APPENDIX 1

TORONTO WATER DIVISION REVIEW OF WASTEWATER TREATMENT PROGRAM – PHASE ONE

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TORONTO Auditor General's Office

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EXECUTIVE SUMMARY

The Auditor General's 2007 Audit Work Plan included a review of Toronto Water's wastewater treatment program. This review was selected based on specific audit risk criteria including the extent of expenditures and assets and the significance of regulatory requirements. In addition, of particular concern in the area of wastewater treatment is the potential impact on the public as well as the resultant legal liability to the City if this area is not managed appropriately.

In order to ensure timely reporting of issues identified during our audit, our review was divided into two phases. Phase One of our review relates to controls over payroll processing, overtime and attendance management. This report also contains a section on the management of maintenance activities at the wastewater treatment plants. Phase Two of our review will address contract management and payment processing and will be reported prior to the end of the year.

This report contains 16 recommendations. In our view, the implementation of these recommendations will improve controls over attendance and payroll processing, help manage overtime costs, and expedite Toronto Water's plans to improve maintenance practices through better and more effective use of technology.

Significant changes in staffing and operating processes have been implemented over the past number of years as a result of municipal amalgamation in 1998 and the Works Best Practices program. The Works Best Practices program is a long-term initiative that began in 1996, to achieve cost savings by automating plant processes, making organizational changes, introducing new operational tools and significantly reducing the number of plant staff.

The reduction in staff required that technical staff assume certain administrative duties such as payroll and purchasing. These administrative duties have generally received less priority and focus than those duties relating to the day-to-day operating activities at each plant. As a result, many of the administrative responsibilities have not received an appropriate level of attention. This is an area which requires re-evaluation by management and, in particular, a refocus on the importance of maintaining an adequate level of administrative expertise in order to ensure that internal administrative controls are maintained at an appropriate level.

In summary, supervisory and financial controls over employee attendance, overtime and payroll processing are not adequate. Related processes and controls require improvement. For example, because the Works Best Practices program eliminated supervisors during nights and weekends, Team Coordinators do not monitor employee attendance during all shifts As a result, it is possible that employees may be paid for hours not worked. This area should be evaluated and steps taken to minimize such risks.

Between 2000 and 2006, overtime increased approximately 60 per cent. Although staff reductions have contributed to some of the increase in overtime, the amount and reasons for overtime have not been analyzed to determine whether such costs were reasonable and necessary. Further, employee absenteeism, which is one of the reasons for overtime, is not regularly monitored according to City policy. Finally, we also identified payroll overpayments which resulted from inadequate controls to ensure that payroll data entered into the financial information system was accurate.

Based on our overtime analysis and discussions with management, maintenance due to equipment breakdowns is a major cause of overtime. Plans are currently underway to improve the existing computerized work management system and develop detailed maintenance practices and procedures which will help better plan and track maintenance activities and monitor maintenance costs. However, plant maintenance staff has continued to use manual records and focus on reactive rather than preventive maintenance. Improving maintenance practices should help reduce repair costs and minimize overtime.

Details on each one of these issues are provided in the balance of the report.

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BACKGROUND

Toronto Water is responsible for supplying Toronto's drinking water and for collecting and treating all the City's wastewater, both sanitary sewage and stormwater. Revenues are derived from user fees charged for water consumption and sewage treatment, rather than through tax assessment.

The Wastewater Treatment section of Toronto Water operates four wastewater treatment plants, which treated approximately 438 million cubic metres of wastewater and generated over 53,000 dry tonnes of wastewater biosolids in 2006. Biosolids are the solid organic material left after solids are separated from liquids in the wastewater treatment process.

In 2006, the four wastewater treatment plants incurred gross expenditures totalling \$91 million of which in-house staff costs account for \$26 million or approximately 28 per cent of the plant operating costs. Other major operating costs include energy usage and the processing and disposal of biosolids.

Based on information in Figure 1 below, operating expenditures for the four wastewater treatment plants increased from \$79 million to \$90 million (14 per cent) over the last seven years. During this same period, salaries and benefits decreased from \$31 million to \$26 million (18 per cent), mainly due to a decline in the number of staff. The number of staff in 2000 was in the range of 450. The number of staff presently employed is approximately 280, which represents a decrease of 37 per cent.



The decline in staffing levels is mainly due to the Works Best Practices program. The Works Best Practices program achieved significant savings in payroll costs mainly by automating plant processes and reducing staffing levels.

AUDIT OBJECTIVES, SCOPE AND METHODOLOGY

What Were the Objectives of this Audit?

The objective of this review was to assess whether the City's wastewater treatment program was being managed economically, efficiently and in compliance with City policies and legislative requirements. Due to the scope of the work involved, this review was divided into two phases.

What did Phase One Include?

Phase One of this review focused on payroll processing, overtime and attendance management. In addition, we reviewed how effectively technology was used to monitor maintenance activities and control overtime costs.

Our review covered the period from January 1, 2006 to March 31, 2007 and focused on two of the four wastewater treatment plants, Ashbridges Bay and Highland Creek.

How Did We Conduct this Audit?

Our audit methodology included the following:

- review of Province of Ontario statutes, regulations, guidelines and procedures relating to water management;
- review of City of Toronto by-laws, directives, policies, procedures and current divisional practices;
- interviews with staff of the Toronto Water Division and other City divisions;
- review of documents, records and management reports;

- evaluation of management controls;
- review of certificates of approval and inspection reports issued by the Ministry of the Environment for two wastewater treatment plants;
- observation of processes and procedures at Ashbridges Bay and Highland Creek Treatment Plants;
- review of Council and Committee minutes;
- review of two audit reports issued by the City of Toronto's Internal Audit Division;
- review and consideration of allegations made to the Fraud and Waste Hotline
 Program pertaining to the wastewater section of Toronto Water Division; and
- review of audit reports of other local governments in Canada and the United States.

We also reviewed related audit work conducted by the following audit agencies:

- Office of Provincial Auditor of Saskatchewan;
- United States Government Accountability Office; and
- Australian National Audit Office.

This audit was conducted in accordance with generally accepted government auditing standards.

AUDIT RESULTS – WHAT DID WE FIND?

The implementation of the recommendations contained in this report will improve internal controls over payroll processing, reduce the risk of error in paying staff and better control staff overtime and absenteeism.

A. VERIFICATION OF EMPLOYEE ATTENDANCE

A.1. Employee Attendance is Not Adequately Supervised

Supervision of staff is not adequate to effectively monitor employee attendance. Plant operations require that staff work seven days a week and 24 hours a day. The Works Best Practices program eliminated supervisors during nights and weekend shifts, although a management staff is always on standby in case of emergencies. Team Coordinators verify employee presence at morning staff meetings but unless specific issues are suspected, there is no spot check of employee attendance during their shift period. As a result, Team Coordinators are unable to verify whether employees worked their entire shift. During our review, we identified an instance where one employee was paid for a shift not worked as a result of an unapproved shift change.

Recommendation:

1. The General Manager, Toronto Water Division, review the current process to monitor employee attendance during night and weekend shifts and determine whether or not it is practical or cost-effective to conduct random checks of employee attendance during night and weekend shifts.

B. CONTROL OF OVERTIME

Overtime costs have increased in the last seven years. As shown in Figure 2 below, staffing levels have declined during this period. After discounting the impact of annual salary increases, overtime costs have increased from \$1.6 million in 2000 to \$2.5 million in 2006, an increase of 60 per cent. This is largely due to the staffing reductions as shown in the chart below.



Due to the number of unforeseen operational and weather events, overtime by virtue of the demands of the wastewater treatment plants is an operational necessity. In addition, overtime is required to cover for statutory holidays, vacation and sick time and ensure compliance with regulations. The extent of controllable overtime, while difficult to accurately estimate, can be mitigated by appropriate levels of management review and approval.

B.1. Supervisory Review and Approval of Overtime Should Be Improved

Overtime does not usually require pre-approval unless it is project related. In general, outside of normal business hours, staff designated as the "Operator in Charge" determine the need for overtime based on operational requirements.

Plant staff at both Highland Creek and Ashbridges Bay treatment plants also do not consistently use specifically designed overtime forms that account for the hours worked and reasons for overtime. These forms contain details of the overtime hours and the reasons for the specific overtime. Further, we identified instances where overtime recorded in the payroll system did not agree with time records. Since overtime forms were not always required, Team Coordinators were unable to explain the reasons for the differences.

Team Coordinators do not always sign the overtime forms as evidence of their review and approval. In addition, the overtime forms do not always document the reasons for overtime in sufficient detail to determine the cause and assess whether the amount of overtime was reasonable.

Recommendation:

2. The General Manager, Toronto Water Division, require management review and approval of all overtime worked and ensure that all plant staff use appropriate documentation approved by management that clearly explain the reasons for overtime worked.

B.2. Reporting and Monitoring of Overtime Costs Requires Improvement

Overtime information currently available to management is not adequate to effectively monitor overtime hours and costs. The plant managers in the wastewater plants receive overtime reports quarterly from the Policy, Planning and Finance Division. However, these reports do not provide information on the hours worked and cost for individual plant work areas. In order to compensate for this, management at Ashbridges Bay developed an in-house report that provides the overtime worked for each employee by work area. However, the in-house report did not agree with the payroll system, mainly due to the omission of Team Coordinators and shift staff from this report. As well as being prone to error, manual processes are also time consuming.

We also found that the Team Coordinators who approve overtime of staff do not review overtime reports. Team Coordinators were not aware of the overtime budget amounts for their work areas. As a result, they do not track and monitor overtime on an ongoing basis, leaving the Plant Manager to track overall overtime.

Tailored overtime reports will help management monitor overtime hours and costs and identify opportunities to control overtime.

Recommendation:

3. The General Manager, Toronto Water Division, in consultation with the Director, Policy, Planning, Finance and Administration and the Director, Pension, Payroll and Employee Benefits, develop overtime reports to meet the information needs of the managers responsible for reviewing overtime costs. Management should regularly review overtime reports to monitor overtime usage and costs and identify potential opportunities to reduce overtime.

B.3. Reasons and Amount of Overtime Require Investigation and Analysis

Our review of overtime indicated the following circumstances that may require further review:

- 38 out of 284 employees earned overtime in excess of 400 hours and approximately \$20,000 annually at the four wastewater plants;
- increase in overtime in the month of December in the last three years; and
- some work areas and positions have unusual levels of overtime on a consistent basis.

Overtime trends among plants and work areas and positions within plants are not compared to help in identifying unnecessary overtime.

According to plant staff, mechanical breakdowns and emergencies due to aging equipment are the major causes of overtime. Other reasons include overtime on planned projects and to cover for staff absences. In general, there is insufficient data on overtime, limiting management's ability to perform detailed overtime analysis and determine whether overtime costs were reasonable and necessary.

Recommendation:

4. The General Manager, Toronto Water Division, direct that detailed overtime analyses be performed to determine whether the amount of overtime is reasonable and necessary in the wastewater plants. Such overtime analyses should identify reasons for overtime and trends among work areas and positions within the plants.

B.4. Opportunities Exist to Reduce Overtime

Staff shift schedules include planned overtime to ensure adequate staff coverage. However, according to a Toronto Water business case drafted in 2007, the wastewater plants could save over \$200,000 annually if they adopted a shift schedule similar to that used at water filtration plants. Based on our review of the shift schedules, the shift schedule at the water filtration plants has 46 hours less planned overtime per shift worker per year than the wastewater plants. At Ashbridges Bay, we were advised that the current shift schedule also makes it more difficult to coordinate activities between the day maintenance staff and plant technicians who work shifts. We were advised that the option of changing shift schedules requires the consent of Local 416 and is currently under review by Employee and Labour Relations staff.

Employee absences due to vacation also cause overtime. Due to the length of time wastewater staff has been employed at the City, most employees have six weeks vacation. The current collective agreement requires that "the City shall consider all requests for employees to take their vacation outside their allotted vacation days only as a result of exceptional circumstances. The City shall not unreasonably deny such a request". Because the collective agreement does not define "exceptional circumstances", it is subject to interpretation by both unionized and supervisory staff. Given the limited number of staff on duty at any one time, if an employee takes vacation outside of their scheduled days, that individual will have to be replaced, usually through overtime. In addition, if employees do not take their vacation by the end of the year, they may also request that unused vacation be paid. There is currently no plan to address the lack of a definition of "exceptional circumstances".

Recommendations:

- 5. The General Manager, Toronto Water Division, consult with the union the potential of adopting a common shift schedule for both the water filtration and wastewater plants that will reduce staff overtime.
- 6. The General Manager, Toronto Water Division, develop criteria for defining the exceptional circumstances where supervisors approve staff requests for changes to their scheduled vacation.

C. CITY POLICY FOR ATTENDANCE MANAGEMENT SHOULD BE FOLLOWED

In 2001, City Council adopted an attendance management program for City employees. This policy very clearly outlines the responsibilities of supervisors in regard to the monitoring of employee attendance and that they keep accurate records of actions with the employee. According to the City's attendance management policy, supervisors must take certain steps for any employee whose absenteeism is above the divisional average.

C.1. Monitoring of Employee Absenteeism Requires Improvement

Team Coordinators are not monitoring absenteeism as required to comply with the City's attendance management policy. We selected a sample of four employees where employee absences from work exceeded the division's average absenteeism rate of nine days. In all four employee files, there was no documentation to indicate that the employee's attendance was reviewed.

We also discussed the attendance management program with Team Coordinators at the plants. Most supervisory staff were not aware of the divisional average absenteeism rate that would require them to review employee attendance. Team Coordinators stated that they have discussed attendance with some employees and issued letters in the past to employees with high absenteeism. However, for several employees, we confirmed that no action had been taken to address absenteeism. In addition, Team Coordinators generally have not been receiving or reviewing attendance reports to monitor absenteeism.

Absenteeism is one cause of overtime. In 2006, approximately 24 per cent of wastewater employees exceeded 10 days illness in the year. Plant operations require that absent shift employees be replaced by another employee, usually through overtime. The City incurred approximately \$306,000 in overtime costs to replace these absent shift staff.

7. The General Manager, Toronto Water Division, ensure that the staff in the Toronto Water Division are aware of their responsibilities relating to the attendance management program and require that employee absenteeism is regularly monitored in accordance with City policy.

D. CONTROLS TO PREVENT PAYROLL INPUT ERRORS REQUIRE IMPROVEMENT

D.1. Payroll Input is Not Independently Verified

Due to the limited administrative support at the facilities, an independent person does not review and verify payroll data entered into the payroll system to ensure the accuracy and completeness of payroll transactions. The absence of this control contributed to numerous minor payroll input errors and payroll overpayments identified during our review. In response to our 2004 audit report, "Payroll Processing Review – Phase One", the City Manager issued a directive in November 2004 requiring departmental staff to perform an independent review and verification of the input of payroll data. The Team Coordinators, responsible for payroll input for staff in their own work area, were not aware of this requirement.

At the Ashbridges Bay Treatment Plant, Team Coordinators input their own payroll time and attendance without subsequent approval by the plant manager. At the Highland Creek, the plant manager discontinued this practice and reassigned payroll input duties to an administrative staff person.

- 8. The General Manager, Toronto Water Division, ensure that:
 - a) divisional staff, independent of the payroll input process, review and verify the accuracy and completeness of payroll transactions; and
 - b) Toronto Water staff do not input their own payroll data into the payroll system.

D.2. Payroll Overpayments

Payroll overpayments occurred when Team Coordinators input "call-in time" using an incorrect payroll code, which resulted in call-in hours being paid at time and one-half instead of straight time. Call-in pay occurs when staff are called into work, usually for emergency situations. For the years 2005 and 2006, we identified total overpayments of approximately \$7,500 for management staff in the two plants. In addition, for one employee, we calculated that the overpayment was approximately \$12,000 for the years 2001 to 2004.

These payroll overpayments occurred prior to the enhancement of on-line system controls in August 2006 that now prevent these types of payroll input errors. However, deficiencies in on-line system controls prior to this date may have resulted in similar payroll overpayments to other City non-union employees. We have therefore advised the Director, Pension, Payroll and Employee Benefits of these overpayments in order that her staff can identify and take appropriate action to recover, if possible, any similar payroll overpayments that may have occurred.

9. The Chief Financial Officer and Treasurer take appropriate action to identify and recover payroll overpayments resulting from the incorrect use of payroll input codes prior to the enhancement of on-line system controls in August 2006.

D.3. Payroll Procedures Should Be Standardized

The wastewater treatment plants do not have written payroll time and attendance procedures. As a result, Team Coordinators who input payroll maintain different kinds of timekeeping records for processing the time and attendance of staff. In addition, payroll timekeeping involves transcribing data from one manual document to another, increasing the risk of error.

At the time of our review, staff did not use payroll time sheets that capture all staff time and attendance. However, the Toronto Water Division is currently drafting a standard time sheet for use by all divisional staff. The two plants we reviewed also differed in the extent of their use of time sheets. For example, at Highland Creek all management staff use time sheets, whereas at Ashbridges Bay only the administrative staff and the plant manager use time sheets. As a result, for other staff, there is no evidence that supervisory staff review and approve staff time and attendance.

Recommendation:

10. The General Manager, Toronto Water Division, develop and implement standard payroll procedures in the Toronto Water Division that require supervisory staff to review and approve a standard time sheet that captures all staff time and attendance.

D.4. Delegate Payroll Input Duties to Administrative Staff

Team Coordinators who perform payroll input duties were generally not aware of and have never used any of the payroll reports. They are not familiar with payroll internal controls such as verification of payroll input and do not have the time, due to operational demands, to familiarize themselves with all the payroll rules and procedures. Further, we noted errors in granting and processing alternate rate pay (a higher rate for performing different duties) that confirm our position in this regard.

Team Coordinators who perform payroll input duties have all attended payroll training. The training's focus was timekeeping but the course material included information on payroll reports as well as collective agreements and human resource policies.

The Team Coordinators' responsibilities require that they ensure that wastewater processes are operating effectively and comply with the legislative requirements. Consequently, their major focus is not on administrative controls.

Recommendations:

- 11. The General Manager, Toronto Water Division, review the use of alternate rate assignments to ensure that such assignments are necessary and properly processed in accordance with policies and procedures as well as the provisions in the collective agreement.
- 12. The General Manager, Toronto Water Division, consider the possibility of reassigning payroll input duties to plant administrative staff.

E. WORK MANAGEMENT SYSTEM AND MAINTENANCE PROGRAM

In 2001, as part of the Works Best Practices program, the Toronto Water Division implemented a work management system in the water and wastewater treatment plants.

The purpose of the work management system is to plan and track maintenance activities and monitor maintenance costs. We have identified issues relating to maintenance practices and the current usage and future plans for the work management system.

E.1. The Plan to Implement the Work Management System Should Be Accelerated

Toronto Water staff do not consistently use the work management system in the wastewater plants. For example, at the Highland Creek Treatment Plant, only \$265,000 in costs out of a total of \$2.8 million spent on maintenance in 2005 was recorded in the work management system. In addition, some labour but no parts and materials costs were recorded. The water and wastewater plants also differed in the extent of its use, depending on the level of staff commitment as well as skills and knowledge.

One plant manager indicated that 75 per cent of maintenance activities are reactive rather than planned and preventive maintenance. While this may be a reflection of the age and condition of equipment in the wastewater plants, we were unable to verify the extent of preventive maintenance due to the lack of complete maintenance records. The Ministry of the Environment also cited problems with the lack of maintenance records in a recent Provincial Officer's Report at Highland Creek.

Maintenance due to equipment breakdowns is a major reason for overtime. If wastewater staff used the work management system effectively and increased planned maintenance, costly repairs may be reduced.

A number of reasons were given for not using the work management system. Wastewater staff felt that the work management system was not user friendly and that they did not receive adequate training and support to use it effectively. In addition, management did not conduct a post-implementation review to ensure that the system was used as intended.

Management has fully recognized the problems relating to maintenance and lack of use of the work management system. In 2005, the Toronto Water Division established a central unit to improve both the maintenance practices as well as the system configuration and support in the water and wastewater treatment plants and district operations. The goal is to "reduce the amount of reactive maintenance and carry out more cost-effective planned maintenance". We have not performed a detailed evaluation of the work plan. However, it appears comprehensive and includes technology improvements, staff training and "client implementation teams". Implementation started in 2007 with a pilot at a water treatment plant. However, the estimated timelines for completion appears in our view to be excessive. Although Highland Creek will complete implementation in 2008, the target for completion at Ashbridges Bay, the City's largest treatment plant, is the year 2011. We understand that Ashbridges Bay has requested an earlier implementation date.

Recommendations:

- 13. The General Manager, Toronto Water Division, require that an evaluation of the use of the work management system be conducted following implementation of the system at each plant location. In addition, timely action should be taken to correct problems that are identified during the evaluation process.
- 14. The General Manager, Toronto Water Division, evaluate the feasibility of accelerating the timelines to implement the work management system at the wastewater plants.

E.2. Selection of a Work Management System

Currently, the Toronto Water Division uses two work management systems. According to management, within several years, the intention is to select one or more work management system to satisfy all of Toronto Water's needs. This will involve the assessment of the two existing work management systems as well as the SAP Plant Maintenance Module and products from other vendors.

Currently, it costs approximately \$330,000 annually to support the two work management systems. In addition, Toronto Water does not plan to submit a business case to the SAP Competency Centre regarding a SAP interface until a decision is made regarding the selection of work management systems for the Toronto Water Division.

Without an interface between the financial information system and the work management systems, staff hours and maintenance costs must be entered into both systems. This is an inefficient use of staff resources and increases the risk that payroll and expenditure information is not accurate and complete.

Recommendation:

15. The General Manager, Toronto Water Division, expedite the review and assessment of the existing work management systems and the SAP Plant Maintenance Module and consider the feasibility of creating an interface between the selected system and the SAP Financial Information system.

E.3. A Single Time Sheet Form Should Be Developed for Payroll and the Work Management System

Currently, maintenance staff input labour hours into the work management system based on their own records. A supervisor does not review or approve these hours for reasonableness. The Toronto Water Division is currently developing a standard time sheet form for payroll data entry. In order to simplify data collection and improve data accuracy and completeness, a single time sheet form could be developed for both payroll data entry and the work management systems.

16. The General Manager, Toronto Water Division, develop a single time sheet to be used for payroll purposes and assess the feasibility to also use this time sheet for the work management system.

CONCLUSION

This report represents a first review by the Auditor General's Office of the Toronto Water's wastewater treatment program. The review focused on controls over payroll processing, overtime and attendance management, as well as the use of technology in managing maintenance activities.

We have identified financial control weaknesses in processing payroll, managing overtime costs and monitoring employee attendance. We also found that technology was not fully utilized by plant staff to manage maintenance activities. In our view, the more effective use of technology would likely reduce repair as well as resultant payroll overtime costs.

Addressing the recommendations in this report will improve financial controls and enhance the efficient use of staff resources and technology in supporting wastewater operations.

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