



ARNPRIOR

Town of Arnprior

Regular Meeting of Council Agenda

Date: Monday, March 9, 2026

Time: 6:30 p.m.

Location: Council Chambers – 105 Elgin Street West, Arnprior

- 1. Call to Order**
- 2. Roll Call**
- 3. Land Acknowledgement Statement**
- 4. Adoption of Agenda (Additions / Deletions)**
- 5. Disclosures of Pecuniary Interest**
- 6. Question Period**
- 7. Adoption of Minutes of Previous Meeting(s) (Except Minutes of Closed Session)**
 - a) **Regular Meeting of Council – February 23, 2026** (Page 1-12)
- 8. Awards / Delegations / Presentations**
 - a) **Museum 2025 Annual Report**, Manager of Culture/Curator (Page 13-27)
- 9. Public Meetings**
- 10. Matters Tabled / Deferred / Unfinished Business**
- 11. Notice of Motion(s)**
- 12. Staff Reports**
 - a) **2025 Annual Report - Arnprior Water Pollution Control Centre and Arnprior Drinking Water System**, Waterworks Supervisor (Page 28-187)
 - b) **2025 DWQMS Audits and Management Review Results**, A/Environmental Engineering Officer (Page 188-258)
- 13. Committee Reports and Minutes**
 - a) **Mayor's Report**
 - b) **County Councillor's Report**

c) Committee Reports and Minutes

14. Correspondence & Petitions

a) Correspondence

i) Correspondence Package I-26-MAR-05

15. By-laws & Resolutions

a) By-laws

b) Resolutions

16. Announcements

17. Closed Session

18. Confirmatory By-law

By-law No. 7658-26 to confirm the proceedings of Council

19. Adjournment

Please Note: Please see the [Town's YouTube channel](#) to view the live stream. The meeting will be uploaded to YouTube for future viewing.

The agenda is made available in the Clerk's Office at the Town Hall, 105 Elgin Street West, Arnprior and on the Town's [website](#). Persons wishing to receive a print item on the agenda by email, fax, or picked up by hand may request a copy by contacting the Clerk's Office at 613-623-4231 ext. 1817. The Agenda and Agenda items will be prepared in an accessible format upon request.

Full Distribution: Council, C.A.O., Managers and Town Administrative Staff and Town Website



ARNPRIOR

**Minutes of Council Meeting
February 23rd, 2026, 6:30 PM
Town Hall, Council Chambers – 105 Elgin St. W. Arnprior, ON.**

Council and Staff Attendance

Council Members Present):

County Councillor Dan Lynch
Councillor Ted Strike
Councillor Tom Burnette
Councillor Lynn Cloutier
Councillor Chris Toner
Councillor Chris Couper

Council Members Absent:

Mayor Lisa McGee

Town Staff Present:

Robin Paquette, CAO
Kaila Zamojski, Town Clerk
Jennifer Morawiec, GM Client
Services/Treasurer
Kaitlyn Wendland, Deputy Clerk
John Steckly, GM Operations
Kelly Vieira, Client Services Coordinator
Alix Jolicoeur, Manager of Community
Services/Planner

1. Call to Order

Deputy Mayor Ted Strike called the Regular Council Meeting to order at 6:30 PM and welcomed those present.

2. Roll Call

The roll was called, with all Members of Council being present except Mayor Lisa McGee.

3. Land Acknowledgement Statement

Deputy Mayor Ted Strike requested the Town Clerk complete the Land Acknowledgement Statement. Kaila Zamojski, Town Clerk, asked everyone to take a moment to acknowledge and show respect for the Indigenous Peoples as traditional stewards of the land we operate on, by stating:

“I would like to begin by acknowledging that the land on which we work, and gather is the traditional unceded territory of the Anishinaabe People. This Algonquin Nation have lived on this land for thousands of years, long before the arrival of the European settlers, and we are grateful to have the opportunity to be present in this territory.”

4. Adoption of Agenda

Resolution Number 045-26
Moved by Chris Toner
Seconded by Dan Lynch

Be It Resolved That the amended agenda for the Regular Meeting of Council dated Monday, February 23rd, 2026, be adopted.

Resolution Carried

5. Disclosures of Pecuniary Interest

Councillor Chris Couper declared a pecuniary interest on item 15(b)i (Resolution of Support – ReNature Foundation) as he is a paid employee of the Renfrew County Catholic District School Board.

6. Question Period

None

7. Adoption of Minutes of Previous Meeting(s)

Resolution Number 046-26
Moved by Tom Burnette
Seconded by Lynn Cloutier

That the minutes of the Regular Meeting of Council listed under Item 7(a) on the Agenda be adopted (Regular Meeting of Council – February 9, 2026).

Resolution Carried

8. Awards/Delegations/Presentations

None

9. Public Meetings

Resolution Number 047-26 (6:33 PM)
Moved by Chris Couper
Seconded by Dan Lynch

That Council move into public meeting regarding Application for Official Plan Amendment #10 – 400 Division Street.

Resolution Carried

Deputy Mayor Ted Strike opened the public meeting and asked staff to provide an overview of the application. Alix Jolicoeur, Manager of Community Services/Planner, provided an overview presentation of the application for Council and the public.

Deputy Mayor Ted Strike opened the floor to public comments with the following being a summary:

- Lorne Franklin, Drainage Superintendent for Township of McNab/Braeside, submitted comments in writing and outlined his comments at the Public Meeting:
 - He believes that this application has the potential to increase impact to the flood plain and worsen the flooding conditions in the municipality upstream.
 - Noted that there are known flood conditions and expressed concerns about the maintenance of the drain.
 - Drains that are under old legislation, including this one, require that individual residents of a subdivision show up to clean up the drain regularly, as this legislation did not consider other methods by which to perform the maintenance of the drain.
 - There would be an ability to have someone maintain the drain, such as the Town of Arnprior, and take on the responsibility even though it is technically for individual homeowners.
 - Indicated that there are a few different methodologies for the maintenance and that he believes the most effective would be to turn it into a municipal drain.
 - There is the opportunity for the Drainage Superintendent to receive the information about the flood plain and the access proposed and then be satisfied that their concerns have been mitigated. He would like the extra time to ensure concerns are addressed through the Drainage Act or other methodologies.

Deputy Mayor Ted Strike thanked the public for their comments.

Resolution Number 048-26 (6:43 PM)

Moved by Chris Couper

Seconded by Tom Burnette

That Council resume to the Regular Meeting of Council.

Resolution Carried

10. Matter Tabled/ Deferred/ Unfinished Business

None

11. Notice of Motion(s)

- a) Provincial Support of the Ontario Airport Capital Assistance Program, County Councillor Lynch**

Resolution Number 049-26

Moved by Dan Lynch

Seconded by Tom Burnette

Whereas County Councillor Lynch has brought forward the following resolution to demonstrate the Town of Arnprior’s support of the Ontario Airport Capital Assistance Program; and

Whereas small and regional airports in Ontario serve as critical infrastructure-facilitating essential public services including air ambulance operations, forest firefighting, search & rescue, and law enforcement activities, while also driving local and regional economic development; and

Whereas many of these airports are ineligible for the federal Airports Capital Assistance Program (ACAP) due to eligibility constraints such as lacking year-round scheduled service, yet still require capital funding for safety-related infrastructure; and

Whereas the Airport Management Council of Ontario (AMCO) has identified a persistent funding gap for non ACAP eligible community airports, estimating that approximately 85 such airports need \$5.5 million annually to address critical airside infrastructure needs; and

Whereas provinces including British Columbia, Alberta, and Saskatchewan have successfully managed permanent provincial capital-assistance programs-offering clear models for cost-sharing framework, eligible projects criteria, and annual funding envelopes; and

Whereas AMCO’s proposed Ontario Airport Capital Assistance Program (OACAP) envisions an annual operational budget of \$8.5-10 Million, with a 75% provincial and 25% facility owner cost-share, a \$2 million per applicant cap, and bonuses for key community-benefiting projects; and

Whereas the 2025 Ontario Budget has already acknowledged “airports as cross country infrastructure” and signaled intent to include them in upcoming capital investments; and

Whereas the Town of Arnprior and the County of Renfrew benefit directly from airport-enabled services and ensure its continued operation are in the public interest of resident safety, economic resilience, and efficient connectivity.

Now Therefore Be It Resolved That the Corporation of the Town of Arnprior formally urges the Government of Ontario to:

- i. Implement the Ontario Airport Capital Assistance Program (OACAP) managed by the Ministry of Transportation; and
- ii. Adopt the recommended cost-sharing structure (75% provincial and 25% facility owner), and cap funds at \$2million per project per applicant; and
- iii. Expand eligibility to include public-use registered aerodromes and certified airports not currently eligible for ACAP; and
- iv. Reinstate the Ontario Air Advisory Panel to advise on airport infrastructure and policy priorities; and

- v. Designate community and regional airports as critical infrastructure under provincial policy; and
- vi. Investigate stable funding mechanisms – such as a dedicated stream from the aviation fuel tax – to support OACAP sustainably; and

Further That a copy of this resolution be forwarded to the Premier of Ontario, Minister of Transportation, local MPPs, the County of Renfrew, and AMCO; and

Further That the Mayor, on behalf of Council send a letter to the Chair of the Arnprior Airport Commission expressing formal support for the establishment of a provincial Ontario Airport Capital Assistance Program.

Resolution Carried

12. Staff Reports

a) 2025 Council Remuneration, Jennifer Morawiec, General Manager Client Services/Treasurer

Resolution Number 050-26
Moved by Dan Lynch
Seconded by Chris Toner

That Council receives as information the attached 2025 Statement of Remuneration and Expenses paid to Council and Local Boards.

Resolution Carried

b) Proclamation for Invasive Species Week (February 23rd to March 1st, 2026), Kaitlyn Wendland, Deputy Clerk

Resolution Number 051-26
Moved by Chris Toner
Seconded by Lynn Cloutier

That Council proclaim February 23rd to March 1st, 2026 as Invasive Species Week in the Town of Arnprior.

Resolution Carried

The Town Clerk read the proclamation:

Whereas this February 23 to March 1, 2026, marks Invasive Species Awareness Week that has been recognized by municipalities, environmental groups and industry across Canada; and

Whereas Invasive Species Awareness Week is a national environmental campaign that builds awareness around the problems caused by invasive species which are non-native, aggressively spreading aquatic and terrestrial plants, animals, and pathogens; and

Whereas invasive species can impact the numerous natural heritage areas, shorelines, corridors, and recreational trails within in the Town of Arnprior including Bell Park, Nopiming Game Preserve, and Gillies Grove; and

Whereas the spread of invasive species poses risk to our local biodiversity, the health of our residents, and our infrastructure; and

Whereas we, as a municipality, are committed to acts of conservation for supporting our local biodiversity, both terrestrial and aquatic; and

Whereas we, as a municipality, will act against invasive species through a public education campaign aimed at community awareness and involvement in identifying, reporting and preventing the spread of invasive species. This year's themes include:

- Learning About Invasive Species
- Pathways of Spread
- Invasive Species Research and Science
- How You Can Prevent the Spread
- Reporting

Now Therefore the Council of the Town of Arnprior, does hereby proclaim February 23rd to March 1st, 2026, as Invasive Species Awareness Week in the Town of Arnprior and urge residents to learn about invasive species in our areas and take action to prevent their spread.

13. Committee Reports and Minutes

a. Mayor's Report

None

b. County Councillor's Report

County Councillor Lynch reported the following from the County of Renfrew:

- Renfrew County has created a new Standard Operating Procedure dealing with social media "Commenting and Moderation Protocol". Media releases will not have the "comment" option available to readers. Residents will continue to have multiple avenues for questions, complaints, and formal engagement, including:
 - Email and telephone contact
 - County website and online forms
 - Council meetings and formal delegations

- Structured consultation processes (public meetings, surveys, etc.)
- Community Services reported the Emergency Assistance and Homelessness Prevention Applications made by municipality in 2025. Arnprior had 50 emergency assistance clients, and 128 total applications to the Homelessness Prevention Program.
- On February 5, 2026, the County was successful in accessing a new Homelessness and Addiction Recovery Treatment (HART) centre which is located in Pembroke. These HART Hubs will protect the safety of children and families, while improving access to recovery and treatment services for people facing housing instability, mental health challenges, and substance use challenges.
- Community Housing waitlist statistics as of December 31, 2025:
 - Number of Households on the Chronological Waitlist: 1,992
 - Number of Households with Special Priority Status: 100
 - Average wait time to be housed Special Priority Status: 1-2 years
 - Average wait time to be housed Chronological waitlist: 8-10 years
 - Households that moved out of RCHC units: 22
 - Households that moved into RCHC units: 23

c. Committee Reports and Minutes

Councillor Chris Toner reported the following from the Seniors Active Living Centre (SALC) Advisory Committee:

- The SALC's new March schedule has programming 6 days a week.
- New programming includes the Knot Club – learn to know and crochet. They are grateful to have received a donation of knitting needles and yarn from Councillor Cloutier.
- The SALC has a few new collaborations including Steelheads and Strikes Bowling every Wednesday from 1-3pm and Ultimate Fitness drop in every Tuesday from 10-11am.
- There are several clinics and information sessions planned in the upcoming months including Hearing Clinic with Hear Canada, Health Clinics (blood pressure and foot care assessment) by Community Nursing Registry of Ottawa, MTO presentation, Managing Stress and Burnout as a Caregiver by the Ontario Caregiver Organization, Prostate Cancer Support Group, and RCVTAC information session by Commander Stuart Theron.
- Gas's Gang of Musicians are still very popular on the last Thursday of every month.
- There is a bus trip planned with the Renfrew Golden Age Centre in August to the 1000 Islands playhouse to see a performance of Grease.
- The annual survey was sent to SALC members on February 18th and there were 44 responses in the first 24 hours.

- The SALC Advisory Committee onboarding manual, volunteer manual, and membership benefits are all being updated and ready for distribution by the end of March.
- Check out the momentum on their Facebook page: Arnprior Seniors Active Living Centre – SALC.

14. Correspondence & Petitions

a) Correspondence

i. Correspondence Package No. I-26-FEB-04

Resolution Number 052-26

Moved by Chris Couper

Seconded by Tom Burnette

That Correspondence Package Number I-26-FEB-04 be received as information and filed accordingly.

Resolution Carried

County Councillor Lynch made the following comments:

- Page 3: Good news for residents, our Mayor received a letter from the Minister of Public and Business Service Delivery and Procurement indicating that a Service Ontario Centre will be opening on the top floor of Gilk's Sign and Trophies at 74 River Road.
- Page 12: Good news for the Environment, the Ontario Government is investing \$20 million through the Species Conservation Program to help protect species at risk and their habitats. This includes the Monarch Butterfly, Blanding Turtles, and Butternut Trees.
- Page 18: The Ontario Government is launching the next round of Road Safety Initiatives Fund (RSIF) to support safety measures in school zones and community safety zones. Bad news, Arnprior is not eligible due to our community not using speed cameras.
- Page 21: Interested in wheelchair basketball? Mark down September 9th to 19th to be in Ottawa to watch the 2026 International Wheelchair Basketball Federation World Championships.
- Page 68: LAS is hosting an Energy Workshop & Treasurer Hunt dealing with hidden energy savings in our facilities. Asked the GM Operations if the Town is participating in this program.
 - The CAO noted: Staff will review this program in more detail to see if it is a good fit for our facilities at this time.
- Page 68: LAS is hosting a Road & Sidewalk Assessment Program that is free. Asked the GM Operations if the Town is taking advantage of this free program.
 - The CAO noted: The Town is not participating in this program this year however we undertook an assessment of our road surfaces last year through this LAS Program. It should be noted that the program isn't free; just the quote is free.

ii. **Correspondence Package No. A-26-FEB-03**

Resolution Number 053-26

Moved by Lynn Cloutier

Seconded by Dan Lynch

That Correspondence Package Number A-26-FEB-03 be received and the recommendations brought forward for Council's consideration.

Resolution Carried

15. By-laws & Resolutions

a) **By-laws**

None

Councillor Chris Couper left the table at 7:01 PM.

b) **Resolutions**

i. **Resolution of Support – ReNature Foundation**

Resolution Number 054-26

Moved by Lynn Cloutier

Seconded by Tom Burnette

Whereas the Town of Arnprior has the following interest: Improving schoolyards by creating outdoor learning spaces and tree canopy environments; and

Whereas the Re-Nature Foundation is undertaking the "Growing Renfrew County Catholic District School Board Schoolyard Canopies with Re-Nature" program, which will be building outdoor learning spaces and planting trees at the elementary schools with the Renfrew County Catholic District School Board.

Now Therefore Be It Resolved that the Council of the Town of Arnprior acknowledges and supports the funding opportunity from the Federation of Canadian Municipalities' "Growing Canada's Community Canopies" initiative for the "Growing Renfrew County Catholic District School Board Schoolyard Canopies with Re-Nature" program, which will be building spaces and planting trees at the elementary schools in Renfrew County Catholic District School Board, in partnership with the Town of Arnprior; and

That the Council of the Town of Arnprior also recognizes that the lifetime contribution from the "Growing Canada's Canopies" initiative will not exceed \$10 million for tree planting within our municipality, inclusive of a maximum contribution of \$1 million for infrastructure activity costs; and

That if approved, this project will be counted towards that lifetime limit.

Resolution Carried

Councillor Chris Couper resumed his seat at 7:02 PM

ii. Municipal Grant Request (In-Kind) – Arnprior & District Quilters Guild

Resolution Number 055-26

Moved by Chris Couper

Seconded by Lynn Cloutier

That Council of the Corporation of the Town of Arnprior receive the Municipal Grant request from the Arnprior & District Quilter’s Guild; and

Whereas the Arnprior & District Quilter’s Guild is an eligible organization under the Municipal Grants Policy as they support the community through fostering interest, awareness, and education in the area of quilting and creating charity projects that benefit the community.

Therefore Be It Resolved That Council approve the request for waiving the Nick Smith Centre Arena Slab and Community Hall rental fees on May 29th, 30th, and 31st, 2026, (value of approximately \$3,045 plus HST) for their Quilt Show; and

Further That the Arnprior & District Quilter’s Guild be advised that it is mandatory to carry sufficient liability insurance and have the Town of Arnprior added as an additional insured for the event.

Resolution Carried

iii. Municipal Grant Request (In-Kind) – Prior Chest Nuts

Resolution Number 056-26

Moved by Dan Lynch

Seconded by Lynn Cloutier

That Council of the Corporation of the Town of Arnprior receive the Municipal Grant request from the Prior Chest Nuts; and

Whereas the Prior Chest Nuts is an eligible organization under the Municipal Grants Policy as they support the community through providing support to those who have been touched by breast cancer in the community.

Therefore Be It Resolved That Council approve the request for waiving the Nick Smith Centre Pool rental fees on April 11th and April 26th, 2026, (value of approximately \$232 plus HST) for their event; and

Further That the Prior Chest Nuts be advised that it is mandatory to carry sufficient liability insurance and have the Town of Arnprior added as an additional insured for the event.

Resolution Carried

16. Announcements

Councill Chris Couper made the following announcement:

- The Arnprior Fire Department participated in Water and Ice Rescue Technician training. This was the second weekend of this training. Deputy Chief Nicholas thanked the following members who dedicated approximately 80 hours of pre-class theory and instruction, and 56 hours of practical training and third-party examination to achieve this certification: Captain Chris Crowder, Captain Chris Belda, Lieutenant Matt Ethier, Firefighters Bob Smith, Graeme Ivory, Wes Schnob, Matt Scott, and Faith Styles. While many of us were warm this weekend, they were in the river. They were able to use the new thermal protection gear that Council had budgeted for this year, which was quite nice compared to the old gear they used last time. Thank you very much to the members of our Fire Department for taking part in this important training program.

17. Closed Session

Resolution Number 057-26 (7:06 PM)
Moved by Lynn Cloutier
Seconded by Dan Lynch

That Council move into Closed Session to discuss One (1) matter pursuant to Section 239 (2)(b) and (d) of the Municipal Act, 2001, as amended, personal matters about an identifiable individual, including municipal or local board employees, labour relations or employee negotiations (Staff Matter).

Resolution Carried

Resolution Number 058-26 (7:20 PM)
Moved by Lynn Cloutier
Seconded by Tom Burnette

That Council resume to Open Session.

Resolution Carried

Resolution Number 059-26
Moved by Dan Lynch
Seconded by Chris Couper

That Council direct staff to proceed as directed in Closed Session.

Resolution Carried

18. Confirmatory By-Law

Resolution Number 060-26
Moved by Tom Burnette
Seconded by Lynn Cloutier

That By-law No. 7656-26, being a By-law to confirm the proceedings of the Regular Meeting of Council held on February 23rd, 2026, be and is hereby approved.

Resolution Carried

19. Adjournment

Resolution Number 061-26
Moved by Lynn Cloutier
Seconded by Chris Couper

That this meeting of Council be adjourned at 7:21 PM.

Resolution Carried

Signatures

Ted Strike, Deputy Mayor

Kaila Zamojski, Town Clerk



Museum 2025 Annual Report

Now We're Cooking!

full day, full week,
experimentation camp

**Crazy
scheme?
Sure!**

Prices,
registration,
weekly themes:
arnprior.ca/camps

Arnprior + District Museum

Emily Stovel
Manager of
Culture/Curator
Arnprior and
District
Museum

March 9, 2026



Public Interest in Museums

- Reconsidering Museums (2021):
 - 67% of surveyed Canadians visit a museum three times a year.
 - 40% visit a museum more than six times a year.
- Canada Strong Pass: 15% spike in attendance @ National Museums & Gallery (and other GLAM sites across Canada also saw a visitation increase)
- Wilkening Consulting (2018-2023):
 - More people in the US visit art museums, science centers, historic houses or sites, zoos, or aquariums than attend professional sporting events.
- UK Art Fund and More in Common (2024):
 - 80% of UK adults want local authorities to support their local museums.

Culture & Museums Economic Impact

- The national GDP of the culture industries in 2023 was \$77,362,035
- The direct economic impact of culture industries is \$58.9 billion in Canada (2017)
- This outpaces
 - accommodation and food services (\$46 billion)
 - utilities (\$46 billion)
 - agriculture, forestry, fishing and hunting (\$39 billion)
 - sports industries \$7.3 billion
- \$1.1 billion contributed to Ontario's GDP by OAC-supported organizations
- Every \$1 invested by OAC generates \$25
- Ontario's culture sector = more jobs (2022) than real estate, auto manufacturing, forestry and mining combined

(Ontario Arts Council and Nordicity)

(Vitreo Research and Statistics
Canada)



Community Connections

- OVTA Board: Re-elected
- Heritage Day @ Ottawa (February 2025)
- AGOV presentation at the County Council
- The Longer Table support
- Homeschool programming
- L'Arche partnership
- The Art Loft partnership
- Student partnerships with ADHS
- New marketing project with Carine
- AMBA Board
- Arnprior Clean-Up Day
- #SeekingPeace Initiative
- Carleton University Bachelor of Media Production and Design
- School Tour development with Legacy of Hope Foundation



Programs

- Repair Café
- Orange Shirt Day at McNab/Braeside School
- Witch Walk
- Winter Carnival Pinball Machines
- Valley Flea
- Collage Workshop
- Collaboration with homeschool families (we welcome more)
- Community Presentations at local schools
- #SeekingPeace programs
 - Vibefest
 - Quaker Exhibit from Nova Scotia
 - Anti-Violence Workshop
 - Erin Lee, ED of Interval House
 - Black Bird Medicine, Chrystal Toop
 - Chris Houston, Peace Museum (Bancroft)
- Summer Camp!!

Exhibits

- ADHS exhibits: Digital and Outdoor
- Climate Action: Yulia Shtern and Sanjay Sundram
- Book on a Wall by Natalie Kauffman
- Collaboration with RCSDB Indigenous Education in final stages
- Supported the reworking of the AMBA Charles Macnamara exhibit
- Quaker Exhibit with in-house video interview of David Newman Quaker museologist and archaeologist and Arnprior resident, April 2025
- Remembrance Day @ Town Hall and Nick Smith Centre

Community Belongings

- Digitization Strategy and use of online portal
- Improving online database: crowdsourcing descriptions and reworking our lexicon
- Building a volunteer cohort for collections work
- Retirement of collections co-ordinator



2025 Cultural Night Market

- New planning structure
- 7 performers, including 2 groups of amazing neighbours
- 1300 attendees (est.)
- 2 Sponsors:
 - Conseil des Ecoles Catholiques de Centre-Est (CECCE)
 - Northern Credit Union
- Opened by Tasheena Sarazin, a well-known and remarkable singer and hand-drummer.



Operations

- New Digital Strategy
- More staff located in front exhibit hall to welcome visitors
- New tracking tools
- Successful YCW and CMOG grants
- Build a Museum folder tree and moved almost all files to new software
- New volunteer plan
- New staff training
- Strategic Plan: draft for submission to Town Council soon
- Coop students and volunteers from Algonquin, Willis College, Nipissing University, and ADHS and St. Joseph's (Renfrew).
- Hired 9 people
- Website changes under review



Visits

- Total: 9100
- Visitors: 1346
- Meetings: 324
- 62.5% visits occurred on the weekend (N=1944)

Australia	1
Belgium	2
Canada	1233
China	2
France	1
Germany	5
India	1
Jordan	1
Mexico	4
Nepal	3
Netherlands	2
New Zealand	2
Nigeria	1
Philippines	2
Russia	2
Sweden	1
Ukraine	1
United Kingdom	6
United States	22
Grand Total	1292



Reworking Marketing

High-Traffic Sources (2024 data)

- Walking by/Passing by (214 visitors, 32%)
- Travelers (99 visitors, 15%) and Local Residents (89 visitors, 13%)
- Word of Mouth (87 visitors, 13%) is a key organic driver

Digital Sources (Total 116 visitors, 17%)

- Search Engines & Maps: 71
- Social Media: 30
- Website & Email: 15
- Traditional Media (Print, Events) less impactful: Physical Ads/Print: 25, Events: 23



Cultural Planning

- Attended CCNC in Kingston
- KAIROS Blanket Exercise
- Talks from Mass Culture and Christina Luckasavitch
- Review of Cultural Plans and tools
- New Land Acknowledgement proposal



Coming Up

- Contribute your Stories: online and upcoming Arrival Project
- Extension of Climate Action Exhibit & Artist's Talk 2 pm on March 21st by Sanjay Sundram
- Papier Mache workshop on March 29th
- Community Exhibit on Arnprior's Unique Museum!
- Fiber Arts workshop series on Sundays in May and Noche Vibes May 30th as part of Museum Month
- Renfrew County Museums Network relaunch
- Friends of the Museum relaunch, join us!
- More volunteers welcomed to support the care and public access to community belongings



Join Us!

**Share a Neighbourhood
STORY**

Arnprior and District Museum is inviting residents to share a short story, memory, or moment connected to life in Arnprior.

Interested?

A small number of stories will be selected and featured on the museum's social media.

Send a brief note or photo by DM or e-mail museum@arnprior.ca

**Arnprior +
District Museum**

**Climate Change
+ Art**

...THE OCEAN

**For more information
arnprior.ca/schooltours**

Questions?



• WHERE THE RIVERS MEET •



Town of Arnprior Staff Report

Subject: 2025 Annual Report - Arnprior Water Pollution Control Centre and Arnprior Drinking Water System

Report Number: 26-03-09-01

Position Title: Ben Ritchie – Waterworks Supervisor

Department: Operations

Meeting Date: March 9th, 2026

Recommendations:

That Council receive this report for information and receive the following additional reports for information:

1. Arnprior Water Pollution Control Centre, Summary Report 2025
2. Town of Arnprior Waterworks, Annual Report 2025
3. Arnprior Water Filtration Plant, Summary Report 2025
4. MECP Arnprior DWS 2025-26 Inspection Report # 1-1481754132, dated February 23rd, 2026.

That a copy of the above noted reports be made available to the public for review in hard copy format at the Town Hall and in electronic format on the Town's website.

That Council receive the updated Municipal Drinking Water Licence, 170-101, Issue No. 8, dated February 24th, 2026, and the updated Drinking Water Works Permit, 170-201, Issue No. 4., dated February 24th, 2026, for information.

Background:

The Ministry of Environment, Conservation and Parks (MECP) require the annual preparation of the above noted reports, and that these reports be provided to Council and made available to the public for review. Specifically, the preparation of the Water Filtration Plan (WFP) summary report is mandated by Ontario Regulation 170/03 – Drinking Water Systems, Schedule 22 – Summary Reports for Municipalities. These documents have been prepared and are included as attachments to this report for Council's review and consideration.

Section 2.7 of the Town's Drinking Water Works Permit (DWWP) states that the owner shall notify the legal owner of any part of the drinking water system of the requirements of the

Municipal Drinking Water Licence (MDWL) and the Drinking Water Works Permit as applicable to the prescribed system. As a result of receiving the updated DWWP and MDWL, both being dated February 24th, 2026, staff are providing Council with the attached updated Municipal Drinking Water Licence, 170-101, Issue No. 8, and the Drinking Water Works PPermit, 70-201, Issue No. 4 for their information.

Discussion:

Further to providing Council with the above noted reports, staff typically take this opportunity to advise Council of any MECP inspections which may have taken place over the course of the previous year.

WFP

MECP inspector Erin Markham performed a physical inspection on November 28th, 2025, and was provided with a digital file of data as requested afterwards. The Final 2025-26 Inspection Report for the Arnprior DWS was received on February 23rd, 2026, a copy of which is attached as Document #4.

There were two (2) items of concern that resulted in four (4) non-compliances for this inspection. The result of the IRR was 86.8%. “Application of the Risk Methodology Used for Measuring Municipal Residential Drinking Water System Inspection Results” reads:

It is important to be aware that an inspection rating less than 100 per cent does not mean the drinking water from the system is unsafe. It shows areas where a system’s operation can improve. The ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The first item addressed the absence of operator training regarding “Harmful Algae Bloom” inspections. While the risk of a harmful algae bloom is low as the Madawaska River has few upstream users and sufficient flow, there is a policy in the DWQMS that operators will be trained on moving forward. Operators have been performing weekly algae bloom inspections at the WFP low lift as per regulation and recording it in the facility logbook.

The second item of concern was an operational issue that occurred on October 15th, 2025. A contractor on-site while calibrating a flow meter failed to return the unit to proper service. This caused the ammonia system not to run when called for, effectively turning the system from chloraminated to free chlorine. The SCADA system was not programmed to catch this issue and as such the system operated this way until an operator noticed the error on the morning of October 16th during routine trend review.

The flow meter’s functionality was immediately restored and normal plant operation resumed. Later that morning a low total chlorine residual was seen at the analyzer located at the WPCC for 3 hours and 21 minutes until chloraminated water reached the facility. Free chlorine over 0.05 mg/l was tested at the facility during this period.

The MECP has recommended several measures be put in place to ensure that Town of Arnprior Waterworks staff have multiple barriers against this situation occurring again. These will be implemented by the Waterworks department over the coming months and include:

- The creation of a procedure to assist operators in making certain that equipment that has been worked on by staff or contractors is properly returned to service.
- SCADA programming implemented specifically for the flow meter that was worked on.

This will alarm out to the on-call operator in the event the plant is running without the flow meter in service.

- The modification of an existing DWQMS standard operating procedure for handling low chlorine residuals at the facility or in the distribution system.

All Waterworks staff will be trained on all procedures and SCADA changes with proof of training provided to the MECP.

WPCC

The MECP has not completed an inspection of the wastewater plant since the last inspection completed in March 2020. A copy of this inspection has been provided to Council previously. The MECP is not required to perform annual inspections of wastewater plants.

Uncommitted Reserve Capacity WFP and WPCC

Based on a five-year flow average (2021-2025), the Town's Water Filtration Plant (WFP) and Water Pollution Control Centre (WPCC) are currently operating at the following capacity percentages of their design capacities:

WFP maximum daily treated water flow: 61.1%

WPCC average daily treated sewage flow: 52.3%

In accordance with provincial guidelines, staff regularly track the Town's uncommitted reserve capacity at both the WFP and WPCC and continue to add additional developments to these calculations as planning approvals are granted. Based on current approved developments, the Town has committed reserve capacity up to approximately 76% of the WFP and approximately 76% of the WPCC total capacities, however it is important to note that some of these developments are not anticipated to be fully built out for another 10+ years.

While the Town currently maintains uncommitted reserve capacity in both our water and wastewater treatment facilities, the ongoing rapid growth in Arnprior is expected to accelerate need for expansion to these facilities in the coming years. The Town has recently completed an update to the Town's Water and Wastewater Master Plan which incorporates the Town's updated growth projections and identify triggers and anticipated timelines for completion of additional treatment studies and facility expansion needs.

Options:

N/A

Policy Considerations:

The preparation and supply of these annual reports, inspection report and ECA are in keeping with the Town's Strategic Plan key priorities #4 and #5 which state:

4. Environment: Environmental sustainability and responsible stewardship are at the forefront of our goals.
5. Growth and Asset Management: Managing our growth and assets effectively is essential to meet the evolving needs of our expanding community.

Financial Considerations:

N/A

Meeting Dates:

N/A

Consultation:

John Steckly – General Manager, Operations, Town of Arnprior

Documents:

1. Arnprior Water Pollution Control Centre Summary Report 2025.
2. Town of Arnprior Waterworks, Annual Report 2025.
3. Arnprior Water Filtration Plant Summary Report 2025.
4. MECP Arnprior DWS 2025-26 Inspection Report # 1-1481754132.
5. Municipal Drinking Water Licence, 170-101, Issue No. 8
6. Drinking Water Works Permit, 170-201, Issue No. 4.

Signatures

Reviewed by Department Head: John Steckly, General Manager, Operations

Reviewed by General Manager, Client Services/Treasurer: Jennifer Morawiec

CAO Concurrence: Robin Paquette

Workflow Certified by Town Clerk: Kaila Zamojski

Town of Arnprior 2025 – Water Pollution Control Centre Summary Report

January 22, 2026

Please find below, a discussion of the operational undertakings of the Town of Arnprior's Water Pollution Control Centre (WPCC) for the 2025 calendar year. This report also includes a summary of all relevant sampling collected during 2025. This report is provided to meet the Town's requirements to report annually on the operation of the WPCC, as per Environmental Compliance Approval Number A-500-6176111914 Version: 1.0 Issue Date: July 18, 2023 and to provide residents of the Town of Arnprior with information on an important piece of the Town's municipal infrastructure.

1.0 Preliminary Treatment

1.1 Screen Units

There are three screening units, two automatic mechanical screens and a standby manual screen. All screens have openings of 13 mm between bars and are enclosed with an odour enclosure where the air is discharged to the exterior atmosphere through a carbon filter.

The screenings are then transferred onto a conveyer that empties into a container for disposal at the Arnprior landfill.

1.2 Grit Removal

Grit removal is achieved by a pair of rectangular aerated spiral roll 90 m³ tanks. Each tank has a grit screw conveyer which pushes settled grit into the grit hoppers. Grit is then pumped into a grit dewatering classifier unit where dense grit particles are separated from light organic solids.

2.0 Primary Treatment

2.1 Primary Sedimentation

There are four rectangular primary clarifiers at the WPCC: two with a surface overflow area of 142 m² and two with an overflow area of 154 m². All units are equipped with chain and flight sludge collection and manual scum removal.

Raw sludge is pumped from the primary clarifiers to Anaerobic Digesters using plunger type positive displacement pumps.

3.0 Secondary Treatment

3.1 Activated Sludge Treatment

The activated sludge treatment process includes two rectangular aeration tanks and three separate rectangular secondary clarifiers, each made up of two units in parallel.

The aeration tank volumes are 1,303 m³ each, and are equipped with four inlet gates and one outlet side plate for isolation. The secondary clarifiers have a surface area of 310 m² each. They are equipped with longitudinal cross chain and flight collector mechanisms which collect the activated sludge into a sump where it is returned to the aeration tank.

3.2 Phosphorous Removal

The phosphorous control system consists of two 12,100 L indoor ferric chloride chemical storage tanks and two chemical feed pumps complete with calibration cylinders. The ferric chloride is added to either the aeration tank or preliminary discharge depending on operational requirements.

3.3 Chlorination System

Disinfection of the plant discharge is done through the addition of Sodium Hypochlorite (NaOCl). The NaOCl is stored in a pair of 12,100 L tanks, and a bank of three variable speed metering pumps are used to deliver the chlorine to the chlorine contact chamber.

3.4 De-chlorination System

The chlorinated water must be de-chlorinated before discharge into the Ottawa River. This is achieved through the addition of sodium bisulphite. The sodium bisulphite system is made up of one 1,336 L storage tank and a pair of feed pumps.

3.5 Sludge Dewatering

A Centrifuge capable of processing 7 L/s of sludge is used for dewatering anaerobically digested sludge. The sludge from this unit is loaded onto a small dump truck and delivered to the Arnprior landfill.

3.6 Auxiliary Power

The Arnprior WPCP is equipped with a 400 Kw diesel generator and automatic transfer switch. This generator will automatically start when a power outage occurs, and can supply power to run the entire plant.

4.0 Plant Performance Summary

Environmental Compliance Approval Number A-500-6176111914 Version: 1.0 Issue Date: July 18, 2023, section 11.4 requires the Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:

11.4.a. a summary and interpretation of all Influent, Imported Sewage and Processed Organic Waste monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

Figure 1. 2025 Monthly Averages of Influent and Effluent pH

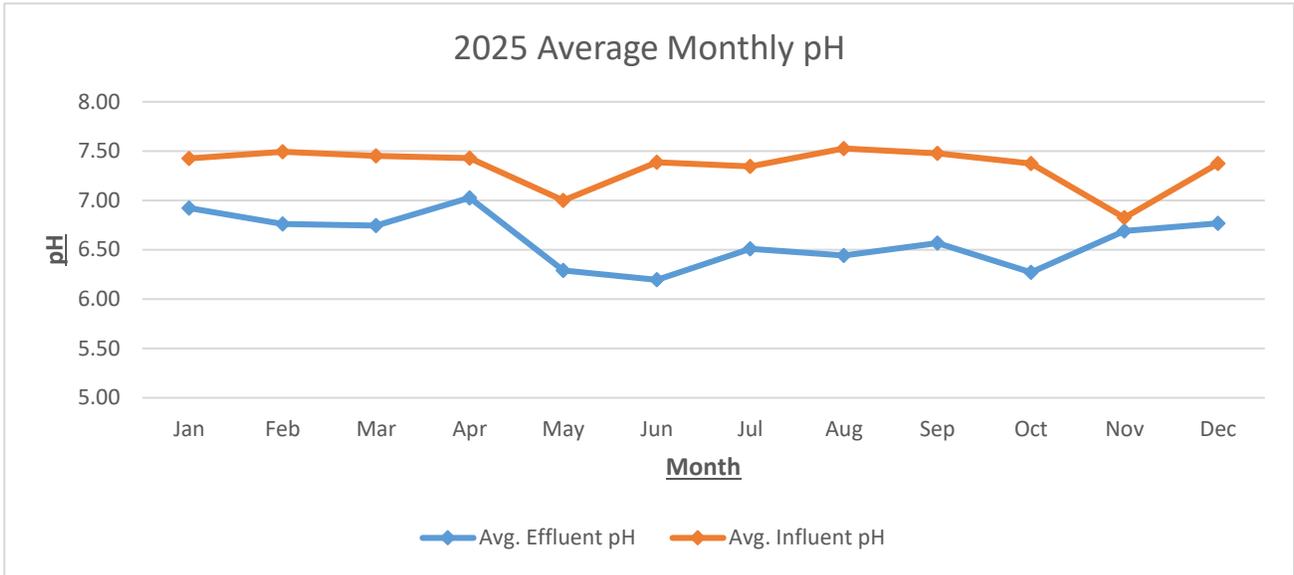


Figure 1 shows the influent and effluent pH monthly averages throughout 2025. Note the lower effluent pH during warmer months of the year.

Figure 2. 2025 Influent Averages of BOD and TSS

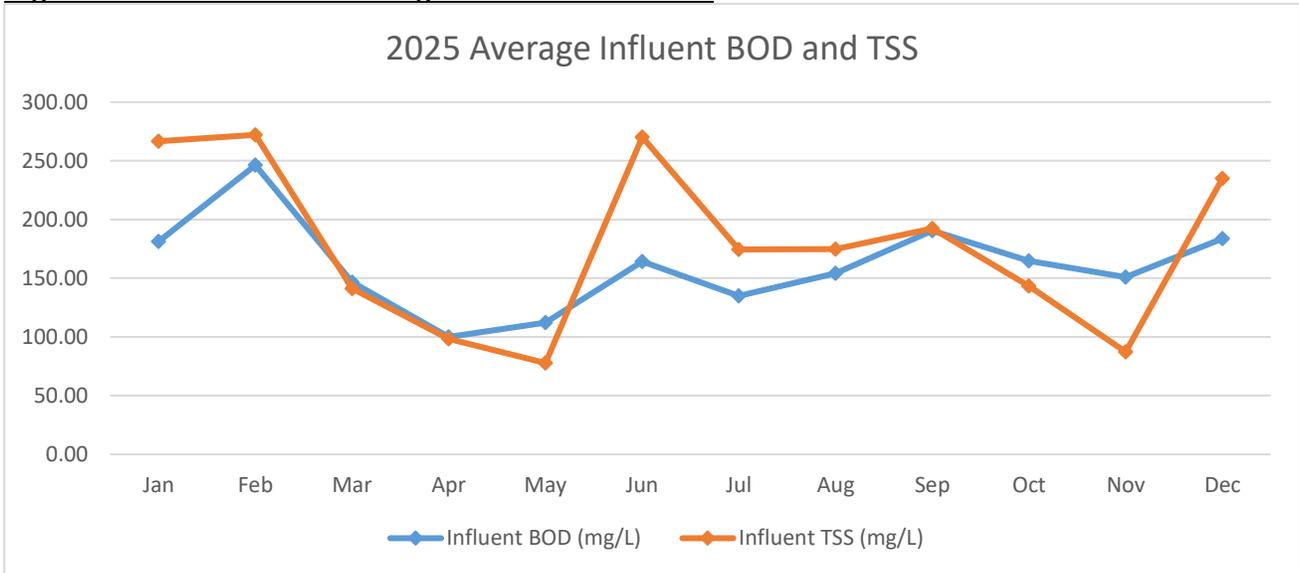


Figure 2 shows a drop in total suspended solids (TSS) in March-May due to the spring freshet where plant flows experienced increased surface water runoff from combined sewers.

11.4.b. a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

4.1 Effluent Flows and Loading

Table 4-1 below indicates the effluent criteria for average monthly flows, CBOD, Total Suspended Solids, Phosphorus and their respective loadings at the WPCC. All monthly concentrations and loadings meet the effluent objectives and limits.

Table 4-1 - Summary of WPCC 2025 Final Effluent Flows and Loading

	Daily Total (m ³ /Day)	CBOD ₅ (mg/L)	Total Suspended Solids (mg/L)	Total Phosphorus (mg/L)	CBOD ₅ Loading (kg/Day)	Total Suspended Solids Loading (kg/Day)	Total Phosphorus Loading (kg/Day)
Objective	N/A	15.0	15.0	0.75	142.5	142.5	9.5
Limit	9700	25.0	25.0	1.0	243.0	243.0	9.7
Compliance Assessment Basis	Annual Average	Monthly Average	Monthly Average	Monthly Average	Monthly Average	Monthly Average	Monthly Average
January	4,400	4.0	9.1	0.27	14.3	40.0	1.18
February	3,709	3.2	7.2	0.30	11.1	26.8	1.09
March	7,448	3.0	11.6	0.29	29.8	85.7	2.12
April	8,480	3.0	5.2	0.13	27.1	44.1	1.10
May	5,353	4.2	3.2	0.46	16.1	17.1	2.44
June	4,643	5.5	6.9	0.27	13.9	31.9	1.25
July	4,740	3.2	7.1	0.41	19.9	33.8	1.92
August	4,491	3.0	7.0	0.49	24.7	31.5	2.18
September	4,228	3.0	6.7	0.30	13.5	28.2	1.25
October	4,080	3.4	8.7	0.29	12.2	35.3	1.18
November	4,904	3.2	9.0	0.24	14.7	44.3	1.15
December	4,385	3.2	10.2	0.29	14.9	44.7	1.28
Annual Average	5,072	3.5	7.6	0.30	17.7	38.6	1.51

4.2 Monitoring Data Interpretation

- 4.2.1** Five day Carbonaceous Biological Oxygen Demand (CBOD5) is sampled once per week from a composite sample. The effluent limit reporting criteria is 25 mg/L and the plant objective is 15 mg/L. The monthly average high was 5.5 mg/L in June. The CBOD5 objective loading rate is 142.5 kg/d, and in 2025 the plant maximum monthly average loading was 29.8 kg/d in March.
- 4.2.2** The Total Suspended Solids (TSS) in the raw and effluent wastewater is usually measured weekly from a composite sample. The effluent reporting criteria is 25 mg/L and the plant objective is 15 mg/L. The maximum monthly average in 2025 was 11.6 mg/L in March. The objective with respect to plant effluent loading of TSS is 142.5 kg/d. The WPCC had a maximum monthly average effluent loading of 85.7 kg/d in March.
- 4.2.3** The Total Phosphorous (TP) in the raw and effluent wastewater is sampled and tested each week from composite samples. The reporting criteria maximum is 1.0 mg/L and the plant objective is 0.75 mg/L. The maximum monthly average of TP levels in 2025 was 0.49 mg/L in August. The Total Phosphorous objective loading rate is 9.5 kg/d and in 2025 the maximum monthly average TP loading rate was 2.44 kg/d in May.

5.0 Effluent Objectives and Effluent Quality Assurance

11.4.e. a summary of any effluent quality assurance or control measures undertaken;

11.4.g a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:

- a) when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality;*
- b) when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;*

11.4.m.a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;

5.1 Effluent Monitoring

Table 5-1 below lists the objectives, limits and results of the final effluent monitoring parameters.

Table 5-1 - 2025 Final Effluent Sampling Results

	Total Ammonia Nitrogen (mg/L)	Total Residual Chlorine (mg/L)	E.Coli (CFU/100ml)	pH	Temperature (°C)	Un-Ionized Ammonia (Note #2)	Lethality Test
Objective	10.0 (May-Oct) 15.0 (Nov-Apr)	Non-Detect	100	6.5 - 8.5	N/A	N/A	Note #1
Limit	Note #1	N/A	200	6.0 - 9.5	N/A	N/A	Pass/ Fail
Compliance Assessment Basis	Monthly Average	Min/Max	Monthly Geometric Mean Density	Min/Max	Monthly Average	Monthly Average	Single Sample
January	11.4	0.01/0.04	7.1	6.6/7.3	11	0.0244	Pass
February	18.5	0.01/0.03	4.2	6.6/6.9	11	0.0275	Pass
March	7.6	0.00/0.03	15.4	6.3/7.1	12	0.0128	Pass
April	4.8	0.00/0.05	34.5	6.5/7.4	13	0.0139	Pass
May	1.3	0.01/0.05	44.0	6.0/6.7	18	0.0013	Pass
June	4.0	0.00/0.03	16.7	6.0/6.5	21	0.0260	Pass
July	2.7	0.00/0.04	36.1	6.0/7.5	23	0.0127	Pass
August	2.4	0.00/0.03	94.2	6.0/7.3	24	0.0119	Pass
September	8.5	0.00/0.06	9.3	6.1/7.0	22	0.0302	Pass
October	0.4	0.00/0.05	7.0	5.9/6.9	20	0.0055	Pass
November	1.3	0.00/0.02	4.1	6.0/7.2	16	0.0030	Pass
December	4.5	0.00/0.03	10.8	6.1/7.5	13	0.0348	Pass
Note #1- Non-acutely Lethal to Rainbow Trout and Daphnia Magna							
Note #2- Un-ionized Ammonia calculated using pH and temperature at time of sampling for Total Ammonia Nitrogen							

- 5.1.1** Total Ammonia Nitrogen has an objective of 10.0 mg/L throughout the months of May to October and 15.0 mg/L throughout the months of November to April. The effluent limit is to be non-acutely lethal to rainbow trout and daphnia magna year-round on a monthly test. The maximum tested concentration was 25.8 mg/L in the month of February. All lethality tests throughout the year passed.
- 5.1.2** Total Residual Chlorine objective is to be non-detectable. A residual was detected in all months but at no time in the year did the value exceed 0.06 mg/L.
- 5.1.3** E.coli is measured in the unit of CFU/100mL as a monthly geometric mean density and the objective is 100 CFU/100mL. This objective was met in all months with the highest monthly geometric mean being 94 CFU/100mL in August. The limit for E.coli is 200 CFU/100mL.
- 5.1.4** pH is the negative log of the concentration of hydrogen. The objective for pH is 6.5 – 8.5 at all times. Exceedances noted are based on daily sampling. Soda ash is dosed in the aeration effluent channels to raise the pH and at all times except for October 4th (measured pH of 5.88), the effluent pH was within the limit of 6.0 – 9.5. The WPCC effluent pH is sometimes too low because the raw sewage does not contain sufficient alkalinity to fully nitrify the incoming nitrogen.

There were no deviations from the monitoring schedule for the current reporting year.

6.0 Bypass, Overflow and Spills Summary

11.4.j. a summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;

11.4.i. a summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted;

- On March 16th, 222.68m³ of partially treated wastewater bypassed secondary treatment at the WPCC due to heavy precipitation. The effluent still received disinfection before going to the Ottawa River.
- On April 3rd, 158.55m³ of partially treated wastewater bypassed secondary treatment at the WPCC due to heavy precipitation. The effluent still received disinfection before going to the Ottawa River.
- On August 26th, 12.5m³ of raw sewage overflowed Lift Station #2 (McNabb St.) due to a break in the forcemain that was repaired that same day.
- On October 4th, an effluent pH of 5.88 was measured below our limit of 6. Soda ash was added to aeration tank effluent. Estimated volume of low pH spill was 3500m³.

Required samples were collected for all events and lab results were received. All events were reported to the MECP and the local health unit.

2026 planned capital works include the Upsizing of Sanitary Trunk Sewer on Daniel Street and Albert Street and Sewer Separation on Albert Street which will see the reconstruction and upsizing of aging sanitary sewers on both streets resulting in a tighter sewer systems with significantly less inflow and infiltration, thereby reducing sewage flows to the WPCC and reducing the likelihood of overflows to the natural environment. The budgeted cost of this project is just over \$5.9 million.

7.0 Operating Problems

11.4.c. a summary of all operating issues encountered and corrective actions taken;

11.4.k. a summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a report on status of implementation of all modification;

A proactive approach is being utilized, contracting licensed plumbers, electricians and millwrights to make improvements throughout the facilities.

In response to the low pH spill on October 4th, The Town of Arnprior is working with Stantec and the MECP to formalize a method of pH control. Currently, the addition of soda ash is not formally recognized in the ECA as a method of pH control. Stantec and the Town of Arnprior are exploring options to formalize this method and implement process controls to mitigate low pH issues.

8.0 Plant Maintenance

11.4.d. a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;

Both a monthly and a weekly maintenance schedule are printed out and the maintenance personnel initial the schedule as tasks are completed. If any major repairs are required, the operator communicates these to the ORO supervisor who then contacts the appropriate licensed contractor.

A summary of major repairs or maintenance carried out in 2025 is as follows:

- Annual certification of laboratory instruments
- Annual certification of backflow preventers
- Annual certification of flow meters
- Various health and safety supplies purchased
- Purchase of spare sludge pump packing
- Installation of davit bases for tank entry
- Purchase of HACH chemical reagents
- Spare hypo mixer installed
- Many ESA defects identified and corrected by licensed electricians
- Extension for manual bar screen manufactured and installed
- New digester sludge recirculation pump ordered
- Effluent weirs on Final Clarifier #3 replaced
- Dewatering centrifuge sent for rebuild (rental unit used in interim)
- Odor control unit media replaced
- Capital project to replace several old PLC's completed

9.0 Sludge Processing

11.4.h. a tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed.

Combined primary and secondary waste activated sludge is collected from all four primary settling tanks and pumped into the anaerobic digesters. From the digesters, sludge is pumped into holding tanks, it is then conditioned and processed in the centrifuge. Sludge is dewatered to approximately 22% and loaded onto a truck to be transferred to the Arnprior landfill.

A total of approximately 220,925 kg dry weight of sludge was transported to the Arnprior Waste Disposal Site. Sludge production in 2026 is expected to be higher than 2025 due to population increases. Table 9-1 below provides a summary of the 2025 centrifuge operation and sludge management totals.

Table 9-1 - Centrifuge Operation and Summary of Sludge Totals

Month	Sludge To Storage m ³	Sludge To Centrifuge m ³	% Solids Avg.	Dry Solids (kg)
January	288	665	2.66	17,659
February	370	624	2.30	14,359
March	356	916	2.16	19,761
April	711	667	2.45	16,363
May	375	756	4.18	31,601
June	716	1,489	1.37	20,398
July	299	1,011	2.74	27,687
August	359	573	2.41	13,788
September	397	689	2.69	18,531
October	482	717	2.06	14,794
November	366	268	3.20	8,560
December	541	1,025	1.70	17,425
Avg	438	783	2.49	18,410
Max	716	1,489	4.18	31,601
Min	288	268	1.37	8,560
Total	5,260	9,399		220,925

10.0 Monitoring Equipment Calibration

11.4.f. a summary of the calibration and maintenance carried out on all Influent, Imported Sewage and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;

All flow meters were calibrated by an outside contractor and passed calibration. The benchtop analyzers are certified annually to ensure accuracy.

11.0 Complaints

11.4.i. a summary of any complaints received, and any steps taken to address the complaints;

There was a complaint of a loud siren being heard from the Headworks Building. This redundant nuisance alarm was disconnected as the gas sensors in the building are connected to the SCADA and verbatim system, alerting the on-call operator of any atmospheric hazards.

An odor complaint from a nearby resident was brought to the Town's attention. The resident was informed that the WPCC odor control unit was due to have its media replaced. The media has since been replaced with reduced on-site odor noticed from staff.

12.0 Conclusion

The Arnprior WPCC met all MECP sewage effluent limits throughout the reporting period with the noted exception of the low pH on October 4th. The objective for pH is between 6.5 and 8.5. Due to the nitrification process, the effluent can be less than 6.5 at times.

The objective for total chlorine residual was not met but at no time did the value exceed 0.06 mg/l. Also to be noted, the sampling location is not representative of the point of discharge in the Ottawa River. The objective being, non-detectable for total chlorine residual.

For inquiries regarding this report, please contact Ben Ritchie at 623-4231 Ext. 1834 or britchie@arnprior.ca.

**Completed by Ben Ritchie
Waterworks Supervisor
Town of Arnprior**



Annual Report

FOR

Town of Arnprior Waterworks

Period: January 1, 2025 – December 31, 2025



Drinking-Water System Number:

220000932

Drinking-Water System Name:

Arnprior Drinking Water System

Drinking-Water System Owner:

Town of Arnprior

Drinking-Water System Category:

Large Municipal Residential

Period being reported:

Year 2025

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [] No [X]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Town of Arnprior
Town Hall
105 Elgin St. W.
Arnprior ON.
K7S 0A8

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
N/A	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [] No [] N/A [x]



Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web**
 - Public access/notice via Government Office**
 - Public access/notice via a newspaper**
 - Public access/notice via Public Request**
 - Public access/notice via a Public Library**
 - Public access/notice via other method**
-

Describe your Drinking-Water System.

The Arnprior Water Filtration Plant (WFP) is owned and operated by the Corporation of the Town of Arnprior. The WFP is situated at 71 James St. Arnprior Ontario, plant operators can be reached at 613-623-4231 Ext 1809. Certified operators monitor and control the treatment and testing of water production and quality.

Water is pumped from the Madawaska River to the treatment plant where coagulant and polymer are added as a flocculent. The water is then put through a clarification process called an Actiflo system, where microsand is utilized to enhance flocculation and acts as a ballast to aid in settling solids. The water is then filtered; chlorine, fluoride, phosphoric acid and soda ash are added to prepare the water for the distribution system and consumption. The treated water is stored in two reservoirs (clearwell 1 and 2) of volume 1,804m³ and 2,167m³ respectively. Aqueous ammonia is then added and the treated water is pumped to the distribution system as well as a 2,727 m³ elevated water storage tank.

List all water treatment chemicals used over this reporting period.

- Coagulant
- Soda Ash
- Chlorine gas
- Fluoride
- Ammonium Sulphate
- Phosphoric Acid

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred.

- Maintenance parts purchased for soda ash dosing pumps
- Online total chlorine analyzer purchased and installed but not yet commissioned
- Chlorine gas system annual maintenance completed by contracted technician
- Annual calibration of analyzers completed by contracted technician
- Filter 1 complete refurb with new underdrains and media
- Gas sensor annual calibration by contracted technician
- Repair of Actiflo overload relays and purchase of timing relays
- Onsite training; confined space training/rescue, fit testing
- Plumbing replaced for sections of chlorine gas dosing
- PLC component spares

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
09/19/2025	Lead	26.8	ug/l	Flush and resample	09/19/2025
09/24/2025	Phosphoric acid	NSF concern	N/A	Confirm NSF	10/14/2025
12/04/2025	Distribution pressure	12	psi	Inform residents to flush taps	12/05/2025

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

Type	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	52	1 - 16	8 - 8000	N/A	N/A
Treated	52	absent	absent	52	<2 - 4
Distribution	311	absent	absent	155	<2 - 6

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

Parameter	Number of Grab Samples	Range of Results
Turbidity	8760	0.05 – 0.38 NTU
Chlorine (Free)	8760	1.34 – 2.30 mg/L
Fluoride (If the DWS provides fluoridation)	8760	0.00 – 1.08 mg/L

NOTE: For continuous monitors use 8760 as the number of samples.

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Parameter	Date Sampled	Result	Unit of Measure
Benzo(a)pyrene	Jan. 14/25	<0.006	µg/L
Haloacetic Acid	Jan. 14/25	18.3	µg/L
Total Organic Carbon	Jan. 14/25	2.9	mg/L
Dissolved Organic Carbon	Jan. 14/25	3.5	mg/L
Colour	Jan. 14/25	<2	TCU
Nitrite	Jan. 14/25	<0.05	mg/L
Nitrate	Jan. 14/25	0.09	mg/L
Nitrosodimethylamine	Jan. 14/25	0.0009	µg/L
Benzo(a)pyrene	Apr. 15/25	<0.006	µg/L
Haloacetic Acid	Apr. 15/25	26.3	µg/L
Total organic Carbon	Apr. 15/25	2.4	mg/L
Dissolved Organic Carbon	Apr. 15/25	2.6	mg/L
Colour	Apr. 15/25	<2	TCU
Nitrite	Apr. 15/25	<0.05	mg/L
Nitrate	Apr. 15/25	0.12	mg/L
Nitrosodimethylamine	Apr. 15/25	<0.0017	µg/L
Benzo(a)pyrene	Jul. 21/25	<0.006	µg/L
Haloacetic Acid	Jul. 21/25	40.3	µg/L
Total organic Carbon	Jul. 21/25	3.2	mg/L
Dissolved Organic Carbon	Jul. 21/25	3.3	mg/L
Colour	Jul. 21/25	<2	TCU
Nitrite	Jul. 21/25	<0.05	mg/L
Nitrate	Jul. 21/25	0.08	mg/L
Nitrosodimethylamine	Jul. 21/25	0.002	µg/L
Benzo(a)pyrene	Oct. 14/25	<0.006	µg/L
Haloacetic Acid	Oct. 14/25	32.4	µg/L



Total Organic Carbon	Oct. 14/25	3.3	mg/L
Dissolved Organic Carbon	Oct. 14/25	3.7	mg/L
Colour	Oct. 14/25	<2	TCU
Nitrite	Oct. 14/25	<0.05	mg/L
Nitrate	Oct. 14/25	0.05	mg/L
Nitrosodimethylene	Oct. 14/25	0.0009	µg/L

Summary of Inorganic parameters tested during this reporting period or the most recent sample results.

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Jan. 14/25	<0.0001	mg/L	no
Arsenic	Jan. 14/25	0.0001	mg/L	no
Barium	Jan. 14/25	0.019	mg/L	no
Boron	Jan. 14/25	<0.005	mg/L	no
Cadmium	Jan. 14/25	<0.000015	mg/L	no
Chromium	Jan. 14/25	<0.0010	mg/L	no
*Lead	Jan. 14/25	<0.00002	mg/l	no
Mercury	Jan. 14/25	<0.00002	mg/L	no
Selenium	Jan. 14/25	<0.001	mg/L	no
Uranium	Jan. 14/25	<0.00005	mg/L	no

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period (Applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems).

Location Type	Number of Sample sites	Range of Lead Results mg/L (min#) – (max #)	Number of Exceedances (>0.01mg/L)
Plumbing	12	<0.00002 – 0.00106	0
Distribution	4	<0.00019 – 0.02680	1
Treated	1	<0.00002	0

Summary of Organic parameters sampled during this reporting period or the most recent sample results.

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Jan. 14/25	<0.3	µg/L	no
Atrazine + Metabolites	Jan. 14/25	<0.5	µg/L	no
Azinphos-methyl	Jan. 14/25	<1	µg/L	no
Benzene	Jan. 14/25	<0.5	µg/L	no
Benzo(a)pyrene	Jan. 14/25	<0.006	µg/L	no
Bromoxynil	Jan. 14/25	<0.5	µg/L	no
Carbaryl	Jan. 14/25	<3	µg/L	no
Carbofuran	Jan. 14/25	<1	µg/L	no
Carbon Tetrachloride	Jan. 14/25	<0.2	µg/L	no
Chlorpyrifos	Jan. 14/25	<0.5	µg/L	no
Diazinon	Jan. 14/25	<1	µg/L	no
Dicamba	Jan. 14/25	<1	µg/L	no
1,2-Dichlorobenzene	Jan. 14/25	<0.5	µg/L	no
1,4-Dichlorobenzene	Jan. 14/25	<0.5	µg/L	no
1,2-Dichloroethane	Jan. 14/25	<0.5	µg/L	no
1,1-Dichloroethene (vinylidene chloride)	Jan. 14/25	<0.5	µg/L	no
Dichloromethane	Jan. 14/25	<5.0	µg/L	no
2-4 Dichlorophenol	Jan. 14/25	<0.2	µg/L	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan. 14/25	<1	µg/L	no
Diclofop-methyl	Jan. 14/25	<0.9	µg/L	no
Diquat	Jan. 14/25	<5	µg/L	no
Diuron	Jan. 14/25	<5	µg/L	no
Glyphosate	Jan. 14/25	<25	µg/L	no
Malathion	Jan. 14/25	<5	µg/L	no
Metolachlor	Jan. 14/25	<3	µg/L	no
Metribuzin	Jan. 14/25	<3	µg/L	no
Monochlorobenzene	Jan. 14/25	<0.5	µg/L	no
Paraquat	Jan. 14/25	<1	µg/L	no
Pentachlorophenol	Jan. 14/25	<0.2	µg/L	no
Phorate	Jan. 14/25	<0.3	µg/L	no
Picloram	Jan. 14/25	<5	µg/L	no
Polychlorinated Biphenyls(PCB)	Jan. 14/25	<0.05	µg/L	no
Prometryne	Jan. 14/25	<0.1	µg/L	no
Simazine	Jan. 14/25	<0.5	µg/L	no



THM (NOTE: show latest annual average)	Jan. 14/25	40.8	µg/L	no
Terbufos	Jan. 14/25	<0.5	µg/L	no
Tetrachloroethylene	Jan. 14/25	<0.5	µg/L	no
2,3,4,6-Tetrachlorophenol	Jan. 14/25	<0.2	µg/L	no
Triallate	Jan. 14/25	<10	µg/L	no
Trichloroethylene	Jan. 14/25	<0.5	µg/L	no
2,4,6-Trichlorophenol	Jan. 14/25	<0.2	µg/L	no
Trifluralin	Jan. 14/25	<0.5	µg/L	no
Vinyl Chloride	Jan. 14/25	<0.2	µg/L	no
MCPA	Jan. 14/25	<10	µg/L	no

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date and Location
None for this reporting period.			

**Completed by Ben Ritchie
Waterworks Supervisor
Arnprior**



ARNPRIOR

Town of Arnprior 2025 – Water Filtration Plant Summary Report

February 25th, 2026

Please find below a discussion of the operational undertakings of the Town of Arnprior's Water Filtration Plant (WFP) for the 2025 calendar year. This report is provided to meet the Town's requirements to report annually on the operation of the WFP, as per Municipal Drinking Water License (MDWL) 170-101 Ver. 7 and Schedule 22 of O. Reg. 170/03 (Drinking Water Systems) and to provide residents of the Town of Arnprior with information on an important piece of the Town's municipal infrastructure.

1.0 Regulatory Reporting Requirements

Hereafter, for clarity all requirements of Schedule 22 of O. Reg. 170/03 are listed in blue italics below.

22-2. (1) The owner of a drinking water system shall ensure that, not later than March 31 of each year after 2003, a report is prepared in accordance with subsections (2) and (3) for the preceding calendar year and is given to,

(a) in the case of a drinking water system owned by a municipality, the members of the municipal council.

This report is to be presented to the Council of the Town of Arnprior during the regular meeting of Council on March 9th, 2026 reporting on the Arnprior Drinking Water System for the period covering January to December 2025.

(2) The report must,

(a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report;

The Town of Arnprior's Drinking Water System Number is 220000932 and is operated under Municipal Drinking Water Licence (MDWL) 170-101, Ver. 7. The Drinking Water Works Permit (DWWP) number is 170-201 Ver. 3 and the current Permit to Take Water (PTTW) P-300-1179150700 Ver. 1.

2.0 Compliance with Terms and Conditions of the MDWL

The Town of Arnprior owns and operates the Water Filtration Plant and complies with the conditions of the DWWP, PTTW, and MDWL.

3.0 WFP Plant changes and Improvements

- Maintenance parts purchased for soda ash dosing pumps
- Annual chlorine gas safety maintenance completed by contractor including service, components, and equipment
- Online total chlorine analyzer purchased but not commissioned until 2026
- Chlorinator plumbing redone
- Inspection of Clearwell# 2 and Water Tower performed by submersible ROV
- Annual calibration of analyzers completed by contracted technician
- Filter# 1 complete refurbishment with new underdrains and media
- Gas sensor annual calibration by contracted technician
- Repair of Actiflo overload relays and purchase of timing relays
- Confined space entry/rescue training as well as mask fit testing

In accordance with Ontario Regulation 107/03, all required sampling and laboratory analysis of the raw and treated water is carried out in the plant laboratory, as well as a certified contracted laboratory, which includes annual, quarterly and weekly sampling requirements.

Flow meters are calibrated annually by an outside contractor for flow measurement of the water taken from the Madawaska River and to the distribution system.

Continuous water quality analyzers with alarm systems are installed for chlorine residual, turbidity of filtered water and fluoride residual.

All operators are certified to the appropriate level, with ongoing training taking place throughout the year.

4.0 Non-Compliance with Terms and Conditions of PTTW and MDWL

(2) The report must,

(b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

MECP inspector Erin Markham performed a physical inspection on November 28th, 2025 and was provided a digital file of data requested afterwards. The Final 2025-26 Inspection Report for the Arnprior DWS was received on February 23rd 2026, a copy of which is attached as Document #4.

There were 2 items of concern that resulted in 4 non-compliances for this inspection. The result of the IRR was 86.8%. “Application of the Risk Methodology Used for Measuring Municipal Residential Drinking Water System Inspection Results” reads:

It is important to be aware that an inspection rating less than 100 per cent does not mean the drinking water from the system is unsafe. It shows areas where a system's operation can improve. The ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The first item addressed the absence of operator training regarding "Harmful Algae Bloom" inspections. While the risk of a harmful algae bloom is low as the Madawaska River has few upstream users and sufficient flow, there is a policy in the DWQMS that operators will be trained on moving forward. Operators have been performing weekly algae bloom inspections at the WFP low lift as per regulation and recording it in the facility logbook.

The second item of concern was an operational issue that occurred on October 15th, 2026. A contractor on-site while calibrating a flow meter failed to return the unit to proper service. This caused the ammonia system not to run when called for, effectively turning the system from chloraminated to free chlorine. The SCADA system was not programmed to catch this issue and as such the system operated this way until an operator noticed the error on the morning of October 16th during routine trend review.

The flow meter's functionality was immediately restored and normal plant operation resumed. Later that morning a low total chlorine residual was seen at the analyzer located at the WPCC for 3 hours and 21 minutes until chloraminated water reached the facility. Free chlorine over 0.05 mg/l was tested at the facility during this period.

The MECP has recommended several measures be put in place to ensure that Town of Arnprior Waterworks staff have multiple barriers against this situation occurring again. These will be implemented by the Waterworks department over the coming months and include:

- The creation of a procedure to assist operators in making certain equipment that has been worked on by staff or contractors is properly returned to service.
- SCADA programming implemented specifically for the flow meter that was worked on. This will alarm out to the on-call operator in the event the plant is running without the flow meter in service.
- The modification of an existing DWQMS standard operating procedure for handling low chlorine residuals at the facility or in the distribution system.

All Waterworks staff will be trained on all procedures and SCADA changes with proof of training provided to the MECP.

5.0 Adverse Test Results and Other Operational Problems

- Concerns about Phosphoric Acid not being “Food Grade”, is in fact NSF certified and safe for use in municipal drinking water
- Ammonia pumps not operating after Clearwell #2 influent flow meter calibration
- Total Cl² analyzer not working properly requiring the distribution unit at the WPCC to be temporarily relocated to the WFP
- High lead adverse in distribution system during hydrant sample. Flushed and retested.
- Water main break during construction work causing low distribution pressure

6.0 Water Production Flow Measurement

The raw water and backwash flows at the plant are measured by Endress + Hauser electromagnetic flow meters. These flow meters are calibrated annually by an outside contractor.

7.0 Raw Water Production

(3) The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

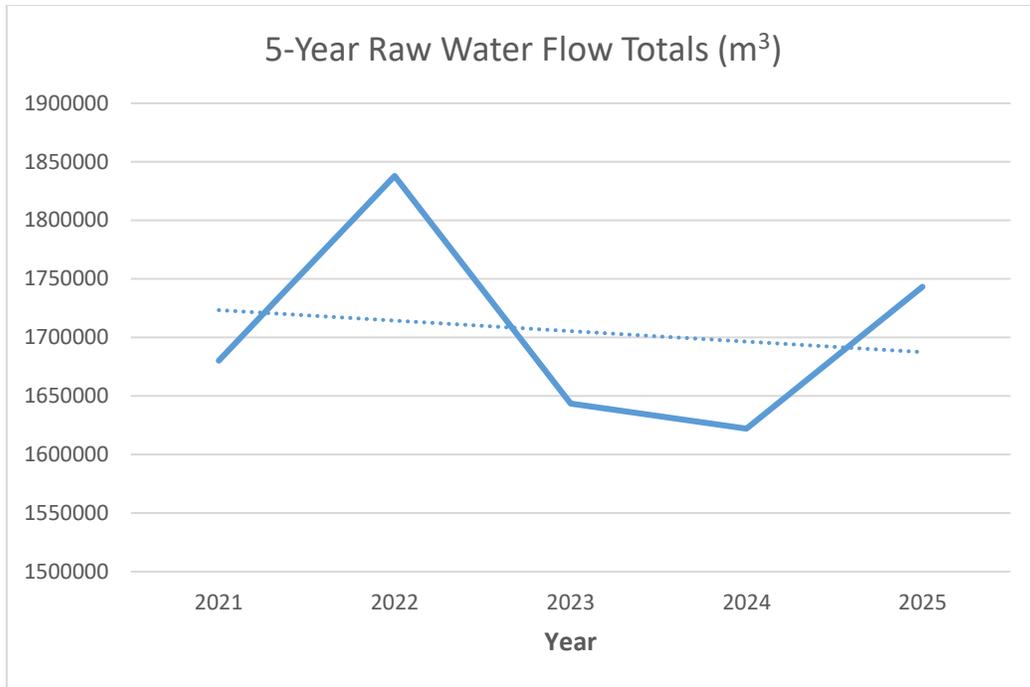
1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.

2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system’s approval, drinking water works permit or municipal drinking water licence.

The average daily raw water flow was measured at 4,759 m³. The maximum daily flow recorded was 6,862 m³ on August 21st, 2025. The maximum daily raw water flow permitted under the Town’s current PTTW from the Madawaska River is 10,340 m³/day.

The total annual raw water flow for 2025 was 1,743,165 m³. This volume has increased slightly since 2024 which had a total flow of 1,622,110 m³, an increase of 7.5 %.

Please see following chart showing annual raw water flows for the years 2021 to 2025.

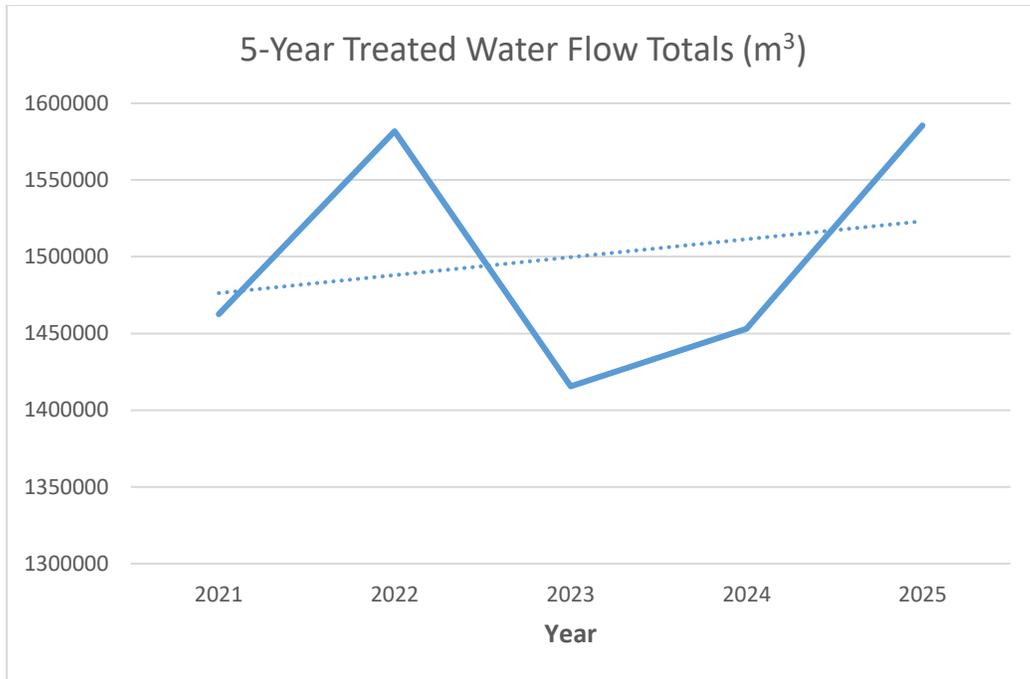


8.0 Treated Water Production

The maximum daily volume of water permitted to be treated by the Town at the WFP under the MDWL in 2025 was 10,340 m³/day. There were no flow exceedances in 2025 and the average daily treated water flow was measured at 4,340 m³/day. The maximum daily treated water flow was 6,315 m³ on August 16th, 2025.

The total annual treated water flow for 2025 was 1,585,527 m³. This volume has increased slightly as compared to 2024 which had a total flow of 1,453,021 m³, an increase of 9.1%.

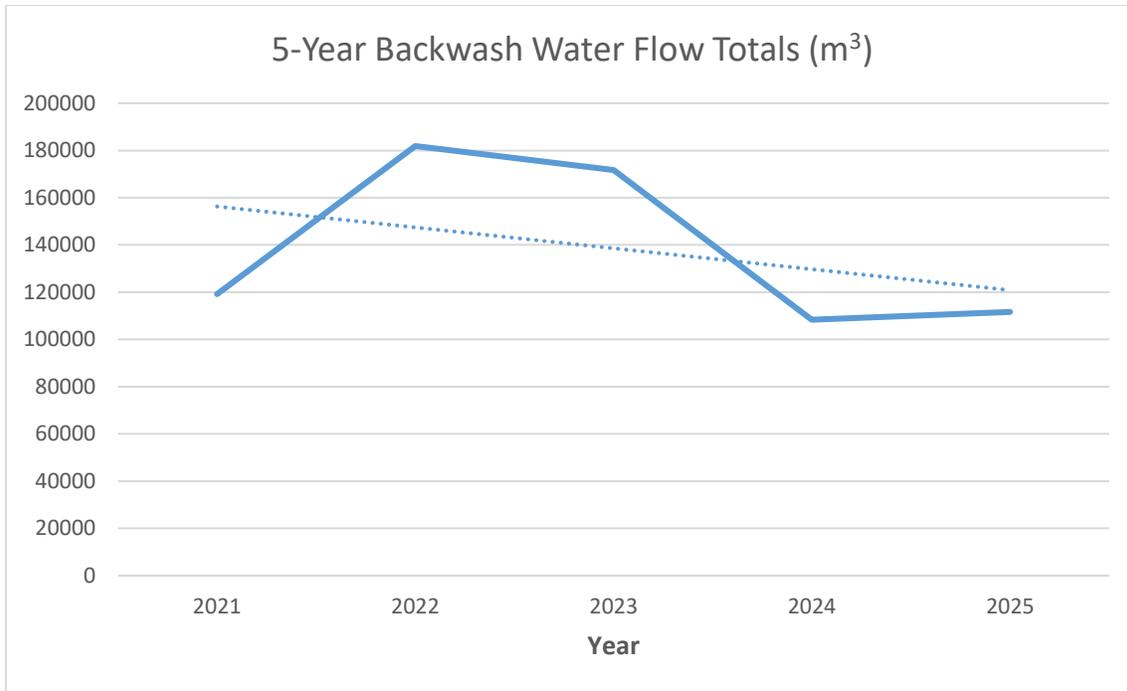
Please see following chart showing annual treated water flows for the years 2021 to 2025.



9.0 Backwash Water Production

The average daily backwash water flow was 306 m³ as compared to 297 m³ in 2024. The total annual backwash water flow was 111,676 m³. The backwash water is treated in a residuals treatment system where the solids are removed and pumped to the Water Pollution Control Centre (WPCC) for treatment and the clear supernatant is directed to the Madawaska River. The WFP MDWL stipulates a maximum 12 month average permitted concentration of Total Suspended Solids (TSS) of 25 mg/L in the supernatant, and in 2025 the average was 4.6 mg/L. The MDWL also stipulates a maximum 12 month average Total Cl² concentration of 0.02 mg/L in the supernatant, in 2025 the average was 0.013 mg/L.

Please see following chart showing annual total backwash water flows for the years 2021 to 2025.



10.0 Water Quality

The Town of Arnprior carries out all the sampling and analysis of the raw and treated water as per the requirements of the MDWL and O. Reg. 170/03, schedules 10, 13, 23 and 24. s. Certain parameters are done at different frequencies such as daily weekly, quarterly and annually.

11.0 Zebra Mussels

Zebra mussels are evident at the Low Lift Pumphouse. At this time, they are manageable with semi-annual cleaning of the intake screens.

12.0 Turbidity

The Madawaska River is an excellent source of raw water with stable water turbidity. The performance criterion for filtered water is a turbidity of less than or equal to 0.30 Nephelometric Turbidity Units (NTU) in 95% of the measurements each month without exceeding 1.0 NTU. The filtered water average turbidity in 2025 as measured by the Town of Arnprior's benchtop analyzer was 0.075 NTU.

13.0 Quarterly and Annual Water Sampling

Sampling and testing were carried out at various frequencies for Volatile Organic Compounds, Inorganic compounds, Pesticides and PCB as per Schedule 23 and 24 of O. Reg. 170/03. These samples are taken by operators and sent to a certified laboratory. The

analytical results revealed that all samples were within acceptable concentrations under the Ontario Drinking Water Standards.

14.0 Hardness

The recommended operational guideline for hardness is 80 mg/L expressed as Calcium Carbonate. This provides an acceptable balance between corrosion control and incrustation. Hardness is caused by the presence of certain dissolved chemical compounds with calcium and magnesium being the primary elements. The amount of hardness varies significantly depending on the source. The Arnprior raw water source has an average hardness of 45.0 mg/L, which would be considered soft water.

15.0 Alkalinity

Alkalinity is a measure of the capacity of water to neutralize acids and is known as the buffering capacity. The recommended operational range for alkalinity in treated drinking water is 30 mg/l to 500 mg/l as Calcium Carbonate. The Arnprior raw water has an average alkalinity of 42 mg/L and the treated water an average of 46 mg/L.

16.0 Fluoride

Hydrofluorosilicic acid is added to the treated water to attain an average fluoride residual in 2025 of 0.68 mg/L with a Maximum Acceptable Concentration of 1.5 mg/L. An ideal target range of 0.60 mg/L to 0.80 mg/L is requested by the RCDHU. The fluoride residual is monitored with an online analyzer and in-house laboratory analysis.

17.0 Water Treatment Chemicals

The WFP uses Chlorine gas, polymer, Ammonium Sulphate (Chloramination), Polyaluminum Chloride (Coagulant), Sodium Carbonate (Soda Ash), Phosphoric Acid (Corrosion Control), and Hydrofluorosilicic Acid (Fluoride).

**Completed by Ben Ritchie
Waterworks Supervisor
Arnprior**

For inquiries regarding this report, please contact Ben Ritchie at 623-4231 Ext. 1834 or britchie@arnprior.ca.

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**



Eastern Region

Région de l'Est

2430 Don Reid Drive, Suite 103
Ottawa ON K1H 1E1
Phone: 613-521-3450
or 1-800-860-2195

2430, promenade Don Reid, suite 103
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ou 1-800-860-2195

February 23, 2026

Ben Ritchie
Arnprior Water Filtration Plant
71 James Street Arnprior
County of Renfrew, Ontario, K7S 0C6

Re: Drinking Water Inspection Program – 2025/2026 Inspection Report
Arnprior Drinking Water System – 1-1481754132

Attached to this letter is the report for the recent unannounced inspection completed at the Arnprior Drinking Water System on November 28, 2025. Please note, the corresponding Incident Rating Report (IRR) and Risk Methodology document will follow in a separate document. This report provides an assessment of compliance and conformance based on observations and information available during the inspection review period only.

Instances of non-compliance were identified during the inspection. Please refer to the “NON-COMPLIANCE ITEMS” section within the report to determine the actions required and take any necessary steps by the date(s) prescribed to bring the system/facility into compliance/conformance.

I would also like to bring your attention to the two recommendations outlined in questions DWMR1037001 and DWMR1104001. Please let me know if you have any questions or concerns and we can discuss.

Sincerely,

A handwritten signature in cursive script that reads "Erin Markham".

Erin Markham
Water Compliance Officer | Badge # 1553 | Ottawa District Office
Drinking Water and Environmental Compliance Division
Ministry of the Environment, Conservation and Parks | Government of Ontario
(613) 698-8159

- Cc:
- Ben Ritchie, Waterworks Supervisor, Town of Arnprior, britchie@arnprior.ca
 - John Steckly, General Manager of Operations, Town of Arnprior, jsteckly@arnprior.ca
 - Robin Paquette, Chief Administrative Officer, Town of Arnprior rpaquette@arnprior.ca
 - Randy McLaren, District Manager, Ministry of Natural Resources and Forestry, randy.mclaren@ontario.ca
 - David Tantalo, Manager, Healthy Environments, Renfrew County & District Health Unit, dtantalo@rcdhu.com
 - Shannon Hamilton-Browne, Water Compliance Supervisor (A), Ministry of the Environment, Conservation and Parks, Shannon.hamiltonbrowne@ontario.ca
 - District Office
- C: File SI-RE-AR-JA-540 (2025-26)



ARNPRIOR DRINKING WATER SYSTEM
Physical Address: 71 JAMES ST, ARNPRIOR,
ON K7S 1E1

INSPECTION REPORT

System Number: 220000932
Entity: CORPORATION OF THE TOWN
OF ARNPRIOR
Inspection Start Date: November 14, 2025
Site Inspection Date: November 28, 2025
Inspection End Date: January 28, 2026
Inspected By: Erin Markham
Badge #: 1553



(signature)

INTRODUCTION

Purpose

This unannounced focused inspection was conducted to confirm compliance with Ministry of the Environment, Conservation and Parks' (MECP) legislation and conformance with ministry drinking water policies and guidelines.

Scope

The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management and the operation of the system.

The inspection of the drinking water system included both the physical inspection of the component parts of the system listed in section 4 "Systems Components" of the report and the review of data and documents associated with the operation of the drinking water system during the review period.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

Facility Contacts and Dates

The drinking water system is owned and operated by the Corporation of the Town of Arnprior.

The system serves an estimated population of 9,629 and is categorized as a Large Municipal Residential System. Information reviewed for this inspection covered the time period of December 5, 2024 to November 28, 2025.

Water Compliance Officers Erin Markham and Michelle Gordon met with Ben Ritchie the Waterworks Supervisor and operators as part of the inspection process.

Systems/Components

All locations associated with primary disinfection were visited as part of this inspection. The following sites were visited as part of the inspection of the drinking water system:

- the low lift pump station, the wastewater treatment plant where secondary disinfection is monitored, and the water tower

Permissions/Approvals

This drinking water system was subject to specific conditions contained within the following permissions and/or approvals (please note this list is not exhaustive) at the time of the inspection in addition to the requirements of the SDWA and its regulations:

Municipal Drinking Water Licence (MDWL) - 170-101, Issue # 7, Issued on March 21, 2021
Drinking Water Works Permit (DWWP) -170-201, Issue #3, Issued on March 31st, 2021

NON-COMPLIANCE

The following item(s) have been identified as non-compliance, based on a "No" response captured for a legislative question(s).

For additional information on each question see the Inspection Details section of the report.

Ministry Program: DRINKING WATER | **Regulated Activity:** DW Municipal Residential

Item	Question	Compliance Response/Corrective Action(s)
NC-1	<p>Question ID: DWMR1104001</p> <p>Were immediate verbal notification requirements for adverse water quality incidents met?</p>	<p>Immediate verbal notification requirements of adverse water quality incidents prescribed by Schedule 16-6 of O. Reg. 170/03 were not met.</p> <p>For a period of about 3 hours and 21 minutes on October 16, 2025, the total chlorine residual (TCR) in the distribution was below 0.25 mg/L (lowest reading of 0.15 mg/L) due to the incident at the water plant resulting in no ammonia being dosed for a little over 10 hours over October 15 and 16, 2025. There was a free chlorine residual (FCR) taken and tested during this time with a result of 0.15 mg/L.</p> <p>This is a violation of the obligation for the owner to ensure the equipment is operated such that at all times and in all locations, the combined chlorine residual (CCR) is never less than 0.25 mg/L, if the drinking water system provides chloramination as per Schedule 1-2(2)4 of O. Reg. 170/03.</p> <p>There was a duty to report a CCR less than 0.25 mg/L during the multi-hour improper 'dosing event'. As the TCR is being used as the regulatory analyzer for the secondary disinfectant residual, this event should have been reported as an adverse water quality incident.</p> <p>Actions Required:</p> <p>Immediately report this incident to the Spills Action Center and the Health Unit.</p> <p>By March 31, 2026 provide to Provincial Officer Erin Markham at erin.markham2@ontario.ca</p>

and to environment.ottawa@ontario.ca a written procedure outlining adverse water quality incidents, including low chlorine residuals both in the distribution system and at the treatment facility as per s.16-4. The procedure should include references to O. Reg 170 and applicable schedules (6, 7, 16, 17, etc.). There should be details of who must be reported to (Spills Action Center and the local Health Unit), how (verbal and written), and the timeline for reporting an incident (Section 16-4 of Schedule 16). The procedure should list the corrective actions that are to be taken and the timelines (Section 17-4 of Schedule 17). Also provide training records for all staff on this procedure.

NC-2 **Question ID:**
DWMR1101001

For large municipal residential systems, were corrective actions, including any steps directed by the Medical Officer of Health, taken to address adverse conditions?

Corrective actions per Schedule 17 of O. Reg. 170/03, including any other steps that were directed by the Medical Officer of Health, were not taken to address adverse conditions.

The low chlorine in the distribution on October 16, 2025 was not reported to the Health Unit and so there were no corrective actions provided by the Medical Officer of Health.

The operating authority should have done the following (in addition to reporting) as per Schedule 17 of O. Reg 170 section 17-4;

1. Immediately flush the watermains and restore secondary disinfection to ensure that,
 - i. a free chlorine residual of at least 0.05 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. a combined chlorine residual of at least 0.25 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chloramination.

2. Take such other steps as are directed by the medical officer of health.

Actions Required:

Refer to the Actions Required under question DWMR1104001 and complete any corrective actions (if any) as directed by the Health Unit upon reporting of the adverse water quality incident from October 16, 2025.

NC-3

Question ID:
DWMR1012001

Did the owner have a harmful algal bloom monitoring plan in place that met the requirements of the Municipal Drinking Water Licence?

The owner did not have a harmful algal bloom monitoring plan in place which met the requirements of the Municipal Drinking Water Licence.

Section 6 of the Municipal Drinking Water Licence (MDWL) 170-101 outlines the details of the Harmful Algal Bloom (HAB) studies required. This includes the requirements to have a monitoring, reporting and sampling plan in place. The owner provided their Policy No. PW-DWQMS-SOP17 which includes all necessary elements to satisfy the requirements outline in the MDWL.

When asked for training records for staff on the HAB Policy, the owner stated that there is no formal training records for this but that historically, the ORO has trained new staff on how to complete the monitoring.

As per sections 6.1.3 and 6.3.6 of the MDWL and as outlined in sections 4.1, 6 vi and 10.1.2 from the Policy, training must be performed annually by the ORO for all staff and records of this shall be retained.

Actions Required:

By March 31, 2026 provide a written plan to Provincial Officer Erin Markham by email to erin.markham2@ontario.ca and environment.ottawa@ontario.ca. This plan should demonstrate how training will be provided by

the ORO annually to each operator prior to each warm season, and how records will be retained of this annual training.

NC-4 **Question ID:**
DWMR1024001

Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required?

Records did not confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.

On October 15 and 16, 2025 there was a period of time (roughly 10 hours and 10 minutes) where no ammonia was being dosed for the secondary disinfection in order to achieve chloramination. As such there was a low TCR of 0.15 mg/L.

This occurred after a third party contractor was onsite performing the annual flow meter calibrations. The flow meter that the ammonia pumps are paced to was not plugged back in to the SCADA after the calibration. Due to this, there was no flow registered for this part of the process and so the ammonia pumps never received the signal to run. As such, there were no alarms triggered from the chemical pumps that typically would have alarmed out notifying the operator of either "failed to start", "failed to stop" or "pump not in auto".

Actions Required:

By March 31, 2026, provide to Provincial Officer Erin Markham to erin.markham2@ontario.ca and environment.ottawa@ontario.ca a written procedure for how situations such as this will be avoided in the future. This procedure should include details for how operators should monitor and review operations/trending before, during and after third party contractors or when internal staff perform work in a facility, including when taking any equipment offline. This should outline the importance of confirming systems are

running as they should.

By April 30, 2026 please provide training records demonstrating that all staff have been trained on this above mentioned procedure.

RECOMMENDATIONS

This should not be construed as a confirmation of full conformance with all potential applicable BMPs. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

INSPECTION DETAILS

This section includes all questions that were assessed during the inspection.

Ministry Program: DRINKING WATER | **Regulated Activity:** DW Municipal Residential

Question ID	DWMR1012001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner have a harmful algal bloom monitoring plan in place that met the requirements of the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner did not have a harmful algal bloom monitoring plan in place which met the requirements of the Municipal Drinking Water Licence.			
Section 6 of the Municipal Drinking Water Licence (MDWL) 170-101 outlines the details of the Harmful Algal Bloom (HAB) studies required. This includes the requirements to have a monitoring, reporting and sampling plan in place. The owner provided their Policy No. PW-DWQMS-SOP17 which includes all necessary elements to satisfy the requirements outline in the MDWL.			
When asked for training records for staff on the HAB Policy, the owner stated that there is no formal training records for this but that historically, the ORO has trained new staff on how to complete the monitoring.			
As per sections 6.1.3 and 6.3.6 of the MDWL and as outlined in sections 4.1, 6 vi and 10.1.2 from the Policy, training must be performed annually by the ORO for all staff and records of this shall be retained.			
Actions Required:			
By March 31, 2026 provide a written plan to Provincial Officer Erin Markham by email to erin.markham2@ontario.ca and environment.ottawa@ontario.ca. This plan should demonstrate how training will be provided by the ORO annually to each operator prior to each warm season, and how records will be retained of this annual training.			

Question ID	DWMR1014001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			

<p>Question: Was flow monitoring performed as required by the Municipal Drinking Water Licence or Drinking Water Works Permit?</p>
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Flow monitoring was performed as required.</p> <p>Schedule C of the MDWL Section 1.1 outlines the rated capacity of the treatment water flows. Review of the data available onsite confirms that the flows for both raw and treated water are monitored. Annual inspections/calibrations of flow meters were completed on October 15, 2025 by a third party contractor. During the previous year, the date of calibration took place October 15, 2024 which satisfies the requirement outlined in Section 3.2 and 3.2.1 in the MDWL for the calibrations to occur at least once every 12 months and not more than 30 days after the first anniversary.</p>

Question ID	DWMR1016001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Was the owner in compliance with the conditions associated with maximum flow rate or the rated/operational capacity in the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions.			
The rated capacity is outlined in Section 1.1 of Schedule C of the MDWL as 10,340 m3/d. The peak flow during the inspection period occurred on August 16, 2025 with a flow of 6,315 m3. The average day flow for the inspection period was 4749 m3/d.			

Question ID	DWMR1018001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner ensure that equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner ensured that equipment was installed as required.			
Schedule A and C of the Drinking Water Works Permit (DWWP) 170-201 were reviewed onsite with staff while completing the visual inspection/tour of the facility. All equipment was installed accordingly.			

Question ID	DWMR1020001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were Form 1 documents prepared as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Form 1 documents were prepared as required. There were four Form 1 documents completed during this inspection period and cover the works as follows; 1. For the watermain works related to Phase 4B of the Marshall's Bay Meadows subdivision. 2. For the reconstruction of MacDonald Street. 3. Covered the work performed on Hartney Street for the removal of 150mm diameter asbestos cement watermain and replaced with 150mm PVC watermain. 4. For the replacement of watermain and appurtenances for the 400mm watermain Madawaska River Crossing (Part 1).			

Question ID	DWMR1021001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were Form 2 documents prepared as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Form 2 documents were prepared as required. One Form 2 was completed for the replacement of the underdrain, feedbox and media of Filter #1, dated May 14, 2025.			

Question ID	DWMR1025001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were all parts of the drinking water system that came in contact with drinking water disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All parts of the drinking water system were disinfected as required.			

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Question ID	DWMR1023001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Did records indicate that the treatment equipment was operated in a manner that achieved the design capabilities prescribed by O. Reg. 170/03, Drinking Water Works Permit and/or Municipal Drinking Water Licence at all times that water was being supplied to consumers?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities prescribed. The Arnprior WTP consists of a conventional filtration process that provides chemically assisted filtration, and is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario (also herein referred to in the report as "the Disinfection Procedure"), including 99 per cent (2-log) removal or inactivation of Cryptosporidium oocysts, at least 99.9 per cent (3-log) removal or inactivation of Giardia cysts, and at least 99.99 per cent (4-log) removal or inactivation of viruses by the time, water enters the distribution system. In addition, to be credited in meeting or exceeding the log removal credits identified above, the WTP must be operated to meet the following criteria: <ul style="list-style-type: none"> - A chemical coagulant must be used at all times when the treatment plant is in operation; - The chemical dosages must be monitored and adjusted in response to variations in raw water quality; - Effective backwash procedures must be maintained, including filter-to-waste or an equivalent procedure during filter ripening to ensure that the effluent turbidity requirements are met at all times; - Filtrate (filter effluent) turbidity must be continuously monitored from each filter; and - 95% of the filtered water turbidity measurements must be 0.3 Nephelometric Turbidity Units (NTU) or less each month for each filter All treatment equipment providing chemically assisted filtration and primary disinfection were operated as required. The filter efficiency for each of the three filters never dropped below 95%. A review of the data and logbooks confirm this.			

Question ID	DWMR1024001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			

Question:

Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Records did not confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.

On October 15 and 16, 2025 there was a period of time (roughly 10 hours and 10 minutes) where no ammonia was being dosed for the secondary disinfection in order to achieve chloramination. As such there was a low TCR of 0.15 mg/L.

This occurred after a third party contractor was onsite performing the annual flow meter calibrations. The flow meter that the ammonia pumps are paced to was not plugged back in to the SCADA after the calibration. Due to this, there was no flow registered for this part of the process and so the ammonia pumps never received the signal to run. As such, there were no alarms triggered from the chemical pumps that typically would have alarmed out notifying the operator of either "failed to start", "failed to stop" or "pump not in auto".

Actions Required:

By March 31, 2026, provide to Provincial Officer Erin Markham to erin.markham2@ontario.ca and environment.ottawa@ontario.ca a written procedure for how situations such as this will be avoided in the future. This procedure should include details for how operators should monitor and review operations/trending before, during and after third party contractors or when internal staff perform work in a facility, including when taking any equipment offline. This should outline the importance of confirming systems are running as they should.

By April 30, 2026 please provide training records demonstrating that all staff have been trained on this above mentioned procedure.

RECOMMENDATIONS:

It is recommended to have "No flow" alarms on the either the treated water flow meter (ex. when high lifts are running), or on the Ammonia chemical pumps in order to notify operators that a portion of the treatment system may not be running while water is moving to the next part of the process.

It was noted that the ammonia chemical pumps, once both have experienced one of the current alarms, will alarm out but not shut down the plant and so water can continue to be sent to the distribution without ammonia being dosed. As this is part of the treatment system in place to achieve secondary disinfection, alarms from the ammonia pumps should shut down the high lifts.

Drinking-water systems using only chloramination as a secondary disinfection, where addition

of ammonia is properly adjusted as required, would not show any free chlorine residual in tests of distribution system samples. For such systems the measurement of total chlorine residual only would be adequate to represent the value of combined chlorine residual.

However, it is recommended that a free chlorine analyzer be added to the high lift area in order to monitor the free chlorine leaving the plant so that combined chlorine entering the distribution can be properly monitored.

Question ID	DWMR1033001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (3); SDWA O. Reg. 170/03 7-2 (4);			
Question: Was secondary disinfectant residual tested as required for the large municipal residential distribution system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Secondary disinfectant residual was tested as required. There is an online total chlorine residual analyzer at the sewage plant to monitor the secondary residual in the distribution system. Operators go onsite daily to test for free chlorine at the same location using the desktop analyzer in the sewage plant lab. A new desktop analyzer was purchased as the previous unit was reported to be unreliable and there were concerns raised as to whether readings stored in the machine were being erased. It is set up so that no readings stored in the machine can be deleted except by the ORO who has a log-in password to the machine. The readings appear to have the correct date and time and review of the stored readings compared to the recorded readings on operational sheets confirm it is working consistently and being used as required. When the concerns were initially raised and the situation reviewed, it was stated by the owner that the ORO or Supervisor would be reviewing the data log in the desktop analyzer and comparing to what was recorded on the log sheets. Records should be made of these reviews in the logbooks.			

Question ID	DWMR1030001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (1); SDWA O. Reg. 170/03 7-2 (2);			
Question: Was primary disinfection chlorine monitoring being conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit or at/near a location where the intended CT had just been achieved?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Primary disinfection chlorine monitoring was conducted as required.			

Chlorine is dosed at the beginning of clearwell 1 and Ammonia is added after clearwell 1 and before clearwell 2. As such, primary disinfection is monitored by an online free chlorine analyzer at the end of Clearwell 1, which is representative of where the CT is achieved.

Operators calculate CT manually once a week using real time values. These calculations are kept in a binder onsite. Review of this binder during the inspection confirmed CT was calculated consistently and was sufficient at all times. The finished water free chlorine residual has alarm set points of LO 1.25 and LOW 1.30 mg/L. Both of which alarm and shut down the plant. These are set to be above the minimum required chlorine residual to achieve CT which is 1.2 mg/L as per the Technical Memorandum completed by J.L.Richards RE: CT Disinfection and Storage Review.

The lowest primary free chlorine residual recorded during the inspection period was 1.34 mg/L on November 15, 2025.

It should be noted that clearwell 1 is scheduled to be replaced in the future and Clearwell #2 will be used for achieving CT. The free chlorine analyzer will be moved from the end of clearwell #1 to the end of clearwell #2 and it will be operated in such a way to ensure CT is maintained.

Question ID	DWMR1032001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-3 (2);			
Question: If the drinking water system obtained water from a surface water source and provided filtration, was continuous monitoring of each filter effluent line performed for turbidity?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Continuous monitoring of each filter effluent line was performed for turbidity. There are continuous online turbidimeters at the effluent line of each filter. The values are recorded on the SCADA and the daily print out includes the Max for each day along with filter efficiency which are then recorded on the "Daily Trending Review" sheets. Trending is reviewed by operators daily. There is an SOP titled "PW-DWQMS-SOP2, Filter Effluent Turbidity Critical Limit Response Procedure". The critical limit is outlined as 0.30 NTU and it outlines how operators should respond to filter effluent turbidity alarms and how and when trends should be reviewed and recorded. The alarm setpoints on the SCADA reflect this limit.			

Question ID	DWMR1035001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4;			

<p>Question: Were operators examining continuous monitoring test results and did they examine the results within 72 hours of the test?</p>
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Operators were examining continuous monitoring test results as required.</p> <p>Trending is reviewed by staff daily with the on-call operators completing the reviews on weekends and holidays. Review of the operational sheets and logbooks confirmed this.</p>

Question ID	DWMR1038001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4;			
Question: Was continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format.			

Question ID	DWMR1037001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question: Were all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All required continuous monitoring equipment utilized for sampling and testing were equipped with alarms or shut-off mechanisms that satisfied the standards.			
The primary disinfection critical limit (free chlorine residual) is outlined as 1.30 mg/L in the SOP titled "PW-DWQMS-SOP3, Primary Disinfection Critical Limit Response Procedure". This value was confirmed on the alarm set point is 1.30 and 1.25 mg/L (LOW and LO) with a delay of 20 seconds.			
The alarm set point for the finished water total chlorine leaving the plant is 0.75 mg/L LO and 3.10 mg/L High.			

It should be noted that the maximum chlorine residual at any time and at any location within the distribution system should not exceed 3.0 mg/L when measured as combined chlorine. Note: A combined chlorine residual of 3.0 mg/L is equivalent to the maximum acceptable concentration of 3.0 mg/L for chloramines allowed by the Ontario Drinking-Water Quality Standards.

The recommended optimum target for combined chlorine residual for systems designed to operate with chloramination is 1.0 mg/L at all locations within the distribution system to suppress bacterial activity that converts ammonia to nitrite and nitrate.

The distribution chloramine is monitored by an online total chlorine residual analyzer at the sewage plant and daily free chlorine grab samples are taken. The alarm setpoints for the total distribution chlorine are as follows; LOLO - 0.50 mg/L, LO - 0.80 mg/L, HI - 2.10 mg/L and HIHI - 2.50 mg/L.

It should be noted that the SOP mentioned above outlines the ideal residual chlorine level at the point of entry to the distribution system is generally between 1.80 and 2.20 mg/L and that the ideal residual in the distribution system is 1.0 mg/L.

RECOMMENDATION:

The alarm setpoints for treated water leaving the plant, distribution chlorine low should be set in accordance with this SOP.

Additionally, the maximum TCR leaving the water treatment plant (current alarm listed as 3.10 mg/L) should be reviewed and adjusted with the maximum chloramines of 3.0 mg/L in mind.

Question ID	DWMR1040001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10;</p>			
<p>Question: Were all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): All continuous analysers were calibrated, maintained, and operated as required.</p> <p>A review of SOPs state that the turbidity and chlorine analyzers are to be cross referenced and calibrated (as needed) manually by staff monthly. These checks are to be recorded on the maintenance sheet. Review of these sheets confirms that checks were done at least monthly if not more. Pocket colorimeters were also checked with the standards monthly and results of this were recorded and filed in the appropriate locations.</p> <p>They confirmed that the calibrations are completed based on the regulation, +/- 5 %.</p>			

Question ID	DWMR1108001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question: Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, Municipal Drinking Water Licence, Drinking Water Works Permit, or order triggered an alarm or an automatic shut-off, did a qualified person respond as required and take appropriate actions?			
Compliance Response(s)/Corrective Action(s)/Observation(s): A qualified person responded as required and took appropriate actions. A review of log books and records confirmed that operators responded to alarms in a timely manner.			

Question ID	DWMR1099001	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records showed that not all water sample results met the Ontario Drinking Water Quality Standards. A Lead sample from the distribution (Hydrant #185) taken on September 15, 2025 came back with a result of 0.0268 mg/L which exceeds the 0.01 mg/L limit outlined in Ontario Regulation 169. Proper corrective actions were taken and no other exceedances of the drinking water quality standards occurred during the inspection period. No actions required at this time other than to ensure the corrosion control plan is continued to be followed.			

Question ID	DWMR1083001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 10-3;			
Question: Were treated microbiological sampling requirements prescribed by Schedule 10-3 of O. Reg. 170/03 for large municipal residential systems met?			

<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Treated microbiological sampling requirements were met.</p> <p>Review of the sample results confirm the requirements were met.</p>
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Question ID	DWMMR1081001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 10-2 (1); SDWA O. Reg. 170/03 10-2 (2); SDWA O. Reg. 170/03 10-2 (3);</p>			
<p>Question: Were distribution microbiological sampling requirements prescribed by Schedule 10-2 of O. Reg. 170/03 for large municipal residential systems met?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Distribution microbiological sampling requirements were met.</p> <p>The population is roughly 9,629 people, as such the required number of samples per month is 17 which would be roughly 4.25 samples per week and at least one of those weekly samples to include HPC. A review of their samples confirmed that there were typically 6 samples a week and 3 of those were tested for HPC.</p> <p>As such, this requirement had been met.</p>			

Question ID	DWMMR1096001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 6-3 (1);</p>			
<p>Question: Did records confirm that chlorine residual tests were conducted at the same time and location as microbiological samples?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Records confirmed that chlorine residual tests were conducted as required.</p> <p>Chain of custody's for the inspection period were reviewed which confirmed that chlorine residual tests were conducted at the same time and location of microbiological samples.</p>			

Question ID	DWMMR1084001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 13-2;</p>			
<p>Question: Were inorganic parameter sampling requirements prescribed by Schedule 13-2 of O. Reg. 170/03 met?</p>			

Compliance Response(s)/Corrective Action(s)/Observation(s):

Inorganic parameter sampling requirements were met.

Schedule 13-2.(1) of O. Reg. 170/03 outlines that the owner of a large municipal residential system and the operating authority for the system shall ensure that at least one water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water.

Records confirm that the most recent treated water sample taken and tested for inorganic parameters was January 14, 2025. The sample prior to this was taken January 23, 2024.

This confirms all inorganic water quality monitoring requirements have been met.

Question ID	DWMR1085001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 13-4 (1); SDWA O. Reg. 170/03 13-4 (2); SDWA O. Reg. 170/03 13-4 (3);</p>			
<p>Question: Were organic parameter sampling requirements prescribed by Schedule 13-4 of O. Reg. 170/03 met?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Organic parameter sampling requirements were met.</p> <p>Schedule 13-4.(1) of O. Reg. 170/03 outlines that the owner of a large municipal residential system and the operating authority for the system shall ensure that at least one water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water.</p> <p>Records confirm that the most recent treated water sample taken and tested for organic parameters was January 14, 2025. The sample prior to this was taken January 23, 2024.</p> <p>This confirms all organic water quality monitoring requirements have been met.</p>			

Question ID	DWMR1086001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 13-6.1 (1); SDWA O. Reg. 170/03 13-6.1 (2); SDWA O. Reg. 170/03 13-6.1 (3); SDWA O. Reg. 170/03 13-6.1 (4); SDWA O. Reg. 170/03 13-6.1 (5); SDWA O. Reg. 170/03 13-6.1 (6);</p>			
<p>Question: Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Haloacetic acid sampling requirements were met.</p>			

As per O. Reg. 170/03 Schedule 13: 13-6.1

(1) The owner of a drinking water system that provides chlorination or chloramination and the operating authority for the system shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids.

(2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for haloacetic acids.

Sampling records indicate that during the inspection period samples were collected from the distribution system quarterly on the following dates and tested for haloacetic acids;

January 15 - 18.3 ug/L
 April 15 - 26.3 ug/L
 July 21 - 40.3 ug/L
 October 14 - 32.4 ug/L

The Running Annual Average (RAA) is 29.33 ug/L which is below the limit of 80 ug/L.

This sampling was conducted within the required frequency.

Question ID	DWMR1087001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 13-6 (1); SDWA O. Reg. 170/03 13-6 (2); SDWA O. Reg. 170/03 13-6 (3); SDWA O. Reg. 170/03 13-6 (4); SDWA O. Reg. 170/03 13-6 (5); SDWA O. Reg. 170/03 13-6 (6);</p>			
<p>Question: Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Trihalomethane sampling requirements were met.</p> <p>As per O. Reg. 170/03 Schedule 13: 13-6.</p> <p>(1) The owner of a drinking water system that provides chlorination or chloramination and the operating authority for the system shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of trihalomethanes.</p> <p>(2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for trihalomethanes.</p>			

Sampling records indicate that during the inspection period samples were collected from the distribution system quarterly on the following dates and tested for trihalomethanes;

January 14 - 31 ug/L
April 15 - 32 ug/L
July 21 - 53 ug/L
October 14 - 45 ug/L

The Running Annual Average (RAA) is 40.3 ug/L which is below the limit of 100 ug/L.

This sampling was conducted within the required frequency.

Question ID	DWMR1088001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-7;			
Question: Were nitrate/nitrite sampling requirements prescribed by Schedule 13-7 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Nitrate/nitrite sampling requirements were met. As per O. Reg. 170/03 Schedule 13: 13-7. The owner of a drinking water system and the operating authority for the system shall ensure that at least one water sample is taken every three months and tested for nitrate and nitrite. Sampling records indicate that during the inspection period samples were collected from treated water quarterly on the following dates and tested for nitrate and nitrite. The results are below beside the dates for nitrate and nitrite respectively, reflected in mg/L. January 14 - 0.09 and 0.05 April 15 - 0.12 and 0.05 July 21 - 0.08 and 0.05 October 14 - 0.05 and 0.05 This sampling was conducted within the required frequency			

Question ID	DWMR1089001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-8;			
Question: Were sodium sampling requirements prescribed by Schedule 13-8 of O. Reg. 170/03 met?			

Compliance Response(s)/Corrective Action(s)/Observation(s):

Sodium sampling requirements were met.

As per O. Reg. 170/03 Schedule 13: 13-8. The owner of a drinking water system and the operating authority for the system shall ensure that at least one water sample is taken every 60 months and tested for sodium.

Sampling records indicate that treated water samples are collected annually and sampled for sodium. The most recent sodium sample was taken on January 14, 2025 (17.6 mg/L) and was previously completed on January 23, 2024.

This sampling frequency exceeds the minimum frequency required by the regulation.

Question ID	DWMR1091001	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 7-4;

Question:

Where fluoridation is practiced, were fluoride sampling requirements prescribed by Schedule 7-4 of O. Reg. 170/03 met?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Fluoride sampling requirements were met.

As per Section 7-4 of O. Reg 170 "If a drinking water system provides fluoridation, the owner of the system and the operating authority for the system shall ensure that a water sample is taken at the end of the fluoridation process at least once every day and is tested for fluoride."

At the high lift pump station there is an online fluoride analyzer and staff also take grab samples and test using a desktop analyzer, thereby meeting the above requirement.

Review of the data confirmed that all fluoride sampling was conducted within the required frequency via an online analyzer.

The highest residual during the inspection period was 0.90 mg/L on May 15 and 16th 2025. This is below the limit of 1.5 mg/L.

The average fluoride residual for the inspection period was 0.67 mg/L which is within the recommended concentration of 0.5 - 0.8 mg/L for the optimum level for control of tooth decay.

Question ID	DWMR1094001	Question Type	Legislative
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Legislative Requirement(s):

SDWA | 31 | (1);

Question:

Were water quality sampling requirements imposed by the Municipal Drinking Water Licence

and Drinking Water Works Permit met?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Water quality sampling requirements were met.

As per Schedule C of the MDWL number 170-101 there are the following sampling requirements imposed on the drinking water system;

Section 5 - Additional Sampling, Testing and Monitoring

Table 5 - Drinking Water Health Related Parameters

- Quarterly Samples of Benzo(a)pyrene at the entrance to the distribution system and Nitrosodimethylamine (NDMA) from the furthest point in the distribution system.

Table 6 - Drinking Water Non-Health Related Parameters

- Quarterly samples of Total Organic Carbon, Dissolved Organic Carbon and Colour from the entrance to the distribution system.

Table 7 - Environmental Discharge Parameters

- Monthly samples of suspended solids and total chlorine residual from the filter backwash wastewater residuals treatment and suspended solids from the Actiflo Residuals treatment.

Section 6 - Studies Required

Table 1 - Monitoring the Effectiveness of Preferred Measures

- Quarterly sampling of Lead and Alkalinity, four samples minimum annually from the distribution system and twelve samples minimum annually from residential and non-residential taps.

- Continuous monitoring of pH from the SCADA, four samples minimum annually from the distribution system, twelve samples minimum annually from the residential and non-residential taps.

- Orthophosphate and soda ash once per month from the distribution system, specifically from the sample tap located at the Town's Water Pollution Control Center.

Review of sample results confirmed that all of the above noted sampling was completed as required.

Question ID	DWMR1104001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 16-6 (1); SDWA O. Reg. 170/03 16-6 (2); SDWA O. Reg. 170/03 16-6 (3); SDWA O. Reg. 170/03 16-6 (3.1); SDWA O. Reg. 170/03 16-6 (3.2); SDWA O. Reg. 170/03 16-6 (4); SDWA O. Reg. 170/03 16-6 (5); SDWA O.</p>			

Reg. 170/03 | 16-6 | (6);

Question:

Were immediate verbal notification requirements for adverse water quality incidents met?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Immediate verbal notification requirements of adverse water quality incidents prescribed by Schedule 16-6 of O. Reg. 170/03 were not met.

For a period of about 3 hours and 21 minutes on October 16, 2025, the total chlorine residual (TCR) in the distribution was below 0.25 mg/L (lowest reading of 0.15 mg/L) due to the incident at the water plant resulting in no ammonia being dosed for a little over 10 hours over October 15 and 16, 2025. There was a free chlorine residual (FCR) taken and tested during this time with a result of 0.15 mg/L.

This is a violation of the obligation for the owner to ensure the equipment is operated such that at all times and in all locations, the combined chlorine residual (CCR) is never less than 0.25 mg/L, if the drinking water system provides chloramination as per Schedule 1-2(2)4 of O. Reg. 170/03.

There was a duty to report a CCR less than 0.25 mg/L during the multi-hour improper 'dosing event'. As the TCR is being used as the regulatory analyzer for the secondary disinfectant residual, this event should have been reported as an adverse water quality incident.

Actions Required:

Immediately report this incident to the Spills Action Center and the Health Unit.

By March 31, 2026 provide to Provincial Officer Erin Markham at erin.markham2@ontario.ca and to environment.ottawa@ontario.ca a written procedure outlining adverse water quality incidents, including low chlorine residuals both in the distribution system and at the treatment facility as per s.16-4. The procedure should include references to O. Reg 170 and applicable schedules (6, 7, 16, 17, etc.). There should be details of who must be reported to (Spills Action Center and the local Health Unit), how (verbal and written), and the timeline for reporting an incident (Section 16-4 of Schedule 16). The procedure should list the corrective actions that are to be taken and the timelines (Section 17-4 of Schedule 17). Also provide training records for all staff on this procedure.

OBSERVATIONS:

As the system operator is not taking grab samples for CCR (or TCR) as required by Schedule 7, they are relying on the continuous monitoring allowance provided by Schedule 6-4. Therefore, the owner/operator must follow the continuous monitoring reporting requirements in Schedule 16. As the ammonia dosing event lasted a little over ten hours, and the minimum monitoring frequency is 1 hour, they would need multiple residuals to evaluate compliance.

In this instance, the single 'daily' FCR grab sample result does not negate the fact that the TCR analyser was below 0.25 mg/L for multiple hours. Furthermore, as the TCR is being used as the regulatory analyser for the secondary disinfectant residual, this event should have been reported as an adverse water quality incident.

Despite the Procedure for Disinfection allowing a TCR analyzer to represent CCR, it is caveated by 'proper operation' of the ammonia dosing equipment.

RECOMMENDATION:

It is recommended to have both a FCR and TCR analyzer so that an accurate CCR can be determined leaving the plant and remain as daily FCR grabs in the distribution system at a minimum.

In the meantime, a recommendation for timely FCR and TCR grab samples during such events is warranted.

Question ID	DWMR1101001	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 17-1; SDWA O. Reg. 170/03 17-10 (1); SDWA O. Reg. 170/03 17-11; SDWA O. Reg. 170/03 17-12; SDWA O. Reg. 170/03 17-13; SDWA O. Reg. 170/03 17-14; SDWA O. Reg. 170/03 17-2; SDWA O. Reg. 170/03 17-3; SDWA O. Reg. 170/03 17-4; SDWA O. Reg. 170/03 17-5; SDWA O. Reg. 170/03 17-6; SDWA O. Reg. 170/03 17-9;</p>			
<p>Question: For large municipal residential systems, were corrective actions, including any steps directed by the Medical Officer of Health, taken to address adverse conditions?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Corrective actions per Schedule 17 of O. Reg. 170/03, including any other steps that were directed by the Medical Officer of Health, were not taken to address adverse conditions.</p> <p>The low chlorine in the distribution on October 16, 2025 was not reported to the Health Unit and so there were no corrective actions provided by the Medical Officer of Health.</p> <p>The operating authority should have done the following (in addition to reporting) as per Schedule 17 of O. Reg 170 section 17-4;</p> <ol style="list-style-type: none"> 1. Immediately flush the watermains and restore secondary disinfection to ensure that, <ol style="list-style-type: none"> i. a free chlorine residual of at least 0.05 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chlorination and does not provide chloramination, or ii. a combined chlorine residual of at least 0.25 milligrams per litre is achieved at all points in 			

the affected parts of the distribution system, if the drinking water system provides chloramination.

2. Take such other steps as are directed by the medical officer of health.

Actions Required:

Refer to the Actions Required under question DWMR1104001 and complete any corrective actions (if any) as directed by the Health Unit upon reporting of the adverse water quality incident from October 16, 2025.

Question ID	DWMR1045001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner update the document describing the distribution components within 12 months of completion of alterations to the system in accordance with the Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had up-to-date documents describing the distribution components.			

Question ID	DWMR1060001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence. The Operations and Maintenance Manual was reviewed onsite and it encompassed all of the requirements outlined in Section 16 of Schedule B in the MDWL.			

Question ID	DWMR1062001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-5;			

<p>Question: Did records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03?</p>
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03. Operator certificates were reviewed along with logbooks and other records and it was confirmed that a certified operator performed these duties.</p>

Question ID	DWMR1071001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Did the owner provide security measures to protect components of the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner provided security measures to protect components of the drinking water system. The water treatment plant itself has cameras and a security gate. An operator in the building checks the camera footage and can remotely open the gate to allow access into the compound. The building is also locked and alarmed. The low lift pump station has a fence and locked gate surrounding, and the door to the building itself is locked and alarmed. The water tower has a fence and gate that are locked and the door into the tower itself is also locked and alarmed.			

Question ID	DWMR1073001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 23 (1);			
Question: Was an overall responsible operator designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): An overall responsible operator was designated for all subsystem. Daily log book entries for the water treatment plant have the ORO outlined on the first line and review of records and licenses confirm that these individuals were appropriately licensed			

to perform the duties of overall responsible operator.

Distribution operators record ORO on timesheets which are tracked daily.

Question ID	DWMR1074001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 25 (1);			
Question: Were operators-in-charge designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Operators-in-charge were designated for all subsystems. Daily log book entries have the OIC outlined on the first line and review of records and licenses confirm that these individuals were appropriately licensed to perform the duties of operator-in-charge.			

Question ID	DWMR1075001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 22;			
Question: Were all operators certified as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All operators were certified as required. Licenses and logbooks were reviewed and confirmed that operators were certified as required.			

Question ID	DWMR1076001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Were adjustments to the treatment equipment only made by certified operators?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Adjustments to the treatment equipment were only made by certified operators.			

APPENDIX A
STAKEHOLDER SUPPORT

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater



PUBLICATION TITLE	PUBLICATION NUMBER
FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking Water in Ontario	Website
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	Website
Filtration Processes Technical Bulletin	Website
Ultraviolet Disinfection Technical Bulletin	Website
Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments	Website
Certification Guide for Operators and Water Quality Analysts	Website
Guide to Drinking Water Operator Training Requirements	9802E
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	Website
Drinking Water System Contact List	7128E01
Ontario's Drinking Water Quality Management Standard - Pocket Guide	Website
Watermain Disinfection Procedure	Website
List of Licensed Laboratories	Website

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à waterforms@ontario.ca si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site www.ontario.ca/eaupotable

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Renseignements sur le profil du réseau d'eau potable	012-2149F
Avis de demande de services de laboratoire	012-2148F
Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-4444F
Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux	Site Web
Marche à suivre pour désinfecter l'eau potable en Ontario	Site Web
Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection	Site Web
Filtration Processes Technical Bulletin (en anglais seulement)	Site Web
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	Site Web
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable	Site Web
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	Site Web
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802F
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	Site Web
Liste des personnes-ressources du réseau d'eau potable	Site Web
L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche	Site Web
Procédure de désinfection des conduites principales	Site Web
Laboratoires autorisés	Site Web

APPENDIX B

**DRINKING WATER LICENCE AND
WORKS PERMIT**



DRINKING WATER WORKS PERMIT

Permit Number: 170-201

Issue Number: 3

Pursuant to the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, I hereby issue this drinking water works permit under Part V of the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32 to:

Arnprior, The Corporation of the Town of

**105 Elgin St
Arnprior, ON K7S 0A8**

For the following municipal residential drinking water system:

Arnprior Drinking Water System

This drinking water works permit includes the following:

Schedule	Description
Schedule A	Drinking Water System Description
Schedule B	General
Schedule C	All documents issued as Schedule C to this drinking water works permit which authorize alterations to the drinking water system
Schedule D	Process Flow Diagrams

Upon the effective date of this drinking water works permit #170-201, all previously issued versions of permit #170-201 are revoked and replaced by this permit.

DATED at TORONTO this 31st day of March, 2021

Signature

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act, 2002*

Schedule A: Drinking Water System Description

System Owner	Arnprior, The Corporation of the Town of
Permit Number	170-201
Drinking Water System Name	Arnprior Drinking Water System
Permit Effective Date	March 31, 2021

1.0 System Description

- 1.1 The following is a summary description of the works comprising the above drinking water system:

Overview

The **Arnprior Drinking Water System** consists of 1 drinking water treatment plant serving approximately a population of 8,795. The source is the Madawaska River. This system can be categorized as a conventional coagulation, flocculation, clarification, and filtration facility, with the chemically assisted clarification process being a two-train proprietary package unit. There are three dual-media filters; optional powdered activated and prechlorination systems, as well as full-time chlorination, fluoridation, soda ash and ammonia addition. Ammonia is added to produce chloramines for secondary disinfection; added when the treated water is pumped from clear wells to the distribution system and elevated water storage tank. There is approximately 57.8 km of distribution watermain.

Treatment Plant

Name	Arnprior Water Filtration Plant
Street Address	71 James Street, Arnprior Town, County of Renfrew
UTM Coordinates	NAD83, Zone 18, Easting: 394000 Northing: 5031220
System Type	Treatment and Distribution
Notes	a main building housing the treatment units and control, testing and monitoring equipment

Surface Water Supply

Intake Crib

Description	Concrete intake structure, pipe, screen,
Equipment	500 mm diameter intake pipe
Location	Located approximately 10m from the west riverbank, Madawaska River
Notes	

Low Lift Works

Wet Well

Description	33 m ³ (3 m x 3.2 m x 3.4 m deep) wet well, with three (3) low lift pumps.
Notes	Mesh intake screen

Low Lift Pumps

Description	A raw water low lift pumping station
Equipment	Two (2) vertical turbine and one (1) centrifugal raw water pumps each rated at 11,000 m ³ /d at a total dynamic head (TDH) of 25 m; one (1) duty and two (2) standby
Notes	Pumps convey raw water through a 400 mm raw watermain into the water treatment plant. Turbidity and pH analyzers, coagulant and prechlorination injection points, and two (2) 350 mm flow transmitters are installed on this line prior to the flash mixing process. The flow elements are installed after the watermain splits to packaged coagulation, flocculation, clarification system.

Coagulation/Flocculation

Coagulation/Flocculation Facilities

Description	Proprietary package for coagulation, flocculation and clarification, consisting of two (2) ballasted flocculation water treatment trains, complete with concrete tankage, each rated at a nominal capacity of 11,000 m ³ /day and each train consisting of the following:
Equipment (on each train)	one (1) automatically operated raw water inlet valve;
	one (1) flash mix tank having approximate inside dimensions of 1.1 m by 1.1 m by 3.6 m top water level, and working volume of approximately 4.4 m ³ , equipped with a mechanical mixer;
	one (1) coagulation tank having approximate inside dimensions of 2.5 m by 1.8 m by 3.6 m top water level, and working volume of approximately 16.2 m ³ , equipped with a mechanical mixer;
	one (1) injection tank having approximate inside dimensions of 2.5 m by 1.8 m by 3.6 m top water level, and working volume of approximately 16.2 m ³ , equipped with a mechanical mixer and polymer injection piping;
	one (1) maturation tank having approximate inside dimensions of 3.4 m by 3.9 m by 3.6 m top water level, and working volume of approximately 47.7 m ³ , equipped with a mechanical mixer and polymer injection piping;
	one (1) clarifier tank having approximate inside dimensions of 4.1 m by 3.9 m complete with a mechanical scraper and include settling module; one (1) recirculation pump for recycling settled sand and residuals to the hydrocyclones;
	one (1) hydrocyclone, complete with splitter box, for separating microsand and residuals and sending microsand back into the injection tank and to send the residuals to a common settling tank for both trains;
	one (1) clarified water turbidity monitor, one (1) raw water pH monitor and level monitors;
	a process control system;
Notes	

Filtration

Filters

Description	Three (3) dual media filters (two different filter designs)
Dimensions	Three (3) dual media (Sand/anthracite) filters with a total filter area of 97.5m ² (5.9m x 5.5m per filter, each with a maximum filtration rate of 7 m/hr (m ³ /m ² /hr) at maximum daily flow with one of the filters out of service); media consisting of a 400 mm sand layer and a 600 mm anthracite layer; a prefabricated underdrain system, complete with air scour
	An actuated valve on the outlet of each filter automatically controlled to maintain a constant filter flow rate; a flow meter, a differential pressure head loss transmitter, level transmitter and an on-line turbidimeter on each of the filters
	one (1) air blower rated for 500 L/s at 45 kPa
Notes	

Backwash Pumps

Description	A filter backwash system including a split case backwash pump drawing from the clearwell, with a butterfly valve providing a backup backwash system using distribution system pressure, requiring manual operation.
Capacity	Pump has a rated capacity of 34,350 m ³ /d at 15m TDH
Notes	Filtered water is conveyed through magnetic flow meters, combined into a common header and delivered to both clearwells (operating in series).

Backwash Residuals Treatment

Description	Filters backwash wastewater with polymer addition, the backwash residuals are clarified, the supernatant dechlorinated using sodium bisulphate and drained by gravity to the Madawaska River and sludge pumped to sanitary sewers.
Equipment	One (1) concrete residuals treatment tank with polymer addition, flocculators and gravity settling with an approximate nominal capacity of 63.0 m ³ (approx. 6.0 m x 3.0 m x 3.5 m top water level).
	Polymer system including a mixing tank and mixer, one (1) storage tank, secondary containment, and two (2) polymer chemical feed pumps (one duty and one standby) with automatic switchover;
	Two (2) mechanical flocculators to aid in mixing of polymer with residuals water in the settling tank;
	Dechlorination system for supernatant, comprised of two (2) sodium bisulphite chemical feed pumps (one duty, one standby) with automatic switchover, capable of supplying up to 0.5 L/min at a pressure of 100 kPa, with secondary containment for the sodium bisulphite supply; containers
	Three (3) sludge hoppers at tank bottom for sludge collection;
	Two (2) sludge pumps (one duty and one standby) each capable of delivering approximately 24 L/s at a TDH of 8.6 m to the sanitary forcemain;
Notes	An effluent sample is collected by Waterworks staff and analyzed for its chlorine sample, prior to being discharged to the Madawaska River.

Actiflo Settling Tanks Residuals Treatment

Description	Actiflo wastewater from the hydrocyclones is sent to a common residuals tank. This raw water residuals does not contain chlorine. The supernatant is drained by gravity to the Madawaska River and sludge to backwash sludge pumps and pumped to sanitary sewers.
Equipment	One concrete residuals treatment tank with gravity settling 6.0m (long), 3.0m (wide), 3.5m side water depth.
	Supernatant overflow weir and piping for discharge to storm sewer
	Three sludge sloped bottom hoppers
	Three automated sludge valves
	Two Actiflo/backwash sludge pumps
	A baffled sand settling box
Notes	A supernatant effluent sample is collected by Waterworks staff and analyzed for its total suspended solids prior to being discharged to the Madawaska River.

Clear Well and High Lift Works

Clear Wells

Description	Two clear wells in series
Dimensions	Volume of clearwell 1 is 2,167 m ³ .
	Volume of clearwell 2 is 1804m ³ .
Notes	Chlorine is added just prior to the first clearwell. Clearwell 1 consists of 2 cells divided by a concrete baffle wall and is hydraulically connected to Clearwell 2, which consists of a single cell divided by a concrete wall. Treated water passes through the clearwells and is conveyed to the high lift pump wet well. Soda ash for pH control is added in Clearwell 2.

High Lift Pump Station

Description	Pumps, meters and analyzers.
Equipment	Three (3) high lift pumps, each designed to deliver approximately 125 L/s at a TDH of 70m
	Finished water analyzers for Free and Total Chlorine, Turbidity, pH, and Fluoride, and a flow meter for treated water to the distribution system.
	400mm diameter treated water header connected to the distribution system
Notes	Pumps draw from second clearwell.

Emergency Power

Backup Power Supply

Description	400kW diesel engine standby power generator set located in a separate outdoor enclosure
Notes	With a 2,270 L double wall storage tank

Chemical Addition

Coagulant

Description	A liquid coagulant injection system.
Feed Point	Watermain immediately upstream of the flash mixing process.
Equipment	Two (2) coagulant chemical feed pumps (one duty and one standby) with automatic switchover.
	One (1) 22,700 L fibreglass reinforced plastic storage tank, with secondary containment;
	One (1) 8,000 L storage tank.
Notes	The system is sized for dosing aluminum chloride or other alternate liquid coagulant chemicals;

Polymer

Description	Polymer injection system
Feed Point	Three locations in the Actiflo Train, at the Injection tank, Maturation Tank and Hydrocyclones
Equipment	One (1) fibreglass mixing tank c/w mixer. Two (2) fibreglass storage tanks. Two Polymer Chemical Metering Pumps, one pump dedicated to each Actiflow unit.
Notes	Flow to each injection point is balanced using Rotameters in each dedicated line to the feed point.

Aqueous Ammonia

Description	Aqueous ammonia system
Feed Point	Between the clearwells
Equipment	Two (2) aqueous ammonia chemical feed pumps (one duty and one standby) with automatic switchover. flow meter between clearwells to pace ammonia; one (1) level sensor secondary containment for supply containers and day tank.
Notes	

Chlorine

Description	A disinfection system utilizing gas chlorination for prechlorination and primary disinfection.
Feed Point	Before the flash mixer for prechlorination and directly into the clearwell inlet for primary disinfection
Equipment	Chlorine gas storage facilities consisting of approximately twelve 68kg bottles stored on site, two scales (one duty and one standby) measuring the tared weight of chlorine the bottle; automatic switchover from duty to standby cylinder based on a preset bottle pressure Two (2) chlorinators (one duty, one standby), and using water from the distribution system as injection water, and an online chlorine residual analyzer to continuously monitor free chlorine residual in the treated water
Notes	

Hydrofluosilicic Acid

Description	A fluoridation storage and injection system
Feed Point	Effluent launders of the filters
Equipment	Two (2) double lined concrete bulk storage tanks with a total volume of 15.8 m ³ for the storage of hydrofluosilicic acid (HFS); One (1) magnetic drive chemical transfer pump to transfer HFS to a

	polyethylene day tank;
	One (1) diaphragm chemical feed pump.
Notes	

Soda Ash

Description	A hydrated soda ash feed system consisting of a 1000 kg bag dry chemical hopper station
Feed Point	Clearwell No. 2 influent line and alternate dosing point in the filter effluent launders
	one (1) volumetric screw feeder
	one (1) slurry mix tank and one day tank
	piping to convey the slurry to the Feed Points
	one (1) on-line pH analyzer for monitoring the pH of treated water
Notes	Used for pH adjustment. Provision for future volumetric screw feeder and pretreatment pH adjustment.

Instrumentation and Control

SCADA System

Description	Motor control center, PLC and SCADA to control and monitor plant process equipment, raw water, filtered water, backwash water and treated water flow meters including all related piping, electrical and mechanical works, plumbing and ventilation, yard piping, instrumentation and control and metering equipment required for a fully operable Water Filtration Plant
Notes	System control with data acquisition including various on-line analyzers and monitors, including the following regulatory equipment: <ul style="list-style-type: none"> - Turbidity Analyzers – Filter 1, 2 & 3 effluent - Free Cl Analyzer – Clearwell #1 effluent - Flow meter – Between Clearwell #1 & 2 - Level Monitor – Clearwell #1 & 2 - pH Analyzer – Clearwell #2 effluent Treated water - Fluoride Analyzer – Treated water - Total Cl Analyzer – Treated water - Flow meter – Treated water - Pressure Sensor – high lift discharge - Flow meter – raw water

Additional Instrumentation Supporting Regulatory Compliance

Description	Additional instrumentation supporting regulatory compliance.
Notes	<ul style="list-style-type: none"> - pH and temperature meter – Lab equipment (CT calculation) - Spectrophotometer – Lab Equipment - Turbidity analyzer – Lab Equipment

Elevated Storage Tanks

Elevated water tower

Location	433 Hartney Street, Arnprior, Ontario
UTM Coordinates	
Description	2,727 m ³ elevated composite water storage tank
Dimensions	2,727 m ³
Equipment	NA
Notes	

Watermains

1.2 Watermains within the distribution system comprise:

1.2.1 Watermains that have been set out in each document or file identified in column 1 of Table 1.

Table 1: Watermains	
Column 1 Document or File Name	Column 2 Date
Arnprior Water Distribution System Map	October 2020

1.2.2 Watermains that have been added, modified, replaced or extended further to the provisions of Schedule C of this drinking water works permit on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

1.2.3 Watermains that have been added, modified, replaced or extended further to an authorization by the Director on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

Schedule B: General

System Owner	Arnprior, The Corporation of the Town of
Permit Number	170-201
Drinking Water System Name	Arnprior Drinking Water System
Permit Effective Date	March 31, 2021

1.0 Applicability

- 1.1 In addition to any other applicable legal requirements, the drinking water system identified above shall be altered and operated in accordance with the conditions of this drinking water works permit and the licence #170-101.
- 1.2 The definitions and conditions of licence #170-101 are incorporated into this permit and also apply to this drinking water system.

2.0 Alterations to the Drinking Water System

- 2.1 Any document issued by the Director to be incorporated into Schedule C to this drinking water works permit shall provide authority to alter the drinking water system in accordance with the applicable conditions of this drinking water works permit and licence #170-101.
- 2.2 All documents issued by the Director as described in condition 2.1 shall form part of this drinking water works permit.
- 2.3 All parts of the drinking water system in contact with drinking water that are added, modified, replaced, extended shall be disinfected in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:
- a) Until **August 30, 2021**, the ministry's Watermain Disinfection Procedure, dated November 2015. As of **August 31, 2021**, the ministry's Watermain Disinfection Procedure, dated August 1, 2020;
 - b) Subject to condition 2.3.2, any updated version of the ministry's Watermain Disinfection Procedure;
 - c) AWWA C652 – Standard for Disinfection of Water-Storage Facilities;
 - d) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and
 - e) AWWA C654 – Standard for Disinfection of Wells.
- 2.3.1 For greater clarity, where an activity has occurred that could introduce contamination, including but not limited to repair, maintenance, or physical / video inspection, all equipment that may come in contact with the drinking water system shall be disinfected in accordance with the requirements of condition 2.3. above.
- 2.3.2 Updated requirements described in condition 2.3 b) are effective six months from the date of publication of the updated Watermain Disinfection Procedure.

- 2.4 The owner shall notify the Director in writing within thirty (30) days of the placing into service or the completion of any addition, modification, replacement, removal or extension of the drinking water system which had been authorized through:
- 2.4.1 Schedule B to this drinking water works permit which would require an alteration of the description of a drinking water system component described in Schedule A of this drinking water works permit;
 - 2.4.2 Any document to be incorporated in Schedule C to this drinking water works permit respecting works other than watermains; or
 - 2.4.3 Any approval issued prior to the issue date of the first drinking water works permit respecting works other than watermains which were not in service at the time of the issuance of the first drinking water works permit.
- 2.5 The notification required in condition 2.4 shall be submitted using the "Director Notification Form" published by the Ministry.
- 2.6 For greater certainty, the notification requirements set out in condition 2.4 do not apply to any addition, modification, replacement, removal or extension in respect of the drinking water system which:
- 2.6.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03;
 - 2.6.2 Constitutes maintenance or repair of the drinking water system; or
 - 2.6.3 Is a watermain authorized by condition 3.1 of Schedule B of this drinking water works permit.
- 2.7 The owner shall notify the legal owner of any part of the drinking water system that is prescribed as a municipal drinking water system by section 2 of O. Reg. 172/03 of the requirements of the licence and this drinking water works permit as applicable to the prescribed system.
- 2.8 For greater certainty, the owner may only carry out alterations to the drinking water system in accordance with this drinking water works permit after having satisfied other applicable legal obligations, including those arising from the *Environmental Assessment Act*, *Niagara Escarpment Planning and Development Act*, *Oak Ridges Moraine Conservation Act, 2001* and *Greenbelt Act, 2005*.

3.0 Watermain Additions, Modifications, Replacements and Extensions

- 3.1 The owner may alter the drinking water system, or permit it to be altered by a person acting on the owner's behalf, by adding, modifying, replacing or extending a watermain within the distribution system subject to the following conditions:
- 3.1.1 The design of the watermain addition, modification, replacement or extension:
 - a) Has been prepared by a licensed engineering practitioner;
 - b) Has been designed only to transmit water and has not been designed to treat water;

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- c) Satisfies the design criteria set out in the Ministry publication “Watermain Design Criteria for Future Alterations Authorized under a Drinking Water Works Permit – June 2012”, as amended from time to time; and
 - d) Is consistent with or otherwise addresses the design objectives contained within the Ministry publication “Design Guidelines for Drinking Water Systems, 2008”, as amended from time to time.
- 3.1.2 The maximum demand for water exerted by consumers who are serviced by the addition, modification, replacement or extension of the watermain will not result in an exceedance of the rated capacity of a treatment subsystem or the maximum flow rate for a treatment subsystem component as specified in the licence, or the creation of adverse conditions within the drinking water system.
 - 3.1.3 The watermain addition, modification, replacement or extension will not adversely affect the distribution system’s ability to maintain a minimum pressure of 140 kPa at ground level at all points in the distribution system under maximum day demand plus fire flow conditions.
 - 3.1.4 Secondary disinfection will be provided to water within the added, modified, replaced or extended watermain to meet the requirements of O. Reg. 170/03.
 - 3.1.5 The watermain addition, modification, replacement or extension is wholly located within the municipal boundary over which the owner has jurisdiction.
 - 3.1.6 The owner of the drinking water system consents in writing to the watermain addition, modification, replacement or extension.
 - 3.1.7 A licensed engineering practitioner has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of condition 3.1.1.
 - 3.1.8 The owner of the drinking water system has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of conditions 3.1.2 to 3.1.6.
- 3.2 The authorization for the addition, modification, replacement or extension of a watermain provided for in condition 3.1 does not include the addition, modification, replacement or extension of a watermain that:
 - 3.2.1 Passes under or through a body of surface water, unless trenchless construction methods are used;
 - 3.2.2 Has a nominal diameter greater than 750 mm;
 - 3.2.3 Results in the fragmentation of the drinking water system; or
 - 3.2.4 Connects to another drinking water system, unless:
 - a) Prior to construction, the owner of the drinking water system seeking the connection obtains written consent from the owner or owner’s delegate of the drinking water system being connected to; and

- b) The owner of the drinking water system seeking the connection retains a copy of the written consent from the owner or owner's delegate of the drinking water system being connected to as part of the record that is recorded and retained under condition 3.3.
- 3.3 The verifications required in conditions 3.1.7 and 3.1.8 shall be:
- 3.3.1 Recorded on "Form 1 – Record of Watermains Authorized as a Future Alteration", as published by the Ministry, prior to the watermain addition, modification, replacement or extension being placed into service; and
- 3.3.2 Retained for a period of ten (10) years by the owner.
- 3.4 For greater certainty, the verification requirements set out in condition 3.3 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:
- 3.4.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
- 3.4.2 Constitutes maintenance or repair of the drinking water system.
- 3.5 The document or file referenced in Column 1 of Table 1 of Schedule A of this drinking water works permit that sets out watermains shall be retained by the owner and shall be updated to include watermain additions, modifications, replacements and extensions within 12 months of the addition, modification, replacement or extension.
- 3.6 The updates required by condition 3.5 shall include watermain location relative to named streets or easements and watermain diameter.
- 3.7 Despite clause (a) of condition 3.1.1 and condition 3.1.7, with respect to the replacement of an existing watermain or section of watermain that is 6.1 meters in length or less, if a licensed engineering practitioner has:
- 3.7.1 inspected the replacement prior to it being put into service;
- 3.7.2 prepared a report confirming that the replacement satisfies clauses (b), (c) and (d) of condition 3.1.1 (i.e. "Form 1 – Record of Watermains Authorized by a Future Alteration" (Form 1), Part 3, items No. 2, 3 and 4); and
- 3.7.3 appended the report referred to in condition 3.7.2 to the completed Form 1,
- the replacement is exempt from the requirements that the design of the replacement be prepared by a licensed engineering practitioner and that a licensed engineering practitioner verify on Form 1, Part 3, item No. 1 that a licensed engineering practitioner prepared the design of the replacement.
- 3.8 For greater certainty, the exemption in condition 3.7 does not apply to the replacement of an existing watermain or section of watermain if two or more sections of pipe, each of which is 6.1 meters in length or less, are joined together, if the total length of replacement pipes joined together is greater than 6.1 meters.

4.0 Minor Modifications to the Drinking Water System

- 4.1 The drinking water system may be altered by adding, modifying or replacing the following components in the drinking water system:
- 4.1.1 Coagulant feed systems in the treatment system, including the location and number of dosing points:
 - a) Prior to making any alteration to the drinking water system under condition 4.1.1, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and
 - b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.1.1 and shall provide the Director with a copy of the review.
 - c) The notification required in condition 4.1.1 b) shall be submitted using the "Director Notification Form" published by the Ministry
 - 4.1.2 Instrumentation and controls, including new SCADA systems and upgrades to SCADA system hardware;
 - 4.1.3 SCADA system software or programming that:
 - a) Measures, monitors or reports on a regulated parameter;
 - b) Measures, monitor or reports on a parameter that is used to calculate CT; or,
 - c) Calculates CT for the system or is part of the process algorithm that calculates log removal, where the impacts of addition, modification or replacement have been reviewed by a licensed engineering practitioner;
 - 4.1.4 Filter media, backwashing equipment, filter troughs, and under-drains and associated equipment in the treatment system;
 - 4.1.5 Spill containment works; or,
 - 4.1.6 Coarse screens and fine screens
- 4.2 The drinking water system may be altered by adding, modifying, replacing or removing the following components in the drinking water system:
- 4.2.1 Treated water pumps, pressure tanks, and associated equipment;
 - 4.2.2 Raw water pumps and process pumps in the treatment system;
 - 4.2.3 Inline booster pumping stations that are not associated with distribution system storage facilities and are on a watermain with a nominal diameter not exceeding 200 mm;
 - 4.2.4 Re-circulation devices within distribution system storage facilities;

- 4.2.5 In-line mixing equipment;
 - 4.2.6 Chemical metering pumps and chemical handling pumps;
 - 4.2.7 Chemical storage tanks (excluding fuel storage tanks) and associated equipment; or,
 - 4.2.8 Measuring and monitoring devices that are not required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry.
 - 4.2.9 Chemical injection points;
 - 4.2.10 Valves.
- 4.3 The drinking water system may be altered by replacing the following:
- 4.3.1 Raw water piping, treatment process piping or treated water piping within the treatment subsystem;
 - 4.3.2 Measuring and monitoring devices that are required by regulation, by a condition in the Drinking Water Works Permit or by a condition otherwise imposed by the Ministry.
 - 4.3.3 Coagulants and pH adjustment chemicals, where the replacement chemicals perform the same function;
 - a) Prior to making any alteration to the drinking water system under condition 4.3.3, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and
 - b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.3.3 and shall provide the Director with a copy of the review.
 - c) The notification required in condition 4.3.3 b) shall be submitted using the "Director Notification Form" published by the Ministry.
- 4.4 Any alteration of the drinking water system made under conditions 4.1, 4.2 or 4.3 shall not result in:
- 4.4.1 An exceedance of a treatment subsystem rated capacity or a treatment subsystem component maximum flow rate as specified in the licence;
 - 4.4.2 The bypassing or removal of any unit process within a treatment subsystem;
 - 4.4.3 The addition of any new unit process other than coagulation within a treatment subsystem;
 - 4.4.4 A deterioration in the quality of drinking water provided to consumers;

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- 4.4.5 A reduction in the reliability or redundancy of any component of the drinking water system;
 - 4.4.6 A negative impact on the ability to undertake compliance and other monitoring necessary for the operation of the drinking water system; or
 - 4.4.7 An adverse effect on the environment.
- 4.5 The owner shall verify in writing that any addition, modification, replacement or removal of drinking water system components in accordance with conditions 4.1, 4.2 or 4.3 has met the requirements of the conditions listed in condition 4.4.
- 4.6 The verifications and documentation required in condition 4.5 shall be:
- 4.6.1 Recorded on “Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System” published by the Ministry, prior to the modified or replaced components being placed into service; and
 - 4.6.2 Retained for a period of ten (10) years by the owner.
- 4.7 For greater certainty, the verification requirements set out in conditions 4.5 and 4.6 do not apply to any addition, modification, replacement or removal in respect of the drinking water system which:
- 4.7.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
 - 4.7.2 Constitutes maintenance or repair of the drinking water system, including software changes to a SCADA system that are not listed in condition 4.1.3
- 4.8 The owner shall update any drawings maintained for the drinking water system to reflect the modification or replacement of the works, where applicable.

5.0 Equipment with Emissions to the Air

- 5.1 The drinking water system may be altered by adding, modifying or replacing any of the following drinking water system components that may discharge or alter the rate or manner of a discharge of a compound of concern to the air:
 - 5.1.1 Any equipment, apparatus, mechanism or thing that is used for the transfer of outdoor air into a building or structure that is not a cooling tower;
 - 5.1.2 Any equipment, apparatus, mechanism or thing that is used for the transfer of indoor air out of a space used for the production, processing, repair, maintenance or storage of goods or materials, including chemical storage;
 - 5.1.3 Laboratory fume hoods used for drinking water testing, quality control and quality assurance purposes;
 - 5.1.4 Low temperature handling of compounds with a vapor pressure of less than 1 kilopascal;

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- 5.1.5 Maintenance welding stations;
 - 5.1.6 Minor painting operations used for maintenance purposes;
 - 5.1.7 Parts washers for maintenance shops;
 - 5.1.8 Emergency chlorine and ammonia gas scrubbers and absorbers;
 - 5.1.9 Venting for activated carbon units for drinking water taste and odour control;
 - 5.1.10 Venting for a stripping unit for methane removal from a groundwater supply;
 - 5.1.11 Venting for an ozone treatment unit;
 - 5.1.12 Natural gas or propane fired boilers, water heaters, space heaters and make-up air units with a total facility-wide heat input rating of less than 20 million kilojoules per hour, and with an individual fuel energy input of less than or equal to 10.5 gigajoules per hour; or
 - 5.1.13 Emergency generators that fire No. 2 fuel oil (diesel fuel) with a sulphur content of 0.5 per cent or less measured by weight, natural gas, propane, gasoline or biofuel, and that are used for emergency duty only with periodic testing.
- 5.2 The owner shall not make an addition, modification, or replacement described in condition 5.1 in relation to an activity that is not related to the treatment and/or distribution of drinking water.
- 5.3 The emergency generators identified in condition 5.1.13 shall not be used for non-emergency purposes including the generation of electricity for sale or for peak shaving purposes.
- 5.4 The owner shall prepare an emission summary table for nitrogen oxides emissions only, for each addition, modification or replacement of emergency generators identified in condition 5.1.13.

Performance Limits

- 5.5 The owner shall ensure that a drinking water system component identified in conditions 5.1.1 to 5.1.13 is operated at all times to comply with the following limits:
- 5.5.1 For equipment other than emergency generators, the maximum concentration of any compound of concern at a point of impingement shall not exceed the corresponding point of impingement limit;
 - 5.5.2 For emergency generators, the maximum concentration of nitrogen oxides at sensitive receptors shall not exceed the applicable point of impingement limit, and at non-sensitive receptors shall not exceed the Ministry half-hourly screening level of 1880 ug/m³ as amended; and
 - 5.5.3 The noise emissions comply at all times with the limits set out in publication NPC-300, as applicable.

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- 5.6 The owner shall verify in writing that any addition, modification or replacement of works in accordance with condition 5.1 has met the requirements of the conditions listed in condition 5.5.
- 5.7 The owner shall document how compliance with the performance limits outlined in condition 5.5.3 is being achieved, through noise abatement equipment and/or operational procedures.
- 5.8 The verifications and documentation required in conditions 5.6 and 5.7 shall be:
- 5.8.1 Recorded on "Form 3 – Record of Addition, Modification or Replacement of Equipment Discharging a Contaminant of Concern to the Atmosphere", as published by the Ministry, prior to the additional, modified or replacement equipment being placed into service; and
- 5.8.2 Retained for a period of ten (10) years by the owner.
- 5.9 For greater certainty, the verification and documentation requirements set out in conditions 5.6 and 5.8 do not apply to any addition, modification or replacement in respect of the drinking water system which:
- 5.9.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
- 5.9.2 Constitutes maintenance or repair of the drinking water system.
- 5.10 The owner shall update any drawings maintained for the works to reflect the addition, modification or replacement of the works, where applicable.

6.0 Previously Approved Works

- 6.1 The owner may add, modify, replace or extend, and operate part of a municipal drinking water system if:
- 6.1.1 An approval was issued after January 1, 2004 under section 36 of the SDWA in respect of the addition, modification, replacement or extension and operation of that part of the municipal drinking water system;
- 6.1.2 The approval expired by virtue of subsection 36(4) of the SDWA; and
- 6.1.3 The addition, modification, replacement or extension commenced within five years of the date that activity was approved by the expired approval.

7.0 System-Specific Conditions

- 7.1 Not Applicable

8.0 Source Protection

- 8.1 Not Applicable

Schedule C: Authorization to Alter the Drinking Water System

System Owner	Arnprior, The Corporation of the Town of
Permit Number	170-201
Drinking Water System Name	Arnprior Drinking Water System
Permit Effective Date	March 31, 2021

1.0 General

1.1 Table 2 provides a reference list of all documents to be incorporated into Schedule C that have been issued as of the date that this permit was issued.

1.1.1 Table 2 is not intended to be a comprehensive list of all documents that are part of Schedule C. For clarity, any document issued by the Director to be incorporated into Schedule C after this permit has been issued is considered part of this drinking water works permit.

Table 2: Schedule C Documents				
Column 1 Issue #	Column 2 Issued Date	Column 3 Description	Column 4 Status	Column 5 DN#
1	May 19, 2016	Implementation of Corrosion Control Plan	Approved	Not Applicable

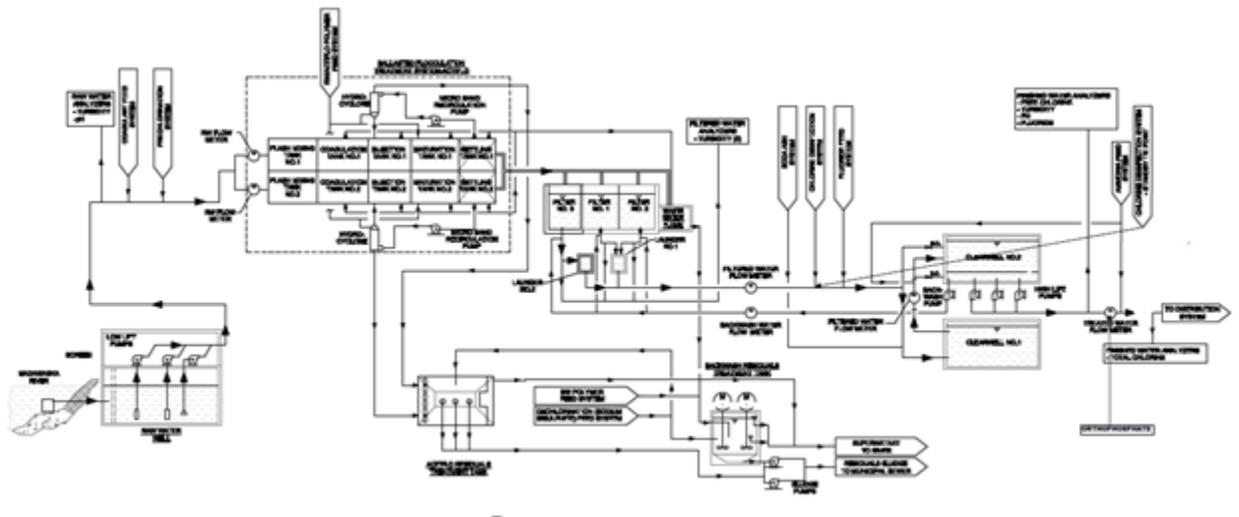
1.2 For each document described in columns 1, 2 and 3 of Table 2, the status of the document is indicated in column 4. Where this status is listed as 'Archived', the approved alterations have been completed and relevant portions of this permit have been updated to reflect the altered works. These 'Archived' Schedule C documents remain as a record of the alterations.

Schedule D: Process Flow Diagrams

System Owner	Arnprior, The Corporation of the Town of
Permit Number	170-201
Drinking Water System Name	Arnprior Drinking Water System
Permit Effective Date	March 31, 2021

1.0 Process Flow Diagrams

Arnprior Water Filtration Plant



[Source: 2 and 3 - Town of Arnprior DWQMS Operational Plan - Version 16 - March 13, 2020]

Note: this process flow diagram is for reference only, and represents a high level overview of the system as of March 13, 2020.



MUNICIPAL DRINKING WATER LICENCE

Licence Number: 170-101

Issue Number: 7

Pursuant to the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, I hereby issue this municipal drinking water licence under Part V of the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32 to:

Arnprior, The Corporation of the Town of

105 Elgin St
Arnprior, ON K7S 0A8

For the following municipal residential drinking water system:

Arnprior Drinking Water System

This municipal drinking water licence includes the following:

Schedule	Description
Schedule A	Drinking Water System Information
Schedule B	General Conditions
Schedule C	System-Specific Conditions
Schedule D	Conditions for Relief from Regulatory Requirements
Schedule E	Pathogen Log Removal/Inactivation Credits

Upon the effective date of this drinking water licence # 170-101, all previously issued versions of licence # 170-101 are revoked and replaced by this licence.

DATED at TORONTO this 31st day of March, 2021

Signature

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act*, 2002

Schedule A: Drinking Water System Information

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	March 31, 2021

1.0 Licence Information

Licence Issue Date	March 31, 2021
Licence Effective Date	March 31, 2021
Licence Expiry Date	March 31, 2026
Application for Licence Renewal Date	September 30, 2025

2.0 Incorporated Documents

The following documents are applicable to the above drinking water system and form part of this licence:

2.1 Drinking Water Works Permit

Drinking Water System Name	Permit Number	Issue Date
Arnprior Drinking Water System	170-201	March 31, 2021

2.2 Permits to Take Water

Water Taking Location	Permit Number	Issue Date
Madawaska River	4143-8ZDLMJ	October 23, 2012

3.0 Financial Plans

The Financial Plan Number for the Financial Plan required to be developed for this drinking water system in accordance with O. Reg. 453/07 shall be:	170-301
Alternately, if one Financial Plan is developed for all drinking water systems owned by the owner, the Financial Plan Number shall be:	170-301A

4.0 Accredited Operating Authority

Drinking Water System or Operational Subsystems	Accredited Operating Authority	Operational Plan No.	Operating Authority No.
Walter E. Prentice Water Filtration Plant and Distribution System	Arnprior, The Corporation Of The Town Of	170-401	170-OA1

Schedule B: General Conditions

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	March 31, 2021

1.0 Definitions

1.1 Words and phrases not defined in this licence and the associated drinking water works permit shall be given the same meaning as those set out in the SDWA and any regulations made in accordance with that act, unless the context requires otherwise.

1.2 In this licence and the associated drinking water works permit:

“**adverse effect**”, “**contaminant**” and “**natural environment**” shall have the same meanings as in the EPA;

“**alteration**” may include the following in respect of this drinking water system:

- (a) An addition to the system,
- (b) A modification of the system,
- (c) A replacement of part of the system, and
- (d) An extension of the system;

“**compound of concern**” means a contaminant described in paragraph 4 subsection 26 (1) of O. Reg. 419/05, namely, a contaminant that is discharged to the air from a component of the drinking water system in an amount that is not negligible;

“**CT**” means the CT Disinfection Concept, as described in subsection 3.1.1 of the Ministry’s Procedure for Disinfection of Drinking Water in Ontario, dated July 29 2016.

“**Director**” means a Director appointed pursuant to section 6 of the SDWA for the purposes of Part V of the SDWA;

“**drinking water works permit**” means the drinking water works permit for the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

“**emission summary table**” means a table described in paragraph 14 of subsection 26 (1) of O. Reg. 419/05;

“**EPA**” means the *Environmental Protection Act*, R.S.O. 1990, c. E.19;

“**financial plan**” means the financial plan required by O. Reg. 453/07;

“**Harmful Algal Bloom (HAB)**” means an overgrowth of aquatic algal bacteria that produce or have the potential to produce toxins in the surrounding water, when the algal

cells are damaged or die. Such bacteria are harmful to people and animals and include microcystins produced by cyanobacterial blooms.

“**licence**” means this municipal drinking water licence for the municipal drinking water system identified in Schedule A of this licence;

“**Ministry**” means the Ontario Ministry of the Environment, Conservation and Parks;

“**operational plan**” means an operational plan developed in accordance with the Director’s Directions – Minimum Requirements for Operational Plans made under the authority of subsection 15(1) of the SDWA;

“**owner**” means the owner of the drinking water system as identified in Schedule A of this licence;

“**OWRA**” means the *Ontario Water Resources Act*, R.S.O. 1990, c. 0.40;

“**permit to take water**” means the permit to take water that is associated with the taking of water for purposes of the operation of the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

“**point of impingement**” has the same meaning as in section 2 of O. Reg. 419/05 under the EPA;

“**point of impingement limit**” means the appropriate standard from Schedule 2 or 3 of O. Reg. 419/05 under the EPA and if a standard is not provided for a compound of concern, the concentration set out for the compound of concern in the document titled “Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants”, as amended from time to time and published by the Ministry and available on a government of Ontario website;

“**licensed engineering practitioner**” means a person who holds a licence, limited licence or temporary licence under the Professional Engineers Act;

“**provincial officer**” means a provincial officer designated pursuant to section 8 of the SDWA;

“**publication NPC-300**” means the Ministry publication titled “Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning” dated August 2013, as amended;

“**SCADA system**” means a supervisory control and data acquisition system used for process monitoring, automation, recording and/or reporting within the drinking water system;

“**SDWA**” means the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32;

“**sensitive receptor**” means any location where routine or normal activities occurring at reasonably expected times would experience adverse effect(s) from a discharge to air from an emergency generator that is a component of the drinking water system, including one or a combination of:

- (a) private residences or public facilities where people sleep (e.g.: single and multi-unit dwellings, nursing homes, hospitals, trailer parks, camping grounds, etc.),
- (b) institutional facilities (e.g.: schools, churches, community centres, day care centres, recreational centres, etc.),
- (c) outdoor public recreational areas (e.g.: trailer parks, play grounds, picnic areas, etc.), and
- (d) other outdoor public areas where there are continuous human activities (e.g.: commercial plazas and office buildings).

“**sub-system**” has the same meaning as in Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts) under the SDWA;

“**surface water**” means water bodies (lakes, wetlands, ponds - including dug-outs), water courses (rivers, streams, water-filled drainage ditches), infiltration trenches, and areas of seasonal wetlands;

“**UV**” means ultraviolet, as in ultraviolet light produced from an ultraviolet reactor.

2.0 Applicability

- 2.1 In addition to any other applicable legal requirements, the drinking water system identified above shall be established, altered and operated in accordance with the conditions of the drinking water works permit and this licence.

3.0 Licence Expiry

- 3.1 This licence expires on the date identified as the licence expiry date in Schedule A of this licence.

4.0 Licence Renewal

- 4.1 Any application to renew this licence shall be made on or before the date identified as the application for licence renewal date set out in Schedule A of this licence.

5.0 Compliance

- 5.1 The owner and operating authority shall ensure that any person authorized to carry out work on or to operate any aspect of the drinking water system has been informed of the SDWA, all applicable regulations made in accordance with that act, the drinking water works permit and this licence and shall take all reasonable measures to ensure any such person complies with the same.

6.0 Licence and Drinking Water Works Permit Availability

- 6.1 At least one copy of this licence and the drinking water works permit shall be stored in such a manner that they are readily viewable by all persons involved in the operation of the drinking water system.

7.0 Permit to Take Water and Drinking Water Works Permit

- 7.1 A permit to take water identified in Schedule A of this licence is the applicable permit on the date identified as the Effective Date of this licence.
- 7.2 A drinking water works permit identified in Schedule A of this licence is the applicable permit on the date identified as the Effective Date of this licence.

8.0 Financial Plan

- 8.1 For every financial plan prepared in accordance with subsections 2(1) and 3(1) of O. Reg. 453/07, the owner of the drinking water system shall:
- 8.1.1 Ensure that the financial plan contains on the front page of the financial plan, the appropriate financial plan number as set out in Schedule A of this licence; and
- 8.1.2 Submit a copy of the financial plan to the Ministry of Municipal Affairs and Housing within three (3) months of receiving approval by a resolution of municipal council or the governing body of the owner.

9.0 Interpretation

- 9.1 Where there is a conflict between the provisions of this licence and any other document, the following hierarchy shall be used to determine the provision that takes precedence:
- 9.1.1 The SDWA;
- 9.1.2 A condition imposed in this licence that explicitly overrides a prescribed regulatory requirement;
- 9.1.3 A condition imposed in the drinking water works permit that explicitly overrides a prescribed regulatory requirement;
- 9.1.4 Any regulation made under the SDWA;
- 9.1.5 Any provision of this licence that does not explicitly override a prescribed regulatory requirement;
- 9.1.6 Any provision of the drinking water works permit that does not explicitly override a prescribed regulatory requirement;
- 9.1.7 Any application documents listed in this licence, or the drinking water works permit from the most recent to the earliest; and

- 9.1.8 All other documents listed in this licence, or the drinking water works permit from the most recent to the earliest.
- 9.1.9 Any other technical bulletin or procedure issued by the Ministry from the most recent to the earliest.
- 9.2** If any requirement of this licence or the drinking water works permit is found to be invalid by a court of competent jurisdiction, the remaining requirements of this licence and the drinking water works permit shall continue to apply.
- 9.3** The issuance of and compliance with the conditions of this licence and the drinking water works permit does not:
- 9.3.1 Relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including the *Environmental Assessment Act*, R.S.O. 1990, c. E.18; and
- 9.3.2 Limit in any way the authority of the appointed Directors and provincial officers of the Ministry to require certain steps be taken or to require the owner to furnish any further information related to compliance with the conditions of this licence or the drinking water works permit.
- 9.4** For greater certainty, nothing in this licence or the drinking water works permit shall be read to provide relief from regulatory requirements in accordance with section 46 of the SDWA, except as expressly provided in the licence or the drinking water works permit.

10.0 Adverse Effects

- 10.1** Nothing in this licence or the drinking water works permit shall be read as to permit:
- 10.1.1 The discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect; or
- 10.1.2 The discharge of any material of any kind into or in any waters or on any shore or bank thereof or into or in any place that may impair the quality of the water of any waters.
- 10.2** All reasonable steps shall be taken to minimize and ameliorate any adverse effect on the natural environment or impairment of the quality of water of any waters resulting from the operation of the drinking water system including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.
- 10.3** Fulfillment of one or more conditions imposed by this licence or the drinking water works permit does not eliminate the requirement to fulfill any other condition of this licence or the drinking water works permit.

11.0 Change of Owner or Operating Authority

- 11.1 This licence is not transferable without the prior written consent of the Director.
- 11.2 The owner shall notify the Director in writing at least 30 days prior to a change of any operating authority identified in Schedule A of this licence.
- 11.2.1 Where the change of operating authority is the result of an emergency situation, the owner shall notify the Director in writing of the change as soon as practicable.

12.0 Information to be Provided

- 12.1 Any information requested by a Director or a provincial officer concerning the drinking water system and its operation, including but not limited to any records required to be kept by this licence or the drinking water works permit, shall be provided upon request.

13.0 Records Retention

- 13.1 Except as otherwise required in this licence or the drinking water works permit, any records required by or created in accordance with this licence or the drinking water works permit, other than the records specifically referenced in section 12 or section 13 of O. Reg. 170/03, shall be retained for at least 5 years and made available for inspection by a provincial officer, upon request.

14.0 Chemicals and Materials

- 14.1 All chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety criteria standards NSF/60, NSF/61 and NSF/372.
- 14.1.1 In the event that the standards are updated, the owner may request authorization from the Director to use any on hand chemicals and materials that previously met the applicable standards.
- 14.2 The most current chemical and material product registration documentation from a testing institution accredited by either the Standards Council of Canada or by the American National Standards Institution ("ANSI") shall be available at all times for each chemical and material used in the operation of the drinking water system that comes into contact with water within the system.
- 14.3 Conditions 14.1 and 14.2 do not apply in the case of the following:
- 14.3.1 Water pipe and pipe fittings meeting AWWA specifications made from ductile iron, cast iron, PVC, fibre and/or steel wire reinforced cement pipe or high density polyethylene (HDPE);
- 14.3.2 Articles made from stainless steel, glass, HDPE or Teflon®;

- 14.3.3 Cement mortar for watermain lining and for water contacting surfaces of concrete structures made from washed aggregates and Portland cement;
- 14.3.4 Gaskets that are made from NSF approved materials;
- 14.3.5 Food grade oils and lubricants, food grade anti-freeze, and other food grade chemicals and materials that are compatible for drinking water use that may come into contact with drinking water, but are not added directly to the drinking water; or
- 14.3.6 Any particular chemical or material where the owner has written documentation signed by the Director that indicates that the Ministry is satisfied that the chemical or material is acceptable for use within the drinking water system and the chemical or material is only used as permitted by the documentation.

15.0 Drawings

- 15.1 All drawings and diagrams in the possession of the owner that show any treatment subsystem as constructed shall be retained by the owner unless the drawings and diagrams are replaced by a revised or updated version showing the subsystem as constructed subsequent to the alteration.
- 15.2 Any alteration to any treatment subsystem shall be incorporated into process flow diagrams, process and instrumentation diagrams, and record drawings and diagrams within one year of the alteration being completed or placed into service.
- 15.3 Process flow diagrams and process and instrumentation diagrams for any treatment subsystem shall be kept in a place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system.

16.0 Operations and Maintenance Manual

- 16.1 An up-to-date operations and maintenance manual or manuals shall be maintained and applicable parts of the manual or manuals shall be made available for reference to all persons responsible for all or part of the operation or maintenance of the drinking water system.
- 16.2 The operations and maintenance manual or manuals, shall include at a minimum:
 - 16.2.1 The requirements of this licence and associated procedures;
 - 16.2.2 The requirements of the drinking water works permit for the drinking water system;
 - 16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system including where applicable:
 - a) A copy of the CT calculations that were used as the basis for primary disinfection under worst case operating conditions and other operating conditions, if applicable; and

- b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;
- 16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;
 - 16.2.5 Procedures for the operation and maintenance of monitoring equipment;
 - 16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;
 - 16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint;
- 16.3** Procedures necessary for the operation and maintenance of any alterations to the drinking water system shall be incorporated into the operations and maintenance manual or manuals prior to those alterations coming into operation.
- 16.4** All of the procedures included or referenced within the operations and maintenance manual must be implemented.

Schedule C: System-Specific Conditions

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	March 31, 2021

1.0 System Performance

Rated Capacity

- 1.1** For each treatment subsystem listed in column 1 of Table 1, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the value identified as the rated capacity in column 2 of the same row.

Table 1: Rated Capacity	
Column 1 Treatment Subsystem Name	Column 2 Rated Capacity (m ³ /day)
Walter E. Prentice Water Filtration Plant and Distribution System	10,340

Maximum Flow Rates

- 1.2** For each treatment subsystem listed in column 1 of Table 2, the maximum flow rate of water that flows into a treatment subsystem component listed in column 2 shall not exceed the value listed in column 3 of the same row.

Table 2: Maximum Flow Rates		
Column 1 Treatment Subsystem Name	Column 2 Treatment Subsystem Component	Column 3 Maximum Flow Rate (L/s)
Not Applicable	Not Applicable	Not Applicable

- 1.3** Despite conditions 1.1 and 1.2, a treatment subsystem may be operated temporarily at a maximum daily volume and/or a maximum flow rate above the values set out in column 2 of Table 1 and column 3 of Table 2 respectively for the purposes of fighting a large fire or for the maintenance of the drinking water system.
- 1.4** Condition 1.3 does not authorize the discharge into the distribution system of any water that does not meet all of the requirements of this licence and all other regulatory requirements, including compliance with the Ontario Drinking Water Quality Standards.

Residuals Management

- 1.5** In respect of an effluent discharged into the natural environment from a treatment subsystem or treatment subsystem component listed in column 1 of Table 3:
- 1.5.1 The annual average concentration of a test parameter identified in column 2 shall:
- a) not exceed the value in column 3 of the same row; and
 - b) be calculated at least once monthly as the running annual average based on the previous twelve months of results;
- 1.5.2 Where the average concentration of a test parameter identified in column 2 exceeds the value in column 3, the concentration shall be reported to the local Ministry district office within 72 hours of receipt of the last lab result used in the calculation;
- 1.5.3 The maximum concentration of a test parameter identified in column 2 shall not exceed the value in column 4 of the same row;
- 1.5.4 Where the maximum concentration of a test parameter identified in column 2 exceeds the value in column 4, the discharge shall be reported in accordance with s.13.2 of O. Reg. 675.98 and recorded in accordance with s.12.2 of O. Reg. 675.98 within 24 hours of receipt of the lab result; and,
- 1.5.5 The test parameters listed in column 2 of Table 3 shall be sampled in accordance with conditions 5.2, 5.3 and 5.4 of Schedule C in this Licence.

Table 3: Residuals Management			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Annual Average Concentration (mg/L)	Column 4 Maximum Concentration (mg/L)
Walter E. Prentice Water Filtration Plant and Distribution System – Filter backwash wastewater Residuals treatment	Annual average concentration of suspended solids in the effluent discharged from the filters backwash wastewater facilities	25	25
	Chlorine Residual	0.02	
Walter E. Prentice Water Filtration Plant and Distribution System – Actiflo Residuals treatment	Annual average concentration of suspended solids in the effluent discharged from the Actiflo Residuals treatment tank	25	25

UV Disinfection Equipment Performance

- 1.6** For each treatment subsystem or treatment subsystem component listed in column 1 of Table 4, and while directing water to the distribution system and being used to meet pathogen log removal/inactivation credits specified in Schedule E:
- 1.6.1 The UV disinfection equipment shall be operated within the validated limits for the equipment at all times such that a continuous pass-through UV dose is maintained throughout the life time of the UV lamp(s) that is at least the minimum continuous pass-through UV dose set out in column 2 of the same row
- 1.6.2 In addition to any other sampling, analysis and recording that may be required, the ultraviolet light disinfection equipment shall test for the test parameters set out in column 4 of the same row at a testing frequency of once every five (5) minutes or less and record the test data at a recording frequency of once every four (4) hours or less;
- 1.6.3 If there is a UV disinfection equipment alarm signaling that the disinfection equipment is malfunctioning, has lost power, or is not providing the appropriate level of disinfection the test parameters set out in column 4 of the same row shall be recorded at a recording frequency of once every five minutes or less until the alarm condition has been corrected;
- 1.6.4 A monthly summary report shall be prepared at the end of each calendar month which sets out the time, date and duration of each UV equipment alarm described in condition 1.6.3, the volume of water treated during each alarm period and the actions taken by the operating authority to correct the alarm situation;

Table 4: UV Disinfection Equipment			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Minimum Continuous Pass-Through UV Dose (mJ/cm²)	Column 3 Control Strategy	Column 4 Test Parameter
Not applicable	Not applicable	Not applicable	Not applicable

2.0 Flow Measurement and Recording Requirements

- 2.1** For each treatment subsystem identified in column 1 of Table 1 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for:
- 2.1.1 The flow rate (L/s) and daily volume (m³/day) of treated water that flows from the treatment subsystem to the distribution system.
- 2.1.2 The flow rate (L/s) and daily volume (m³/day) of water that flows into the treatment subsystem.

- 2.2** For each treatment subsystem component identified in column 2 of Table 2 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for the flow rate and daily volume of water that flows into the treatment subsystem component.
- 2.3** Where a rated capacity from Table 1 or a maximum flow rate from Table 2 is exceeded, the following shall be recorded:
- 2.3.1 The difference between the measured amount and the applicable rated capacity or maximum flow rate specified in Table 1 or Table 2;
 - 2.3.2 The time and date of the measurement;
 - 2.3.3 The reason for the exceedance; and
 - 2.3.4 The duration of time that lapses between the applicable rated capacity or maximum flow rate first being exceeded and the next measurement where the applicable rated capacity or maximum flow rate is no longer exceeded.

3.0 Calibration of Flow Measuring Devices

- 3.1** All flow measuring devices that are required by regulation, by a condition in the drinking water works permit 170-201, or by a condition otherwise imposed by the Ministry, shall be checked and where necessary calibrated in accordance with the manufacturer's instructions.
- 3.2** If the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and where necessary calibrated at least once every 12 months during which the drinking water system is in operation.
- 3.2.1 For greater certainty, if condition 3.2 applies, the equipment shall be checked and where necessary calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

4.0 Calibration of CT Monitoring System

- 4.1** Any measuring instrumentation that forms part of the monitoring system for CT shall be checked and where necessary calibrated at least once every 12 months during which the drinking water system is in operation, or more frequently in accordance with the manufacturer's instructions.
- 4.1.1 For greater certainty, if condition 4.1 applies, the instrumentation shall be checked and where necessary calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

5.0 Additional Sampling, Testing and Monitoring

Drinking Water Health and Non-Health Related Parameters

- 5.1** For each treatment subsystem or treatment subsystem component identified in column 1 of Tables 5 and 6 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 at the sampling frequency listed in column 3 and at the monitoring location listed in column 4 of the same row.

Table 5: Drinking Water Health Related Parameters			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sampling Frequency	Column 4 Monitoring Location
Walter E. Prentice Water Filtration Plant and Distribution System	Benzo(a)pyrene	Quarterly	Point of entrance to distribution system
	Nitrosodimethylamine (NDMA)	Quarterly	Farthest point in the distribution system

Table 6: Drinking Water Non-Health Related Parameters			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sampling Frequency	Column 4 Monitoring Location
Walter E. Prentice Water Filtration Plant and Distribution System	Total Organic Carbon	Quarterly	Entrance to Distribution System
	Dissolved Organic Carbon	Quarterly	Entrance to Distribution System
	Colour	Quarterly	Entrance to Distribution System

Environmental Discharge Parameters

- 5.2** For each treatment subsystem or treatment subsystem component identified in column 1 of Table 7 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 using the sample type identified in column 3 at the sampling frequency listed in column 4 and at the monitoring location listed in column 5 of the same row.

- 5.3** For the purposes of Table 7:

- 5.3.1** Manual Composite means the mean of at least three grab samples taken during a discharge event, with one sample being taken immediately following the commencement of the discharge event, one sample being taken approximately at the mid-point of the discharge event and one sample being taken immediately before the end of the discharge event; and

5.3.2 Automated Composite means samples must be taken during a discharge event by an automated sampler at a minimum sampling frequency of once per hour.

5.4 Any sampling, testing and monitoring for the test parameter Total Suspended Solids shall be performed in accordance with the requirements set out in the publication "Standard Methods for the Examination of Water and Wastewater", 23rd Edition, 2017, or as amended from time to time by more recently published editions.

Table 7: Environmental Discharge Parameters				
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sample Type	Column 4 Sampling Frequency	Column 5 Monitoring Location
Walter E. Prentice Water Filtration Plant and Distribution System – Filter backwash wastewater Residuals treatment	Suspended Solids (composite)	Composite	Monthly	Point of Discharge – Residue management supernatant discharge sampling port
	Total Chlorine Residual	Grab	Monthly	Point of Discharge – Residue management supernatant discharge sampling port
Walter E. Prentice Water Filtration Plant and Distribution System – Actiflo Residuals treatment	Suspended Solids (composite)	Composite	Monthly	Point of Discharge – Residue management supernatant discharge sampling port

5.5 Pursuant to Condition 10 of Schedule B of this licence, the owner may undertake the following environmental discharges associated with the maintenance and/or repair of the drinking water system:

5.5.1 The discharge of potable water from a watermain to a road or storm sewer;

5.5.2 The discharge of potable water from a water storage facility or pumping station:

a) To a road or storm sewer; or

b) To a watercourse where the discharge has been dechlorinated and if necessary, sediment and erosion control measures have been implemented.

5.5.3 The discharge of dechlorinated non-potable water from a watermain, water storage facility or pumping station to a road or storm sewer;

5.5.4 The discharge of raw water from a groundwater well to the environment where if necessary, sediment and erosion control measures have been implemented; and

5.5.5 The discharge of raw water, potable water or non-potable water from a treatment subsystem to the environment where if necessary, the discharge has been dechlorinated and sediment and erosion control measures have been implemented.

- 5.5.6 The discharge of any excess water to a road, storm sewer or the environment, associated with the management of materials excavated as part of watermain construction or repair, where necessary sediment, erosion and environmental control measures have been implemented.

6.0 Studies Required

Harmful Algal Blooms

- 6.1** The owner shall develop and keep up to date a Harmful Algal Bloom monitoring, reporting and sampling plan, herein known as the “Plan”, to be implemented when a potential harmful algal bloom is suspected or present. The owner shall have the Plan in place on or before September 30, 2021.
- 6.1.1 The owner must have a copy of the Plan available onsite at the drinking water system, for inspection upon request by Ministry staff.
- 6.1.2 The owner must implement the Plan annually during the harmful algal bloom season, during but not limited to the warm seasonal period between June 1 and October 31 each year, or as otherwise directed by the Ministry or the Medical Officer of Health.
- 6.1.3 The owner must train all relevant drinking water system staff on the Plan prior to the beginning of each warm season, as described in Condition 6.1.2.
- 6.2** For clarity, a Harmful Algal Bloom is considered suspected or occurring when:
- 6.2.1 the owner or operating authority has observed an algal bloom:
- a) near the shoreline at or near the source water intake(s) described in drinking water works permit #xxx, or
 - b) where the intake has an Intake Protection Zone in a source protection plan, within IPZ-1, or
 - c) within a circle that has a radius, measured from the intake, equal to the distance from the intake to the farthest edge of IPZ-2.
- 6.2.2 microcystin has been detected in a raw or treated water sample; and/or,
- 6.2.3 the owner has received any form of notification related to an algal bloom from the Ministry, a Medical Officer of Health, or the public; or,
- 6.2.4 the presence of or identification of cyanobacteria has been determined through optical probes or other analytic techniques used by the drinking water system.
- 6.3** The Plan described in condition 6.1 must include, at a minimum:
- 6.3.1 details relating to visual monitoring for harmful algal blooms at or near the drinking water system intake(s),

-
- a) as described in drinking water works permit #xxx, or
 - b) where the intake has an Intake Protection Zone in a source protection plan, within IPZ-1, or
 - c) within a circle that has a radius, measured from the intake, equal to the distance from the intake to the farthest edge of IPZ-2.
- 6.3.2 details relating to visual monitoring of shoreline; this is applicable to drinking water systems where the proximity of the intake(s) may be of concern.
- 6.3.3 details relating to reporting the observed or suspected harmful algal bloom, as described in section 6.2:
- a) to the Overall Responsible Operator(s) and/or Operator(s)-in-Charge if the blooms have been observed or suspected by a duty operator; the Plan shall include wording that directs relevant drinking water staff to follow the instructions provided by the Overall Responsible Operator(s) or the Operator(s)-in-Charge;
 - b) to the medical officer of health; and
 - c) to the local MECP representative and the Ministry's Spills Action Centre.,
- 6.3.4 a sampling plan, including the identification of sample location(s) and frequencies that at a minimum match those described in condition 6.4.
- 6.3.5 triggers that may increase the required sampling frequency;
- 6.3.6 up-to-date records that document staff training on the harmful algal bloom monitoring, reporting, and sampling procedures.
- 6.4** Any water samples collected under Condition 6.3.4 must be:
- 6.4.1 collected, at a minimum, once per week, or as otherwise directed by the Ministry or the medical officer of health;
 - 6.4.2 collected prior to any treatment, if the sample is taken from raw water;
 - 6.4.3 collected at the point of entry into the distribution system, if the sample is taken from treated water;
 - 6.4.4 collected from the shoreline by the drinking water system, if applicable based on Condition 6.3.1;
 - 6.4.5 submitted to a laboratory licensed to perform ELISA testing for total microcystin;
 - 6.4.6 repeatedly collected until 3 consecutive samples have shown non-detection of microcystin and the algal bloom is no longer suspected or visually observed.

6.5 Corrosion Control Implementation

- 6.5.1 The Owner shall implement the Town of Arnprior Corrosion Control Plan dated November 3, 2014 and as amended on December 8, 2016 monitor the effectiveness of the corrosion control measures.
- 6.5.2 The Owner shall prepare an Evaluation Report to assess the effectiveness of the corrosion control measures. The report shall contain the following information in 5.1.3 – 5.1.7, where applicable:
- 6.5.3 A list of all lead results and a summary of any key corrosion control parameter measurements at the point treated water enters the distribution system and premise plumbing with the frequencies identified in Table 1:

Table 1: Monitoring the Effectiveness of Preferred Measures			
Column 1 Parameters	Column 2 Point of Entry	Column 3 Distribution System	Column 4 Residential and Non-Residential Taps
Lead	Quarterly	4 samples minimum, annually	12 samples minimum, annually
Alkalinity	Quarterly	4 samples minimum, annually	12 samples minimum, annually
pH	SCADA (continuous)	4 samples minimum, annually	12 samples minimum, annually
Orthophosphate (and soda ash)	-	1/month ¹	As per Corrosion Control Plan
Other Parameters in Table 6.1 the Ministry's Guidance Document for Corrosion Control Monitoring, dated December 2009.	-	-	-

¹ - Orthophosphate samples to be collected at the Towns Water Pollution Control Centre sample tap.

- 6.5.4 A technical evaluation of the effectiveness of corrosion control measures including:
- Any key milestones of implementation, including equipment malfunction or upset conditions;
 - The ability to maintain operating conditions and inhibitor concentrations, in the distribution system and premise plumbing; and
 - The ability to achieve reduction in lead levels and other corrosion related parameters in the distribution system and premise plumbing.
- 6.5.5 A summary of lead levels and other metals monitored at the following locations, since implementation of corrosion control, and comparison to pre-implementation levels:
- Distribution system;
 - Residential plumbing; and,
 - Non-residential plumbing.

- 6.5.6 An evaluation of secondary impacts as a result of corrosion control implementation of corrosion control measures, including any:
- a) Customer feedback or water quality complaints, since implementation of corrosion control, with analysis of reasons;
 - b) Impacts on secondary disinfection, including biofilm formation; and,
 - c) Impacts on wastewater treatment plants receiving treated water from the owner, including estimates of increases in phosphorous loadings to the receiver, and comparison to effluent limits.
- 6.5.7 A summary of results of all other aspects of the Owner's lead mitigation strategy including:
- a) Lead service line replacement on public and private property;
 - b) Outreach and education, especially to populations vulnerable to lead in drinking water;
 - c) Faucet filter program, and,
 - d) Involvement of public health authorities.
- 6.6** The Corrosion Control Evaluation Report outlined in 5.1.2 shall cover each calendar year, and shall be submitted to the Director by March 31st, annually.
- 6.7** The lead sampling data shall be submitted every 6 months to the Ottawa District Office, no later than 30 days following the previous bi-annual sampling periods.

7.0 Source Protection

- 7.1** The owner of the drinking water system shall implement risk management measures, as appropriate, to manage any potential threat to drinking water that results from the operation of the drinking water system.
- 7.2** The owner of the system shall notify the Director in writing within thirty (30) days of any approved changes to an applicable source protection plan that impact the assessed threat level of a fuel oil system identified in Schedule A of drinking water works permit.
- 7.3** The notification required in condition 7.2 shall include:
- 7.3.1 A description of the changes and their impact on the assessed threat level of the fuel oil system(s); and,
 - 7.3.2 A timeline for re-assessing the threat level and providing the results of the assessment to the Director.

Schedule D: Conditions for Relief from Regulatory Requirements

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	March 31, 2021

No relief from regulatory requirements is authorized by the Director under section 46 of the SDWA in respect of the drinking water system.

Schedule E: Pathogen Log Removal/Inactivation Credits

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	March 31, 2021

1.0 Primary Disinfection Pathogen Log Removal/Inactivation Credits

Arnprior Water Filtration Plant

Madawaska River [SURFACE WATER]

Minimum Log Removal/ Inactivation Required	Cryptosporidium Oocysts	Giardia Cysts ^a	Viruses ^b
Arnprior Water Filtration Plant	2	3	4

^a At least 0.5 log inactivation of Giardia shall be achieved by the disinfection portion of the overall water treatment process.

^b At least 2 log inactivation of viruses shall be achieved by disinfection.

Log Removal/Inactivation Credits Assigned ^c	Cryptosporidium Oocysts	Giardia Cysts	Viruses
Conventional Filtration	2	2.5	2
Chlorination [CT: Clearwell]	-	0.5+	2+

^c Log removal/inactivation credit assignment is based on each treatment process being fully operational and the applicable log removal/inactivation credit assignment criteria being met.

Treatment Component	Log Removal/Inactivation Credit Assignment Criteria
Conventional Filtration	<ol style="list-style-type: none"> 1. A chemical coagulant shall be used at all times when the treatment plant is in operation; 2. Chemical dosages shall be monitored and adjusted in response to variations in raw water quality; 3. Effective backwash procedures shall be maintained including filter-to-waste or an equivalent procedure during filter ripening to ensure that effluent turbidity requirements are met at all times; 4. Filtrate turbidity shall be continuously monitored from each filter; and 5. Performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter.
Chlorination	<ol style="list-style-type: none"> 1. Sampling and testing for free chlorine residual shall be carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario; and 2. At all times, CT provided shall be greater than or equal to the CT required to achieve the log removal credits assigned.
Primary Disinfection Notes	



MUNICIPAL DRINKING WATER LICENCE

Licence Number: 170-101

Issue Number: 8

Pursuant to the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, I hereby issue this municipal drinking water licence under Part V of the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32 to:

Arnprior, The Corporation of the Town of

**105 Elgin St
Arnprior, ON K7S 0A8**

For the following municipal residential drinking water system:

Arnprior Drinking Water System

This municipal drinking water licence includes the following:

Schedule	Description
Schedule A	Drinking Water System Information
Schedule B	General Conditions
Schedule C	System-Specific Conditions
Schedule D	Conditions for Relief from Regulatory Requirements
Schedule E	Pathogen Log Removal/Inactivation Credits

Upon the effective date of this drinking water licence # 170-101, all previously issued versions of licence # 170-101 are revoked and replaced by this licence.

DATED at TORONTO this 24th day of February, 2026

Signature

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act*, 2002

Schedule A: Drinking Water System Information

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	February 24th, 2026

1.0 Licence Information

Licence Issue Date	2026-02-24
Licence Effective Date	2026-02-24
Licence Expiry Date	2031-02-23
Application for Licence Renewal Date	2030-08-24

2.0 Incorporated Documents

The following documents are applicable to the above drinking water system and form part of this licence:

2.1 Drinking Water Works Permit

Drinking Water System Name	Permit Number	Issue Date
Arnprior Drinking Water System	170-201	2026-02-24

2.2 Permits to Take Water

Water Taking Location	Permit Number	Issue Date
Madawaska River	NUMBER P-300-1179150700 Version: 1.0	August 9, 2022

3.0 Financial Plans

The Financial Plan Number for the Financial Plan required to be developed for this drinking water system in accordance with O. Reg. 453/07 shall be:	170-301
Alternately, if one Financial Plan is developed for all drinking water systems owned by the owner, the Financial Plan Number shall be:	170-301A

4.0 Accredited Operating Authority

Drinking Water System or Operational Subsystems	Accredited Operating Authority	Operational Plan No.	Operating Authority No.
Walter E. Prentice Water Filtration Plant and Distribution System	Arnprior, The Corporation Of The Town Of	170-401	170-OA1

Schedule B: General Conditions

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	February 24th, 2026

1.0 Definitions

1.1 Words and phrases not defined in this licence and the associated drinking water works permit shall be given the same meaning as those set out in the SDWA and any regulations made in accordance with that act, unless the context requires otherwise.

1.2 In this licence and the associated drinking water works permit:

“adverse effect”, “contaminant” and “natural environment” shall have the same meanings as in the EPA;

“alteration” may include the following in respect of this drinking water system:

- (a) An addition to the system,
- (b) A modification of the system,
- (c) A replacement of part of the system, and
- (d) An extension of the system;

“Clean Water Act” means the *Clean Water Act*, 2005, S.O. 2006, c. 22.

“compound of concern” means a contaminant described in paragraph 4 subsection 26 (1) of O. Reg. 419/05, namely, a contaminant that is discharged to the air from a component of the drinking water system in an amount that is not negligible;

“CT” means the CT Disinfection Concept, as described in subsection 3.1.1 of the Ministry’s Procedure for Disinfection of Drinking Water in Ontario, dated July 29 2016.

“Director” means a Director appointed pursuant to section 6 of the SDWA for the purposes of Part V of the SDWA;

“Duty” means the unit installed and used in regular operation of the drinking water system. The duty unit is included in determining the design capacity calculation.

“drinking water works permit” means the drinking water works permit for the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

“EPA” means the *Environmental Protection Act*, R.S.O. 1990, c. E.19;

“financial plan” means the financial plan required by O. Reg. 453/07;

“Harmful Algal Bloom (HAB)” means an overgrowth of aquatic algal bacteria that produce or have the potential to produce toxins in the surrounding water, when the algal cells are damaged or die. Such bacteria are harmful to people and animals and include microcystins produced by cyanobacterial blooms.

“licence” means this municipal drinking water licence for the municipal drinking water system identified in Schedule A of this licence;

“licensed engineering practitioner” means a person who holds a licence, limited licence, or temporary licence under the *Ontario Professional Engineers Act* R.S.O. 1990, c. P.28.

“Minister” means the Minister of the Ministry or such other member of the Executive Council as may be assigned the administration of the SDWA under the Executive Council Act, R.S.O. 1990, c. E.25.

“Ministry” means the Ministry of the Minister and includes all employees or other persons acting on its behalf.

“operational plan” means an operational plan developed in accordance with the Director’s Directions – Minimum Requirements for Operational Plans made under the authority of subsection 15(1) of the SDWA;

“owner” means the owner of the drinking water system as identified in Schedule A of this licence;

“OWRA” means the *Ontario Water Resources Act*, R.S.O. 1990, c. 0.40;

“permit to take water” means the permit to take water that is associated with the taking of water for purposes of the operation of the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

“point of impingement” has the same meaning as in section 2 of O. Reg. 419/05 under the EPA;

“point of impingement limit” means the appropriate standard from Schedule 2 or 3 of O. Reg. 419/05 under the EPA and if a standard is not provided for a compound of concern, the concentration set out for the compound of concern in the document titled “Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants”, as amended from time to time and published by the Ministry and available on a government of Ontario website;

“provincial officer” means a provincial officer designated pursuant to section 8 of the SDWA;

“publication NPC-300” means the Ministry publication titled “Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning” dated August 2013, as amended;

“**SCADA system**” means a supervisory control and data acquisition system used for process monitoring, automation, recording and/or reporting within the drinking water system;

“**SDWA**” means the *Safe Drinking Water Act, 2002, S.O. 2002, c. 32*;

“**sensitive receptor**” means any location where routine or normal activities occurring at reasonably expected times would experience adverse effect(s) from a discharge to air from an emergency generator that is a component of the drinking water system, including one or a combination of:

- (a) private residences or public facilities where people sleep (e.g.: single and multi-unit dwellings, nursing homes, hospitals, trailer parks, camping grounds, etc.),
- (b) institutional facilities (e.g.: schools, churches, community centres, day care centres, recreational centres, etc.),
- (c) outdoor public recreational areas (e.g.: trailer parks, play grounds, picnic areas, etc.), and
- (d) other outdoor public areas where there are continuous human activities (e.g.: commercial plazas and office buildings).

“**Spare**” means a separate unit that is not connected and can be installed and placed into operation when the Duty unit is out of service (not operational). The spare should be the same size or larger than the duty unit it may be replacing.

“**Standby**” means a separate unit that is connected for use and operation. The standby unit is available for operation when the duty unit is offline or out of service. The standby unit is not considered in determining the design capacity calculation, but should be the same size or larger than the duty unit it may be replacing.

“**sub-system**” has the same meaning as in Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts) under the SDWA;

“**surface water**” means water bodies (lakes, wetlands, ponds - including dug-outs), water courses (rivers, streams, water-filled drainage ditches), infiltration trenches, and areas of seasonal wetlands;

“**UV**” means ultraviolet, as in ultraviolet light produced from an ultraviolet reactor.

2.0 Applicability

- 2.1 In addition to any other applicable legal requirements, the drinking water system identified above shall be established, altered and operated in accordance with the conditions of the drinking water works permit and this licence.

3.0 Licence Expiry

- 3.1 This licence expires on the date identified as the licence expiry date in Schedule A of this licence.

4.0 Licence Renewal

- 4.1 Any application to renew this licence shall be made on or before the date identified as the application for licence renewal date set out in Schedule A of this licence.

5.0 Compliance

- 5.1 The owner and operating authority shall ensure that any person authorized to carry out work on or to operate any aspect of the drinking water system has been informed of the SDWA, all applicable regulations made in accordance with that act, the drinking water works permit and this licence and shall take all reasonable measures to ensure any such person complies with the same.

6.0 Licence and Drinking Water Works Permit Availability

- 6.1 At least one copy of this licence and the drinking water works permit shall be stored in such a manner that they are readily viewable by all persons involved in the operation of the drinking water system.

7.0 Permit to Take Water and Drinking Water Works Permit

- 7.1 A permit to take water identified in Schedule A of this licence is the applicable permit on the date identified as the Effective Date of this licence.
- 7.2 A drinking water works permit identified in Schedule A of this licence is the applicable permit on the date identified as the Effective Date of this licence.

8.0 Financial Plan

- 8.1 For every financial plan prepared in accordance with subsections 2(1) and 3(1) of O. Reg. 453/07, the owner of the drinking water system shall:
- 8.1.1 Ensure that the financial plan contains on the front page of the financial plan, the appropriate financial plan number as set out in Schedule A of this licence; and
- 8.1.2 Submit a copy of the financial plan to the Ministry of Municipal Affairs and Housing within three (3) months of receiving approval by a resolution of municipal council or the governing body of the owner.

9.0 Interpretation

- 9.1 Where there is a conflict between the provisions of this licence and any other document, the following hierarchy shall be used to determine the provision that takes precedence:
- 9.1.1 The SDWA;
- 9.1.2 A condition imposed in this licence that explicitly overrides a prescribed regulatory requirement;
- 9.1.3 A condition imposed in the drinking water works permit that explicitly overrides a prescribed regulatory requirement;
- 9.1.4 Any regulation made under the SDWA;

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- 9.1.5 Any provision of this licence that does not explicitly override a prescribed regulatory requirement;
- 9.1.6 Any provision of the drinking water works permit that does not explicitly override a prescribed regulatory requirement;
- 9.1.7 Any application documents listed in this licence, or the drinking water works permit from the most recent to the earliest; and
- 9.1.8 All other documents listed in this licence, or the drinking water works permit from the most recent to the earliest.
- 9.1.9 Any other technical bulletin or procedure issued by the Ministry from the most recent to the earliest.
- 9.2** If any requirement of this licence or the drinking water works permit is found to be invalid by a court of competent jurisdiction, the remaining requirements of this licence and the drinking water works permit shall continue to apply.
- 9.3** The issuance of and compliance with the conditions of this licence and the drinking water works permit does not:
- 9.3.1 Relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including the *Environmental Assessment Act*, R.S.O. 1990, c. E.18; and
- 9.3.2 Limit in any way the authority of the appointed Directors and provincial officers of the Ministry to require certain steps be taken or to require the owner to furnish any further information related to compliance with the conditions of this licence or the drinking water works permit.
- 9.4** For greater certainty, nothing in this licence or the drinking water works permit shall be read to provide relief from regulatory requirements in accordance with section 46 of the SDWA, except as expressly provided in the licence or the drinking water works permit.

10.0 Adverse Effects

- 10.1** Nothing in this licence or the drinking water works permit shall be read as to permit:
- 10.1.1 The discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect; or
- 10.1.2 The discharge of any material of any kind into or in any waters or on any shore or bank thereof or into or in any place that may impair the quality of the water of any waters.
- 10.2** All reasonable steps shall be taken to minimize and ameliorate any adverse effect on the natural environment or impairment of the quality of water of any waters resulting from the operation of the drinking water system including such accelerated or additional

monitoring as may be necessary to determine the nature and extent of the effect or impairment.

- 10.3** Fulfillment of one or more conditions imposed by this licence or the drinking water works permit does not eliminate the requirement to fulfill any other condition of this licence or the drinking water works permit.

11.0 Change of Owner or Operating Authority

- 11.1** This licence is not transferable without the prior written consent of the Director.
- 11.2** The owner shall notify the Director in writing at least 30 days prior to a change of any operating authority identified in Schedule A of this licence.
- 11.2.1 Where the change of operating authority is the result of an emergency situation, the owner shall notify the Director in writing of the change as soon as practicable.

12.0 Information to be Provided

- 12.1** Any information requested by a Director or a provincial officer concerning the drinking water system and its operation, including but not limited to any records required to be kept by this licence or the drinking water works permit, shall be provided upon request and in a timeframe outlined by the Director or a provincial officer.

13.0 Records Retention

- 13.1** Except as otherwise required in this licence or the drinking water works permit, any records required by or created in accordance with this licence or the drinking water works permit, other than the records specifically referenced in section 12 or section 13 of O. Reg. 170/03, shall be retained for at least 5 years and made available for inspection by a provincial officer, upon request.

14.0 Chemicals and Materials

- 14.1** All chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety criteria standards NSF/14, NSF/60, NSF/61 and NSF/372.
- 14.1.1 In the event that the standards are updated, the owner may request authorization from the Director to use any on hand chemicals and materials that previously met the applicable standards.
- 14.2** The most current chemical and material product registration documentation from a testing institution accredited by either the Standards Council of Canada or by the American National Standards Institution ("ANSI") shall be available at all times for each chemical and material used in the operation of the drinking water system that comes into contact with water within the system.

- 14.3** Conditions 14.1 and 14.2 do not apply in the case of the following:
- 14.3.1 Water pipe and pipe fittings meeting AWWA specifications made from ductile iron, cast iron, PVC, fibre and/or steel wire reinforced cement pipe or high density polyethylene (HDPE);
 - 14.3.2 Articles made from stainless steel, glass, HDPE or Teflon®;
 - 14.3.3 Cement mortar for watermain lining and for water contacting surfaces of concrete structures made from washed aggregates and Portland cement;
 - 14.3.4 Gaskets that are made from NSF approved materials;
 - 14.3.5 Food grade oils and lubricants, food grade anti-freeze, and other food grade chemicals and materials that are compatible for drinking water use that may come into contact with drinking water, but are not added directly to the drinking water; or
 - 14.3.6 Any particular chemical or material where the owner has written documentation signed by the Director that indicates that the Ministry is satisfied that the chemical or material is acceptable for use within the drinking water system and the chemical or material is only used as permitted by the documentation.

15.0 Drawings

- 15.1** All drawings and diagrams in the possession of the owner that show any treatment subsystem as constructed shall be retained by the owner unless the drawings and diagrams are replaced by a revised or updated version showing the subsystem as constructed subsequent to the alteration.
- 15.2** Any alteration to any treatment subsystem shall be incorporated into process flow diagrams, process and instrumentation diagrams, and record drawings and diagrams within twelve (12) months of the alteration being completed or placed into service.
- 15.3** Process flow diagrams and process and instrumentation diagrams for any treatment subsystem shall be kept in a place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system.

16.0 Operations and Maintenance Manual

- 16.1** An up-to-date operations and maintenance manual or manuals shall be maintained and applicable parts of the manual or manuals shall be made available for reference to all persons responsible for all or part of the operation or maintenance of the drinking water system.
- 16.1.1 For clarity, up-to-date in the context of condition 16.1 means an operations and maintenance manual or manuals that reflects the current procedures in use within the drinking water system.
- 16.2** The operations and maintenance manual or manuals, shall include at a minimum:

- 16.2.1 The requirements of this licence and associated procedures;
- 16.2.2 The requirements of the drinking water works permit for the drinking water system;
- 16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system including where applicable:
- a) A copy of the CT calculations used to ensure that at all times, CT provided shall be greater than or equal to the CT required for the pathogen inactivation; and,
 - b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;
- 16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;
- 16.2.5 Procedures for the operation and maintenance of monitoring equipment;
- 16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;
- 16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint;
- 16.3** Procedures necessary for the operation and maintenance of any alterations to the drinking water system shall be incorporated into the operations and maintenance manual or manuals prior to those alterations coming into operation.

17.0 CT Calculations

Table B1: CT Calculations	
Column 1 Document Title or File Name	Column 2 Version Number and Date
2025 Arnprior - CT Information	July 16, 2025

- 17.1** Any changes to the CT calculations used as the basis for primary disinfection in the drinking water system, described in Table B1 must be:
- 17.1.1 structured to ensure that the provided CT is greater than or equal to the CT (or log inactivation) required for the pathogen inactivation as described in Schedule E of this licence;

- 17.1.2 included in the operations and maintenance manual described in condition 16 of Schedule B in this licence prior to being implemented;
- 17.1.3 reviewed by a Licensed Engineering Practitioner; and,
- 17.1.4 submitted to the Director no later than 30 days after the date that the changes have been implemented.

Schedule C: System-Specific Conditions

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	February 24th, 2026

1.0 System Performance

Rated Capacity

1.1 For each treatment subsystem listed in column 1 of Table 1, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the value identified as the rated capacity in column 2 of the same row.

1.1.1 Despite condition 1.1, where maximum flow rates in Table 2 limit the volume of water that may be treated by the treatment subsystem, the maximum daily volume of treated water that flows from the treatment subsystem listed in column 1 of Table 1 to the distribution system shall not exceed the value identified as the operational capacity in column 3 of the same.

Table 1: Rated Capacity		
Column 1 Treatment Subsystem Name	Column 2 Rated Capacity (m ³ /day)	Column 3 Operational Capacity (m ³ /day)
Walter E. Prentice Water Filtration Plant and Distribution System	10,340	10,340

Maximum Flow Rates

1.2 For each treatment subsystem listed in column 1 of Table 2, the maximum flow rate of water that flows into a treatment subsystem component listed in column 2 shall not exceed the value listed in column 3 of the same row.

Table 2: Maximum Flow Rates		
Column 1 Treatment Subsystem Name	Column 2 Treatment Subsystem Component	Column 3 Maximum Flow Rate (L/s)
Not Applicable	Not Applicable	Not Applicable

1.3 Despite conditions 1.1 and 1.2, a treatment subsystem may be operated temporarily at a maximum daily volume and/or a maximum flow rate above the values set out in column 2 or column 3 of Table 1 and column 3 of Table 2 respectively for the purposes of fighting a large fire or for the maintenance of the drinking water system.

- 1.4 Condition 1.3 does not authorize the discharge into the distribution system of any water that does not meet all of the requirements of this licence and all other regulatory requirements, including compliance with the Ontario Drinking Water Quality Standards.

Residuals Management

- 1.5 In respect of an effluent discharged into the natural environment from a treatment subsystem or treatment subsystem component listed in column 1 of Table 3:
- 1.5.1 The annual average concentration of a test parameter identified in column 2 shall:
- not exceed the value in column 3 of the same row; and
 - be calculated at least once monthly as the running annual average based on the previous twelve months of results;
- 1.5.2 Where the average concentration of a test parameter identified in column 2 exceeds the value in column 3, the concentration shall be reported to the local Ministry district office within 72 hours of receipt of the last lab result used in the calculation;
- 1.5.3 The maximum concentration of a test parameter identified in column 2 shall not exceed the value in column 4 of the same row;
- 1.5.4 Where the maximum concentration of a test parameter identified in column 2 exceeds the value in column 4, the discharge shall be reported in accordance with s.13.2 of O. Reg. 675.98 and recorded in accordance with s.12.2 of O. Reg. 675.98 within 24 hours of receipt of the lab result; and,
- 1.5.5 The test parameters listed in column 2 of Table 3 shall be sampled in accordance with conditions 5.2, 5.3 and 5.4 of Schedule C in this Licence.

Table 3: Residuals Management			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Annual Average Concentration (mg/L)	Column 4 Maximum Concentration (mg/L)
Filter backwash wastewater Residuals treatment	Total Suspended Solids	25	--
	Total Chlorine Residual	0.02	0.1
Actiflo Residuals treatment	Total Suspended Solids	25	--
	Total Chlorine Residual	NA	NA

UV Disinfection Equipment Performance

- 1.6** For each treatment subsystem or treatment subsystem component listed in column 1 of Table 4, and while directing water to the distribution system and being used to meet pathogen log removal/inactivation credits specified in Schedule E:
- 1.6.1 The UV disinfection equipment shall be operated within the validated limits for the equipment at all times such that a continuous pass-through UV dose is maintained throughout the life time of the UV lamp(s) that is at least the minimum continuous pass-through UV dose set out in column 2 of the same row
- 1.6.2 In addition to any other sampling, analysis and recording that may be required, the ultraviolet light disinfection equipment shall test for the test parameters set out in column 4 of the same row at a testing frequency of once every five (5) minutes or less and record the test data at a recording frequency of once every four (4) hours or less;
- 1.6.3 If there is a UV disinfection equipment alarm signaling that the disinfection equipment is malfunctioning, has lost power, or is not providing the appropriate level of disinfection the test parameters set out in column 4 of the same row shall be recorded at a recording frequency of once every five minutes or less until the alarm condition has been corrected;
- 1.6.4 A monthly summary report shall be prepared at the end of each calendar month which sets out the time, date and duration of each UV equipment alarm described in condition 1.6.3, the volume of water treated during each alarm period and the actions taken by the operating authority to correct the alarm situation;

Table 4: UV Disinfection Equipment			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Minimum Continuous Pass-Through UV Dose (mJ/cm²)	Column 3 Control Strategy	Column 4 Test Parameter
Not applicable	Not applicable	Not applicable	Not applicable

Filtration Performance

- 1.7** For each treatment subsystem in column 1 of Table 1 and while the filter effluent line is directing water to the next stage of the treatment process and being used to meet pathogen log removal/inactivation credits specified in Schedule E:
- 1.7.1 Filtrate turbidity shall be continuously monitored from each filter;
- 1.7.2 Continuous monitoring test result data shall be used for the filter performance for filter performance calculations;

- 1.7.3 Filter performance calculations shall be performed at a minimum of once every 72 hours or more frequently if required by the Ministry's Procedure for Disinfection of Drinking Water in Ontario;
 - 1.7.4 If the filter performance calculation result for any individual filter does not meet the percent criterion specified in Schedule E, an adverse water quality report shall be made as per Schedule 16-4 of O. Reg. 170/03 immediately after the calculation and assessment is conducted.
- 1.8** The requirement for the Owner to comply with condition 1.7 shall come into force on March 31, 2027.
- 1.8.1 Prior to transitioning to the requirements set out in condition 1.7, the Owner shall ensure that performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter.
 - 1.8.2 For greater certainty the timeframe described in condition 1.8 is intended to provide a period for transition. Implementation may occur on or before the date indicated in this condition.

2.0 Flow Measurement and Recording Requirements

- 2.1** For each treatment subsystem identified in column 1 of Table 1 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for:
- 2.1.1 The flow rate (L/s) and daily volume (m³/day) of treated water that flows from the treatment subsystem to the distribution system.
 - 2.1.2 The flow rate (L/s) and daily volume (m³/day) of water that flows into the treatment subsystem.
- 2.2** For each treatment subsystem component identified in column 2 of Table 2 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for the flow rate and daily volume of water that flows into the treatment subsystem component.
- 2.3** Where a rated capacity from Table 1 or a maximum flow rate from Table 2 is exceeded, the following shall be recorded:
- 2.3.1 The difference between the measured amount and the applicable rated capacity or maximum flow rate specified in Table 1 or Table 2;
 - 2.3.2 The time and date of the measurement;
 - 2.3.3 The reason for the exceedance; and
 - 2.3.4 The duration of time that lapses between the applicable rated capacity or maximum flow rate first being exceeded and the next measurement where the applicable rated capacity or maximum flow rate is no longer exceeded.

3.0 Calibration of Flow Measuring Devices

- 3.1** All flow measuring devices that are required by regulation, by a condition in the drinking water works permit 170-201, or by a condition otherwise imposed by the Ministry, shall be checked and where necessary calibrated in accordance with the manufacturer's instructions.
- 3.2** If the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and where necessary calibrated at least once every twelve (12) months during which the drinking water system is in operation.
- 3.2.1** For greater certainty, if condition 3.2 applies, the equipment shall be checked and where necessary calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

4.0 Calibration of CT Monitoring System

- 4.1** Any measuring instrumentation that forms part of the monitoring system for CT shall be checked and where necessary calibrated at least once every 12 months during which the drinking water system is in operation, or more frequently in accordance with the manufacturer's instructions.
- 4.1.1** For greater certainty, if condition 4.1 applies, the instrumentation shall be checked and where necessary calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

5.0 Additional Sampling, Testing and Monitoring

Drinking Water Health and Non-Health Related Parameters

- 5.1** For each treatment subsystem or treatment subsystem component identified in column 1 of Tables 5 and 6 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 at the sampling frequency listed in column 3 and at the monitoring location listed in column 4 of the same row.

Table 5: Drinking Water Health Related Parameters			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sampling Frequency	Column 4 Monitoring Location
Walter E. Prentice Water Filtration Plant and Distribution System	Benzo(a)pyrene	Quarterly	Point of entrance to distribution system
	Nitrosodimethylamine (NDMA)	Quarterly	Farthest point in the distribution system

Table 6: Drinking Water Non-Health Related Parameters			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sampling Frequency	Column 4 Monitoring Location
Walter E. Prentice Water Filtration Plant and Distribution System	Total Organic Carbon	Quarterly	Entrance to Distribution System
	Dissolved Organic Carbon	Quarterly	Entrance to Distribution System
	Colour	Quarterly	Entrance to Distribution System

Environmental Discharge Parameters

- 5.2** For each treatment subsystem or treatment subsystem component identified in column 1 of Table 7 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 using the sample type identified in column 3 at the sampling frequency listed in column 4 and at the monitoring location listed in column 5 of the same row.
- 5.3** For the purposes of Table 7:
- 5.3.1 Manual Composite means the mean of at least three grab samples taken during a discharge event, with one sample being taken immediately following the commencement of the discharge event, one sample being taken approximately at the mid-point of the discharge event and one sample being taken immediately before the end of the discharge event; and
- 5.3.2 Automated Composite means samples must be taken during a discharge event by an automated sampler at a minimum sampling frequency of once per hour.
- 5.4** Any sampling, testing and monitoring for the test parameter Total Suspended Solids shall be performed in accordance with the requirements set out in the publication "Standard Methods for the Examination of Water and Wastewater", 23rd Edition, 2017, or as amended from time to time by more recently published editions.

Table 7: Environmental Discharge Parameters

Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sample Type	Column 4 Sampling Frequency	Column 5 Monitoring Location
Filter backwash wastewater Residuals treatment	Suspended Solids (composite)	Composite	Monthly	Point of Discharge – Residue management supernatant discharge sampling port
	Total Chlorine Residual	Grab	Monthly	Point of Discharge – Residue management supernatant discharge sampling port
Actiflo Residuals treatment	Suspended Solids (composite)	Composite	Monthly	Point of Discharge – Residue management supernatant discharge sampling port

5.5 Pursuant to Condition 10 of Schedule B of this licence, the owner may undertake the following environmental discharges associated with the maintenance and/or repair of the drinking water system:

- 5.5.1 The discharge of potable water from a watermain to a road or storm sewer;
- 5.5.2 The discharge of potable water from a water storage facility or pumping station:
- a) To a road or storm sewer; or
 - b) To a watercourse where the discharge has been dechlorinated and if necessary, sediment and erosion control measures have been implemented.
- 5.5.3 The discharge of dechlorinated non-potable water from a watermain, water storage facility or pumping station to a road or storm sewer;
- 5.5.4 The discharge of raw water from a groundwater well to the environment where if necessary, sediment and erosion control measures have been implemented; and
- 5.5.5 The discharge of raw water, potable water or non-potable water from a treatment subsystem to the environment where if necessary, the discharge has been dechlorinated and sediment and erosion control measures have been implemented.
- 5.5.6 The discharge of any excess water to a road, storm sewer or the environment, associated with the management of materials excavated as part of watermain construction or repair, where necessary sediment, erosion and environmental control measures have been implemented.

6.0 Studies Required

6.1 Not Applicable

7.0 Harmful Algal Blooms

7.1 The owner shall develop and keep up to date a Harmful Algal Bloom Monitoring, Reporting and Sampling Plan (herein known as the "Plan") that, at a minimum:

7.1.1 Meets the requirements set out in the Ministry document titled "Harmful Algal Bloom Guide for Owners and Operators of Municipal Residential Drinking Water Systems", dated January 29, 2024;

7.1.2 Is updated within 12 months of any update to the guide described in condition 7.1.1;

7.1.3 Is maintained in a format that is available onsite at the drinking water system, for inspection upon request by Ministry staff; and,

7.1.4 Is implemented each year for the period identified within the Plan.

7.2 The owner must ensure that all relevant drinking water system staff are provided with training on the Plan each year, prior to the period described in the Plan.

7.3 When a Harmful Algal Bloom is suspected or occurring:

7.3.1 Water samples must be:

a) Collected at least once per week from locations identified in the Plan, or otherwise as directed by the Ministry or the medical officer of health;

b) Repeatedly collected until 3 consecutive samples have shown non-detection of microcystin and the algal bloom is no longer suspected or visually observed; and,

c) Submitted to a laboratory licensed to perform ELISA testing for total microcystin

7.3.2 The bloom must be reported to the local medical officer of health and the Ministry in accordance with procedures outlined in the Plan.

7.4 Corrosion Control Implementation

7.4.1 The Owner shall implement the Town of Arnprior Corrosion Control Plan dated November 3, 2014 and as amended on December 8, 2016 monitor the effectiveness of the corrosion control measures.

7.4.2 The Owner shall prepare an Evaluation Report to assess the effectiveness of the corrosion control measures. The report shall contain the following information in 5.1.3 – 5.1.7, where applicable:

- 7.4.3 A list of all lead results and a summary of any key corrosion control parameter measurements at the point treated water enters the distribution system and premise plumbing with the frequencies identified in Table 1:

Table 1: Monitoring the Effectiveness of Preferred Measures			
Column 1 Parameters	Column 2 Point of Entry	Column 3 Distribution System	Column 4 Residential and Non-Residential Taps
Lead	Quarterly	4 samples minimum, annually	12 samples minimum, annually
Alkalinity	Quarterly	4 samples minimum, annually	12 samples minimum, annually
pH	SCADA (continuous)	4 samples minimum, annually	12 samples minimum, annually
Orthophosphate (and soda ash)	-	1/month ¹	As per Corrosion Control Plan
Other Parameters in Table 6.1 the Ministry's Guidance Document for Corrosion Control Monitoring, dated December 2009.	-	-	-

¹ - Orthophosphate samples to be collected at the Towns Water Pollution Control Centre sample tap.

- 7.4.4 A technical evaluation of the effectiveness of corrosion control measures including:
- Any key milestones of implementation, including equipment malfunction or upset conditions;
 - The ability to maintain operating conditions and inhibitor concentrations, in the distribution system and premise plumbing; and
 - The ability to achieve reduction in lead levels and other corrosion related parameters in the distribution system and premise plumbing.
- 7.4.5 A summary of lead levels and other metals monitored at the following locations, since implementation of corrosion control, and comparison to pre-implementation levels:
- Distribution system;
 - Residential plumbing; and,
 - Non-residential plumbing.
- 7.4.6 An evaluation of secondary impacts as a result of corrosion control implementation of corrosion control measures, including any:
- Customer feedback or water quality complaints, since implementation of corrosion control, with analysis of reasons;
 - Impacts on secondary disinfection, including biofilm formation; and,

- c) Impacts on wastewater treatment plants receiving treated water from the owner, including estimates of increases in phosphorous loadings to the receiver, and comparison to effluent limits.
- 7.4.7 A summary of results of all other aspects of the Owner's lead mitigation strategy including:
- a) Lead service line replacement on public and private property;
 - b) Outreach and education, especially to populations vulnerable to lead in drinking water;
 - c) Faucet filter program, and,
 - d) Involvement of public health authorities.
- 7.5 The Corrosion Control Evaluation Report outlined in 5.1.2 shall cover each calendar year, and shall be submitted to the Director by March 31st, annually.
- 7.6 The lead sampling data shall be submitted every 6 months to the Ottawa District Office, no later than 30 days following the previous bi-annual sampling periods.

8.0 Source Protection

- 8.1 The Owner shall implement risk management measures, as appropriate, to manage any potential threat to drinking water that results from the operation of the drinking water system.
- 8.2 Where the drinking water system, or a portion thereof, is located in a source protection area as defined in the *Clean Water Act, 2006*, the owner shall prepare an "Assessment of Fuel Storage and Handling" (the "Assessment") on or before March 30, 2027.
- 8.3 At a minimum, the Assessment shall:
- 8.3.1 Identify all locations that are part of drinking water system where fuel is stored or handled within a well head protection area (WHPA) or intake protection zone (IPZ), as identified in the ministry's Source Protection Information Atlas (SPIA) mapping tool.
 - 8.3.2 For each location identified under 8.3.1, document an evaluation of the fuel storage or handling for the purposes of determining if the fuel storage or handling is a Significant Drinking Water Threat by using the SPIA, the latest Technical Rules under the *Clean Water Act, 2006* and in particular, the tables of drinking water quality threats, having regard to the circumstances set out in the table and the vulnerability score of each fuel storage or handling location in the WHPA or IPZ.
 - 8.3.3 Having regard to conditions 8.8, 8.9 and 8.10, determine and document the risk management measures that shall be implemented in respect of each fuel storage or handling location mentioned in condition 8.3.2 that is determined to be a Significant Drinking Water Threat.

- 8.4** If the Owner proposes to make alterations to the drinking water system authorized in Schedule B of the drinking water works permit that would result in any new or modified fuel storage or handling that is part of the drinking water system, the Owner shall, before making the alteration, ensure that the new or modified fuel storage or handling is identified and evaluated in accordance with conditions 8.3.1, 8.3.2 and 8.3.3, and the Assessment is updated accordingly.
- 8.5** The owner shall review the Assessment at least once every twelve (12) months and:
- 8.5.1 If the Technical Rules under the *Clean Water Act, 2006*, the delineation of any WHPA or IPZ in the source protection area, or any applicable source protection plan policies have changed since the Assessment was last reviewed under this condition, identify and evaluate fuel storage or handling in accordance with conditions 8.3.1, 8.3.2 and 8.3.3 and update the Assessment accordingly.
- 8.5.2 Record the date that the review was completed and outcome(s) of the review.
- 8.6** The owner shall notify the Director in writing within thirty (30) days of preparing or updating an Assessment that identifies or changes one or more fuel storage or handling Significant Drinking Water Threats.
- 8.7** The notification required in condition 8.6 shall:
- 8.7.1 list new location(s) where fuel storage or handling has been identified as a Significant Drinking Water Threat;
- 8.7.2 list the locations where existing fuel storage or handling has become or is no longer a Significant Drinking Water Threat; and,
- 8.7.3 be submitted using the "Director Notification Form" published by the Ministry.
- 8.8** Where fuel storage or handling is identified as a Significant Drinking Water Threat, the owner shall implement risk management measures for the fuel oil storage systems that ensure fuel is appropriately stored and managed to protect the raw water source of supply for the drinking water system or subsystem.
- The measures shall include the following:
- 8.8.1 The storage tank(s) associated with the fuel oil systems shall be inspected at least once every twelve months, or more frequently as recommended by the manufacturer or required by the Technical Standards and Safety Act (TSSA) 2000, and applicable regulations, codes and standards.
- 8.8.2 the inspection required by condition 8.8.1 shall be performed by a person certified for that purpose under the TSSA and shall include, at a minimum,
- 8.8.3 Visual inspection of the fuel oil tank, tubing, and piping for leaks;
- 8.8.4 Where the tank is below grade (underground), visible components of the tank should be inspected, including the fill pipe and vent;

- 8.8.5 Visual inspection of any grade-level secondary containment;
 - 8.8.6 Inspection of any equipment installed to monitor or measure fuel levels;
 - 8.8.7 Inspection of any cut-off or control valves and associated equipment;
 - 8.8.8 Visual inspection of any fuel pumps and/or sumps and testing of such devices for proper operation;
 - 8.8.9 Inspection of any installed corrosion protection systems;
 - 8.8.10 Testing for water at the bottom of storage tanks that are not bottom outlet tanks; and,
 - 8.8.11 Inspection of any installed electronic or mechanical leak-detection equipment.
- 8.9** A record of the inspections performed in accordance with condition 8.8.1 and a record of any associated repairs, maintenance or upgrades shall be kept on-site and available for review by ministry staff.
- 8.10** Spill or leak detection and spill response procedures shall be incorporated into the Operations and Maintenance Manual required under condition 16 of this licence.
- 8.11** Where the local source protection plan outlines risk management measures for fuel storage or handling in addition to those identified in 8.8, the measures identified in the source protection plan shall also be implemented.
- 8.12** The owner shall undertake alterations and develop operating procedures as appropriate to ensure that the storage and handling of fuel is adequately managed to protect the source of drinking water.

Schedule D: Conditions for Relief from Regulatory Requirements

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	March 31, 2021

No relief from regulatory requirements is authorized by the Director under section 46 of the SDWA in respect of the drinking water system.

1.0 Continuous Monitoring

- 1.1 Notwithstanding the requirements of O. Reg. 170/03 and the table to Schedule 6, the last column (Minimum Alarm Standard), items 1 and 2 shall be changed from:

“0.1 milligrams per litre *less* than the concentration of free chlorine residual that is required to achieve primary disinfection”, to:

”at least 0.1 milligrams per litre *greater* than the concentration of free chlorine residual that is required to achieve primary disinfection”

2.0 Chlorine Residual in the Distribution System

- 2.1 Where a chlorine residual below the values set out in s.1-2(2)(4) of Schedule 1 of O. Reg. 170/03 is identified at a location within the distribution system and:

- 2.1.1 the drinking water system's water treatment equipment is confirmed to be operating effectively;
- 2.1.2 any adverse result is reported in accordance with s.16-3(1)(4) or s.16-3(1)(5) in Schedule 16 of O. Reg. 170/03;
- 2.1.3 the operator undertakes corrective action required by s.17-4 in Schedule 17 or s.18-4 in Schedule 18 of O. Reg. 170/03; and
- 2.1.4 actions are taken to prevent reoccurrence(s) of low chlorine residual results at the location,

the owner shall be deemed not to have contravened s.1-2(2)(4) in Schedule 1 of O. Reg. 170/03.

- 2.2 For clarity, actions taken under condition 2.1 d) may include but are not limited to implementation of a flushing program, enhancement of an existing flushing program, or infrastructure upgrades.

Schedule E: Pathogen Log Removal/Inactivation Credits

System Owner	Arnprior, The Corporation of the Town of
Licence Number	170-101
Drinking Water System Name	Arnprior Drinking Water System
Licence Effective Date	February 24th, 2026

1.0 Primary Disinfection Pathogen Log Removal/Inactivation Credits

Arnprior Water Filtration Plant

Madawaska River [SURFACE WATER]

Minimum Log Removal/ Inactivation Required	Cryptosporidium Oocysts	Giardia Cysts ^a	Viruses ^b
Arnprior Water Filtration Plant	2	3	4

^a At least 0.5 log inactivation of Giardia shall be achieved by the disinfection portion of the overall water treatment process.

^b At least 2 log inactivation of viruses shall be achieved by disinfection.

Log Removal/Inactivation Credits Assigned ^c	Cryptosporidium Oocysts	Giardia Cysts	Viruses
Conventional Filtration	2	2.5	2
Chlorination [CT: Clearwell]	-	0.5+	2+

^c Log removal/inactivation credit assignment is based on each treatment process being fully operational and the applicable log removal/inactivation credit assignment criteria being met.

Treatment Component	Log Removal/Inactivation Credit Assignment Criteria
Conventional Filtration	<ol style="list-style-type: none"> 1. A chemical coagulant shall be used at all times when the treatment plant is in operation; 2. Chemical dosages shall be monitored and adjusted in response to variations in raw water quality; 3. Effective backwash procedures shall be maintained including filter-to-waste or an equivalent procedure during filter ripening to ensure that effluent turbidity requirements are met at all times; 4. Filtrate turbidity shall be continuously monitored from each filter; and 5. Performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements shall be met for each filter.
Chlorination	<ol style="list-style-type: none"> 1. Sampling and testing for free chlorine residual shall be carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario; and 2. At all times, CT provided shall be greater than or equal to the CT required to achieve the log removal credits assigned.
Primary Disinfection Notes	



DRINKING WATER WORKS PERMIT

Permit Number: 170-201

Issue Number: 4

Pursuant to the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, I hereby issue this drinking water works permit under Part V of the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32 to:

Arnprior, The Corporation of the Town of

**105 Elgin St
Arnprior, ON K7S 0A8**

For the following municipal residential drinking water system:

Arnprior Drinking Water System

This drinking water works permit includes the following:

Schedule	Description
Schedule A	Drinking Water System Description
Schedule B	General
Schedule C	All documents issued as Schedule C to this drinking water works permit which authorize alterations to the drinking water system
Schedule D	Process Flow Diagrams

Upon the effective date of this drinking water works permit #170-201, all previously issued versions of permit #170-201 are revoked and replaced by this permit.

DATED at TORONTO this 24th day of February, 2026

Signature

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act, 2002*

Schedule A: Drinking Water System Description

System Owner	Arnprior, The Corporation of the Town of
Permit Number	170-201
Drinking Water System Name	Arnprior Drinking Water System
Permit Effective Date	February 24th, 2026

1.0 System Description

- 1.1 The following is a summary description of the works comprising the above drinking water system:

Overview

The **Arnprior Drinking Water System** consists of 1 drinking water treatment plant serving approximately a population of 9,890. The source is the Madawaska River. This system can be categorized as a conventional coagulation, flocculation, clarification, and filtration facility, with the chemically assisted clarification process being a two-train proprietary package unit. There are three dual-media filters; optional powdered activated and prechlorination systems, as well as full-time chlorination, fluoridation, soda ash, phosphoric acid and ammonia addition. Ammonia is added to produce chloramines for secondary disinfection; added when the water flows from CW1 to CW2. There is approximately 65 km of distribution watermain.

Treatment Plant

Name	Arnprior Water Filtration Plant
Street Address	71 James Street, Arnprior Town, County of Renfrew
UTM Coordinates	NAD83, Zone 18, Easting: 394000 Northing: 5031220
System Type	Treatment and Distribution
Notes	a main building housing the treatment units and control, testing and monitoring equipment

Surface Water Supply

Intake Crib

Description	Concrete intake structure, pipe, screen,
Equipment	500 mm diameter intake pipe
Location	Located approximately 10m from the west riverbank, Madawaska River
Notes	

Low Lift Works

Wet Well

Description	33 m ³ (3 m x 3.2 m x 3.4 m deep) wet well, with three (3) low lift pumps.
Notes	Mesh intake screen

Low Lift Pumps

Description	A raw water low lift pumping station
Equipment	Two (2) vertical turbine and one (1) centrifugal raw water pumps each rated at 11,000 m ³ /d at a total dynamic head (TDH) of 25 m; one (1) duty and two (2) standby
Notes	Pumps convey raw water through a 400 mm raw watermain into the water treatment plant. Turbidity and pH analyzers, coagulant and prechlorination injection points, and two (2) 350 mm flow transmitters are installed on this line prior to the flash mixing process. The flow elements are installed after the watermain splits to packaged coagulation, flocculation, clarification system.

Coagulation/Flocculation

Coagulation/Flocculation Facilities

Description	Proprietary package for coagulation, flocculation and clarification, consisting of two (2) ballasted flocculation water treatment trains, complete with concrete tankage, each rated at a nominal capacity of 11,000 m ³ /day and each train consisting of the following:
Equipment (on each train)	one (1) automatically operated raw water inlet valve;
	one (1) flash mix tank having approximate inside dimensions of 1.1 m by 1.1 m by 3.6 m top water level, and working volume of approximately 4.4 m ³ , equipped with a mechanical mixer;
	one (1) coagulation tank having approximate inside dimensions of 2.5 m by 1.8 m by 3.6 m top water level, and working volume of approximately 16.2 m ³ , equipped with a mechanical mixer;
	one (1) injection tank having approximate inside dimensions of 2.5 m by 1.8 m by 3.6 m top water level, and working volume of approximately 16.2 m ³ , equipped with a mechanical mixer and polymer injection piping;
	one (1) maturation tank having approximate inside dimensions of 3.4 m by 3.9 m by 3.6 m top water level, and working volume of approximately 47.7 m ³ , equipped with a mechanical mixer and polymer injection piping;
	one (1) clarifier tank having approximate inside dimensions of 4.1 m by 3.9 m complete with a mechanical scraper and include settling module; one (1) recirculation pump for recycling settled sand and residuals to the hydrocyclones;
	one (1) hydrocyclone, complete with splitter box, for separating microsand and residuals and sending microsand back into the injection tank and to send the residuals to a common settling tank for both trains;
	one (1) clarified water turbidity monitor, one (1) raw water pH monitor and level monitors;
	a process control system;
Notes	

Filtration

Filters

Description	Three (3) dual media filters (two different filter designs)
Dimensions	Three (3) dual media (Sand/anthracite) filters with a total filter area of 97.5m ² (5.9m x 5.5m per filter, each with a maximum filtration rate of 7 m/hr (m ³ /m ² /hr) at maximum daily flow with one of the filters out of service); media consisting of a 400 mm sand layer and a 600 mm anthracite layer; a prefabricated underdrain system, complete with air scour
	An actuated valve on the outlet of each filter automatically controlled to maintain a constant filter flow rate; a flow meter, a differential pressure head loss transmitter, level transmitter and an on-line turbidimeter on each of the filters
	one (1) air blower rated for 500 L/s at 45 kPa
Notes	

Backwash Pumps

Description	A filter backwash system including a split case backwash pump drawing from the clearwell, with a butterfly valve providing a backup backwash system using distribution system pressure, requiring manual operation.
Capacity	Pump has a rated capacity of 34,350 m ³ /d at 15m TDH
Notes	Filtered water is conveyed through magnetic flow meters, combined into a common header and delivered to both clearwells (operating in series).

Backwash Residuals Treatment

Description	Filters backwash wastewater with polymer addition, the backwash residuals are clarified, the supernatant dechlorinated using sodium bisulphite and drained by gravity to the Madawaska River and sludge pumped to sanitary sewers.
Equipment	One (1) concrete residuals treatment tank with polymer addition, flocculators and gravity settling with an approximate nominal capacity of 63.0 m ³ (approx. 6.0 m x 3.0 m x 3.5 m top water level).
	Polymer system including a mixing tank and mixer, one (1) storage tank, secondary containment, and two (2) polymer chemical feed pumps (one duty and one standby) with automatic switchover;
	Two (2) mechanical flocculators to aid in mixing of polymer with residuals water in the settling tank;
	Dechlorination system for supernatant, comprised of two (2) sodium bisulphite chemical feed pumps (one duty, one standby) with automatic switchover, capable of supplying up to 0.5 L/min at a pressure of 100 kPa, with secondary containment for the sodium bisulphite supply; containers
	Three (3) sludge hoppers at tank bottom for sludge collection;
	Two (2) sludge pumps (one duty and one standby) each capable of delivering approximately 24 L/s at a TDH of 8.6 m to the sanitary forcemain;
Notes	<input type="checkbox"/> An effluent sample is collected by Waterworks staff and analyzed for its chlorine sample, prior to being discharged to the Madawaska River. <input type="checkbox"/> The polymer addition system is currently not in use.

Actiflo Settling Tanks Residuals Treatment

Description	Actiflo wastewater from the hydrocyclones is sent to a common residuals tank. This raw water residuals does not contain chlorine. The supernatant is drained by gravity to the Madawaska River and sludge to backwash sludge pumps and pumped to sanitary sewers.
Equipment	One concrete residuals treatment tank with gravity settling 6.0m (long), 3.0m (wide), 3.5m side water depth.
	Supernatant overflow weir and piping for discharge to storm sewer
	Three sludge sloped bottom hoppers
	Three automated sludge valves
	Two Actiflo/backwash sludge pumps
	A baffled sand settling box
Notes	A supernatant effluent sample is collected by Waterworks staff and analyzed for its total suspended solids prior to being discharged to the Madawaska River.

Clear Well and High Lift Works

Clear Wells

Description	Two clear wells in series
Dimensions	Volume of clearwell 1 is 2,167 m ³ .
	Volume of clearwell 2 is 1804m ³ .
Notes	Chlorine is added just prior to the first clearwell. Clearwell 1 consists of 2 cells divided by a concrete baffle wall and is hydraulically connected to Clearwell 2, which consists of a single cell divided by a concrete wall. Treated water passes through the clearwells and is conveyed to the high lift pump wet well. Soda ash for pH control is added in Clearwell 2.

High Lift Pump Station

Description	Pumps, meters and analyzers.
Equipment	Three (3) high lift pumps, each designed to deliver approximately 125 L/s at a TDH of 70m
	Finished water analyzers for Total Chlorine, pH, and Fluoride, and a flow meter for treated water to the distribution system.
	400mm diameter treated water header connected to the distribution system
Notes	Pumps draw from second clearwell.

Emergency Power

Backup Power Supply

Description	400kW diesel engine standby power generator set located in a separate outdoor enclosure
Notes	With a 2,270 L double wall storage tank

Chemical Addition

Coagulant

Description	A liquid coagulant injection system.
Feed Point	Watermain immediately upstream of the flash mixing process.
Equipment	Two (2) coagulant chemical feed pumps (one duty and one standby) with automatic switchover.
	One (1) 22,700 L fibreglass reinforced plastic storage tank, with secondary containment;
	One (1) 8,000 L storage tank.

Notes	The system is sized for dosing aluminum chloride or other alternate liquid coagulant chemicals;
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Polymer

Description	Polymer injection system
Feed Point	Three locations in the Actiflo Train, at the Injection tank, Maturation Tank and Hydrocyclones
Equipment	One (1) mixing tank c/w mixer.
	Two (2) storage tanks.
	Two Polymer Chemical Metering Pumps, one pump dedicated to each Actiflow unit.
Notes	Flow to each injection point is balanced using Rotameters in each dedicated line to the feed point.

Aqueous Ammonia

Description	Aqueous ammonia system
Feed Point	Between the clearwells
Equipment	Two (2) aqueous ammonia chemical feed pumps (one duty and one standby) with automatic switchover.
	flow meter between clearwells to pace ammonia;
	one (1) level sensor
	secondary containment for supply containers and day tank.
Notes	

Chlorine

Description	A disinfection system utilizing gas chlorination for prechlorination and primary disinfection.
Feed Point	Before the flash mixer for prechlorination and directly into the clearwell inlet for primary disinfection
Equipment	Chlorine gas storage facilities consisting of approximately twenty 68kg bottles stored on site, two scales (one duty and one standby) measuring the tared weight of chlorine and the bottle; automatic switchover from duty to standby cylinder based on a preset bottle pressure
	Two (2) chlorinators (one duty, one standby), and using water from the distribution system as injection water, and an online chlorine residual analyzer to continuously monitor free chlorine residual in the treated water from the end of Clearwell#1
Notes	

Hydrofluosilicic Acid

Description	A fluoridation storage and injection system
Feed Point	Effluent launders of the filters

Equipment	Two (2) double lined concrete bulk storage tanks with a total volume of 15.8 m ³ for the storage of hydrofluosilicic acid (HFS);
	One (1) magnetic drive chemical transfer pump to transfer HFS to a polyethylene day tank;
	One (1) diaphragm chemical feed pump.
Notes	

Soda Ash

Description	A hydrated soda ash feed system consisting of a 1000 kg bag dry chemical hopper station
Feed Point	Clearwell compartment at the high lift pump compartment
Equipment	one (1) volumetric screw feeder
	one (1) slurry mix tank, c/w mixer
	Two (2) transfer pumps
	One (1) distribution tank, c/w mixer
	Two (2) feed pumps, operated on a variable speed mode
	Mixing pump and piping to convey the slurry to the Feed Points
	one (1) on-line pH analyzer for monitoring the pH of treated water
Notes	Used for treated water pH adjustment at a target pH on real time basis, for corrosion control purpose

Phosphoric Acid

Description	A phosphoric acid solution feed system consisting of a duplex feed pump system
Feed Point	High lift pump compartment
Equipment	One (1) storage tank
	Two (2) feed pumps
Notes	Used for developing a protective coating inside the water distribution system piping, for corrosion control purpose

Instrumentation and Control

SCADA System

Description	Motor control center, PLC and SCADA to control and monitor plant process equipment, raw water, filtered water, backwash water and treated water flow meters including all related piping, electrical and mechanical works, plumbing and ventilation, yard piping, instrumentation and control and metering
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	equipment required for a fully operable Water Filtration Plant
Notes	<p>System control with data acquisition including various on-line analyzers and monitors, including the following regulatory equipment:</p> <ul style="list-style-type: none"> - Turbidity Analyzers – Filter 1, 2 & 3 effluent - Free Cl Analyzer – Clearwell #1 effluent - Flow meter – Between Clearwell #1 & 2 - Level Monitor – Clearwell #1 & 2 - pH Analyzer – Clearwell #2 effluent Treated water - Fluoride Analyzer – Treated water - Total Cl Analyzer – Treated water - Flow meter – Treated water - Pressure Sensor – high lift discharge - Flow meter – raw water

Additional Instrumentation Supporting Regulatory Compliance

Description	Additional instrumentation supporting regulatory compliance.
Notes	<ul style="list-style-type: none"> - pH and temperature meter – Lab equipment (CT calculation) - Spectrophotometer – Lab Equipment - Turbidity analyzer – Lab Equipment

Elevated Storage Tanks

Elevated water tower

Location	433 Hartney Street, Arnprior, Ontario
UTM Coordinates	
Description	2,365 m ³ elevated composite water storage tank
Dimensions	2,365 m ³
Equipment	NA
Notes	

Watermains

1.2 Watermains within the distribution system comprise:

1.2.1 Watermains that have been set out in each document or file identified in column 1 of Table 1.

Table 1: Watermains	
Column 1 Document or File Name	Column 2 Date
2025 Arnprior - Distribution System Map	2025

- 1.2.2 Watermains that have been added, modified, replaced or extended further to the provisions of Schedule C of this drinking water works permit on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.
- 1.2.3 Watermains that have been added, modified, replaced or extended further to an authorization by the Director on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

Schedule B: General

System Owner	Arnprior, The Corporation of the Town of
Permit Number	170-201
Drinking Water System Name	Arnprior Drinking Water System
Permit Effective Date	February 24th, 2026

1.0 Applicability

- 1.1 In addition to any other applicable legal requirements, the drinking water system identified above shall be altered and operated in accordance with the conditions of this drinking water works permit and the licence #170-101.
- 1.2 The definitions and conditions of licence #170-101 are incorporated into this permit and also apply to this drinking water system.

2.0 Alterations to the Drinking Water System

- 2.1 Any document issued by the Director to be incorporated into Schedule C to this drinking water works permit shall provide authority to alter the drinking water system in accordance with the applicable conditions of this drinking water works permit and licence #170-101.
- 2.2 All documents issued by the Director as described in condition 2.1 shall form part of this drinking water works permit.
- 2.3 All parts of the drinking water system in contact with drinking water that are added, modified, replaced, extended shall be disinfected in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:
 - a) The ministry's Watermain Disinfection Procedure, dated August 1, 2020;
 - b) Subject to condition 2.3.2, any updated version of the ministry's Watermain Disinfection Procedure;
 - c) Subject to condition 2.3.3,
 - a. AWWA C652 – Standard for Disinfection of Water-Storage Facilities;
 - b. AWWA C653 – Standard for Disinfection of Water Treatment Plants;
 - and,
 - c. AWWA C654 – Standard for Disinfection of Wells.
- 2.3.1 For greater certainty, where an activity has occurred that could introduce contamination, including but not limited to repair, maintenance, or physical / video inspection, all equipment that may come in contact with the drinking water system shall be disinfected in accordance with the requirements of condition 2.3. above.
- 2.3.2 Updated requirements described in condition 2.3 b) are effective six months from the date of publication of the updated Watermain Disinfection Procedure.
- 2.3.3 Requirements described in condition 2.3 c) are effective until:

-
- a) In the case of AWWA C652, six months after the issue date of the ministry's Water Storage Facility Disinfection Procedure;
 - b) In the case of AWWA C653, six months after the issue date of the ministry's Water Treatment Plant Disinfection Procedure; and,
 - c) In the case of AWWA C654, six months after the issue date of the ministry's Wells Disinfection Procedure.
- 2.3.4 The ministry documents described in condition 2.3.3 shall be implemented within the timeframe specified in condition 2.3.3 and once implemented all parts of the drinking water system in contact with drinking water that are added, modified, replaced or extended shall be disinfected in accordance with the applicable provisions of the document or a procedure approved by the Director.
- 2.3.5 After the initial issue date, any updated requirements are effective six months from the date of publication of the updated Water Storage Facility Disinfection Procedure, Water Treatment Plant Disinfection Procedure or Wells Disinfection Procedure.
- 2.3.6 For greater certainty the timeframes described in conditions 2.3.2, 2.3.3 and 2.3.5 are intended to provide a period for transition. Implementation may occur at any point within the identified timeframe in these conditions.
- 2.4 The owner shall notify the Director in writing within thirty (30) days of the placing into service or the completion of any addition, modification, replacement, removal or extension of the drinking water system which had been authorized through:
- 2.4.1 Schedule B to this drinking water works permit which would require an alteration of the description of a drinking water system component described in Schedule A of this drinking water works permit;
 - 2.4.2 Any document to be incorporated in Schedule C to this drinking water works permit respecting works other than watermains; or
 - 2.4.3 Any approval issued prior to the issue date of the first drinking water works permit respecting works other than watermains which were not in service at the time of the issuance of the first drinking water works permit.
- 2.5 The notification required in condition 2.4 shall be submitted using the "Director Notification Form" published by the Ministry.
- 2.6 For greater certainty, the notification requirements set out in condition 2.4 do not apply to any addition, modification, replacement, removal or extension in respect of the drinking water system which:
- 2.6.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03;
 - 2.6.2 Constitutes maintenance or repair of the drinking water system; or
 - 2.6.3 Is a watermain authorized by condition 3.1 of Schedule B of this drinking water works permit.
- 2.7 The owner shall notify the legal owner of any part of the drinking water system that is prescribed as a municipal drinking water system by section 2 of O. Reg. 172/03 of the

requirements of the licence and this drinking water works permit as applicable to the prescribed system.

- 2.8 For greater certainty, the owner may only carry out alterations to the drinking water system in accordance with this drinking water works permit after having satisfied other applicable legal obligations, including those arising from the *Environmental Assessment Act*, *Niagara Escarpment Planning and Development Act*, *Oak Ridges Moraine Conservation Act, 2001* and *Greenbelt Act, 2005*.

3.0 Watermain Additions, Modifications, Replacements and Extensions

- 3.1 The owner may alter the drinking water system, or permit it to be altered by a person acting on the owner's behalf, by adding, modifying, replacing or extending a watermain within the distribution system subject to the following conditions:
- 3.1.1 The design of the watermain addition, modification, replacement or extension:
- a) Has been prepared by a licensed engineering practitioner;
 - b) Has been designed only to transmit water and has not been designed to treat water;
 - c) Satisfies the design criteria set out in the Ministry publication "Watermain Design Criteria for Future Alterations Authorized under a Drinking Water Works Permit – June 2012", as amended from time to time; and
 - d) Is consistent with or otherwise addresses the design objectives contained within the Ministry publication "Design Guidelines for Drinking Water Systems, 2008", as amended from time to time.
- 3.1.2 The maximum demand for water exerted by consumers who are serviced by the addition, modification, replacement or extension of the watermain will not result in an exceedance of the rated capacity of a treatment subsystem or the maximum flow rate for a treatment subsystem component as specified in the licence, or the creation of adverse conditions within the drinking water system.
- 3.1.3 The watermain addition, modification, replacement or extension will not adversely affect the distribution system's ability to maintain a minimum pressure of 140 kPa at ground level at all points in the distribution system under maximum day demand plus fire flow conditions.
- 3.1.4 Secondary disinfection will be provided to water within the added, modified, replaced or extended watermain to meet the requirements of O. Reg. 170/03.
- 3.1.5 The watermain addition, modification, replacement or extension is wholly located within the municipal boundary over which the owner has jurisdiction.
- 3.1.6 The owner of the drinking water system consents in writing to the watermain addition, modification, replacement or extension.
- 3.1.7 A licensed engineering practitioner has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of condition 3.1.1.

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- 3.1.8 The owner of the drinking water system has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of conditions 3.1.2 to 3.1.6.
- 3.2 The authorization for the addition, modification, replacement or extension of a watermain provided for in condition 3.1 does not include the addition, modification, replacement or extension of a watermain that:
- 3.2.1 Passes under or through a body of surface water, unless trenchless construction methods are used;
 - 3.2.2 Has a nominal diameter greater than 750 mm;
 - 3.2.3 Results in the fragmentation of the drinking water system; or
 - 3.2.4 Connects to another drinking water system, unless:
 - a) Prior to construction, the owner of the drinking water system seeking the connection obtains written consent from the owner or owner's delegate of the drinking water system being connected to; and
 - b) The owner of the drinking water system seeking the connection retains a copy of the written consent from the owner or owner's delegate of the drinking water system being connected to as part of the record that is recorded and retained under condition 3.3.
- 3.3 The verifications required in conditions 3.1.7 and 3.1.8 shall be:
- 3.3.1 Recorded on "Form 1 – Record of Watermains Authorized as a Future Alteration", as published by the Ministry, prior to the watermain addition, modification, replacement or extension being placed into service; and
 - 3.3.2 Retained for a period of ten (10) years by the owner.
- 3.4 For greater certainty, the verification requirements set out in condition 3.3 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:
- 3.4.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
 - 3.4.2 Constitutes maintenance or repair of the drinking water system.
- 3.5 The document or file referenced in Column 1 of Table 1 of Schedule A of this drinking water works permit that sets out watermains shall be retained by the owner and shall be updated to include watermain additions, modifications, replacements and extensions within 12 months of the addition, modification, replacement or extension.
- 3.6 The updates required by condition 3.5 shall include watermain location relative to named streets or easements and watermain diameter.

- 3.7 Despite clause (a) of condition 3.1.1 and condition 3.1.7, with respect to the replacement of an existing watermain or section of watermain that is 6.1 meters in length or less, if a licensed engineering practitioner has:
- 3.7.1 inspected the replacement prior to it being put into service;
 - 3.7.2 prepared a report confirming that the replacement satisfies clauses (b), (c) and (d) of condition 3.1.1 (i.e. "Form 1 – Record of Watermains Authorized by a Future Alteration" (Form 1), Part 3, items No. 2, 3 and 4); and
 - 3.7.3 appended the report referred to in condition 3.7.2 to the completed Form 1,
- the replacement is exempt from the requirements that the design of the replacement be prepared by a licensed engineering practitioner and that a licensed engineering practitioner verify on Form 1, Part 3, item No. 1 that a licensed engineering practitioner prepared the design of the replacement.
- 3.8 For greater certainty, the exemption in condition 3.7 does not apply to the replacement of an existing watermain or section of watermain if two or more sections of pipe, each of which is 6.1 meters in length or less, are joined together, if the total length of replacement pipes joined together is greater than 6.1 meters.

4.0 Minor Modifications to the Drinking Water System

- 4.1 The drinking water system may be altered by adding, modifying or replacing the following components in the drinking water system:
- 4.1.1 Coagulant feed systems in the treatment system, including the location and number of dosing points:
 - a) Prior to making any alteration to the drinking water system under condition 4.1.1, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and
 - b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.1.1 and shall provide the Director with a copy of the review.
 - c) The notification required in condition 4.1.1 b) shall be submitted using the "Director Notification Form" published by the Ministry
 - 4.1.2 Instrumentation and controls, including new SCADA systems and upgrades to SCADA system hardware;
 - 4.1.3 SCADA system software or programming that:
 - a) Measures, monitors or reports on a regulated parameter;
 - b) Measures, monitor or reports on a parameter that is used to calculate CT; or,
 - c) Calculates CT for the system or is part of the process algorithm that calculates log removal, where the impacts of addition, modification or replacement have been reviewed by a licensed engineering practitioner;

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- 4.1.4 Filter media, backwashing equipment, filter troughs, and under-drains and associated equipment in the treatment system;
 - 4.1.5 Spill containment works; or,
 - 4.1.6 Coarse screens and fine screens
- 4.2 The drinking water system may be altered by adding, modifying, replacing or removing the following components in the drinking water system:
- 4.2.1 Treated water pumps, pressure tanks, and associated equipment;
 - 4.2.2 Raw water pumps and process pumps in the treatment system;
 - 4.2.3 Inline booster pumping stations that are not associated with distribution system storage facilities and are on a watermain with a nominal diameter not exceeding 200 mm;
 - 4.2.4 Re-circulation devices within distribution system storage facilities;
 - 4.2.5 In-line mixing equipment;
 - 4.2.6 Chemical metering pumps and chemical handling pumps;
 - 4.2.7 Chemical storage tanks and associated equipment;
 - 4.2.8 Measuring and monitoring devices that are not required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry.
 - 4.2.9 Chemical injection points;
 - 4.2.10 Valves;
 - 4.2.11 Fuel storage tanks and spill containment works, and associated equipment or,
 - 4.2.12 Any other component(s) where the Director has provided authorization in writing to proceed with the alteration.
- 4.3 The drinking water system may be altered by replacing the following:
- 4.3.1 Raw water piping, treatment process piping or treated water piping within the treatment subsystem;
 - 4.3.2 Measuring and monitoring devices that are required by regulation, by a condition in the Drinking Water Works Permit or by a condition otherwise imposed by the Ministry.
 - 4.3.3 Coagulants and pH adjustment chemicals, where the replacement chemicals perform the same function;

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- a) Prior to making any alteration to the drinking water system under condition 4.3.3, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and
 - b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.3.3 and shall provide the Director with a copy of the review.
 - c) The notification required in condition 4.3.3 b) shall be submitted using the "Director Notification Form" published by the Ministry.
- 4.4 Any alteration of the drinking water system made under conditions 4.1, 4.2 or 4.3 shall not result in:
- 4.4.1 An exceedance of a treatment subsystem rated capacity or a treatment subsystem component maximum flow rate as specified in the licence;
 - 4.4.2 The bypassing or removal of any unit process within a treatment subsystem;
 - 4.4.3 The addition of any new unit process other than coagulation within a treatment subsystem;
 - 4.4.4 A deterioration in the quality of drinking water provided to consumers;
 - 4.4.5 A reduction in the reliability or redundancy of any component of the drinking water system;
 - 4.4.6 A negative impact on the ability to undertake compliance and other monitoring necessary for the operation of the drinking water system; or
 - 4.4.7 An adverse effect on the environment.
- 4.5 The owner shall verify in writing that any addition, modification, replacement or removal of drinking water system components in accordance with conditions 4.1, 4.2 or 4.3 has met the requirements of the conditions listed in condition 4.4.
- 4.6 The verifications and documentation required in condition 4.5 shall be:
- 4.6.1 Recorded on "Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System" published by the Ministry, prior to the modified or replaced components being placed into service; and
 - 4.6.2 Retained for a period of ten (10) years by the owner.
- 4.7 For greater certainty, the verification requirements set out in conditions 4.5 and 4.6 do not apply to any addition, modification, replacement or removal in respect of the drinking water system which:
- 4.7.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
 - 4.7.2 Constitutes maintenance or repair of the drinking water system, including software changes to a SCADA system that are not listed in condition 4.1.3

- 4.8 The owner shall update any drawings maintained for the drinking water system to reflect the modification or replacement of the works, where applicable.

5.0 Equipment with Emissions to the Air

- 5.1 The drinking water system may be altered by adding, modifying or replacing any of the following drinking water system components that may discharge or alter the rate or manner of a discharge of a compound of concern to the air:
- 5.1.1 Any equipment, apparatus, mechanism or thing that is used for the transfer of outdoor air into a building or structure that is not a cooling tower;
 - 5.1.2 Any equipment, apparatus, mechanism or thing that is used for the transfer of indoor air out of a space used for the production, processing, repair, maintenance or storage of goods or materials, including chemical storage;
 - 5.1.3 Laboratory fume hoods used for drinking water testing, quality control and quality assurance purposes;
 - 5.1.4 Low temperature handling of compounds with a vapor pressure of less than 1 kilopascal;
 - 5.1.5 Maintenance welding stations;
 - 5.1.6 Minor painting operations used for maintenance purposes;
 - 5.1.7 Parts washers for maintenance shops;
 - 5.1.8 Emergency chlorine and ammonia gas scrubbers and absorbers;
 - 5.1.9 Venting for activated carbon units for drinking water taste and odour control;
 - 5.1.10 Venting for a stripping unit for methane removal from a groundwater supply;
 - 5.1.11 Venting for an ozone treatment unit;
 - 5.1.12 Natural gas or propane fired boilers, water heaters, space heaters and make-up air units with a total facility-wide heat input rating of less than 20 million kilojoules per hour, and with an individual fuel energy input of less than or equal to 10.5 gigajoules per hour; or
 - 5.1.13 Emergency generators that fire No. 2 fuel oil (diesel fuel) with a sulphur content of 0.5 per cent or less measured by weight, natural gas, propane, gasoline or biofuel, and that are used for emergency duty only with periodic testing.
- 5.2 The owner shall not make an addition, modification, or replacement described in condition 5.1 in relation to an activity that is not related to the treatment and/or distribution of drinking water.

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- 5.3 The emergency generators identified in condition 5.1.13 shall not be used for non-emergency purposes including the generation of electricity for sale or for peak shaving purposes.
- 5.4 The owner shall ensure that the criteria outlined for standby power sources in s.20.4 of O. Reg. 419/05 (Air Pollution – Local Air Quality) are met for all discharge that occurs from the use of emergency generators added, modified or replaced under condition 5.1.13.

Performance Limits

- 5.5 The owner shall ensure that a drinking water system component identified in conditions 5.1.1 to 5.1.13 is operated at all times to comply with the following limits:
- 5.5.1 For equipment other than emergency generators, the maximum concentration of any compound of concern at a point of impingement shall not exceed the corresponding point of impingement limit;
- 5.5.2 For emergency generators, the maximum concentration of nitrogen oxides at sensitive receptors shall not exceed the applicable point of impingement limit, and at non-sensitive receptors shall not exceed the Ministry half-hourly screening level of 1880 ug/m³ as amended; and
- 5.5.3 The noise emissions comply at all times with the limits set out in publication NPC-300, as applicable.
- 5.6 The owner shall verify in writing that any addition, modification or replacement of works in accordance with condition 5.1 has met the requirements of the conditions listed in condition 5.5.
- 5.7 The owner shall document how compliance with the performance limits outlined in condition 5.5.3 is being achieved, through noise abatement equipment and/or operational procedures.
- 5.8 The verifications and documentation required in conditions 5.6 and 5.7 shall be:
- 5.8.1 Recorded on “Form 3 – Record of Addition, Modification or Replacement of Equipment Discharging a Contaminant of Concern to the Atmosphere”, as published by the Ministry, prior to the additional, modified or replacement equipment being placed into service; and
- 5.8.2 Retained for a period of ten (10) years by the owner.
- 5.9 For greater certainty, the verification and documentation requirements set out in conditions 5.6 and 5.8 do not apply to any addition, modification or replacement in respect of the drinking water system which:
- 5.9.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
- 5.9.2 Constitutes maintenance or repair of the drinking water system.
- 5.10 The owner shall update any drawings maintained for the works to reflect the addition, modification or replacement of the works, where applicable.

6.0 Previously Approved Works

- 6.1 The owner may add, modify, replace or extend, and operate part of a municipal drinking water system if:
 - 6.1.1 An approval was issued after January 1, 2004 under section 36 of the SDWA in respect of the addition, modification, replacement or extension and operation of that part of the municipal drinking water system;
 - 6.1.2 The approval expired by virtue of subsection 36(4) of the SDWA; and
 - 6.1.3 The addition, modification, replacement or extension commenced within five years of the date that activity was approved by the expired approval.

7.0 System-Specific Conditions

- 7.1 Not Applicable

8.0 Source Protection

- 8.1 Not Applicable

Schedule C: Authorization to Alter the Drinking Water System

System Owner	Arnprior, The Corporation of the Town of
Permit Number	170-201
Drinking Water System Name	Arnprior Drinking Water System
Permit Effective Date	February 24th, 2026

1.0 General

1.1 Table 2 provides a reference list of all documents to be incorporated into Schedule C that have been issued as of the date that this permit was issued.

1.1.1 Table 2 is not intended to be a comprehensive list of all documents that are part of Schedule C. For clarity, any document issued by the Director to be incorporated into Schedule C after this permit has been issued is considered part of this drinking water works permit.

Table 2: Schedule C Documents				
Column 1 Issue #	Column 2 Issued Date	Column 3 Description	Column 4 Status	Column 5 DN#
1	May 19, 2016	Implementation of Corrosion Control Plan	Achieved	3
2	February 17, 2026	Clearwell #1 replacement	On-going	Not Applicable

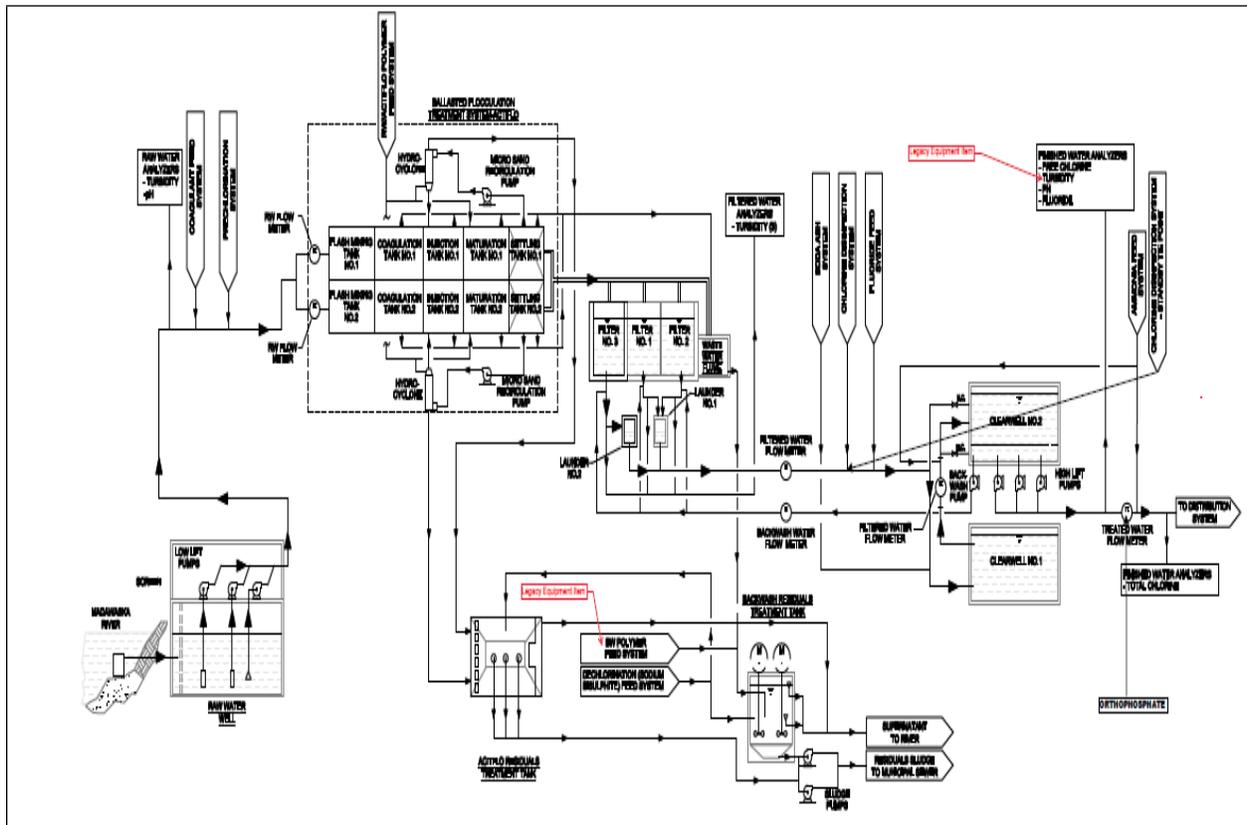
1.2 For each document described in columns 1, 2 and 3 of Table 2, the status of the document is indicated in column 4. Where this status is listed as 'Archived', the approved alterations have been completed and relevant portions of this permit have been updated to reflect the altered works. These 'Archived' Schedule C documents remain as a record of the alterations.

Schedule D: Process Flow Diagrams

System Owner	Arnprior, The Corporation of the Town of
Permit Number	170-201
Drinking Water System Name	Arnprior Drinking Water System
Permit Effective Date	February 24th, 2026

1.0 Process Flow Diagrams

Arnprior Water Filtration Plant



[Source: Town of Arnprior DWQMS Operational Plan - Version 25 – October 22, 2024]

Note: this process flow diagram is for reference only, and represents a high level overview of the system as of January 30, 2026.



Town of Arnprior Staff Report

Subject: 2025 DWQMS Audits and Management Review Results

Report Number: 26-03-09-02

Report Author and Position Title: Sheena Baum, A/ Environmental Engineering Officer

Department: Operations - Engineering

Meeting Date: March 9, 2026

Recommendations:

That Council receive Report Number 26-03-09-02 authorizing the Chief Administrative Officer (CAO) and the General Manager, Operations on behalf of Top Management, and the Mayor, on behalf of Council, to endorse the QMS Commitment and Endorsement Policy, to meet the requirements of the Town of Arnprior Drinking Water Quality Management System Operational Plan.

Background:

DWQMS

The Town of Arnprior has an established Quality Management System (QMS) for its drinking water system. DWQMS is mandated through the Safe Drinking Water Act, 2002 (SDWA) with the specific requirements for the QMS coming from the document titled "Ontario's Drinking Water Quality Management Standard – Ver 2.0".

The intention of this staff report is to fulfill communication responsibilities listed between Top Management and the Owner (Council) as outlined in Element 12 of the QMS. Element 12 states:

"The status of the DWQMS and its effectiveness shall be communicated to the Owner by Top Management, or by the QMS Representative as directed by Top Management during scheduled Council meetings summary reports, e-mails, memos, etc."

Discussion:

External Audit Results

On October 3, 2025, SAI Global, the Town's external auditor, completed the desk top portion of the system audit (an off-site review of documentation) of the Town's QMS for 2025. The on-site component of the system audit was conducted on November 6, 2025.

The 2025 audit was completed as Year 1 of the 3-year audit cycle. Next year's audit (for the year 2026) will be a Year 2 surveillance audit.

The audit reports provided by SAI Global found a total of nineteen (19) opportunities for improvement (OFI's). There was one (1) non-conformity identified in the Systems audit.

Note that this year being a System Audit provided an opportunity for a more thorough review. Items identified during the external audit provide an outside view on ways we can improve our QMS. Improvements made to the QMS help to proactively name issues with the Town's Drinking Water System, helping to ensure the continued delivery of safe drinking water in Arnprior.

For complete external audit results, the external audit for 2025 is attached as Appendix 1 and Appendix 2. Closing of non-conformity is attached as Appendix 3.

OFI's from External Desktop Audit

The first two columns are comments provided by external auditor.

OFI # and Description	Recommended Corrective/Improvement Plan	Corrective Action Anticipated Date of Completion
OFI-2025-01 - Element 1: While a Subject System Description Form has been included in the Operational Plan, an outdated version of the form was used. The current Ministry form requires the Licence Number to be provided on the form.	Update the Subject System Description Form to include the Licence Number	Completed during internal audit.
OFI-2025-02 - Element 1: Viewed the Drinking Water Quality Management System Operational Plan on the website on Oct 3, 2025. Noted that the version online is from 2021.	There is an opportunity to ensure that the most current version of the OP is available online.	Complete for 2025, website to be updated annually following signing of Commitment and Endorsement Policy
OFI-2025-03 - Element 7: Opportunity for Improvement While redundancy is considered in the risk assessment outcomes, it is not clearly described in the procedure that the reliability and redundancy of equipment is considered when conducting the risk assessment.	Ensure that the requirement to consider the reliability and redundancy of equipment is clearly stated in the risk assessment procedure	Completed during internal audit.

OFI # and Description	Recommended Corrective/Improvement Plan	Corrective Action Anticipated Date of Completion
<p>OFI-2025-04 - Element 8: It was noted that the emergency response procedures that may be implemented in response to a hazardous events are not specifically referenced under the “Emergency procedure or contingency plan” column in the risk assessment table.</p>	<p>There is an opportunity to include a reference to the specific emergency response procedures for related hazards in the “Emergency procedure or contingency plan” column in the risk assessment table</p>	<p>Review during next Risk Assessment Review scheduled for September 2026</p>
<p>OFI-2025-05 - Element 18: Each of the emergency response procedures has a section entitled “Contingency and Recovery”. While all procedures have items listed in a table under this section, most of the items listed speak to the contingencies and do not include instructions or criteria to return the system to normal operations (recovery) after an emergency.</p>	<p>There is an opportunity to more clearly describe recovery processes for the identified emergencies</p>	<p>WW Supervisor to Review and update Summer 2026</p>
<p>OFI-2025-06 - Element 20: During the Management Review, agenda item e) covered internal audit findings, but the external audit results from October 25, 2024, were not discussed. The Standard requires consideration of both internal and third-party Audit results.</p>	<p>Ensure that external audit results are included in the Management Review</p>	<p>Complete - External audits were discussed in Top Management Review January 19, 2026. Formatting of minutes and forms for tracking OFI’s have been updated for ease both internal and external review.</p>

OFI's from External On-site Audit

The first two columns are comments provided by external auditor

OFI # and Description	Recommended Corrective/Improvement Plan	Anticipated Date of Completion
<p>OFI-2025-07 - Element 8: Appendix D5 – Distribution Pressure Critical Limit Response Procedure mostly speaks to what to do in the plant should the distribution pressure drop below the critical control limit, but there are no details regarding what to do in the distribution system in the event of the pressure dropping below the critical control limit of 60psi</p>	<p>There is an opportunity to consider adding distribution response procedures to the Distribution Pressure Critical Limit Response Procedure</p>	<p>DWQMS Rep to review this spring and consult, Eng. Dept and Roads and Services</p>
<p>OFI-2025-08 - Element 8: The last 36-month risk assessment was completed on Sep 24, 2025, however in viewing the risk assessment table in the Risk Assessment Outcomes Procedure (PW-DWQMS-08), that date is not included so it is not immediately apparent when the 36-month assessment was completed</p>	<p>Consider adding the date of the 36-month assessment to the RA Table</p>	<p>Completed during internal audit. Risk Assessment Table was updated to include date of last full assessment and date of next.</p>
<p>OFI-2025-09 – Element 12: The procedure requires new employees to receive DWQMS Employee Orientation</p>	<p>Ensure that orientation sessions are being conducted for new employees.</p>	<p>Tracker added to HR training tracker to maintain record of orientation. Refresher to be provided at Emergency Response Training</p>
<p>OFI-2025-10 – Element 13: Essential supplies and services are listed in section 8.0 of the procedure. It was noted that not all suppliers have an identified back up, and that there does not appear to be a supplier listed for the handheld instruments and supplies.</p>	<p>There is an opportunity to consider identifying back up suppliers/services and more clearly indicate suppliers of handheld instruments and reagents.</p>	<p>Updated during audit, additional review for back up suppliers ongoing. QMS Rep to coordinate with WW Supervisor.</p>
<p>OFI-2025-11 – Element 13: The procedure states that all tender documents shall provide list of relevant quality requirements (e.g. AWWA, ANSI/NSF). During the audit, a current tender document was reviewed and while some AWWA requirements are referenced, the Municipal Drinking Water Licence (MDWL) requirements are</p>	<p>There is an opportunity to ensure that water system inventory (e.g. repair parts) complies with the regulatory requirements (e.g. NSF/14, NSF/60, NSF/61 and NSF/372) and to vet tender documents to ensure the</p>	<p>Noted and Eng. Dept. into account for next relevant tender.</p>

OFI # and Description	Recommended Corrective/Improvement Plan	Anticipated Date of Completion
<p>not fully stated. It was also discussed that the new MDWL includes new requirements for PVC pipe (NSF14) and that condition 14.2 of the MDWL requires “The most current chemical and material product registration documentation from a testing institution accredited by either the Standards Council of Canada or by the American National Standards Institution ("ANSI") shall be available at all times for each chemical and material used in the operation of the drinking water system that comes into contact with water within the system.”</p>	<p>MDWL requirements are stated.</p>	
<p>OFI-2025-12 – Element 14: The justification column of the long-range capital and operating budget forecast would include the reason(s) for a budget request but doesn't clearly indicate if requests are based on Infrastructure Review and/or Risk Assessment outcomes.</p>	<p>There is an opportunity to ensure that the Infrastructure Review information and any links to Risk Assessment outcomes are included in the long-range forecast/budget submission to council</p>	<p>Fall 2026 – Ongoing in following years</p>
<p>OFI-2025-13 – Element 15: There is no formal watermain commissioning process nor form for contractors (capital projects or development) to follow or use. Tender documents require contractors to complete commissioning as per the Provincial Watermain Disinfection Procedure and AWWA C651. It was also discussed that there is no formal final connection approval paperwork.</p>	<p>There is an opportunity to consider creating a watermain commissioning process for contractors and formalizing the recordkeeping and connection approval requirements.</p>	<p>To be included in upcoming projects</p>
<p>OFI-2025-14 – Element 17: During the audit, it was noted that the colorimeter verification records include the tolerance range of the SpecCheck standard handwritten at the top of the record for each colorimeter. This is a great initiative to assist staff in quickly confirming that the colorimeter they are verifying is reading within the range, rather than pulling out the range form from the SpecCheck standard. By making</p>	<p>There is an opportunity to consider adding the verification tolerance ranges for the colorimeters to the Analyzer Calibration Record</p>	<p>Review with staff preferences and update form from there – March 2026</p>

OFI # and Description	Recommended Corrective/Improvement Plan	Anticipated Date of Completion
<p>this a fillable part of the form, this would formalize recording the ranges to ensure this information is consistently recorded by all staff. This may also assist in traceability (e.g. linking the verification results to the specific SpecCheck standard).</p>		
<p>OFI-2025-15 – Element 17: Section 8.1 in PW-DWQMS-17 requires any instrumentation that forms part of the monitoring system for CT to be checked and where necessary, calibrated at least once every 12 months when the system is in operation or more frequently in accordance with manufacturer’s Audit Report recommendations. It was discussed during the audit that Hach has published a Free and total chlorine analyzer verification document which meets the requirements of USEPA Method 334.0: Determination of Residual Chlorine in Drinking Water using an On-Line Chlorine Analyzer Paragraph 11.1.1 requires a check standard to be analyzed when a grab sample is used to adjust the calibration of an on-line chlorine analyzer.</p>	<p>Consider reviewing Hach’s calibration/verification recommendations to confirm if the “manufacturer’s recommendations” statement in PW-DWQMS-17 is accurate.</p>	<p>Completed - Reviewed and found current calibration/verification procedure to exceed manufacturer’s recommendations.</p>
<p>OFI-2025-16 – Element 17: Section 8.5 of the Management Review Procedure lists the items to be discussed during the meeting; however, this list does not fully match the list provided in the Standard or the Top Management Review Form.</p>	<p>The OA may wish to vet the list provided in the procedure for consistency with the Standard and Appendix 20A – Top Management Review Form (PW-DWQMS-FR8).</p>	<p>Completed during internal audit, documents updated for consistency.</p>
<p>Minor Non-Conformity # ARN NCR-01: Element 17 –The Operating Authority shall develop a procedure for tracking and measuring continual improvement of its Quality Management System by: a) Reviewing and considering applicable best management practices including any published by the Ministry..., at least once every</p>	<p>Addition of BMP’s to agenda template for infrastructure review (Appendix 14A). Create method to track BMP discussion in reference to MECP guidelines which can be used at meetings throughout the year. Utilised the Internal Audit</p>	<p>Completed forms created and sent to auditor for review. BMP’s were reviewed as part of Top Management Review conducted on January 19, 2026.</p>

OFI # and Description	Recommended Corrective/Improvement Plan	Anticipated Date of Completion
<p>thirty-six months. DO – The Operating Authority shall strive to continually improve the effectiveness of it's Quality Management System by implementing and conforming to the procedure. Section 8.10 in the Continual Improvement Procedure (PW-DWQMS-21) states that a review of best management practices shall be discussed during the annual infrastructure review meeting. There is no evidence of best management practices being discussed in the last thirty-six months during the annual infrastructure review meeting.</p>	<p>Checklist which includes review of BMP's at least once every thirty-six months.</p>	
<p>OFI-2025-17 – Element 21: Note that the new https://www.ontario.ca/page/drinking-water-system-best-managementpractices document has been published. There is an opportunity to define the process to consider the specific BMPs (e.g. consider how the continual improvement procedure can be modified to include high level consideration of the BMPs based on factors like relevance to the system or practicality of implementation) with a more detailed consideration of the BMPs that are relevant to the system) to demonstrate consideration of all the BMPs.</p>	<p>There is an opportunity to review the Ministry's recently published BMPs and consider defining the Operating Authority's review process.</p>	<p>Completed – New form to track internal BMP's against latest ministry BMPs was created and reviewed in Top Management Review.</p>
<p>OFI-2025-18 – Element 21: Noted that the Appendix 5F – DWQMS Master List of Documents and Records (PW-DWQMSFR11), did not contain action items from the emergency test, nor from the infrastructure review. These are noted in separate documents (e.g. Appendix 18H – Action Items from Emergency Management Training (PW-DWQMS-FR28)) – however, there is an opportunity to consolidate and have all findings in one spot.</p>	<p>There is an opportunity to use the Appendix 5F – DWQMS Master List of Documents and Records (PW-DWQMS-FR11) to track action items arising during annual reviews (e.g. infrastructure, management) and emergency tests.</p>	<p>Completed – Action items are recorded in Appendix 5F in the table that records OFI's and links back to original meeting minutes for context.</p>

OFI # and Description	Recommended Corrective/Improvement Plan	Anticipated Date of Completion
OFI-2025-19 – Element 21: Viewed the blank Corrective Action Request Form (PW-DWQMS-FR5) and noted that there is no section on the form to document the root cause of the nonconformance. It is a requirement of the standard to investigate the cause of nonconformance.	Ensure that the Corrective Action Request Form (PW-DWQMS-FR5) includes a section to document the root cause of the nonconformance.	Completed during internal audit

Internal Audit Results

The QMS rep undertook an internal audit of the Towns QMS system in September to December 2025. The results of the internal audit listed eight (8) opportunities for improvement (OFI's). Two (2) of which were carried over from 2024's internal audit.

As a reminder, items identified during the internal audit or management review processes should be looked upon positively, as they demonstrate to the external auditors that the Town reviews its processes critically and continually work to improve its QMS.

For complete internal audit results, the internal audit checklist for 2025 is attached as Appendix 4.

OFI # and Description	Recommended Corrective/Improvement Plan	Corrective Action Anticipated Date of Completion
OFI-2025-20 - Element 5 Records of the last (5) years DWQMS documents are to be kept on record. Gap missing in physical, FileHold and SharePoint systems for years 2020-2022. Files located in previous QMS rep local files and uploaded to SharePoint.	Maintain previous 5-year QMS files on back-up in case of cyber event. Update annually for continuity of documents.	March 2026
OFI- 2025-21 - Element 6 Some sections describing the water filtration plant equipment and processes are outdated.	Update Appendix 6A/B	Work in progress, updated documents to be reviewed by WFP staff prior to finalizing. Goal is for March 2026
OFI- 2025-22 - Element 10 (Carried over from OFI-2024-02) The Operating Authority shall meet and maintain competencies for personnel directly affecting drinking water quality and shall maintain records of these activities.	Develop training tracking sheet with Health and Safety and HR. Existing training tracker for all staff includes occupational health and safety training. Working to update tracking for MECF related	Completed - developed water treatment and distribution specific licence tracking, and health and safety training that is maintained by HR. It was determined that current practices of

OFI # and Description	Recommended Corrective/Improvement Plan	Corrective Action Anticipated Date of Completion
	requirements to ensure annual hours are met.	training hour record keeping being most practical and procedure for managing has been updated in Element 10 of DWQMS
<p>OFI- 2025-23 - Element 10 Requirement the Operating Authority shall undertake activities to:</p> <p>a.) ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water and shall maintain records of these activities.</p>	Develop DWQMS orientation presentation for new staff and track training in operator tracking sheet.	Complete and on-going. Overview manual is available at DWQMS Rep’s office but could be revised for orientation training uses. Proposed refresher of DWQMS at Emergency Response Training
<p>OFI-2025-24 - Element 11 (Carried over from OFI-2024-01): There continues to be difficulty scheduling and completing mechanical maintenance activities at the WFP, due to two issues:</p> <ul style="list-style-type: none"> • The availability of reliable contracted millwright services to complete both large repair projects but also regularly required mechanical maintenance. 	Top Management working to fill role of Mechanical Technician position for WFP. Current maintenance tasks are completed by external contractors until position is filled. Review opportunities for recruitment.	On-going review of position including job description and salary range to attract talent.
<p>OFI-2025-25 - Element 14: Current employee feedback provided at infrastructure review. Provide opportunity for feedback throughout the year and insure it is incorporated back into infrastructure review. Create employee suggestion form for equipment maintenance to be reviewed against budgets.</p>	Create employee suggestion form for equipment maintenance to be reviewed against budgets.	DWQMS Rep to review with DWQMS Alternate and finalize in February.
<p>OFI-2025-26 - Element 15: Procedures and forms do not include timelines for maintenance work.</p>	Consider adding frequency schedule for inspections to procedures and to forms in section 15	Discussed at Top Management Review, SB to create schedule in March 2026 that will be incorporated into infrastructure review meetings.

OFI # and Description	Recommended Corrective/Improvement Plan	Corrective Action Anticipated Date of Completion
OFI-2025-27 - Element 20 Make sure all elements and records are taking place throughout the year.	Checklist to be developed to track key DWQMS activities to be undertaken annually, to help avoid tasks being missed by new/fill in staff during leaves of absences.	Completed

OFI's may be suggested outside of audit activities. In review of a water main break on December 4, 2025, the following OFI was brought forth.

OFI # and Description	Recommended Corrective/Improvement Plan	Corrective Action Anticipated Date of Completion
OFI-2025-28 - Element 18 Update boil water advisory procedure and communication templates.	Review current procedure from 2015 and update as required.	March 2026

Top Management Review

The Top Management review meeting was completed on January 19, 2026. This meeting covered DWQMS activities of 2025.

Action items discussed during the Top Management Review that require follow up by Staff in 2026 include:

ACTION PLAN:	ASSIGNED TO:	COMPLETION DATE
Consider possibility of adding logic to SCADA for flow meter on ammonia pumps to register a minimum flow.	BR – to discuss with controls supplier	Summer 2026
Update Boil Water Advisory Procedure and Communication Templates	SB/LW	March 2026
Update locations of dead-ends for flushing routine	Eng. Dept. Summer Student	July 2026
Develop Routine Inspection/Maintenance tracking form for use during annual Infrastructure Review	SB	March 2026

Commitment and Endorsement by the Owner

Element 3 of the Standard states that the Owner and Top Management are responsible for ensuring that the Quality Management System is implemented through their commitment and endorsement of the DWQMS.

A copy of the Commitment and Endorsement Policy is attached for your review (Appendix 3). The policy must be endorsed by the CAO and the General Manager, Operations (Top Management) and by the Mayor on behalf of Council as the Owner.

The Operational Plan for the Town of Arnprior, titled "Town of Arnprior Walter E. Prentice Water Filtration Plant and Distribution System, Drinking Water Quality Management Standard Operational Plan" is available for your review in hard copy or digital from the Environmental Engineering Officer (QMS Rep).

Options:

N/A

Policy Considerations:

This report is in keeping with the Strategic Plan's Vision of Improved infrastructure and Guiding Principle of Accountability, Dependability and Reliability.

Ontario's Drinking Water Quality Management Standard (Ver 2)

Safe Drinking Water Act (SDWA), 2002.

- O. Reg. 170/03
- O. Reg. 128/04

Financial Considerations:

N/A

Meeting Dates:

N/A

Consultation:

John Steckly - General Manager, Operations
Ben Ritchie - Waterworks Supervisor
Mike Ledgerwood - Supervisor, Roads and Services

Documents:

Attached

Appendix 1 – SAI Global System Audit – October 3, 2025
Appendix 2 – SAI Global System Audit – November 6, 2025
Appendix 3 - Finding Detail
Appendix 4 – Internal Audit Checklist – 2025
Appendix 5 – QMS Commitment and Endorsement Policy

Referenced Documents/By-laws:

Town of Arnprior Drinking Water System, Drinking Water Quality Management Standard
Operational Plan

Signatures

Reviewed by Department Head: John Steckly

Reviewed by General Manager, Client Services/Treasurer: Jennifer Morawiec

CAO Concurrence: Robin Paquette

Workflow Certified by Town Clerk: Kaila Zamojski

Audit Report

DWQMS Systems Audit for

The Corporation of the Town of Arnprior

ACTY-2023-641349

Audited Address: 71 James Street, Arnprior, Ontario, K7S 1C9

Start Date: October 3, 2025 End Date: October 3, 2025

Type of audit:
System (Stage 1)

Issue Date: October 3, 2025

Revision Level: *Final*



Audit Report

BACKGROUND INFORMATION

Intertek - SAI Global conducted an audit of The Corporation of the Town of Arnprior beginning on October 3, 2025 and ending on October 3, 2025 to Drinking Water Quality Management Standard (Version 2.0).

The purpose of this audit report is to summarise the degree of compliance with relevant criteria, as defined on the cover page of this report, based on the evidence obtained during the audit of your organization. This audit report considers your organization's policies, objectives, and continual improvement processes. Comments may include how suitable the objectives selected by your organization appear to be in regard to maintaining customer satisfaction levels and providing other benefits with respect to policy and other external and internal needs. We may also comment regarding the measurable progress you have made in reaching these targets for improvement.

Intertek - SAI Global audits are carried out within the requirements of Intertek - SAI Global procedures that also reflect the requirements and guidance provided in the international standards relating to audit practice such as ISO/IEC 17021-1, ISO 19011 and other normative criteria. Intertek - SAI Global Auditors are assigned to audits according to industry, standard or technical competencies appropriate to the organization being audited. Details of such experience and competency are maintained in our records.

In addition to the information contained in this audit report, Intertek - SAI Global maintains files for each client. These files contain details of organization size and personnel as well as evidence collected during preliminary and subsequent audit activities (Documentation Review and Scope) relevant to the application for initial and continuing certification of your organization.

Please take care to advise us of any change that may affect the application/certification or may assist us to keep your contact information up to date, as required by Intertek - SAI Global Terms and Conditions.

This report has been prepared by Intertek - SAI Global Limited (Intertek - SAI Global) in respect of a Client's application for assessment by Intertek - SAI Global. The purpose of the report is to comment upon evidence of the Client's compliance with the standards or other criteria specified. The content of this report applies only to matters, which were evident to Intertek - SAI Global at the time of the audit, based on sampling of evidence provided and within the audit scope. Intertek - SAI Global does not warrant or otherwise comment upon the suitability of the contents of the report or the certificate for any particular purpose or use. Intertek - SAI Global accepts no liability whatsoever for consequences to, or actions taken by, third parties as a result of or in reliance upon information contained in this report or certificate.

Please note that this report is subject to independent review and approval. Should changes to the outcomes of this report be necessary as a result of the review, a revised report will be issued and will supersede this report.

Standard:	DWQMS (Version 2)
Applicable codes:	ACTY-2023-641349
Scope of Certification:	DWQMS (Version 2)
Drinking Water System Owner:	The Corporation of the Town of Arnprior
Operating Authority:	The Corporation of the Town of Arnprior
Population Services:	8114
Activities:	Treatment & Distribution
Drinking Water Systems	Arnprior Drinking Water System #220000932

Total audit duration:	Person(s): 1 Day(s): 0.50
Audit Team Member(s):	Darlene Suddard

Other Participants:

Audit Report

Definitions and action required with respect to audit findings

Major Non-conformance:

Based on objective evidence, the absence of, or a significant failure to implement and/or maintain conformance to requirements of the applicable standard. Such issues may raise significant doubt as to the capability of the management system to achieve its intended outputs (i.e. the absence of or failure to implement a complete Management System clause of the standard); or

A situation which would on the basis of available objective evidence, raise significant doubt as to the capability of the Management System to achieve the stated policy and objectives of the customer.

NOTE: The “applicable Standard” is the Standard which Intertek - SAI Global are issuing certification against, and may be a Product Standard, a management system Standard, a food safety Standard or another set of documented criteria.

Action required: This category of findings requires Intertek - SAI Global to issue a formal NCR; to receive and approve client’s proposed correction and corrective action plans; and formally verify the effective implementation of planned activities. Correction and corrective action plan should be submitted to Intertek - SAI Global prior to commencement of follow-up activities as required. Follow-up action by Intertek - SAI Global must ‘close out’ the NCR or reduce it to a lesser category **within 90 days for initial certification and within 60 days for surveillance or re-certification audits, from the last day of the audit.**

If significant risk issues (e.g. safety, environmental, food safety, product legality/quality, etc.) are detected during an audit these shall be reported immediately to the Client and more immediate or instant correction shall be requested. If this is not agreed and cannot be resolved to the satisfaction of Intertek - SAI Global, immediate suspension shall be recommended.

In the case of initial certification, failure to close out NCR within the time limits means that the Certification Audit may be repeated.

If significant risk issues (e.g. safety, environmental, food safety, product legality/quality, etc.) are detected during an audit these shall be reported immediately to the Client and more immediate or instant correction shall be requested. If this is not agreed and cannot be resolved to the satisfaction of Intertek - SAI Global, immediate suspension shall be recommended.

In the case of an already certified client, failure to close out NCR within the time limits means that suspension proceedings may be instituted by Intertek - SAI Global.

Follow-up activities incur additional charges.

Minor Non-conformance:

Represents either a management system weakness or minor issue that could lead to a major nonconformance if not addressed. Each minor NC should be considered for potential improvement and to further investigate any system weaknesses for possible inclusion in the corrective action program

Action required: This category of findings requires Intertek - SAI Global to issue a formal NCR; to receive and approve client’s proposed correction and corrective action plans; and formally verify the effective implementation of planned activities at the next scheduled audit.

Opportunity for Improvement:

A documented statement, which may identify areas for improvement however shall not make specific recommendation(s).

Action required: Client may develop and implement solutions in order to add value to operations and management systems. Intertek - SAI Global is not required to follow-up on this category of audit finding.

Audit Type and Purpose

Systems Audit:

A desktop audit of the operational plans for the subject system to assess whether the documented QMS meets the PLAN requirements of the DWQMS V2.

Audit Objectives

The objective of the audit was to determine whether the drinking water Quality Management System (QMS) of the subject system conforms to the requirements of the Ontario Ministry of the Environment & Climate Change (MOECC) Drinking Water Quality Management Standard (DWQMS V2).

The audit was also intended to gather the information necessary for Intertek - SAI Global to assess whether accreditation can continue or be offered or to the operating authority.

Audit Report

Audit Scope

The facilities and processes associated with the operating authority's QMS were objectively evaluated to obtain audit evidence and to determine a) whether the quality management activities and related results conform with DWQMS V2 requirements, and b) if they have been effectively implemented and/or maintained.

Audit Criteria:

- The Drinking Water Quality Management Standard Version 2
- Current QMS manuals, procedures and records implemented by the Operating Authority
- Intertek - SAI Global Accreditation Program Handbook

Confidentiality and Documentation Requirements

The Intertek - SAI Global stores their records and reports to ensure their preservation and confidentiality. Unless required by law, the Intertek - SAI Global will not disclose audit records to a third party without prior written consent of the applicant. The only exception will be that the Intertek - SAI Global will provide audit and corrective action reports to the Ontario Ministry of the Environment. For more information, please refer to the Intertek - SAI Global Accreditation Program Handbook.

As part of the Intertek - SAI Global Terms, it is necessary for you to notify Intertek - SAI Global of any changes to your Quality Management System that you believe are significant enough to risk non-conformity with DWQMS V2: For more information, please refer to the Intertek - SAI Global Accreditation Program Handbook.

Review of any changes

Changes to the company since last audit include:

EXECUTIVE OVERVIEW

The objective of this System audit (Stage 1) was to review the management system and processes, confirm the scope for certification, and determine the organization's preparedness for the onsite verification audit (Stage 2). In addition, it allowed for the review of the adequacy of the Intertek - SAI Global audit program and resources for the audit including confirming and preparing the draft audit plan.

The results of this System (Stage 1) audit indicate that the organization is now ready for an onsite accreditation (Stage 2) audit.

Recommendation

Based on the results of this audit it has been determined that the management system is effectively implemented and maintained and meets the requirements of the standard relative to the scope of certification identified in this report; therefore, a recommendation for (continued) certification will be submitted to Intertek - SAI Global review team.

Opportunities for Improvement:

The following opportunities for improvement have been identified.

- Update the Subject System Description Form to include the Licence Number.
- There is an opportunity to ensure that the most current version of the OP is available on-line.
- Ensure that the requirement to consider the reliability and redundancy of equipment is clearly stated in the risk assessment procedure.
- There is an opportunity to include a reference to the specific emergency response procedures for related hazards in the "Emergency procedure or contingency plan" column in the risk assessment table.
- There is an opportunity to more clearly describe recovery processes for the identified emergencies.
- Ensure that external audit results are included in the Management Review.

It is suggested that the opportunities for improvement be considered by management to further enhance the company's Quality Management System and performance.

Management System Documentation

The management systems operational plan(s) was reviewed and found to be in conformance with the requirements of the standard.

Management Review

Records of the most recent management review meetings were verified and found to meet the requirements of the standard. All inputs were reflected in the records, and appear suitably managed as reflected by resulting actions and decisions.

Internal Audits

Internal audits are being conducted at planned intervals to ensure conformance to planned arrangements, the requirements of the standard and the established management system.

Corrective, Preventive Action & Continual Improvement Processes

The company is implementing an effective process for the continual improvement of the management system through the use of the quality policy, quality objectives, audit results, data analysis, the appropriate management of corrective and preventive actions and management review.

Summary of Findings

1. Quality Management System	2 OFIs
2. Quality Management System Policy	Conforms
3. Commitment and Endorsement	Conforms
4. Quality Management System Representative	Conforms
5. Document and Records Control	Conforms****
6. Drinking-Water System	Conforms
7. Risk Assessment	OFI
8. Risk Assessment Outcomes	OFI
9. Organizational Structure, Roles, Responsibilities and Authorities	Conforms
10. Competencies	Conforms
11. Personnel Coverage	Conforms
12. Communications	Conforms****
13. Essential Supplies and Services	Conforms****
14. Review and Provision of Infrastructure	Conforms
15. Infrastructure Maintenance, Rehabilitation & Renewal	Conforms****
16. Sampling, Testing and Monitoring	Conforms****
17. Measurement & Recording Equipment Calibration and Maintenance	Conforms****
18. Emergency Management	OFI
19. Internal Audits	Conforms
20. Management Review	OFI
21. Continual Improvement	Conforms****
Major NCR #	Major non-conformity. The auditor has determined one of the following: (a) a required element of the DWQMS has not been incorporated into a QMS; (b) a systemic problem with a QMS is evidenced by two or more minor non-conformities; or (c) a minor non-conformity identified in a corrective action request has not been remedied.
Minor NCR #	Minor non-conformity. In the opinion of the auditor, part of a required element of the DWQMS has not been incorporated satisfactorily into a QMS.
OFI	Opportunity for improvement. Conforms to the requirement, but there is an opportunity for improvement.
Conforms	Conforms to requirement.
NANC	Not applicable/Not Covered during this audit.
****	Additional comment added by auditor in the body of the report.

PART D. Audit Observations, Findings and Comments

DWQMS Reference:	1 Quality Management System
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) revised Oct 18, 2023, reviewed Sep 13, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Opportunity for Improvement</p> <p>While a Subject System Description Form has been included in the Operational Plan, an outdated version of the form was used. The current Ministry form requires the Licence Number to be provided on the form.</p> <ul style="list-style-type: none"> - Update the Subject System Description Form to include the Licence Number. <p>Opportunity for Improvement</p> <p>Viewed the Drinking Water Quality Management System Operational Plan on the website: https://www.arnprior.ca/en/living-here/drinking-water-quality.aspx#Drinking-Water-Quality-Management-System-DWQMS- on Oct 3, 2025. Noted that the version online is from 2021.</p> <ul style="list-style-type: none"> - There is an opportunity to ensure that the most current version of the OP is available on-line. 	

DWQMS Reference:	2 Quality Management System Policy
Client Reference:	Quality Management System Policy (PW-DWQMS-02), revised Nov 13, 2019, reviewed Sep 13, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Conforms.</p>	

DWQMS Reference:	3 Commitment and Endorsement
Client Reference:	Commitment and Endorsement Policy (PW-DWQMS-03), revised/reviewed Sep 13, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Signed by Mayor, CAO and General Manager of Operations on March 25/26, 2024.</p> <p>Conforms.</p>	

DWQMS Reference:	4 Quality Management System Representative
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.4 revised Oct 18, 2023, reviewed Sep 13, 2024 Appointment of QMS Representative Policy (PW-DWQMS-04), revised Nov 1, 2019, reviewed Oct 7, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Viewed Certified Resolution DWQMS Endorsement 457-13, Dec 9, 2013 which appoints the QMS Rep, authorizes them to carry out QMS Rep responsibilities, and authorizes the Mayor and Council to endorse the OP</p> <ul style="list-style-type: none"> - Environmental Engineering Officer, QMS Rep - Engineering Officer, Alternate QMS Rep <p>Conforms.</p>	

Audit Report

DWQMS Reference:	5 Document and Record Control
Client Reference:	Document and Record Control Procedure (PW-DWQMS-05), revised Oct 9, 2020, reviewed Oct 7, 2024 Appendix 5A – Format Procedure for the Development of DWQMS Policies and Procedures (PW-DWQMS-SOP1), revised Oct 26, 2022, reviewed Oct 21, 2024. Appendix 5F – DWQMS Master List of Documents and Records (PW-DWQMS-FR11), revised/reviewed Oct 20, 2023.
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> Note the auditor will spend some time reviewing documents and records during the on-site audit. Conforms.	

DWQMS Reference:	6 Drinking Water System
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.6 revised Oct 18, 2023, reviewed Sep 13, 2024 Drinking Water System (PW-DWQMS-06), revised Oct 18, 2023, reviewed Oct 7, 2024 Appendix 6A – Water Filtration Plant Detailed Process Description (PW-DWQMS-SOP14), revised Apr 10, 2018, revised Oct 21, 2024.
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> Appendix 6A contains a very detailed description of the treatment process, including photos. Conforms.	

DWQMS Reference	7 Risk Assessment
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.8 revised Oct 18, 2023, reviewed Sep 13, 2024 Risk Assessment Procedure (PW-DWQMS-07), revised Oct 19, 2023, reviewed Oct 7, 2024 Risk Assessment Outcomes Procedure (PW-DWQMS-08), revised Nov 22, 2023, reviewed Oct 8, 2024.
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> Opportunity for Improvement While redundancy is considered in the risk assessment outcomes, it is not clearly described in the procedure that the reliability and redundancy of equipment is considered when conducting the risk assessment. <ul style="list-style-type: none">- Ensure that the requirement to consider the reliability and redundancy of equipment is clearly stated in the risk assessment procedure.	

Audit Report

DWQMS Reference:	8 Risk Assessment Outcomes
Client Reference:	<p>Quality Management System – Operational Plan (PW-DWQMS-01) section 8.8 revised Oct 18, 2023, reviewed Sep 13, 2024</p> <p>Risk Assessment Outcomes Procedure (PW-DWQMS-08), revised/reviewed Sep 24, 2025.</p> <p>Appendix 8B – Filter Effluent Turbidity Critical Limit Response Procedure (PW-DWQMS-SOP2), revised/reviewed Sep 18, 2024</p> <p>Appendix 8C – Primary Disinfection Critical Limit Response Procedure (PW-DWQMS-SOP3), revised/reviewed Sep 18, 2024</p> <p>Appendix 8D – Distribution System Pressure Critical Limit Response Procedure (PW-DWQMS-SOP4), revised/reviewed Sep 18, 2024</p> <p>Appendix 8E – Secondary Disinfection Critical Limit Response Procedure(PW-DWQMS-SOP5), revised/reviewed Sep 18, 2024</p> <p>Appendix 8F – Raw Water Pipe Collapse Critical Limit Response Procedure (PW-DWQMS-SOP6), revised/reviewed Sep 12, 2024</p> <p>Appendix 8G – Low CT Response Procedure (PW-DWQMS-SOP15), revised/reviewed Oct 21, 2024</p> <p>Appendix 8H – Shallow Main Freeze and Break (PW-DWQMS-SOP16), revised/reviewed Sep 23, 2024</p>
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p>	
<p>The CCP’s identified relate to:</p>	
<ul style="list-style-type: none"> - System Wide Threats (Sustained Extreme Temps – Distribution, CCL 0.80 mg/L total chlorine; Shallow Main Freeze and Break, CCL 50psi; Cyber Security, CCL NA) - Source Water (Highway accident - spill, CCL NA) - Treatment (Loss of coagulant, CCL 0.30 NTU; Loss of polymer, CCL 0.30 NTU; Plugged filter/underdrain failure and filter breakthrough, not CCPs, but have identified CCL of 0.30 NTU) - Primary Disinfection Treatment (Chlorinator Failure, not CCP but have identified CCL as 1.30 mg/L free chlorine) - Distribution (Breakage of single pipe from plant to distribution, not CCP but have identified CCL of 60 psi; Breakage of pipe under Madawaska River, CCL 60psi @plant and 55% water in tower; Loss of chlorine residual – secondary disinfection large portion of system and limited area, CCL 0.80 mg/L total chlorine; Backflow – no CCL) 	
<p>Opportunity for Improvement</p>	
<p>It was noted that the emergency response procedures that may be implemented in response to a hazardous event are not specifically referenced under the “Emergency procedure or contingency plan” column in the risk assessment table.</p>	
<ul style="list-style-type: none"> - There is an opportunity to include a reference to the specific emergency response procedures for related hazards in the “Emergency procedure or contingency plan” column in the risk assessment table. 	

Audit Report

DWQMS Reference:	9 Organizational Structure, Roles, Responsibility and Authorities
Client Reference:	Organizational Structures, Roles, Responsibilities and Authorities (PW-DWQMS-09), revised/reviewed Oct 8, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Cross-referenced the positions in the org. structure and these correspond with the positions described in the table of roles, responsibilities and authorities.</p> <p>Top Management – CAO and General Manager of Operations (Management Review)</p> <p>QMS Rep – Environmental Engineering Officer</p> <p>Conforms.</p>	

DWQMS Reference:	10 Competencies
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.10 revised Oct 18, 2023, reviewed Sep 13, 2024 Competencies Procedure (PW-DWQMS-10) revised/reviewed Oct 8, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Conforms.</p>	

DWQMS Reference:	11 Personnel Coverage
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.11 revised Oct 18, 2023, reviewed Sep 13, 2024 Personnel Coverage Procedure (PW-DWQMS-11), revised/reviewed Oct 8, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Conforms.</p>	

DWQMS Reference:	12 Communications
Client Reference:	Communications Procedure (PW-DWQMS-12), review/revised Oct 8, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Note that the auditor will spend some time reviewing records of communications during the on-site audit.</p> <p>Conforms.</p>	

DWQMS Reference:	13 Essential Supplies and Services
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.13 revised Oct 18, 2023, reviewed Sep 13, 2024 Essential Supplies and Services Procedure (PW-DWQMS-13), revised Oct 19, 2023, reviewed Oct 8, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Note that the auditor will spend some time reviewing essential supplies and services during the on-site audit.</p> <p>Conforms.</p>	

Audit Report

DWQMS Reference:	14 Review and Provision of Infrastructure
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.14 revised Oct 18, 2023, reviewed Sep 13, 2024 Review and Provision of Infrastructure (PW-DWQMS-14), revised Oct 21, 2021, reviewed Oct 8, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Last reported to owner: Viewed Town of Arnprior, Regular Meeting of Council Agenda for Feb 10, 2025 and 2025 Capital Budget Summary</p> <p>Reviewed Review and Provision of Infrastructure Annual Meeting Minutes dated July 15, 2025. For 2026 capital.</p> <p>Conforms.</p>	

DWQMS Reference:	15 Infrastructure Maintenance, Rehabilitation and Renewal
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.15 revised Oct 18, 2023, reviewed Sep 13, 2024 Element 15 - Infrastructure Maintenance, Rehabilitation and Renewal Procedure (PW-DWQMS-15), revised Oct 18, 2023, reviewed Oct 8, 2024.
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Maintenance categories (planned and unplanned) include: Infrastructure, building and distribution system, machinery and equipment, distribution system, computers, software, SCADA</p> <p>Note that the auditor will spend some time reviewing infrastructure maintenance documents and records during the on-site audit.</p> <p>Conforms.</p>	

DWQMS Reference:	16 Sampling, Testing and Monitoring
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.16 revised Oct 18, 2023, reviewed Sep 13, 2024 Sampling and Testing Procedure (PW-DWQMS-16), revised Oct 19, 2022, reviewed Oct 8, 2024 Monitoring Procedure (PW-DWQMS-22), revised/reviewed Oct 17, 2024 Appendix 22D - Harmful Algal Bloom Monitoring Procedure (PW-DWQMS-SOP17), revised/reviewed Oct 17, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Confirmed most recent Annual & Summary Reports available online at: https://www.arnprior.ca/en/living-here/drinking-water-quality.aspx#Waterworks-Summary-Report accessed on October 3, 2025.</p> <p>Note the auditor will spend some time reviewing the records of sampling, monitoring and testing during the on-site audit.</p> <p>Conforms.</p>	

Audit Report

DWQMS Reference:	17 Measurement and Recording Equipment Calibration and Maintenance
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.17 revised Oct 18, 2023, reviewed Sep 13, 2024 Measurement and Recording Equipment Calibration and Maintenance Procedure (PW-DWQMS-17), revised/reviewed Oct 8, 2024
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>Calibration and maintenance is performed either in house or through an external manufacturer/supplier</p> <p>Procedure applies to:</p> <ul style="list-style-type: none"> - Portable colorimeters (2 treatment, 1 distribution) - Portable turbidimeters (treatment) - pH meters (1 benchtop, 1 treated, 2 actiflo) - Pressure gauges - Continuous chlorine residual analyzers (1 free, 1 total) - Continuous turbidimeters (2 actiflo, 1 benchtop, 3 filters) - Flow meters - Water level transducer (clearwell #1, #2) <p>Any equipment part of CT is checked and if necessary, calibrated at least once every 12 months when the system is in operation or more frequently in accordance with manufacturer’s recommendations.</p> <p>Note the auditor will spend some time reviewing calibration and maintenance records during the on-site audit.</p> <p>Conforms.</p>	

DWQMS Reference:	18 Emergency Management
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.18 revised Oct 18, 2023, reviewed Sep 13, 2024 Emergency Management Procedure (PW-DWQMS-18), revised Sep 12, 2024, reviewed Sep 26, 2023 Appendix 18H – Action Items from Emergency Management Training (PW-DWQMS-FR28), revised/reviewed Jul 25, 2025 Appendix 18A – Weather Related or Natural Causes Emergencies (PW-DWQMS-SOP8), revised/reviewed Sep 12, 2024 Appendix 18B– Security Breach Emergencies (PW-DWQMS-SOP9), revised/reviewed Sep 12, 2024 Appendix 18C– Power Failure Emergencies (PW-DWQMS-SOP10), revised/reviewed Sep 18, 2024. Appendix 18D– Pandemic Emergencies (PW-DWQMS-SOP11), revised/reviewed Sep 12, 2024. Appendix 18E– Source Water Contamination Emergencies (PW-DWQMS-SOP12), revised/reviewed Sep 12, 2024 Appendix 18F– Major Fire Emergencies (PW-DWQMS-SOP13), revised/reviewed Sep 12, 2024
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>Opportunity for Improvement</p> <p>Each of the emergency response procedures has a section entitled “Contingency and Recovery”.</p>	

Audit Report

While all procedures have items listed in a table under this section, the majority of the items listed speak to the contingencies and do not include instructions or criteria to return the system to normal operations (recovery) after an emergency.

- There is an opportunity to more clearly describe recovery processes for the identified emergencies.

DWQMS Reference:	19 Internal Audits
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.19 revised Oct 18, 2023, reviewed Sep 13, 2024 Internal Audits Procedure (PW-DWQMS-19), revised Nov 12, 2019, reviewed Oct 8, 2024. Appendix 19B – Internal Audit Schedule (PW-DWQMS-FR4), revised/reviewed Oct 19, 2024
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>Reviewed the Internal Audit Checklist by Amy Dean and Jessica Schultz, dated Sep/Oct 2024, and noted one OFI was identified and the status of previous OFIs and NCs was summarized in the Action Plan section.</p> <p>The 2025 Internal Audit is scheduled for Oct/Nov 2025.</p> <p>Conforms.</p>	

DWQMS Reference:	20 Management Review
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.20 revised Oct 18, 2023, reviewed Sep 13, 2024 Management Review Procedure (PW-DWQMS-20), revised Nov 12, 2019, reviewed Oct 8, 2024. Appendix 20A – Top Management Review Form (PW-DWQMS-FR8), revised/reviewed Oct 19, 2024 Minutes from March 12, 2025 Management Review Meeting
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>Opportunity for Improvement</p> <p>During the Management Review, agenda item e) covered internal audit findings, but the external audit results from October 25, 2024, were not discussed. The Standard requires consideration of both internal and third-party Audit results.</p> <ul style="list-style-type: none"> - Ensure that external audit results are included in the Management Review. 	

Audit Report

DWQMS Reference:	21 Continual Improvement
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.21 revised Oct 18, 2023, reviewed Sep 13, 2024 Continual Improvement Procedure (PW-DWQMS-21), revised/reviewed Oct 19, 2024 Appendix 5F – DQWMS Master List of Documents and Records (PW-DWQMS-FR11), reviewed/revised Sep 24, 2025
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> Note the auditor will spend some time reviewing the continual improvement processes with the QMS Rep during the on-site audit. Conforms.	

Details regarding the personnel interviewed and objective evidence reviewed are maintained on file at Intertek - Intertek - SAI Global.

This report was prepared by:



Darlene Suddard

Intertek - Intertek - SAI Global Management Systems Auditor

The audit report is distributed as follows:

- Intertek - Intertek - SAI Global
- Operating Authority
- Owner
- MOECC

Notes

Copies of this report distributed outside the organization must include all pages.

Audit Report

DWQMS Re-Accreditation Audit for

The Corporation of the Town of Arnprior

ACTY-2023-641351

Audited Address: 71 James Street, Arnprior, Ontario, K7S 1C9

Start Date: Nov 6, 2025 End Date: Nov 6, 2025

Type of audit:
Verification On-Site Audit

Issue Date: Nov 6, 2025

Revision Level: *Final*



Audit Report

BACKGROUND INFORMATION

Intertek - SAI Global conducted an audit of The Corporation of the Town of Arnprior beginning on Nov 6, 2025 and ending on Nov 6, 2025 to Drinking Water Quality Management Standard (Version 2.0).

The purpose of this audit report is to summarise the degree of compliance with relevant criteria, as defined on the cover page of this report, based on the evidence obtained during the audit of your organization. This audit report considers your organization's policies, objectives, and continual improvement processes. Comments may include how suitable the objectives selected by your organization appear to be in regard to maintaining customer satisfaction levels and providing other benefits with respect to policy and other external and internal needs. We may also comment regarding the measurable progress you have made in reaching these targets for improvement.

Intertek - SAI Global audits are carried out within the requirements of Intertek - SAI Global procedures that also reflect the requirements and guidance provided in the international standards relating to audit practice such as ISO/IEC 17021-1, ISO 19011 and other normative criteria. Intertek - SAI Global Auditors are assigned to audits according to industry, standard or technical competencies appropriate to the organization being audited. Details of such experience and competency are maintained in our records.

In addition to the information contained in this audit report, Intertek - SAI Global maintains files for each client. These files contain details of organization size and personnel as well as evidence collected during preliminary and subsequent audit activities (Documentation Review and Scope) relevant to the application for initial and continuing certification of your organization.

Please take care to advise us of any change that may affect the application/certification or may assist us to keep your contact information up to date, as required by Intertek - SAI Global Terms and Conditions.

This report has been prepared by Intertek - SAI Global Limited (Intertek - SAI Global) in respect of a Client's application for assessment by Intertek - SAI Global. The purpose of the report is to comment upon evidence of the Client's compliance with the standards or other criteria specified. The content of this report applies only to matters, which were evident to Intertek - SAI Global at the time of the audit, based on sampling of evidence provided and within the audit scope. Intertek - SAI Global does not warrant or otherwise comment upon the suitability of the contents of the report or the certificate for any particular purpose or use. Intertek - SAI Global accepts no liability whatsoever for consequences to, or actions taken by, third parties as a result of or in reliance upon information contained in this report or certificate.

Please note that this report is subject to independent review and approval. Should changes to the outcomes of this report be necessary as a result of the review, a revised report will be issued and will supersede this report.

Standard:	DWQMS (Version 2)
Applicable codes:	ACTY-2023-641351
Scope of Certification:	DWQMS (Version 2)
Drinking Water System Owner:	The Corporation of the Town of Arnprior
Operating Authority:	The Corporation of the Town of Arnprior
Population Services:	8114
Activities:	Treatment & Distribution
Drinking Water Systems	Arnprior Drinking Water System #220000932

Total audit duration:	Person(s): 1	Day(s): 1.0
Audit Team Member(s):	Darlene Suddard	

Other Participants:

Audit Report

Definitions and action required with respect to audit findings

Major Non-conformance:

Based on objective evidence, the absence of, or a significant failure to implement and/or maintain conformance to requirements of the applicable standard. Such issues may raise significant doubt as to the capability of the management system to achieve its intended outputs (i.e. the absence of or failure to implement a complete Management System clause of the standard); or

A situation which would on the basis of available objective evidence, raise significant doubt as to the capability of the Management System to achieve the stated policy and objectives of the customer.

NOTE: The "applicable Standard" is the Standard which Intertek - SAI Global are issuing certification against, and may be a Product Standard, a management system Standard, a food safety Standard or another set of documented criteria.

Action required: This category of findings requires Intertek - SAI Global to issue a formal NCR; to receive and approve client's proposed correction and corrective action plans; and formally verify the effective implementation of planned activities. Correction and corrective action plan should be submitted to Intertek - SAI Global prior to commencement of follow-up activities as required. Follow-up action by Intertek - SAI Global must 'close out' the NCR or reduce it to a lesser category **within 90 days for initial certification and within 60 days for surveillance or re-certification audits, from the last day of the audit.**

If significant risk issues (e.g. safety, environmental, food safety, product legality/quality, etc.) are detected during an audit these shall be reported immediately to the Client and more immediate or instant correction shall be requested. If this is not agreed and cannot be resolved to the satisfaction of Intertek - SAI Global, immediate suspension shall be recommended.

In the case of initial certification, failure to close out NCR within the time limits means that the Certification Audit may be repeated.

If significant risk issues (e.g. safety, environmental, food safety, product legality/quality, etc.) are detected during an audit these shall be reported immediately to the Client and more immediate or instant correction shall be requested. If this is not agreed and cannot be resolved to the satisfaction of Intertek - SAI Global, immediate suspension shall be recommended.

In the case of an already certified client, failure to close out NCR within the time limits means that suspension proceedings may be instituted by Intertek - SAI Global.

Follow-up activities incur additional charges.

Minor Non-conformance:

Represents either a management system weakness or minor issue that could lead to a major nonconformance if not addressed. Each minor NC should be considered for potential improvement and to further investigate any system weaknesses for possible inclusion in the corrective action program

Action required: This category of findings requires Intertek - SAI Global to issue a formal NCR; to receive and approve client's proposed correction and corrective action plans; and formally verify the effective implementation of planned activities at the next scheduled audit.

Opportunity for Improvement:

A documented statement, which may identify areas for improvement however shall not make specific recommendation(s).

Action required: Client may develop and implement solutions in order to add value to operations and management systems. Intertek - SAI Global is not required to follow-up on this category of audit finding.

Audit Type and Purpose

On-site Verification Audit:

An onsite audit to assess whether a QMS has been implemented for the subject system that meets the “DO” requirements of the DWQMS V2.

Audit Objectives

The objective of the audit was to determine whether the drinking water Quality Management System (QMS) of the subject system conforms to the requirements of the Ontario Ministry of the Environment & Climate Change (MOECC) Drinking Water Quality Management Standard (DWQMS V2).

The audit was also intended to gather the information necessary for Intertek - SAI Global to assess whether accreditation can continue or be offered or to the operating authority.

Audit Report

Audit Scope

The facilities and processes associated with the operating authority's QMS were objectively evaluated to obtain audit evidence and to determine a) whether the quality management activities and related results conform with DWQMS V2 requirements, and b) if they have been effectively implemented and/or maintained.

Audit Criteria:

- The Drinking Water Quality Management Standard Version 2
- Current QMS manuals, procedures and records implemented by the Operating Authority
- Intertek - SAI Global Accreditation Program Handbook

Confidentiality and Documentation Requirements

The Intertek - SAI Global stores their records and reports to ensure their preservation and confidentiality. Unless required by law, the Intertek - SAI Global will not disclose audit records to a third party without prior written consent of the applicant. The only exception will be that the Intertek - SAI Global will provide audit and corrective action reports to the Ontario Ministry of the Environment. For more information, please refer to the Intertek - SAI Global Accreditation Program Handbook.

As part of the Intertek - SAI Global Terms, it is necessary for you to notify Intertek - SAI Global of any changes to your Quality Management System that you believe are significant enough to risk non-conformity with DWQMS V2: For more information, please refer to the Intertek - SAI Global Accreditation Program Handbook.

Review of any changes

Changes to the company since last audit include: None

EXECUTIVE OVERVIEW

The results of this onsite verification audit (Stage 2) indicate that the management system does not fully meet the requirements of the standard based on the area(s) of non-conformance identified during the audit and as documented in the attached Non-conformance Report(s). As discussed during the closing meeting a recommendation for certification to the standard and to the scope of certification identified in this report is on hold pending the receipt, review and acceptance of the corrective action taken. For re-certification, failure to address the nonconformances within the 60 day timeframe may lead to suspension.

Recommendation

The results of this audit indicate that the management system does not fully meet the requirements of the standard based on the area(s) of non-conformance identified during the audit and as documented in the attached Non-conformance Report(s).

A recommendation for (re-)certification to the standard and to the scope of certification identified in this report is on hold pending the receipt, review and acceptance of the corrective action taken.

Opportunities for Improvement:

The following opportunities for improvement have been identified.

- There is an opportunity to consider adding distribution response procedures to the Distribution Pressure Critical Limit Response Procedure.
- Consider adding the date of the 36-month assessment to the Risk Assessment Table.
- Ensure that orientation sessions are being conducted for new employees.
- There is an opportunity to consider identifying back up suppliers/services and more clearly indicate suppliers of handheld instruments and reagents.
- There is an opportunity to ensure that water system inventory (e.g. repair parts) complies with the regulatory requirements (e.g. NSF/14, NSF/60, NSF/61 and NSF/372) and to vet tender documents to ensure the MDWL requirements are stated.
- There is an opportunity to ensure that the Infrastructure Review information and any links to Risk Assessment outcomes are included in the long-range forecast/budget submission to council
- There is an opportunity to consider creating a watermain commissioning process for contractors and formalizing the recordkeeping and connection approval requirements.
- There is an opportunity to consider adding the verification tolerance ranges for the colorimeters to the Analyzer Calibration Record
- Consider reviewing Hach's calibration/verification recommendations to confirm if the "manufacturer's recommendations" statement in PW-DWQMS-17 is accurate.
- The OA may wish to vet the list provided in the procedure for consistency with the Standard and Appendix 20A – Top Management Review Form (PW-DWQMS-FR8).
- There is an opportunity to review the Ministry's recently published BMPs and consider defining the Operating Authority's review process.
- There is an opportunity to use the Appendix 5F – DWQMS Master List of Documents and Records (PW-DWQMS-FR11) to track action items arising during annual reviews (e.g. infrastructure, management) and emergency tests.
- Ensure that the Corrective Action Request Form (PW-DWQMS-FR5) includes a section to document the root cause of the nonconformance.

It is suggested that the opportunities for improvement be considered by management to further enhance the company's Quality Management System and performance.

Management System Documentation

The management systems operational plan(s) was reviewed and found to be in conformance with the requirements of the standard.

Management Review

Records of the most recent management review meetings were verified and found to meet the requirements of the standard. All inputs were reflected in the records, and appear suitably managed as reflected by resulting actions and decisions.

Internal Audits

Internal audits are being conducted at planned intervals to ensure conformance to planned arrangements, the requirements of the standard and the established management system.

Corrective, Preventive Action & Continual Improvement Processes

The company is not implementing an effective corrective and preventive action process for the continual improvement of the management system. Details are provided in NCR No. ARN NCR-01

Summary of Findings

1. Quality Management System	Conforms
2. Quality Management System Policy	Conforms
3. Commitment and Endorsement	Conforms
4. Quality Management System Representative	Conforms
5. Document and Records Control	Conforms
6. Drinking-Water System	Conforms
7. Risk Assessment	Conforms
8. Risk Assessment Outcomes	2 OFIs
9. Organizational Structure, Roles, Responsibilities and Authorities	Conforms
10. Competencies	Conforms
11. Personnel Coverage	Conforms
12. Communications	OFI
13. Essential Supplies and Services	2 OFIs
14. Review and Provision of Infrastructure	OFI
15. Infrastructure Maintenance, Rehabilitation & Renewal	OFI
16. Sampling, Testing and Monitoring	Conforms
17. Measurement & Recording Equipment Calibration and Maintenance	2 OFIs
18. Emergency Management	Conforms
19. Internal Audits	Conforms
20. Management Review	OFI
21. Continual Improvement	Minor NCR# ARN NCR-01 3 OFIs
Major NCR #	Major non-conformity. The auditor has determined one of the following: (a) a required element of the DWQMS has not been incorporated into a QMS; (b) a systemic problem with a QMS is evidenced by two or more minor non-conformities; or (c) a minor non-conformity identified in a corrective action request has not been remedied.
Minor NCR #	Minor non-conformity. In the opinion of the auditor, part of a required element of the DWQMS has not been incorporated satisfactorily into a QMS.
OFI	Opportunity for improvement. Conforms to the requirement, but there is an opportunity for improvement.
Conforms	Conforms to requirement.
NANC	Not applicable/Not Covered during this audit.
****	Additional comment added by auditor in the body of the report.

PART D. Audit Observations, Findings and Comments

DWQMS Reference:	1 Quality Management System
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) revised Oct 18, 2023, reviewed Sep 13, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Files are in the process of being moved to a Sharepoint site. Working on getting Sharepoint better organized so can find the DWQMS documents easier.</p> <p>Archived Operational Plans are stored in Filehold. And have the hard copies back to 2012.</p> <p>Conforms.</p>	
DWQMS Reference:	2 Quality Management System Policy
Client Reference:	Quality Management System Policy (PW-DWQMS-02), revised Nov 13, 2019, reviewed Sep 13, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>The QMS Rep has made an action item with the marketing team who manages the website to upload the most current Operational Plan and Policy to the website.</p> <p>Conforms.</p>	
DWQMS Reference:	3 Commitment and Endorsement
Client Reference:	Commitment and Endorsement Policy (PW-DWQMS-03), revised/ reviewed Sep 13, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Re-endorsement is sought annually when the annual DWQMS report is presented to Council.</p> <p>Conforms.</p>	
DWQMS Reference:	4 Quality Management System Representative
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.4 revised Oct 18, 2023, reviewed Sep 13, 2024 Appointment of QMS Representative Policy (PW-DWQMS-04), revised Nov 1, 2019, reviewed Oct 7, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Conforms.</p>	
DWQMS Reference:	5 Document and Record Control
Client Reference:	Document and Record Control Procedure (PW-DWQMS-05), revised Oct 9, 2020, reviewed Oct 7, 2024 Appendix 5A – Format Procedure for the Development of DWQMS Policies and Procedures (PW-DWQMS-SOP1), revised Oct 26, 2022, reviewed Oct 21, 2024.
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>During this audit, the auditor evaluated that current versions of documents are consistently in use and the records reviewed were legible and identifiable.</p> <p>Conforms.</p>	

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DWQMS Reference:	6 Drinking Water System
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.6 revised Oct 18, 2023, reviewed Sep 13, 2024 Drinking Water System (PW-DWQMS-06), revised Oct 18, 2023, reviewed Oct 7, 2024 Appendix 6A – Water Filtration Plant Detailed Process Description (PW-DWQMS-SOP14), revised Apr 10, 2018, revised Oct 21, 2024.
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>During the audit it was discussed that the in-progress internal audit has raised a lot of updates and changes to the system description to more accurately reflect what is in the system. Updates will be completed before seeking re-endorsement with the annual DWQMS report.</p> <p>Conforms.</p>	

DWQMS Reference	7 Risk Assessment
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.8 revised Oct 18, 2023, reviewed Sep 13, 2024 Risk Assessment Procedure (PW-DWQMS-07), revised Oct 19, 2023, reviewed Oct 7, 2024 Risk Assessment Outcomes Procedure (PW-DWQMS-08), revised Nov 22, 2023, reviewed Oct 8, 2024.
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>Conforms.</p>	

DWQMS Reference:	8 Risk Assessment Outcomes
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.8 revised Oct 18, 2023, reviewed Sep 13, 2024 Risk Assessment Outcomes Procedure (PW-DWQMS-08), revised/reviewed Sep 24, 2025. Appendix 8D – Distribution System Pressure Critical Limit Response Procedure (PW-DWQMS-SOP4), revised/reviewed Sep 18, 2024
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>Opportunity for Improvement:</p> <p>Appendix D5 – Distribution Pressure Critical Limit Response Procedure mostly speaks to what to do in the plant should the distribution pressure drop below the critical control limit, but there are no details regarding what to do in the distribution system in the event of the pressure dropping below the critical control limit of 60psi</p> <ul style="list-style-type: none"> - There is an opportunity to consider adding distribution response procedures to the Distribution Pressure Critical Limit Response Procedure <p>Opportunity for Improvement:</p> <p>The last 36-month risk assessment was completed on Sep 24, 2025, however in viewing the risk assessment table in the Risk Assessment Outcomes Procedure (PW-DWQMS-08), that date is not included so it is not immediately apparent when the 36-month assessment was completed.</p> <ul style="list-style-type: none"> - Consider adding the date of the 36-month assessment to the RA Table 	

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DWQMS Reference:	9 Organizational Structure, Roles, Responsibility and Authorities
Client Reference:	Organizational Structures, Roles, Responsibilities and Authorities (PW-DWQMS-09), revised/reviewed Oct 8, 2024
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> The org chart is current. Organizational changes (e.g. new staff) are communicated to all staff and the owner via an email from the CAO. Conforms.	

DWQMS Reference:	10 Competencies
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.10 revised Oct 18, 2023, reviewed Sep 13, 2024 Competencies Procedure (PW-DWQMS-10) revised/reviewed Oct 8, 2024
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> There is an outstanding OFI to create a training log for operators. The QMS Rep is monitoring progress. Conforms.	

DWQMS Reference:	11 Personnel Coverage
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.11 revised Oct 18, 2023, reviewed Sep 13, 2024 Personnel Coverage Procedure (PW-DWQMS-11), revised/reviewed Oct 8, 2024
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> Arnprior is a member of OnWARN and would be able to request assistance in the event of a personnel shortage. Conforms.	

DWQMS Reference:	12 Communications
Client Reference:	Communications Procedure (PW-DWQMS-12), review/revised Oct 8, 2024
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> Opportunity for Improvement: The procedure requires new employees to receive DWQMS Employee Orientation, however the current QMS Rep, who is covering a maternity leave, did not receive the orientation. - Ensure that orientation sessions are being conducted for new employees.	

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DWQMS Reference:	13 Essential Supplies and Services
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.13 revised Oct 18, 2023, reviewed Sep 13, 2024 Essential Supplies and Services Procedure (PW-DWQMS-13), revised Oct 19, 2023, reviewed Oct 8, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Opportunity for Improvement:</p> <p>Essential supplies and services are listed in section 8.0 of the procedure. It was noted that not all suppliers have an identified back up, and that there does not appear to be a supplier listed for the handheld instruments and supplies.</p> <ul style="list-style-type: none"> - There is an opportunity to consider identifying back up suppliers/services and more clearly indicate suppliers of handheld instruments and reagents. <p>Opportunity for Improvement:</p> <p>The procedure states that all tender documents shall provide list of relevant quality requirements (e.g. AWWA, ANSI/NSF). During the audit, a current tender document was reviewed and while some AWWA requirements are referenced, the Municipal Drinking Water Licence (MDWL) requirements are not fully stated. It was also discussed that the new MDWL includes new requirements for PVC pipe (NSF14) and that condition 14.2 of the MDWL requires “The most current chemical and material product registration documentation from a testing institution accredited by either the Standards Council of Canada or by the American National Standards Institution ("ANSI") shall be available at all times for each chemical and material used in the operation of the drinking water system that comes into contact with water within the system.”</p> <ul style="list-style-type: none"> - There is an opportunity to ensure that water system inventory (e.g. repair parts) complies with the regulatory requirements (e.g. NSF/14, NSF/60, NSF/61 and NSF/372) and to vet tender documents to ensure the MDWL requirements are stated. 	

DWQMS Reference:	14 Review and Provision of Infrastructure
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.14 revised Oct 18, 2023, reviewed Sep 13, 2024 Review and Provision of Infrastructure (PW-DWQMS-14), revised Oct 21, 2021, reviewed Oct 8, 2024
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Opportunity for Improvement:</p> <p>The justification column of the long-range capital and operating budget forecast would include the reason(s) for a budget request, but doesn't clearly indicate if requests are based on Infrastructure Review and/or Risk Assessment outcomes.</p> <ul style="list-style-type: none"> - There is an opportunity to ensure that the Infrastructure Review information and any links to Risk Assessment outcomes are included in the long-range forecast/budget submission to council 	

Audit Report

DWQMS Reference:	15 Infrastructure Maintenance, Rehabilitation and Renewal
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.15 revised Oct 18, 2023, reviewed Sep 13, 2024 Element 15 - Infrastructure Maintenance, Rehabilitation and Renewal Procedure (PW-DWQMS-15), revised Oct 18, 2023, reviewed Oct 8, 2024.
Details: <i>(personnel interviewed, procedures, activities and records observed)</i>	
Opportunity for Improvement: There is no formal watermain commissioning process nor form for contractors (capital projects or development) to follow or use. Tender documents require contractors to complete commissioning as per the Provincial Watermain Disinfection Procedure and AWWA C651. It was also discussed that there is no formal final connection approval paperwork. <ul style="list-style-type: none">- There is an opportunity to consider creating a watermain commissioning process for contractors and formalizing the recordkeeping and connection approval requirements.	

DWQMS Reference:	16 Sampling, Testing and Monitoring
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.16 revised Oct 18, 2023, reviewed Sep 13, 2024 Sampling and Testing Procedure (PW-DWQMS-16), revised Oct 19, 2022, reviewed Oct 8, 2024 Monitoring Procedure (PW-DWQMS-22), revised/reviewed Oct 17, 2024
Details: <i>(personnel interviewed, procedures, activities and records observed)</i>	
Conforms.	

DWQMS Reference:	17 Measurement and Recording Equipment Calibration and Maintenance
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.17 revised Oct 18, 2023, reviewed Sep 13, 2024 Measurement and Recording Equipment Calibration and Maintenance Procedure (PW-DWQMS-17), revised/reviewed Oct 8, 2024
Details: <i>(personnel interviewed, procedures, activities and records observed)</i>	
Opportunity for Improvement: During the audit, it was noted that the colorimeter verification records include the tolerance range of the SpecCheck standard handwritten at the top of the record for each colorimeter. This is a great initiative to assist staff in quickly confirming that the colorimeter they are verifying is reading within the range, rather than pulling out the range form from the SpecCheck standard. By making this a fillable part of the form, this would formalize recording the ranges to ensure this information is consistently recorded by all staff. This may also assist in traceability (e.g. linking the verification results to the specific SpecCheck standard). <ul style="list-style-type: none">- There is an opportunity to consider adding the verification tolerance ranges for the colorimeters to the Analyzer Calibration Record	
Opportunity for Improvement: Section 8.1 in PW-DWQMS-17 requires any instrumentation that forms part of the monitoring system for CT to be checked and where necessary, calibrated at least once every 12 months when the system is in operation or more frequently in accordance with manufacturer's	

Audit Report

recommendations. It was discussed during the audit that Hach has published a [Free and total chlorine analyzer verification document](#) which meets the requirements of [USEPA Method 334.0: Determination of Residual Chlorine in Drinking Water using an On-Line Chlorine Analyzer](#). Paragraph 11.1.1 requires a check standard to be analyzed when a grab sample is used to adjust the calibration of an on-line chlorine analyzer.

- Consider reviewing Hach’s calibration/verification recommendations to confirm if the “manufacturer’s recommendations” statement in PW-DWQMS-17 is accurate.

DWQMS Reference:	18 Emergency Management
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.18 revised Oct 18, 2023, reviewed Sep 13, 2024 Emergency Management Procedure (PW-DWQMS-18), revised Sep 12, 2024, reviewed Sep 26, 2023
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>The Town is considering a cybersecurity incident for the 2026 emergency test.</p> <p>Conforms.</p>	

DWQMS Reference:	19 Internal Audits
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.19 revised Oct 18, 2023, reviewed Sep 13, 2024 Internal Audits Procedure (PW-DWQMS-19), revised Nov 12, 2019, reviewed Oct 8, 2024. Appendix 19B – Internal Audit Schedule (PW-DWQMS-FR4), revised/reviewed Oct 19, 2024
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>The 2025 internal audit is in progress.</p> <p>Conforms.</p>	

DWQMS Reference:	20 Management Review
Client Reference:	Quality Management System – Operational Plan (PW-DWQMS-01) section 8.20 revised Oct 18, 2023, reviewed Sep 13, 2024 Management Review Procedure (PW-DWQMS-20), revised Nov 12, 2019, reviewed Oct 8, 2024. Appendix 20A – Top Management Review Form (PW-DWQMS-FR8), revised/reviewed Oct 19, 2024 Minutes from March 12, 2025 Management Review Meeting
<p><i>Details: (personnel interviewed, procedures, activities and records observed)</i></p> <p>Opportunity for Improvement:</p> <p>Section 8.5 of the Management Review Procedure lists the items to be discussed during the meeting, however, this list does not fully match the list provided in the Standard or the Top Management Review Form.</p> <ul style="list-style-type: none"> - The OA may wish to vet the list provided in the procedure for consistency with the Standard and Appendix 20A – Top Management Review Form (PW-DWQMS-FR8). 	

DWQMS Reference:	21 Continual Improvement
Client Reference:	<p>Quality Management System – Operational Plan (PW-DWQMS-01) section 8.21 revised Oct 18, 2023, reviewed Sep 13, 2024</p> <p>Continual Improvement Procedure (PW-DWQMS-21), revised/reviewed Oct 19, 2024</p> <p>Appendix 5F – DQWMS Master List of Documents and Records (PW-DWQMS-FR11), reviewed/revised Sep 24, 2025</p>
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Minor Non-Conformity # ARN NCR-01:</p> <p>Element 21 – Continual Improvement</p> <p>PLAN – The Operating Authority shall develop a procedure for tracking and measuring continual improvement of its Quality Management System by:</p> <ul style="list-style-type: none"> a) Reviewing and considering applicable best management practices including any published by the Ministry..., at least once every thirty-six months. <p>DO – The Operating Authority shall strive to continually improve the effectiveness of it’s Quality Management System by implementing and conforming to the procedure.</p> <p>Section 8.10 in the Continual Improvement Procedure (PW-DWQMS-21) states that a review of best management practices shall be discussed during the annual infrastructure review meeting.</p> <p>There is no evidence of best management practices being discussed in the last thirty-six months during the annual infrastructure review meeting.</p> <p>Opportunity for Improvement:</p> <p>Note that the new https://www.ontario.ca/page/drinking-water-system-best-management-practices document has been published. There is an opportunity to define the process to consider the specific BMPs (e.g. consider how the continual improvement procedure can be modified to include high level consideration of the BMPs based on factors like relevance to the system or practicality of implementation) with a more detailed consideration of the BMPs that are relevant to the system) to demonstrate consideration of all the BMPs.</p> <ul style="list-style-type: none"> - There is an opportunity to review the Ministry’s recently published BMPs and consider defining the Operating Authority’s review process. <p>Opportunity for Improvement:</p> <p>Noted that the Appendix 5F – DWQMS Master List of Documents and Records (PW-DWQMS-FR11), did not contain action items from the emergency test, nor from the infrastructure review. These are noted in separate documents (e.g. Appendix 18H – Action Items from Emergency Management Training (PW-DWQMS-FR28)) – however, there is an opportunity to consolidate and have all findings in one spot.</p> <ul style="list-style-type: none"> - There is an opportunity to use the Appendix 5F – DWQMS Master List of Documents and Records (PW-DWQMS-FR11) to track action items arising during annual reviews (e.g. infrastructure, management) and emergency tests. <p>Opportunity for Improvement:</p> <p>Viewed the blank Corrective Action Request Form (PW-DWQMS-FR5) and noted that there is no section on the form to document the root cause of the nonconformance. It is a requirement of the standard to investigate the cause of nonconformance.</p> <ul style="list-style-type: none"> - Ensure that the Corrective Action Request Form (PW-DWQMS-FR5) includes a section to document the root cause of the nonconformance. 	

Audit Report

Details regarding the personnel interviewed and objective evidence reviewed are maintained on file at Intertek - Intertek - SAI Global.

This report was prepared by:



Darlene Suddard

Intertek - Intertek - SAI Global Management Systems Auditor

The audit report is distributed as follows:

- Intertek - Intertek - SAI Global
- Operating Authority
- Owner
- MOECC

Notes

Copies of this report distributed outside the organization must include all pages.

FINDING DETAIL

Document #: F103-21

Release Date: 13-MAY-2020

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SECTION 1: Basic Data - Audit

Client: The Corporation of the Town of Arnprior	Client ID#: CMPY-165344
Audit Criteria: DWQMS 2.0 2017	Date(s) of audit: Nov 6, 2025

SECTION 2: Finding DATA

Finding # : PEM NCR-01

Finding classification

- Major Nonconformity
- Minor Nonconformity
- Opportunity for improvement
- Minor Area of concern for Stage II
- Major Area of concern for Stage II

Action required

- Submit corrective action plan by (date):
- Submit corrective action by (date): Dec 5, 2025
- No response required
- No response required. Action to be taken prior to Stage II

Audit Criteria reference # : 21

Management system documentation reference # :
 Section 8.10 of Continual Improvement Procedure (PW-DWQMS-21)
 Review and Provision of Infrastructure Annual Meeting Minutes dated July 15, 2025.

Finding:

There is no evidence of best management practices being discussed during the annual infrastructure review meeting in the last thirty-six months.

Requirement:

Element 21 – Continual Improvement

PLAN – The Operating Authority shall develop a procedure for tracking and measuring continual improvement of its Quality Management System by:

- a) Reviewing and considering applicable best management practices including any published by the Ministry..., at least once every thirty-six months.

DO – The Operating Authority shall strive to continually improve the effectiveness of it’s Quality Management System by implementing and conforming to the procedure.

Section 8.10 in the Continual Improvement Procedure (PW-DWQMS-21) states that a review of best management practices shall be discussed during the annual infrastructure review meeting.

Objective Evidence: (Evidence recorded at, if multi site:)

The Review and Provision of Infrastructure Annual Meeting Minutes dated July 15, 2025 did not include a discussion of best management practices, and a review of the agenda for the 2023 and 2024 Infrastructure Review Annual Meeting by the QMS Rep revealed that best management practices were not included.





FINDING DETAIL

Document #: F103-21

Release Date: 13-MAY-2020

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Issued by: Darlene Suddard

SECTION 3: Corrective action plan (To be completed by the client)

Root Cause (Required in all cases)

Review of BMP's are to take place during Infrastructure Review, however BMP's were not included in meeting's agenda template. BMP's are generally discussed throughout various meetings but not tracked as such

Correction (if not required, please justify)

addition of BMP's to agenda template for infrastructure review (Appendix 14A), creation of Appendix 21A to track BMP discussions in reference to MECP guidelines.

Corrective action (Required in all cases)

utilise updated agendas for future meetings. Appendix 21A to be reviewed in next Top Management Review meeting in January.

Plan for verification of effectiveness (Required in all cases)

Utilise Internal Audit Checklist (Appendix 19A – Section 21) which includes confirmation of that BMP's have been reviewed at least once-every thirty-six months.

Target date for completion:

Jan 12, 2025

Signature:

Date:

DEC 10, 2025

SECTION 4: Acceptance of corrective action plan (For Intertek's use only)

Major nonconformity: Acceptance of corrective action plan stated above.

Accepted by:

Date:



FINDING DETAIL

Document #: F103-21

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Minor nonconformity: Acceptance of corrective action plan stated above. Implementation to be verified during the next audit.	
Accepted by: 	Date: Dec 10, 2025

SECTION 5: verification of implementation (For Intertek's use only)
Implementation of the corrective action plan Viewed updated Appendix 14A - PW-DWQMS-FR23, dated Nov 27/25 and new Appendix 21A - PW-DWQMS-FR29, dated Nov 27/25.
Effectiveness of corrective action Use of these forms, and verification of their use during the next internal audit will demonstrate that BMPs were considered as required by Element 21.

Nonconformity closed: Corrective action(s) verified to be implemented.	
Verified by: 	Date: Dec 10, 2025



Policy No.	PW-DWQMS-FR7
Policy/Procedure/Document:	Appendix 19A - Internal Audit Checklist
Author:	QMS Representative
Approval Authority:	Owner and Top Management
Date of Original Procedure:	October 1, 2009
Date of Last Review:	October 8, 2024
Date of Last Update:	December 5, 2017

Date	Auditor	Elements Reviewed
Sep 2025	SB & AH	5, 6, 7, 8
Oct 2025	SB	1,2,3,4,9
Nov-Dec 2025	SB	10-21

Opening Meeting	Date: Sept 11, 2025	Staff: John Steckly, Jess Schultz
Comments: Agenda: Review DWQMS audit procedure		
Closing Meeting	Date: Dec 17, 2025	Staff: John Steckly, Ben Ritchie, Ryan Wall, Patrick Foley, Sheena Baum
Comments: 7 Corrective actions; 2 carried over from 2025. DWQMS Rep to compile OFI's from internal and external audits and issue action items to assignees minimum 1 week prior to Top management review.		

DWQMS Requirement	Findings	Degree of Conformance		
		Conformance	Partial Conforms	Non-conforming
<p>1. Quality Management System PLAN – the Operating Authority shall document a Quality Management System that meets the requirements of this Standard</p> <p>DO – The Operating Authority shall establish and maintain the Quality Management System in accordance with the requirements of this Standard and the policies and procedures documented in the Operational Plan.</p>	<p>System name on Operation Plan not matching name on licence – updated during audit</p> <p>Operational Plan online from 2021, has been updated to have 2024 OP available. Plan to publish 2025 updated OP once signed in new year.</p>	X		
<p>2. Quality Management System Policy PLAN – The Operational Plan shall document a Quality Management System Policy that provides the foundation for the Quality Management System, and:</p> <p>a.) includes a commitment to the maintenance and continual improvement of the Quality Management System, b.) includes a commitment to the consumer to provide safe drinking water, c.) includes a commitment to comply with all legislation and regulations, and d.) is in a form that provides for ready communication to all Operating Authority personnel, the Owner and the public.</p>	<p>System name on Appendix 2A - Quality Management System Policy</p>	X		

<p>DO – The Operating Authority shall establish and maintain a Quality Management System that is consistent with the Policy.</p>				
<p>3. Commitment and Endorsement PLAN – The Operational Plan shall contain a written endorsement of its contents by top Management and the Owner</p> <p>DO – Top Management shall provide evidence of its commitment to an effective Quality Management System by:</p> <ul style="list-style-type: none"> a.) ensuring that a Quality Management System is in place that meets the requirements of this Standard, b.) ensuring that the Operating Authority is aware of all applicable legislative and regulatory requirements, c.) communicating the Quality Management System according to the procedure for communications, and d.) determining, obtaining or providing the resources needed to maintain and continually improve the Quality management System 	<p>No comments - current endorsement is online</p>	<p>X</p>		
<p>4. Quality Management System Representative</p> <p>PLAN – The Operational Plan shall identify a Quality Management System representative.</p>	<p>QMS Rep Identified in Element 4 & 9</p> <ul style="list-style-type: none"> • Resolution No. 457-13 Appointment of QMS Representative and Implementation Lead (December 9, 2013) 	<p>X</p>		

<p>DO – Top Management shall appoint and authorise a Quality Management System representative who, irrespective of other responsibilities, shall:</p> <ul style="list-style-type: none"> a.) administer the Quality Management System by ensuring that processes needed for the Quality Management System are established and maintained, b.) report to Top Management on the performance of the Quality Management System and any need for improvement, c.) ensure that the current version of documents required by the Quality Management System are being used at all times, d.) ensure that personnel are aware of all applicable legislative and regulatory requirements that pertain to their duties for the operation of the subject system, and e.) promote awareness of the Quality Management System throughout the Operating Authority 	<ul style="list-style-type: none"> • Resolution No. 513-09 appointment of QMS Representative and Implementation Lead Alternate. 			
<p>5. Document and Records Control</p> <p>PLAN – The Operational Plan shall document a procedure for document and records control that describes how:</p> <ul style="list-style-type: none"> a.) documents required by the Quality Management System are: <ul style="list-style-type: none"> i. kept current, legible and readily identifiable 	<p>Need to include references to Sharepoint System</p> <p>Current DWQMS documents available on both FileHold and SharePoint. Appendix 5F links direct to files located on FileHold. Should be updated to link to SharePoint location. Some files in FileHold to be uploaded to SharePoint.</p>	<p>X</p> <p>X</p>		

<ul style="list-style-type: none"> ii. retrievable iii. stored, protected, retained and disposed of. <p>b.) Records required by the Quality Management System are:</p> <ul style="list-style-type: none"> i. kept legible and readily identifiable ii. retrievable iii. stored, protected, retained and disposed of. <p>DO – The Operating Authority shall implement and conform to the procedure for document and records control and shall ensure that the Quality Management System documentation for the subject system includes:</p> <ul style="list-style-type: none"> a.) the Operational Plan and its associated policies and procedures, b.) documents and records determined by the Operating Authority as being needed to ensure the effective planning, operation and control of its operations, and the results of internal and external audits and management reviews 	<p>Records of the last (5) years DWQMS documents are to be kept on record. Gap missing in physical, FileHold and SharePoint systems for years 2020-2022. Files located in previous QMS rep local files and uploaded to SharePoint.</p> <p>OFI Maintain previous 5 year QMS files on USB #5 QMS rep in event of cyber event.</p> <p>No hardcopy of DWQMS at garage and WFP copy was previous version. New copies were printed of version 25. Plan to print and distribute hard and soft copies of version 26 when complete.</p>	<p>X</p> <p>X</p> <p>X</p>		
<p>6. Drinking –Water System</p> <p>PLAN – The Operational Plan shall document, as applicable:</p> <ul style="list-style-type: none"> a) for the Subject System: <ul style="list-style-type: none"> i) the name of the Owner and Operating Authority, 	<p>Systems have been reviewed and require updates (see attached notes). Corrections made during Audit.</p> <p>Appendix 6C Map up to date on GIS group network as of June 2025.</p>	<p>X</p> <p>X</p>		

<p>ii) if the system includes equipment that provides Primary Disinfection and/or Secondary Disinfection:</p> <ul style="list-style-type: none"> A. a description of the system including all applicable Treatment System processes and Distribution System components, B. a Treatment System process flow chart, C. a description of the water source, including: <ul style="list-style-type: none"> I. general characteristics of the raw water supply, II. common event-driven fluctuations, and III. any resulting operational challenges and threats. <p>iii) if the system does not include equipment that provides Primary Disinfection or Secondary Disinfection:</p> <ul style="list-style-type: none"> A. a description of the system including all Distribution System components, and B. a description of any procedures that are in place to maintain disinfection residuals. <p>b) if the Subject System is an Operational Subsystem, a summary description of the Municipal Residential Drinking Water System it is a part of including the name of the</p>	<p>OFI Updates required to Appendix 6A (See attached)</p>		<p>X</p>	
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<p>Operating Authority(ies) for the other Operational Subsystems.</p> <p>c) if the Subject System is connected to one or more other Drinking Water Systems owned by different Owners, a summary description of those systems which:</p> <ul style="list-style-type: none"> i) indicates whether the Subject System obtains water from or supplies water to those systems, ii) names the Owner and Operating Authority(ies) of those systems, and iii) identifies which, if any, of those systems that the Subject System obtains water from are relied upon to ensure the provision of safe drinking water. <p>DO – The Operating Authority shall ensure that the description of the Drinking Water System is kept current.</p>				
<p>7. Risk Assessment</p> <p>PLAN – The Operational Plan shall document a risk assessment process that: Considers potential hazardous events and associated hazards, as identified in the Ministry of the Environment and Climate Change document titled Potential Hazardous Events for Municipal Residential Drinking Water Systems, dated February 2017 as it</p>	<p>Risk Assessment completed Sept. 19 2025</p> <ul style="list-style-type: none"> - Addition of Cyber Security Treat and separating Storage into two categories: Clearwells, and Elevated Reservoir -Minor updates made SOP's -Table reviewed with minor edits 	<p>X</p>		

<p>may be amended. A copy of this document is available at www.ontario.ca/drinkingwater.</p> <ul style="list-style-type: none"> a) identifies potential hazardous events and associated hazards, b) assesses the risks associated with the occurrence of hazardous events, c) ranks the hazardous events according to the associated risk, d) identifies control measures to address the potential hazards and hazardous events, e) identifies critical control points, f) identifies a method to verify, at least once every calendar year, the currency of the information and the validity of the assumptions used in the risk assessment, g) ensures that a risk assessment is conducted at least once every thirty-six months, and h) considers the reliability and redundancy of equipment. <p>DO – The Operating Authority shall perform a risk assessment consistent with the documented process.</p>	<p>-2024 audit reports previous RA’s went above requirements; Element 7 requires full RA using blank FR6 (Appendix 7/8A) to be completed every 36 months and review of past outcomes very 12 months. Form 6 updated as part of audit to keep track of next full RA.</p>			
<p>8. Risk Assessment Outcomes</p> <p>PLAN – The Operational Plan shall document:</p> <ul style="list-style-type: none"> a.) the identified potential hazardous events and associated hazards b.) the assessed risks associated with the occurrence of hazardous events, c.) the ranked hazardous events, 	<p>Results of RA conducted Sept 19 were updated for Element 8.</p> <p>Form 6 (Appendix 7/8A) was updated as part of audit.</p> <p>2024 and 2025 Risk Assessments sent to external auditor</p>	X		

<p>d.) the identified control measures to address the potential hazards and hazardous events, e.) the identified critical control points and their respective critical control limits, f.) procedures and/or processes to monitor the critical control limits, g.) procedures to respond to deviations from the critical control limits, and h.) procedures for reporting and recording deviations from the critical control limits.</p> <p>DO – The Operating Authority shall implement and conform to the procedures.</p>				
<p>9. Organisational Structure, Roles. Responsibilities and Authorities</p> <p><u>PLAN</u> – The Operational Plan shall: describe the organizational structure of the Operating Authority including respective roles, responsibilities and authorities,</p>	<p>Number of staff updated back to 5 Plant Operators</p>	<p>X</p>		

<p>c.) activities to ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water.</p> <p>DO – the Operating Authority shall undertake activities to:</p> <p>a.) meet and maintain competencies for personnel directly affecting drinking-water quality and shall maintain records of these activities, and</p> <p>d.) ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water, and shall maintain records of these activities.</p>	<p><u>Distribution:</u> 4 licences that were posted are up to date.</p> <p>Carried forward OFI #2024-02, currently working on training tracking sheet with Health and Safety and HR. Existing training tracker for all staff includes occupational health and safety training. Working to update tracking for MECF related requirements to insure 40hrs annual are met.</p>			
<p>11. Personnel Coverage</p> <p>PLAN – The Operational Plan shall document a procedure to ensure that sufficient personnel meeting the identified competencies are available for duties that directly affect drinking water quality,</p> <p>DO – The Operating Authority shall implement and conform to the procedure.</p>	<p>Carried forward OFI - #2020-02, now OFI - #2024-01 Top Management working with union to develop job description for Mechanical Technician position. Current maintenance tasks are completed by external contractors until position is filled.</p> <p>1 full-time contract treatment operator was hired</p> <p>Arnprior continues to be member of OnWARN network.</p>	<p>X</p> <p>X</p> <p>X</p>	<p>X</p>	

<p>12. Communications</p> <p>PLAN – The Operational Plan shall document a procedure for communications that describes how the relevant aspects of the Quality Management System are communicated between Top Management and:</p> <ul style="list-style-type: none"> a.) the Owner, b.) Operating Authority personnel, c.) Suppliers, and d.) The public. <p>DO – The Operating Authority shall implement and conform to the procedure.</p>	<p>See comments in Element 1 and 5</p> <p>Staff report to council was provided on March 24, 2025. Included results from both internal and external audits</p>	<p>X</p>	<p>X</p>	
<p>13. Essential Supplies and Services</p> <p>PLAN – The Operational Plan shall:</p> <ul style="list-style-type: none"> a.) identify all supplies and services essential for the delivery of safe drinking water and shall state, for each supply or service, the means to ensure its procurement, and b.) include a procedure by which the Operating Authority ensures the quality of the essential supplies and services, in as much as they may affect the drinking water quality. <p>DO – The Operating Authority shall implement and conform to the procedure.</p>	<p>Confirmed with staff no new suppliers and services other than electrician and Security Systems (info to be obtained from IT).</p> <p>Incident Sep. 24 regarding shipment of phosphoric acid not containing proper label. Pumps were shut off to while confirming grade and supplier was informed of label requirements. The was confusion among staff regarding use of Food-Grade vs NSF. Form 12 (Appendix 13A) on site was confirmed to have check box for NSF. Staff were communicated the difference</p>	<p>X</p> <p>X</p>		

	between grades			
<p>14. Review and Provision of Infrastructure</p> <p>PLAN – The Operational Plan shall document a procedure for reviewing the adequacy of the infrastructure necessary to operate and maintain the Subject System that:</p> <p>a) Considers the outcomes of the risk assessment documented under Element 8, and</p> <p>b) Ensures that the adequacy of the infrastructure necessary to operate and maintain the Subject System is reviewed at least once every calendar year.</p> <p>DO – The Operating Authority shall implement and conform to the procedure and communicate the findings of the review to the Owner.</p>	<p>Infrastructure review completed July 15, 2025 Outcomes:</p> <p>Planned projects:</p> <ul style="list-style-type: none"> -Tower review - Clearwell #1 replacement - New watermain to Tower, Albert St. - Addition of hi-lift pump/reduction pumps - review of maintenance software budget <p>Reserve capacity reviewed = 23% remaining</p> <p>Growth projection +5000 population planned</p> <p>Operator suggestions: 2 more employees, on-call vehicle, new air compressor, more training</p> <p>OFI- consider creating employee suggestion form for equipment maintenance to be reviewed against budgets</p>	X		
<p>15. Infrastructure Maintenance, Rehabilitation and Renewal</p>	<p>Drinking Water Works Permits and Municipal Drinking Water Licences form submitted to MECP for to notify of upcoming Clearwell #1 Replacement</p>	X		

<p>PLAN – The Operational Plan shall document: a) a summary of the Operating Authority’s infrastructure maintenance, rehabilitation and renewal programs for the Subject System, and b) a long term forecast of major infrastructure maintenance, rehabilitation and renewal activities.</p> <p>DO – The Operating Authority shall: a) keep the summary of the infrastructure maintenance, rehabilitation and renewal programs current, b) ensure that the long term forecast is reviewed at least once every Calendar Year, c) communicate the programs to the Owner, and d) monitor the effectiveness of the maintenance program.</p>	<p>Reviewed submission of documents to MECP for Clearwell and Water Main Crossing projects</p> <p>Form #1 completed for River Crossing, Phase 2 of MacDonald/Edey St and Phase 4B of Marshall’s Bay Watermain projects.</p> <p>Form 2 completed for Filter #1, Filter #2 and #3 Replacement.</p> <p>Schedule C completed in 2025 as part of licence renewal.</p> <p>10 year Capital Forecast provided by GM Operations.</p> <p>OFI - consider adding frequency schedule for inspections to procedure and to form (ie place for last/next) <u>Hydrant Flushing</u> <u>Valve Exercising</u> <u>Fire Flow Testing</u> <u>Leak Detection</u></p>			
<p>16. Sampling, Testing and Monitoring</p> <p>PLAN – The Operational Plan shall document:</p>	<p>Hydrant flushing records provided and maintained by distribution staff</p>	<p>X</p>		

<p>a.) a sampling, testing and monitoring procedure for process control and finished drinking water quality including the requirements for sampling, testing and monitoring at the conditions most challenging to the subject system</p> <p>b.) a description of any relevant sampling, testing or monitoring activities that take place upstream of the subject system, and</p> <p>c.) a procedure that describes how sampling, testing and monitoring results are recorded and shared between the Operating Authority and the Owner, where applicable.</p> <p>d.) DO – The Operating Authority shall implement and conform to the procedures.</p>	<p>Lab results maintained on SharePoint Waterworks page</p> <p>Results form 2024 summarized in Annual report to council</p> <p>MECP inspection report provided January 16, 2025 showed plant monitoring to comply</p> <p>2025 Raw Water Assessment in support of MDWL Renewal was provided to MECP, showing no significant changes in raw water samples from 2011 through June 2025.</p> <p>Weekly residuals sampling completed and reviewed. Note from 2024 audit to improve records by setting monthly average.</p> <p>Distribution chlorine residuals sampling records reviewed.</p> <p>WM commissioning log book reviewed for superchlorination and testing - available during audit.</p>			
<p>17. Measurement and Recording Equipment Calibration and Maintenance</p>	<p>Inhouse calibrations were available during time of audit. Sample locations and methods were demonstrated.</p>	<p>X</p>		

<p>PLAN – The Operational Plan shall document a procedure for the calibration and maintenance of measurement and recording equipment.</p> <p>DO – The Operating Authority shall implement and conform to the procedure.</p>	<p>External calibration records were provided and filed to SharePoint – consistent with weekly and monthly required calibrations.</p>			
<p>18. Emergency Management</p> <p>PLAN – The Operational Plan shall document a procedure to maintain a state of emergency preparedness that includes:</p> <ul style="list-style-type: none"> a.) a list of potential emergency situations or service interruptions, b.) processes for emergency response and recovery, c.) emergency response training and testing requirements, d.) Owner and Operating Authority responsibilities during emergency situations, e.) References to municipal emergency planning measures as appropriate, and f.) An emergency communication protocol and an up-to-date list of emergency contacts. <p>DO – The Operating Authority shall implement and conform to the procedure.</p>	<p>New Low CT response procedure for Clearwell replacement to be added as Appendix. Procedure was sent to MECP. Emergency Response Training conducted July 4 - Summer Storm. No further actions resulted from training.</p> <p>Emergency contact lists reviewed and edited to ensure contact information is up to date.</p>	<p>X</p>		
<p>19. Internal Audits</p>	<p>Current DWQMS rep not trained for</p>	<p>X</p>		

<p>PLAN – The Operational Plan shall document a procedure for internal audits that:</p> <ul style="list-style-type: none"> a.) evaluates the conformity of the QMS with the requirements of this Standard, b.) identifies internal audit criteria, frequency, scope, methodology and record-keeping requirements, c.) considers previous internal and external audit results, and d.) describes how the Quality Management System corrective actions are identified and initiated. <p>DO – The Operating Authority shall implement and conform to the procedure and shall ensure that internal audits are conducted at least once every twelve months.</p>	<p>DWQMS audit, obtained assistance from Waterworks staff trained in audits to conduct.</p> <p>Outstanding OFI's from 2024 Audit: #2024-01: Hiring millwright for WFP – Ongoing #2024-02: Training tracking sheet, in progress</p>			
<p>20. Management Review</p> <p>PLAN – The Operational Plan shall document a procedure for management review that evaluates the continuing suitability, adequacy and effectiveness of the Quality Management System and that includes consideration of:</p> <ul style="list-style-type: none"> a.) incidents of regulatory non-compliance, b.) incidents of adverse drinking-water tests, c.) deviations form critical control point limits and response actions, 	<p>OP states that Top Management review shall occur once per calendar year. Typically, the review is completed in January for the previous calendar year.</p> <p>OFI- Checklist to be developed to track key DWQMS activities to be undertaken annually, to help avoid tasks being missed by new/fill in staff during leaves of absences.</p>	X		

<p>d.) the effectiveness of the risk assessment process,</p> <p>e.) internal and third party audit results,</p> <p>f.) results of emergency response testing,</p> <p>g.) operational performance,</p> <p>h.) raw water supply and drinking water quality trends,</p> <p>i.) follow-up action items from previous management reviews,</p> <p>j.) the status of management action items identified between reviews,</p> <p>k.) changes that could affect the Quality Management System,</p> <p>l.) consumer feedback,</p> <p>m.) the resources needed to maintain the Quality Management System,</p> <p>n.) the results of infrastructure review,</p> <p>o.) Operational Plan currency, content and updates, and</p> <p>p.) Staff suggestions</p> <p>Do - Top Management shall implement and conform to the procedure and shall:</p> <p>a.) ensure that a management review is conducted at least once every calendar year,</p> <p>b.) consider the results of the management review and identify deficiencies and action items to address the deficiencies,</p> <p>c.) provide a record of any decisions and action items related to the management review</p>				
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<p>including personnel responsible for delivering the action items and the proposed timelines for their implementation, and</p> <p>d.) report the results of management review, the identified deficiencies, decisions and action items to the Owner.</p>				
<p>21. Continual Improvement</p> <p>PLAN – The Operating Authority shall develop a procedure for tracking and measuring continual improvement of its Quality Management System by:</p> <p>a.) reviewing and considering applicable best management practices, including any published by the Ministry of the Environment, Conservation and Parks and available on www.ontario.ca/drinkingwater, at least once every thirty-six months;</p> <p>b.) documenting a process for identification and management of Quality Management System Corrective Actions that includes:</p> <p>i) investigating the cause(s) of an identified non-conformity,</p> <p>ii) documenting the action(s) that will be taken to correct the non-conformity and prevent the non-conformity from re-occurring, and</p> <p>iii) reviewing the action(s) taken to correct the non-conformity, verifying</p>	<p>QMS Rep reviewed the www.ontario.ca/drinkingwater on November 19, 2025. New Best Management Practice Guidelines were posted on October 3, 2025.</p> <p>Review of best management practices to be included in top management review meeting. Form created to be added to meeting minutes.</p>	<p>X</p>		

<p>that they are implemented and are effective in correcting and preventing the re-occurrence of the non-conformity.</p> <p>c.) documenting a process for identifying and implementing Preventive Actions to eliminate the occurrence of potential non-conformities in the Quality Management System that includes:</p> <ul style="list-style-type: none"> i) reviewing potential non-conformities that are identified to determine if preventive actions may be necessary, ii) documenting the outcome of the review, including the action(s), if any, that will be taken to prevent a non-conformity from occurring, and iii) reviewing the action(s) taken to prevent a non-conformity, verifying that they are implemented and are effective in preventing the occurrence of the non-conformity. <p>DO – The Operating Authority shall strive to continually improve the effectiveness of its Quality Management System by implementing and conforming to the procedure.</p>				
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NON-CONFORMANCES

ACTION PLAN:	ASSIGNED TO:	COMPLETION DATE
OFI- Maintain previous 5 year QMS files on USB #5 QMS rep in event of cyber event.	SB	Spring 2026
OFI - Updates required to Appendix 6A, work with notes provided, site visits to water treatment plant and review from Operator required once complete.	SB	Winter 2026
OFI -#2024-02, currently working on training tracking sheet with Health and Safety and HR. Existing training tracker for all staff includes occupational health and safety training. Working to update tracking for MECP related requirements to insure 40hrs annual are met.	SB	Winter 2026
OFI -Develop DWQMS orientation presentation for new staff and track training in operator tracking sheet.	SB	Spring 2026
OFI – #2020-02/#2024-01, Top Management working with union to develop job description for Mechanical Technician position. Current maintenance tasks are completed by external contractors until position is filled. Review opportunities for recruitment.	HR/JS/BR	On-Hold
OFI- create employee suggestion form for equipment maintenance to be reviewed against budgets	SB	Spring 2026

OFI - consider adding frequency schedule for inspections to procedures and to forms in section 15 (ie place for last/next)	SB	Winter 2026
OFI - Checklist to be developed to track key DWQMS activities to be undertaken annually, to help avoid tasks being missed by new/fill in staff during leaves of absences.	SB	Winter 2026

Revision Control Sheet

Review Date	Revisions Issued	Effective Date	Reviewed By	Revised By
Dec 5, 2013	Template Updates	Dec 5, 2013	GB	DS
Dec 8, 2014	Addition of action items table to template	Dec 8, 2014	GB	DS
Dec 5, 2017	Template Elements updated to include new DWQMS 2.0 standards	Dec 5, 2017	JS	DN



QMS Commitment and Endorsement Policy

The Owner and Top Management of the Operating Authority for the Corporation of the Town of Arnprior have reviewed the contents of this Operational Plan and endorse the Quality Management System.

The Operating Authority has:

- Ensured that the QMS meets the requirements of the standard
- Followed and is aware of the applicable legislative and regulatory requirements
- Communicated the QMS
- Determined, obtained and provided the necessary resources needed to maintain and continually improve the QMS

The Owner and Top Management acknowledge the need for and supports the provision of sufficient resources to implement, maintain and continually improve the QMS.

Top Management of the Operating Authority has reviewed the contents of the Operational Plan and has ensured that the QMS meets the requirements of the Drinking Water Quality Management Standard.

Top Management has ensured that the relevant members of the Operating Authority, such as the Waterworks Staff are aware of all applicable legislative and regulatory requirements surrounding the operation of a drinking water system and communicate the QMS according to the procedures outlined within the Operational Plan.

Mayor

Date

Chief Administrative Officer

Date

General Manager of Operations

Date