WATER TREATMENT CORPORATION

Notes to the Financial Statements (In dollars)

For the year ended December 31, 2025

## 7. ACCUMULATED SURPLUS

	Unappropriated surplus	Capital replacement reserve	Investment in Tangible Capital Assets	2025	2024
Opening balance	(20,046,009)	-	290,598,877	270,552,868	211,611,496
Surplus	14,095,097	-	(4,928,979)	9,166,118	58,941,372
Tangible capital assets investment	(47,721,969)	-	47,721,969	-	-
Transfer from operations (Note i)	29,124,737	-	(29,124,737)	-	-
Transfer of surplus from operations	(18,597,232)	18,597,232	-	-	-
Expenditures from reserve for replacement of capital assets	18,597,232	(18,597,232)	-	-	-
<b>Accumulated surplus (deficit)</b>	<b>(24,548,144)</b>	<b>-</b>	<b>304,267,130</b>	<b>279,718,986</b>	<b>270,552,868</b>

- i. In 2017, the City of Regina and the City of Moose Jaw approved the Corporation to enter into a non-revolving term loan with Bank of Montreal. As disclosed in Note 8, the purpose of this advancement of these funds was to finance the Electrical Upgrade Capital Project with any remaining funds for the Plant Renewal Project. In 2025, management had a net utilization of debt of \$29,124,737 (2024-net utilization of \$20,136,246) relating to this term loan financing towards its investment in Tangible Capital Assets. Accordingly, this portion of the loan advancements represents the Corporations financing of its investment in tangible capital assets. At the end of 2025, \$94,202,009 (2024 - \$65,077,276) of long-term debt was utilized to finance the Corporation's investment in tangible capital assets.
- ii. In 2021, the City of Regina and the City of Moose Jaw also approved the Corporation to enter into a term loan with Toronto - Dominion Bank. As disclosed in Note 8, the purpose of this advancement is to finance the Plant Renewal Project that commenced in 2022.
- iii. In 2022, the City of Regina and the City of Moose Jaw also approved the Corporation to enter into a term loan with Royal Bank of Canada. As disclosed in Note 8, the purpose of this advancement is to finance the shortfall in funding the Plant Renewal Project that commenced in 2022.

**Capital Replacement Reserve**

The Board of Directors of the Corporation approved the establishment of capital replacement reserve. The primary objective of the capital replacement reserve is to promote financial stability and flexibility and smooth water rates to prevent fluctuations.

During the year, the Board of Directors approved \$47,195,818 capital expenditures relating to major capital projects for the plant upgrade. The Board of Directors authorized the transfer of \$18,597,232 from the capital reserve to finance the capital expenditures. The total capital expenditure relating to major capital projects are as follows:

Plant Renewal Project	45,397,293
SCADA Upgrade	1,717,909
Laboratory Equipment	80,616
	<b>47,195,818</b>

## BUFFALO POUND WATER TREATMENT CORPORATION

# Notes to the Financial Statements (In dollars)

For the year ended December 31, 2025

## 8. LONG TERM DEBT

	2025	2024
1. Bank of Montreal term loan of \$45M payable in monthly principal payments ranging from \$120,000 to \$125,000 based on a 25-year mortgage style amortization with interest rate fixed at 3.46% through an interest rate swap. The term loan is nonrevolving and is subject to renewal on November 30, 2027. The term loan is guaranteed by the City of Regina and the City of Moose Jaw.	<b>34,557,000</b>	36,026,000
2. Toronto-Dominion bank, term loan advanced as a single draw facility of \$60M payable in a monthly principal payments ranging from \$198,000 to \$204,000 based on a 20-year mortgage style amortization with an interest rate fixed at 3.09% through an interest rate swap. The term loan matures on December 1, 2041. The term loan is guaranteed by the City of Regina and the City of Moose Jaw.	<b>50,766,514</b>	53,182,814
3. Royal Bank of Canada term loan advanced with effective date of June 28, 2024 as a single draw facility of \$55M payable in monthly principal payment ranging from \$90,000 to \$94,000 based on a 25-year mortgage style amortization with a swap rate of 5.39%. The term loan matures on June 28, 2049. The term loan is guaranteed by the City of Regina and the City of Moose Jaw.	<b>53,355,272</b>	54,466,253
	<b>138,678,786</b>	143,675,067

In 2017, the City of Regina and the City of Moose Jaw approved the Corporation to enter into a non-revolving term loan with Bank of Montreal for the purpose of financing the Electrical Upgrade Capital Project (EUCP) with any remaining funds for the Plant Renewal Project. The Corporation entered into an interest rate swap agreement for a 25 year term.

In 2017, the City of Regina and the City of Moose Jaw approved the Corporation to enter into a non-revolving term loan with Bank of Montreal for the purpose of financing the Electrical Upgrade Capital Project (EUCP) with any remaining funds for the Plant Renewal Project. The Corporation entered into an interest rate swap agreement for a 25 year term.

In 2017, the City of Regina and the City of Moose Jaw approved the Corporation to enter into a non-revolving term loan with Bank of Montreal for the purpose of financing the Electrical Upgrade Capital Project (EUCP) with any remaining funds for the Plant Renewal Project. The Corporation entered into an interest rate swap agreement for a 25 year term.

Principal repayments on long term debt in each of the next five years for the three loans are estimated as follows:

	Electrical Upgrade	Plant Renewal (A)	Plant Renewal (B)	Total
2026	1,520,000	2,492,031	1,171,594	<b>5,183,625</b>
2027	1,573,000	2,570,134	1,235,513	<b>5,378,647</b>
2028	1,629,000	2,650,686	1,302,919	<b>5,582,605</b>
2029	1,686,000	2,733,762	1,374,004	<b>5,793,766</b>
2030	1,745,000	2,819,442	1,448,966	<b>6,013,408</b>

## BUFFALO POUND WATER TREATMENT CORPORATION

# Notes to the Financial Statements (In dollars)

For the year ended December 31, 2025

## 9. CONTRACTUAL OBLIGATIONS

The Corporation entered into an agreement with Jacobs (formerly CH2M Hill Canada Ltd) to serve as the Owner advocate for the Water Treatment Plant Renewal Project. The remaining contract is valued at \$631,996 before tax.

The Corporation entered into a supply agreement contract on June 2020 with Spartan-Lakeside for the supply of control systems for the SCADA Upgrade Project. The remaining value as of December 31, 2025 is \$14,919.

The Corporation entered into agreement for construction services with Graham-Aecon Joint Venture in November 2021 for the Plant Renewal Project. The remaining value for the total project as at December 31, 2025 is estimated at \$8,185,338.

The Corporation entered into agreement with AtkinsRealis (formally SNC Lavalin Inc.) pre-2020 for the design of the SCADA Upgrade Project. The remaining value for the total project as at December 31, 2025 is \$156,339.

## 10. RELATED PARTY TRANSACTIONS

The following related party transactions with the City of Regina and City of Moose Jaw as part of the normal course of operations and valued at fair market value.

	2025	2024
<b>CITY OF REGINA</b>		
Accounts Receivable	2,117,945	2,053,420
Revenue	25,471,191	22,124,086
Expenses	368,010	373,790
<b>CITY OF MOOSE JAW</b>		
Accounts Receivable	322,740	859,319
Revenue	4,507,774	4,066,123
Expenses	28	446,017

## 11. CONTINGENT LIABILITIES

The Corporation has been named in some lawsuits. As litigation is subject to many uncertainties, it is not possible to predict the ultimate outcome of these lawsuits or to estimate the loss, if any which may result.

During the year, hydrocarbon contamination was identified at a historic site. At this time, it has not been confirmed whether the environmental standards have been exceeded. Remediation is not currently expected and any obligation to remediate is dependent upon the results of a planned Phase II Environmental Site Assessment (ESA).

## BUFFALO POUND WATER TREATMENT CORPORATION

# Schedule of Expenditures (In dollars)

For the year ended December 31, 2025

Schedule 1

	Budget	2025	2024
<b>EMPLOYEE WAGES AND BENEFITS</b>			
Wages - permanent employees	3,700,300	<b>3,926,617</b>	3,733,986
Employee benefits - permanent employees	684,950	<b>697,449</b>	722,368
Overtime wages - permanent employees	150,000	<b>278,361</b>	206,362
Premium pay - permanent employees	25,000	<b>9,822</b>	12,523
Car allowance	12,900	<b>16,391</b>	15,841
Clothing and boot allowance	6,800	<b>2,874</b>	2,598
Employee benefits - vacation, sick and termination	-	<b>36,869</b>	71,563
Employee awards and gifts	5,700	<b>825</b>	23,728
Other compensation	5,000	<b>10,094</b>	4,287
Health spending account	52,400	<b>38,305</b>	38,372
Telephone allowance	2,000	-	-
	4,645,050	<b>5,017,607</b>	4,831,628
<b>UTILITIES</b>			
Electricity	3,200,000	<b>2,743,781</b>	2,754,216
Natural gas	500,000	<b>247,713</b>	391,006
	3,700,000	<b>2,991,494</b>	<b>3,145,222</b>
<b>CHEMICALS</b>			
Alum	2,300,000	<b>2,715,212</b>	2,472,322
Thiosulphate	70,000	<b>70,380</b>	109,519
LOX	257,500	<b>170,229</b>	-
Chlorine	200,000	<b>174,515</b>	322,486
Caustic (NaOH)	370,000	<b>22,591</b>	6,960
Polymer	460,000	<b>21,140</b>	31,935
Orthophosphate	220,000	<b>102,968</b>	-
BAC	300,000	-	-
	4,177,500	<b>3,277,035</b>	2,943,222
<b>EQUIPMENT MAINTENANCE</b>			
Filtration plant equipment	371,300	<b>198,231</b>	249,966
Wastewater system	1,300,050	<b>857,647</b>	1,442,954
Chemical building equipment	109,050	-	32
Lake pump station	54,600	<b>70,723</b>	42,916
Computer and communications	140,050	<b>249,042</b>	147,046
High power electrical	48,400	<b>37,783</b>	111,492
Pipeline	40,000	<b>33,574</b>	-
Maintenance and repair	425,000	<b>54,706</b>	201,467
Maintenance equipment	39,100	<b>71,906</b>	26,613
	2,527,800	<b>1,573,612</b>	2,222,486

## BUFFALO POUND WATER TREATMENT CORPORATION

# Schedule of Expenditures (continued) (In dollars)

For the year ended December 31, 2025

Schedule 1

	Budget	2025	2024
<b>MISCELLANEOUS</b>			
Insurance	155,000	151,815	154,488
General supplies	4,300	20,995	83,091
Telephone	50,000	51,464	53,914
Professional and membership fees	32,800	41,748	31,198
Travel and conventions	30,400	17,713	24,723
Fuel and gas	74,400	38,131	25,789
Stationery and office supplies	27,300	23,120	24,134
Contracted services	150,000	409,773	240,907
Advertising	11,100	72	107
Education and training	56,300	29,136	33,947
Reception and meetings	10,800	21,062	12,185
Other purchase	5,600	26,720	12,998
Vehicle license and registration	5,000	4,010	3,255
First Aid and Safety	63,650	93,916	-
Software maintenance	47,700	173,282	98,768
	724,350	1,102,957	799,504
<b>LABORATORY SUPPLIES AND RESEARCH</b>			
Laboratory supplies	130,000	136,528	129,547
Research	175,000	119,757	61,054
Laboratory equipment maintenance	57,400	47,420	54,157
Contract analytical	18,000	12,751	10,563
Accreditation	20,000	21,234	18,424
	400,400	337,690	273,745
<b>BUILDING AND GROUND MAINTENANCE</b>			
Filtration plant	163,900	245,439	98,901
Chemical Building	10,900	-	-
Lake pump station	21,900	26,322	8,352
	196,700	271,761	107,253
<b>ADMINISTRATION</b>			
City of Regina administration	221,500	215,072	210,236
Board expenses	200,050	232,356	222,538
Audit services	50,050	58,974	50,826
	471,600	506,402	483,600
<b>INTEREST EXPENSES AND BANK CHARGES</b>			
Banking services	36,000	1,617	1,728
Interest	5,845,092	5,741,013	4,254,164
<b>Interest Expenses and Bank Charges</b>	<b>5,881,092</b>	<b>5,742,630</b>	<b>4,255,892</b>

## BUFFALO POUND WATER TREATMENT CORPORATION


# Schedule of Tangible Capital Assets (In dollars)

For the year ended December 31, 2025

Schedule 2

	GENERAL			INFRASTRUCTURE				2025	2024
	Land	Land Improvements	Vehicles and Equipment	Office and Information Technology	Plants and Facilities	Roads	Assets Under Construction		
<b>COST</b>									
Beginning of year	253,869	11,373	2,101,941	123,568	162,631,465	455,389	275,466,926	<b>441,044,531</b>	349,644,427
Add: Additions during year	-	-	328,605	6,861	271,302	-	47,115,201	<b>47,721,969</b>	91,400,104
Transfers from assets under construction	-	-	-	-	-	-	-	-	6,638,283
Less: Disposals during year	-	-	-	-	(123,498)	-	123,498	-	6,638,283
End of the Year	253,869	11,373	2,430,546	130,429	163,026,265	455,389	322,458,629	<b>488,766,500</b>	441,044,531
<b>ACCUMULATED AMORTIZATION</b>									
Beginning of year	-	11,373	1,392,860	112,504	83,652,994	198,650	-	<b>85,368,381</b>	80,718,166
Add: Amortization	-	-	134,300	2,068	4,762,406	30,205	-	<b>4,928,979</b>	4,650,215
Less: Accumulated amortization on disposals	-	-	-	-	-	-	-	-	-
End of the Year	-	11,373	1,527,160	114,572	88,415,401	228,855	-	<b>90,297,360</b>	85,368,381
<b>Net Book Value</b>	<b>253,869</b>	<b>-</b>	<b>903,386</b>	<b>15,857</b>	<b>74,610,864</b>	<b>226,534</b>	<b>322,458,629</b>	<b>398,469,139</b>	355,676,150

**Buffalo Pound Water  
is really in the  
business of health.  
Yes, water is what we  
do. But the impact is  
so much bigger.**

The bottom half of the image features a decorative pattern of multiple, overlapping, wavy lines in a slightly lighter shade of blue than the background. These lines create a sense of movement and depth, resembling water ripples or a stylized landscape.



**BUFFALO  
POUND  
WATER**

**TREATMENT  
CORPORATION**

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