



**Markham Distribution System
2008 MANAGEMENT REVIEW
ACTION ITEM LIST**

Management Review Date: November 20, 2008						
Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
1. Currently no formalized procedure in place for corrective action for E.Coli and Total Coliform (adverse on re-sample) testing when supply water chlorine residual is out of range (<1.00mg/l)	- Finalize Corrective Action Standard Operating Procedure (for E.Coli and Total Coliform testing) – with Markham's role defined when supply water chlorine residual is outside MOE limits for this type of adverse event - Town of Markham, Region of York, City of Toronto met and planned on how to address issues.	Karen D.	Jan 2009	- Meetings were held with Region of York and Toronto to address the issues. - SOP 16b has been revised to address the corrective action procedure for Markham to follow.	Yes	Feb. 5, 2009
2. Testing of Emergency Response procedures not completed yet	Ensure Waterworks completes the Emergency drill exercise by end of January 2009	Anna D.	Jan 2009	- Emergency Response Training rolled out January 2009 ~ Fan Callout doc. - Mock exercise conducted, ~ Emergency Fan Callout doc. - After Action Review document completed	Yes Yes Yes	Jan 16, 2009 Feb. 2, 2009 Feb. 13, 2009



**Markham Distribution System
2008 MANAGEMENT REVIEW
ACTION ITEM LIST**

Management Review Date: November 28, 2008						
Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
3. Health & Safety (H&S) – no Full Time H&S Specialist in HR for the last year. No formal Joint H&S Committee meeting in last year due to lack of quorum and/or no corporate representative. Liability of Town and staff is a concern.	Brenda to send e-mail to Human Resources (HR) to raise this concern.	Brenda L.	Dec 2008	Email sent by Brenda to Sharon Jan. 5, 2009. Sharon replied and advised new H&S Rep. to be in place very soon. Meanwhile WW Management shall ensure a rep. presents at each H&S meeting in order to be kept in the loop.	Yes	Jan. 7, 2009
4. Training Model Learning & Development (L&D) – linkage to corporate L&D – linkage to NQI principles. i.e. Want more than technical skills for management (people skills, leadership skills)	Ensure linkages of NQI competencies are included in the Waterworks Training Model	Anna D.	Mar 2009	Waterworks Training Model link to Markham's NQI: - NQI - Organizational Excellence: ~ Staff Engagement ~ Staff Empowerment ~ Training Opportunities ~ Succession Planning - Training Model recognizes knowledge, skills and ability (KSA) and addresses DW/QMS 'competencies' element - Training Model engages and empowers staff through the <i>Staff Profile & Employee Skills Assessment ~ Training Plans</i> provide training opportunities and identified <i>Position Profile</i> activities aid in succession planning	Yes	Feb. 24, 2009



Markham Distribution System
2008 MANAGEMENT REVIEW
ACTION ITEM LIST

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
5. Needs assessment across the commission is required for training needs (facility requirements)	Needs Assessment to be conducted	HR, Anna D. & Daphne R.	May 2009	- Meeting held to review needs. Further meetings to take place to review requirements with Operations and HR. - Room Warden 1B set up, room is large enough to conduct training sessions at 8100 Warden. - Commission wide needs assessment also completed, full detailed report forwarded to Commissioner for her review	Yes	Feb. 24, 2009
6. Low percentage of responses from door hanger surveys for Planned Maintenance water shutdowns	Review process to see if there is a way to get a larger percentage of responses from consumers (greater than 5%)	Noris D.	Apr 2009	- Reviewed existing survey process w/ WW Mgt. Team - Worked closely w/ Infra group to track and ensure distribution of survey cards for capital projects - Drafted a formal process (M3206) for customer satisfaction survey - Engaged WW Mgt. Team, Rick Dominico and Dennis Flaherty to agree on a standard questionnaire and rating scale for survey.	Yes	May 5, 2009



**Markham Distribution System
2008 MANAGEMENT REVIEW
ACTION ITEM LIST**

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
7. Capital Budgets are behind schedule	• Ensure a plan is in place to complete all carryover projects and 2009 in capital budget • 5 year capital program	Ernie T.	Dec 2009	○ Infrastructure project engineer hired Jan. 2009 after vacancy of nine months (April to Dec. 2008) ○ Infrastructure renewal and rehabilitation projects on track. ○ Other carryover and 2009 projects on schedule for completion. ○ 5 years capital program completed.	Yes	Sept 2009
8. Internal audit methodology	• Review system to determine which process works better (by element or by section)	Eddy W.	Jan 2009	○ 2009 internal audit scheduled to be performed by element instead of by section in order to compare the effectiveness	Yes	Jan. 19, 2009
9. Water rate & budget alignment	• Align the DWQMS process into a new connecting point into the Town's budget process for setting the water rate • Presentations about the service versus technical	Jerry K. & Peter L.	May 2009	○ Delayed by other Finance priorities ○ Initiation meeting between Finance and Waterworks took place August 11, 2009 and working group established to prepare review of needs and develop appropriate rate structure for 2011 budget year implementation ○ To be reviewed in the upcoming management review	No	Jul. 6, 2009



Markham Distribution System
2008 MANAGEMENT REVIEW
ACTION ITEM LIST

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
10. Improve process of receiving staff suggestions	Develop formal mechanism to collect staff suggestions from all Waterworks staff	Noris D.	Mar 2009	Developed and implemented a formal mechanism for collecting, tracking and reporting WW staff suggestions	Yes	May 5, 2009
11. Due to increased presence at public presentation increased need for presentation and facilitation skills	Advise of HR of this needed skill set to align the corporate HR goals with our needs	Anna D.	Dec 2008	- Email sent to Alex Khan (HR) suggesting training addressing 'Presentation Skills' - Alex located Presentation Skills workshop from an external training agency, however since this was not part of the Corporate Calendar it would have to be a Waterworks expense \$ quote: Nexient Learning, 2 day workshop, \$1,095 (pp) ~ on-site, 10 participants, 7K - Need to review as a group at Management Review meeting	Yes Yes	Jan 5, 2009 Jan 8, 2009 Jan 6, 2009 Sep 21, 2009



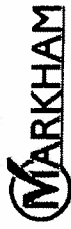
**Markham Distribution System
2008 MANAGEMENT REVIEW
ACTION ITEM LIST**

Deficiency / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
12. Need for improved data quality assurance and mgmt reporting capabilities	• IMS Clerk position could be re-engineered to undertake data quality assurance etc • Create Job description and business case	Noris D.	Dec 2008	- o IMS Clerk position re-engineered as Data Management Specialist in Dec 2008 - o HR completed job evaluation in April 2009. - o Deferred staffing action as suggested by Commissioner due to funding constraint - o Submitted in 2010 budget for wage gap funding (reengineered position was assigned to a higher pay grade following job evaluation.)	No	Jan. 5, 2009
13. Contract preparation, centralization and management	• Look at how other municipalities manage their contracts - review best practices and prepare recommendations	Ernie T.	Mar 2009	- o Survey of 17 municipalities and Regions completed - o Findings and recommendation to be completed by year end.	Yes No	Apr 30, 2009 Dec. 30, 2009



Markham Distribution System 2008 MANAGEMENT REVIEW ACTION ITEM LIST

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
14. Clarity of Waterworks Financial Analyst position – this previously approved & funded position removed for Waterworks budget for 2009	Articulate the need and communicate the need	Peter L. & Jerry K.	Mar 2009	- Needs has been compiled and communicated to Peter Loukes - New Senior Business Analyst hired to provide support to Commission of Community and Fire Services - However the specific Waterworks needs are still not addressed - For example: the financial duties of the IMS Systems Coordinator and PowerStream billing values - To be reviewed in the upcoming management review	No	Apr 1, 2009
15. Service Level Agreements need to be revisited	- Meet with other commissions to communicate our needs - Brenda will raise with colleagues and/or at CCC	Brenda L.	Mar 2009	Meeting to be set up with Peter and WW Managers to review requirements prior to bringing this up with other commissions	No	Apr. 3, 2009
16. Scheduling of Management Meetings	Try to align with the budget process	Eddy W.	May 2009	- Management Review 2009 to be taken place at the end of June/early July, but avoiding the short week - Meeting postponed until the completion of the external audit.	Yes	Jan. 21, 2009 July 3, 2009



**Markham Distribution System
2009 MANAGEMENT REVIEW
ACTION ITEM LIST**

Management Review Date: September 21, 2009

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
1. Further discussion with York Region and Toronto on relief and to clarify what can be done to receive the appropriate content. Also, investigate relief from the Ministry; speak to them regarding the regulation requirements for Markham standards.	Contact York Region and Toronto regarding chlorine residual. Speak to Ministry of Environment regarding regulation requirements.	Karen D.	Sept 2010	Continuation of item #1 of 2008 Management Review action item.		
2. Health and Safety – town hired H&S Specialist, receives regular updates, gives status on Commission, not being communicated fully to staff.	To discuss with H&S Specialist the protocol and communication (posting of) minutes to staff.	Peter L.	Nov 2009	Director Loukes' Administrative Assistant appointed to be the point of contact with Corporate H&S Specialist, and be responsible to update the JHSC notice boards at 8100 Warden.	Yes	Oct. 6, 2009
3. Current space for Waterworks training is to be converted to Emergency Operations Center in 2010 and this will affect the Waterworks training plan in 2010.	Further discussion on when the EOC is scheduled to take place. Also alert WW Training Co-ordinator as this is the primary training room.	Brenda L., Peter L. & Anna D.	Dec 2010			



Markham Distribution System
2009 MANAGEMENT REVIEW
ACTION ITEM LIST

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
4. New, effective methodology for customer surveying is required as the response received is low.	Revamp survey to increase response. Suggesting door to door, door knockers or mail outs, even surveying contractors. Also turn KPIs into survey questions.	Noris D.	Dec 2009	o		
5. Project Engineer in Waterworks Infrastructure is not being compensated at the same level as Project Engineers in other Town departments.	Prepare report for Brenda to discuss and clarify that the pay scale should be consistent along with other project engineers in the Town	Ernie T.	Dec 2009	o		
6. Water Rates and Budget Alignment.	- Create report to show Council that the rate change will benefit the Town. - Briefing note to be created regarding the working group, detailing what the team is about and who are the members for the Commissioner. - Create Terms-of-Reference, why this is beneficial. - Investigate what the other municipalities are doing and what their practices are.	Peter L.	Dec 2009	- Carry over item from 2008 Management Review action item #9 - Initial meeting with Finance took place August 2009 and working team was created		



Markham Distribution System
2009 MANAGEMENT REVIEW
ACTION ITEM LIST

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
7. Increased training of presentation skills.	• Suggest by group to look for other sources, i.e. community colleges and the Markham Public Library • Director to further follow up with HR	Anna D. Peter L.	Sept 2010 Dec 2009	○ Carry over item from 2008 Management Review action item #11 ○ Inquired about Presentation Skills training to HR (Alex Khan) ○ Alex suggested workshop on presentation skills from external agency, not part of corporate calendar (per person \$1100).		
8. Contract preparation, centralization and management.	• Survey sent to 17 municipalities and regions with more than 20 questions asked. • Create report and recommendation detailing findings of survey sent to other municipalities.	Ernie T.	Dec 2009	○ Carry over item from 2008 Management Review action item #7		
9. Waterworks Financial Analyst position was approved and cancelled during hiring process. Business Analyst is still necessary for Waterworks.	• Document this to make Finance Dept. aware of the lack of financial support. • Position to be called Business Analyst, rework the way it is requested and presented.	Jerry K. & Peter L.	Dec 2009	○ Carry over item from 2008 Management Review action item #14		



Markham Distribution System
2009 MANAGEMENT REVIEW
ACTION ITEM LIST

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
10. Unclear about what services and the corresponding service levels other Town departments are to provide to Waterworks but annual funding has been allocated to fund other Town departments.	- Waterworks to provide an update about Waterworks service needs and service levels from other Town's departments - Commissioner to engage discussion with other Commissioners on establishing service level agreements	Brenda L., Peter L. & Jerry K.	May 2010	Carry over item from 2008 Management Review action item #15		
11. Benchmark other municipalities for water loss/balance, leakage index.	- Determine the average across the board - Stage One – Gather data from other municipalities regarding water loss/balance, leakage index. Create report to educate. - Stage Two – Fill in data	Karen D.	May 2010			
12. Capture and focus on the top 3 to 4 critical activities in the summary when reviewing the data for total Work Orders.	Expand the work order completion summary to include the top 3 to 4 critical activities	Noris D. & Peter S.	Dec 2009			
13. Fire Department to be made aware of critical control point regarding backflow contamination.	Organize training with Fire Department to address the issue of potential contamination of the drinking water system from fire fighting activities	Eddy W.	May 2010			



**Markham Distribution System
2009 MANAGEMENT REVIEW
ACTION ITEM LIST**

Decision / Deficiency	Action Item	Champion	Timeline	Action Taken	Resolved	Date
14. Investigate any similarities and possible merging with Fire Department to conduct the annual mock emergency exercise.	Determine if there are any similarities with Fire Department and Waterworks emergency exercise	Anna D.	Sept 2010	○		
15. Staff was unfamiliar with the process of how to use the Fan Callout document.	Test the fan callout document on a yearly basis until staff are fully comfortable	Anna D. & Eddy W.	Sept 2010	○		
16. New process in place for the recording of major and minor watermain related projects.	Establish the process with Engineering and Asset Management regarding the use of the new forms in the Drinking Water Works Permit	Eddy W.	Jan 2010	○		
17. Business Cases must be written when requesting new staffing position or program that have financial impact for approval.	Create business case for resource needs, requesting new staffing position or program that have financial impact	All Managers	Oct 2009	○	Business cases for all Waterworks new staffing requirement completed and forwarded to Commissioner Librecz for CCC approval for 2010	Yes Oct. 2, 2009
18. No back up QMS Representative.	Discuss with Operational Top Management and appoint a backup QMS Representative	Jerry K.	Dec 2009	○		
19. Shortage of QMS internal auditors added the burden on existing QMS internal auditors to conduct more than one audit per year as originally committed.	QMS Internal Auditor Recruitment & Training in 2010	Eddy W.	Apr 2010	○		



Markham Distribution System
2009 MANAGEMENT REVIEW
ACTION ITEM LIST



Markham Distribution System 2009 MANAGEMENT REVIEW RESOURCES NEED SUMMARY

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: Data and Information Management

Lead: IMS

Needs	Issues	Alternative Solutions	Recommendations	Impact
Need for improved data quality assurance and management reporting capabilities – Data Management Specialist	Funding of JE pay rate gap and staffing of reengineered position (completion of 2008 DWQMS review action item #12 re-engineering of IMS Clerk position)	No alternative solution has been identified.	Staffing action deferred to 2010 as suggested by Commissioner	Risk associated with data quality issues (i.e. regulatory noncompliance, adequacy of business data to support planning and decision making, LMS and QMS software reporting, etc.)
Develop and establish Waterworks data architecture model	- Inadequate communication of existing data resources - Vague understanding of future data requirement - Continued growth of disparate data sources - Growing cost of managing data - Availability of knowledgeable resource to complete the project	Costly use of Consultant and outsourcing of activities needed to develop, build & implement model. Note: project needs extensive staff input to complete.	Option 1 - provide secondment opportunity to staff/staff reallocation Option 2 –hire contract staff	Full Waterworks business data lifecycle needs assessment; guided data growth and management; controlled software acquisition and data management costs; etc.
Waterworks need to augment & standardize its customer satisfaction survey capabilities	- Several survey cards - Different rating scale - Low or inconsistent turn-out	Outsourcing customer satisfaction survey	Revamp survey database and standardize survey methodology effective 1 Jan 2010 (utilize IMS Clerk and Contact Centre for survey activities)	Standardized, verifiable performance indicators, consistent survey turn-out, etc.

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: Staffing Request for a Capital Projects Inspector for 2010

Lead: Infrastructure Section

Needs	Issues	Alternative Solutions	Recommendations	Impact
Continuous inspection required for capital projects to ensure contract compliance and properly address residents and contractor issues and concerns.	- Continuous inspection is required to ensure contract compliance and quality of underground construction works. - Contractors poor workmanship and non-compliance to specifications cannot be determined if inspector is not on site prior to backfilling. - A permanent capital projects inspector will be able to support a year round project inspection of several projects. - Difficulty in finding and hiring a qualified inspector for a short duration contract. - Advance preparation for hiring required to allow completion of several mandatory training prior to inspector field assignment. - Annual hiring is too time consuming.	- Hire a permanent capital projects inspector to address the needs. - Hire a permanent capital projects inspector on contract for 3-5 years and budget salary under capital costs. - Outsource permanent project inspection to Consultant to ensure qualified inspection (more expensive option and still requires performance monitoring and administration from Town). - Do nothing. May result in non-compliance to health and safety, labour regulations and QMS licensing. May also result in poor workmanship and non compliance to contract requirements and specifications.	- Hire a permanent capital projects inspector to ensure compliance and quality of workmanship. - Alternative solution is to acquire a 3/5 years contract position budgeted under capital costs in order to reduce impact to Operating budget.	- If requested position is granted, projects will be completed in compliance to contract requirements and to Town standards. It will also demonstrate due diligence as an operating (Town) authority. Quality of contractors work can be assured. - Rejection of the requested position will result in sporadic inspection and non assurance that works are completed to Town standards. Sub-standard works will not be discovered until many years and could expose the Town to higher risks of financial and legal liabilities. It may result in non-conformance to the licensing requirement of the Town's as an operating authority.



Markham Distribution System 2009 MANAGEMENT REVIEW RESOURCES NEED SUMMARY

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: Staffing Request for a Project Engineer for 2010

Lead: Infrastructure Section

Needs	Issues	Alternative Solutions	Recommendations	Impact
Secondary support for Capital projects renewal and rehabilitation contracts management to complete projects on time and budget.	- Infrastructure capital works are backlogged in part due to imbalance on number of resources against number of projects. - Some projects are internally out source but still require design review and comments and other technical issues dealt with for construction. - Projects performed are coordinated and conducted from pre-planning, contract issuance, award, administrations to final commissioning and acceptance of completed work. - Infrastructure renewal and rehabilitation projects annually numbers from 12-14 projects. 4 full scope projects can effectively be managed per each project engineer.	- Hire an additional permanent project engineer to address the needs. - Hire a project engineer on contract for 3-5 years and budget salary under capital costs. - Outsource additional projects for design, contract administration and inspection to external consultants. (More expensive options and still requires Town monitoring and administration of the consultant work and performance). - Do nothing. This will result in delayed projects and exposes Town to higher risks in financial and legal liabilities.	- Hire the additional permanent project engineer to complete projects on time and budget and reduce risks. - Alternative solution is to acquire a 3/5 years contract position budgeted under capital costs in order to reduce impact to Operating budget.	- If requested position is granted, projects will be completed on time and budget and improving customer service and compliance contract requirements. It will also demonstrate due diligence as an operating (Town) authority. - Rejection of the requested position will result in delayed completion of other projects and will expose the Town to higher risks of financial and legal liabilities. It may result in non-conformance to the licensing requirement of the Town's as an operating authority.



Markham Distribution System 2009 MANAGEMENT REVIEW RESOURCES NEED SUMMARY

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: Waterworks O&M additional staffing requirement

Lead: O&M

Needs	Issues	Alternative Solutions	Recommendations	Impact
To hire new Waterworks Operators in order for the Operations & Maintenance Section to support the new infrastructure being added and retain the service level provided	• The Town's watermain and sewer infrastructure both increased by 10.5% and further 4-5% increase is expected by the end of 2010 • On average since 2006 infrastructure has been grown on average 5% per year • Additional Waterworks Operators are required in order to maintain the service level provided • Two Waterworks Operator positions were requested in 2009 but were declined • There is a need for additional two Operators in 2010, thus in total requesting four Waterworks Operator positions in 2010	1. Hire new staff 2. Contract out activities in order to reduce the work load of existing staff 3. Reduce the service level of current activities	1. Hiring new staff is recommended, as other than maintain the service levels, succession planning is another factor to consider. It takes several years to grow an experienced Waterworks Operator, and our most experienced Operator	• Lack of staff reduces the service levels for customer response and maintenance of Town's infrastructure • Important preventive maintenance activities such as valve turning and hydrant inspection are delayed or reduced • Succession planning limited with staff attrition, as the senior Operators will either leave or will be retiring. It takes three years for a new Operator to obtain the required license level and additional one to two years to become fully independent and knowledgeable of all O&M activities and be able to analyse system performance for critical performance parameters

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: Waterworks O&M supporting infrastructure at 8100 Warden

Lead: O&M

Needs	Issues	Alternative Solutions	Recommendations	Impact
- To have the supporting equipment to support the Waterworks O&M section in conjunction to the move from Miller Yard to 8100 Warden - To address the staff satisfaction issue from the 2008 Staff Satisfaction Survey – actual physical working environment	- Waterworks O&M Section is moving from Miller Yard to 8100 Warden - Other than the office and lockers room, other supporting infrastructure would be required - Fuelling – currently town vehicles are to be fuelled at Miller Yard only as no fuelling facility available at 8100 Warden - Parking – trucks at 8100 Warden are to be parked outdoor with no security measures in place and good chance for break ins. - Parts storage – spare parts are now being stored at the Miller Yard, both outside and inside the parts storage room	<u>Fuelling</u> - Trucks to be fuelled up at Miller Yard prior to returning to 8100 Warden - Trucks to be refuelled at outside gas stations when needed - Make the fuel pump at 8100 Warden back online for fuelling of Town vehicles parked at this location <u>Parking</u> - Park the trucks indoor to prevent vandalism - Build a secure parking area for the trucks - In between of the above two alternative solutions, park the important vehicles inside and others outside <u>Parts storage</u> - Move all Waterworks parts storage to 8100 Warden - Move the materials being stored outside to 8100 Warden and leave the Parts Storage Room “as-is”	<u>Fuelling</u> - Make the fuel pump back online at 8100 Warden will be beneficial to the Town as the back up fuel storage facility <u>Parking</u> - Park the trucks indoor to prevent vandalism, and does not cause any additional funding to build anything on the property. Indoor parking will be able to allow the Operators to hit the road faster during winter as well <u>Parts Storage</u> - Set up a Parts Storage Room at 8100 Warden, but additional manpower would be required to manage this room	- Staff morale improvement - More downtime will be created as Operators must refuel at Miller and then park at 8100 Warden thus reducing the productivity - Will be adding more administrative work for staff to manage outside fuelling expenses - Parking outside with no security measure does have the potential for breaking in thus losing equipment on the trucks - Takes time for Operators to warm up the vehicle and clean up the snow prior to hitting the road thus reducing efficiency - Not efficient for Operators to go to Miller Yard for parts when needed

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: QMS Internal Auditor Training

Lead: QMS

Needs	Issues	Alternative Solutions	Recommendations	Impact
To carry out QMS internal audits in order to stay in compliance to DWQMS element 19	Trained internal auditors left, resigned or optioned for not to participate in active auditing role	Ask for more commitment from existing internal auditors to conduct more audits	Train more internal auditors in order to provide opportunity for staff who has expressed interest to become an auditor, and also to replenish the QMS auditor team members	- Existing auditors will be required to conduct more than one audit (original commitment was one audit per year per auditor) - QMS Controller been filling the audits when needed but several elements could not be audited by the QMS Controller but very difficult to find another auditor - Internal audits could get behind
	Existing auditors do not have time to conduct the audit on time, thus internal audit schedule was not followed	- Have outside QMS auditors to perform internal audits - Train more internal auditors		
	Staff expressed interest to become a QMS internal auditor			

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: Waterworks System Engineering Additional Staffing Requirement
Lead: SE

Needs	Issues	Alternative Solutions	Recommendations	Impact
One additional support staff (technical, administrative & communication) is required in order to support Waterworks implementation of the Town's Backflow Prevention Program and reduce risk of system contamination due to occurrence of a backflow incident.	- Council enacted a By-law to control cross connections between the municipal drinking-water system and non-potable water sources, and approved the backflow prevention program even though the timeline was questioned as 8 years being too lengthy by Councillor Horchik considering the risk involved. - Timely and effective implementation of the backflow prevention program will aid in the provision of quality drinking water (reduced risk of system contamination due to a backflow incident through an unprotected connection), reduced water purveyor liability (the Town has a duty of care- <i>Safe Drinking Water Act</i>- with respect to protection of the drinking water supply) and reduced health risk to our customers. - The MOE inspects the management of the Town's drinking water system annually and has included in its report the need for a backflow prevention program. - Originally it was estimated that an 8 year time period with current staffing (0.5 fte) would be required	- Hire one additional full time staff dedicated to the backflow prevention program. - Provision of administrative and communicative dedicated support for the Backflow Prevention Program by other departments (contact centre, building department).	Hire a new staff whose primary responsibility will be for the Backflow Prevention Program. Technical, administrative and communication support is required (1.0 fte) to implement a timely and effective Town wide backflow prevention program. This position was identified in the Waterworks Planning sessions.	- The length of time (8+ years) to implement the backflow prevention program to ICI properties within the Town of Markham is an unnecessary increased risk due to the length of the program's implementation. - The occurrence of a backflow incident and corresponding drinking water contamination increases (with length of program implementation) the health risk to customers, increased water purveyor liability and fines, incurred clean-up costs and loss of customer confidence in Markham's drinking water quality. - Markham's Drinking Water Quality System and associated municipal drinking water licence has included implementation of an effective backflow prevention program in order to reduce risks to the quality of drinking water in the Town of Markham



Markham Distribution System
2009 MANAGEMENT REVIEW
RESOURCES NEED SUMMARY

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

	to administer the backflow prevention program to all 2000 ± ICI properties within the Town. This estimate may be longer by 2 years due to the unforeseen work involved to implement, manage databases, reach customers, gain compliance and support enforcement of the By-law. It was realized following program development and first phase of program implementation, that current staffing (0.5 fte) is insufficient. The current 0.5 fte (compliance engineer) will be required for program refinement, risk assessments and the enforcement process (including site visits). The required additional 1.0 fte will be needed to carry out backflow prevention program records management (cross connection surveys, device testing, certified tester information, compliance status and customer correspondence), customer and tester query response, inter-departmental and public communications). • Following the initial program (ICI) implementation, residential properties (including high rise buildings, properties with lawn sprinklers etc.) will be addressed. Further, an on-going program of device testing and property surveys for continued By-law compliance will be continued into the future.			
--	--	--	--	--



Markham Distribution System 2009 MANAGEMENT REVIEW RESOURCES NEED SUMMARY

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: Request to change part-time contract position to part-time permanent ~ Waterworks Training Clerk position Lead: Training Section				
Needs	Issues	Alternative Solutions	Recommendations	Impact
Maintain continuity of service and operations within Waterworks' Training Section ~ crucial in ensuring continual compliance of staff training & development.	After the most recent DWQMS audit, a question regarding 'backup' was raised and since the Training Clerk position is contract it cannot be identified as backup for training leaving the Training Coordinator as the sole support.	1. Create permanent-position, or change current contract part-time position to permanent part-time. 2. Managers/Supervisors administer and maintain licensing and training records of their staff exclusively.	Adjust position to permanent part-time.	• The next external auditor may issue a non-compliance if there is still no backup for training. • 'Contract' has a start and end date and with the amount of work the Training Section is responsible for a Training Clerk is crucial.

Topic: Dedicate Training Facility Lead: Training Section				
Needs	Issues	Alternative Solutions	Recommendations	Impact
Classroom and on-the-job /hands-on setting for training and development.	1. Current training room at 8100 Warden will be going through a EOC transformation within the next year ~ training room required to continue with training for Waterworks staff. 2. Workshop area needs to be constructed in order to conduct on-the-job and hands-on training.	1. Use corporate meeting rooms to address classroom training. 2. Use Miller yard truck bay area for hands-on demonstrations and conduct on-the-job/hands-on training for staff.	1. Create a make-shift training area within 8100 Warden while construction of EOC is going on. 2. Construct and equip workshop area to address on-the-job/hands-on training at 8100 Warden.	Licensed Operator are required to obtain at a minimum 23 hours of On-the-Job (Hands-on) training annually, therefore, it is essential that Operators are provided with a learning environment to ensure our mandate of obtaining the required training hours is sustained. <i>Total hours required annually: Water Distribution = 35 Wastewater Collection = 40</i>



Markham Distribution System 2009 MANAGEMENT REVIEW RESOURCES NEED SUMMARY

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: QMS Representative back up Lead: Top Management				
Needs	Issues	Alternative Solutions	Recommendations	Impact
To identify a back up for the QMS Representative	- It was identified in the accreditation audit that currently no back up was identified for the QMS Representative - There is currently no staff directly reporting to the QMS Controller, thus no staff can be able to act as the immediate back up - The QMS Representative has been identified as a DWQMS requirement under DWQMS Element 4, and therefore one staff must be the QMS Representative at all time	- Appoint a staff from the Operational Top Management to be the back up of the QMS Representative - This is only an observation from the external audit, and the Town is not in non-compliance without the backup	Appoint a staff from the Operational Top Management to be the backup. This is mainly for emergency situation but not for daily acting of the QMS Controller's duties and responsibilities	- No staff has been identified to fill in when the QMS Controller is not available - This could be very serious especially during an external audit - Some QMS tasks could not be left behind for an extended period of time - Town could be in non compliance during the external audit if important tasks were found not completed, thus jeopardizing the Town's Drinking Water License - However the impact on back up staff is significant because it would require to be confident and have detail knowledge of DWQMS - This needs to be further analyzed and appropriate recommendation made



Markham Distribution System 2009 MANAGEMENT REVIEW RESOURCES NEED SUMMARY

This table summarizes the resources needed to maintain the QMS, Water System License, Efficiency and Compliance

Topic: Inter-departmental Service Provisions

Lead: Top Management

Needs	Issues	Alternative Solutions	Recommendations	Impact
To identify inter-departmental services provided to Waterworks by other departments within the Town	• Each year in the Operating Budget, funding has to be allocated for the Waterworks Admin Internal Charge • Waterworks do not have the clear understanding of what services are to be provided by other internal departments • No Service Level Agreements are signed with any internal departments to formalize the expectation of services to be provided	1. Formalize and document the inter-departmental service provisions in the form of Service Level Agreements (SLAs) 2. Hire or contract dedicated staff for Waterworks to provide external services	1. Formalize the Service Level Agreements with all support departments	• Working relationship with internal departments and resources need can be more formalized with the SLAs in place • Waterworks and external departments would have a clear understanding of inter-departmental service provisions, and also have better understanding for future budget allocation for this Waterworks Admin Internal Charge

