



Environment and Climate Change
Environmental Stewardship Division
Environmental Approvals Branch
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August 11, 2025
Client File No.: 1071.10
Our File No.: S-972, S-1146, EMS
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Attention: Agnes Wittmann, Director

**RE: QUARTERLY PROGRESS REPORT FOR NEWPCC UPGRADES
APRIL 1 – JUNE 30, 2025**

This report summarizes progress on the North End Sewage Treatment Plant (NEWPCC) upgrades, operating under Environmental Act Licence No. 2684 RRR, from April 1 to June 30, 2025.

1. INTERIM CHEMICAL PHOSPHOROUS REMOVAL FACILITIES

Update on items from last report:

- There are two existing ferric chloride dosing points at NEWPCC:
 - Location 1: Centrifuges
 - Location 2: Primary Sludge Line
- As part of the Interim Chemical Phosphorus Removal Facilities project, three new ferric chloride dosing points were added at NEWPCC including:
 - Location 3: Secondary Clarifiers
 - Location 4: Waste Activated Sludge (WAS) Line (formerly referred to as CEPT)
 - Location 5: Hauled Sludge Line
- [Figure 1](#) in the Appendix shows the locations of the ferric chloride dosing points
- Dosing into Location 3 remains constant at 200 litres per day which is 11% of the consultant's recommended dose at that location based on Biowin modelling (the recommended dose).
- Dosing into Location 4 continued at approximately 500 litres per day (11% of the recommended dose at that location) until June 1, 2025, when it was shut down due to a leak in the WAS pipe.
 - A preliminary inspection indicates that the WAS pipe has deteriorated; further thickness testing and replacement options continue to be reviewed.
- Ferric chloride dosing into Locations 1 and 2 was increased (approximately 200 litres per day) due to Location 4 being offline.
- Testing of Location 5 was performed in April and May to confirm that the pumps work and that the connections do not leak.
- On May 6, 2025, a digester was taken offline for cleaning and is anticipated to be brought back online mid-July.
 - When digesters are cleaned, the sludge is directed to the headworks which adds to the influent phosphorus load.
 - Further increases to ferric chloride dosing at Location 3 will be considered once the digester is back online.

- The average final effluent phosphorous level over the past three-month period (April through June 30, 2025) is 3.8 mg/L. Phosphorous concentrations were higher due to dosing to Location 4 being shutdown and additional phosphorus loading from digester cleaning.
- [Figure 2](#) in the Appendix provides historic 30-day rolling average total phosphorus effluent levels from August 21, 2021 to June 30, 2025.
- [Figure 3](#) in the Appendix provides historic annual total phosphorus effluent loads from 2004 to present.
- The estimated effluent phosphorous concentrations throughout various stages of the NEWPCC upgrades are provided in [Table 1](#) in the Appendix.

Next steps:

- The offline digester will be returned to service in mid-July 2025. Once it is returned to service, dosing to Location 3 will be increased.
- Replacement and/or repair options for the WAS pipe will be reviewed and implemented.
- Following pipe repair, the City and consultant will continue to adjust doses and monitor processes.

Schedule update:

- The current project schedule is provided in [Table 2](#) in the Appendix.

2. HEADWORKS FACILITIES

An overall site plan for the headworks project is provided in [Figure 4](#) in the Appendix.

Update on items from last report:

- H1 Junction Chamber: Installation of concrete benching in the base of chamber began and construction of the concrete liner wall continued. Multiple concrete pours to occur over several months for the benching and liner wall.
- Raw Sewage Pumping Station: Installation of exterior masonry on the south and east walls and steel railings on the south mezzanine is complete. Installation of the roof membrane, exterior wall finishing, piping, ducting, cable trays, cabling, drywall, door frames, and painting is ongoing.
- Grit Building: Installation of Fiberglass Reinforced Plastic (FRP) grit covers are complete. Forming and pouring of column bases, installation of monorail beams, piping, ducting, cabling, and electrical instrumentation is ongoing.
- Fine Screening Area: Installation of exterior masonry and southeast roofing system are complete. Installation of exterior wall finishing, conduit, cabling, and piping are ongoing.
- Solids Handling and Mechanical Rooms: Placement of concrete for the pads in the boiler room is nearing completion. Installation of metal cladding, ducting, piping, cabling, and painting is ongoing.
- Y4 Gallery Connection: Installation of fire alarm cabling is ongoing.
- Main Control Building: Installation of piping insulation, cabling, electrical boxes, drywall, and painting is ongoing.

- Standby Generator Building: Installation of louver sleeves are complete. Installation of ducting, acoustic exhaust louvres, cabling, terminations, and fueling pad is ongoing.
- Overflow Piping: Excavation and concrete placement for the overflow chamber base is complete. Installation of concrete piping and the construction of overflow chamber walls is ongoing. Connection to the existing outfall remains outstanding.
- Fuel Storage System: Construction of the fueling pad, concrete base for the fuel pump room, and backfilling north of the fuel pad is ongoing.
- Odour Control Facility: Construction of walls and access doors are complete. Installation of the odour control stack, exterior finishing, and placement of equipment is ongoing.
- Area Y Transformer Yard: Installation of cabling from Area E to the Transformer Yard and terminations to transformers is complete. Installation of the cable bus, pulling of cables to switchgears, and performance of continuity tests are ongoing.
- Area Y: Hydrotesting of the grit effluent chamber and installation of rainwater piping is complete. Installation of fire hydrants and underground conduits for parking electrical is ongoing.

Next steps:

- H1: Continue concrete benching and liner wall installation.
- Raw Sewage Pumping Station: Continue installation of metal cladding, electrical, drywall, painting, piping, fire stopping penetrations, and ducting.
- Grit Removal Building: Continue installation of electrical systems, ducting, and coating of effluent channels.
- Fine Screening Area: Continue installation of metal cladding, roofing, electrical, piping, and monorail anchors
- Solids Handling and Mechanical Rooms: Continue installation of electrical, ducting, and piping.
- Main Control Building: Continue installation of electrical, ducting and dampers, and piping insulation.
- Standby Generator Building: Cable termination and testing. Installation of ducting, dampers and silencers, site grading, and concrete.
- Odour control system: Installation of roof, exterior membrane, and cladding.
- Area Y Transformer Yard: Completion of grading, fencing, and energizing transformers.
- Area Y: Installation of watermain and roadway preparation.
- Existing NEWPCC Grit Area Modifications: Modification of Tank 1 and the remaining modifications to Tanks 2 and 3 will be undertaken in fall/winter 2025.

Schedule update:

- The re-baselined schedule that incorporates the schedule extension has been reviewed and indicates the new Headworks facility will be operational by March 31, 2026; however, decommissioning will not be completed until Q2 2026. The project team is evaluating the contractual impacts of this.
- RRS may reschedule activities at their discretion. The only date that cannot be modified without penalty is Substantial Completion. The following scheduled completion dates have been revised:

- The Standby Generator Facility and Fuel Storage System has been revised to September 17, 2025.
- The Headworks Building, Structural and External Finishes has been revised to August 27, 2025.
- The current project schedule is provided in [Table 3](#) in the Appendix.

3. BIOSOLIDS FACILITIES

Update on items from last report:

- The Development Partner is in the Preliminary Design Period and is working towards Stage Gate #2. The 30% design is anticipated in Q3 2025 followed by the Class 3 cost estimate in Q4 2025.
- On April 23, 2025, the City formally notified the Provincial Regulator about transferring the phosphorous recovery system to the Nutrient Removal Facilities project.
- The NEWPCC Piping Installation, Soil Remediation, and Site Compound Development construction continues. The quantities and extent of contaminated soil continue to be higher than anticipated.
- The detailed design for the land drainage system (LDS) is under final review. The LDS subsurface railway crossing application is pending approval from CPKC; it was submitted on February 21, 2025.

Next steps:

- Upon completion of Stage Gate #2, the Development Partner is anticipated to start the Intermediate Design Period in Q4 2025.
- Construction work will continue on the NEWPCC Piping Installation, Soil Remediation, and Site Compound Development tender. This construction is anticipated to be completed by Q4 2025.
- A remediation plan for the additional contaminated soil identified on the Biosolids site will be developed.
- The tender for the LDS is anticipated to go out in Q3 2025 and construction to begin in Q4 2025.

Schedule Update:

- The current project schedule is provided in [Table 4](#) in the Appendix.

4. NUTRIENT REMOVAL FACILITIES

Update on items from last report:

- The revised project budget was considered by Council in March 2025. External funding continues to be sought to limit impacts to rate payers.
- The procurement phase continues. Development of the procurement and contract documents is ongoing.
- Additional market sounding interviews were held in April 2025.
- Site investigations to identify and delineate potential soil contamination was completed.

- A temporary construction surface crossing of the CPKC rail line is being sought to facilitate construction activities for the Biosolids and Nutrient Removal projects. A crossing application is being prepared.

Next steps:

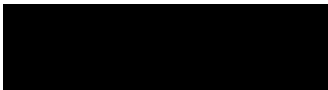
- Posting of the RFP Step 1 is scheduled for August 22, 2025.
- Submit the crossing application for a temporary construction surface crossing of the CPKC rail line.

Schedule Update:

- The current project schedule is provided in [Table 5](#) in the Appendix.

Should you have any questions, please contact me at 204-986-5210 or by email at cwiebe@winnipeg.ca.

Sincerely,



Cynthia Wiebe, P. Eng., CAMP
Manager of Engineering Services

ATTACHMENTS: Figures and Tables

CW/jkm

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Figure 1: NEWPCC Ferric Chloride Dosing Points

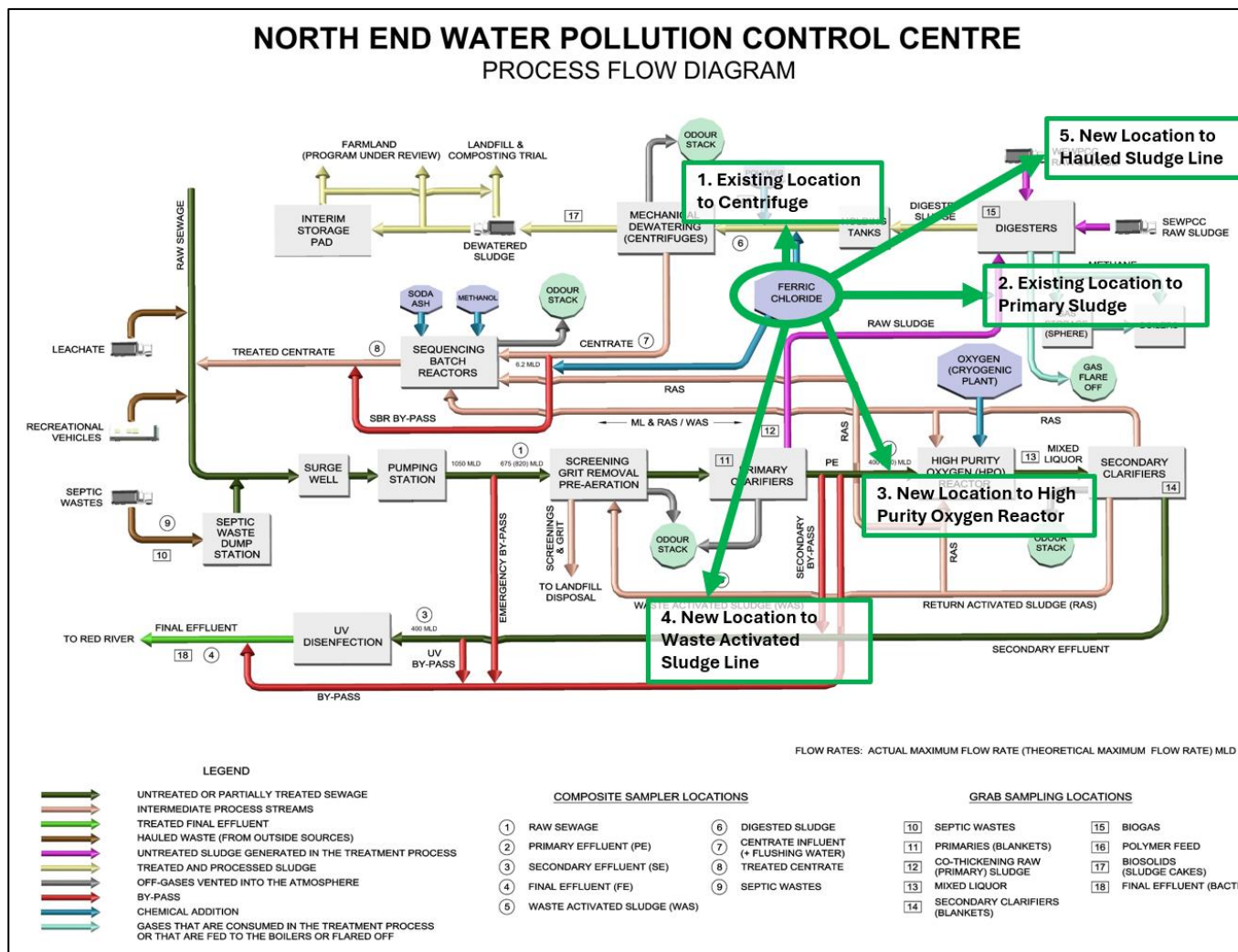


Figure 2: 30-Day Rolling Average Total Phosphorous in the NEWPCC Final Effluent from August 21, 2021 to June 30, 2025

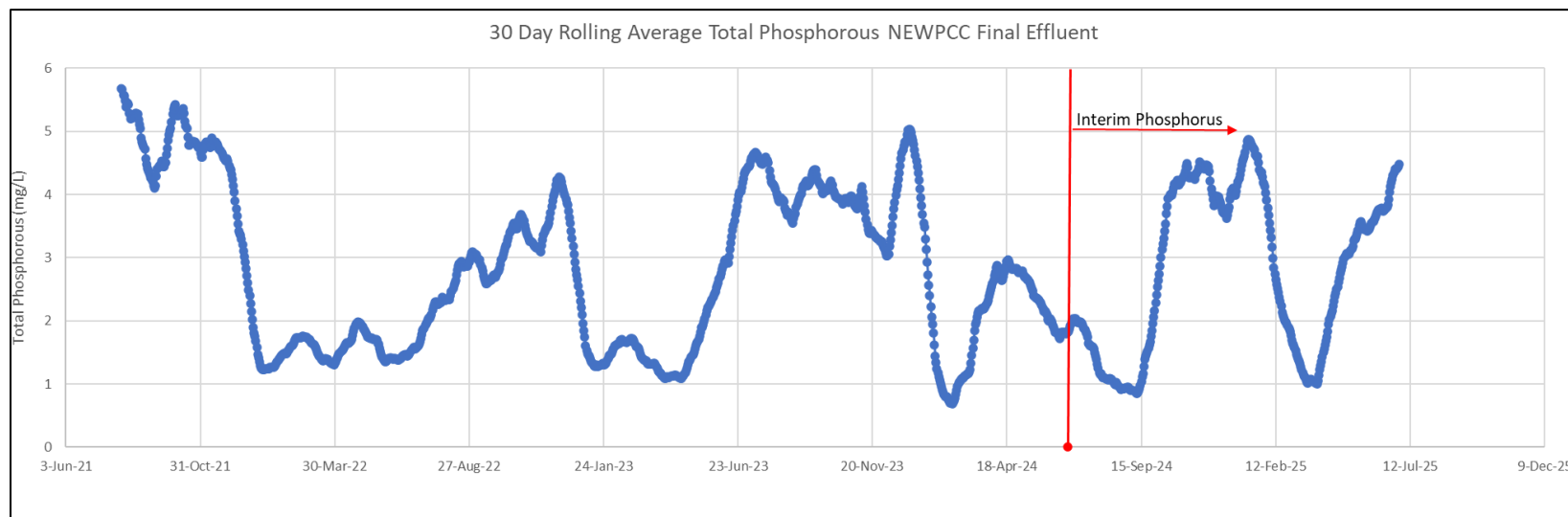
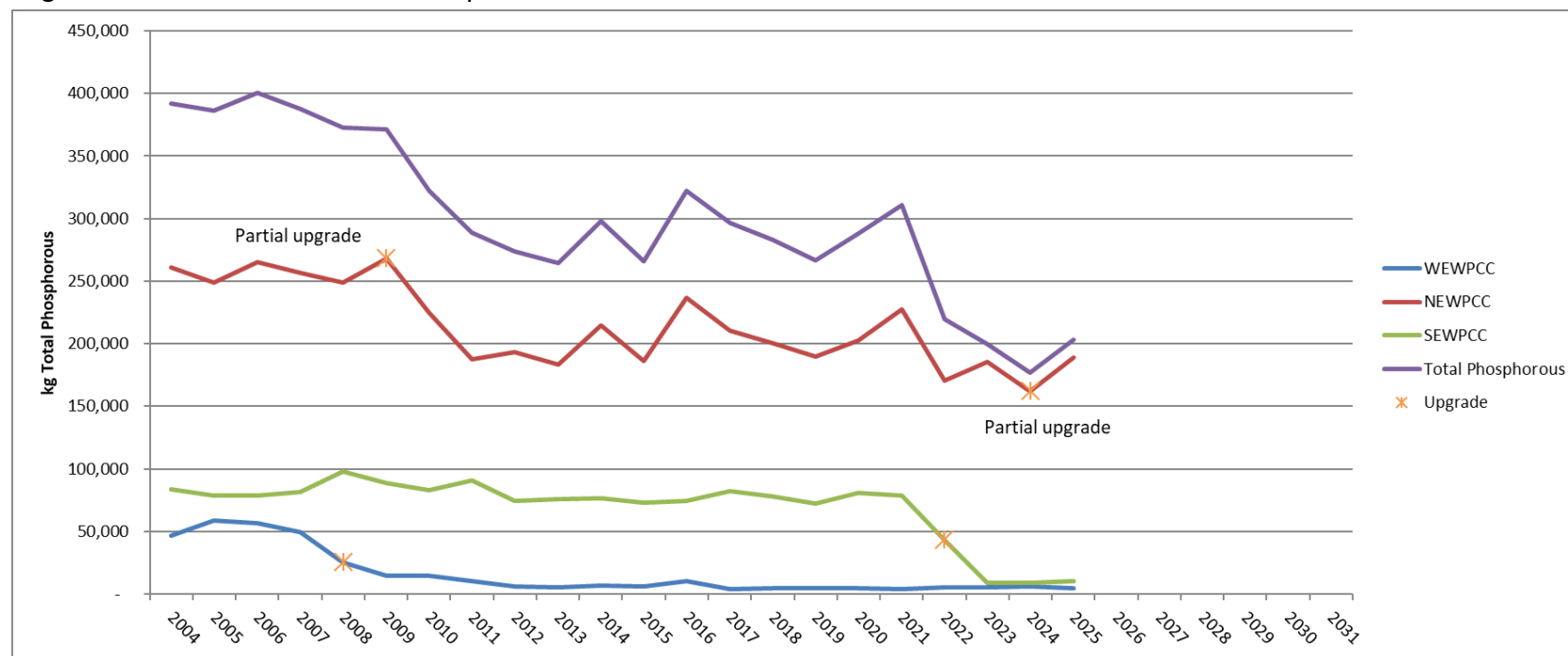


Figure 3: Historic Annual Total Phosphorus Effluent Loads from 2004 to Present¹



¹ 2025 data is an estimate and is based on the total phosphorus loads to date and historic trends

Table 1: Estimated Phosphorous Concentrations through NEWPCC Upgrade Stages

Stage	Period	Estimated Total Phosphorous Concentration in NEWPCC Final Effluent ^{1,2}	Monitoring Data: Total Phosphorous (NEWPCC Final Effluent)
Stage 1: Phosphorous reduction with existing infrastructure	Until Aug 2021	Approximately 4.0 to 4.5 mg/L on average	3.6 mg/L (Average from 2017 – 2021)
Stage 2: Maximized phosphorous reduction through optimization with existing infrastructure	Aug 2021 to June 24, 2024	Approximately 3.5 mg/L on average	2.5 mg/L (Average from 2022 to June 24, 2024)
Stage 3: Phosphorous reduction with Interim Chemical Phosphorous Facilities	June 25, 2024 to Dec 2030	Approximately 2.5 to 3.0 mg/L on average ³	2.9 mg/L ⁵
Stage 4: Phosphorous reduction with commissioned Biosolids Facilities	Jan 2031 to Jan 2032	1 mg/L until Jan 2032 ⁴	
Stage 5: Ongoing phosphorous reduction with commissioned Nutrient Removal Facilities	TBD	1 mg/L	

¹ Based on the 'NEWPCC Interim Phosphorous Removal and Detail Review and Bench Scale Testing Report, December 2020

² The modelled data is a conservative estimate of total phosphorous concentrations. The model was developed based on historical wastewater loadings and factored in the projected impacts of upgrades at SEWPCC. Actual results are dependent on many variables, such as:

- the overall health and performance of the treatment bacteria
- the performance of various processes
- wet weather flow
- changes in development
- industrial activity (especially high strength industry)
- ongoing capital improvements

Phosphorous concentrations in the final effluent are reported in the NEWPCC's monthly compliance reports and can be found online at winnipeg.ca/wwcompliance.

³ Phosphorous levels may increase as City growth consumes sludge processing capacity

⁴ Phosphorous levels may increase after January 2032 dependent on sludge loading levels (assuming maximum sludge generating scenario)

⁵ Average final effluent phosphorous level for June 25, 2024 to June 30, 2025

Table 2: Interim Chemical Phosphorous Removal Facilities - Project Milestones

Task Description	% Complete			Original Targeted Completion Date	Revised Targeted Completion Date	Actual Completion Dates
	April	May	June			
Consultant RFP Award	100%			Sep 30, 2021		Sep 28, 2021
Preliminary Design	100%			Feb 3, 2022	Mar 31, 2022	Feb 2, 2022
Detailed Design	100%			May 18, 2022	Jun 30, 2022	May 18, 2022
Construction Tender Award	100%			Jul 15, 2022		Sep 22, 2022
Substantial Completion	100%			Jun 30, 2023	July 2, 2024	Jul 2, 2024
Total Completion				Sep 30, 2023	Aug 28, 2024	Aug 28, 2024
Full-Scale Testing and Implementation				Dec 31, 2024	Aug 28, 2025	

Figure 4: Headworks Facilities – Site Plan

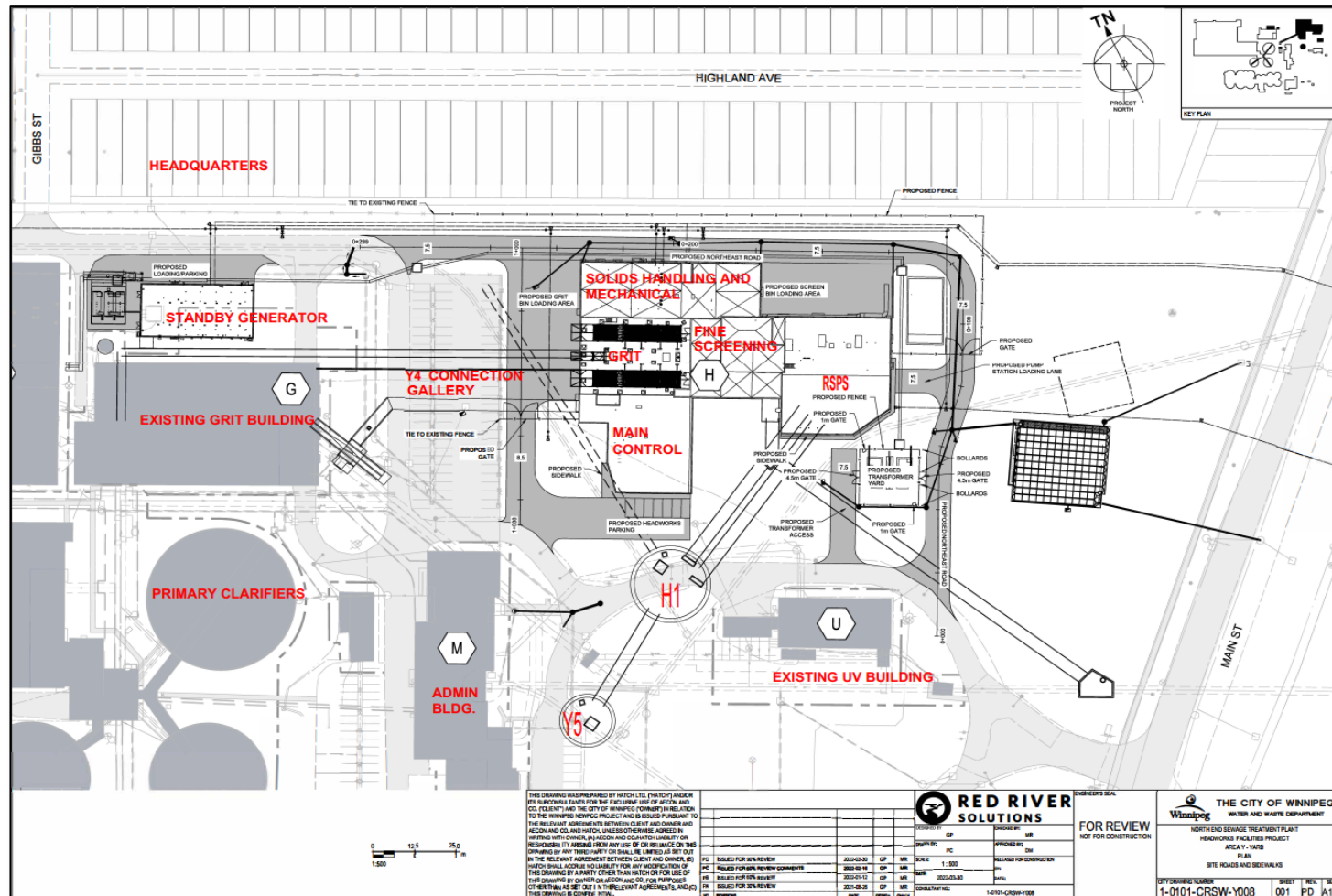


Table 3: Headworks Facilities – Project Milestones

Task Description	% Complete**			Original Targeted Completion Date	Revised Targeted Completion Date	Actual Completion Dates
	April	May	June			
Procurement and Contract Award	100%			Jun 30, 2021		Jun 11, 2021
DB Mobilization Complete	100%			Dec 31, 2021		Dec 15, 2021
30% Design	100%			Dec 14, 2021		Dec 14, 2021
60% Design	100%			Sep 30, 2022		May 22, 2024
90% Design	100%			Jan 23, 2023	Nov 30, 2024	Oct 29, 2024
IFC Design	100%			Apr 17, 2023	Jan 30, 2025	Jan 6, 2025
Driven Piles (All Areas)	100%			Aug 19, 2022		Mar 14, 2023
Secant Piles (H2, H1, Y5)	100%			Sep 29, 2022		Jan 13, 2023
Microtunneling (H1 to H2 and H1 to Y5)	100%			Dec 20, 2022	Feb 28, 2025	Mar 24, 2025
Generator Building, Structural and External Finishes	90%	100%		Mar 14, 2023	May 30, 2025	May 30, 2025
Standby Generators, Install	100%			Aug 3, 2023		Oct 30, 2022
Raw Sewage Pumping Station (H2), Concrete	97%	100%		Aug 7, 2023	May 30, 2025	May 31, 2025
H1 Chamber	65%	65%	67%	Sep 5, 2023	Aug 28, 2026	

Table 3: Headworks Facilities – Project Milestones continued...

Task Description	% Complete**			Original Targeted Completion Date	Revised Targeted Completion Date	Actual Completion Dates
	April	May	June			
Standby Generator Facility and Fuel Storage System	90%	91%	93%	Sep 15, 2023	May 30, 2025 Sept 17, 2025	
Grit Removal System, Install	100%			Sep 18, 2023	Jul 31, 2024	Jul 19, 2024
Y5 Chamber	28%	28%	28%	Dec 7, 2023	Aug 28, 2026	
Raw Sewage Pumps, Install	100%			Jan 23, 2024	Nov 25, 2024	Oct 23, 2024
Fine Screens, Install	100%			Mar 26, 2024	Jan 17, 2025	Nov 25, 2024
Headworks Building, Structural and External Finishes	40%	50%	70%	Jun 7, 2024	Jun 30, 2025 Aug 27, 2025	
Odour Control System, Install	18%	25%	30%	Jul 8, 2024	Aug 29, 2025	
Civil Works and Landscaping	0%	0%	0%	Jul 26, 2024	Aug 28, 2026	
Headworks Building, Complete	38%	42%	77%	Nov 5, 2024	Mar 31, 2026	
Commissioning	0%	0%	0%	Mar 31, 2025	Mar 31, 2026	
Decommissioning – Original Equipment	0%	0%	0%	May 14, 2025	Aug 28, 2026	
Substantial Completion*	0%	0%	0%	Jun 30, 2025	Mar 31, 2026	

*This is the only milestone that is contractual and cannot slide without penalty

**Data source: Red River Solution's Monthly Report

Table 4: Biosolids Facilities – Project Milestones

Task Description	% Complete			Original Targeted Completion Date	Revised Targeted Completion Date	Actual Completion Dates
	April	May	June			
Updated Preliminary Design and Procurement Strategy	100%			Dec 31, 2021	Apr 1, 2022	Apr 14, 2022 Council Approved Jul 21, 2022
Post RFP Step 1 (Following Council Approval for a PDB procurement strategy)	100%			Jul 13, 2023		Jul 14, 2023
Shortlist Proponents	100%			Sep 30, 2023	Dec 4, 2023	Dec 1, 2023
Post RFP Step 2	100%			Oct 31, 2023	Dec 4, 2023	Dec 11, 2023
Contract Award of Development Phase Agreement (DPA)	100%			Jun 30, 2024	Sep 27, 2024	Sep 23, 2024
DPA Stage Gate 1 – Start-Up Period	100%			Feb 6, 2025		Jan 31, 2025
DPA Stage Gate 2 – Preliminary Period	25%	38%	44%	Sep 12, 2025	Nov 17, 2025	
DPA Stage Gate 3 – Intermediate Period	0%	0%	0%	April 20, 2026	June 22, 2026	
Contract Award of Design Build Agreement	0%	0%	0%	Sep 18, 2026		
Substantial Completion				TBD following DBA – by Dec 31, 2030		

Table 5: NEWPCC Upgrade Project Milestones – Nutrient Removal Facilities

Task Description	% Complete			Original Targeted Completion Date	Revised Targeted Completion Date	Actual Completion Dates
	April	May	June			
Nutrient Removal Technology Selection	100%			Oct 19, 2023		Oct 12, 2023
Updated EPD	100%			Jun 30, 2024	Oct 18, 2024	Oct 21, 2024
Revised Class 3 Cost Estimate	100%			Sep 30, 2024	Nov 15, 2024	Nov 12, 2024
Procurement – Post RFP Step 1	15%	40%	60%	Aug 22, 2025		
Procurement – Shortlist Proponents	0%	0%	0%	Nov 21, 2025		
Procurement – Post RFP Step 2	10%	15%	30%	Jan 16, 2026		
Contract Award – Development Phase Agreement	0%	0%	0%	Oct 16, 2026		
Substantial Completion				Dec 31, 2032		