Agenda – Executive Policy Committee – January 21, 2025

AUDIT COMMITTEE

Item No. 1 North End Sewage Treatment Plant Upgrade Projects Audit Report

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

1. That the North End Sewage Treatment Plant Upgrade Projects Audit Report be received as information.

ADMINISTRATIVE REPORT

Title: North End Sewage Treatment Plant Upgrade Projects Audit Report

Critical Path: Audit Committee - Council

AUTHORIZATION

Author	Department Head	CFO	CAO
J. Egert City Auditor	J. Egert City Auditor		

EXECUTIVE SUMMARY

The Audit Department engaged KPMG to complete an audit of the North End Sewage Treatment Plant Upgrade Projects otherwise known as the North End Water Pollution Control Centre ("NEWPCC") Upgrade Projects. The audit was conducted by KPMG as specific skills and knowledge in managing large capital major projects was required.

The audit evaluated the existence, effectiveness, and adequacy of controls related to the project governance and oversight, project leadership and organization, commercial strategy and management, and project delivery and risk management. The audit identified opportunities for improvement in project delivery, with a focus on the following areas:

- Governance and oversight
- Organization and performance
- Commercial and financial
- Delivery and risk management

The NEWPCC Projects are a schedule driven $2.38 billion program of works (this includes a 2018 cost estimate for Nutrient Removal which is currently being updated to reflect 2024 costs) comprised of three complex major projects that are distinctly different in scale and form from those typically delivered by the City. The size and complexity of these projects highlights the criticality of having effective and adequate measures and controls in place in order to manage risk to the City and the project objectives. The NEWPCC Projects have experienced recent cost and schedule pressures, notable challenges experienced on Headworks, including the Northwest Interceptor failure, unanticipated and differing ground conditions, and a period of high project team turnover. The Projects have also experienced cost increases from the original budget in 2018 due to project delay, project financing, regulatory/scope increases and like many projects undertaken over the past five years, market escalation.

Although the assessment is critical in nature and focused on opportunities to bring the Projects in line with industry practice, we have also recognized key strengths within the Projects environment. These include:

- **Contract strategies and procurement options**: Detailed project-specific contract strategies and procurement options analysis have been completed or are planned to be undertaken for the Projects in line with expectations and leading industry practice resulting in contracts that align with City risk tolerance and market interest.
- **Dedicated Project team**: The NEWPCC Projects Team is comprised of dedicated members who are committed to the success of the Projects. This includes the collaboration and integration with Veolia North America ("Veolia") who can supplement the City of Winnipeg personnel on an as needed basis and bring relevant major project experience.
- **Team communication and commitment**: Strong team communication has been built within the Projects where open communication between all members and a philosophy of engaging and escalating issues (i.e., current problems) or items quickly has been established. The team has demonstrated commitment through resolving outstanding claims and dealing with challenges including rebuilding the team. This approach can minimize the magnitude of issues.
- **Following City procedures and policies**: The NEWPCC Projects Team is following the City's established policies and procedures. However, these are not all fit-for-purpose (i.e., meets the specific needs) for the size and complexity of the Projects.
- **Following reporting requirements**: City reporting requirements are being adhered to and the Project is reporting to multiple levels of the City, along with the regulator and other stakeholders. The reporting is not aligned to industry practice for major projects.

The audit found that the NEWPCC Projects are following the current structure, guidelines, and processes in place as part of the City's established procedures and policies for capital project planning, initiating, executing, and close-out. However, these structures, guidelines, and processes are not fit for purpose for the cost, complexity, and consequences associated with the NEWPCC Projects.

Many of the cost pressures, including the NWI failure, differing ground conditions on Headworks,and the overall market inflation over the last five years, are elements outside of the Project's control and are not direct results of inadequate systems or controls on the Project. The gaps identified throughout the report result in risk for further cost and schedule growth.

The audit identified a total of 25 summary observations with recommendations comprised of 44 detailed observations / recommendations. Management agrees with all the recommendations and has provided an overall response to address the strategic implementation of the audit recommendations.

A summary of the key observations includes:

Governance and Oversight

- The governance and oversight controls, as governed by the applicable City policies and the City's Project Management Manual, including the oversight model, stage gate structure, reporting and assurance requirements, are not adequate for the size, complexity, and consequence of the NEWPCC Projects.
- The governance and reporting structures, based on requirements in the City's Administrative Standard for Asset Management, are designed for smaller, lower risk

projects and is not fit for purpose. Given the high cost and consequence of the NEWPCC Projects the Major Capital Project Advisory Committee ("MCPAC") is too far removed from City Council in the reporting structure and the reporting timeframes take too long to report and receive feedback from Council. The current governance structure does not adequately support achieving appropriate alignment, accountability, autonomy, and disclosure to effectively oversee and monitor the performance and risk of the NEWPCC Projects.

- The current reporting does not provide a transparent picture of the NEWPCC Projects status and performance due to template restrictions that miss key information.
- There is a misalignment between the authority and accountability on the NEWPCC Projects with accountability at the the Project Director/Project Manager level and authority at the Department Director, governance, and City Council level. Authority refers to financial authority along with decision making and staffing authority.

Organization and Performance

- The NEWPCC Projects owner team size is small relative to industry practice and is insufficient for the size and complexity of the NEWPCC Projects resulting in lack of capacity for many major project requirements. The City Project team is comprised of eight full-time personnel and a part-time finance support role at the time of the audit and is bolstered through the use of the Veolia partnership. The Project recently received approval for four more Senior Major Capital Project Engineers.
- The NEWPCC Projects report into the Water and Waste Department, with the Project Sponsor as the Manager of Engineering for Water and Waste. The Manager of Engineering / Project Sponsor reports to the Director of Water and Waste who is responsible to Council for the delivery of the projects. Integration with other City departments is through normal channels supported by existing relationships and MCPAC members. Project organization charts and responsibility matrices are out of date and do not adequately identify reporting lines.

Commercial and Financial

- The City has developed project-specific contract strategies and completed detailed procurement options analysis for the NEWPCC Projects in line with expectations and industry practice. For the Biosolids Project, this work has resulted in the decision to proceed with a Progressive Design Build ("PDB") delivery model. This form of delivery model was selected based on what the market is currently willing to accept. It is new to the City of Winnipeg and, therefore, there is limited precedent for executing a project under this model.
- The differences between the PDB model and a Design Build or Design Bid Build model are not accounted for in the project processes including for example, effective risk management and commercial oversight to manage the PDB conversion risk, resourcing, and process requirements to facilitate open, collaborative, and timely design review and development, and differences in design completion at stage gates.

Delivery and Risk Management

- The City is relying upon its Project Management Manual for guidance on required activities and procedures for risk management, cost, and schedule management, change management, and claims management and avoidance. While this guidance covers many of the key features of these areas, it does not adequately support the nature, size, and complexity of the NEWPCC Projects, nor does it address the project-specific and delivery model nuances in process and responsibilities.

- The risk management processes do not meet industry practice for effective risk management.
- Cost and schedule management is occurring at an overall project level but does not appear to include adequate tracking of performance at the work breakdown structure ("WBS") level. Limited data on project cost and schedule performance is being used in City project reporting to provide insights and support effective oversight. The Project team is using the City required reporting templates and tools, however, these are not adequate for a project of this size and complexity.
- The change control processes defined in the Project Management Manual are adequate and followed, however the approval and implementation of change orders is not timely due to a lengthy approval process

RECOMMENDATIONS

1. That the North End Sewage Treatment Plant Upgrade Projects Audit Report be received as information.

REASON FOR THE REPORT

The report is being submitted in accordance with the City Organization By-law 7100/97 section 19(d)(iv) that the Audit Committee will "receive and review audit reports, and table such reports with its recommendations at a regular meeting of Executive Policy Committee."

IMPLICATIONS OF THE RECOMMENDATIONS

The most important component of an audit recommendation is its implementation. The Public Service is responsible for providing a management response to the report; their responses have been included in the audit report.

The Public Service has agreed to implement all 44 recommendations.

HISTORY/DISCUSSION

The North End Sewage Treatment Plant Upgrade Projects Audit was included in the Council approved 2024 Audit Plan.

The objective of the audit was:

1. To evaluate the existence, effectiveness, and adequacy of controls related to project governance and oversight, project leadership and organization, commercial strategy and management, and project delivery and risk management

FINANCIAL IMPACT

Financial Impact Statement Date: December 19, 2024

Project Name:
North End Sewage Treatment Plant Upgrade Projects Audit Report

COMMENTS:

There are no financial implications associated with receiving this report as information.

Randy Bernard
Randy Bernard, CPA, CMA
Manager of Finance & Administration (Campus)
Corporate Finance Department

CONSULTATION

This Report has been prepared in consultation with:

Water and Waste Department
Assets and Project Management Department
Chief Administrative Office

OURWINNIPEG POLICY ALIGNMENT

Leadership and Good Governance

1. Establish and implement priority actions through evidence-informed decision-making processes.
2. Promote trust and government responsiveness through meaningful, inclusive and informed community engagement.
3. Achieve community-responsive service delivery through an aligned, integrated, collaborative and results-oriented organizational culture.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

N/A

SUBMITTED BY

Department: Audit Department
Prepared by: J. Egert, City Auditor
Date: January 2025

Attachments: