

For Information

DATE: July 20, 2011

REPORT TITLE: **WATER DIVISION - CAPITAL PROJECT MANAGEMENT AUDIT**

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OBJECTIVE

To inform Audit Committee of the results of the Capital Project Management audit in the Water Division.

REPORT HIGHLIGHTS

- Capital Projects in the Water Division are managed effectively.
- There are opportunities for improved project management efficiencies. This includes implementing:
 - a document management system to help reduce duplication and data errors,
 - an automated project management system to eliminate the number of different files, systems and information locations, and
 - a consistent methodology to ensure all relevant capital costs are captured correctly.
- Public Works is currently assessing project management needs and will evaluate Project Portfolio Management software to determine if it will meet individual project management needs within the Department.

DISCUSSION**1. Background**

The Region prepares a capital budget and nine-year capital forecast annually. Departments are responsible for preparing their budgets and forecasts in accordance with the Financial Control By-law 45-2004 and instructions issued each year. The budget and forecast assesses the sustainability of Peel's capital assets while planning for expected future growth and fiscal pressures. Approximately \$1.8 billion (36.7%) of the \$4.9 billion included in the 2011–2020 Capital Budget and Forecast relates to Water capital projects.

The Water Division is responsible for ensuring Peel's water quality exceeds Ontario Drinking Water Standards. The Division is staffed by a Director; six Managers; four Supervisors; 18 Project Managers; and related support staff. On average, Project Managers within the Capital Works Transmission and Distribution section are each managing contracts from 16 different projects. The Manager in the section is managing

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contracts for more than 70 projects. By comparison, Project Managers in other municipalities are managing anywhere from 3 to 7 projects each.

Through leadership and collaboration, high quality drinking water and related support services designed to meet the needs and expectations of Peel's customers are delivered in a safe, reliable and efficient manner. The Water Division operates and maintains:

- the Lorne Park and Lakeview Water Treatment Facilities,
- 14 active production wells,
- 14 booster stations and 22 reservoirs / elevated tanks / standpipes,
- 3,215 kilometres of watermain; 32,755 mainline valves; and 22,700 hydrants, and
- 195,908 residential and commercial shut-off valves and services.

The *Internal Audit Risk Based Work Plan 2010* includes a review of Capital Project Management in the Water Division. Work on the audit was initiated in September of 2010 with field work ending in April of 2011.

This audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing*.

2. Audit Objective

The objective of the audit was to determine if management:

- follows consistent project management practices and principles to ensure Water capital projects are managed and delivered efficiently and effectively,
- has resources, tools and systems in place to ensure Water capital projects are managed and delivered efficiently and effectively, and
- follows applicable legislation and policies including the Purchasing By-law and the Financial Control By-law.

Specifically, the audit focused on ensuring:

- water capital projects have clearly established and monitored accountabilities for all phases of a project,
- project costs are accurate, authorized and allocated to the appropriate capital project,
- there is a process in place to prioritize and assign special project requests that are not included in the Water Division's work plan, and
- third party approval processes exist to ensure decisions are timely and assist in expediting project completion.

The scope of the review specifically excluded:

- Public Works Transportation, Waste Water and Roads capital projects, and
- Peel Regional Police capital projects.

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3. Audit Observations

The audit identified a number of areas where improvements could be made. This includes:

- conducting a program review and *Updating the Water Division's Mandate* to better align work with client and stakeholder expectations, and to ensure capital projects are completed on time,
- developing and implementing a *Document Management System and Protocol* to manage information efficiently and help mitigate errors that may be made when managing projects,
- acquiring an automated *Project Management Tool* so that information maintained in a number of different files, systems and locations does not have to be re-entered into spreadsheets to manage projects efficiently,
- developing and implementing a consistent approach and methodology to ensure all costs related to capital projects are captured efficiently and effectively, and
- providing increased or refresher training around administrative tasks and processes to ensure capital projects are managed consistently from an administrative perspective by all Project Managers in the Division.

The Acting Manager, Strategic Projects and Services indicated the Region is also in the process of developing a Project Management Office (PMO). The PMO is expected to be in place by the third quarter of 2011. Once established and resourced, the PMO will be the primary vehicle available to support needed project management improvements. As part of the development, a comprehensive third-party organizational project management maturity assessment has been conducted with results expected in August 2011. The results will be reported back to Audit Committee and will provide further insight into the health and maturity of project management practices within Public Works and the organization. The results will also provide the basis for identifying and prioritizing key improvement measures.

Efforts are also underway to roll-out a new more comprehensive project management training curriculum in the third quarter of 2011. Training will focus on growing and developing staff competencies across a variety of key project management knowledge areas and the PMO will be available to support opportunities for more specialized project-related training required by Public Works staff.

4. Noteworthy Accomplishments

Water Division staff provided valuable input and suggestions for improvement that were included as Management Action Plans. In addition, the Water Division also implemented a number of best practices so that Infrastructure Stimulus Funded projects would be completed in accordance with established timelines, which included:

- pre-qualifying vendors at the front-end of the Procurement process to expedite project start and completion dates,
- tendering for supplies and labour separately and having Vendors / Contractors coordinate the delivery of materials and supplies to reduce costs,
- completing Environmental Assessment, pre-engineering and design work in the fall of a previous year to Tender, Award and start construction earlier in the following year,
- bundling smaller repair and replace type projects into one larger capital project to reduce delays, expedite completion and manage projects within a bundle, and
- proactively working with Vendors / Contractors to minimize disruptions on residents.

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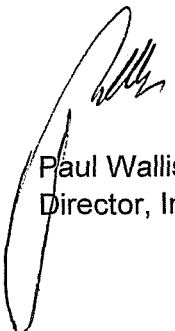
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CONCLUSION

Capital Projects in the Water Division are managed effectively but there are opportunities for improved efficiency. There is consistency in the project management practices and principles being applied and followed however there is not an adequate automated system to help manage projects efficiently. As a short-term solution, manual processes and a number of systems and applications that requires multiple sources of information are being used to provide Project Managers with the information they need to manage effectively.

As a longer-term solution, the Region has acquired a software application (Eclipse Project Portfolio Management) to help manage project portfolios at a high corporate level. Public Works is currently assessing project management needs and will evaluate Eclipse to determine if it will meet individual project management needs within the Department.

Internal Audit will follow-up on the status of outstanding Management Action Plans related to this audit and will report the status to Audit Committee in 2012.



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