REGULAR MEETING OF COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF MANITOUWADGE, TO BE HELD IN THE COUNCIL CHAMBERS, MUNICIPAL ADMINISTATION COMPLEX, MANITOUWADGE, ONTARIO, ON WEDNESDAY, MARCH 13, 2013, AT THE HOUR OF 7:00 p.m.

AGENDA

01 CALL TO ORDER

02 PECUNIARY INTEREST

03 ADOPTION OF MINUTES OF PREVIOUS COMMITTEE AND REGULAR MEETINGS

01 Minutes of the Regular Meeting held on Wednesday, February 27, 2013.

04 DEPUTATIONS

None.

05 DISBURSEMENTS

01 Statement of Disbursement #2013-04, for the amount of $402,778.15.

06 CORRESPONDENCE

01 Correspondence to Mayor MacEachern, from Allison J. Stuart, Assistant Deputy Minister and Chief, Ministry of Community Safety and Correctional Services, dated February 8, 2013.

02 Correspondence to Mayor MacEachern, from Ian Smith, Regional Director, Northwestern Region, Ministry of Transportation, dated February 22, 2013.

03 Notice of Inspection: Pic River 2013-2023 Forest Management Plan, as issued by the Ministry of Natural Resources, from February 20 to March 22, 2013.

04 Notice of Inspection: White River Phase II 2013-2018 Forest Management Plan, as issued by the Ministry of Natural Resources, from March 6 to April 5, 2013.

07 PETITIONS

None.

08 BY-LAWS

None.

09 NEW BUSINESS

01 Administration Report No. PW2013-01, dated March 8, 2013 and submitted by Omer Collin, Public Works Superintendent, regarding "2012 Wastewater Collection System Class II & Wastewater Treatment System Class I" Annual Report.

02 Administration Report No. PW2013-02, dated March 4, 2013 and submitted by Omer Collin, Public Works Superintendent, regarding "2012 Water Treatment Subsystem Class I & Water Distribution Subsystem Class I Annual Report".

03 Administration Report No. PW2013-03, dated March 5, 2013 and submitted by Omer Collin, Public Works Superintendent, regarding "Recycling".

04 Administration Report No. PW2013-04, dated March 6, 2013 and submitted by Omer Collin, Public Works superintendent, regarding "Review of the Quality Management system Operational Plan".

05 KPMG representative, Mr. Oscar A. Poloni, presentation.

10 OLD BUSINESS

None.

11 REPORTS AND COMMITTEES

01 Tabled from previous meeting - Minutes of Meeting: Manitouwadge Municipal Housing Corporation held on Monday, January 21, 2013.

02 Tabled from previous meeting - Minutes of Meetings (Annual and Regular): Thunder Bay District Health Unit Board held on January 16, 2013.

03 Tabled from previous meeting - Minutes of Meeting: Manitouwadge Economic Development Corporation held on January 17, 2013.

04 Minutes of Meeting: The District of Thunder Bay Social Service Administration Board, Meeting No. 01/2013, held on January 24, 2013.

05 Minutes of Meeting: Manitouwadge Public Library Board held on February 5th, 2013.

06 Report to Council submitted by Councillor Connie Hunter, providing an update on ARC activities, dated March 6, 2013.

12 MOTIONS AND NOTICES OF MOTION

None.

13 RESOLUTION TO GO INTO CLOSED SESSION

01 personal matters about an identifiable individual, including municipal or local board employees.

14 ADJOURNMENT

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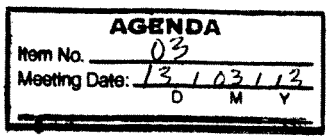
MINUTES OF THE REGULAR MEETING OF THE COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF MANITOUWADGE, HELD IN THE COUNCIL CHAMBERS, MANITOUWADGE, ONTARIO ON WEDNESDAY, FEBRUARY 27, 2013 AT THE HOUR OF 7:00 P.M.

PRESENT: Councillor Connie Hunter
Councillor Donna Jaunzarins
Councillor Sheldon Plummer



ABSENT: Mayor John MacEachern
Councillor Natalie Labbée

STAFF: Cecile Kerster, Municipal Manager Clerk
Margaret Hartling, Treasurer/Deputy Clerk
Omer Collin, Public Works Superintendent

PUBLIC: 5

01 CALL TO ORDER

RESOLUTION NO. 2013-64
Moved by: Councillor Jaunzarins Seconded by: Councillor Hunter

RESOLVED THAT: the Regular Meeting commence at the hour of 7:02 p.m.

CARRIED

Request for Add-on Items under By-laws: Cecile Kerster, Municipal Manager Clerk, requested that the two following by-laws be added to this agenda which was approved by all present.

08-01
Being a By-law to enter into an agreement with HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, as represented by the Minister of Agriculture, Food and Rural Affairs.

08-02
Being a By-law to establish interim control provisions for the Township of Manitouwadge, to prohibit the establishment of environmental treatment structures and facilities associated with historical contamination resulting or emanating from contamination on the 75 Manitou Road West property, for an interim period of one year in order to allow for the completion of a planning study on the potential regulation of these uses.

02 PECUNIARY INTEREST

None.

03 ADOPTION OF MINUTES OF PREVIOUS COMMITTEE AND REGULAR MEETINGS

01 Minutes of the Regular Meeting held on Wednesday, February 13, 2013.

RESOLUTION NO. 2013-66
Moved by: Councillor Hunter Seconded by: Councillor Jaunzarins

RESOLVED THAT: the Minutes of the Regular Meeting of February 13, 2013 are adopted as circulated.

CARRIED

04 DEPUTATIONS

None.

05 DISBURSEMENTS

01 Statement of Disbursement Sheet #2013-03 for $145,895.89

RESOLUTION NO. 2013-67
Moved by: Councillor Jaunzarins Seconded by: Councillor Hunter

RESOLVED THAT: Disbursement Sheet No. 2013-03 for One Hundred, Forty-Five Thousand, Eight Hundred, Ninety-Five Dollars and Eighty-Nine Cents ($145,895.89), for the period ending February 22, 2013, as provided to Council for information purposes only.

CARRIED

06 CORRESPONDENCE

01 None.

07 PETITIONS

None.

08 BY-LAWS

Added-on items:

01 **Being a By-law to** enter into an agreement with HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, as represented by the Minister of Agriculture, Food and Rural Affairs.

RESOLUTION NO. 2013-68
Moved by: Councillor Hunter Seconded by: Councillor Jaunzarins

RESOLVED THAT: being a by-law to enter into an agreement with HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, as represented by the Minister of Agriculture, Food and Rural Affairs, for approved funding to create an Asset Management Plan in accordance with the "Building Together: Guide for Municipal Asset Management Plans", be read a first and second time.

CARRIED

RESOLUTION NO. 2013-69
Moved by: Councillor Jaunzarins Seconded by: Councillor Hunter

RESOLVED THAT: being a by-law to enter into an agreement with HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, as represented by the Minister of Agriculture, Food and

Rural Affairs, for approved funding to create an Asset Management Plan in accordance with the "Building Together: Guide for Municipal Asset Management Plans", be read a third time, passed and numbered as **By-law No. 2013-03.**

CARRIED

02 **Being a By-law to** establish interim control provisions for the Township of Manitouwadge, to prohibit the establishment of environmental treatment structures and facilities associated with historical contamination resulting or emanating from contamination on the 75 Manitou Road West property, for an interim period of one year in order to allow for the completion of a planning study on the potential regulation of these uses.

RESOLUTION NO. 2013-70
Moved by: Councillor Hunter Seconded by: Councillor Jaunzarins

RESOLVED THAT: being a by-law to establish interim control provisions for the Township of Manitouwadge, to prohibit the establishment of environmental treatment structures and facilities associated with historical contamination resulting or emanating from contamination on the 75 Manitou Road West property, for an interim period of one year in order to allow for the completion of a planning study on the potential regulation of these uses, be read a first and second time.

CARRIED

RESOLUTION NO. 2013-71
Moved by: Councillor Jaunzarins Seconded by: Councillor Hunter

RESOLVED THAT: being a by-law to establish interim control provisions for the Township of Manitouwadge, to prohibit the establishment of environmental treatment structures and facilities associated with historical contamination resulting or emanating from contamination on the 75 Manitou Road West property, for an interim period of one year in order to allow for the completion of a planning study on the potential regulation of these uses, be read a third time, passed and numbered as **By-law No. 2013-04.**

CARRIED

09 NEW BUSINESS

01 Millier Dickinson Blais, Consultants, presentation regarding "Needs and Gaps Study and Marketing Study", as provided by Sarah Lewis, Senior Development Analyst.

RESOLUTION NO. 2013-72
Moved by: Councillor Hunter Seconded by: Councillor Jaunzarins

RESOLVED THAT: Council has viewed and accepts as received, the presentation regarding "Needs & Gaps Study" and also; "Marketing Study", as prepared by Consultants, Millier Dickenson Blais's representative, Sarah Lews, Senior Development Analyst.

CARRIED

02 Statement of: 2012 Council Remuneration & Expenses, as required under *Municipal Act,* s.284(1).

RESOLUTION NO. 2013-73
Moved by: Councillor Jaunzarins Seconded by: Councillor Hunter

RESOLVED THAT: Council is in receipt of 2012 Council Remuneration & Expenses as per *Municipal Act* s.281(1), which are being provided for information purposes only.

CARRIED

03 Administration Report No. TR2013-01, regarding 2012 Tax Write-Offs.

RESOLUTION NO. 2013-74
Moved by: Councillor Hunter Seconded by: Councillor Jaunzarins

RESOLVED THAT: Council is in receipt of Administration Report No. TR2013-01, submitted by Margaret Hartling, Treasurer/Deputy Clerk, dated February 11, 2013, regarding 2012 Tax Write-Offs, which are being provided for information purposes only.

CARRIED

10 OLD BUSINESS

None.

11 REPORTS AND COMMITTEES

The following Minutes of Meetings were tabled for the next meeting as Motioned by: Councillor Hunter and, Seconded by: Councillor Jaunzarins.

01 Minutes of Meeting: Manitouwadge Municipal Housing Corporation, held on Monday, January 21, 2013.

02 Minutes of Meetings (Annual and Regular): Thunder Bay District Health Unit Board, held on January 16, 2013.

03 Minutes of Meeting: Manitouwadge Economic Development Corporation, held on January 17, 2013,

12 MOTIONS AND NOTICES OF MOTION

None.

13 RESOLUTION TO GO INTO CLOSED SESSION

None.

14 ADJOURNMENT

RESOLUTION NO. 2013-75
Moved by: Councillor Jaunzarins Seconded by: Councillor Hunter

RESOLVED THAT: the Regular Meeting adjourn at the hour of 8:15 p.m.

CARRIED

Acting Mayor Sheldon Plummer

Cecile Kerster, Municipal Manager Clerk

The Corporation of the

TOWNSHIP OF MANITOUWADGE

Manitouwadge, Ontario

P0T 2C0

STATEMENT OF DISBURSEMENTS

DISBURSEMENT SHEET NO. **2013-04** FOR THE PERIOD

ENDING March 8, 2013

PAYROLL	$	78,672.86
REGULAR CHEQUES	$	324,162.47
VOID CHEQUES	$	-57.18
TOTAL	$	**402,778.15**

TREASURER/DEPUTY CLERK

MAYOR

APPROVED BY RESOLUTION NO. _____

MEETING OF COUNCIL HELD _____

☐ MUNICIPAL MANAGER CLERK

☐ DEPUTY CLERK

AGENDA
Item No. 05
Meeting Date: 13/03/13
D M Y

Payroll Disbursements - Council Report

Payroll Date		Amount
Mar 8/13	Regular	$ 78,672.86
2013-04		$ 78,672.86

TOWNSHIP OF MANITOUWADGE
Cheque Deletions and Cancellations
Audit Trail

Audit Date : Feb 21, 2013 To Mar 08, 2013 **Audit Trail Option :** Cancelled Cheques

Audit User : All

Cheque Number	Cheque Date	Cheque Amount	Vendor Code	Bank Acct Code	Deleted or Cancelled	Deleted / Cancelled On	Deleted / Cancelled By
2146	20-Feb-2013	57.18	CAPRI01	1	Cancelled	28-Feb-2013	albrechts

1 Records Printed.

Vendor : 2335401 To ZENGO01
Cheque Dt. 21-Feb-2013 To 08-Mar-2013
Bank : 1 - GENERAL OPERATING

Seq : Cheque No. Status : All
Medium : C=Computer

Cheque #	Cheque Date	Vendor	Vendor Name	Status	Batch	Medium	Amount
2174	28-Feb-2013	CUPEL01	CANADIAN UNION OF PUBLIC EMPLOYEES	Issued	42	C	674.80
2175	28-Feb-2013	HYDRO04	HYDRO ONE NETWORKS INC.	Issued	42	C	2,774.84
2176	28-Feb-2013	MINIS03	MINISTER OF FINANCE	Issued	42	C	2,532.77
2177	28-Feb-2013	OMERS01	OMERS	Issued	42	C	21,942.22
2178	28-Feb-2013	RECEI01	RECEIVER GENERAL	Issued	42	C	19,132.71
2179	28-Feb-2013	RENDE01	RENDEZ-VOUS RESTAURANT	Issued	42	C	57.18
2180	28-Feb-2013	SHAWC01	SHAW CABLESYSTEMS G.P.	Issued	42	C	129.67
2181	28-Feb-2013	TBAYT01	TBAYTEL	Issued	42	C	95.94
2182	28-Feb-2013	WSIB01	WSIB	Issued	42	C	3,024.53
2183	07-Mar-2013	ALSLA01	ALS LABORATORY GROUP	Issued	46	C	3,162.27
2184	07-Mar-2013	AMCTO01	AMCTO - ZONE 9	Issued	46	C	100.00
2185	07-Mar-2013	BLUEW01	BLUEWAVE ENERGY	Issued	46	C	16,344.08
2186	07-Mar-2013	BUSET01	BUSET & PARTNERS LLP	Issued	46	C	2,473.75
2187	07-Mar-2013	CALGA01	CAL-GAS INC.	Issued	46	C	19,480.94
2188	07-Mar-2013	CALGA01	CAL-GAS INC.	Issued	46	C	9,451.17
2189	07-Mar-2013	CANAD09	CANADIAN RED CROSS SOCIETY	Issued	46	C	1,095.20
2190	07-Mar-2013	CLEAN02	CLEAN-SWEEP	Issued	46	C	1,638.50
2191	07-Mar-2013	COLLI01	COLLIN, OMER	Issued	46	C	77.90
2192	07-Mar-2013	CRANN01	CRANNEY, OWEN	Issued	46	C	132.19
2193	07-Mar-2013	DISNE01	DISNEY MOVIE CLUB	Issued	46	C	38.79
2194	07-Mar-2013	EMCOC01	EMCO CORP./WESTERN SUPPLIES	Issued	46	C	1,068.84
2195	07-Mar-2013	FISHE01	FISHER'S REGALIA	Issued	46	C	49.90
2196	07-Mar-2013	FRIEN01	FRIENDS BAKERY & COFFEE SHOP	Issued	46	C	210.00
2197	07-Mar-2013	GASCO01	GASCON, RAYMOND JOHN	Issued	46	C	390.54
2198	07-Mar-2013	GREAT01	GREAT-WEST LIFE ASSURANCE CO.	Issued	46	C	17,757.16
2199	07-Mar-2013	GUILL01	GUILLEVIN INTERNATIONAL	Issued	46	C	200.24
2200	07-Mar-2013	HARTL01	HARTLING, MARGARET	Issued	46	C	85.00
2201	07-Mar-2013	HOSAN01	HOSANNA FIRE PROTECTION	Issued	46	C	270.53
2202	07-Mar-2013	HYDRO04	HYDRO ONE NETWORKS INC.	Issued	46	C	6,837.01
2203	07-Mar-2013	KGSGR01	KGS GROUP	Issued	46	C	984.81
2204	07-Mar-2013	LOWER01	LOWERYS LTD.	Issued	46	C	321.28
2205	07-Mar-2013	MACEA01	MACEACHERN, JOHN	Issued	46	C	1,635.00
2206	07-Mar-2013	MANIT15	MANITOUWADGE PUBLIC LIBRARY	Issued	46	C	32.00
2207	07-Mar-2013	MCCLO01	MCCLOSKEY, PAULA	Issued	46	C	1,750.00
2208	07-Mar-2013	MILLI01	MILLIER DICKINSON BLAIS INC.	Issued	46	C	20,220.34
2209	07-Mar-2013	MINIS04	MINISTER OF FINANCE	Issued	46	C	57,974.00
2210	07-Mar-2013	MMHC01	MMHC	Issued	46	C	1,596.01
2211	07-Mar-2013	NOMA01	NOMA	Issued	46	C	675.00
2212	07-Mar-2013	NORTH13	NORTH STAR LINEN & UNIFORM	Issued	46	C	728.72
2213	07-Mar-2013	NORTH21	NORTHEASTERN ONT PUBLIC WORKS ORG/	Issued	46	C	35.00
2214	07-Mar-2013	ONTAG01	ONT. AGGREGATE RESOURCES CORP.	Issued	46	C	400.00
2215	07-Mar-2013	PATTE01	PATTERSON, SHAWNA	Issued	46	C	150.00
2216	07-Mar-2013	PAULD01	PAUL DALLAIRE WELDING	Issued	46	C	46.33
2217	07-Mar-2013	PLUMM01	PLUMMER, SHELDON	Issued	46	C	371.00
2218	07-Mar-2013	POLYG01	POLYGLOT PUBLISHING	Issued	46	C	60.00
2219	07-Mar-2013	PREMA01	PREMA NORTH WEST	Issued	46	C	186.09
2220	07-Mar-2013	PREMI01	PREMIERE INCENTIVES	Issued	46	C	187.57
2221	07-Mar-2013	QUART01	QUARTEK GROUP INC.	Issued	46	C	5,059.58
2222	07-Mar-2013	RECEI01	RECEIVER GENERAL	Issued	46	C	18,906.59
2223	07-Mar-2013	RECEI03	RECEIVER GENERAL FOR CANADA	Issued	46	C	851.00
2224	07-Mar-2013	RITEP01	RITE PRICE APPL & ELECT REPAIR	Issued	46	C	5,226.18
2225	07-Mar-2013	SLING01	SLING CHOKER MFG. (HEMLO) LTD.	Issued	46	C	97.61
2226	07-Mar-2013	SOSEM01	SOS EMERGENCY RESPONSE TECH	Issued	46	C	282.50
2227	07-Mar-2013	SUPER08	SUPERIOR PETROLEUM	Issued	46	C	61,020.00

Cheque Register-Summary-Bank

Vendor : 2335401 To ZENGO01
Cheque Dt. 21-Feb-2013 To 08-Mar-2013
Bank : 1 - GENERAL OPERATING
Seq : Cheque No. Status : All
Medium : C=Computer

Cheque #	Cheque Date	Vendor	Vendor Name	Status	Batch	Medium	Amount
Bank : 1	GENERAL OPERATING						
2228	07-Mar-2013	TBAYT01	TBAYTEL	Issued	46	C	758.34
2229	07-Mar-2013	TBDSS01	TBDSSAB	Issued	46	C	6,949.00
2230	07-Mar-2013	TECHS01	TECH STANDARDS & SAFETY AUTH.	Issued	46	C	100.00
2231	07-Mar-2013	THUND06	THUNDER BAY DISTRICT HEALTH UNIT	Issued	46	C	3,994.00
2232	07-Mar-2013	TOROM01	TOROMONT INDUSTRIES LTD.	Issued	46	C	1,909.03
2233	07-Mar-2013	VANHO01	VANHOUTTE	Issued	46	C	193.20
2234	07-Mar-2013	XEROX01	XEROX CANADA LTD.	Issued	46	C	233.62

Total Computer Paid :	**324,162.47**	**Total EFT PAP :**	**0.00**	**Total Paid :**	**324,162.47**
Total Manually Paid :	**0.00**	**Total EFT File :**	**0.00**		

61 Total No. Of Cheque(s) ...

Ministry of Community Safety and Correctional Services

Emergency Management Ontario
77 Wellesley Street West
Box 222
Toronto ON M7A 1N3

Office of the ADM and Chief

Telephone/Téléphone (416) 314-3723
Facsimile/ Télécopieur (416) 314-3758
E-mail AskEMO@ontario.ca

Ministère de la Sécurité communautaire et des Services correctionnels

Gestion des situations d'urgence Ontario
77, rue Wellesley Ouest
C.P. 222
Toronto ON M7A 1N3

Bureau du sous-ministre adjoint et chef

February 8, 2013

His Worship John MacEachern
Township of Manitouwadge
1 Mississauga Road
Manitouwadge, ON P0T 2C0

Dear Mayor MacEachern:

I am writing to congratulate your municipality for completing the mandatory emergency management program elements required under the Emergency Management and Civil Protection Act (EMCPA) and Ontario Regulation 380/04 for 2012.

Your Council and staff are to be commended on this accomplishment, particularly during a year in which all levels of government have confronted significant challenges. I am comforted that we share the same commitment to public safety. As a direct result of your efforts, the residents of your municipality are better prepared.

I wish you, your colleagues and your municipality the best for 2013.

Sincerely,

Allison J. Stuart
Assistant Deputy Minister and Chief

c. Community Emergency Management Coordinator
Sector Field Officer
Deputy Chief Jeff Edwards

Ministry of Transportation

Northwestern Region
615 South James Street
3rd Floor
Thunder Bay, Ontario
P7E 6P6
Tel: 807-473-2050
Fax: 807-473-2165

Ministère des Transports

Région du Nord-Ouest
615, rue James Sud
3e étage
Thunder Bay, Ontario
P7E 6P6
Tél: 807-473-2050
Téléc: 807-473-2165

Ontario

February 22, 2013

Mayor John MacEachern
Township of Manitouwadge
1 Mississauga Drive
Manitouwadge, Ontario
P0T 2C0

Dear Mayor MacEachern:

Thank you for your letter of February 14, 2013, regarding the status of the sand/salt and loader storage facility at the Manitouwadge Public Works Yard.

Please be assured that both the Minister and the ministry share your concerns for appropriate highway maintenance. The Ministry of Transportation places the highest priority on the safety of travellers on our highways, especially during the winter months when adverse weather conditions can make driving difficult.

The Area Maintenance Contract, AMC 2012-18, is expected to be signed with the successful contractor in March, 2013. The Contract will start on June 17, 2013 and end on May 31, 2024. Highway 614 is presently being maintained at a Class 4 Standard which requires the highway to be centre bare within 24 hours, when conditions permit. The plowing or salting circuit time is 5.5 hours. For your information, I have provided a copy of PERF 2002 – Winter Maintenance which is the standard to be met in the Area Maintenance Contract. The PERF identifies outcome targets, conformance to outcome targets, and consequences for non-conformances. The contractor must meet or exceed the outcome targets for the listed activities and circuit times, and financial consequences will be applied based on non-conformance to these outcome targets.

Highway 614 will remain at a Class 4 service level, as is presently in place. The Contractor will be required to maintain Highway 614 at this service level.

The location of the contractor's equipment is determined by the contractor, based on performance requirements for the highways to be serviced. As part of the submission, the contractor will identify where they will be locating their equipment. The Contractor will still have to meet the Class 4 service level for Highway 614 from where their equipment is located.

When Highway 17 or any highway is closed to traffic due to weather, the contractor will still continue to carry out their winter maintenance operations until the winter event is completed. This will include maintenance operations on Highway 614. The contractor will not be held to outcome targets when the OPP has to close a highway for non-weather related emergencies, which blocks the contractor's passage of equipment to and from assigned routes.

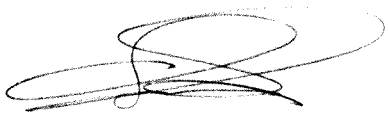
.../2

The maintenance standard for Highway 614 has not changed for this AMC. The highway will continue to be serviced at a Class 4 service level. The ministry will carry out audits on the contractor's operations on all of the highways, including Highway 614 and will issue non-conformances if the contractor is not meeting the required service level and/or outcome targets. This performance contract does not prescribe how the contractor does the work. The performance contract sets targets and the contractor determines the resources needed to meet the required highway class standard and outcome targets.

I trust the above answers your questions and please be assured that Highway 614 will continue to be maintained at the present service level under the next Area Maintenance Contract.

Thank you for bringing your concerns to our attention.

Sincerely,



IAN SMITH
Regional Director
Northwestern Region

The Corporation of the

TOWNSHIP OF MANITOUWADGE

1 Mississauga Drive
Manitouwadge, Ontario
P0T 2C0
Telephone (807) 826-3227 Fax (807) 826-4592

To Wayne

February 14, 2013

Mr. Ian Smith, Regional Director
Ministry of Transportation - Northwestern Region
615 James Street South, 2nd Floor,
Thunder Bay, ON P7E 6P6

Dear Mr. Smith:

Re: Sand/Salt and Loader Storage Facility
- Manitouwadge Public Works Yard

The Corporation of the Township of Manitouwadge received a letter dated January 11, 2013, from Mr. Ronald Kettle, P. Eng., Area Contracts Engineer for the Ministry of Transportation, Northwestern Region, regarding the above mentioned subject matter. Council discussed this letter at their January 23, 2013 Regular Council meeting.

Mrs. Cecile Kerster, Municipal Manager Clerk for the Township of Manitouwadge, called Mr. Kettle for clarification of the contents in the letter. There was no mention of the plough in the letter therefore, Mrs. Kerster asked if the plough would remain in Manitouwadge. She was told that the plough that we currently have in the community would be moved to Marathon. It was explained that the contractor has the obligation to meet the performance based specification requirements and, that at the end of the day, it is the AMC 2012-18 contractor who will determine where the trucks are positioned. Mr. Kettle also stated that the contract had not been awarded at that point and time.

We would like more information regarding this matter which we are hopeful that you can answer and/or clarify:

1) When will the AMC 2012-18 be awarded?

2) Provide us with the highway maintenance delivery model to performance based specifications for Highway 614.

3) What are the outcome targets for snow accumulation on Highway 614 including circuit time and penalties?

Rec'd Feb 20, 2013

4) Explain how the change in the delivery model will not impact highway maintenance for Highway 614.

5) Confirm that the plough is being removed from Manitouwadge and moved to Marathon. If the plough is being moved to Marathon, how will this change not impact the snow removal of Highway 614? Also, if Highway 17 is closed at Marathon, how will the plough come from Marathon to Manitouwadge to do snow removal?

6) Provide details on how the contractor will abide to the new minimum maintenance standards which apply to Highway 614.

I look forward to your response to our concerns listed above, and being that this issue is critical to the safety of our community, I would appreciate your reply as soon as possible. Thank you.

Yours truly,

Mayor John MacEachern

/dld

Copy: Cecile Kerster, Municipal Manager Clerk
Michael Mantha, MPP, Algoma-Manitoulin

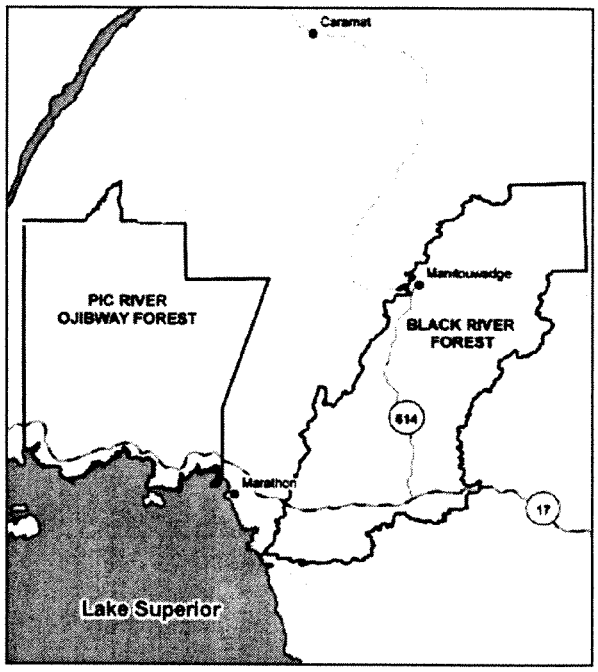
INSPECTION

Approved Forest Management Plan Inspection
Pic River 2013–2023 Forest Management Plan

The Ontario **Ministry of Natural Resources (MNR)**, **GreenForest Management Inc. (GFMI)** and the **Pic River Public Consultation Committee (PRPCC)** would like to advise you that the 2013–2023 Forest Management Plan (FMP) for the Pic River Forest has been approved by the MNR Regional Director and is available for inspection. The Pic River Forest is formed from the former Pic River Ojibway Forest and Black River Forest through an amalgamation process.

The Planning Process

The FMP takes approximately two years to complete. During this time, five formal opportunities for public and Aboriginal involvement are provided. The fourth opportunity (Stage 4) for this FMP occurred on September 25, 2012–November 21, 2012 when the public was invited to review and comment on the draft FMP. This '**Stage 5**' notice is to advise you that the MNR-approved FMP will be available for inspection for 30 days.



FMP Inspection – Final Opportunity

During the 30-day inspection period, you may make a written request to the Director, Environmental Assessment Approvals Branch, Ministry of the Environment for an individual environmental assessment of specific forest management activities in the FMP. A response to a request will normally be provided by the Director, Environmental Assessment and Approvals Branch, Ministry of the Environment after the completion of the 30-day inspection period.

The MNR-approved FMP and summary are available for inspection during normal office hours for 30 days from **February 20, 2013–March 22, 2013** at the following locations:

- GreenForest Management Inc. office, 470 Hodder Avenue, Thunder Bay, ON, Tel: 807-343-6418
- MNR public website at **ontario.ca/forestplans**. (The Ontario Government Information Centres in Toronto at 777 Bay Street and Manitouwadge, Nipigon and Wawa provide Internet access.)

Interested and affected persons and organizations can arrange an appointment with MNR staff at the appropriate MNR district or area office to discuss the FMP.

For further information, please contact:

Tim Reece, RPF
Management Forester
Ministry of Natural Resources
48 Mission Road
Wawa, ON P0S 1K0
tel: 705-856-4717
fax: 705-856-7511

Jeffrey Cameron, RPF
Plan Author
GreenForest Management Inc.
P.O. Box 22004
470 Hodder Avenue
Thunder Bay, ON P7A 8A8
tel: 807-343-6418
fax: 807-343-6424

Grant Goodwin
PRPCC Chair
Manitouwadge, ON
tel: 807-826-3875

The approved FMP will be available for the 10-year period of the FMP at the same locations listed above.

The Ministry of Natural Resources is collecting your personal information under the authority of the *Crown Forest Sustainability Act*. Any personal information you provide (address, name, telephone, etc.) will be protected in accordance with the *Freedom of Information and Protection of Privacy Act*. Your personal information may be used by the Ministry of Natural Resources to send you further information related to this forest management planning exercise. If you have questions about use of your personal information, please contact Doris Zagar at 705-856-4745.

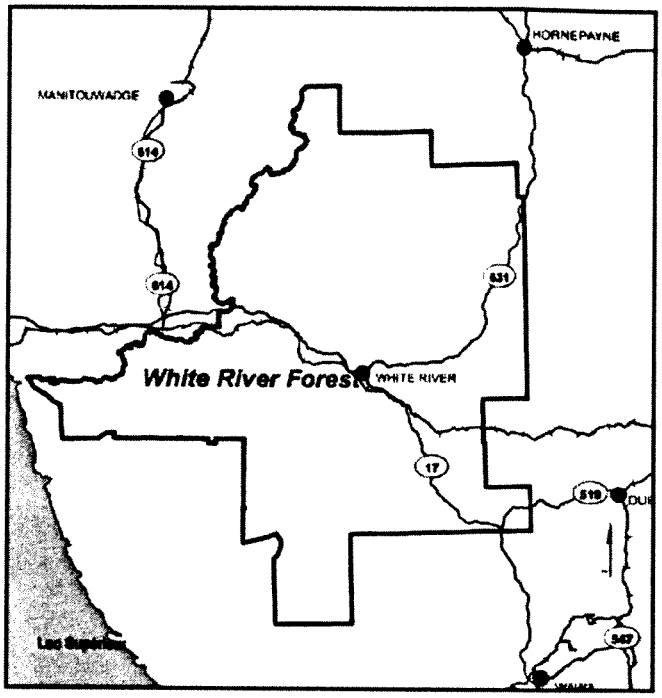
Renseignements en français : Jennifer Lamontagne au 705-856-4747.

Ontario

INSPECTION

White River Forest 2008–2018 Forest Management Plan
Inspection of Approved Planned Operations for Phase II 2013–2018

The Ontario **Ministry of Natural Resources (MNR)**, **White River Forest Products Ltd.** and the **White River Area Co-Management Committee (WRACC)** are advising you that the Planned Operations for the second five-year term (2013–2018) of the 2008–2018 Forest Management Plan (FMP) for the **White River Forest** have been approved by the MNR Regional Director and are available for inspection.



The MNR-approved Planned Operations for the second five-year term will be available for inspection for 30 days.

During the 30-day inspection period, there is an opportunity to make a written request to the Director, Environmental Assessment Approvals Branch, Ministry of the Environment for an individual environmental assessment of specific forest management activities in the Planned Operations for the second five-year term.

The MNR-approved Planned Operations for the second five-year term and planned operations summary are available for inspection during normal office hours by appointment for 30 days beginning **March 6, 2013** to **April 5, 2013** at the following locations:

- Jackfish River Management Ltd. office, 10 Becker Road, Hornepayne, ON at tel: 807-868-2370;
- The MNR public website at **ontario.ca/forestplans**; and
- The Ontario Government Information Centre in Toronto at 777 Bay Street, the Wawa District Office and the Manitouwadge Area Office provide Internet access.

For further information, please contact:

Zachary White, RPF
Management Forester
Ministry of Natural Resources
48 Mission Road, Wawa, ON
tel: 705-856-4715
fax: 705-856-7511
e-mail: zachary.white@ontario.ca

Boris Michelussi, RPF
Forester
Jackfish River Management Ltd.
10 Becker Road, Hornepayne, ON
tel: 807-868-2670 ext. 222
fax: 807-868-2594
e-mail: b.michelussi@jackfishriver.ca

Dino Tarini
Chair/Planning Team Rep.
WRACC
tel: 807-822-2109
e-mail: tarini@onlink.net

The approved Planned Operations will be available for public viewing for the five-year period at the same locations listed above.

This is the third and final opportunity to influence operations for the second five-year term.

The Ministry of Natural Resources is collecting your personal information under the authority of the *Crown Forest Sustainability Act*. Any personal information you provide (address, name, telephone, etc.) will be protected in accordance with the *Freedom of Information and Protection of Privacy Act*. Your personal information may be used by the Ministry of Natural Resources to send you further information related to this forest management planning exercise. If you have questions about the use of your personal information, please contact Doris Zagar at 705-856-4745.

Renseignements en français : Jennifer Lamontagne au 705-856-4747.

Ontario

Township of Manitouwadge
Administration Report

Date: March 8, 2012 **No.** PW2013-01

Submitted to: **Mayor and Council**

Issue: 2012 Wastewater Collection System Class II & Wastewater Treatment System Class I Annual Report

Background:

Discussion: Attached is a copy of the 2012 Wastewater Collection System Class II & Wastewater Treatment System Class I Annual Repo t for your approval.

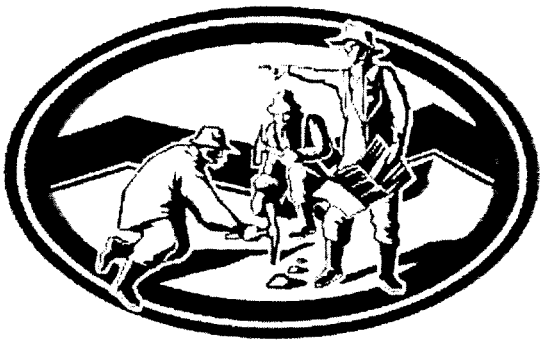
Financial Implications:

Options:

Recommendation:

Respectfully submitted by: Omer Collin, Public Works Superintendent

cc: Cecile Kerster, Municipal Manager Clerk



MANITOUWADGE

ONTARIO · CANADA

Manitouwadge Public Works

Presents:

Wastewater Collection System

Class II

and

Wastewater Treatment Plant

Class I

2012

ANNUAL REPORT

Prepared By: Kirk Tourout and Paul Richard

Date: February 28, 2013

ANNUAL REPORT
2012
Township of Manitouwadge
Public Works Department
Wastewater Collection System Class II
and
Wastewater Treatment Plant Class I

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ANNUAL REPORT
2012
Township of Manitouwadge
Public Works Department
Manitouwadge Wastewater Collection and Treatment System

1.0 INTRODUCTION

The Township of Manitouwadge, Public Works Department operates Manitouwadge Wastewater Collection System and Manitouwadge Wastewater Treatment System under a Certificate of Approval # 0031-86NKKA issued by the Ministry of the Environment on October 15, 2010.

As a condition of this Certificate of Approval, we are required to produce an Annual Compliance and Performance report for the benefit of the Ministry of the Environment and the residents of Manitouwadge within ninety days of the end of the calendar year.

Contained in this report you will find the information that we are required to keep in accordance with our Certificate of Approval from January 1, 2012 to December 31, 2012. As well, we include our accomplishments during the year.

Appendices in this report summarizes laboratory analysis test results for those parameters mandated by our Certificate of Approval as well as summarizes the annual daily flows, maximum daily flows, and minimum daily flow events for the year.

Currently the Manitouwadge Wastewater Collection System is classified as a Class II facility, and the Manitouwadge Wastewater Treatment System is classified as a Class I facility by the Ontario Environmental Training Consortium.

Kirk Tourout is fully licensed under Ontario Regulation 435/93 Utility Operator Licensing Program to operate these facilities. He is also designated by By-Law as the Operator in Overall Responsible Charge. He is assisted by Paul Richard who holds both Class I for Wastewater Treatment and a Class II for Wastewater Collections.

Our laboratory analysis for our Certificate of Approval sampling requirements are performed by Thunder Bay Analytical, a division of the ALS Laboratories who are accredited by the Ministry of the Environment.

For the purposes of this report these facilities provide collection and treatment for a population of 2106. Approximately 1292 households are connected to the collection system. Households are deemed to include residential, institutional, multiple unit residential and industrial locations. Please note that the households located on Station Road, Sault Road and Black Road are not connected to our facilities.

2.0 MANITOUWADGE WASTEWATER COLLECTION & TREATMENT SYSTEM

2.1 HISTORY

The Manitouwadge Wastewater Collection System is a gravity flow network of underground sewer mains that connect the households of three Residential Areas, a Commercial Area and an Industrial Area to a sewage lift station located adjacent to Manitouwadge Lake beside a pedestrian way that links Ohsweken Road with Mississauga Drive.

Due to the lack of a comprehensive storm sewer infrastructure our collection system is deemed to be a combined system. Simply put, this means that the majority of the service connections to the sanitary sewer system are also connected to the weeping tile systems of the households. Hence, not only the sewage from the households but the groundwater from the households is directed to the wastewater collection system.

The piping material used in our system ranges from vitreous clay, concrete, cement asbestos (transite) to P.V.C. pipe. The vitreous clay and concrete piping was laid in 2.5 foot lengths and the joints sealed with oakum and mortar. The transite pipe was laid in 6.5 foot to 13 foot lengths with ringtite joints. P.V.C. piping was laid in 20 foot lengths with ringtite joints.

Manitouwadge area soil composition consists of bedrock, sand, clay and muskeg. This creates real problems with the vitreous clay and concrete pipe because of their short lengths and numerous joints when the ground moves during our freeze and thaw cycles. This leads to infiltration of groundwater during our summer months and possible exfiltration of raw sewage during freeze up.

Prior to 1986 the sewage collection at the lift station was pumped via a 12" inch cement asbestos force main to a sedimentation tank located approximately 3 km distant at Rudder Lake.

The sedimentation tank was pumped semi-annually into a drying bed. After leaching off the water the accumulated sludge was bulldozed and allowed to decompose naturally.

With the Hemlo Gold field discovery the townships ability to handle the expansion of the residential areas was brought into question. The existing lift station was aging and subject to frequent failures. Hence, in 1986 the Township undertook a Sewage Works Upgrading with the provision of a new lift station, a new 400 mm force main and a new two celled aerated sewage lagoon.

The sewage lift station features a single chamber wet well with an operating volume of 24 cubic meters with two 100 horsepower submersible pumps each capable of pumping 151 liters per second. As a backup to the lift station there is an overflow bypass tank

with an operating volume of 114 cubic meters with an 88 horsepower submersible pump capable of pumping 101 liters per second.

Two Milltronics Enviroranger flow monitors one dedicated to the wet well and the other dedicated to the overflow bypass tank measure the flows leaving the lift station.

A 200 KW generator set provides emergency power for the lift station and one sewage pump during a power outage.

The lift station is connected to the aerated sewage lagoons by a 400 mm diameter force main approximately 3.2 km in length. The force main route parallels the area 1D trunk sewer from the lift station to Matachewan Road, along Matachewan Road extending cross country to the Caramat Road. It then follows the Caramat Road to the intersection with the Rudder Lake Lagoon Access Road. These locations represent the low points in the profile of the force main. The vacuum/air release chambers representing the high points in the force main profile are located at the end of Matachewan Road and on the east side of the Caramat Road adjacent to the Cemetery.

The sewage then enters the inlet/outlet works where it enters the primary cell of a two cell aerated facultative lagoon with an operating volume of approximately 61,500 cubic meters. At its rated capacity of 4,100 average cubic meters per day and at its normal operating depth of 4 meters this allows for a minimum retention time in excess of 12 days.

Following the primary cell the sewage then enters the second or polishing cell of these lagoons returning to the inlet/outlet works where it outfalls to a clay lined outfall ditch to Rudder Lake. Please note that water from Rudder Lake enters the Pic River watershed. This is worthy of note inasmuch as the Township water supply is drawn from an aquifer that is drained by the Black River watershed.

At the lagoon site there is a building that houses two 50 horsepower positive displacement blowers that supply the air for the treatment process maintaining a minimum dissolved oxygen level of 2.0 mg/L in the lagoon wastewater.

The flows entering the lagoons are measured by a modified Parshall Flume complete with a Milltronics OCM III flow monitor.

The Corporation of the Township of Manitouwadge is in the process of constructing a drying bed having a treatment surface area of 10,450 m^2. The location of the drying bed is at the Northwestern end of Cell #1 and Cell #2. Once the drying bed construction is completed the sludge will be directly pumped into the drying bed with the excess water flowing back into to Cell #1 and Cell #2 via gravity feed. The water will have to pass through many layers filtering out the water before entering the lagoons to insure that only the water and not the sludge is being reintroduced to the treatment Cells. Left behind will be a layer of sludge which will be left in the drying bed until it is dehydrated and then it will be shipped to the landfill site for disposal. Sludge removal will not only increase the

life of the lagoons but will also increase the airflow supplied to the lagoons by the two blowers.

Surrounding the drying bed are four (4) monitoring wells which are being sampled by KGS to develop a history before the completion of the drying bed. Therefore the historical data will allow us to see any possible impacts of leachate entering the ground water surrounding the drying bed and ponds.

3.0 THE TREATMENT PROCESS

Our sewage is treated by the AIR-AQUA aeration system.

The primary purpose of the aeration system is to replace the dissolved oxygen in facultative lagoons where both aerobic and anaerobic digestion of the sewage has depleted the oxygen content. This is accomplished by generating millions of small air bubbles at the bottom of the lagoons and allowing them to flow slowly upward. The upward flowing of mixed air and water replenishes the dissolved oxygen and circulates the entire liquid mass.

The AIR-AQUA aeration system provides a quiet and efficient source of dissolved oxygen to the liquid content of the lagoon to meet the Biochemical Oxygen Demand (BOD) of the sewage digestion process by the aerobic bacteria. The gentle action of the system gives complete dispersion of the dissolved oxygen in the water and allows a large proportion of the solids to settle to the bottom for eventual anaerobic digestion. The process is relatively odorless.

The air bubbles for the treatment process are produced by a patented designed polyethylene tubing which has precisely formed check valves on the top centerline for careful metering of the air. This provides small bubbles of the proper size, which in turn produce a low velocity upward flow of mixed air, water and very fine suspended solids. The tubing laid on the bottom of the lagoon features a lead keel.

The aeration tubing arranged in a carefully engineered pattern is to provide optimum oxidation of the sewage liquid. The tubing is closer at the influent end of the lagoon to meet the greater demand for oxygen required by the raw sewage. The liquid volume on each side of the aeration tubing axis operates as a dynamic treatment cell. Thus the lagoon has a series of individual sewage treatment cells which extend through its length.

The objectives for the effluent entering Rudder Lake are Suspended Solids (SS) 25mg/L, BOD_5 20mg/L at a pH within the range of 6 to 9. The effluent limits must not exceed 30 mg/L for Suspended Solids (SS) and 25 mg/L for BOD_5 at a pH within the range of 6.0 to 9.5 at all times.

4.0 SOME WASTEWATER FACTS

4.1 DATA

During the period January1, 2012 to December 31, 2012 we pumped and treated 467,515,870 liters of wastewater.

Appendix A-2 gives the reader a Summary of the Monthly Sewage Flows highlighting the Month Flows, Average, Maximum and Minimum Daily Flows.

Appendix A-3 shows the reader a Monthly Summary of the Maximum and Minimum Daily Flow Events juxtaposed with the day that they occurred.

On a per capita daily basis the Annual Flow translates to a figure of 606 liters of wastewater generated per person per day based on the 2011 figure of 508 liters per person per day this represents a 16 % increase in wastewater production. After review of the water report we showed that we had a 8 % decrease. The increase in sewage flows can be attributed to unmetered water losses (i.e. watering lawns, water breaks, fire hydrant usage).

On a household basis this figure becomes 989 liters per household per day of wastewater generation. Based on the 2011 figure of 905 liters per household per day this represents a 8 % increase in wastewater production. After review of the water report we showed that we had an 8 % decrease. This increase in sewage directly correlates with the increase in water consumption. The increase in sewage flows can be attributed to unmetered water losses (i.e. watering lawns, water breaks, fire hydrant usage).

During the period of January 1, 2012 to December 31, 2012 the Manitouwadge Water Treatment Plant Delivered 302,973,000 liters of potable water to its consumers. Relevant per capita water consumption generates figures of 394 liters per person per day and 642 liters per household per day.

It is a commonly held industry theory that a figure of 90 to 95 percent recovery of drinking water pumped returns to the Wastewater Collection and Treatment Systems

5.0 COMPLIANCE ISSUES

5.1 FLOW METERING

Our Certificate of Approval mandates that our raw sewage and final effluent meters must be within plus or minus 15 percent of each other. On September 18, 2012 Rob Kincaid, a Milltronics trained technician of Trans-West, out of Thunder Bay calibrated the flow meters at the lift station including the overflow and the lagoons. During the flow meter

meters at the lift station including the overflow and the lagoons. During the flow meter calibration Rob Kincaid confirmed that the flow meters were within 7.74 percent of each other for the lift station wet well pump #1 and #2. Also, during this timeframe the overflow pump was also calibrated which yielded a 2.15 percent difference of each other.

It is important to note that the Milltronics Enviro-Ranger ERS 500 uses a mathematical algorithm to calculate flows based upon the fill time and pump time of the vessel being measured. Because the Overflow Tank is used infrequently its measured volumes are questionable. However, when the tank is put into regular service its accuracy will mirror the volumes measured by the OCM III at the lagoons.

5.2 LABORATORY ANALYSIS

Our Certificate of Approval mandates that we sample Raw Sewage and Final Effluent on a bi-monthly basis.

Raw Sewage samples are analyzed for the following parameters: Total Phosphorous (P), Biochemical Oxygen Demand, Total Suspended Solids, E-Coli, and pH. The results of our C of A Raw sewage sampling program are contained in Appendix B-1.

Final Effluent samples are analyzed for the following parameters: Ammonia (N), Total Phosphorous (P), Biochemical Oxygen Demand, Total Suspended Solids, E-Coli, and pH. The results of our C of A Final Effluent sampling program are contained in Appendix B-2. During the 2012 timeframe there was one exceedence of the C of A. A concentration of 32.5 mg/l was analysis for Total Suspended Solids.

Our C of A mandates that a Target Objective of 20 mg/L for Biochemical Oxygen Demand be maintained with a Maximum Allowable Concentration of 25 mg/L. For Total Suspended Solids a Target Objective of 25 mg/L is to be maintained with a Maximum Allowable Concentration of 30 mg/L.

To show the effectiveness of our Treatment Process we have appendices with the percentage reduction for the following parameters: Total Phosphorous (P) as Appendix B-3, B.O.D as Appendix B-4, T.S.S as Appendix B-5, and E-Coli as Appendix B-6.

On an Annual basis the reductions were as follows:

a) Total Phosphorous (P) 47.9 %
b) Biochemical Oxygen Demand 93.1 %
c) Total Suspended Solids 93.4 %
d) E-Coli 100 %

5.3 MAXIMUM AVERAGE DAILY FLOW EXCEEDENCES

Our Certificate of Approval allows an Average Daily Maximum Flow of 4,100 m^3 per day with a minimum retention time of twelve (12) days or 5,125 m^3 per day.

For 2012 there were three (3) exceedences of the C of A requirement of 4,100 m^3 per day.

This occurrence is contained in Appendix C together with the laboratory analysis results.

5.4 FINAL EFFLUENT DISSOLVED OXYGEN

As part of our C of A for the sewage lagoons we are required to monitor the Final Effluent for Dissolved Oxygen levels. Listed below is a table that was developed to show the data collected for the 2012 period. Readings were collected at the discharge from the lagoons system before exiting over the effluent weir plate. See Figure 1 below for data and Figure 2 below for graph.

Lagoon D.O. Readings

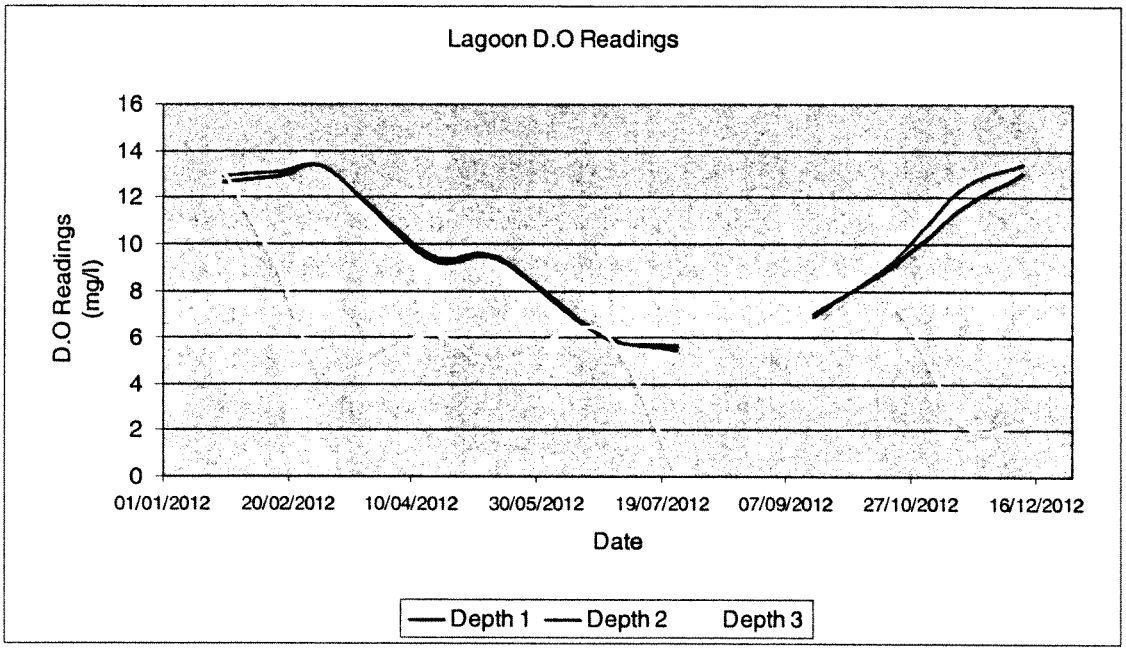
2012

Figure 1

Sample	Out Fall Location 4 Depth 1	Out Fall Location 4 Depth 2	Out Fall Location 4 Depth 3
Date	mg/L	mg/L	mg/L
25/01/2012	12.63	12.9	13.06
16/02/2012	12.88	13.08	8.87
07/03/2012	13.2	13.21	4.45
17/04/2012	9.36	9.54	6.16
14/05/2012	9.38	9.42	4.87
25/06/2012	6.08	6.15	6.24
25/07/2012	5.61	5.43	0.19
18/09/2012	7.05	6.92	6.46
19/10/2012	8.98	9.19	7.68
16/11/2012	11.48	12.34	2.32
11/12/2012	13.04	13.38	2.26
Min	**5.61**	**5.43**	**0.19**
Max	**13.2**	**13.38**	**13.06**
Average	**9.97**	**10.14**	**5.69**

**Depth 1 is approx 25% depth from surface
**Depth 2 is approx 50 % of the depth from surface
**Depth three is approx 75% of the depth from surface
Please note: DO probe out for calibration during the month of August.

Figure 2



5.5 CONSUMER COMPLAINTS

Feb 10, 2012

- Plugged sewer lateral at OPP Station and were instructed to call a plumber.

Feb 11, 2012

- Inspect sewer lateral 85 Warbler Dr.
- Advised home owner to call plumber.

Feb 12, 2012

- Inspect sewer backup 3 Minaki Place
- Camera sewer lateral 200 ft. and could not locate sewer main clean out.
- Sewer snaked to remove plug.

Feb 13, 2012

- Snake sewer lateral at 3 Minaki Place.

Mar 21, 2012

- Inspect sewer backup at 32 Shingwauk.Drive
- Sewermain clear and advise homeowner to call plumber.

Mar 03, 2012

- Backed up sewermain between Mississauga Drive and Forester Walk.
- Snake sewer from Mississauga Drive and Forester Walk.

Mar 26, 2012

- Slow sewer flow at sewer manhole in old trailer court.
- Snake sewermain from old trailer court to liftstation.

Mar 27, 2012

- Sewer backup complaint at 42 Otter Drive.
- Inspect sewermain and sewer flowing freely.
- Advise homeowner to call plumber.

Apr 1, 2012

- Backed up sewer at 56 Neebig Avenue.
- Backed up sewer lateral due to plugged sewermain on Shingwauk Drive.
- Snake sewer main.

Apr 5, 2012

- Camera sewer lateral 3 Minaki Place.

Apr 11, 2012

- Snake sewer lateral 3 Minaki Place.
- Camera sewer lateral to confirm blockage was removed.

Apr 30, 2012

- Potter's Environmental in to flush sewermain from Hospital to liftstation to remove rags.

May 15, 2012

- Inspect sewer manhole in Manitou Road and Neebig Avenue pedestrian way.
- Clean out sewer manhole.

May 16, 2012

- Flush sewermain in Manitou Road and Neebig Avenue pedestrian way.

July 12, 2012

- Lateral plugged at Lions Beach bathroom.
- Flush lateral to remove debris.

Aug 8, 2012

- Sewage backup at Golf Hutt
- Repair sewage pump in collections chamber.

Sept 2, 2012

- Snake sewermain Sandpiper Avenue.

Sept 21, 2012

- Inspect damaged manhole on FisherAvenue.
- Repair chamber and remove debris from manhole.

Sept 24, 2012

- Snake sewermain Sandpiper Avenue.

Oct 27, 2012

- Inspect sewer lateral 3 Warbler Drive
- Inspect sewermain and sewer flowing freely. Plugged lateral advised homeowner to call plumber.

Dec 24, 2012

- Inspect sewer lateral 7 Swallow.
- Lateral plugged.
- Snake lateral to remove obstruction.

6.0 ACCOMPLISHMENTS

In the 2012 period the Township of Manitouwadge contracted the services of Potter's Environmental to clean the wet well at the sewage liftstation. This involved bypassing and drawing down the wet well and the removal of all the accumulated rags and grease. During the cleaning we took the opportunity to inspect the wet well and pumps.

The replacement of 40 feet of underground PVC aeration headers to galvanized piping at the sewage lagoons. This was done to alleviate the constant splitting of the plastic pipe due to traffic.

Updating of the operations manual to include the methods employed to detect when maintenance is necessary and frequency of inspections.

The completion of the Standard Operating Procedures for the sanitary sewer system.

Also in the 2012 period the Township of Manitouwadge spent 11 regular hours and one O.T hour snaking sewer mains.

Operators spent 3 regular hours and 7 O.T hours flushing sewer mains.

Operators spent a total of 3 regular hours repairing sewer service repair.

Operators spent 77.5 regular hours, 26 O.T hours and 16 double time hours repairing the forcemain break

The Township of Manitouwadge operators utilized 2.5 regular hours using the camera to video sewer laterals.

The Township of Manitouwadge operators utilized 2 regular hours inspecting sewer laterals.

7.0 CONCLUSION

2012 was a busy year for the Manitouwadge Wastewater Collection and Treatment System. There were some consumer complaints in the 2012 period. Consumer complaints were dealt with in a timely fashion to insure consumer's satisfaction. The summary of these complaints are listed above in section 5.5 Consumer Complaints.

The drawing down and cleaning of the wet well at the sewage liftstation allowed us to conduct visual inspection of both wet well and pumps #1 and #2, this was very beneficial from a maintenance standpoint.

8.0 RECOMENDATIONS

From the operation stand point there are a few recommendations for the 2013 time frame. These recommendations are listed below.

1. The first would be the completion of the drying bed out at the lagoons.

2. Amending the waste management systems Certificate of Approval to accept sludge waste from the drying bed.

3. Servicing of one of the two of the Flygt pumps in the wet well.

4. The second would be the repair and straightening of the main aeration headers that surround the lagoons.

5. The third would be the replacement of the intrinsically safe heater in the hoist room of the liftstation.

ANNUAL PERFORMANCE REPORT

2012

DAILY SEWAGE FLOW

Appendix A-1

	January			February			March			April			May			June			July			August			September			October			November			December	
1	Sun	792.80	1	Wed	835.25	1	Thu	718.15	1	Sun	2061.86	1	Tue	1806.33	1	Fri	1775.41	1	Sun	1751.65	1	Wed	996.42	1	Sat	667.55	1	Mon	536.47	1	Thu	922.74	1	Sat	894.08
2	Mon	811.23	2	Thu	824.34	2	Fri	756.42	2	Mon	1795.75	2	Wed	1960.37	2	Sat	1804.22	2	Mon	1573.67	2	Thu	908.94	2	Sun	1140.96	2	Tue	635.16	2	Fri	883.89	2	Sun	896.20
3	Tue	817.07	3	Fri	864.28	3	Sat	814.71	3	Tue	1697.74	3	Thu	2349.47	3	Sun	1854.91	3	Tue	1583.28	3	Fri	852.77	3	Mon	1174.94	3	Wed	611.91	3	Sat	939.34	3	Mon	1392.41
4	Wed	838.08	4	Sat	993.50	4	Sun	763.82	4	Wed	1704.31	4	Fri	2219.44	4	Mon	2011.22	4	Wed	1489.92	4	Sat	853.17	4	Tue	637.84	4	Thu	667.43	4	Sun	959.10	4	Tue	1345.62
5	Thu	802.09	5	Sun	1005.91	5	Mon	727.67	5	Thu	1570.29	5	Sat	2137.02	5	Tue	1944.82	5	Thu	1443.81	5	Sun	852.31	5	Wed	625.50	5	Fri	646.67	5	Mon	893.40	5	Wed	1246.29
6	Fri	812.81	6	Mon	857.97	6	Tue	672.94	6	Fri	1594.76	6	Sun	2153.48	6	Wed	2415.13	6	Fri	1388.62	6	Mon	846.44	6	Thu	622.59	6	Sat	722.71	6	Tue	821.81	6	Thu	1290.65
7	Sat	847.22	7	Tue	888.41	7	Wed	957.04	7	Sat	1556.73	7	Mon	1955.14	7	Thu	3492.24	7	Sat	1492.53	7	Tue	1171.18	7	Fri	591.62	7	Sun	677.13	7	Wed	857.34	7	Fri	1179.91
8	Sun	867.93	8	Wed	939.28	8	Thu	761.31	8	Sun	1486.13	8	Tue	1684.37	8	Fri	5141.25	8	Sun	1225.30	8	Wed	741.81	8	Sat	616.97	8	Mon	792.59	8	Thu	872.39	8	Sat	1153.64
9	Mon	750.64	9	Thu	818.03	9	Fri	713.41	9	Mon	1466.88	9	Wed	1690.03	9	Sat	3739.44	9	Mon	1267.29	9	Thu	749.57	9	Sun	663.31	9	Tue	762.05	9	Fri	930.70	9	Sun	1149.23
10	Tue	780.35	10	Fri	734.88	10	Sat	816.18	10	Tue	1754.35	10	Thu	1609.24	10	Sun	3140.44	10	Tue	1255.12	10	Fri	708.10	10	Mon	597.07	10	Wed	745.30	10	Sat	1010.26	10	Mon	1054.45
11	Wed	767.79	11	Sat	802.33	11	Sun	887.71	11	Wed	1333.10	11	Fri	1637.76	11	Mon	2921.07	11	Wed	1227.16	11	Sat	745.94	11	Tue	623.20	11	Thu	751.56	11	Sun	1417.31	11	Tue	961.83
12	Thu	756.29	12	Sun	825.27	12	Mon	965.62	12	Thu	1381.13	12	Sat	1603.99	12	Tue	2523.78	12	Thu	1250.26	12	Sun	749.96	12	Wed	1183.40	12	Fri	733.05	12	Mon	1320.59	12	Wed	1022.66
13	Fri	742.46	13	Mon	756.43	13	Tue	1385.17	13	Fri	1337.33	13	Sun	1659.38	13	Wed	2460.01	13	Fri	1136.23	13	Mon	727.21	13	Thu	601.90	13	Sat	809.64	13	Tue	1217.67	13	Thu	907.44
14	Sat	804.27	14	Tue	752.35	14	Wed	1498.64	14	Sat	1393.12	14	Mon	1632.82	14	Thu	2175.24	14	Sat	1265.88	14	Tue	721.25	14	Fri	614.51	14	Sun	831.24	14	Wed	1124.78	14	Fri	881.01
15	Sun	824.50	15	Wed	745.60	15	Thu	1423.49	15	Sun	1517.80	15	Tue	2055.50	15	Fri	2069.37	15	Sun	1329.26	15	Wed	704.63	15	Sat	637.82	15	Mon	775.60	15	Thu	1121.60	15	Sat	929.66
16	Mon	747.54	16	Thu	768.34	16	Fri	1531.08	16	Mon	1415.24	16	Wed	1621.78	16	Sat	1947.00	16	Mon	2134.79	16	Thu	756.50	16	Sun	699.39	16	Tue	768.82	16	Fri	1045.77	16	Sun	946.27
17	Tue	773.08	17	Fri	755.28	17	Sat	2567.76	17	Tue	1412.49	17	Thu	1675.98	17	Sun	1735.78	17	Tue	1557.69	17	Fri	692.07	17	Mon	592.00	17	Wed	740.21	17	Sat	1095.53	17	Mon	897.80
18	Wed	774.83	18	Sat	798.96	18	Sun	3218.28	18	Wed	1419.42	18	Fri	1509.92	18	Mon	1270.06	18	Wed	1287.46	18	Sat	727.89	18	Tue	614.96	18	Thu	752.96	18	Sun	1067.04	18	Tue	891.67
19	Thu	767.05	19	Sun	748.98	19	Mon	3030.42	19	Thu	1527.30	19	Sat	1507.00	19	Tue	1218.16	19	Thu	1333.02	19	Sun	772.25	19	Wed	644.63	19	Fri	732.72	19	Mon	999.65	19	Wed	950.17
20	Fri	757.83	20	Mon	807.42	20	Tue	2370.26	20	Fri	1604.33	20	Sun	2625.07	20	Wed	1272.97	20	Fri	1258.56	20	Mon	704.08	20	Thu	721.20	20	Sat	781.21	20	Tue	967.80	20	Thu	899.40
21	Sat	815.28	21	Tue	703.54	21	Wed	2351.53	21	Sat	1816.35	21	Mon	2707.99	21	Thu	1135.60	21	Sat	1088.03	21	Tue	752.79	21	Fri	695.64	21	Sun	775.90	21	Wed	1002.64	21	Fri	844.44
22	Sun	833.64	22	Wed	733.58	22	Thu	2365.43	22	Sun	2354.99	22	Tue	2217.80	22	Fri	1112.90	22	Sun	1133.66	22	Wed	721.59	22	Sat	720.96	22	Mon	714.69	22	Thu	944.10	22	Sat	900.76
23	Mon	851.13	23	Thu	763.32	23	Fri	4207.36	23	Mon	2703.81	23	Wed	2044.99	23	Sat	1154.25	23	Mon	1041.03	23	Thu	697.00	23	Sun	743.12	23	Tue	776.48	23	Fri	898.04	23	Sun	867.16
24	Tue	834.66	24	Fri	714.85	24	Sat	4819.12	24	Tue	2782.86	24	Thu	1998.32	24	Sun	1175.24	24	Tue	1023.06	24	Fri	708.40	24	Mon	696.71	24	Wed	1244.63	24	Sat	951.27	24	Mon	875.80
25	Wed	839.48	25	Sat	766.65	25	Sun	3142.46	25	Wed	2585.59	25	Fri	1737.17	25	Mon	1228.53	25	Wed	1069.57	25	Sat	728.62	25	Tue	681.72	25	Thu	1563.73	25	Sun	959.04	25	Tue	810.71
26	Thu	833.67	26	Sun	807.28	26	Mon	2566.45	26	Thu	2767.86	26	Sat	1574.35	26	Tue	1179.92	26	Thu	1150.71	26	Sun	709.16	26	Wed	675.54	26	Fri	1398.28	26	Mon	892.53	26	Wed	828.96
27	Fri	844.33	27	Mon	737.29	27	Tue	2360.12	27	Fri	2179.48	27	Sun	3015.39	27	Wed	1226.35	27	Fri	927.70	27	Mon	685.73	27	Thu	643.00	27	Sat	1240.82	27	Tue	921.82	27	Thu	807.37
28	Sat	888.19	28	Tue	776.98	28	Wed	2314.18	28	Sat	2121.27	28	Mon	3356.58	28	Thu	1425.77	28	Sat	1039.04	28	Tue	858.00	28	Fri	627.65	28	Sun	1191.55	28	Wed	866.98	28	Fri	814.96
29	Sun	917.986	29	Wed	708.5104	29	Thu	1987.38	29	Sun	1931.83	29	Tue	3024.53	29	Fri	1254.66	29	Sun	958.88	29	Wed	863.00	29	Sat	697.48	29	Mon	1083.80	29	Thu	872.87	29	Sat	843.46
30	Mon	853.6728				30	Fri	1872.11	30	Mon	1874.20	30	Wed	2747.65	30	Sat	1151.48	30	Mon	950.19	30	Thu	575.68	30	Sun	711.12	30	Tue	1022.66	30	Fri	824.90	30	Sun	815.62
31	Tue	880.0673				31	Sat	1915.12				31	Thu	2551.55				31	Tue	929.01	31	Fri	1424.03											31	Mon	827.20
		25227.92			23234.8			56481.35			54148.3			64070.42			58957.21			39562.37			24704.49			21164.3			26457.68			29602.90			30126.825
	AVE	813.80		AVE	801.20		AVE	1821.98		AVE	1804.94		AVE	2066.79		AVE	1965.24		AVE	1276.21		AVE	796.92		AVE	705.48		AVE	853.47		AVE	986.76		AVE	971.83	
	MAX	917.99		MAX	1005.91		MAX	4819.12		MAX	2782.86		MAX	3356.58		MAX	5141.25		MAX	2134.79		MAX	1424.03		MAX	1183.40		MAX	1563.73		MAX	1417.31		MAX	1392.41	
	MIN	742.46		MIN	703.54		MIN	672.94		MIN	1333.10		MIN	1507.00		MIN	1112.90		MIN	927.70		MIN	575.68		MIN	591.62		MIN	536.47		MIN	821.81		MIN	807.37	

ANNUAL REPORT
2012
SUMMARY OF SEWAGE MONTHLY FLOWS

Appendix A-2

Month	Total Flow	Daily Flows		
		m3/day		
	(m3)	Average	Maximum	Minimum
January	25,227.92	813.80	917.99	698.22
February	23,234.80	801.20	1,005.91	703.54
March	56,481.35	1,821.98	4,819.12	672.94
April	54,148.30	1,804.94	2,782.86	1,333.10
May	64,070.42	2,066.79	3,356.58	1,507.00
June	71,686.57	2,389.55	5,141.25	1,735.78
July	39,562.37	1,276.21	2,134.79	927.70
August	28,935.12	933.39	5,088.63	575.68
September	21,164.30	705.48	1,183.40	591.62
October	26,457.68	853.47	1,563.73	536.47
November	29,602.90	986.76	1,417.31	821.81
December	26,944.13	977.12	1,392.41	807.37
ANNUAL	**467,515.87**	**1,285.89**	**5,141.25**	**536.47**

ANNUAL REPORT
2012
Summary of Monthly Maximum and Minimum Daily Flow Events

Appendix A-3

Day	Date	Maximum Daily Flow	Month	Mimimum Daily Flow	Day	Date
		m3		m3		
Sunday	29th	917.99	**January**	742.46	Friday	13th
Sunday	5th	1,005.91	**February**	703.54	Tuesday	21st
Saturday	24th	4,819.12	**March**	672.94	Tuesday	6th
Tuesday	24th	2,782.86	**April**	1,333.10	Wednesday	11th
Monday	28th	3,356.58	**May**	1,507.00	Saturday	19th
Thursday	21st	5,141.25	**June**	1,735.78	Saturday	30th
Monday	16th	2,134.79	**July**	927.70	Friday	27th
Friday	31st	1,424.03	**August**	575.68	Thursday	30th
Wednesday	12th	1,183.40	**September**	591.62	Friday	7th
Thursday	25th	1,563.73	**October**	536.47	Monday	1st
Sunday	11th	1,417.31	**November**	821.81	Tuesday	6th
Monday	3rd	1,392.41	**December**	807.37	Thursday	27th
		5,141.25	**ANNUAL**	**536.47**		

ANNUAL SEWAGE REPORT
2012
Summary of Raw Sewage Laboratory Sampling Results

Appendix B-1

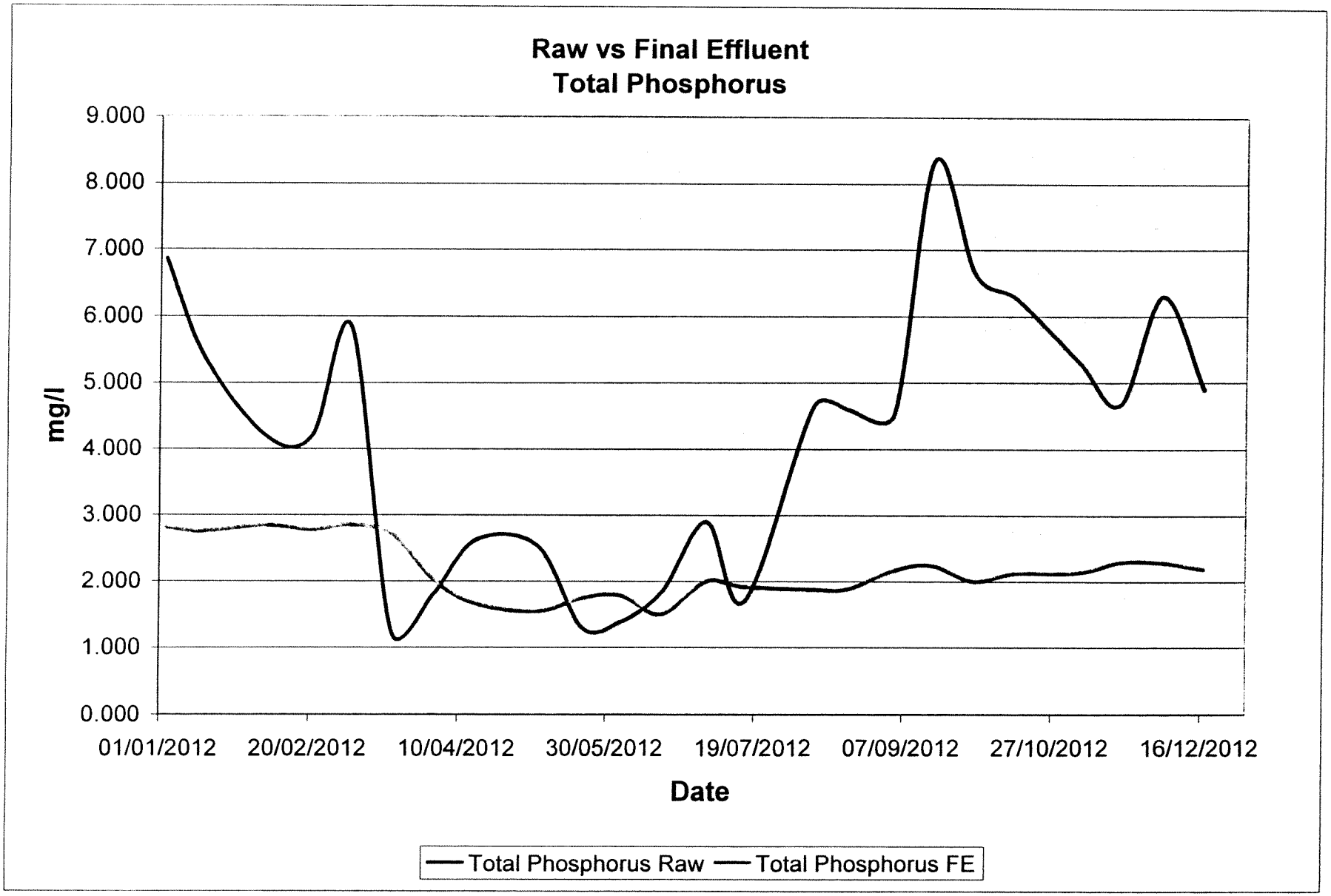
Laboratory Results							
Raw Sewage		Total Phosphorus (TP)	Biochemical Oxygen Demand	Total Suspended Solids	Temperature	E-Coli	pH
Month	Date	(mg/L)			°C	C.F.U./100ml	
January	03/01/2012	6.860	213	576	8.3	10,000,000	7.83
	16/01/2012	5.370	199	126	6.8	3,900,000	7.73
February	06/02/2012	4.180	177	123	7.6	8,700,000	7.86
	21/02/2012	4.200	163	136	7.7	3,100,000	7.96
March	05/03/2012	5.830	221	192	7	10,000,000	8.01
	19/03/2012	1.220	45.8	78	7.4	1,300,000	7.45
April	02/04/2012	1.800	64	76.5	7.4	1,500,000	7.65
	16/04/2012	2.620	93.1	151	6.8	3,300,000	7.81
May	07/05/2012	2.540	92.5	76	6.8	5,800,000	7.60
	22/05/2012	1.300	36.1	59.2	10.8	1,300,000	7.45
June	04/06/2012	1.370	32.5	54	10.9	830,000	7.48
	18/06/2012	1.830	57.9	104	14.6	4,900,000	7.47
July	03/07/2012	2.900	96.6	172	14.6	7,700,000	7.37
	16/07/2012	1.690	97.2	124	16.9	7,700,000	7.48
August	08/08/2012	4.650	135	152	15.9	5,200,000	7.81
	20/08/2012	4.590	122	162	16.3	13,000,000	7.77
September	04/09/2012	4.520	140	153	18.1	6,500,000	7.46
	17/09/2012	8.350	211	264	16.1	11,000,000	8.15
October	01/10/2012	6.640	216	402	15.2	4,100,000	7.58
	15/10/2012	6.270	134	218	12.2	5,800,000	8.21
November	05/11/2012	5.310	182	128	11.1	4,400,000	8.18
	19/11/2012	4.670	155	164	11.9	5,200,000	8.00
December	03/12/2012	6.300	175	279	7.8	3,300,000	8.06
	17/12/2012	4.890	105	176	6.9	20,000,000	8.18
Annual	Average	4.16	131.82	172.74	11.05	6,188,750	7.77

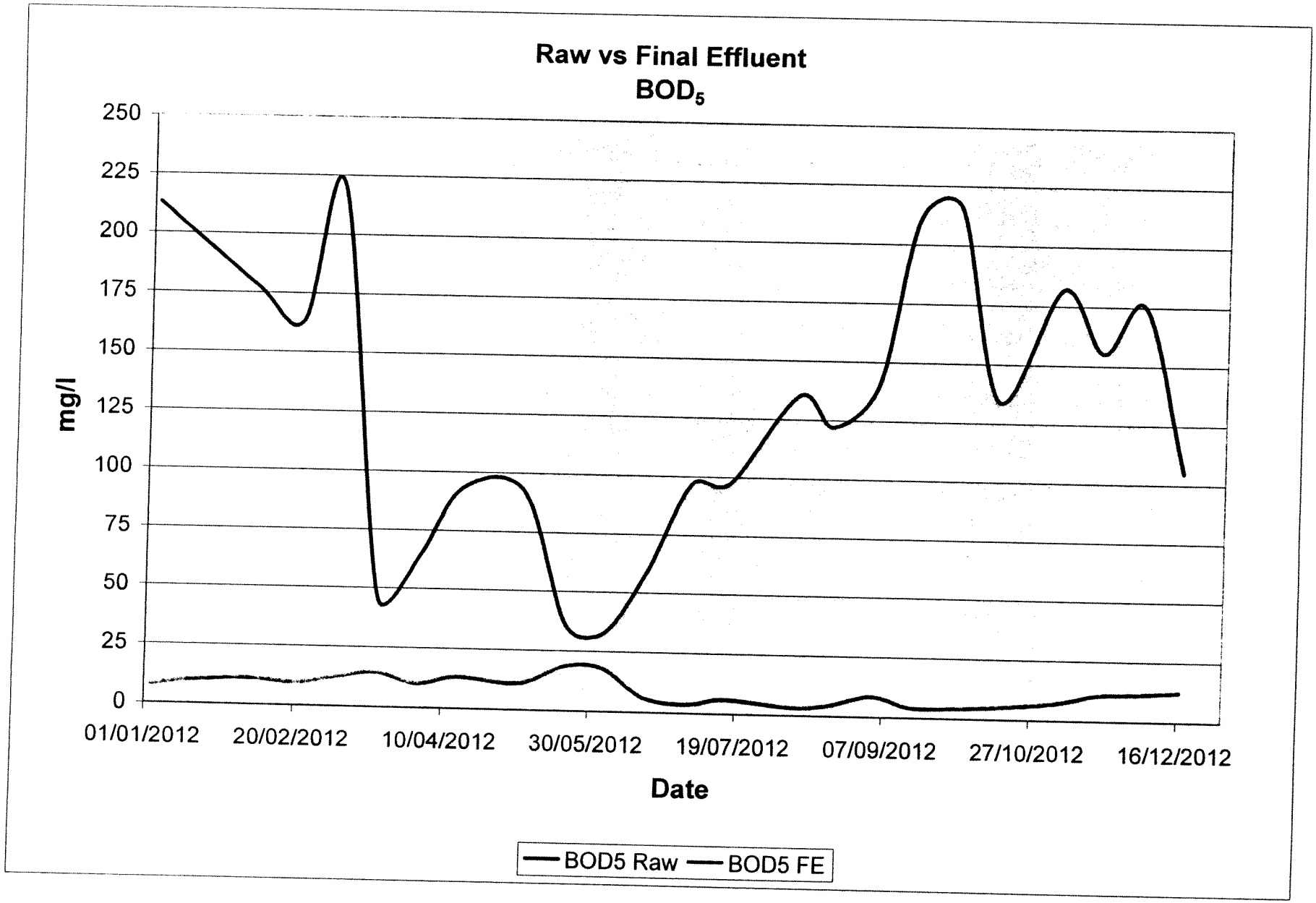
ANNUAL SEWAGE REPORT
2012
Summary of Final Effluent Laboratory Sampling Results

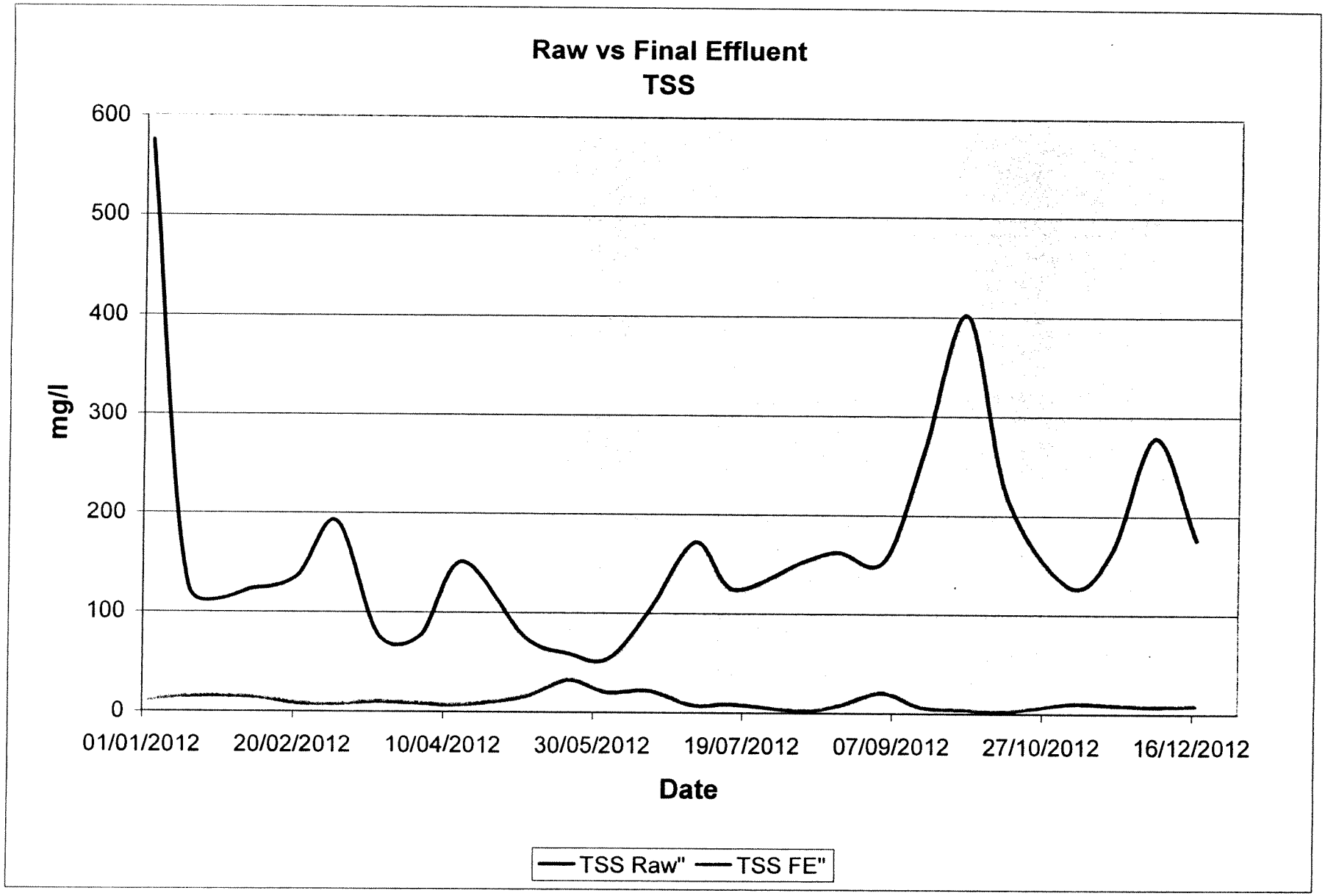
Appendix B-2

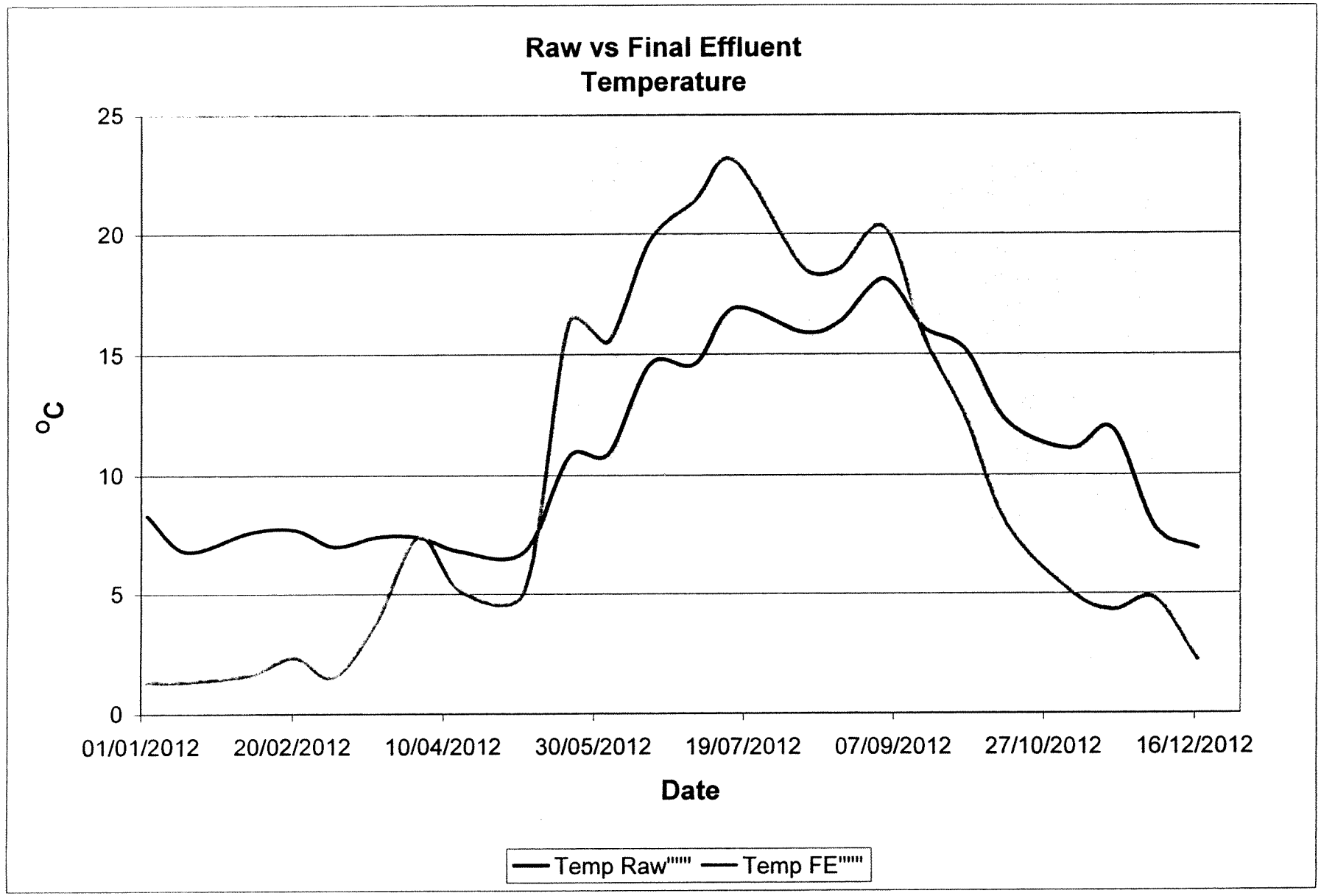
Laboratory Results										
Final Effluent		Ammonia (N)	Total Phosphorus	Biochemical Oxygen Demand	Total Suspended Solids	Temperature	E-Coli		pH	Exceedence
Month	Date	(mg/L)			(mg/L)	°C	C.F.U./100 ml			
January	03/01/2012	12.00	2.81	7.8	11.6	1.3	>	2,420	7.84	No
	16/01/2012	13.9	2.75	9.6	14.9	1.3		1,700	7.87	No
February	06/02/2012	16.70	2.84	10.8	14.5	1.6		1,300	7.77	No
	21/02/2012	17.20	2.77	9.4	8.7	2.3	>	2,420	7.78	No
March	05/03/2012	17.20	2.85	11.7	7.6	1.5		2,400	7.74	No
	19/03/2012	17.60	2.71	14.2	10.1	3.8	>	2,420	7.67	No
April	02/04/2012	11.10	2.02	9.9	8.8	7.4		2,400	7.83	No
	16/04/2012	9.11	1.65	12.9	7.5	5.1		1,700	7.86	No
May	07/05/2012	6.90	1.53	11	15.4	5.1		1,700	7.84	No
	22/05/2012	3.03	1.73	18.4	32.5	16.3		36	8.07	Yes
June	04/06/2012	3.01	1.78	17.9	20	15.5		220	8.02	No
	18/06/2012	3.63	1.49	6.1	22	19.7		99	7.78	No
July	03/07/2012	4.81	1.99	3.6	7.8	21.4		8	7.87	No
	16/07/2012	3.01	1.91	5.8	8.9	23.1		5	7.78	No
August	08/08/2012	0.96	1.87	3.3	2.5	18.6		72	7.96	No
	20/08/2012	0.89	1.88	4.3	7.9	18.5		120	7.79	No
September	04/09/2012	1.40	2.16	8.3	20.6	20.3		78	8.00	No
	17/09/2012	0.95	2.24	4.2	6.8	15.8		730	7.82	No
October	01/10/2012	0.87	2.00	4.2	4.5	12.4		870	7.77	No
	15/10/2012	1.56	2.12	5	2.6	7.9		2,400	7.80	No
November	05/11/2012	2.73	2.13	7.1	10.7	5.1	>	2,400	7.79	No
	19/11/2012	6.84	2.29	10.5	9.6	4.3	>	2,420	8.02	No
December	03/12/2012	7.99	2.29	11.2	8	4.8	>	2,420	7.86	No
	17/12/2012	10.30	2.19	12.2	8.7	2.2	>	2,420	7.86	No
Annual	Average	7.24	2.17	9	11	10		1,365	7.85	No

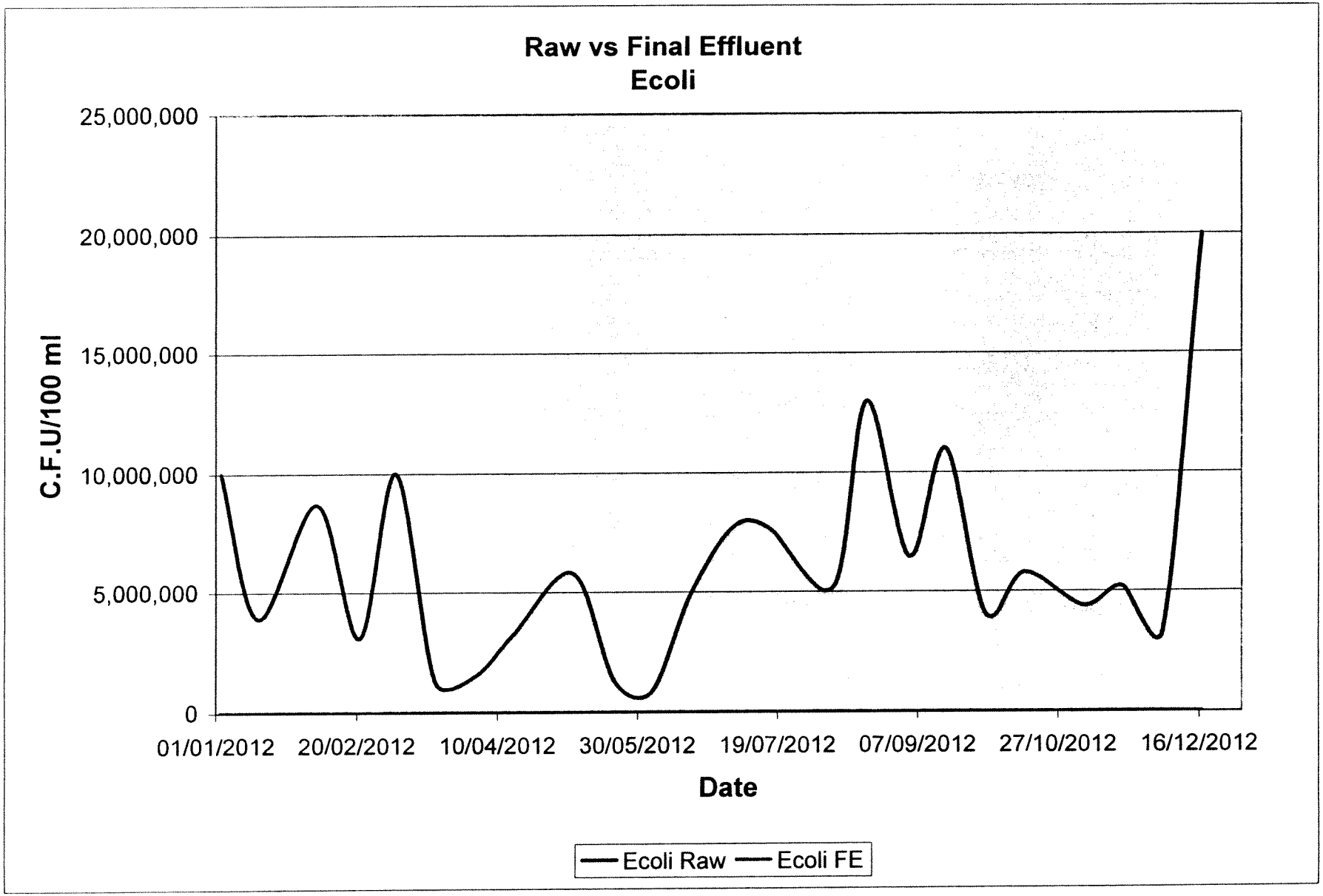
(1) The Ontario Spills Action Centre and the Ministry of Environment were notified
The final Effluent was resampled

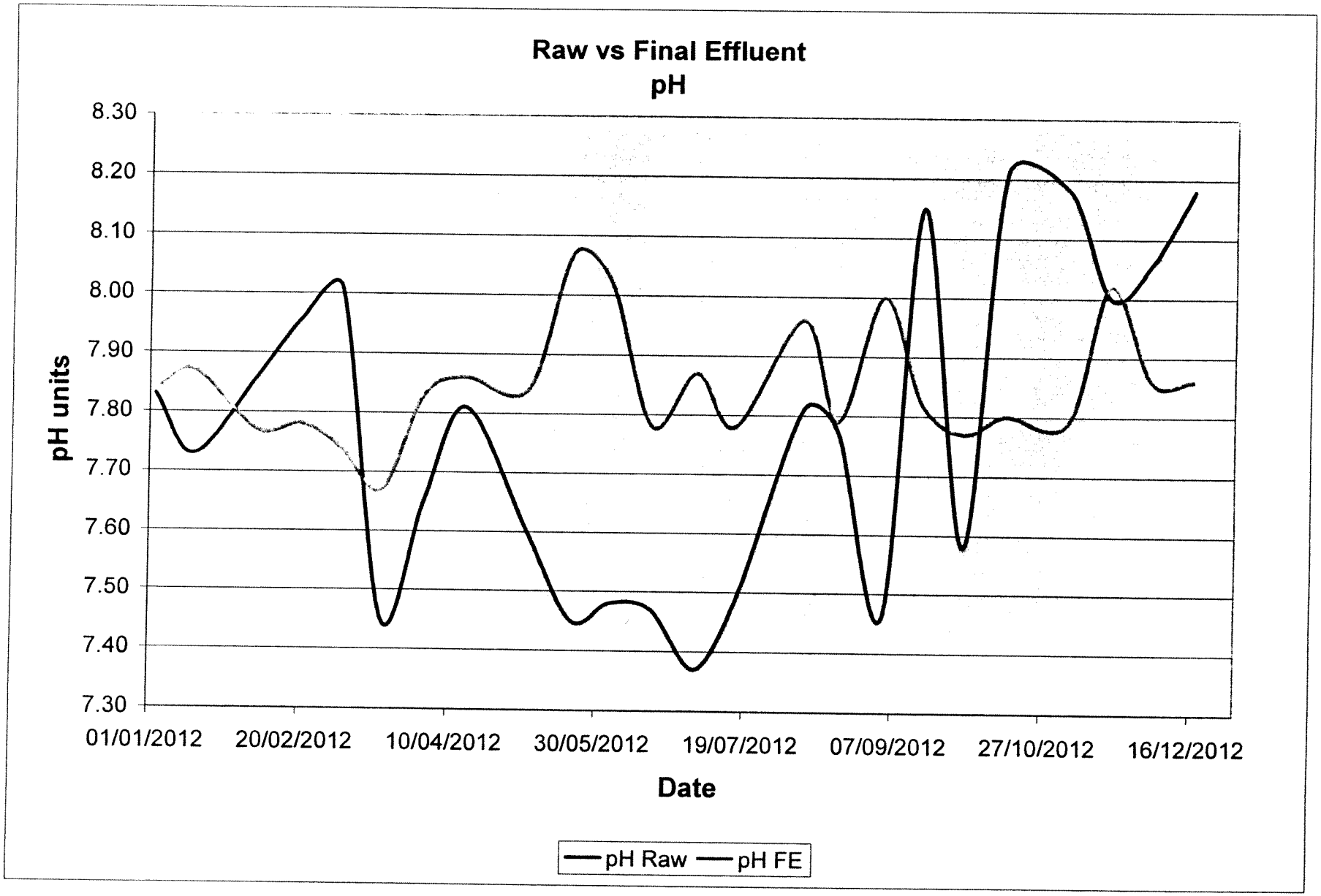

Raw vs Final Effluent
Total Phosphorus
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
mg/l
01/01/2012
20/02/2012
10/04/2012
30/05/2012
19/07/2012
07/09/2012
27/10/2012
16/12/2012
Date
Total Phosphorus Raw
Total Phosphorus FE

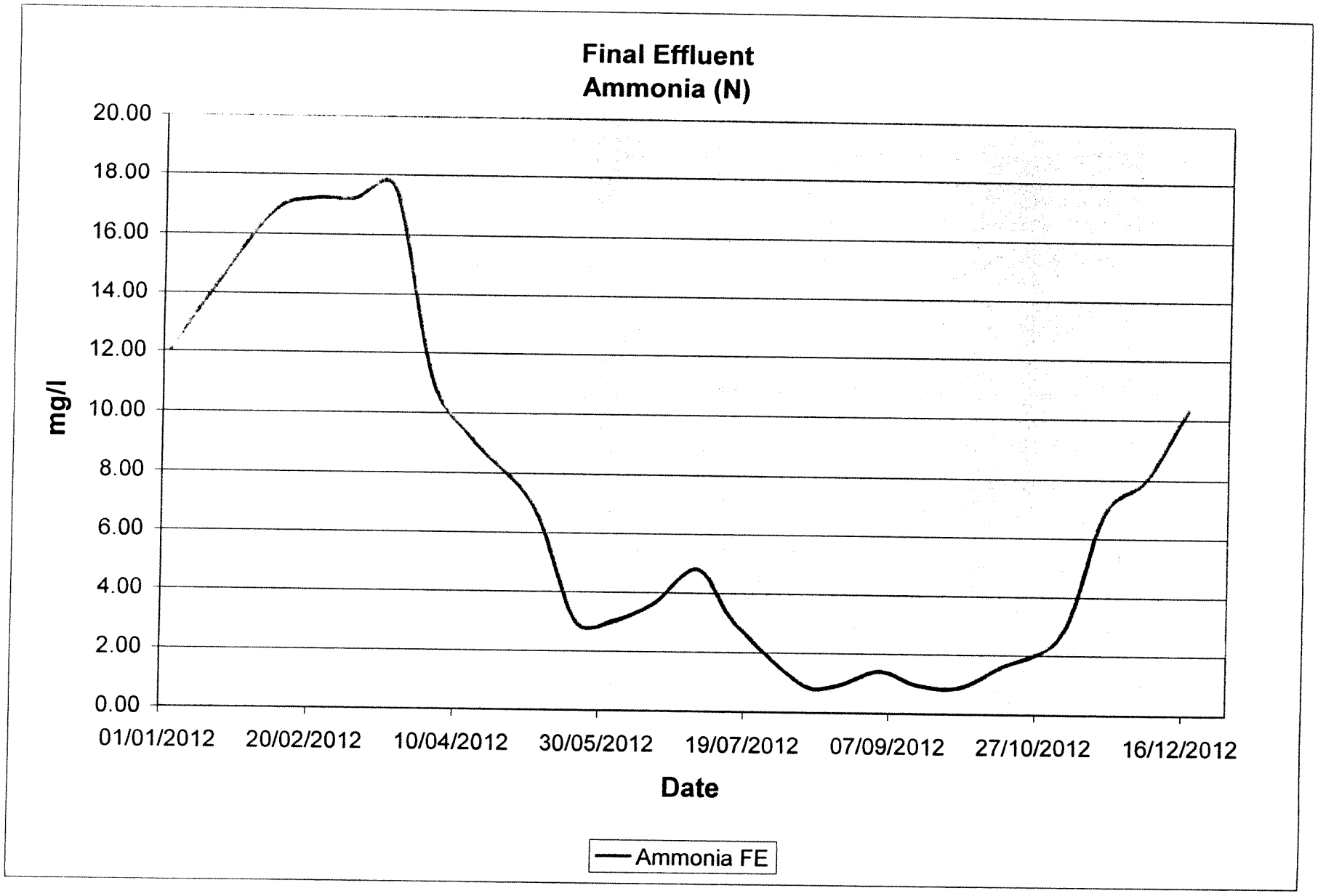

Raw vs Final Effluent
BOD5
250
225
200
175
150
125
100
75
50
25
0
mg/l
01/01/2012
20/02/2012
10/04/2012
30/05/2012
19/07/2012
07/09/2012
27/10/2012
16/12/2012
Date
BOD5 Raw
BOD5 FE


Raw vs Final Effluent
TSS
600
500
400
300
200
100
0
mg/l
01/01/2012
20/02/2012
10/04/2012
30/05/2012
19/07/2012
07/09/2012
27/10/2012
16/12/2012
Date
TSS Raw"
TSS FE"


Raw vs Final Effluent Temperature
25
20
15
10
5
0
°C
01/01/2012
20/02/2012
10/04/2012
30/05/2012
19/07/2012
07/09/2012
27/10/2012
16/12/2012
Date
Temp Raw""""
Temp FE""""


Raw vs Final Effluent
Ecoli
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
C.F.U/100 ml
01/01/2012
20/02/2012
10/04/2012
30/05/2012
19/07/2012
07/09/2012
27/10/2012
16/12/2012
Date
Ecoli Raw
Ecoli FE


Raw vs Final Effluent
pH
8.30
8.20
8.10
8.00
7.90
7.80
7.70
7.60
7.50
7.40
7.30
pH units
01/01/2012
20/02/2012
10/04/2012
30/05/2012
19/07/2012
07/09/2012
27/10/2012
16/12/2012
Date
pH Raw
pH FE


Final Effluent
Ammonia (N)
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
mg/l
01/01/2012
20/02/2012
10/04/2012
30/05/2012
19/07/2012
07/09/2012
27/10/2012
16/12/2012
Date
Ammonia FE

ANNUAL REPORT
2012
Summary of Sewage Laboratory Sampling Results
PERCENT REDUCTION

Appendix B-3

Raw Sewage				Final Effluent	
Total Phosphorus				Total Phosphorus	Percentage Reduction
mg/L	Date	Month	Date	mg/L	%
6.860	03/01/2012	January	03/01/2012	2.81	59.0%
5.370	16/01/2012		16/01/2012	2.75	48.8%
4.180	06/02/2012	February	06/02/2012	2.84	32.1%
4.200	21/02/2012		21/02/2012	2.77	34.0%
5.830	05/03/2012	March	05/03/2012	2.85	51.1%
1.220	19/03/2012		19/03/2012	2.71	-122.1%
1.800	02/04/2012	April	02/04/2012	2.02	-12.2%
2.620	16/04/2012		16/04/2012	1.65	37.0%
2.540	07/05/2012	May	07/05/2012	1.53	39.8%
1.300	22/05/2012		22/05/2012	1.73	-33.1%
1.370	04/06/2012	June	04/06/2012	1.78	-29.9%
1.830	18/06/2012		18/06/2012	1.49	18.6%
2.900	03/07/2012	July	03/07/2012	1.99	31.4%
1.690	16/07/2012		16/07/2012	1.91	-13.0%
4.650	08/08/2012	August	08/08/2012	1.87	59.8%
4.590	20/08/2012		20/08/2012	1.88	59.0%
4.520	04/09/2012	September	04/09/2012	2.16	52.2%
8.350	17/09/2012		17/09/2012	2.24	73.2%
6.640	01/10/2012	October	01/10/2012	2.00	69.9%
6.270	15/10/2012		15/10/2012	2.12	66.2%
5.310	05/11/2012	November	05/11/2012	2.13	59.9%
4.670	19/11/2012		19/11/2012	2.29	51.0%
6.300	03/12/2012	December	03/12/2012	2.29	63.7%
4.890	17/12/2012		17/12/2012	2.19	55.2%
4.163	Average	Annual	Average	2.17	**47.9%**

ANNUAL REPORT
2012
Summary of Sewage Laboratory Sampling Results
PERCENT REDUCTION

Appendix B-4

Raw Sewage				Final Effluent	
Biochemical Oxygen Demand				Biochemical Oxygen Demand	Percentage Reduction
mg/L	Date	Month	Date	mg/L	%
213	03/01/2012	January	03/01/2012	7.8	96.3%
199	16/01/2012		16/01/2012	9.6	95.2%
177	06/02/2012	February	06/02/2012	10.8	93.9%
163	21/02/2012		21/02/2012	9.4	94.2%
221	05/03/2012	March	05/03/2012	11.7	94.7%
45.8	19/03/2012		19/03/2012	14.2	69.0%
64	02/04/2012	April	02/04/2012	9.9	84.5%
93.1	16/04/2012		16/04/2012	12.9	86.1%
92.5	07/05/2012	May	07/05/2012	11	88.1%
36.1	22/05/2012		22/05/2012	18.4	49.0%
32.5	04/06/2012	June	04/06/2012	17.9	44.9%
57.9	18/06/2012		18/06/2012	6.1	89.5%
96.6	03/07/2012	July	03/07/2012	3.6	96.3%
97.2	16/07/2012		16/07/2012	5.8	94.0%
135	08/08/2012	August	08/08/2012	3.3	97.6%
122	20/08/2012		20/08/2012	4.3	79.8%
140	04/09/2012	September	04/09/2012	8.3	94.1%
211	17/09/2012		17/09/2012	4.2	98.0%
216	01/10/2012	October	01/10/2012	4.2	98.1%
134	15/10/2012		15/10/2012	5	96.3%
182	05/11/2012	November	05/11/2012	7.1	96.1%
155	19/11/2012		19/11/2012	10.5	93.2%
175	03/12/2012	December	03/12/2012	11.2	93.6%
105	17/12/2012		17/12/2012	12.2	88.4%
132	**Average**	**Annual**	**Average**	9	**93.1%**

ANNUAL REPORT
2012
Summary of Sewage Laboratory Sampling Results
PERCENT REDUCTION

Appendix B-5

Raw Sewage				Final Effluent	
Total Suspended Solids				Total Suspended Solids	Percentage Reduction
mg/L	Date	Month	Date	mg/L	%
576	03/01/2012	January	03/01/2012	11.6	98.0%
126	16/01/2012		16/01/2012	14.9	88.2%
123	06/02/2012	February	06/02/2012	14.5	88.2%
136	21/02/2012		21/02/2012	8.7	93.6%
192	05/03/2012	March	05/03/2012	7.6	96.0%
78	19/03/2012		19/03/2012	10.1	87.1%
76.5	02/04/2012	April	02/04/2012	8.8	88.5%
151	16/04/2012		16/04/2012	7.5	95.0%
76	07/05/2012	May	07/05/2012	15.4	79.7%
59.2	22/05/2012		22/05/2012	32.5	45.1%
54	04/06/2012	June	04/06/2012	20	63.0%
104	18/06/2012		18/06/2012	22	78.8%
172	03/07/2012	July	03/07/2012	7.8	95.5%
124	16/07/2012		16/07/2012	8.9	92.8%
152	08/08/2012	August	08/08/2012	2.5	98.4%
162	20/08/2012		20/08/2012	7.9	95.1%
153	04/09/2012	September	04/09/2012	20.6	86.5%
264	17/09/2012		17/09/2012	6.8	97.4%
402	01/10/2012	October	01/10/2012	4.5	98.9%
218	15/10/2012		15/10/2012	2.6	98.8%
128	05/11/2012	November	05/11/2012	10.7	91.6%
164	19/11/2012		19/11/2012	9.6	94.1%
279	03/12/2012	December	03/12/2012	8	97.1%
176	17/12/2012		17/12/2012	8.7	95.1%
173	Average	Annual	Average	11	**93.4%**

ANNUAL REPORT
2012
Summary of Sewage Laboratory Sampling Results
PERCENT REDUCTION

Appendix B-6

Raw Sewage				Final Effluent	
E-Coli				E-Coli	Percentage Reduction
C.F.U./100 ml	Date	Month	Date	C.F.U./100 ml	%
10,000,000	03/01/2012	January	03/01/2012	2,420	100.0%
3,900,000	16/01/2012		16/01/2012	1,700	100.0%
8,700,000	06/02/2012	February	06/02/2012	1,300	100.0%
3,100,000	21/02/2012		21/02/2012	2,420	99.9%
10,000,000	05/03/2012	March	05/03/2012	2,400	100.0%
1,300,000	19/03/2012		19/03/2012	2,420	99.8%
1,500,000	02/04/2012	April	02/04/2012	2,400	99.8%
3,300,000	16/04/2012		16/04/2012	1,700	99.9%
5,800,000	07/05/2012	May	07/05/2012	1,700	100.0%
1,300,000	22/05/2012		22/05/2012	36	100.0%
830,000	04/06/2012	June	04/06/2012	220	100.0%
4,900,000	18/06/2012		18/06/2012	99	100.0%
7,700,000	03/07/2012	July	03/07/2012	8	100.0%
7,700,000	16/07/2012		16/07/2012	5	100.0%
5,200,000	08/08/2012	August	08/08/2012	72	100.0%
13,000,000	20/08/2012		20/08/2012	120	100.0%
6,500,000	04/09/2012	September	04/09/2012	78	100.0%
11,000,000	17/09/2012		17/09/2012	730	100.0%
4,100,000	01/10/2012	October	01/10/2012	870	100.0%
5,800,000	15/10/2012		15/10/2012	2,400	100.0%
4,400,000	05/11/2012	November	05/11/2012	2,400	99.9%
5,200,000	19/11/2012		19/11/2012	2,420	100.0%
3,300,000	03/12/2012	December	03/12/2012	2,420	99.9%
20,000,000	17/12/2012		17/12/2012	2,420	100.0%
6,188,750	Average	Annual	Average	1,365	**100.0%**

ANNUAL SEWAGE REPORT
2012

Summary of Exceedences of Certificate of Approval for Average Maximum Daily Flows

Appendix C

Laboratory Results									
#	Date	Daily Flow (m^3)	Reason	Ammonia (N)	Total Phosphorus (TP)	Biochemical Oxygen Demand (BOD5)	Total Suspended Solids (TSS)	pH	Exceedence
				(mg/L)					
1	23-Mar-12	4207.36	Rain/Snow Melt	14.80	2.38	19.3	10.7	7.8	No
2	24-Mar-12	4819.12	Rain/Snow Melt	-	-	12	9.7	-	No
3	21-Jun-12	5141.25	Heavy Rain Fall	-	-	4.3	16.4	-	No

Sample analysis concluded an exceedence on our C of A for BOD_5. The M.A.C is 25 mg/L and the Target is 20 mg/L. Samples were also collected on the following day and results show that we were in compliance according to our C of A.

Township of Manitouwadge
Administration Report

Date: March 4, 2013

No. PW2013-02

Submitted to: **Mayor and Council**

Issue: 2012 Water Treatment Subsystem Class I &
Water Distribution Subsystem Class I Annual Report

Background:

Discussion: Attached is a copy of the 2012 Water Treatment Subsystem Class I & Water Distribution Subsystem Class I Annual Report for your approval.

Financial Implications:

Options:

Recommendation:

Respectfully submitted by: Omer Collin, Public Works Superintendent

cc: Cecile Kerster, Municipal Manager Clerk

MANITOUWADGE
ONTARIO · CANADA

Manitouwadge Public Works

Presents:

Water Treatment
Subsystem Class I
and
Manitouwadge Water Distribution
Subsystem Class I

2012
ANNUAL REPORT

Prepared By: Kirk Tourout and Paul Richard

Date: February 28, 2013

2012 ANNUAL REPORT
Township of Manitouwadge
Public Works Department

Manitouwadge Water Treatment Plant
Water Treatment Subsystem Class 1 & Manitouwadge Water Distribution
Water Distribution Subsystem Class 1

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ANNUAL REPORT
2012
Township of Manitouwadge
Public Works Department
Manitouwadge Water Treatment Plant
Water Treatment Subsystem Class 1
and
Manitouwadge Water Distribution
Water Distribution Subsystem Class 1

1.0 INTRODUCTION

The Corporation of the Township of Manitouwadge Public Works Department operates the Manitouwadge Water Distribution System under a **Drinking Water Works Permit # 229-201** issued by the Ministry of the Environment.

The Corporation of the Township of Manitouwadge is required to produce an annual compliance report for the benefit of the Ministry of the Environment and the residents of Manitouwadge within ninety days of the end of the calendar year.

Contained in this report, you will find the water quality data and information that we are required to keep and publish, under the Ontario Drinking Water Protection Act, from January 1, 2012 to December 31, 2012 as well; we include some of our accomplishments during the year.

Appendices to this report are the summaries of the laboratory results mandated by Ontario Regulation 170/03. Parameters included are microbiological, chemical and operational, daily laboratory testing, daily on-line instrumentation readings, inorganics and organics. As well, we have attached a "Glossary of Terms" to aid you in interpreting the data presented.

While perusing these appendices please be sure to read any and all the attached footnotes remembering that not all Maximum Acceptable Concentrations or Interim Maximum Acceptable Concentrations are health related. In fact some are aesthetic or operational parameters. Remember also that the presence of any substance does "not necessarily make the water unsafe to drink".

As of November 30, 2005 our facilities are classified as a Class I Water Treatment Subsystem and a Class I Water Distribution Subsystem.

Kirk Tourout is the operator in overall responsible charge. He is currently licensed as a Class I Water Treatment Subsystem and a Class II Water Distribution and Supply Subsystem operator. Kirk is assisted by Paul Richard who is currently licensed as a Class

I Water Treatment Subsystem and a Class I Water Distribution and Supply Subsystem operator.

Our system participates as part of the Ontario Drinking Water Surveillance Program which occurs twice annually.

Our Laboratory analysis for Ontario Regulation 170/03 sampling requirements are performed by Thunder Bay Analytical, a division of ALS Laboratory Group who are accredited by the Ministry of the Environment. Drinking Water Surveillance Program sampling is analyzed by the Ministry of the Environments central laboratory.

For the purpose of this report our system supplies water for a population of 2,106. The number of households connected to our system is 1,292. Households are deemed to include residential, multiple unit residential, institutional and industrial locations.

2.0 MANITOUWADGE WATER WORKS

2.1 WATER SOURCE

Have you ever really thought about where your water comes from?

Contrary to majority public opinion, our water comes from five drilled wells and not from Manitouwadge Lake. This community is blessed with an ample supply of water from an enormous aquifer located deep under the town site bounded by hills surrounding the valley where we are situated.

Water quality does not change quickly due to the depth and the size of our aquifer. The water temperature varies from 7 °C to 8.7 °C year round. Like most drilled wells, our water is extremely hard and slightly aggressive. Allowing the well water to pass through induced draught aerators, the naturally occurring hydrogen sulfides is scrubbed off, yielding a fairly consistent pH in the 7.6 to 7.9 range.

The natural colour of our water is extremely clear and its turbidity is very low. Hence, the addition of a 12% sodium hypochlorite solution used for disinfection produces extremely low levels of trihalomethanes (THMs).

2.2 HISTORY

The Manitouwadge Distribution System was first constructed in 1954 and has gone through several upgrades since.

Initially, there was one drilled well that pumped directly into the water main with no treatment. Pressure and flow were controlled by a pressure reducing valve powered by a 50 horsepower motor. It was coupled to a four cylinder engine on a right angle drive to provide water during power outages. The system was not automatic, necessitating a workman to come to start the engine, engage the drive and disengage and stop the engine

before restoring it to main power. Capacity was 30.2 L/sec (400 IGPM). Increased demand necessitated a second drilled well. Capacity increased to 60.4 L/sec (800 IGPM). Duty was divided between these two pumps. A prolonged decrease in pressure would signal the second pump to run, meeting flow and pressure demands.

In 1962, numerous water breaks revealed that our water was corroding our water mains. The solution was to construct an induced draught aerator to raise the pH of the water. This necessitated the construction of an in-ground storage tank of 55 cubic meters (12,000 IG) to receive the aerated water. Two high lift service pumps pumped the water into the water mains controlled by pressure reducing valves. The motors on the existing well pumps were reduced to 25 horsepower. The high service pumps were 50 horsepower each. One of the high service pumps was coupled to a six cylinder engine on a right angle drive. It was later upgraded to automatic operation during a power outage. However, should the reservoir run low on water, the stand-by well motor had to be run manually.

The town continued to grow. The wells and reservoir could no longer maintain normal daily flows, forget fire flows. In 1975, a second in-ground reservoir, of 59 cubic meters (13,000 IG) capacity, was added. An additional induced draught aerator was supplied to handle the two new drilled wells, located adjacent to the Lion's Beach. A ten inch raw water main was constructed to supply the reservoirs located at the Shawinigan Place distribution centre. A 100 KW Diesel generator was installed to provide emergency power for well pumps #3 and #4. Emergency well capacity increased from 30.2 L/s (400 IGPM) to 120.6 L/sec (1,200 IGPM). A fifth drilled well was later added, in 1989. An upgrade to the sewage lift station, in 1984, saw the upgrading of diesel generator to 200 KW. However, this resulted in the emergency well pumping capacity dropping to 60.4 L/sec (800 IGPM).

Two additional high service pumps were added to bring our firm pumping capacity to 120.8 L/sec (1,600 IGPM). One of these pumps was connected to a motor driven right angle drive, boosting our emergency pumping capacity to 60.4 L/sec (800 IGPM).

By 1984, the inadequacy of our water supply became apparent. Consistent failure of the emergency pumping systems, and the age of the equipment and its operating systems, prompted a detailed study.

The Hemlo Gold find prompted the final 1990 expansion of our water distribution system. A 4,065 cubic meter (893, 000 IG) two-celled reservoir was constructed. Two dedicated fire pumps were added and the existing high service pumps were upgraded to 40.5 L/sec (525 IGPM). Firm pumping capacity was increased to 243 L/sec (3,200 IGPM).

A 400 KW generator was installed to provide emergency power for the entire Shawinigan Place facility. However, our assured well pumping capacity is only 60.4 L/sec (800 IGPM). A study on upgrading the well pumping station generator to 400 KW, to allow

for emergency power for wells #3, #4 and #5, plus power for the sewage lift station facilities, is being contemplated.

In the spring of 2004 the oil lubricated vertical turbines for Well Pumps #1, #2, #3 and #4 were replaced with submersible water lubricated units. The reasons for the upgrade were prompted by Ministry of the Environment Inspectors preference for water lubricated units to eliminate the need for oil. The oil used was of food grade quality; therefore meaning that there was no risk to human health should the well pump break suction. The decision was made on operational basis determined by the relative ease of servicing locally rather than contracting out maintenance services to a specialist well contractor.

Our Facilities can service the peak pumping hours, plus fire flows, for a population of 6,000 people.

As of May 10th, 2007 a secondary source of treatment was implemented for the Town Of Manitouwadge consisting of 3 UV reactors which were installed in the pumping stations. The UV reactors are posing as an initial treatment used to inactivate pathogens using 254 nm spectrum of light before receiving a secondary treatment of disinfection as stated above. These reactors are designed to achieve maximum inactivation at a minimum dosage rate of 42 mJ/cm^2. This dosage rate will supply sufficient inactivation to specific micro-organisms passing through the light spectrum. Inactivation consists of a physical process which fuses the DNA of the microorganism rendering it incapable of replication.

Over the past three years Jon Nelson of Nelson Technical Services has been implementing a change in method of which the control of the water plant is conducted. As of the end of 2011 the water treatment plant is now controlled using SCADA (Supervisory Control And Data Acquisition) System. The SCADA System is a visual control system which allows operators to see changes made to the processes in real time. The SCADA system has various pages for viewing which include System overview, Service pumps, Well pumps, System settings, and Alarm History, Analog Inputs, and pump hour meters.

The System Overview is exactly that an overview of all the service pumps, well pumps, reservoir and UV system and what is running in real time. The Service pump page indicates what service pump is supplying the distribution system as well this page allows you to select service pumps and run them manually. The well pump page indicates which well pump is selected, and allows operators to run well pumps manually. System settings page is where all the settings are located and allows operators to view and change set points for the reservoir, selection for lead service pumps and lead well pumps. Also the system settings page allows operators to view alarm set points. Alarm History page is just accumulation of alarms that have previously happened. (i.e. Pump Failure or UV Failure). The Analog page is a visual indication of all the input readouts. (i.e., CL2, Turbidity, Temp, etc.). Pump hour meter page allows operators to visually see how many hours are on each pump indicates to operators which pump need to be ran to have even runtime and distribute the everyday wear and tear on the pumps. In the near future Jon Nelson will

commission the Daily Reporting page which will allow operators to print out daily reports on a regular basis.

The SCADA System also has trending pages which allow operators to visually look at graphs and see anomalies in the in the data, whether it be in five minute intervals up to weekly or monthly intervals. This feature is good as you can pinpoint the timeframe then go back to the actual data and identify the numbers associated with the anomalies.

2.3 OPERATIONS

System pressure controls the operation of six (6) high power pumps. The lead pump is controlled by a variable frequency driver. The VFD increases the lead pump's speed to maintain system pressure until the maximum motor speed is reached. As demand increases and as the system pressure drops to and remains 2.5 to 5.0 PSI below the system pressure set point (currently 80 PSI) for twenty (20) seconds, a second high service pump is called at constant (maximum speed, and then starts following a five (5) second time delay. The lead pump's speed is adjusted by the VFD to compensate and maintain the system pressure at its set point.

As system demand increases further, the lead pumps speed increases to maximum, and when the system pressure set point drops 2.5 to 5 PSI for a twenty (20) second period, a second high service pump at constant speed is called and then starts after a five (5) second time delay.

2.4 DECREASING DEMAND

The lead pump decreases its speed via the VFD to maintain system pressure until the minimum speed is attained. As demand decreases and the system pressure rises and remains 2.5 to 5 PSI above the set point for a period of ten (10) seconds, a high service pump at a constant speed is stopped. The VFD adjusts the lead pumps to compensate and maintain the system pressure set point.

2.5 WELL PUMPS

Reservoir levels control the operation of five (5) well pumps. When the reservoir level falls to the start level for duty one, the pump assigned to duty one will start and continue to run until the reservoir level rises to the stop level programmed for the duty one. In a similar manner, their remaining pumps will start or stop in accordance with their programmed start and stop levels when reached according to the well pump duty cycle for duties two (2) to five (5).

Up until the end of 2011 well pump Flow (Q) was controlled by throttling valves to achieve the desired flow on the flow meter. As of the end of December 2011 Automation Now and Nelson Technical Services installed five 25 hp VFD's on each of the well pumps, which allowed us to open up the valves and control the speed of the pump using

the VFD's to achieve the desired flow on the flow meters. The addition of the VFD control benefits the plant in a variety of ways, not only is the wear and tear on the pumps valves and piping minimized but we are also running the well pumps more efficiently. The installation of the VFD's on the well pumps boasted approximately a 45 % reduction in energy usage just by controlling the speed of the pump rather than throttling the valves.

2.6 PUMP SETUP

Within the system, there were two (2) variable frequency drivers, six (6) high service lift pumps and five (5) well pumps. As of the end of December, Automation Now and Nelson Technical Services installed an additional two (2) VFD's on the service pumps which supply the town's water through the Distribution System. The operator now selects which pump is going to be the lead pump with the option of selection two service pumps as the lead pumps. After pump selection is achieved automatically, the VFD that is hooked up to that service pump will run to maintain the desired pressure in the distribution system. Lead pumps are cycled to achieve an equal run time.

The operator selects from service pumps 1 to 4 the lead pump. High service pumps #5 and #6 can never be selected as lead pumps. Pump # 5 becomes the automatic selection when you select service pump #1 or #2 and Pump #6 becomes the automatic selection when service pump #3 or #4 is selected. Also another feature that was put in place is if the power fails and the PLC dumps and we loose control a service pump will run on minimum speed to insure that the pressure in the Distribution System doesn't drop until we can get the PLC repaired.

The operator selects from well pumps 1 to 5 the lead well pump. The balance of the pumps becomes duties 2 to 5. As with the VFD's and the high service pumps, care is taken to run each well pump on a regular basis to equally distribute the wear and tear of the regular operations.

3.0 WATER QUALITY

Some parameters may be present in source water before we treat it. The various groups of parameters are described as follows:

Microbiological Parameters, such as bacteria, may come from sewage plants, livestock operations, septic systems and wildlife. Microbiological quality is the most important aspect of the drinking water quality because of its association with dangerous water-borne disease which can strike quickly.

Inorganic Parameters, such as salts and metals, can be naturally occurring, or a result of urban storm runoff, industrial or domestic wastewater discharge, mining or agriculture. Some may be a result of treatment and distribution of water (for example, lead from old solder in pipes).

Organic Parameters can be naturally occurring, but most organics of concern are synthetic. They originate from industrial discharges, urban storm runoff and other sources. Included in this group are pesticides that originate from both, rural and urban areas. Some may originate from treatment of drinking water (for example, chlorination byproducts such at trihalomethanes).

4.0 SOME WATER FACTS

4.1 DATA

See Appendix A for the relevant flow data.

Appendix A-1 shows the sodium hypochlorite and chlorine usage and the average daily dosage rate.

Appendix A-2 summarizes the total monthly flows juxtaposed with the average, minimum and maximum for actual flows and peak daily flows.

Appendix A-3 features a summary of the minimum and maximum daily flows on a monthly basis highlighting the day that they occurred.

Appendix A-4 in accordance with our Certificate Of Approval features a summary of the minimum and the maximum daily flows on a monthly basis also highlighting the day that they occurred. Please note that these flows are calculated using the peak flow for that day extrapolated to a daily flow. They are **not** actual daily flows.

Appendix A-5 shows an annual overview of the actual daily flows.

Appendix A-6 is an annual summary of maximum instantaneous daily flows.

Appendix A-7 annually summarizes the minimum instantaneous daily flows.

Our Treatment Plant delivered 302,973,000 liters of potable water to its consumers 6,016 liters of 12% sodium hypochlorite solution yielding 786.76 kilograms of chlorine used for disinfection purposes. This translates to an annual dosage rate of 2.69 mg/L.

On a per capita basis this translated to 394 liters per person per day. Based on the 2011 figure of 331 liters per person per day this represents a 8 % increase in water consumption per person per day.

On a household basis this means that 642 liters per household per day were consumed. Based on the 2011 figure of 590 liters per household per day, this represents an 8 % increase in consumption levels.

4.2 Water Metering

Completion of the water meter installations in April 2005 prompted the creation of Figure 4.2. It shows the percentage decrease in water consumption commensurate with the billing for the water usage.

Fig 4.2					
	2011		2012		
Month	Total Flow	Average Daily Flow	Total Flow	Average Daily Flow	Reduction
	m^3	m^3	m^3	m^3	%
January	23598	761.23	30137	969.48	27.709975
February	22731	811.82	29730	1026.46	30.79055
March	28352	914.58	27026	869.32	-4.676919
April	26776	892.53	25312	839.03	-5.467583
May	20269	653.84	28643	919	41.314322
June	20232	674.4	32100	1062.57	58.659549
July	21456	692.13	28712	922.13	33.818046
August	22429	723.52	23567	759.06	5.0737884
September	20769	692.3	19856	657.43	-4.395975
October	24548	791.87	18354	592.06	-25.2322
November	21506	716.87	17736	632.7	-17.52999
December	26220	845.81	21800	701.35	-16.85736
Total/Average	328240	901.43	302973	829.2158	-7.697721

*** When there is a (-) % that is actually a decrease from previous year and when the there is no (–) sign that indicates an increase from the previous year. Even though there were increases in some months the overall reduction is based on the annual comparison.

5.0 COMPLIANCE ISSUES

5.1 SAMPLING

Appendix B-1 gives a summary of the laboratory analysis for Ontario Regulation 170/03 annual sampling requirements for inorganics. There was one exceedence.

Appendix B-2 gives a summary of the laboratory analysis for Ontario Regulation 170/03 annual sampling requirements for organics. There were no exceedences.

Appendix B-3 gives a summary of the laboratory analysis for Ontario Regulation 170/03 quarterly sampling requirements for organics. There were no exceedences.

Appendix B-4 and B-5 gives a summary of the laboratory analysis performed under the auspices of the Ontario Drinking Water Surveillance Program. B4-a and B4-b deal with various chemical, physical and operational parameters. B4-deals specifically with raw water and B4-b deals with treated water. There was one exceedence for Hardness. Please pay close attention to the footnotes provided.

B5-a and B5-b deal with various inorganic parameters. B5-a deals specifically with raw water and B5-b deals with treated water. There were some exceedences. Please pay careful attention to the footnotes.

Appendix C-1 details a summary of our weekly raw water bacteriological sampling requirements under Ontario Regulation170/03. There were no exceedences.

Appendix C-2 details a summary of our weekly treated water bacteriological sampling requirements under Ontario Regulation170/03. There were no exceedences.

Appendix C-3 summarizes our weekly bacteriological sampling requirements for the distribution system under Ontario Regulation170/03. There were no exceedences.

5.2 Peak Flows

Under our Certificate of Approval we are required to monitor our instantaneous maximum daily flow and translate this into a daily flow also known as a "Peak Flow". This figure should not exceed our Maximum Allowable Daily Flow of 10, 472 m3/day. Any flows in excess of this must be documented together with a reason for the exceedence.

For 2012 there were Four (4) such exceedences. Figure 5.2 represents this exceedence with a brief explanation for the occurrence.

Figure 5.2

Peak Flow Exceedences		
Day/Date	**Flow (m^3/day)**	**Probable Causes**
Monday, July 16th, 2012	11,118.82	OCWA Annual Watermain Swabbing
Wednesday, Aug 29th, 2012	11,574.14	Water Service Repair 26 Oshweken
Thursday, Oct 30th, 2012	11,574.14	Water Service Repair 14 Warbler
Friday, Dec 21th, 2012	11,715.84	Watermain Repair Station Road and Caribou

6.0 CERTIFICATE OF APPROVAL

6.1 DAILY LABORATORY TESTING AND OPERATIONAL PARAMETERS

Appendix D-1 summarizes our Certificate of Approval mandated daily in-house laboratory testing for various operational parameters and distribution system zone sampling. To address a request by the Ministry Of Environment Inspector that our results mirror the M.O.E. Form III reporting this appendix goes from 1a to 1g. Included in these results as requested by the M.O.E. are the Raw Well Turbidity readings which are analyzed for once a month and recorded in a spread sheet.

Appendix D-2 summarizes our Certificate of Approval mandated On-Line Instrumentation as per M.O.E. request to mirror Form III reporting this appendix goes from 2a to 2d. There were no exceedences.

Our On-Line instrumentation and our Laboratory analyzers were re-calibrated by P. Andre Lemoine who is a Clear Tech Technician on July 25th, 2012.

6.2 FLOW METERING

Our Certificate of Approval mandates that our flow meters must be accurate within plus or minus five (5%) percent of the raw water and treated water flow meters.

Appendices E1 to E13 sets out the accumulated data for January through December. Appendix E1 is a summary of the monthly totals of Appendices E2 to E13. This shows that for the period represented by this data that is an average we were in compliance.

However, as you pursue this data you may notice that some daily and some monthly figures seem to be out of compliance. The explanation for this is as follows:
The well flow meters are the most accurate and these flows are used to compute the daily flows. Each well is restricted to 30.3 liters per second and the corresponding meter is set accordingly. The raw water flow meter to achieve the maximum accuracy is programmed to accurately measure flows up to 91.2 liters per second which represents the combined flow of three wells. When more than three wells are running, such as during hot days or major water break or fire hydrant usage, the accuracy falls off. Similarly the treated water meter is programmed to be accurate with flows not exceeding 120 liters per second. This represents the maximum flow at 80 psi that three of our six high service pumps can produce. During high flow conditions such as hot weather demand, major water breaks or fire hydrant usage when more that three high service pumps are required, the accuracy again falls off.

Please realize that the accuracy of the flow metering equipment is monitored on a daily basis by our operations personnel. The well flow meter and hour meter, raw water meter and treated water meter are read daily. Hour meter readings are subtracted from the previous days reading and multiplied by the well meter flow usual 108 cubic meters per day and compared with difference in the flow meter reading to ensure that it is within

plus or minus five percent of each other. The results of the five wells are then added and then compared with the differences for the raw water and treated water flow meters.

Our flow meters were re-calibrated by Endress + Hauser on October 25, 2012.

6.3 LEAD SAMPLING PROGRAM

In spring 2008 M.O.E mandated that lead sampling be conducted in accordance with OR 170-03 Community Lead sampling. Lead Sampling was to commence twice annually during the spring and again in the fall. The number of samples collected was reduced due to the ratio of samples that were below the 10 ug/L and the samples that exceeded the 10 ug/L. This meant that Manitouwadge needed to achieve 10 household samples, 2 distribution samples (i.e. Hydrants) and 1 non-residential sample over the 2012 period. Appendix F-1 and F-2 summarizes the results from the sampling periods. Appendix F-1 for the spring sampling program and Appendix F-2 for the fall sampling program yielded no exceedences.

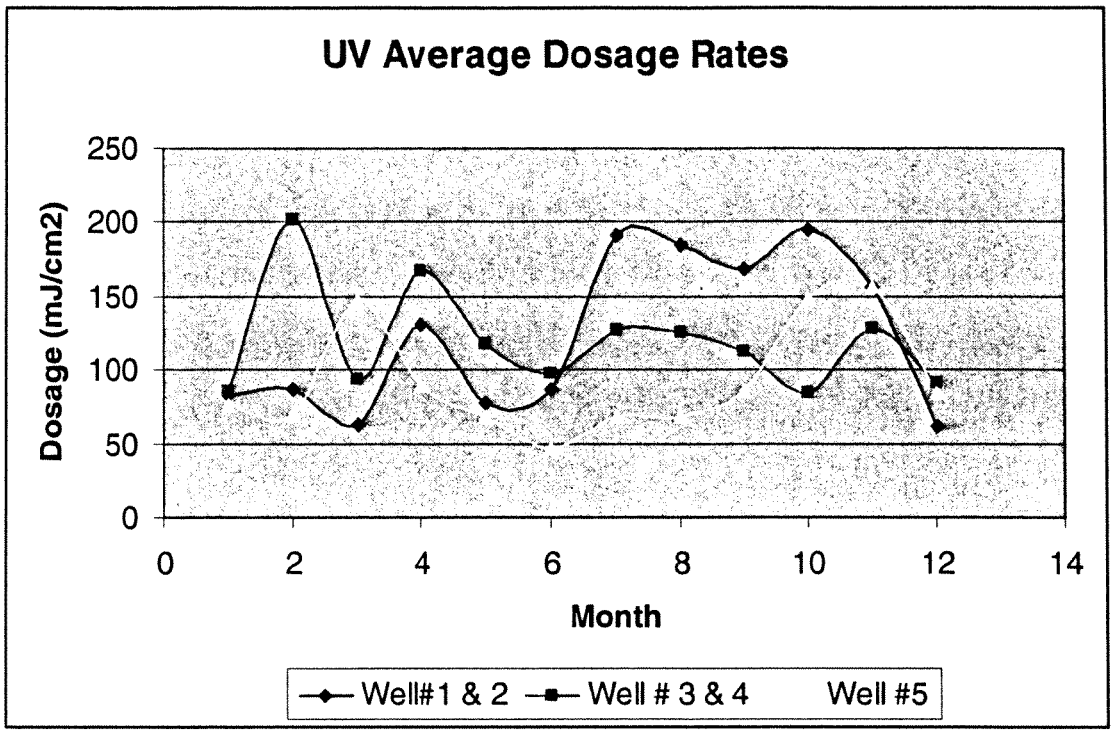
6.4 UV Treatment Operations & Data

This section was a result of the installation of the three (3) UV Reactors one for each of the pump houses. The data was averaged out on a monthly basis and the data was input into tabular format as well as a graph was plotted to show the average monthly comparison of each of the reactors. See below figure 6.4a and 6.4b.

Figure 6.4 a

2012	Well 1 & 2 Average Dosage	Well 3 & 4 Average Dosage	Well 5 Average Dosage
	mJ/cm^2	mJ/cm^2	mJ/cm^2
January	83	85	76
February	87	202	69
March	63	94	147
April	131	167	90
May	78	118	69
June	87	98	47
July	191	126	68
August	184	126	68
September	169	113	85
October	195	84	148
November	156	128	157
December	62	91	84
Average	124	119	92

Figure 6.4 b



**Average dosage reading was calculated based on all the data provided. This means that even when the unit wasn't running it was logging a zero reading. Therefore the dosages that yielded a low average result is a result of all the zeros in the calculation as well as the frequency of well run time. Run time increases when the well is selected by the lead pump.

7.0 MINISTRY ORDERS

1. Review of the 2012 M.O.E Drinking water Inspection report revealed that no orders were issued.

8.0 CONCLUSION

The Township had an extremely busy 2012.

1. The Township had contracted out to the Ontario Clean Water Agency (O.C.W.A.) the second of a three year swabbing plan. O.C.W.A. in accordance with the Township of Manitouwadge, swabbed pipes in Zone #1 which was completed over a three day process which consisted of 20 regular man hours and 7 overtime man hours.

2. During the Swabbing program, Water Operators also conducted the valve exercising program which insured smooth operation during the swabbing program. The valve exercising program allowed operators to identify and repair deficiencies in the Distribution System.

3. The Township Public Works Department spent 490.5 regular man hours repairing house services and 128.5 overtime hours.

4. The Township Public Works Department spent 3 regular man hours repairing standpipes.

5. The Township Public Works Department spent 18 regular man hours, 15.5 overtime hours and 3 double time man hours repairing water mains in 2012.

6. The Township Public Works Department spent one regular hour and 4 overtime hours on frozen water services.

7. The Township Public Works Department spent 29 regular hours and one overtime hour on water service disconnections.

8. The Township Public Works Department spent 22.5 regular hours and one overtime hour on water service reconnections.

9. The Township Public Works Department spent 97 regular hour and one overtime hour on water meters.

10. The Township Public Works Department spent 28.5 regular hours on fire hydrant repairs.

11. The Township contracted out the services of Lotowater Technical Services Inc. to conduct performance testing on wells 1, 2, 3, 4, and 5. The tests concluded that Well #1 undergo a mechanical and chemical well rehabilitation as well as a new submersible pump be installed. Well #2, 3, and 4 were recommended to be put on staggered well service schedule. Recommendations at Well #5 included the removal of the existing oil lubricated line shaft pump and replacing it with a submersible pump.

RECOMENDATIONS

1. The repair of the roof at the main pumphouse.

2. Data acquisition and daily report capabilities from SCADA system.

3. Completion of rehabilitation program on wells 1,2,3,4 and 5.

ANNUAL REPORT
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SUMMARY OF
SODIUM HYPOCHLORITE USAGE

Appendix A-1

Month	12% Sodium Hypochlorite Solution	Chlorine	Dosage Rate
	Liters (L)	Kilograms (kg)	mg/L
January	520	72.88	2.31
February	585	81.99	2.63
March	488	68.40	2.40
April	508	71.16	2.68
May	517	72.46	2.44
June	541	75.84	2.26
July	594	83.18	2.73
August	539	75.55	2.98
September	444	62.23	3.03
October	439	61.53	3.21
November	382	53.47	2.69
December	461	64.54	2.86
ANNUAL	6,016	843.24	2.68

ANNUAL REPORT
2012
SUMMARY OF MONTHLY ACTUAL AND PEAK FLOWS

APPENDIX A-2

Total Flow (m^3)	Actual Daily Flows (m^3/Day)			Month	Peak Daily Flows (m^3/Day)			Exceedence
	Average	Minimum	Maximum		Average	Minimum	Maximum	
31,603.78	1,019.48	880.92	1,220.73	January	1,125.88	370.66	2,257.63	N
31,315.39	1,079.84	902.05	1,329.66	February	1,385.12	0.00	8,989.92	N
29,222.02	942.65	796.98	1,452.04	March	1,188.23	0.00	5,596.13	N
26,372.75	879.09	769.24	1,151.28	April	1,124.27	0.00	6,416.93	N
29,823.46	962.05	833.40	1,145.90	May	1,089.40	0.00	4,449.60	N
33,879.27	1,129.31	949.74	1,353.26	June	1,432.19	1.73	8,831.81	N
30,663.56	989.15	726.77	1,624.16	July	1,418.71	1.73	11,118.82	Y
26,145.53	843.40	668.98	2,242.75	August	1,406.90	0.00	11,574.14	Y
20,835.65	694.52	475.84	1,321.12	September	1,081.15	1.73	7,893.50	N
19,196.81	619.25	463.61	750.20	October	790.13	0.00	6,501.60	N
19,992.75	666.43	573.08	808.71	November	708.25	3.46	1,959.55	N
22,944.46	740.14	595.28	983.13	December	1,342.86	1.73	11,715.84	Y
321,995.43	882.18	463.61	2,242.75	Annual	1,174.42	0.00	11,715.84	Y

[1] Under our Certificate of Approval our Maximum Allowable Daily flow is 10,472 m^3/Day. Any time the instantaneous Peak Flow exceeds 10,472 m3/Day a note must be made of the circumstances that created the flow.

ANNUAL REPORT
2012
SUMMARY OF MONTHLY
MAXIMUM AND MINIMUM DAILY PEAK FLOW EVENTS

Appendix A-3

Minimum Daily Flow m^3	Day	Date	Month	Day	Date	Maximum Daily Flow m^3
842.32	Sunday	1st	January	Saturday	28th	1,265.09
902.88	Wednesday	29th	February	Saturday	4th	1,293.60
775.31	Monday	12th	March	Sunday	18th	1,089.42
736.20	Wednesday	11th	April	Saturday	28th	1,087.55
762.36	Tuesday	1st	May	Wednesday	2nd	1,243.54
918.23	Saturday	30th	June	Thursday	30th	1,365.07
623.30	Monday	30th	July	Tuesday	31st	1,572.70
584.39	Sunday	5th	August	Friday	31st	1,339.79
501.24	Tuesday	25th	September	Monday	3rd	1,366.29
457.24	Friday	5th	October	Saturday	6th	728.57
547.18	Friday	30th	November	Sunday	25th	783.51
581.52	Wednesday	5th	December	Wednesday	19th	975.97
457.24			Annual			1,572.70

ANNUAL REPORT
2012
SUMMARY OF MONTHLY
MAXIMUM AND MINIMUM INSTANTANEOUS DAILY PEAK FLOW EVENTS

Appendix A-4

Minimum Daily Flow m^3	Day	Date	Month	Day	Date	Maximum Daily Flow m^3
370.66	Monday	16th	January	Thursday	5th	2,257.63
0.00	Thursday	23rd	February	Monday	27th	8,989.92
0.00	Sunday	18th	March	Monday	12th	5,596.13
0.00	Thursday	5th	April	Thursday	26th	6,416.93
0.00	Wednesday, Saturday	16th,26th	May	Thursday	24th	4,449.60
1.73	Sunday	24th	June	Sunday	10th	8,831.81
1.73	Monday, Tuesday	2nd, 3rd	July	Monday	16th	11,118.82
0.00	Friday	24th	August	Wed,Thur	29th,30th	11,574.14
1.73	Saturday, Friday	1st,7th	September	Friday	7th	7,893.50
0.00	Thursday,Wednesday, Thursday	11th,24th,25th	October	Monday	1st	6,501.60
3.46	Saturday,Thursday,Thursday	3rd,15th, 22nd	November	Tuesday	13th	1,959.55
1.73	Thursday,Friday	20th, 21st	December	Friday	21st	11,715.84
0.00			Annual			11,715.84

ANNUAL PERFORMANCE REPORT

2012

DAILY WATER FLOW

Appendix A-5

	January			February			March			April			May			June			July			August			September			October			November			December
1	Sun	842.32	1	Wed	1060.67	1	Thu	929.68	1	Sun	980.77	1	Tue	762.36	1	Fri	1027.16	1	Sun	946.20	1	Wed	867.21	1	Sat	853.46	1	Mon	659.24	1	Thu	577.41	1	Sat	626.76
2	Mon	996.71	2	Thu	1153.81	2	Fri	827.15	2	Mon	906.34	2	Wed	1243.54	2	Sat	980.41	2	Mon	1041.62	2	Thu	718.62	2	Sun	1315.04	2	Tue	601.74	2	Fri	602.37	2	Sun	770.82
3	Tue	1,070.38	3	Fri	1094.75	3	Sat	1052.42	3	Tue	892.76	3	Thu	787.55	3	Sun	1021.38	3	Tue	902.88	3	Fri	746.23	3	Mon	1366.29	3	Wed	594.50	3	Sat	709.94	3	Mon	832.75
4	Wed	920.49	4	Sat	1293.60	4	Sun	964.56	4	Wed	881.12	4	Fri	940.90	4	Mon	1169.00	4	Wed	995.85	4	Sat	768.04	4	Tue	761.63	4	Thu	585.73	4	Sun	606.56	4	Tue	730.31
5	Thu	932.83	5	Sun	1204.85	5	Mon	850.17	5	Thu	888.73	5	Sat	880.92	5	Tue	1123.68	5	Thu	1146.17	5	Sun	584.39	5	Wed	576.30	5	Fri	457.24	5	Mon	634.12	5	Wed	581.52
6	Fri	932.98	6	Mon	1125.65	6	Tue	798.34	6	Fri	750.13	6	Sun	1059.71	6	Wed	1063.82	6	Fri	825.89	6	Mon	861.14	6	Thu	719.53	6	Sat	728.57	6	Tue	588.03	6	Thu	754.08
7	Sat	1,041.47	7	Tue	1144.95	7	Wed	1006.64	7	Sat	951.18	7	Mon	899.29	7	Thu	1050.18	7	Sat	1088.94	7	Tue	781.47	7	Fri	510.41	7	Sun	540.05	7	Wed	715.95	7	Fri	595.22
8	Sun	938.92	8	Wed	1195.55	8	Thu	793.92	8	Sun	762.22	8	Tue	828.78	8	Fri	1120.94	8	Sun	899.74	8	Wed	803.50	8	Sat	693.13	8	Mon	651.01	8	Thu	648.78	8	Sat	719.09
9	Mon	1,032.41	9	Thu	1150.95	9	Fri	954.50	9	Mon	914.47	9	Wed	882.57	9	Sat	1154.24	9	Mon	927.42	9	Thu	780.35	9	Sun	663.79	9	Tue	560.14	9	Fri	648.51	9	Sun	819.88
10	Tue	888.26	10	Fri	1050.25	10	Sat	844.41	10	Tue	894.96	10	Thu	912.68	10	Sun	1194.59	10	Tue	1046.37	10	Fri	836.11	10	Mon	686.25	10	Wed	602.06	10	Sat	666.61	10	Mon	680.00
11	Wed	999.75	11	Sat	1024.32	11	Sun	961.12	11	Wed	736.20	11	Fri	993.39	11	Mon	1167.48	11	Wed	1023.45	11	Sat	838.06	11	Tue	677.62	11	Thu	665.76	11	Sun	764.23	11	Tue	663.79
12	Thu	925.08	12	Sun	1076.06	12	Mon	775.31	12	Thu	850.68	12	Sat	971.16	12	Tue	947.72	12	Thu	1067.85	12	Sun	980.16	12	Wed	855.94	12	Fri	546.21	12	Mon	661.49	12	Wed	735.20
13	Fri	868.98	13	Mon	1139.16	13	Tue	957.97	13	Fri	824.79	13	Sun	918.56	13	Wed	1119.72	13	Fri	1108.90	13	Mon	837.75	13	Thu	699.46	13	Sat	640.90	13	Tue	693.42	13	Thu	591.11
14	Sat	1,009.23	14	Tue	1052.75	14	Wed	917.94	14	Sat	878.31	14	Mon	1160.67	14	Thu	1256.19	14	Sat	1128.83	14	Tue	819.32	14	Fri	714.89	14	Sun	678.36	14	Wed	574.59	14	Fri	774.85
15	Sun	1,049.88	15	Wed	959.00	15	Thu	865.25	15	Sun	868.27	15	Tue	907.68	15	Fri	1153.23	15	Sun	1109.47	15	Wed	807.32	15	Sat	632.12	15	Mon	676.43	15	Thu	731.61	15	Sat	720.49
16	Mon	963.80	16	Thu	1033.73	16	Fri	963.93	16	Mon	761.02	16	Wed	871.17	16	Sat	1247.20	16	Mon	1540.81	16	Thu	656.42	16	Sun	634.82	16	Tue	567.09	16	Fri	562.22	16	Sun	731.67
17	Tue	940.86	17	Fri	1022.71	17	Sat	987.23	17	Tue	814.86	17	Thu	967.03	17	Sun	1230.21	17	Tue	1248.00	17	Fri	782.28	17	Mon	609.48	17	Wed	672.53	17	Sat	740.18	17	Mon	650.51
18	Wed	944.76	18	Sat	1192.07	18	Sun	1089.42	18	Wed	878.07	18	Fri	932.12	18	Mon	1128.06	18	Wed	1362.22	18	Sat	717.74	18	Tue	532.81	18	Thu	600.50	18	Sun	743.71	18	Tue	739.16
19	Thu	1,034.45	19	Sun	945.58	19	Mon	894.34	19	Thu	870.72	19	Sat	1055.76	19	Tue	1040.20	19	Thu	874.88	19	Sun	824.29	19	Wed	565.83	19	Fri	486.15	19	Mon	636.76	19	Wed	975.97
20	Fri	981.69	20	Mon	1138.75	20	Tue	1040.88	20	Fri	839.02	20	Sun	926.91	20	Wed	1042.30	20	Fri	876.00	20	Mon	887.73	20	Thu	655.72	20	Sat	625.96	20	Tue	723.55	20	Thu	911.96
21	Sat	994.39	21	Tue	969.21	21	Wed	877.90	21	Sat	948.98	21	Mon	915.09	21	Thu	1049.49	21	Sat	780.65	21	Tue	842.65	21	Fri	540.21	21	Sun	718.09	21	Wed	724.57	21	Fri	690.58
22	Sun	1,111.61	22	Wed	1026.74	22	Thu	890.37	22	Sun	917.89	22	Tue	1020.22	22	Fri	1019.42	22	Sun	837.65	22	Wed	810.00	22	Sat	643.32	22	Mon	599.90	22	Thu	590.12	22	Sat	753.97
23	Mon	1,189.57	23	Thu	1052.61	23	Fri	1033.60	23	Mon	910.60	23	Wed	857.22	23	Sat	1025.37	23	Mon	816.62	23	Thu	734.59	23	Sun	634.29	23	Tue	652.01	23	Fri	649.03	23	Sun	713.39
24	Tue	986.00	24	Fri	1104.53	24	Sat	926.86	24	Tue	917.27	24	Thu	1109.10	24	Sun	1307.10	24	Tue	787.65	24	Fri	843.96	24	Mon	609.09	24	Wed	598.65	24	Sat	724.11	24	Mon	754.44
25	Wed	1,061.96	25	Sat	1117.31	25	Sun	864.75	25	Wed	944.26	25	Fri	891.67	25	Mon	1167.54	25	Wed	768.16	25	Sat	803.31	25	Tue	501.24	25	Thu	561.96	25	Sun	783.51	25	Tue	696.00
26	Thu	1,143.19	26	Sun	1012.65	26	Mon	1001.12	26	Thu	924.06	26	Sat	967.30	26	Tue	1109.30	26	Thu	790.26	26	Sun	862.68	26	Wed	635.41	26	Fri	612.75	26	Mon	672.40	26	Wed	700.80
27	Fri	1,022.42	27	Mon	1057.89	27	Tue	816.68	27	Fri	812.22	27	Sun	1079.04	27	Wed	1344.86	27	Fri	796.96	27	Mon	845.65	27	Thu	579.34	27	Sat	648.48	27	Tue	650.90	27	Thu	741.53
28	Sat	1,265.09	28	Tue	930.53	28	Wed	873.45	28	Sat	1087.55	28	Mon	898.36	28	Thu	1365.07	28	Sat	799.34	28	Tue	816.92	28	Fri	567.11	28	Sun	705.62	28	Wed	720.99	28	Fri	835.37
29	Sun	1,115.69	29	Wed	902.88	29	Thu	1002.59	29	Sun	995.66	29	Tue	999.00	29	Fri	1147.34	29	Sun	876.98	29	Wed	846.31	29	Sat	666.61	29	Mon	659.05	29	Thu	739.00	29	Sat	709.36
30	Mon	1,175.02				30	Fri	796.82	30	Mon	894.39	30	Wed	968.81	30	Sat	918.23	30	Mon	623.30	30	Thu	879.90	30	Sun	587.31	30	Tue	624.48	30	Fri	547.18	30	Sun	803.13
31	tue	1,161.26				31	Sat	938.64				31	Thu	1036.07				31	Tue	1572.70	31	Fri	1339.79									31	Wed	572.28				31	Mon	812.17
		31541.47			31233.54			28497.96			26497.51			29644.63			33691.44			30611.75			25323.87			20688.47			19093.43			20031.85			22615.88
	ADF	1017.47		ADF	1083.24		ADF	919.29		ADF	883.25		ADF	956.28		ADF	1123.05		ADF	987.48		ADF	816.90		ADF	689.62		ADF	615.92		ADF	667.73		ADF	729.54
	NHI (L)	513		NHI (L)	318		NHI (L)	488		NHI (L)	508		NHI (L)	517		NHI (L)	541		NHI (L)	594		NHI (L)	539		NHI (L)	444		NHI (L)	439		NHI (L)	382		NHI (L)	820
	CL_2 (kg)	71.83		CL_2 (kg)	44.57		CL_2 (kg)	68.40		CL_2 (kg)	71.16		CL_2 (kg)	72.46		CL_2 (kg)	75.84		CL_2 (kg)	83.18		CL_2 (kg)	75.55		CL_2 (kg)	62.23		CL_2 (kg)	61.53		CL_2 (kg)	53.47		CL_2 (kg)	114.93
	DOSAGE (mg/L)	2.39		DOSAGE (mg/L)	2.63		DOSAGE (mg/L)	2.40		DOSAGE (mg/L)	2.68		DOSAGE (mg/L)	2.44		DOSAGE (mg/L)	2.26		DOSAGE (mg/L)	2.73		DOSAGE (mg/L)	2.98		DOSAGE (mg/L)	3.03		DOSAGE (mg/L)	3.21		DOSAGE (mg/L)	2.69		DOSAGE (mg/L)	2.63

Maximum Instantaneous Readings

Appendix A-6

2012		January		Feb		March		April		May		June		July		August		September		October		November		December
1	Sun	1,581.98	Wed	3,523.39	Thu	1,721.95	Sun	4,350.24	Tue	1,645.92	Fri	1,626.91	Sun	1,799.71	Wed	4,580.06	Sat	4836.67	Mon	6,501.60	Thu	1,298.59	Sat	5,965.92
2	Mon	1,601.86	Thu	1,715.90	Fri	1,478.30	Mon	1,471.39	Wed	1,469.66	Sat	1,603.58	Mon	1,700.35	Thu	1,454.98	Sun	2083.1	Tue	2,037.31	Fri	1,236.38	Sun	1,378.08
3	Tue	1,681.34	Fri	1,843.78	Sat	1,721.95	Tue	1,694.30	Thu	1,812.67	Sun	1,721.95	Tue	1,574.21	Fri	1,485.22	Mon	1961.28	Wed	1,275.26	Sat	1,315.01	Mon	1,334.88
4	Wed	1,541.59	Sat	1,819.22	Sun	1,690.85	Wed	1,511.14	Fri	1,656.29	Mon	1,880.06	Wed	1,598.40	Sat	1,569.02	Tue	2177.28	Thu	1,754.78	Sun	1,405.73	Tue	1,378.94
5	Thu	2,257.63	Sun	1,888.70	Mon	1,723.68	Thu	1,638.14	Sat	1,661.47	Tue	1,710.72	Thu	1,975.97	Sun	1,302.05	Wed	1440.29	Fri	1,236.38	Mon	1,305.50	Wed	1,238.98
6	Fri	1,639.87	Mon	1,870.56	Tue	1,570.76	Fri	1,627.78	Sun	1,778.11	Wed	1,694.30	Fri	1,613.08	Mon	1,547.42	Thu	4771.01	Sat	1,320.19	Tue	1,186.27	Thu	4,001.18
7	Sat	1,805.76	Tue	1,745.28	Wed	1,581.98	Sat	1,702.08	Mon	1,652.83	Thu	5,667.58	Sat	1,740.10	Tue	1,380.67	Fri	7893.504	Sun	1,351.29	Wed	1,226.02	Fri	1,247.62
8	Sun	1,805.76	Wed	1,906.85	Thu	5,301.50	Sun	1,529.28	Tue	1,598.40	Fri	1,590.62	Sun	1,910.30	Wed	1,480.03	Sat	1453.25	Mon	1,384.13	Thu	1,387.58	Sat	1,536.19
9	Mon	1,538.78	Thu	1,794.53	Fri	1,454.98	Mon	1,616.54	Wed	1,552.61	Sat	1,730.59	Mon	1,877.47	Thu	1,616.54	Sun	1347.84	Tue	1,193.18	Fri	1,416.96	Sun	1,378.94
10	Tue	1,565.57	Fri	1,676.16	Sat	1,679.62	Tue	1,442.02	Thu	1,631.23	Sun	8,831.81	Tue	1,692.58	Fri	1,522.37	Mon	1358.21	Wed	1,168.13	Sat	1,420.42	Mon	1,329.70
11	Wed	1,689.12	Sat	1,892.16	Sun	1,614.82	Wed	1,534.46	Fri	1,536.19	Mon	1,797.98	Wed	1,956.09	Sat	1,641.60	Tue	3640.03	Thu	1,391.04	Sun	1,476.58	Tue	1,326.24
12	Thu	1,552.61	Sun	1,843.78	Mon	5,596.13	Thu	1,543.97	Sat	1,067.04	Tue	1,715.90	Thu	6,091.20	Sun	1,736.64	Wed	5735.23	Fri	1,313.28	Mon	1,321.92	Wed	1,552.61
13	Fri	1,759.97	Mon	1,753.06	Tue	1,565.57	Fri	1,465.34	Sun	1,418.69	Wed	1,839.46	Fri	1,776.38	Mon	1,674.43	Thu	1392.77	Sat	1,397.09	Tue	1,959.55	Thu	1,302.05
14	Sat	1,730.59	Tue	2,170.37	Wed	1,558.66	Sat	1,651.10	Mon	1,669.25	Thu	1,859.33	Sat	2,026.94	Tue	1,402.27	Fri	1380.67	Sun	1,341.79	Wed	1,438.56	Fri	1,893.89
15	Sun	1,685.66	Wed	1,574.21	Thu	1,540.51	Sun	1,674.43	Tue	1,734.91	Fri	1,763.42	Sun	2,127.17	Wed	1,458.43	Sat	1527.55	Mon	1,245.88	Thu	1,287.36	Sat	1,449.79
16	Mon	1,647.65	Thu	5,464.80	Fri	1,878.34	Mon	1,420.41	Wed	1,639.87	Sat	1,959.55	Mon	11,118.82	Thu	1,356.48	Sun	1492.99	Tue	1,410.91	Fri	1,269.49	Sun	1,423.87
17	Tue	1,558.66	Fri	1,683.94	Sat	1,629.50	Tue	1,485.22	Thu	1,626.91	Sun	1,912.03	Tue	8,481.89	Fri	1,354.75	Mon	1245.89	Wed	1,245.88	Sat	1,467.07	Mon	1,409.18
18	Wed	1,708.99	Sat	1,874.02	Sun	3,556.24	Wed	2,043.36	Fri	1,641.60	Mon	1,857.60	Wed	4,723.49	Sat	1,425.60	Tue	1405.73	Thu	1,220.83	Sun	1,498.18	Tue	9,037.44
19	Thu	1,590.62	Sun	1,961.28	Mon	1,761.70	Thu	1,542.24	Sat	1,514.59	Tue	1,732.32	Thu	2,059.78	Sun	1,486.08	Wed	1232.93	Fri	1,380.67	Mon	1,349.57	Wed	1,823.04
20	Fri	1,636.42	Mon	1,753.06	Tue	1,758.24	Fri	1,492.12	Sun	1,699.49	Wed	1,716.77	Fri	1,492.98	Mon	1,447.20	Thu	1186.27	Sat	1,534.46	Tue	1,645.92	Thu	8,439.55
21	Sat	1,880.06	Tue	1,710.72	Wed	1,672.70	Sat	1,728.86	Mon	1,694.30	Thu	1,616.54	Sat	1,670.98	Tue	1,531.01	Fri	1238.98	Sun	1,442.02	Wed	1,323.65	Fri	11,715.84
22	Sun	1,843.78	Wed	1,590.62	Thu	4,576.61	Sun	4,275.07	Tue	1,747.01	Fri	1,747.01	Sun	1,656.29	Wed	1,416.96	Sat	1321.92	Mon	1,257.12	Thu	1,358.21	Sat	1,461.89
23	Mon	1,843.78	Thu	1,750.46	Fri	1,527.55	Mon	1,966.46	Wed	1,656.29	Sat	1,819.58	Mon	1,432.51	Thu	8,692.70	Sun	1443.74	Tue	2,053.73	Fri	1,260.58	Sun	1,507.68
24	Tue	1,730.59	Fri	1,814.40	Sat	1,702.08	Tue	1,636.42	Thu	4,449.60	Sun	5,692.03	Tue	1,794.53	Fri	1,414.37	Mon	1244.16	Wed	1,169.86	Sat	1,449.79	Mon	1,416.96
25	Wed	1,874.02	Sat	1,842.05	Sun	1,715.90	Wed	1,499.90	Fri	1,683.94	Mon	1,892.16	Wed	1,418.67	Sat	1,587.17	Tue	1200.96	Thu	1,236.38	Sun	1,456.70	Tue	1,270.94
26	Thu	1,791.07	Sun	1,667.52	Mon	1,529.28	Thu	6,416.93	Sat	1,703.81	Tue	1,956.10	Thu	4,179.17	Sun	1,454.98	Wed	1245.89	Fri	1,240.70	Mon	1,318.46	Wed	1,663.20
27	Fri	1,747.01	Mon	8,989.92	Tue	1,753.06	Fri	1,585.44	Sun	1,694.30	Wed	1,932.77	Fri	1,574.21	Mon	1,575.07	Thu	1245.89	Sat	1,380.67	Tue	1,325.38	Thu	1,420.42
28	Sat	1,934.50	Tue	1,574.21	Wed	1,481.76	Sat	1,761.69	Mon	1,567.30	Thu	2,268.86	Sat	1,572.48	Tue	4,421.09	Fri	1142.21	Sun	1,327.97	Wed	1,269.22	Fri	1,392.77
29	Sun	1,880.06			Thu	1,649.38	Sun	1,708.99	Tue	1,614.82	Fri	2,012.26	Sun	1,425.60	Wed	11,574.14	Sat	1371.17	Mon	1,346.11	Thu	1,467.94	Sat	1,634.69
30	Mon	1,736.64			Fri	1,605.31	Mon	1,645.92	Wed	1,581.98	Sat	1,693.44	Mon	1,460.16	Thu	11,574.14	Sun	1343.52	Tue	1,316.74	Fri	1,216.51	Sun	1,519.78
31	Tue	1,877.47			Sat	1,605.31			Thu	1,759.97			Tue	1,540.51	Fri	1,636.42			Wed	1,193.18			Mon	1,392.77
Min		1,538.78		1,574.21		1,454.98		1,420.41		1,067.04		1,590.62		1,418.67		1,302.05		1,142.21		1,168.13		1,186.27		1,238.98
Max		2,257.63		8,989.92		5,596.13		6,416.93		4,449.60		8,831.81		11,118.82		11,574.14		7,893.50		6,501.60		1,959.55		11,715.84
Average		1,732.88		2,239.11		2,038.85		1,955.37		1,714.87		2,294.77		2,550.39		2,574.19		2,078.70		1,537.70		1,378.64		2,478.87
		1125.88		1385.12		1188.23		1124.27		1089.40		1432.19		1418.71		1406.90		1081.15		790.13		708.25		1342.86

Minimum Instantaneous Readings

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2012		January		Feb		March		April		May		June		July		August		September		October		November		December
1	Sun	470.02	Wed	3.46	Thu	293.76	Sun	451.00	Tue	490.75	Fri	456.19	Sun	461.38	Wed	3.46	Sat	1.73	Mon	3.46	Thu	5.18	Sat	3.46
2	Mon	450.14	Thu	711.94	Fri	319.68	Mon	385.34	Wed	470.02	Sat	514.08	Mon	1.73	Thu	205.63	Sun	837.22	Tue	190.94	Fri	5.18	Sun	29.38
3	Tue	453.60	Fri	685.15	Sat	359.42	Tue	435.46	Thu	654.05	Sun	573.70	Tue	1.73	Fri	228.96	Mon	800.93	Wed	5.18	Sat	3.46	Mon	222.05
4	Wed	571.97	Sat	677.38	Sun	517.54	Wed	425.09	Fri	317.95	Mon	639.36	Wed	559.01	Sat	199.58	Tue	21.60	Thu	3.46	Sun	6.91	Tue	263.52
5	Thu	413.86	Sun	773.28	Mon	258.34	Thu	0.00	Sat	328.32	Tue	616.03	Thu	444.96	Sun	199.58	Wed	34.56	Fri	3.46	Mon	6.91	Wed	240.19
6	Fri	508.90	Mon	684.29	Tue	254.02	Fri	319.68	Sun	377.57	Wed	575.42	Fri	263.52	Mon	19.87	Thu	5.18	Sat	5.18	Tue	216.00	Thu	3.46
7	Sat	410.40	Tue	746.50	Wed	522.72	Sat	80.35	Mon	501.12	Thu	515.81	Sat	343.01	Tue	375.84	Fri	1.73	Sun	3.46	Wed	19.87	Fri	6.91
8	Sun	533.95	Wed	735.26	Thu	14.69	Sun	425.09	Tue	362.88	Fri	495.94	Sun	532.22	Wed	283.39	Sat	5.18	Mon	3.46	Thu	6.91	Sat	5.18
9	Mon	444.96	Thu	670.46	Fri	80.35	Mon	293.76	Wed	506.30	Sat	588.38	Mon	96.61	Thu	286.85	Sun	194.40	Tue	5.18	Fri	6.91	Sun	266.98
10	Tue	517.08	Fri	611.71	Sat	328.32	Tue	401.76	Thu	501.12	Sun	3.46	Tue	507.17	Fri	19.01	Mon	5.18	Wed	6.91	Sat	6.91	Mon	6.91
11	Wed	522.72	Sat	522.72	Sun	433.73	Wed	254.02	Fri	1,079.14	Mon	540.86	Wed	507.17	Sat	25.06	Tue	2.31	Thu	0.00	Sun	209.09	Tue	281.66
12	Thu	423.36	Sun	648.00	Mon	3.46	Thu	255.74	Sat	799.20	Tue	597.89	Thu	400.03	Sun	372.38	Wed	3.46	Fri	6.91	Mon	5.18	Wed	230.69
13	Fri	397.44	Mon	631.58	Tue	364.61	Fri	265.25	Sun	863.14	Wed	724.90	Fri	468.29	Mon	25.06	Thu	278.21	Sat	6.91	Tue	6.91	Thu	3.46
14	Sat	433.73	Tue	570.24	Wed	489.02	Sat	250.56	Mon	506.30	Thu	700.70	Sat	413.86	Tue	337.82	Fri	241.92	Sun	192.67	Wed	11.23	Fri	230.69
15	Sun	542.59	Wed	578.02	Thu	370.65	Sun	361.15	Tue	650.59	Fri	755.14	Sun	489.02	Wed	324.86	Sat	3.46	Mon	6.91	Thu	3.46	Sat	194.40
16	Mon	370.66	Thu	439.78	Fri	571.97	Mon	227.23	Wed	0.00	Sat	782.78	Mon	6.91	Thu	221.18	Sun	5.18	Tue	12.96	Fri	11.23	Sun	306.72
17	Tue	603.07	Fri	519.26	Sat	349.06	Tue	334.37	Thu	512.35	Sun	825.98	Tue	3.46	Fri	209.09	Mon	3.46	Wed	6.92	Sat	8.64	Mon	6.91
18	Wed	548.64	Sat	621.22	Sun	0.00	Wed	332.64	Fri	435.46	Mon	542.59	Wed	56.16	Sat	265.45	Tue	6.91	Thu	5.18	Sun	227.23	Tue	286.85
19	Thu	446.69	Sun	599.62	Mon	466.56	Thu	298.08	Sat	379.30	Tue	626.40	Thu	240.19	Sun	337.82	Wed	3.46	Fri	5.18	Mon	6.91	Wed	405.22
20	Fri	439.78	Mon	507.17	Tue	499.39	Fri	254.02	Sun	357.70	Wed	601.34	Fri	12.96	Mon	281.66	Thu	3.46	Sat	6.92	Tue	221.18	Thu	1.73
21	Sat	470.12	Tue	609.98	Wed	507.18	Sat	211.68	Mon	1.73	Thu	603.07	Sat	228.96	Tue	281.66	Fri	3.46	Sun	194.40	Wed	14.69	Fri	1.73
22	Sun	650.59	Wed	641.09	Thu	3.46	Sun	3.46	Tue	497.66	Fri	565.06	Sun	304.99	Wed	288.58	Sat	5.18	Mon	5.18	Thu	3.46	Sat	266.98
23	Mon	530.50	Thu	0.00	Fri	3.46	Mon	311.04	Wed	553.82	Sat	555.55	Mon	9.50	Thu	1.73	Sun	6.91	Tue	6.91	Fri	5.18	Sun	303.26
24	Tue	686.88	Fri	34.25	Sat	304.99	Tue	379.30	Thu	118.37	Sun	1.73	Tue	298.08	Fri	0.00	Mon	5.18	Wed	0.00	Sat	5.18	Mon	3.46
25	Wed	710.21	Sat	681.70	Sun	477.79	Wed	387.07	Fri	528.77	Mon	631.58	Wed	281.66	Sat	12.96	Mon	5.18	Thu	0.00	Sun	32.83	Tue	303.26
26	Thu	652.32	Sun	540.86	Mon	381.02	Thu	3.46	Sat	0.00	Tue	631.58	Thu	27.65	Sun	303.26	Tue	6.91	Fri	3.46	Mon	6.91	Wed	298.08
27	Fri	616.03	Mon	3.46	Tue	388.80	Fri	3.46	Sun	570.24	Wed	738.72	Fri	14.69	Mon	254.02	Wed	3.46	Sat	6.91	Tue	34.56	Thu	5.18
28	Sat	608.26	Tue	423.36	Wed	439.48	Sat	459.65	Mon	439.78	Thu	795.74	Sat	14.69	Tue	329.18	Thu	3.46	Sun	205.63	Wed	9.50	Fri	261.79
29	Sun	677.38			Thu	344.74	Sun	494.21	Tue	581.47	Fri	619.49	Sun	268.70	Wed	278.21	Fri	3.46	Mon	6.91	Thu	21.60	Sat	350.78
30	Mon	604.80			Fri	346.46	Mon	490.75	Wed	578.02	Sat	268.70	Mon	343.01	Thu	278.21	Sat	5.18	Tue	21.60	Fri	6.91	Sun	328.32
31	Tue	639.36			Sat	346.46			Thu	502.85			Tue	21.75	Fri	44.06	Sun	5.18	Wed	5.18			Mon	275.62
Min		370.66		0.00		0.00		0.00		0.00		1.73		1.73		0.00		1.73		0.00		3.46		1.73
Max		710.21		773.28		571.97		494.21		1,079.14		825.98		559.01		375.84		837.22		205.63		227.23		405.22
Average		527.42		531.13		323.91		293.16		466.64		569.61		245.91		203.05		83.60		30.24		37.87		174.03

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Appendix B-1

Summary of Inorganics Treated Water							
Parameter	**M.A.C. or I.M.A.C.**	**Unit of Measure**	**Result**		**Unit of Measure**	**Exceedence**	**Action Required**
Antimony	0.0001	mg/L	<	0.6	ug/L	No	No
Arsenic	0.025	mg/L	<	1	ug/L	No	No
Barium	1	mg/L		47	ug/L	No	No
Boron	5	mg/L	<	50	ug/L	No	No
Cadmium	0.005	mg/L	<	0.1	ug/L	No	No
Chromium	0.05	mg/L	<	1	ug/L	No	No
Flouride	1.5	mg/L		---	mg/L	No	No
Lead	0.01	mg/L		---	ug/L	No	No
Mercury	0.001	mg/L	<	0.1	ug/L	No	No
Nirtate	10	mg/L		1.34	mg/L	No	No
Nitrite	1	mg/L	<	0.02	mg/L	No	No
Selenium	0.01	mg/L	<	1	ug/L	No	No
Sodium [1]	20	mg/L		---	mg/L	Yes	Yes
Uranium	0.1	mg/L	<	2	ug/L	No	No

[1]The Ontario Spills Action Center and the Thunder Bay District Healt Unit, Medical Officer of Health have been notified. Warning notices have been posted and local doctors advised to alert persons on a sodium restricted diet to use an alternative potable water supply for cooking and drinking purposes.
When sodium levels exceed 200 ug/L, corrective measures may be ordered.

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Appendix B-2

Summary of Organics Treated Water							
Parameter	**M.A.C. or I.M.A.C.**	**Units**	**Results**			**Exceedence**	**Action Required**
Alachlor	0.005	mg/L	<	0.1	ug/L	No	No
Aldicarb	0.009	mg/L	<	1	ug/L	No	No
Aldrin + Dieldrin	0.007	mg/L	<	0.04	ug/L	No	No
Atrazine + N-dialkylated metobolites	0.005	mg/L	<	0.2	ug/L	No	No
Azinphos-methyl	0.02	mg/L	<	0.1	ug/L	No	No
Bendiocarb	0.04	mg/L	<	0.2	ug/L	No	No
Benzene	0.005	mg/L	<	0.5	ug/L	No	No
Benzo (a) pyrene	0.0001	mg/L	<	0.01	ug/L	No	No
Bromoxynil	0.005	mg/L	<	0.2	ug/L	No	No
Carbaryl	0.09	mg/L	<	0.2	ug/L	No	No
Carbofuran	0.09	mg/L	<	0.2	ug/L	No	No
Carbon Tetrachloride	0.005	mg/L	<	0.5	ug/L	No	No
Chlordane (Total)	0.007	mg/L	<	0.3	ng/L	No	No
Chlorpyrifos	0.08	mg/L	<	0.1	ug/L	No	No
Cyanazine	0.01	mg/L	<	0.1	ug/L	No	No
Diazinon	0.02	mg/L	<	0.1	ug/L	No	No
Dicamba	0.12	mg/L	<	0.2	ug/L	No	No
1,2-Dichlorobenzene	0.2	mg/L	<	0.5	ug/L	No	No
1,4-Dichlorobenzene	0.005	mg/L	<	0.5	ug/L	No	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	0.03	mg/L	<	0.4	ng/L	No	No
1,2-Dichloroethane	0.005	mg/L	<	0.5	ug/L	No	No
1,1-Dichloroethylene (vinylidene chloride)	0.014	mg/L	<	0.5	ug/L	No	No
Dichloromethane	0.05	mg/L	<	0.5	ug/L	No	No
2-4 Dichlorophenol	0.09	mg/L	<	0.3	ug/L	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.1	mg/L	<	0.2	ug/L	No	No
Diclofop-methyl	0.009	mg/L	<	0.2	ug/L	No	No
Dimethoate	0.02	mg/L	<	0.1	ug/L	No	No
Dinoseb	0.01	mg/L	<	0.2	ug/L	No	No
Diquat	0.07	mg/L	<	1	ug/L	No	No

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Appendix B-2

Summary of Organics Treated Water							
Parameter	**M.A.C. or I.M.A.C.**	**Units**	**Results**			**Exceedence**	**Action Required**
Diuron	0.15	mg/L	<	1	ug/L	No	No
Glyphosate	0.28	mg/L	<	5	ug/L	No	No
Heptachlor + Heptachlor Epoxide	0.003	mg/L	<	0.1	ug/L	No	No
Linadane (Total)	0.004	mg/L	<	0.1	ug/L	No	No
Malathion	0.19	mg/L	<	0.1	ug/L	No	No
Methoxychlor	0.9	mg/L	<	0.1	ug/L	No	No
Metolachlor	0.05	mg/L	<	0.1	ug/L	No	No
Metribuzin	0.08	mg/L	<	0.1	ug/L	No	No
Monochlorobenzene	0.02	mg/L	<	0.5	ug/L	No	No
Paraquat	0.01	mg/L	<	1	ug/L	No	No
Parathion	0.05	mg/L	<	0.1	ug/L	No	No
Pentachlorophenol	0.05	mg/L	<	0.5	ug/L	No	No
Phorate	0.002	mg/L	<	0.1	ug/L	No	No
Picloram	0.19	mg/L	<	0.2	ug/L	No	No
Polychlorinated Biphenyls (PCB)	0.003	mg/L	<	0.035	ug/L	No	No
Prometryne	0.001	mg/L	<	0.1	ug/L	No	No
Simazine	0.01	mg/L	<	0.1	ug/L	No	No
Total Trihalomethanes	0.15	mg/L		27	ug/L	No	No
Temephos	0.28	mg/L	<	0.1	ug/L	No	No
Terbufos	0.001	mg/L	<	0.2	ug/L	No	No
Tetrachloroethylene	0.03	mg/L	<	0.5	ug/L	No	No
2,3,4,6-Tetrachlorophenol	0.1	mg/L	<	0.5	ug/L	No	No
Triallate	0.23	mg/L	<	0.1	ug/L	No	No
Trichloroethylene	0.05	mg/L	<	0.5	ug/L	No	No
2,4,6-Trichlorophenol	0.1	mg/L	<	0.5	ug/L	No	No
2,4,5-Trichlorophenoxy Acetic Acid (2,4,5-T)	0.28	mg/L	<	0.2	ug/L	No	No
Trifluralin	0.045	mg/L	<	0.1	ug/L	No	No
Vinyl Chloride	0.07	mg/L	<	0.5	ug/L	No	No

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Ontario Regulation Quarterly Sampling Requirement

Appendix B-3

Summary of Inorganics								
Treated Water								
Parameter	M.A.C. or I.M.A.C.	Unit of Measure	January 09 2012	April 24 2012	July 16 2012	October 22 2012	Exceedence	Action Required
Nitrate	10	mg/L	1.34	1.44	1.53	1.7	No	No
Nitrite	1	mg/L	< 0.02	<0.02	<0.02	<0.02	No	No
THM	0.15	mg/L	27.0 ug/L	33.9 ug/L	32.3 ug/L	33.5 ug/L	No	No

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Appendix B4-A

Sumary of chemical, Physical and Operational Parameters										
			Raw Water							
Parameter	M.A.C. or I.M.A.C.	Units	Well #1 April 4, 2012	Well #4 April 4, 2012	Well #5 April 4, 2012	Well #2 Sept 5, 2012	Well #3 Sept 5, 2012	Well #5 Sept 5, 2012	Exceedence	Action Required
Alkalinity	30 - 500	mg/L	379	293	335	307	298	338	No	No
Ammonia & Ammonium	0.15	mg/L	0.01	0.004	0.002	0.032	0.035	0.034	No	No
Chloride	250	mg/L	59.4	63.4	77.2	61.7	63.5	60.4	No	No
Colour	5	TCU	4.7	1.2	2.3	2.1	2.1	2.5	No	No
Conductivity	?	uS/cm	888	793	899	795	821	869	?	?
Dissolved Organic Carbon	5	mg/L	2.9	1.3	2	1.5	1.2	1.6	No	No
Dissolved Inorganic Carbon	?	mg/L	88.4	69.5	80	71.3	70.6	81.5	?	?
Dissolved Solids	?	mg/L	—	—	—	437	461	488	?	?
Fluoride	1.5 - 2.4	mg/L	0.08	0.06	0.09	0.09	0.07	0.09	No	No
Hardness	80 - 100	mg/L	—	—	—	312	322	360	Yes [1]	No
Langaliers Index	?	—	—	—	—	0.81	0.84	0.8	?	?
Nitrate	10	mg/L	0.787	2.41	1.02	1.62	1.49	0.296	No	No
Nitrite	1	mg/L	0.001	0.001	0.001	0.004	0.005	0.01	No	No
pH	6.5 - 8.5	—	7.47	7.68	7.56	7.76	7.81	7.67	No	No
pH Saturated	6.5 - 8.6	—	—	—	—	6.95	6.97	6.87	No	No
Phosphorus	?	mg/L	0.002	0.005	0.002	0.002	0.002	0.002	?	?
Silicon	?	mg/L	5.2	4.24	4.5	4.54	4.84	5.3	?	?
Sulphate	150 - 500	mg/L	20.2	33.7	37.2	17	38	38.8	No	No
Turbidity	1	FTU	—	—	—	—	—	—	No	No
Phosphate	?	mg/L	0.0023	0.0025	0.0021	0.0005	0.0011	0.0005	?	?
Total Kjeldahl Nitrogen (TKN)	?	mg/L	0.18	0.16	0.12	0.16	0.14	0.11	?	?

[1] The M.A.C of 80 - 100 mg/L for Hardness is an Aesthetic Objective. If hardness Exceeds 500 mg/L further action may be ordered.

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Appendix B4-B

Sumary of Chemical, Physical and Operational Parameters						
Treated						
Parameter	**M.A.C. or I.M.A.C.**	**Units**	**Reservoir April 4, 2012**	**Reservoir Sept 5, 2012**	**Exceedence**	**Action Required**
Alkalinity	30 - 500	mg/L	335	309	No	No
Ammonia & Ammonium (N)	0.15	mg/L	0.003	0.031	No	No
Chloride	250	mg/L	77.2	64.7	No	No
Colour	5	TCU	2.1	0.8	No	No
Conductivity	?	uS/cm	886	829	?	?
Dissolved Organic Carbon	5	mg/L	2	1.2	No	No
Dissolved Inorganic Carbon	?	mg/L	78.2	74.9	?	?
Dissolved Solids	?	mg/L	---	464	?	?
Fluoride	1.5 - 2.4	mg/L	0.09	0.06	No	No
Hardness	80 - 100	mg/L	---	324	Yes	No
Langaliers Index	?	---	---	1.2	?	?
Nitrate	10	mg/L	1.33	1.47	No	No
Nitrite	1	mg/L	0.001	0.003	No	No
pH	6.5 - 8.5	---	7.9	8.1	No	No
pH Saturated	6.5 - 8.6	---	---	6.95	No	No
Phosphorus	?	mg/L	0.002	0.002	?	?
Silicon	?	mg/L	4.4	5.04	?	?
Sulphate	150 - 500	mg/L	32.2	32.3	No	No
Phosphate	?	mg/L	0.0022	0.0005	?	?
Total Kjeldahl Nitrogen (TKN)	?	mg/L	0.12	0.12	?	?

[1]The M.A.C. of 80 - 100 mg/L for Hardness is an aesthetic objective. When Hardness exceeds 500 mg/L, corrective measures may be ordered.

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Appendix B5-A

INORGANICS																						
Raw Water																						
Parameter	M.A.C. or I.M.A.C.	Units	Well #1 April 4, 2012		Well 4 April 4, 2012		Well 5 April 4, 2012		Well #2 Sept 5, 2012		Well #3 Sept 5, 2012		Well #5 Sept 5, 2012		Exceedence	Action Required
Aluminum	0.1	mg/L	0.5	ug/L	0.8	ug/L	0.6	ug/L	0.7	ug/L	0.5	ug/L	0.6	ug/L	No	No
Antimony	0.0001	mg/L	0.5	ug/L	0.7	ug/L	0.8	ug/L	0.5	ug/L	0.5	ug/L	0.6	ug/L	No	No
Arsenic	0.025	mg/L	0.2	ug/L	0.3	ug/L	0.3	ug/L	0.3	ug/L	0.3	ug/L	0.4	ug/L	No	No
Barium	?	mg/L	43.2	ug/L	26.6	ug/L	48.3	ug/L	42.1	ug/L	36.4	ug/L	46.9	ug/L	No	No
Beryllium	?	mg/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	No	No
Boron	5	mg/L	13.1	ug/L	9.4	ug/L	12.1	ug/L	21.9	ug/L	17.7	ug/L	16.4	ug/L	No	No
Cadmium	0.005	mg/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	No	No
Calcium	?	mg/L	---	mg/L	---	mg/L	---	mg/L	102	mg/L	101	mg/L	112	mg/L	No	No
Chromium	0.05	mg/L	0.1	ug/L	0.3	ug/L	0.1	ug/L	0.5	ug/L	0.5	ug/L	0.5	ug/L	No	No
Cobolt	?	mg/L	0.2	ug/L	0.2	ug/L	0.3	ug/L	0.2	ug/L	0.2	ug/L	0.4	ug/L	No	No
Copper	1	mg/L	1.5	ug/L	2	ug/L	3.6	ug/L	2.2	ug/L	2.2	ug/L	4.3	ug/L	No	No
Iron	0.3	mg/L	70	ug/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	10	ug/L	No	No
Lead	0.01	mg/L	0	ug/L	0.1	ug/L	0	ug/L	0.1	ug/L	0.1	ug/L	0.1	ug/L	No	No
Magnesium	?	mg/L	---	mg/L	---	mg/L	---	mg/L	14	mg/L	16.8	mg/L	19.2	mg/L	No	No
Manganese	0.05	mg/L	29.1	ug/L	0.5	ug/L	17	ug/L	21.1	ug/L	12.2	ug/L	27.1	ug/L	No	No
Molybdenum	?	mg/L	0.1	ug/L	0.2	ug/L	0.4	ug/L	0.2	ug/L	0.2	ug/L	0.3	ug/L	No	No
Nickel	?	mg/L	0.4	ug/L	0.4	ug/L	1.5	ug/L	0.5	ug/L	0.6	ug/L	1.9	ug/L	No	No
Potassium	?	mg/L	---	mg/L	---	mg/L	---	mg/L	2.87	mg/L	2.1	mg/L	2.69	mg/L	No	No
Selenium	0.01	mg/L	0.3	ug/L	0.5	ug/L	1.5	ug/L	0.3	ug/L	0.5	ug/L	0.8	ug/L	No	No
Silver	?	mg/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	No	No
Sodium	20	mg/L	---	mg/L	---	mg/L	---	mg/L	45 [2]	mg/L	51.3 [2]	mg/L	46.9 [2]	mg/L	Yes [2]	No
Strontium	?	mg/L	126	ug/L	105	ug/L	142	ug/L	119	ug/L	110	ug/L	144	ug/L	No	No
Thallium	?	mg/L	0	ug/L	0.1	ug/L	0.1	ug/L	0	ug/L	0.1	ug/L	0.1	ug/L	No	No
Titanium	?	mg/L	0.3	ug/L	0.7	ug/L	0.8	ug/L	0.4	ug/L	0.7	ug/L	0.7	ug/L	No	No
Uranium	0.1	mg/L	0.6	ug/L	0.6	ug/L	3.3	ug/L	0.9	ug/L	1.4	ug/L	3.7	ug/L	No	No
Vanadium	?	mg/L	0.2	ug/L	0.4	ug/L	0.7	ug/L	0.2	ug/L	0.4	ug/L	0.5	ug/L	No	No
Zinc	5	mg/L	0.7	ug/L	4.9	ug/L	1.6	ug/L	0.8	ug/L	3.6	ug/L	1.8	ug/L	No	No

[1]The M.A.C. of 0.05 mg/L (50 ug/L) for manganese is a colour related aesthetic objective. Like Iron, Manganese may stain laundered items and plumbing fixtures and in excessive concentrations, may cause undesirable tastes in beverages and drinking water.

[2]The Ontario Spills Action Center and the Thunder Bay District Healt Unit, Medical Officer of Health have been notified. Warning notices have been posted and local doctors advised to alert persons on a sodium restricted diet to use another potable water supply for cooking and drinking purposes. When sodium levels exceed 20000 ug/L, corrective measures may be ordered.

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Appendix B5-B

INORGANICS															
Treated Water															
Parameter	M.A.C. or I.M.A.C.	Units	Reservoir April 4, 2012		Reservoir Sept 5, 2012		Distribution April 4, 2012		Distribution Sept 5, 2012		Exceedence	Action Required
Aluminum	0.1	mg/L	1.6	ug/L	1.2	ug/L	1.2	ug/L	1.1	ug/L	No	No
Antimony	0.006	mg/L	0.7	ug/L	0.5	ug/L	0.8	ug/L	0.5	ug/L	No	No
Arsenic	0.025	mg/L	0.3	ug/L	0.3	ug/L	0.4	ug/L	0.3	ug/L	No	No
Barium	?	mg/L	45.3	ug/L	39.8	ug/L	46.5	ug/L	39.9	ug/L	?	?
Beryllium	?	mg/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	?	?
Boron	5	mg/L	13.6	ug/L	19.6	ug/L	12.5	ug/L	19.5	ug/L	No	No
Cadmium	0.005	mg/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	No	No
Calcium	?	mg/L	—	mg/L	102	mg/L	—	mg/L	102	mg/L	?	?
Chromium	0.05	mg/L	0.2	ug/L	0.7	ug/L	0.1	ug/L	0.5	ug/L	No	No
Cobolt	?	mg/L	0.2	ug/L	0.2	ug/L	0.2	ug/L	0.2	ug/L	?	?
Copper	1	mg/L	88.7	ug/L	97.4	ug/L	116	ug/L	226	ug/L	No	No
Iron	0.3	mg/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	No	No
Lead	0.01	mg/L	0.1	ug/L	0.1	ug/L	0.5	ug/L	0.4	ug/L	No	No
Magnesium	?	mg/L	—	mg/L	16.6	mg/L	—	mg/L	16.6	mg/L	?	?
Manganese	0.05	mg/L	15.4	ug/L	12.2	ug/L	6.2	ug/L	16.7	ug/L	No	No
Molybdenum	?	mg/L	0.3	ug/L	0.2	ug/L	0.3	ug/L	0.2	ug/L	?	?
Nickel	?	mg/L	1.3	ug/L	0.7	ug/L	1.4	ug/L	0.6	ug/L	?	?
Potassium	?	mg/L	—	mg/L	2.34	mg/L	—	mg/L	2.31	mg/L	?	?
Selenium	0.01	mg/L	1	ug/L	0.9	ug/L	1.4	ug/L	0.9	ug/L	No	No
Silver	?	mg/L	0	ug/L	0	ug/L	0	ug/L	0	ug/L	?	?
Sodium	20	mg/L	—	mg/L	51[(2)]	mg/L	—	mg/L	51[(2)]	mg/L	Yes [(2)]	Yes
Strontium	?	mg/L	135	ug/L	116	ug/L	142	ug/L	117	ug/L	?	?
Thallium	?	mg/L	0.1	ug/L	0.1	ug/L	0.1	ug/L	0	ug/L	?	?
Titanium	?	mg/L	0.7	ug/L	0.7	ug/L	0.7	ug/L	0.6	ug/L	?	?
Uranium	0.1	mg/L	2.3	ug/L	1.3	ug/L	2.9	ug/L	1.3	ug/L	No	No
Vanadium	?	mg/L	0.6	ug/L	0.3	ug/L	0.7	ug/L	0.3	ug/L	?	?
Zinc	5	mg/L	3	ug/L	2.7	ug/L	2.2	ug/L	2.5	ug/L	No	No

[2]The Ontario Spills Action Center and the Thunder Bay District Healt Unit, Medical Officer of Health have been notified. Warning notices have been posted and local doctors advised to alert persons on a sodium restricted diet to use another potable water supply for cooking and drinking purposes. When sodium levels exceed 20000 ug/L, corrective measures may be ordered.

T.N.P - Test Not Performed

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Summary of Weekly Bacteriological Sampling

Appendix C-1

Raw Water						
# of Detectable Results						
Adverse Quality Indicator [1]						
Month	**Number of Samples**	**Total[1] Coliform**	**Fecal[1] Coliform**	**E-Coli[1]**	**Exceedence**	**Action Required**
January	20	A	A	A	No	No
February	20	A	A	A	No	No
March	20	A	A	A	No	No
April	25	A	A	A	No	No
May	20	A	A	A	No	No
June	20	A	A	A	No	No
July	25	A	A	A	No	No
August	20	A	A	A	No	No
September	20	A	A	A	No	No
October	25	A	A	A	No	No
November	20	A	A	A	No	No
December	20	A	A	A	No	No
Annual	255	A	A	A	No	No

[1] There are no maximum or interim maximum acceptable concentrations for Coliforms, Fecal Coliforms, or E-Coli. Rather, the presence of any of these parameters in a drinking water sample indicates deteriorating or adverse water quality.The detection of an adverse indicator in an unchlorinated raw water sample that will be subject to the treatment process poses no significant risk to human health.

A Absent
P Prescence

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Summary of Weekly Bacteriological Sampling

Appendix C-2

Treated Water Reservoir									
# of Detectable Results									
Adverse Quality Indicator[1]									
Month	Number of Samples	Total[1] Coliforms	Fecal[1] Coliforms	E-Coli[1]	H.P.C. Number of Tests	Range of Results C.F.U. / 100 ml		Exceedence	Action Required
						Minimum	Maximum		
January	4	A	A	A	4	0	2	N	N
February	4	A	A	A	4	0	2	N	N
March	4	A	A	A	4	0	1	N	N
April	5	A	A	A	5	0	1	N	N
May	4	A	A	A	4	0	1	N	N
June	4	A	A	A	4	0	2	N	N
July	5	A	A	A	5	0	1	N	N
August	4	A	A	A	4	0	1	N	N
September	4	A	A	A	4	0	0	N	N
October	5	A	A	A	5	0	1	N	N
November	4	A	A	A	4	0	0	N	N
December	4	A	A	A	4	0	0	N	N
Annual	51	A	A	A	51	0	2	N	N

[1] There are no maximum or interim maximum acceptable concentrations for Coliforms, Fecal Coliforms, or E-Coli. Rather, the presence of any of these parameters in a drinking water sample indicates deteriorating or adverse water quality.

A Absent
P Present

ANNUAL REPORT
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Summary of Weekly Bacteriological Sampling

Appendix C-3

Distribution System									
Number of Detectable Results									
Adverse Quality Indicators [1]									
Month	Number of Samples	Total[1] Coliforms	Fecal[1] Coliforms	E-Coli[1]	H.P.C. Number of Tests	Range of Results C.F.U. / 100 ml		Exceedence	Action Required
						Minimum	Maximum		
January	16	A	A	A	16	0	3	N	N
February	16	A	A	A	16	0	1	N	N
March	16	A	A	A	16	0	1	N	N
April	20	A	A	A	16	0	3	N	N
May	16	A	A	A	20	0	4	N	N
June	16	A	A	A	16	0	7	N	N
July	20	A	A	A	16	0	128	N	N
August	16	A	A	A	20	0	13	N	N
September	16	A	A	A	16	0	75	N	N
October	20	A	A	A	20	0	5	N	N
November	16	A	A	A	16	0	1	N	N
December	16	A	A	A	16	0	2	N	N
Annual	204	A	A	A	204	0	128	N	N

[1] There are no maximum or interim maximum acceptable concentrations for Coliforms,Fecal Coliforms, or E-Coli. Rather, the presence of any of these parameters in a drinking water sample indicates deteriorating or adverse water quality.

A Absent
P Present

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-a

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results N.T.U			Exceedence	Action Required
				Average	Minimum	Maximum		
Turbidity	1 N.T.U	January	62	0.194	0.10	0.29	N	N
		February	56	0.202	0.12	0.30	N	N
		March	62	0.216	0.08	0.33	N	N
		April	60	0.222	0.09	0.32	N	N
		May	62	0.212	0.08	0.35	N	N
		June	60	0.235	0.13	0.31	N	N
		July	62	0.185	0.07	0.29	N	N
		August	62	0.218	0.13	0.28	N	N
		September	60	0.220	0.15	0.28	N	N
		October	62	0.195	0.13	0.28	N	N
		November	60	0.182	0.12	0.29	N	N
		December	62	0.205	0.12	0.32	N	N
		Annual	730	0.207	0.07	0.35	N	N

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-b

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results T.C.U.			Exceedence	Action Required
				Average	Minimum	Maximum		
Colour	5 T.C.U.	January	62	0.0	0.0	0.0	No	No
		February	56	0.0	0.0	0.0	No	No
		March	62	0.0	0.0	0.0	No	No
		April	60	0.0	0.0	0.0	No	No
		May	62	0.0	0.0	0.0	No	No
		June	60	0.0	0.0	0.0	No	No
		July	62	0.0	0.0	0.0	No	No
		August	62	0.0	0.0	0.0	No	No
		September	60	0.0	0.0	0.0	No	No
		October	62	0.0	0.0	0.0	No	No
		November	60	0.0	0.0	0.0	No	No
		December	62	0.0	0.0	0.0	No	No
		Annual	730	0.0	0.0	0.0	No	No

ANNUAL REPORT
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Summary of Laboratory Testing and Operational Parameters

Appendix D1-c

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Average °C	Exceedence	Action Required
Temperature	4°C to 15°C	January	62	6.8	No	No
		February	56	6.9	No	No
		March	62	7.0	No	No
		April	60	7.1	No	No
		May	62	7.3	No	No
		June	60	7.8	No	No
		July	62	8.0	No	No
		August	62	8.0	No	No
		September	60	7.9	No	No
		October	62	7.7	No	No
		November	60	7.3	No	No
		December	62	7.0	No	No
		Annual	730	7.4	No	No

ANNUAL REPORT
2012
Summary of Laboratory Testing and Operational Parameters

Appendix D1-d

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Average	Exceedence	Action Required
pH	6.5 to 8.5	January	62	7.6	No	No
		February	56	7.7	No	No
		March	62	7.7	No	No
		April	60	7.6	No	No
		May	62	7.6	No	No
		June	60	7.7	No	No
		July	62	7.8	No	No
		August	62	7.7	No	No
		September	60	7.8	No	No
		October	62	7.7	No	No
		November	60	7.7	No	No
		December	62	7.7	No	No
		Annual	730	7.7	No	No

ANNUAL REPORT
2012
Summary of Laboratory Testing and Operational Parameters

Appendix D1-e

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Free Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	62	0.88	0.65	1.19	No	No
		February	56	0.88	0.61	1.19	No	No
		March	62	0.91	0.67	1.15	No	No
		April	60	0.90	0.34	1.27	No	No
		May	62	0.86	0.72	1.00	No	No
		June	60	0.82	0.57	1.23	No	No
		July	62	0.85	0.67	1.27	No	No
		August	62	1.09	0.69	1.39	No	No
		September	60	0.91	0.61	1.27	No	No
		October	62	0.88	0.77	1.04	No	No
		November	60	0.96	0.48	1.19	No	No
		December	62	1.14	1.02	1.35	No	No
		Annual	730	0.92	0.34	1.39	No	No

(1) Ontario Spills Action Centre, Thunder Bay District Health Unit and Ministry of the Environment were informed.
Sodium Hypochlorite dosage rate increased until Free Chlorine Residual leaving the pumphouse was above 0.20 mg/L.
Distribution Samples taken to confirm that Free Chlorine Residual was 0.20 mg/L or greater.

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Summary of Laboratory Testing and Operational Parameters

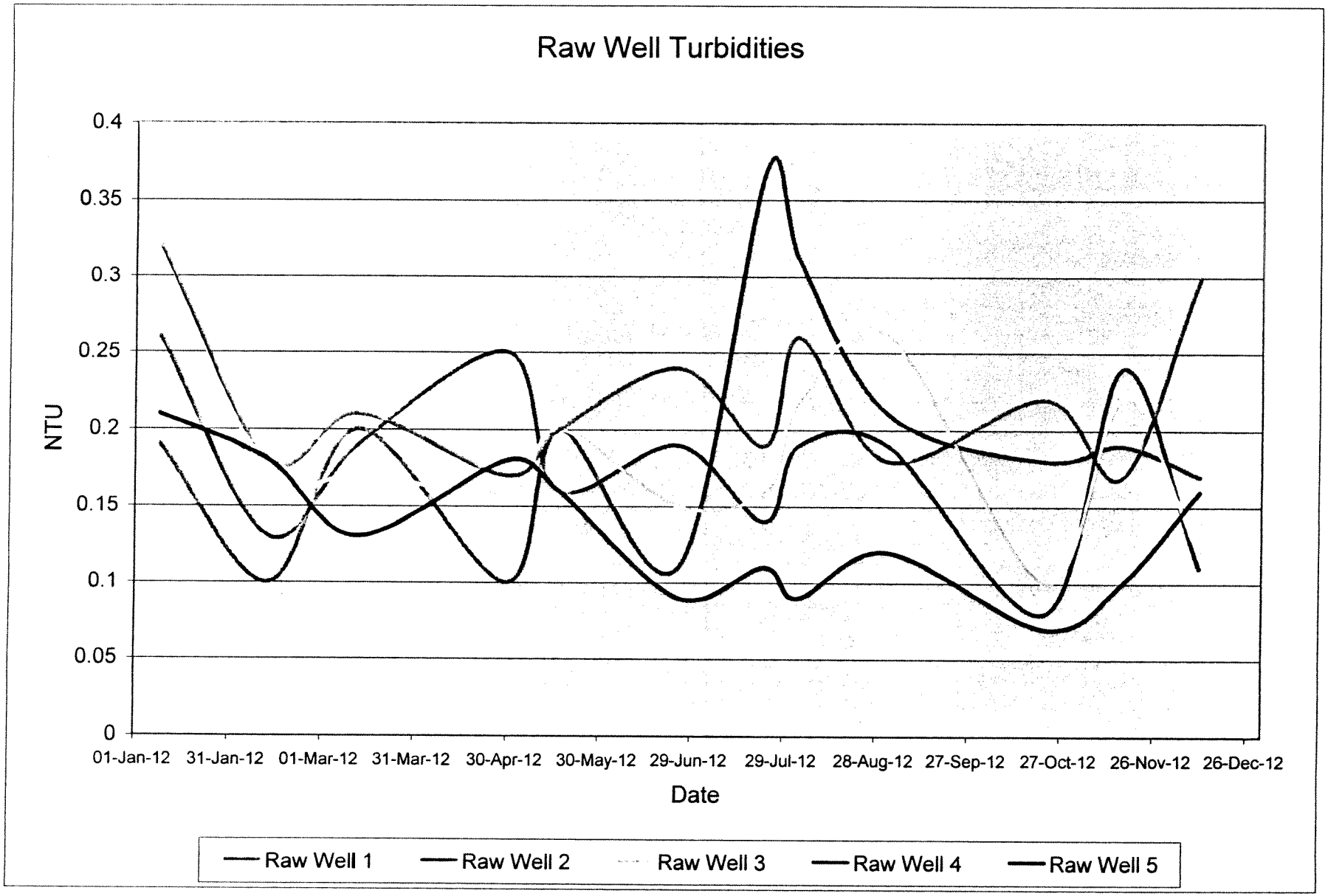
Appendix D1-f

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Total Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	62	1.06	0.82	1.36	No	No
		February	56	1.04	0.78	1.31	No	No
		March	62	1.07	0.81	1.40	No	No
		April	60	1.08	0.44	1.41	No	No
		May	62	1.02	0.86	1.16	No	No
		June	60	0.98	0.73	1.35	No	No
		July	62	1.02	0.82	1.46	No	No
		August	62	1.27	0.87	1.66	No	No
		September	60	1.09	0.71	1.44	No	No
		October	62	1.05	0.90	1.24	No	No
		November	60	1.13	0.60	1.39	No	No
		December	62	1.33	1.20	1.60	No	No
		Annual	730	1.09	0.44	1.66	No	No

2012
Annual Report
MonthlyTurbidity Readings

Appendix D1-g

Date	Raw Well 1 NTU	Raw Well 2 NTU	Raw Well 3 NTU	Raw Well 4 NTU	Raw Well 5 NTU
09-Jan-12	0.19	0.26	0.32	0.32	0.21
13-Feb-12	0.1	0.13	0.17	0.18	0.18
13-Mar-12	0.2	0.19	0.17	0.21	0.13
30-Apr-12	0.1	0.25	0.16	0.17	0.18
17-May-12	0.2	0.16	0.2	0.2	0.16
25-Jun-12	0.11	0.19	0.15	0.24	0.09
23-Jul-12	0.37	0.14	0.16	0.19	0.11
03-Aug-12	0.31	0.19	0.22	0.26	0.09
01-Sep-12	0.21	0.19	0.26	0.18	0.12
22-Oct-12	0.18	0.08	0.1	0.22	0.07
16-Nov-12	0.19	0.24	0.22	0.17	0.1
11-Dec-12	0.17	0.11	0.12	0.3	0.16
Min	**0.1**	**0.08**	**0.1**	**0.17**	**0.07**
Max	**0.37**	**0.26**	**0.32**	**0.32**	**0.21**
Average	**0.19**	**0.18**	**0.19**	**0.22**	**0.13**


Raw Well Turbidities
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
NTU
01-Jan-12
31-Jan-12
01-Mar-12
31-Mar-12
30-Apr-12
30-May-12
29-Jun-12
29-Jul-12
28-Aug-12
27-Sep-12
27-Oct-12
26-Nov-12
26-Dec-12
Date
Raw Well 1
Raw Well 2
Raw Well 3
Raw Well 4
Raw Well 5

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2012
Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 1 FC

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Free Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	31	0.81	0.58	1.14	No	No
		February	29	0.80	0.57	1.05	No	No
		March	31	0.86	0.60	1.17	No	No
		April	30	0.80	0.59	1.00	No	No
		May	31	0.71	0.57	0.83	No	No
		June	30	0.71	0.41	1.07	No	No
		July	31	0.73	0.53	1.03	No	No
		August	31	0.95	0.64	1.27	No	No
		September	30	0.69	0.39	1.02	No	No
		October	31	0.74	0.53	0.92	No	No
		November	30	0.85	0.42	1.07	No	No
		December	31	1.04	0.84	1.25	No	No
		Annual	366	0.81	0.39	1.27	No	No

(1) Ontario Spills Action Centre, Thunder Bay District Health Unit and Ministry of the Environment were informed.
Sodium Hypochlorite dosage rate increased until Free Chlorine Residual leaving the pumphouse was above 0.20 mg/L.
Distribution Samples taken to confirm that Free Chlorine Residual was 0.20 mg/L or greater.

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 1 pH

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Average	Exceedence	Action Required
Distribution Zone #1 pH	6.5 to 8.5	January	31	7.7	No	No
		February	29	7.7	No	No
		March	31	7.8	No	No
		April	30	7.7	No	No
		May	31	7.7	No	No
		June	30	7.8	No	No
		July	31	7.8	No	No
		August	31	7.7	No	No
		September	30	7.9	No	No
		October	31	7.7	No	No
		November	30	7.7	No	No
		December	31	7.7	No	No
		Annual	366	7.8	No	No

ANNUAL REPORT
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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 1 TC

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Total Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	31	0.99	0.74	1.39	No	No
		February	29	0.96	0.70	1.21	No	No
		March	31	1.01	0.76	1.26	No	No
		April	30	0.98	0.98	1.23	No	No
		May	31	0.85	0.73	0.99	No	No
		June	30	0.84	0.53	1.22	No	No
		July	31	0.86	0.60	1.17	No	No
		August	31	1.09	0.78	1.39	No	No
		September	30	0.82	0.50	1.19	No	No
		October	31	0.89	0.65	1.09	No	No
		November	30	1.01	0.52	1.32	No	No
		December	31	1.22	0.99	1.44	No	No
		Annual	366	0.96	0.50	1.44	No	No

(1) Ontario Spills Action Centre, Thunder Bay District Health Unit and Ministry of the Environment were informed.
Sodium Hypochlorite dosage rate increased until Free Chlorine Residual leaving the pumphouse was above 0.20 mg/L.
Distribution Samples taken to confirm that Free Chlorine Residual was 0.20 mg/L or greater.

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 2 FC

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Distribution Zone 2 Free Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	31	0.73	0.47	1.00	No	No
		February	29	0.72	0.47	0.97	No	No
		March	31	0.77	0.55	0.97	No	No
		April	30	0.77	0.59	0.97	No	No
		May	31	0.69	0.60	0.79	No	No
		June	30	0.66	0.35	1.02	No	No
		July	31	0.63	0.43	0.93	No	No
		August	31	0.80	0.48	0.98	No	No
		September	30	0.72	0.45	1.09	No	No
		October	31	0.68	0.51	0.93	No	No
		November	30	0.79	0.39	1.03	No	No
		December	31	0.99	0.83	1.19	No	No
		Annual	366	0.75	0.35	1.19	No	No

(1) Ontario Spills Action Centre, Thunder Bay District Health Unit and Ministry of the Environment were informed.
Sodium Hypochlorite dosage rate increased until Free Chlorine Residual leaving the pumphouse was above 0.20 mg/L.
Distribution Samples taken to confirm that Free Chlorine Residual was 0.20 mg/L or greater.

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 2 TC

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Distribution Zone 2 Total Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	31	0.89	0.66	0.82	No	No
		February	29	0.88	0.61	1.22	No	No
		March	31	0.91	0.68	1.10	No	No
		April	30	0.93	0.72	1.16	No	No
		May	31	0.84	0.72	0.96	No	No
		June	30	0.78	0.45	1.14	No	No
		July	31	0.75	0.50	1.10	No	No
		August	31	0.94	0.61	1.12	No	No
		September	30	0.85	0.56	1.20	No	No
		October	31	0.83	0.66	1.06	No	No
		November	30	0.94	0.50	1.20	No	No
		December	31	1.16	0.99	1.40	No	No
		Annual	366	0.89	0.45	1.40	No	No

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 2 pH

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Average	Exceedence	Action Required
Distribution Zone #2 pH	6.5 to 8.5	January	31	7.7	No	No
		February	29	7.7	No	No
		March	31	7.8	No	No
		April	30	7.7	No	No
		May	31	7.7	No	No
		June	30	7.8	No	No
		July	31	7.9	No	No
		August	31	7.8	No	No
		September	30	7.9	No	No
		October	31	7.7	No	No
		November	30	7.7	No	No
		December	31	7.8	No	No
		Annual	366	7.8	No	No

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 3 FC

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Distribution Zone 3 Free Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	31	0.75	0.53	1.02	No	No
		February	29	0.73	0.50	1.00	No	No
		March	31	0.76	0.54	0.97	No	No
		April	30	0.72	0.42	0.94	No	No
		May	31	0.62	0.42	0.74	No	No
		June	30	0.55	0.26	0.85	No	No
		July	31	0.45	0.36	0.59	No	No
		August	31	0.66	0.36	0.84	No	No
		September	30	0.61	0.36	0.88	No	No
		October	31	0.52	0.36	0.76	No	No
		November	30	0.66	0.28	0.87	No	No
		December	31	0.84	0.65	1.09	No	No
		Annual	366	0.66	0.26	1.09	No	No

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 3 TC

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Distribution Zone 3 Total Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	31	0.89	0.66	1.18	No	No
		February	29	0.88	0.63	1.15	No	No
		March	31	0.89	0.68	1.07	No	No
		April	30	0.87	0.55	1.14	No	No
		May	31	0.75	0.54	0.86	No	No
		June	30	0.65	0.35	1.00	No	No
		July	31	0.55	0.44	0.87	No	No
		August	31	0.78	0.48	0.96	No	No
		September	30	0.73	0.46	1.03	No	No
		October	31	0.64	0.46	0.90	No	No
		November	30	0.79	0.37	1.02	No	No
		December	31	0.99	0.79	1.29	No	No
		Annual	366	0.63	0.35	1.29	No	No

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 3 pH

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Average	Exceedence	Action Required
Distribution Zone #3 pH	6.5 to 8.5	January	31	7.7	No	No
		February	29	7.8	No	No
		March	31	7.8	No	No
		April	30	7.7	No	No
		May	31	7.7	No	No
		June	30	7.8	No	No
		July	31	7.9	No	No
		August	31	7.8	No	No
		September	30	7.9	No	No
		October	31	7.7	No	No
		November	30	7.7	No	No
		December	31	7.8	No	No
		Annual	366	7.8	No	No

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 4 FC

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Distribution Zone 4 Free Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	31	0.74	0.50	1.07	No	No
		February	29	0.73	0.49	1.00	No	No
		March	31	0.75	0.48	0.96	No	No
		April	30	0.75	0.41	0.98	No	No
		May	31	0.68	0.51	0.95	No	No
		June	30	0.77	0.40	1.08	No	No
		July	31	0.69	0.37	0.92	No	No
		August	31	0.91	0.46	1.21	No	No
		September	30	0.78	0.32	1.11	No	No
		October	31	0.72	0.61	0.92	No	No
		November	30	0.77	0.39	1.03	No	No
		December	31	0.93	0.71	1.11	No	No
		Annual	366	0.77	0.32	1.21	No	No

(1) Ontario Spills Action Centre, Thunder Bay District Health Unit and Ministry of the Environment were informed.
Sodium Hypochlorite dosage rate increased until Free Chlorine Residual leaving the pumphouse was above 0.20 mg/L.
Distribution Samples taken to confirm that Free Chlorine Residual was 0.20 mg/L or greater.

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Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 4 pH

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Average	Exceedence	Action Required
Distribution Zone #4 pH	6.5 to 8.5	January	31	7.7	No	No
		February	29	7.8	No	No
		March	31	7.8	No	No
		April	30	7.8	No	No
		May	31	7.7	No	No
		June	30	7.8	No	No
		July	31	7.9	No	No
		August	31	7.8	No	No
		September	30	7.9	No	No
		October	31	7.7	No	No
		November	30	7.7	No	No
		December	31	7.8	No	No
		Annual	366	7.8	No	No

ANNUAL REPORT
2012
Summary of Laboratory Testing and Operational Parameters

Appendix D1-g Zone 4 TC

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results mg/L			Exceedence	Action Required
				Average	Minimum	Maximum		
Distribution Zone 4 Total Chlorine Residual	0.05 mg/L (minium) to 4.00 mg/L (maximum)	January	31	0.91	0.65	1.20	No	No
		February	29	0.88	0.60	1.08	No	No
		March	31	0.89	0.62	1.11	No	No
		April	30	0.90	0.48	1.20	No	No
		May	31	0.81	0.61	1.11	No	No
		June	30	0.77	0.40	1.08	No	No
		July	31	0.81	0.45	1.07	No	No
		August	31	1.04	0.58	1.34	No	No
		September	30	0.93	0.50	1.27	No	No
		October	31	0.86	0.72	1.09	No	No
		November	30	0.92	0.48	1.20	No	No
		December	31	1.10	0.84	1.28	No	No
		Annual	366	0.63	0.40	1.34	No	No

ANNUAL REPORT
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Summary of Daily On-Line Instrumentation

Appendix D2-a

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results N.T.U			Exceedence	Action Required
				Average	Minimum	Maximum		
Turbidity	1 N.T.U	January	62	0.092	0.06	0.134	No	No
Hach 1720D Turbidimeter		February	56	0.079	0.05	0.103	No	No
		March	62	0.092	0.066	0.136	No	No
		April	60	0.131	0.089	0.167	No	No
		May	62	0.123	0.079	0.347	No	No
		June	60	0.118	0.080	0.288	No	No
		July	62	0.137	0.093	0.217	No	No
		August	62	0.165	0.104	0.266	No	No
		September	60	0.149	0.118	0.179	No	No
		October	62	0.154	0.130	0.186	No	No
		November	60	0.139	0.088	0.215	No	No
		December	62	0.140	0.097	0.306	No	No
		Annual	730	0.127	0.050	0.347	No	No

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Summary of Daily On-Line Instrumentation

Appendix D2-b

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Range of Results (mg/L) Average	Range of Results (mg/L) Minimum	Range of Results (mg/L) Maximum	Exceedence	Action Required
Chlorine Residual	0.05 mg/L (minimum) to 4.00 mg/L (maximum)	January	62	0.94	0.69	1.25	No	No
Hach CL17 Free Chlorine Analyzer		February	56	0.88	0.59	1.19	No	No
		March	62	0.92	0.64	1.21	No	No
		April	60	0.93	0.32	1.33	No	No
		May	62	0.86	0.75	1.01	No	No
		June	60	0.81	0.52	1.26	No	No
		July	62	0.83	0.66	1.3	No	No
		August	62	1.07	0.65	1.42	No	No
		September	60	0.88	0.54	1.24	No	No
		October	62	0.83	0.72	1.30	No	No
		November	60	0.95	0.42	1.30	No	No
		December	62	1.22	1.10	1.43	No	No
		Annual	730	0.93	0.32	1.43	No	No

(1)The Ontario Spills Action Centre, Thunder Bay District Health Unit and the Ministry of Environment must be notified.
Chlorine dosage rate is increased to return Free Chlorine Residual to 0.20 mg/L leaving the Treatment Plant.
Distribution Samples are taken to confirm Free Chlorine is greater than 0.20 mg/L or higher.

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Summary of Daily On-Line Instrumentation

Appendix D2-c

Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Average	Exceedence	Action Required
pH	6.5 to 8.5	January	62	7.61	No	No
Hach EC 310		February	56	7.72	No	No
		March	62	7.79	No	No
		April	60	7.73	No	No
		May	62	7.79	No	No
		June	60	7.83	No	No
		July	62	7.78	No	No
		August	62	7.87	No	No
		September	60	7.85	No	No
		October	62	7.80	No	No
		November	60	7.84	No	No
		December	62	7.80	No	No
		Annual	730	7.78	No	No

ANNUAL REPORT
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Summary of Daily On-Line Instrumentation

Appendix D2-d

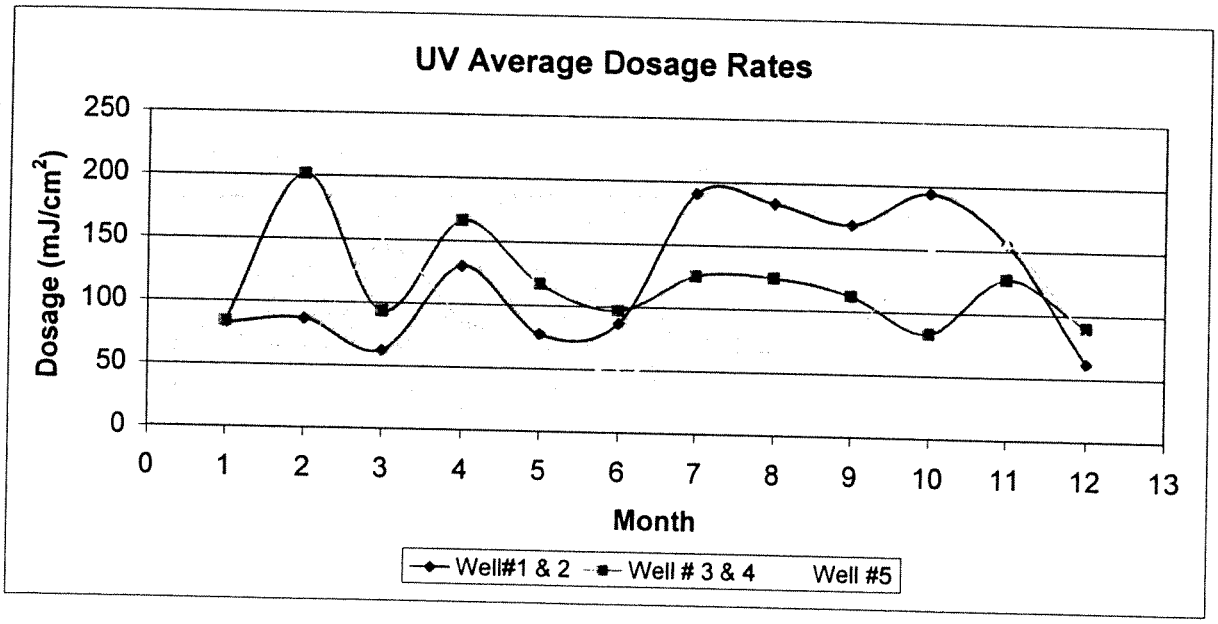
Parameter	M.A.C. or I.M.A.C.	Month	Number of Samples	Average °C	Exceedence	Action Required
Temperature Hach EC 310	4 °C to 15 °C	January	62	7.1	No	No
		February	56	7.2	No	No
		March	62	7.3	No	No
		April	60	7.3	No	No
		May	62	7.5	No	No
		June	60	8.0	No	No
		July	62	8.2	No	No
		August	62	8.2	No	No
		September	60	8.1	No	No
		October	62	7.9	No	No
		November	60	7.5	No	No
		December	62	7.2	No	No
		Annual	730	7.6	No	No

Annual UV Treatment
2012
Dosage

Appendix D2E

Date	Well#1 & 2			Well # 3 & 4			Well #5		
	min	max	average	min	max	average	min	max	average
January	0	255	83	0	448	85	0	282	76
February	0	308	87	0	399	202	0	145	69
March	0	317	63	0	160	94	0	227	147
April	0	290	131	0	227	167	0	227	90
May	0	290	78	0	351	118	0	194	69
June	0	396	87	0	387	98	0	198	47
July	0	520	191	0	375	126	0	229	68
August	0	291	184	0	170	126	0	220	68
September	0	299	169	0	174	113	0	150	85
October	0	290	195	0	165	84	0	255	148
November	0	282	156	0	165	128	0	264	157
December	0	139	62	0	165	91	0	229	84
Annual (min, max, Average)	0	520	124	0	448	119	0	282	92

UV Dose are measured using mJ/cm2 units. Zero reading are measured during well shut down and the average is based on up to 10 000 readings. These reactors are designed to achieve maximum inactivation at a minimum dosage rate of 42 mJ/cm2



ANNUAL REPORT
2012
SUMMARY OF MONTHLY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-1

YEAR 2012 MONTH	WELL 1 FLOW m3	WELL 2 FLOW m3	WELL 3 FLOW m3	WELL 4 FLOW m3	WELL 5 FLOW m3	WELL FIELD FLOW m3	RAW FLOW m3	TREATED FLOW m3	PERCENTAGE RAW WATER WELL FIELD	PERCENTAGE TREATED WATER WELL FIELD	PERCENTAGE RAW WATER TREATED WATER
JANUARY	584.81	19718.60	3771.05	953.01	6576.31	31603.78	30493.69	30136.82	-3.64	-4.64	-1.18
FEBRUARY	603.89	9362.44	11344.27	407.16	9597.63	31315.39	29865.39	29730.15	-4.86	-5.06	-0.45
MARCH	385.30	5206.82	10529.92	494.29	12605.69	29222.02	27841.90	27026.35	-4.96	-7.51	-3.02
APRIL	207.65	15090.33	8159.23	622.23	2293.31	26372.75	25460.72	25311.91	-3.58	-4.02	-0.59
MAY	248.17	13533.10	5187.82	348.14	10506.23	29823.46	28736.83	28642.99	-3.78	-3.96	-0.33
JUNE	353.77	8568.90	12283.92	409.77	12262.91	33879.27	32449.98	32099.87	-4.40	-5.25	-1.09
JULY	744.81	10936.52	6596.70	1625.88	10759.65	30663.56	30226.62	28712.07	-1.45	-6.36	-5.27
AUGUST	3521.06	6089.53	8519.55	3114.31	4901.08	26145.53	24624.92	23566.52	-6.18	-9.86	-4.49
SEPTEMBER	2153.98	8883.57	5489.12	11.17	4297.81	20835.65	21206.06	19855.60	1.75	-4.70	-6.80
OCTOBER	3639.02	4520.94	1990.42	548.69	8497.74	19196.81	18960.77	18384.04	-1.24	-4.23	-3.14
NOVEMBER	437.61	5794.80	10801.41	566.27	911.63	18511.71	18186.49	17736.04	-1.79	-4.19	-2.54
DECEMBER	1202.25	4832.95	2955.15	6333.41	7620.70	22944.46	23085.90	21799.89	0.61	-4.99	-5.90
ANNUAL	14082.32	112538.50	87628.56	15434.33	90830.69	320514.39	311139.27	303002.25	-3.01	-5.46	-2.69

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ACTUAL DAILY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-2

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
January	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Sunday	52.08	95.81	34.74	98.57	635.01	916.21	905.36	886.52	-1.20	-3.24	-2.13
2	Monday	13.49	0.16	34.92	0.00	919.41	967.98	939.10	926.54	-3.08	-4.28	-1.36
3	Tuesday	10.40	865.49	41.62	12.29	48.90	978.70	953.87	919.02	-2.60	-6.10	-3.79
4	Wednesday	17.37	817.97	48.21	20.82	54.29	958.66	925.19	910.59	-3.62	-5.01	-1.60
5	Thursday	47.10	732.13	66.93	34.66	0.10	880.92	848.00	900.01	-3.88	2.17	5.78
6	Friday	23.73	908.43	0.03	73.39	67.81	1073.39	1026.03	918.48	-4.62	-14.43	-11.71
7	Saturday	0.03	953.67	0.00	64.95	0.00	1018.65	974.35	962.78	-4.55	-5.48	-1.20
8	Sunday	27.00	811.05	0.03	17.48	78.68	934.24	907.64	962.09	-2.93	2.98	5.66
9	Monday	29.01	748.31	81.03	24.57	73.82	956.74	931.16	899.24	-2.75	-6.01	-3.55
10	Tuesday	0.01	895.87	0.02	23.68	60.35	979.93	949.89	912.54	-3.16	-6.88	-4.09
11	Wednesday	27.38	786.57	0.01	0.00	81.77	895.73	858.20	900.92	-4.37	0.58	4.74
12	Thursday	0.01	978.05	0.00	0.00	0.00	978.06	938.63	896.79	-4.20	-8.31	-4.67
13	Friday	46.75	621.71	132.36	42.49	84.59	927.90	889.33	890.00	-4.34	-4.08	0.08
14	Saturday	19.94	871.32	54.59	41.90	0.06	987.81	946.43	947.39	-4.37	-4.09	0.10
15	Sunday	0.04	934.04	0.01	34.43	89.69	1058.21	1021.65	975.48	-3.58	-7.82	-4.73
16	Monday	8.98	71.82	799.83	13.80	76.99	971.42	921.81	902.60	-5.38	-7.08	-2.13
17	Tuesday	4.42	0.17	876.65	0.00	12.01	893.25	837.73	943.70	-6.63	5.65	11.23
18	Wednesday	12.58	0.17	988.55	0.00	35.48	1036.78	979.45	924.54	-5.85	-10.83	-5.94
19	Thursday	56.18	430.18	204.66	46.19	217.74	954.95	922.86	929.37	-3.48	-2.68	0.70
20	Friday	19.73	946.97	34.90	9.56	0.03	1011.19	970.98	929.35	-4.14	-8.09	-4.48
21	Saturday	0.01	1103.55	0.00	0.00	0.00	1103.56	1060.19	1005.28	-4.09	-8.91	-5.46
22	Sunday	0.05	1043.69	0.00	0.00	0.00	1043.74	1002.84	1067.84	-4.08	2.31	6.09
23	Monday	9.28	170.59	29.85	13.40	900.65	1123.77	1081.78	1036.33	-3.88	-7.78	-4.39
24	Tuesday	14.92	46.19	40.01	19.36	945.35	1065.83	1039.67	1045.68	-2.52	-1.89	0.57
25	Wednesday	0.07	76.03	0.04	47.08	932.49	1055.71	1025.65	1039.33	-2.93	-1.55	1.32
26	Thursday	49.19	0.17	140.15	0.00	957.12	1146.63	1097.49	1059.73	-4.48	-7.58	-3.56
27	Friday	0.05	795.09	60.34	176.53	96.25	1128.26	1120.56	1032.79	-0.69	-8.46	-8.50
28	Saturday	18.04	1102.83	0.00	34.37	0.00	1155.24	1103.59	1129.65	-4.68	-2.22	2.31
29	Sunday	37.83	885.99	0.06	60.71	98.28	1082.87	1065.34	1132.42	-1.65	4.58	5.92
30	Monday	12.26	1145.07	25.29	8.41	29.70	1220.73	1172.08	1068.14	-4.15	-12.50	-9.73
31	Tuesday	26.88	879.51	76.22	34.37	79.74	1096.72	1076.84	1081.68	-1.85	-1.37	0.45
	TOTALS	584.81	19718.60	3771.05	953.01	6576.31	31603.78	30493.69	30136.82	-3.64	-4.64	-1.18

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APPENDIX E-3

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
February	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Wednesday	0.08	991.87	0.00	53.00	0.00	1044.95	1000.55	1067.44	-4.44	2.15	6.27
2	Thursday	21.90	287.55	824.40	37.23	0.11	1171.19	1098.77	1066.17	-6.59	-8.97	-3.06
3	Friday	0.09	0.17	1140.02	0.00	0.15	1140.43	1065.02	1073.52	-7.08	-5.87	0.79
4	Saturday	0.07	0.17	1203.30	0.00	0.06	1203.60	1124.04	1112.75	-7.08	-7.55	-1.01
5	Sunday	0.05	0.17	1329.34	0.00	0.10	1329.66	1244.38	1183.79	-6.85	-10.97	-5.12
6	Monday	11.09	33.81	21.23	23.96	1042.14	1132.23	1092.80	1100.36	-3.61	-2.81	0.69
7	Tuesday	57.84	143.83	163.85	75.94	703.80	1145.26	1103.41	1119.42	-3.79	-2.26	1.43
8	Wednesday	0.00	106.26	0.03	56.04	1046.16	1208.49	1167.88	1114.42	-3.48	-7.78	-4.80
9	Thursday	0.00	0.17	0.02	0.00	1139.14	1139.33	1095.19	1081.68	-4.03	-5.06	-1.25
10	Friday	0.00	697.62	0.00	0.00	341.33	1038.95	996.09	1006.00	-4.30	-3.17	0.99
11	Saturday	34.81	866.73	62.76	26.44	82.90	1073.64	1035.53	1061.36	-3.68	-1.14	2.43
12	Sunday	9.73	1062.57	0.02	0.00	27.22	1099.54	1055.62	1088.06	-4.16	-1.04	2.98
13	Monday	15.50	1027.60	23.58	18.00	24.24	1108.92	1067.80	1023.52	-3.85	-7.70	-4.33
14	Tuesday	44.58	980.08	0.00	0.00	0.00	1024.66	987.51	959.79	-3.76	-6.33	-2.89
15	Wednesday	54.51	59.92	904.63	0.10	0.13	1019.29	951.74	958.63	-7.10	-5.95	0.72
16	Thursday	52.75	0.16	766.58	27.57	89.31	936.37	878.38	958.61	-6.60	2.38	8.37
17	Friday	0.01	0.16	1129.30	0.00	0.00	1129.47	1054.14	949.05	-7.15	-15.97	-11.07
18	Saturday	0.00	0.17	978.86	0.00	0.00	979.03	913.82	1012.85	-7.14	3.45	9.78
19	Sunday	0.00	0.17	1179.30	0.00	0.00	1179.47	1102.00	1006.24	-7.03	-14.69	-9.52
20	Monday	35.18	0.17	943.77	0.00	93.02	1072.14	1031.59	1022.16	-3.93	-4.66	-0.92
21	Tuesday	34.66	24.22	90.60	8.53	779.65	937.66	918.81	982.69	-2.05	4.80	6.50
22	Wednesday	51.49	49.37	80.62	0.17	874.30	1055.95	1011.57	979.28	-4.39	-7.26	-3.30
23	Thursday	53.26	107.25	144.64	0.00	755.54	1060.69	1030.67	991.47	-2.91	-6.53	-3.95
24	Friday	41.86	0.16	119.01	0.01	904.77	1065.81	1017.31	967.29	-4.77	-9.24	-5.17
25	Saturday	37.07	932.25	106.51	0.01	11.27	1087.11	1039.95	1027.10	-4.53	-5.52	-1.25
26	Sunday	0.00	1038.03	0.00	0.00	0.00	1038.03	995.85	1068.68	-4.24	2.95	6.81
27	Monday	21.11	869.82	55.63	35.46	64.96	1046.98	1003.29	1008.57	-4.35	-3.67	0.52
28	Tuesday	26.25	0.16	76.23	0.00	841.85	944.49	906.91	894.12	-4.14	-5.33	-1.43
29	Wednesday	0.00	81.83	0.04	44.70	775.48	902.05	874.77	845.13	-3.12	-6.31	-3.51
	TOTALS	603.89	9362.44	11344.27	407.16	9597.63	31315.39	29865.39	29730.15	-4.86	-5.06	-0.45

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APPENDIX E-4

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
March	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Thursday	48.99	0.17	141.00	0.02	776.30	966.48	920.89	846.71	-4.95	-12.39	-8.76
2	Friday	0.02	0.16	0.00	0.00	796.80	796.98	766.20	826.21	-4.02	3.67	7.26
3	Saturday	27.03	0.17	0.03	38.98	842.41	908.62	876.45	906.84	-3.67	-0.20	3.35
4	Sunday	0.00	0.17	0.00	0.00	1046.13	1046.30	1006.53	921.86	-3.95	-11.89	-9.18
5	Monday	13.27	41.39	31.26	18.46	737.90	842.28	817.70	855.96	-3.01	1.62	4.47
6	Tuesday	43.57	643.15	33.03	69.90	73.56	863.21	825.16	837.98	-4.61	-2.92	1.53
7	Wednesday	35.16	773.25	101.78	0.00	0.05	910.24	867.14	865.90	-4.97	-4.87	-0.14
8	Thursday	0.02	818.95	0.00	0.00	0.00	818.97	784.90	834.51	-4.34	1.90	5.94
9	Friday	75.13	778.05	0.00	124.55	0.05	977.78	943.01	814.06	-3.69	-16.74	-15.84
10	Saturday	17.41	864.33	0.00	26.99	0.02	908.75	875.61	879.02	-3.78	-3.27	0.39
11	Sunday	0.04	838.42	0.00	0.00	0.00	838.46	804.01	847.99	-4.28	1.14	5.19
12	Monday	35.79	213.35	539.09	76.59	27.68	892.50	868.04	842.29	-2.82	-5.63	-3.06
13	Tuesday	10.48	32.98	854.14	17.74	29.10	944.44	894.24	855.69	-5.61	-9.40	-4.51
14	Wednesday	21.20	50.15	758.95	37.02	57.98	925.30	879.66	838.28	-5.19	-9.40	-4.94
15	Thursday	25.29	42.47	681.04	21.04	70.21	840.05	795.00	847.92	-5.67	0.94	6.24
16	Friday	0.05	0.10	1451.80	0.00	0.09	1452.04	1361.58	868.81	-6.64	-40.17	-56.72
17	Saturday	0.10	0.13	1181.41	0.00	0.08	1181.72	1054.93	875.05	-12.02	-25.95	-20.56
18	Sunday	14.55	0.17	1000.97	0.00	37.99	1053.68	996.26	992.79	-5.76	-5.78	-0.35
19	Monday	7.86	23.17	937.17	11.51	19.58	999.29	943.46	889.32	-5.92	-11.00	-6.09
20	Tuesday	0.08	0.17	904.64	0.00	0.11	905.00	844.41	895.85	-7.18	-1.01	5.74
21	Wednesday	0.06	0.17	1002.46	0.00	0.14	1002.83	936.70	856.41	-7.06	-14.60	-9.38
22	Thursday	0.03	0.16	856.07	0.00	0.08	856.34	798.45	888.38	-7.25	3.74	10.12
23	Friday	0.02	57.15	31.35	35.04	860.53	984.09	954.10	854.16	-3.14	-13.20	-11.70
24	Saturday	0.02	0.16	0.00	0.00	923.03	923.21	886.80	929.98	-4.11	0.73	4.64
25	Sunday	0.06	0.16	0.00	0.00	918.07	918.29	881.87	921.35	-4.13	0.33	4.29
26	Monday	8.98	27.32	23.72	16.45	922.42	998.89	970.28	872.65	-2.95	-12.64	-11.19
27	Tuesday	0.03	0.16	0.01	0.00	866.38	866.58	832.37	880.85	-4.11	1.65	5.50
28	Wednesday	0.02	0.16	0.00	0.00	811.92	812.10	780.75	852.21	-4.02	4.94	8.39
29	Thursday	0.01	0.16	0.00	0.00	973.08	973.25	933.52	859.78	-4.26	-11.66	-8.58
30	Friday	0.01	0.16	0.00	0.00	912.32	912.49	876.80	854.77	-4.07	-6.33	-2.58
31	Saturday	0.02	0.16	0.00	0.00	901.68	901.86	865.08	912.77	-4.25	1.21	5.22
	TOTALS	385.30	5206.82	10529.92	494.29	12605.69	29222.02	27841.90	27026.35	-4.96	-7.51	-3.02

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APPENDIX E-5

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
APRIL	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Sunday	0.01	15.67	0.00	0.00	908.34	924.02	889.74	937.16	-3.85	1.42	5.06
2	Monday	8.87	54.35	28.76	21.15	859.47	972.60	938.23	866.29	-3.66	-10.93	-8.30
3	Tuesday	0.03	799.96	0.00	0.00	0.00	799.99	774.80	829.53	-3.25	3.69	6.60
4	Wednesday	19.36	837.82	0.04	39.40	77.38	974.00	953.80	842.23	-2.12	-13.53	-13.25
5	Thursday	11.40	632.13	0.03	72.33	141.82	857.71	839.06	803.92	-2.22	-6.27	-4.37
6	Friday	21.71	748.69	39.51	31.41	0.00	841.32	812.71	864.50	-3.52	2.76	5.99
7	Saturday	18.75	751.67	54.13	14.84	28.91	868.30	851.58	846.73	-1.96	-2.48	-0.57
8	Sunday	0.04	769.20	0.00	0.00	0.00	769.24	774.23	817.15	0.64	6.23	5.25
9	Monday	0.04	882.39	0.00	0.00	0.00	882.43	856.01	849.49	-3.09	-3.73	-0.77
10	Tuesday	7.98	767.19	21.19	13.72	22.78	832.86	806.79	800.16	-3.23	-3.93	-0.83
11	Wednesday	0.04	865.13	0.00	0.00	0.00	865.17	837.35	802.38	-3.32	-7.26	-4.36
12	Thursday	0.03	726.73	78.71	0.38	79.67	885.52	874.24	820.70	-1.29	-7.32	-6.52
13	Friday	0.03	845.80	0.00	0.00	0.00	845.83	818.50	778.89	-3.34	-7.91	-5.09
14	Saturday	0.03	811.96	0.00	0.00	0.00	811.99	785.50	831.74	-3.37	2.43	5.56
15	Sunday	0.03	794.28	0.00	0.00	0.00	794.31	769.14	830.93	-3.27	4.61	7.44
16	Monday	8.39	771.45	27.72	18.44	29.56	855.56	833.16	809.99	-2.69	-5.33	-2.86
17	Tuesday	0.05	704.74	0.08	34.30	67.69	806.86	791.52	797.78	-1.94	-1.13	0.78
18	Wednesday	20.73	763.85	55.60	0.02	0.04	840.24	811.44	815.23	-3.55	-2.98	0.46
19	Thursday	0.08	868.37	0.00	0.00	0.00	868.45	841.31	818.39	-3.23	-5.76	-2.80
20	Friday	0.08	863.00	0.00	14.17	0.00	877.25	847.64	808.55	-3.49	-7.83	-4.83
21	Saturday	25.02	769.03	0.00	42.74	0.03	836.82	912.31	890.15	8.27	6.37	-2.49
22	Sunday	0.11	0.16	904.67	0.07	0.12	905.13	843.21	946.88	-7.34	4.61	10.95
23	Monday	6.24	19.04	911.64	17.23	23.22	977.37	921.54	842.46	-6.06	-13.80	-9.39
24	Tuesday	0.04	0.16	848.26	0.00	0.08	848.54	791.66	827.53	-7.18	-2.48	4.33
25	Wednesday	49.55	0.16	916.22	24.85	0.10	990.88	926.28	849.13	-6.97	-14.31	-9.09
26	Thursday	0.01	0.16	584.62	247.91	0.05	832.75	781.01	865.13	-6.62	3.89	9.72
27	Friday	0.01	0.16	959.00	0.01	0.10	959.28	896.77	829.69	-6.97	-13.51	-8.08
28	Saturday	0.01	0.16	867.49	0.00	0.07	867.73	809.37	911.34	-7.21	5.03	11.19
29	Sunday	0.02	0.16	1151.05	0.00	0.05	1151.28	1075.78	944.52	-7.02	-17.96	-13.90
30	Monday	8.96	26.76	710.51	29.26	53.83	829.32	796.04	833.34	-4.18	0.48	4.48
	TOTALS	207.65	15090.33	8159.23	622.23	2293.31	26372.75	25460.72	25311.91	-3.58	-4.02	-0.59

ANNUAL REPORT
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ACTUAL DAILY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-6

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
May	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Tuesday	0.02	0.16	894.51	0.00	0.18	894.87	837.70	849.43	-6.82	-5.08	1.38
2	Wednesday	0.04	0.17	1106.45	0.00	0.07	1106.73	1034.25	1031.50	-7.01	-6.80	-0.27
3	Thursday	0.03	0.17	904.92	0.00	0.10	905.22	845.52	861.63	-7.06	-4.82	1.87
4	Friday	42.41	75.84	0.04	47.69	710.97	876.95	856.09	828.53	-2.44	-5.52	-3.33
5	Saturday	3.84	0.16	9.88	0.00	891.12	905.00	868.05	902.74	-4.26	-0.25	3.84
6	Sunday	47.42	31.13	103.45	0.00	897.94	1079.94	1038.14	937.58	-4.03	-13.18	-10.73
7	Monday	2.70	8.34	35.30	20.30	782.92	849.56	827.31	853.79	-2.69	0.50	3.10
8	Tuesday	0.03	0.16	0.00	0.00	833.21	833.40	802.40	851.36	-3.86	2.16	5.75
9	Wednesday	10.46	0.17	0.00	0.16	930.94	941.73	907.20	910.96	-3.81	-3.27	0.41
10	Thursday	25.58	0.17	0.00	0.00	850.37	876.12	845.20	867.78	-3.66	-0.95	2.60
11	Friday	0.04	0.17	0.00	0.00	925.35	925.56	892.37	867.52	-3.72	-6.27	-2.86
12	Saturday	0.05	0.17	0.00	0.00	988.97	989.19	953.29	955.44	-3.77	-3.41	0.23
13	Sunday	0.06	0.17	0.00	0.00	996.22	996.45	959.59	971.17	-3.84	-2.54	1.19
14	Monday	14.04	42.78	40.73	26.18	1022.17	1145.90	1122.50	1021.04	-2.08	-10.90	-9.94
15	Tuesday	0.05	541.37	0.01	0.00	338.95	880.38	850.86	888.74	-3.47	0.95	4.26
16	Wednesday	0.04	876.60	0.01	106.91	0.00	983.56	949.40	898.63	-3.60	-8.63	-5.65
17	Thursday	13.72	851.11	36.48	23.33	42.85	967.49	945.07	919.20	-2.37	-4.99	-2.81
18	Friday	28.56	725.71	3.78	64.62	77.72	900.39	868.43	889.09	-3.68	-1.26	2.32
19	Saturday	17.24	996.48	48.86	0.00	0.04	1062.62	1028.49	970.68	-3.32	-8.65	-5.96
20	Sunday	0.05	932.68	0.00	0.00	0.00	932.73	903.77	903.53	-3.20	-3.13	-0.03
21	Monday	0.04	978.74	0.00	0.00	0.00	978.78	947.95	1002.61	-3.25	2.43	5.45
22	Tuesday	12.31	830.04	26.07	17.59	30.17	916.18	892.57	922.91	-2.65	0.73	3.29
23	Wednesday	0.05	946.78	0.00	0.00	0.00	946.83	917.14	927.92	-3.24	-2.00	1.16
24	Thursday	0.06	1003.58	0.00	0.00	0.00	1003.64	973.23	980.14	-3.12	-2.34	0.71
25	Friday	0.04	929.15	0.00	0.00	0.00	929.19	901.04	907.42	-3.12	-2.34	0.70
26	Saturday	0.04	849.25	92.44	0.16	101.49	1043.38	1024.69	957.38	-1.82	-8.24	-7.03
27	Sunday	0.04	1076.41	0.00	0.00	0.00	1076.45	1041.86	1000.60	-3.32	-7.05	-4.12
28	Monday	9.72	812.83	22.77	14.24	26.61	886.17	865.79	926.93	-2.35	4.60	6.60
29	Tuesday	0.08	876.41	0.02	26.96	57.62	961.09	935.50	930.00	-2.74	-3.23	-0.59
30	Wednesday	19.35	146.03	891.08	0.00	0.13	1056.59	995.72	938.62	-6.11	-11.17	-6.08
31	Thursday	0.06	0.17	971.02	0.00	0.12	971.37	905.71	968.12	-7.25	-0.33	6.45
	TOTALS	248.17	13533.10	5187.82	348.14	10506.23	29823.46	28736.83	28642.99	-3.78	-3.96	-0.33

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ACTUAL DAILY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-7

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
June	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Friday	0.02	0.17	1018.38	0.00	0.09	1018.66	949.83	902.78	-7.25	-11.38	-5.21
2	Saturday	0.01	0.17	1048.96	0.00	0.08	1049.22	979.29	935.51	-7.14	-10.84	-4.68
3	Sunday	0.03	0.17	1022.76	0.00	0.09	1023.05	954.60	1019.83	-7.17	-0.31	6.40
4	Monday	8.82	26.78	1107.68	14.76	20.79	1178.83	1109.19	1018.68	-6.28	-13.59	-8.89
5	Tuesday	35.23	0.17	986.74	56.70	0.10	1078.94	1009.12	1030.50	-6.92	-4.49	2.07
6	Wednesday	0.05	0.17	1065.97	0.02	0.14	1066.35	995.19	1019.12	-7.15	-4.43	2.35
7	Thursday	0.06	0.17	1040.09	0.00	0.06	1040.38	971.79	1010.51	-7.06	-2.87	3.83
8	Friday	0.08	0.17	1010.52	0.00	0.05	1010.82	941.31	970.83	-7.38	-3.96	3.04
9	Saturday	0.10	0.21	1168.27	0.00	0.08	1168.66	1090.75	1059.65	-7.14	-9.33	-2.93
10	Sunday	0.13	0.23	1314.14	0.00	0.09	1314.59	1228.61	1230.73	-7.00	-6.38	0.17
11	Monday	8.53	26.02	1052.71	18.04	28.99	1134.29	1070.69	995.49	-5.94	-12.24	-7.55
12	Tuesday	0.07	982.70	0.10	0.03	22.83	1005.73	975.18	968.48	-3.13	-3.70	-0.69
13	Wednesday	50.15	864.82	140.51	13.29	20.86	1089.63	1051.13	1116.10	-3.66	2.43	5.82
14	Thursday	0.05	974.53	0.08	83.55	127.87	1186.08	1159.95	1117.30	-2.25	-5.80	-3.82
15	Friday	0.05	1207.44	0.00	0.00	0.00	1207.49	1171.04	1120.22	-3.11	-7.23	-4.54
16	Saturday	0.05	1237.31	0.00	17.05	25.97	1280.38	1241.04	1249.32	-3.17	-2.43	0.66
17	Sunday	0.05	1230.55	0.04	13.58	20.73	1264.95	1228.02	1240.92	-3.01	-1.90	1.04
18	Monday	41.10	837.55	25.22	15.72	136.43	1056.02	1030.99	1056.10	-2.43	0.01	2.38
19	Tuesday	47.15	869.24	0.02	0.00	133.16	1049.57	1018.83	993.45	-3.02	-5.35	-2.55
20	Wednesday	0.02	134.72	26.98	0.00	820.13	981.85	944.50	964.14	-3.95	-1.80	2.04
21	Thursday	0.05	0.21	0.00	0.00	1089.19	1089.45	1051.35	996.70	-3.62	-8.51	-5.48
22	Friday	0.09	0.18	0.00	0.00	1074.50	1074.77	1036.51	985.03	-3.69	-8.35	-5.23
23	Saturday	9.53	43.44	10.80	0.00	987.37	1051.14	1018.79	1058.29	-3.18	0.68	3.73
24	Sunday	0.09	0.17	0.00	0.00	1236.55	1236.81	1192.82	1227.35	-3.69	-0.76	2.81
25	Monday	38.90	18.78	19.69	53.12	1039.49	1169.98	1137.26	1075.91	-2.88	-8.04	-5.70
26	Tuesday	30.82	0.17	77.76	0.01	1090.92	1199.68	1172.42	1148.66	-2.33	-4.25	-2.07
27	Wednesday	28.27	0.22	68.88	31.35	1209.73	1338.45	1314.12	1228.49	-1.85	-8.22	-6.97
28	Thursday	0.08	56.27	0.05	32.07	1264.79	1353.26	1313.25	1296.10	-3.05	-4.22	-1.32
29	Friday	45.79	0.20	77.52	22.95	1064.04	1210.50	1171.43	1172.28	-3.34	-3.16	0.07
30	Saturday	8.40	55.97	0.05	37.53	847.79	949.74	920.98	891.40	-3.12	-6.14	-3.32
	TOTALS	353.77	8568.90	12283.92	409.77	12262.91	33879.27	32449.98	32099.87	-4.40	-5.25	-1.09

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ACTUAL DAILY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-8

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
July	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Sunday	5.54	37.23	0.05	29.59	756.08	828.49	797.22	871.84	-3.92	5.23	8.56
2	Monday	37.04	26.70	0.05	61.84	847.77	973.40	937.48	976.41	-3.83	0.31	3.99
3	Tuesday	13.69	921.94	28.56	17.57	33.48	1015.24	993.89	920.56	-2.15	-9.33	-7.97
4	Wednesday	0.06	769.38	0.00	91.42	140.62	1001.48	986.69	977.15	-1.50	-2.43	-0.98
5	Thursday	0.04	924.15	0.02	29.56	63.55	1017.32	992.51	1032.36	-2.50	1.48	3.86
6	Friday	0.05	965.68	0.00	0.00	0.00	965.73	937.97	892.34	-2.96	-7.60	-5.11
7	Saturday	0.05	871.61	50.27	0.00	64.59	986.52	962.14	963.79	-2.53	-2.30	0.17
8	Sunday	0.05	1007.35	0.00	0.00	0.00	1007.40	977.31	991.31	-3.08	-1.60	1.41
9	Monday	18.92	788.08	44.45	26.95	54.94	933.34	917.27	905.43	-1.75	-2.99	-1.31
10	Tuesday	0.05	974.69	0.00	0.00	0.00	974.74	945.63	959.19	-3.08	-1.60	1.41
11	Wednesday	5.81	1098.02	12.37	0.00	0.00	1116.20	1080.27	1057.18	-3.33	-5.29	-2.18
12	Thursday	26.64	961.64	9.51	0.02	0.04	997.85	971.59	971.84	-2.70	-2.61	0.03
13	Friday	0.07	75.56	906.81	0.00	200.83	1183.27	1113.28	1042.53	-6.29	-11.89	-6.79
14	Saturday	0.09	0.22	1116.55	0.00	0.16	1117.02	1045.63	1039.74	-6.83	-6.92	-0.57
15	Sunday	0.10	0.22	1069.10	0.00	0.11	1069.53	1001.19	1076.92	-6.83	0.69	7.03
16	Monday	10.87	278.48	1305.68	10.00	19.13	1624.16	1568.00	1480.19	-3.58	-8.86	-5.93
17	Tuesday	0.05	355.29	874.65	0.00	0.11	1230.10	1223.25	1121.60	-0.56	-8.82	-9.06
18	Wednesday	0.04	631.35	605.00	0.07	90.78	1327.24	1393.20	1317.67	4.73	-0.72	-5.73
19	Thursday	0.07	0.20	0.00	0.01	926.96	927.24	894.29	817.53	-3.68	-11.83	-9.39
20	Friday	0.10	0.24	0.00	0.00	726.43	726.77	701.08	770.96	-3.66	6.08	9.06
21	Saturday	0.11	0.25	0.00	0.00	929.66	930.02	896.22	837.85	-3.77	-9.91	-6.97
22	Sunday	0.12	0.25	0.00	0.00	765.28	765.65	739.01	810.22	-3.60	5.82	8.79
23	Monday	11.70	35.94	26.77	9.90	700.62	784.93	766.04	718.38	-2.47	-8.48	-6.63
24	Tuesday	124.37	0.21	0.00	0.00	697.98	822.56	813.13	804.01	-1.16	-2.26	-1.13
25	Wednesday	194.19	0.22	0.00	0.00	574.48	768.89	769.56	692.39	0.09	-9.95	-11.15
26	Thursday	227.09	0.17	105.67	0.00	492.32	825.25	807.14	744.77	-2.24	-9.75	-8.37
27	Friday	0.06	0.17	0.41	261.25	520.12	782.01	815.92	808.74	4.16	3.42	-0.89
28	Saturday	0.10	0.23	0.40	280.46	558.67	839.86	875.39	839.59	4.06	-0.03	-4.26
29	Sunday	0.09	0.25	0.44	299.06	594.69	894.53	935.13	790.78	4.34	-11.60	-18.25
30	Monday	53.19	166.45	24.64	162.69	322.40	729.37	754.80	709.17	3.37	-2.77	-6.43
31	Tuesday	14.46	44.35	415.30	345.49	677.85	1497.45	1614.39	769.63	7.24	-48.60	-109.76
	TOTALS	744.81	10936.52	6596.70	1625.88	10759.65	30663.56	30226.62	28712.07	-1.45	-6.36	-5.27

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APPENDIX E-9

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
August	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Wednesday	225.57	0.20	556.58	0.00	0.17	782.52	736.95	739.20	-6.18	-5.54	0.30
2	Thursday	209.52	0.18	518.18	0.00	0.13	728.01	687.58	721.87	-5.88	-0.84	4.75
3	Friday	45.17	1.71	741.22	0.00	0.11	788.21	737.84	743.44	-6.83	-5.68	0.75
4	Saturday	0.05	0.21	800.60	0.00	0.08	800.94	747.39	727.77	-7.16	-9.14	-2.70
5	Sunday	0.06	269.04	293.45	138.09	0.11	700.75	682.40	677.04	-2.69	-3.38	-0.79
6	Monday	0.03	407.73	76.24	206.07	85.51	775.58	787.80	749.90	1.55	-3.31	-5.05
7	Tuesday	0.03	501.66	0.00	252.76	0.16	754.61	760.42	733.03	0.76	-2.86	-3.74
8	Wednesday	7.25	519.68	27.39	261.64	32.37	848.33	864.70	747.64	1.89	-11.87	-15.66
9	Thursday	155.62	117.33	0.03	58.90	455.14	787.02	786.41	780.18	-0.08	-0.87	-0.80
10	Friday	202.49	0.17	0.00	0.00	597.71	800.37	799.65	777.78	-0.09	-2.82	-2.81
11	Saturday	215.64	0.17	0.00	0.00	636.17	851.98	850.91	847.75	-0.13	-0.50	-0.37
12	Sunday	259.88	0.17	0.00	0.00	768.76	1028.81	1029.54	916.51	0.07	-10.92	-12.33
13	Monday	9.10	444.38	21.76	222.78	25.62	723.64	728.27	785.06	0.64	8.49	7.23
14	Tuesday	0.04	613.23	0.00	309.63	0.00	922.90	936.18	784.27	1.42	-15.02	-19.37
15	Wednesday	0.04	527.09	0.00	266.83	0.01	793.97	804.67	784.87	1.33	-1.15	-2.52
16	Thursday	0.01	352.05	0.00	0.00	354.19	706.25	778.22	706.41	9.25	0.02	-10.17
17	Friday	0.04	352.21	0.00	0.00	354.14	706.39	779.23	698.06	9.35	-1.18	-11.63
18	Saturday	0.04	420.72	0.00	0.00	422.27	843.03	930.74	740.28	9.42	-12.19	-25.73
19	Sunday	0.03	337.03	38.10	0.01	337.94	713.11	765.62	763.46	6.86	7.06	-0.28
20	Monday	6.97	416.24	20.49	1381.00	418.05	2242.75	949.68	769.48	-136.16	-65.69	-23.42
21	Tuesday	0.03	354.05	0.00	0.00	356.33	710.41	784.15	728.27	9.40	2.51	-7.67
22	Wednesday	235.26	0.19	580.50	0.00	0.08	816.03	768.80	713.26	-6.14	-12.59	-7.79
23	Thursday	192.82	0.21	475.80	0.00	0.15	668.98	629.79	726.11	-6.22	8.54	13.27
24	Friday	127.47	426.88	314.37	0.00	0.06	868.78	829.67	743.10	-4.71	-14.47	-11.65
25	Saturday	247.01	0.22	610.22	0.00	0.09	857.54	807.40	805.14	-6.21	-6.11	-0.28
26	Sunday	213.17	0.22	525.42	0.00	0.12	738.93	694.79	783.62	-6.35	6.05	11.34
27	Monday	197.46	25.77	523.08	16.60	55.21	818.12	795.23	766.72	-2.88	-6.28	-3.72
28	Tuesday	246.44	0.17	609.27	0.00	0.17	856.05	806.88	780.07	-6.09	-8.88	-3.44
29	Wednesday	250.61	0.20	619.69	0.00	0.12	870.62	821.30	796.67	-6.01	-8.49	-3.09
30	Thursday	246.30	0.22	607.92	0.00	0.06	854.50	803.51	772.53	-6.35	-9.59	-4.01
31	Friday	226.91	0.20	559.24	0.00	0.05	786.40	739.20	757.03	-6.39	-3.73	2.36
	TOTALS	3521.06	6089.53	8519.55	3114.31	4901.08	26145.53	24624.92	23566.52	-6.18	-9.86	-4.49

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ACTUAL DAILY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-10

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
September	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Saturday	267.47	0.19	662.91	0.00	0.08	930.65	878.61	853.78	-5.92	-8.26	-2.91
2	Sunday	370.21	0.18	917.45	0.00	0.07	1287.91	1215.86	1234.48	-5.93	-4.15	1.51
3	Monday	380.92	0.22	939.95	0.00	0.03	1321.12	1243.34	1257.76	-6.26	-4.80	1.15
4	Tuesday	201.70	17.55	505.99	1.23	21.48	747.95	726.80	723.99	-2.91	-3.20	-0.39
5	Wednesday	116.89	61.62	375.15	0.00	96.08	649.74	632.47	613.23	-2.73	-5.62	-3.14
6	Thursday	183.97	0.18	454.88	0.00	0.19	639.22	602.24	636.83	-6.14	-0.37	5.43
7	Friday	178.55	0.17	440.80	0.00	0.12	619.64	582.94	559.46	-6.30	-9.71	-4.20
8	Saturday	0.04	354.41	0.06	4.25	342.25	701.01	771.55	631.56	9.14	-9.91	-22.17
9	Sunday	0.06	347.32	0.00	0.00	348.35	695.73	766.05	669.51	9.18	-3.77	-14.42
10	Monday	8.73	302.99	27.63	1.09	309.36	649.80	727.30	620.87	10.66	-4.45	-17.14
11	Tuesday	0.03	360.27	0.00	0.00	362.24	722.54	799.31	730.70	9.60	1.13	-9.39
12	Wednesday	0.03	366.99	0.00	0.00	368.04	735.06	809.54	754.67	9.20	2.67	-7.27
13	Thursday	0.04	416.29	0.00	0.00	417.80	834.13	920.33	713.27	9.37	-14.49	-29.03
14	Friday	0.05	345.26	0.00	0.00	346.99	692.30	762.54	675.17	9.21	-2.47	-12.94
15	Saturday	0.04	286.77	0.00	0.00	288.41	575.22	633.58	640.29	9.21	11.31	1.05
16	Sunday	7.24	369.37	0.00	0.00	348.74	725.35	796.38	632.33	8.92	-12.82	-25.94
17	Monday	4.92	285.74	17.57	3.64	292.94	604.81	673.36	547.28	10.18	-9.51	-23.04
18	Tuesday	0.08	273.77	0.00	0.00	275.23	549.08	604.39	558.20	9.15	1.66	-8.27
19	Wednesday	0.09	271.86	0.00	0.00	273.49	545.44	598.26	555.58	8.83	1.86	-7.68
20	Thursday	87.12	137.33	214.67	0.00	138.06	577.18	589.26	566.73	2.05	-1.81	-3.98
21	Friday	179.63	0.17	441.82	0.00	0.10	621.72	583.13	538.42	-6.62	-13.40	-8.30
22	Saturday	152.63	110.22	333.13	0.63	0.17	596.78	602.25	600.86	0.91	0.68	-0.23
23	Sunday	0.08	502.33	108.23	0.00	17.18	627.82	603.43	622.93	-4.04	-0.78	3.13
24	Monday	7.54	543.33	48.88	0.33	50.41	650.49	649.20	552.15	-0.20	-15.12	-17.58
25	Tuesday	0.08	475.76	0.00	0.00	0.00	475.84	461.49	563.42	-3.11	18.41	18.09
26	Wednesday	0.08	623.71	0.00	0.00	0.00	623.79	607.02	559.60	-2.76	-10.29	-8.47
27	Thursday	0.09	570.48	0.00	0.00	0.00	570.57	553.93	525.91	-3.00	-7.83	-5.33
28	Friday	0.09	512.83	0.00	0.00	0.00	512.92	498.39	551.42	-2.92	7.51	9.62
29	Saturday	0.08	660.99	0.00	0.00	0.00	661.07	642.41	622.60	-2.90	-5.82	-3.18
30	Sunday	5.50	685.27	0.00	0.00	0.00	690.77	670.70	542.60	-2.99	-21.45	-23.61
	TOTALS	2153.98	8883.57	5489.12	11.17	4297.81	20835.65	21206.06	19855.60	1.75	-4.70	-6.80

ANNUAL REPORT
2012
ACTUAL DAILY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-11

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
October	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Monday	79.760	175.28	25.310	0.460	246.110	526.92	527.080	581.710	0.03	10.40	9.39
2	Tuesday	165.630	0.17	0.000	0.000	489.450	655.25	653.780	587.350	-0.22	-10.36	-11.31
3	Wednesday	171.050	0.17	0.000	0.000	506.730	677.95	676.550	594.130	-0.21	-12.36	-13.87
4	Thursday	147.810	0.17	0.000	0.000	433.280	581.26	573.140	571.920	-1.40	-1.61	-0.21
5	Friday	117.070	0.17	0.000	0.000	346.370	463.61	462.630	530.910	-0.21	14.52	12.86
6	Saturday	185.840	0.17	0.000	0.000	548.730	734.74	731.370	614.860	-0.46	-16.32	-18.95
7	Sunday	152.360	0.17	0.000	0.000	450.200	602.73	600.030	579.330	-0.45	-3.88	-3.57
8	Monday	153.780	0.17	0.000	0.000	453.780	607.73	603.470	614.890	-0.70	1.18	1.86
9	Tuesday	116.940	25.77	34.240	0.240	355.190	532.38	542.350	549.550	1.87	3.23	1.31
10	Wednesday	148.550	0.17	0.000	0.000	439.710	588.43	586.590	585.430	-0.31	-0.51	-0.20
11	Thursday	161.220	0.17	0.000	0.000	474.780	636.17	630.980	578.370	-0.82	-9.09	-9.10
12	Friday	138.540	0.17	0.000	0.000	410.330	549.04	545.140	562.750	-0.71	2.50	3.13
13	Saturday	190.390	0.17	0.000	0.000	559.640	750.20	745.200	642.400	-0.67	-14.37	-16.00
14	Sunday	164.270	24.07	0.000	0.000	461.760	650.10	641.480	670.440	-1.33	3.13	4.32
15	Monday	152.200	3.54	22.240	0.250	467.910	646.14	642.450	618.730	-0.57	-4.24	-3.83
16	Tuesday	145.400	0.17	0.000	0.000	430.250	575.82	575.810	582.990	0.00	1.25	1.23
17	Wednesday	148.210	0.17	0.000	0.000	436.520	584.90	576.860	563.350	-1.37	-3.68	-2.40
18	Thursday	148.800	0.17	0.000	0.000	440.570	589.54	588.240	572.790	-0.22	-2.84	-2.70
19	Friday	148.310	0.17	0.000	0.000	437.570	586.05	583.310	540.910	-0.47	-7.70	-7.84
20	Saturday	186.610	0.17	461.450	0.000	0.070	648.30	610.890	619.120	-5.77	-4.50	1.33
21	Sunday	190.770	0.17	470.760	0.000	0.190	661.89	622.040	639.650	-6.02	-3.36	2.75
22	Monday	172.000	18.67	464.500	0.220	41.620	697.01	675.220	572.780	-3.13	-17.82	-17.88
23	Tuesday	181.460	0.17	448.010	0.000	0.100	629.74	592.210	585.770	-5.96	-6.98	-1.10
24	Wednesday	0.080	500.06	39.830	2.210	0.030	542.21	526.790	562.940	-2.84	3.82	6.42
25	Thursday	0.100	629.7	0.000	0.000	0.000	629.80	612.700	574.570	-2.72	-8.77	-6.64
26	Friday	0.070	568.96	0.000	0.000	0.000	569.03	552.580	595.500	-2.89	4.65	7.21
27	Saturday	63.130	548.16	0.000	127.540	0.020	738.85	713.200	655.900	-3.47	-11.23	-8.74
28	Sunday	0.060	639.56	0.000	0.000	0.000	639.62	670.870	654.080	4.89	2.26	-2.57
29	Monday	8.500	463.1	24.020	172.550	25.730	693.90	691.350	622.230	-0.37	-10.33	-11.11
30	Tuesday	0.050	464.54	0.000	50.070	0.000	514.66	506.790	573.430	-1.53	11.42	11.62
31	Wednesday	0.060	456.47	0.060	195.150	41.100	692.84	699.670	585.260	0.99	-15.53	-19.55
	TOTALS	3639.02	4520.94	1990.42	548.69	8497.74	19196.81	18960.77	18384.04	-1.23	-4.23	-3.14

ANNUAL REPORT
2012
ACTUAL DAILY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-12

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
November	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Monday	12.66	23.90	522.64	15.61	36.35	611.15	599.51	571.53	-1.94	-6.48	-4.90
2	Tuesday	67.85	0.00	335.50	0.00	135.77	539.12	537.11	562.07	-0.37	4.26	4.44
3	Wednesday	0.00	0.00	531.40	0.00	0.01	531.41	520.64	539.20	-2.07	1.47	3.44
4	Thursday	0.00	0.00	672.06	0.00	0.00	672.06	655.46	561.69	-2.53	-16.42	-16.69
5	Friday	0.00	61.80	443.15	33.25	0.00	538.21	533.25	543.57	-0.93	1.00	1.90
6	Saturday	0.00	0.00	368.67	42.27	88.61	499.55	507.33	561.70	1.53	12.44	9.68
7	Sunday	0.00	0.00	700.95	0.00	0.01	700.96	682.56	587.51	-2.69	-16.18	-16.18
8	Monday	10.04	19.15	563.82	10.99	21.53	625.53	612.97	569.10	-2.05	-9.02	-7.71
9	Tuesday	58.26	0.00	408.22	0.01	113.34	579.83	569.79	565.51	-1.76	-2.47	-0.76
10	Wednesday	0.00	0.00	538.85	0.00	0.01	538.85	523.62	568.77	-2.91	5.55	7.94
11	Thursday	0.00	134.84	372.19	68.14	0.00	575.17	648.68	565.96	11.33	-1.60	-14.61
12	Friday	0.00	0.00	643.96	0.00	0.00	643.96	552.60	572.19	-16.53	-11.15	3.42
13	Saturday	37.24	0.00	639.33	0.00	0.86	677.43	663.78	607.51	-2.06	-10.32	-9.26
14	Sunday	0.00	84.44	533.55	42.79	0.00	660.78	656.20	659.41	-0.70	-0.21	0.49
15	Monday	15.22	28.87	541.54	11.04	13.40	610.07	601.27	596.06	-1.46	-2.30	-0.88
16	Tuesday	0.00	0.00	533.16	0.00	0.01	533.17	517.09	578.10	-3.11	8.43	10.55
17	Wednesday	0.00	0.00	703.37	0.00	0.00	703.37	672.90	598.61	-4.53	-14.89	-12.41
18	Thursday	0.00	0.00	543.39	0.00	0.00	543.39	592.62	575.10	8.31	5.83	-3.05
19	Friday	0.00	0.00	675.55	43.09	1.21	719.85	620.10	564.24	-16.09	-21.62	-9.90
20	Saturday	64.59	183.16	202.20	50.40	0.74	501.08	490.42	591.20	-2.17	17.98	17.05
21	Sunday	0.00	517.91	101.05	45.12	85.36	749.44	744.19	628.44	-0.70	-16.15	-18.42
22	Monday	16.19	402.83	71.73	33.14	65.53	589.42	585.91	603.24	-0.60	2.35	2.87
23	Tuesday	0.00	635.77	0.00	0.00	0.00	635.77	625.39	587.33	-1.66	-7.62	-6.48
24	Wednesday	0.00	604.29	0.00	0.00	0.00	604.29	596.42	598.69	-1.32	-0.93	0.38
25	Thursday	42.43	336.07	91.12	50.62	100.79	621.03	622.13	619.31	0.18	-0.28	-0.45
26	Friday	23.49	523.61	44.89	21.58	43.48	657.04	643.20	616.20	-2.15	-6.22	-4.38
27	Saturday	0.00	721.60	0.00	0.00	0.00	721.60	708.03	642.48	-1.92	-10.96	-10.20
28	Sunday	0.00	489.10	0.00	61.67	123.71	674.49	670.19	653.76	-0.64	-3.07	-2.51
29	Monday	28.00	558.33	19.09	8.86	20.85	635.12	628.39	639.54	-1.07	0.70	1.74
30	Tuesday	61.65	469.15	0.00	27.69	60.07	618.56	604.75	608.04	-2.28	-1.70	0.54
	TOTALS	437.61	5794.80	10801.41	566.27	911.63	18511.71	18186.49	17736.04	-1.79	-4.19	-2.54

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2012
ACTUAL DAILY FLOWS & COMPLIANCE SHEET - WATER

APPENDIX E-13

Month	Year	WELL 1	WELL 2	WELL 3	WELL 4	WELL 5	WELL FIELD	RAW	TREATED	PERCENTAGE	PERCENTAGE	PERCENTAGE
December	2012	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	RAW WATER	TREATED WATER	RAW WATER
DATE	DAY	m3	m3	m3	m3	m3	m3	m3	m3	WELL FIELD	WELL FIELD	TREATED WATER
1	Saturday	0.07	456.07	0.05	230.08	55.59	741.86	746.40	675.67	0.61	-8.92	-10.47
2	Sunday	0.07	452.01	0.00	228.31	0.08	680.47	679.23	694.68	-0.18	2.09	2.22
3	Monday	7.85	438.05	31.28	241.23	28.27	746.68	753.83	652.55	0.95	-12.61	-15.52
4	Tuesday	0.02	396.01	0.00	199.25	0.00	595.28	593.68	631.58	-0.27	6.10	6.00
5	Wednesday	0.03	490.61	0.00	247.30	0.17	738.11	734.31	634.06	-0.52	-14.10	-15.81
6	Thursday	0.03	397.70	0.00	200.26	0.09	598.08	603.19	637.23	0.85	6.55	5.34
7	Friday	0.02	391.42	0.00	359.57	0.16	751.17	746.18	619.41	-0.67	-17.54	-20.47
8	Saturday	0.02	466.53	0.00	235.38	0.07	702.00	702.44	682.45	0.06	-2.78	-2.93
9	Sunday	0.01	483.82	0.00	243.96	0.01	727.80	726.47	715.22	-0.18	-1.73	-1.57
10	Monday	3.96	377.18	39.89	204.73	43.15	668.91	671.73	657.24	0.42	-1.74	-2.20
11	Tuesday	8.14	398.82	58.68	210.11	56.45	732.20	734.08	646.82	0.26	-11.66	-13.49
12	Wednesday	23.50	33.58	6.39	217.18	398.69	679.34	695.79	709.36	2.36	4.42	1.91
13	Thursday	0.03	0.17	0.46	238.15	474.13	712.94	741.62	663.80	3.87	-6.89	-11.72
14	Friday	20.09	0.17	0.40	235.40	468.90	724.96	753.34	685.28	3.77	-5.47	-9.93
15	Saturday	0.05	0.17	0.33	247.18	491.91	739.64	763.78	689.45	3.16	-6.79	-10.78
16	Sunday	0.06	0.17	0.40	251.47	500.93	753.03	780.64	729.65	3.54	-3.10	-6.99
17	Monday	9.95	29.88	18.40	204.17	442.14	704.54	721.99	683.55	2.42	-2.98	-5.62
18	Tuesday	0.06	0.17	0.55	247.70	493.31	741.79	769.67	701.75	3.62	-5.40	-9.68
19	Wednesday	0.06	0.17	0.51	328.27	654.12	983.13	1019.10	961.31	3.53	-2.22	-6.01
20	Thursday	0.06	0.17	0.36	263.56	524.88	789.03	815.66	827.36	3.26	4.86	1.41
21	Friday	0.04	0.17	0.39	246.14	490.52	737.26	767.53	709.17	3.94	-3.81	-8.23
22	Saturday	0.02	0.17	0.42	251.17	500.09	751.87	777.72	724.14	3.32	-3.69	-7.40
23	Sunday	0.03	0.17	0.42	252.22	501.95	754.79	778.89	715.89	3.09	-5.15	-8.80
24	Monday	0.03	0.17	0.51	248.96	495.47	745.14	772.12	696.16	3.49	-6.57	-10.91
25	Tuesday	0.02	0.17	0.44	243.75	485.08	729.46	754.71	679.25	3.35	-6.88	-11.11
26	Wednesday	0.01	0.17	0.35	245.98	489.50	736.01	759.26	705.31	3.06	-4.17	-7.65
27	Thursday	197.87	18.38	496.57	11.93	24.55	749.30	707.56	711.86	-5.90	-5.00	0.60
28	Friday	239.36	0.17	590.11	0.00	0.18	829.82	774.32	712.47	-7.17	-14.14	-8.68
29	Saturday	198.67	0.17	491.41	0.00	0.08	690.33	645.09	753.39	-7.01	9.13	14.38
30	Sunday	247.55	0.17	612.16	0.00	0.10	859.98	801.88	754.00	-7.25	-12.32	-6.35
31	Monday	244.57	0.17	604.67	0.00	0.13	849.54	793.69	739.83	-7.04	-12.91	-7.28
	TOTALS	1202.25	4832.95	2955.15	6333.41	7620.70	22944.46	23085.90	21799.89	0.61	-4.99	-5.90

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ANNUAL REPORT
SPRING LEAD SAMPLING

Community Lead Testing - Sampling and Action log

Appendix F-1

Date Sampled (dd/mm/yy)	Sampling Location	911 Street Address (for plumbing samples)	Corresponding Distribution Sample Location ID # applicable (2)	Sample Type	Re-sample? (3)	Possible Lead Source if information available (4)	Lead Results (mg/L)		Alkalinity Result - mg/L (5)	pH Result	Date Lead Results Received (dd/mm/yy)	Date Lead Results Provided to Occupant (dd/mm/yy)	Delivery Method	AWQI number (6)	Corrective Action directed by Health Unit	Corrective Action taken by Municipality (7)	Additional Comments
							1st Litre	2nd Litre (if plumbing)									
18/04/2012	kitchen tap	8 Redwing	—	residential	no	other (specify in comments)	< 1	< 1	—	7.61	27/04/2012	27/04/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	kitchen tap	12 Warbler	—	residential	no	other (specify in comments)	< 1	< 1	—	7.52	27/04/2012	19/05/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	kitchen tap	14 Partridge	—	residential	no	other (specify in comments)	< 1	< 1	—	7.60	27/04/2012	19/05/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	hydrant	DL 5-9 Lyns	—	distribution	no	other (specify in comments)	< 1	—	319	7.52	27/04/2012	—	—	—			
18/04/2012	kitchen tap	11 Brooks	—	residential	no	other (specify in comments)	< 1	< 1	—	7.86	27/04/2012	27/04/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	kitchen tap	30 Shingwauk	—	residential	no	other (specify in comments)	< 1	< 1	—	7.62	27/04/2012	27/04/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	hydrant	DL 4-30 Shingwauk	—	distribution	no	other (specify in comments)	< 1	—	318	7.70	27/04/2012	—	—	—			
18/04/2012	kitchen tap	5 Lyns	—	residential	no	other (specify in comments)	< 1	< 1	—	7.63	27/04/2012	20/04/2011	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	kitchen tap	26 Hosking	—	residential	no	other (specify in comments)	< 1	< 1	—	7.62	27/04/2012	27/04/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	bathroom tap	Public Works	—	non-residential	no	other (specify in comments)	< 1	< 1	—	7.49	27/04/2012	—	—	—			
18/04/2012	kitchen tap	12 Oliver	—	residential	no	other (specify in comments)	< 1	< 1	—	7.88	27/04/2012	10/05/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	kitchen tap	2 Partridge	—	residential	no	other (specify in comments)	< 1	< 1	—	7.98	27/04/2012	10/05/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing
18/04/2012	kitchen tap	18 Lyns	—	residential	no	other (specify in comments)	< 1	< 1	—	7.61	27/04/2012	10/05/2012	in person	—	standard response	following standard response provided by health unit	One Sample location exceeded for lead in their plumbing

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Ministry of the Environment

2012
ANNUAL REPORT
FALL LEAD SAMPLING

Community Lead Testing - Sampling and Action log

Appendix F-2

Date Sampled (dd/mm/yy)	Sampling Location	911 Street Address (for plumbing samples)	Corresponding Distribution Sample Location ID # applicable (2)	Sample Type	Re-sample? (3)	Possible Lead Source if information available (4)	Lead Results (mg/L)		Alkalinity Result - mg/L (5)	pH Result	Date Lead Results Received (dd/mm/yy)	Date Lead Results Provided to Occupant (dd/mm/yy)	Delivery Method	AWQI number (6)	Corrective Action directed by Health Unit	Corrective Action taken by Municipality (7)	Additional Comments
							1st Litre	2nd Litre (if plumbing)									
19/09/2012	kitchen tap	9 Redwing	---	residential	no	other (specify in comments)	< 1.0	< 1.0	---	7.99	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	12 Warbler	---	residential	no	other (specify in comments)	1.2	< 1.0	---	7.93	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	14 Partridge	---	residential	no	other (specify in comments)	< 1.0	< 1.0	---	7.99	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	3 Partridge	---	residential	no	other (specify in comments)	1.6	< 1.0	---	7.75	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	hydrant	DL 6-8 lynx	---	distribution	no	other (specify in comments)	< 1.0	---	308	7.93	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	11 Bluejay	---	residential	no	other (specify in comments)	< 1.0	< 1.0	---	7.86	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	30 Shingwauk	---	residential	no	other (specify in comments)	1.8	< 1.0	---	7.89	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	hydrant	DL 1-30 Shingwauk	---	distribution	no	other (specify in comments)	< 1.0	---	215	7.86	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	8 Lynx	---	residential	no	other (specify in comments)	< 1.0	< 1.0	---	7.95	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	28 Hawk	---	residential	no	other (specify in comments)	< 1.0	< 1.0	---	7.92	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	laundry room tap	Public Works	---	non-residential	no	other (specify in comments)	< 1.0	< 1	---	7.88	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	12 Otter	---	residential	no	other (specify in comments)	1.8	< 1.0	---	7.89	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program
19/09/2012	kitchen tap	18 Lynx	---	residential	no	other (specify in comments)	< 1	< 1	---	7.86	01/10/2012	04/10/2012	in person	---	standard response	following standard response provided by health unit	No Exceedances were identified in the Fall Lead sampling program

GLOSSARY OF TERMS

APPENDIX F

Here are some terms that the reader should know about before reading the content of this report, and the laboratory results attached.

PARAMETER – A measurable or quantifiable characteristic or feature. These elements can be organic (Bacteria), or inorganic (metals or salts), and/or a variety of pesticides, herbicides and PCB's.

COLOUR - The aesthetic objective for colour in drinking water is 5 TCU (True Colour Units). Water can have a faint yellow/brown colour which is often caused by organic materials created by the decay of vegetation. Sometimes colour may be contributed to by Iron and Manganese compounds produced by processes occurring in natural sediments or in aquifers. The presence of organic material is the main cause of disinfection by-products when water is treated with chlorine.

I.M.A.C (Maximum Acceptable Concentration) – This is a health-related Ontario Drinking water standards established for contaminants when there are insufficient toxicological data to establish a M.A.C. with reasonable certainty, or when it is not practical to establish a M.A.C. at the desired level.

mg/L (Milligrams per Litre) – This is a unit of measure of the concentration of a parameter in water, sometimes called ppm (parts per million). Simply put, mg/L means one kilogram of a chemical, or contaminant, in one million kilograms (litres) of water.

ug/L (Micrograms per Litre) – This is a unit of measure of the concentration of a parameter in water, sometimes called ppb (parts per billion). Simply put, ug/L means one kilogram of a chemical, or contaminant, in one billion kilograms (litres) of water. 1000ug/L = 1 mg/L

ng/L (Nanograms per Litre) – This is a unit of measure of the concentration of a parameter in water, sometimes called ppt (parts per Trillion). Simply put, ng/L means one kilogram of a chemical, or contaminant, in one Trillion kilograms (litres) of water. 1000 ng/L = 1ug/L

pg/L (Picograms per Litre) – This is a unit of measure of the concentration of a parameter in water, sometimes called ppq (parts per quadrillion). Simply put, mg/L means one kilogram of a chemical, or contaminant, in one thousand trillion kilograms (litres) of water. 1000pg/L = 1 ng/L

pH – pH is a parameter that indicates the acidity of a water sample. The operational guideline recommended in drinking water is to maintain a pH between 6.5 and 8.5. The principal objective in controlling pH is to produce a water that is neither corrosive nor produces incrustation. At pH levels above 8.5, mineral incrustations and bitter tastes can occur. Corrosion is commonly associated with pH levels below 6.5 and elevated levels of certain undesirable chemical parameters. With pH levels above 8.5, there is a progressive decrease in the efficiency of chlorine disinfection and alum coagulation.

Temperature – An aesthetic objective is set for maximum water temperature to aid in selection of the best water source or the best placement for a water intake. It is desirable that the temperature of drinking water should not exceed 15 °C because of the palatability of water is enhanced by it coolness. Low water temperatures offer a number of other benefits. A temperature below 15 °C will tend to reduce the growth of nuisance organisms and minimize associated taste, colour, odour and corrosion problems. In the summer and fall, water temperatures may increase in the distributed water due to the warming of the soil. Low temperature facilitates maintenance of a free chlorine residual by reducing the rates of decay of the chlorine.

THMs (TRIHALOMETHANES) – The M.A.C. for THMs in drinking water is 0.10 mg/L based on a four quarter moving annual average of test results. THMs are the most widely occurring synthetic organics found in chlorinated drinking water. The four most commonly detected THMs in drinking water are chloroform, bromodichloromethane, chlorodibromomethane and bromoform. The principal source of the THMs in drinking water is the chemical reaction of chlorine with naturally occuring organics left in the water after filtration.

TURBIDITY - The M.A.C. for turbidity in drinking water is 1.0 FTU (FormazinTurbidity Unit) or 1.0 NTU (Nephlometric Turbidity Units) for water entering the distribution system but much lower turbidity around less than 0.1 are commonly continuously attained in well operated treatment plants. Turbidity measurements are made frequently to confirm the existence of good operating conditions at all surface water treatment plants and at some ground water plants.

An appearance related aesthetic objective of 5 FTU or NTU has been set for water consumers' Taps. Turbidity higher than 5 FTU or NTU taken at consumers' taps generally indicates severe local corrosion and/or poor bacteriological control due to loss of chlorine residual.

Turbidity in water is caused by the presence of suspended tiny particles that scatter light and make the water appear cloudy. These particles are made from matter such as clay, silt, spores, plankton and other microorganisms. The most important health related effect of turbidity is interference with disinfection and with the maintenance of chlorine residual. Viable coli form bacteria have been detected in waters with the turbidity higher than 3.8 NTU or FTU even in the presence of free chlorine residuals of up to 0.5 mg/L and after a contact time in excess of 30 minutes. Outbreaks of disease traced to chlorinated water supplies have been associated with high turbidity.

TOWNSHIP OF MANITOUWADGE
ADMINISTRATION REPORT

DATE: March 05, 2013 **NUMBER: PW 2013-03**

Submitted to: **Mayor and Council**

Issue: **Recycling**

Background:
As per the request of council I made some inquiries regarding the possibility of recycling in Manitouwadge. The first thing I did was ask myself why we would want to have recycling or do we need recycling in Manitouwadge? Is it because we want to go green or do we do it to extend the life of the landfill? The first thing I found out was they both cost money to do. The cost associated with recycling depends on how much and what kind of recycling we would like to have. The cost associated with increasing the life span of the landfill site is totally different because it is a more direct cost and that is in the form of a purchase or lease of a landfill compactor. It is a proven fact that the more compaction you have, the more life span you gain because solid waste is based on volume packed into a certain area known as the footprint. The more you can compact the footprint, the more waste you can put into it. The other thing I did was look at who was actually recycling in our area by contacting neighboring communities, White River, Marathon, Terrace Bay, Schreiber and the Mines at Barrick Gold. This was done for two reasons, one being I wanted to know what type of recycling they may be doing and the other was to find out if we could join and cost share on some of the fees associated with recycling.

Discussion:
The first thing to note is we are under 5000 residents therefore we are not mandated or regulated to have any form of recycling, what we decide on is strictly upon us to find funding for it.

After speaking with Brian Hyshka from Marathon it's pretty obvious why they recycle. They have no landfill site life, it is full and they have to divert as much as possible by recycling. The cost to run their landfill site is approximately $150, 000.00/year, then they have the cost of recycling which includes the contract with Recool and another contractor that does their by-weekly curbside recycle pick up and that is approximately $110,000.00/year . Marathon recycles types 1 & 2 plastics, aluminum cans, aluminum foil wrap and trays, cardboard and paper. They also have regular household waste pick up and this is regulated by bag tags and is limited to a certain amount of bags that can be put out for regular pick up. Recycling in Marathon is mandatory for its residents and businesses. They also do hazardous waste drop off collection during the summer and WEEE-Recycling Electronics, they do not collect or accept tires, a private local tire dealer accepts them. They do not have pick up for recycled or regular garbage at any of the businesses, the businesses make their own arrangement for drop offs at either the depot or the waste transfer site.

White River does not recycle other then the WEEE-Recycling Electronics and their one day Hazardous Waste Day. Their landfill site is operated by a contractor and it is also subjected to tipping fees, there is a cost by vehicle size loads and also by number of axles per vehicle when entering their landfill, they also have bag tags for household waste. All of these funds go to the contractor and the contractor has salvage rights to all waste brought to the landfill site.

Terrace Bay and Schreiber both share the same landfill site and neither communities recycle. They have a yearly Hazardous Waste day. They also have the WEEE-Recycling Electronics and are involved with the Tire Stewardship program. They had a local guy try recycling for awhile but he couldn't make it work at a profit. The tipping fees schedule that they presently have is what we are looking at implementing; it only applies to their landfill site and drive in traffic but does not affect their regular household pick up, tipping fees are strictly for the landfill site. They also accept scrap metal at their landfill site and have the scrap metal recycling companies do occasional pickups. They do not have dumpsters for their businesses and pick up is done at the same time as household pick up day, it is all hand loaded into the back of the garbage truck.

I obtained the Terrace Bay report on recycling and they were looking at the curb side pickup (Blue Box) waste diversion with Stewardship Ontario. This method, at the time of their study, was a 30% payback from Stewardship Ontario; however it had a two year lag period so you had to install your program, get it working, then wait two years before getting any dollars back. I spoke with Stewardship Ontario about this and they informed me that the municipal share is now 50%. The other half comes from industry i.e.: Stewardship Ontario is a private, not for profit, Industry Funding Organization (IFO). It was created to help product producers, importers and brand owners fulfill their environmental responsibilities. Stewardship Ontario operates the Blue Box and Orange Drop Programs. They also stated that the municipality would have to adopt the bag tag system and enact a by-law in order to make recycling mandatory in the community; it's the only way to make the program work, they claim.

I spoke with Barrick about their recycling program and all they basically do is the collecting of water bottles and aluminum cans and have a third party drive the stuff to Thunder Bay for them. This third party is already on site doing work for them and they basically do it for free. Barrick does not feel that it would be appropriate to ask this third party to take our recyclables.

This is the general idea of how our neighboring communities handle solid waste and when asked if they would consider recycling I got mixed feelings, White River said they would not, they claimed they could not afford it. Terrace Bay said they have not ruled it out completely but the only way they would consider it would be full cost recovery. At the time of the Terrace Bay study the Mill life expectancy was not good. I asked Marathon if they would have considered recycling had they not been forced to and they said no. However as they have so much invested into it now they claim that even if they find another 50 year plus landfill site they would continue with the program, solely because of their high investments made to make the program work.

The amount of waste diverted from our landfill site would not be known until we go through at least one year of recycling. We would need to know how much buy-in from the general public we would get because it would be strictly a volunteer program we may just get a select few that recycle.

We presently do the E-waste through the Ontario Electronic Stewardship program; we also do the yearly Household Hazardous Waste Day Collection through Ontario Stewardship and I am presently looking at the Ontario Tire Stewardship program to recycle the mountain of tires presently at our landfill site. As it stands presently the Electronic Stewardship does not cost us anything to participate, we actually get approximately $50/metric ton and since the program started we have diverted 18 metric tons from our landfill site. Our Hazardous waste collection day is also run at almost full cost recovery and the Tire Stewardship program may generate a little income also. I am also looking at the possibility of collecting scrap metal as there is a market for that also. We do turn away a lot of metal as in, old dryers and washers, vehicle rims that still have the tire on them and any other metal items that may come to the landfill site. So far all of these programs are drop off only, we do not do pick up other than for derelict vehicles for scrap.

We presently accept refrigerated appliances at a cost of $60 for the refrigerant removal but we will now keep them for the scrap metal value.

I also spoke with a couple of recycling companies from Thunder Bay and inquired about the possible costs associated with recycling plastics, paper/cardboard and the cheapest route so far is the rental of the roll off bins from the company(s) and we pay for the shipping either way, all profits from the waste go to them. One company wants us to sign a contract, plus cover the cost of the bin rentals and pick up and deliveries of the bins and another company doesn't need a contract but the bin rental, pick and delivery is still the same. All other handling and sorting of the recyclables is at our expense and time. The bins come in different size and lengths and have no lid, which means they would have to be stored inside. I presently have one quote for supplying the bins and it is $135.00/hr. from yard to customer and $500.00/month rental if more than twice a month serviced with no rental fee. This is per bin and if we fill more than two bins per month there is no rental but the delivery/pickup charge is the same. If we want to have more than just the bin program then that would have to be a totally different discussion with both parties as the price and contracts would be totally different.

Financial Implications:
In one year the cost to get the bins and pay for the rental and delivery/pick up costs and if I use pick up costs for four quarters and this is just for the bin program: I will use two bins if we do plastic, cardboard/paper and if we want to do aluminum cans, then we would need three bins. Delivery would/could be more if we need additional pickups above the four quarterly pickups listed.

	Per 2 Bins	Per 3 Bins
Bin rental(s)	$500.00/month x 12 x 2 bins = **$12,000.00**	$12,000.00 + 1 bin = **$18,000.00**
Delivery $135.00 x 8hrs x 4 quarters	**$4,320.00**	$4,320.00 + 1 bin = **$6,480.00**
	$16,320.00	**$24,480.00**

We also would have to factor in the added cost of handling and sorting of the recyclables and the storing or sheltering of the bins because of no lids. I did not calculate these costs because I do not know what level of service we would provide but an approximate figure would look like this: open 2 ½ days a week = ½ year wages for one employee, $21.26 x 1,040 hrs. = $22,110.40 plus benefits.

So we could possibly do a pretty good job of providing recycling for about $50,000.00/year but this would be for drop off recyclables only. If we go with curb side pickup then the handling and sorting costs would go up and also the wages because of the extra time needed for pick up.

Recommendation:
Unless we can find an alternative way to pay for the cost associated with a Recycling Program in Manitouwadge, my recommendation would be that we do not consider recycling of: plastic, cardboard/paper. We could possibly start with the volunteer aluminum can/foil and aluminum tray recycling because this material could be added to our scrap metals pile and we could have it picked up at the same time as the scrap metal but at a profit to us.

Submitted by: _____
Omer Collin, Public Works Superintendent

cc: Cecile Kerster, Municipal Manager Clerk

AGENDA
Item No. 09-04
Meeting Date: 13/03/12
D M Y

Township of Manitouwadge
Administration Report

Date: March 06, 2013 **No.** PW2013-04

Submitted to: Mayor and Council

Issue: Review of the Quality Management System Operational Plan

Background:
The Canadian General Standards Board (CGSB), a federal government organization under Public Works and Government Services Canada, entered into an agreement with the Ministry of the Environment to do accreditation services for the purpose of the Municipal Drinking Water Licensing Program.

The purpose of the Accreditation Program is to recognize Operating authorities of municipal residential drinking water systems that demonstrate, through accreditation by an independent third party, that their quality management systems meet the requirements of the Drinking Water Quality Management Standards and to recognize operating authorities that are managing their drinking water systems in a planned and systematic manner.

The benefits of an operating authority's having a QMS (Quality Management Standard) include ensuring consistency of practice and operation and ensuring that everyone associated with the system is striving to reduce the risks potentially affecting the system. The benefits of accreditation include evaluation from a third party, proof of conformity to the requirements of the Standards and public recognition through an accreditation certificate that an operating authority has a QMS in place.

The accreditation of the operating authority is also a mandatory requirement of the Safe Drinking Water Act, 2002. The M.O.E. requires owners of municipal residential drinking water systems to have an accredited operating authority in place before a license is issued. As of the day on which the license is issued, the owner must ensure that an accredited operating authority is in charge of the system. We had received this accreditation on August 26, 2011and it was good for one year from that date.

Discussion:
This new Accreditation Plan was designed to be completed within a couple of years for all Municipalities and once initial criteria's were met they were allowed a first time accreditation known as Limited Scope-Entire Accreditation as a starting point. This was to allow municipality's time to get firstly; an internal audit of the operating plan to ensure that we have been following what we agreed to in the plan. Secondly it would allow Municipalities time to get an external third party audit completed then followed by the Drinking Water Financial Plan to be submitted to the M.O.E.

Unfortunately the Provincial and Federal Government disagreed with the process and the Federal Canadian General Standards Board (CGSB) had been dropped from the program and private

accreditation authorities had been allowed to bid on the process. The provincial government selected two reputable agencies for the program and allowed municipality's to choose from the two. This however caused time delays in acquiring an accreditation body and did not allow those municipalities who got their limited scope accreditation in 2011/2012 to meet the one year deadline to achieve their full accreditation.

On July 31, 2012 The Township of Manitouwadge selected SAI Global as the Authorized Accreditation Body, we did have some minor technical issues with SAI Global in the registration process and this resulted in some delays on their part with scheduling of audit dates but we are presently scheduled for the external audit with them for the last week of March 2013.

Our internal audit was performed on February 05, 2013 with good results; I have included the summary for councils viewing. The four non-conformances listed in the summary are all somewhat related to the changeover of the Accreditation body and the fact that we were of the understanding that the audits had to take place before the plan was implemented. These issues have all been dealt with for 2013 and will now become part of the yearly reviews such as Water/Wastewater Reports and these reviews will be conducted at that time also.

The next step in the process is to put together the financial plan that is required for the water system and we are currently looking at a couple of models to choose from. We expect to have this done by early summer of 2013.

In keeping with the recommendation of the DWQMS Internal Audit report and as the DWQMS Representative for the Quality Management System Operational Plan, I am pleased to inform Council that all reviews and changes have been met for the 2013 Year. These changes consisted of the addition to the operational plan to include the leak detection performed on our water system in 2012, the completion of our yearly internal audit and our yearly management review. The only outstanding issue is the acceptance from Council by resolution that all four non-conformances outlined in the 2013 internal audit have been addressed and corrected.

Financial Implications: **N/A**

Options: **N/A**

Recommendations:
As the DWQMS representative for our Quality Management System Operational Plan I am recommending that the 2013 review of the Plan be accepted along with the document changes to Appendix B, Control I.D.; P-13 Internal Audit as ***Revision: 2 updated step 5.2*** and the History of Change at the bottom of the page to reflect ***February 05, 2013*** as the change date. Also changes to Appendix C, Wl-2 Response Work Instruction –Secondary Disinfection as ***Revision: 2, added Section 5.4*** and the History of Change at the bottom of the page to reflect the addition and revision date to ***February 05, 2013***. These are the only changes to the plan.

Respectfully submitted by: Omer Collin, Public Works Superintendent

cc: Cecile Kerster, Municipal Manager Clerk

The Corporation of the

TOWNSHIP OF MANITOUWADGE

1 Mississauga Drive
Manitouwadge, Ontario
P0T 2C0
Telephone (807) 826-3227 Fax (807) 826-4592

This Operational Plan has been reviewed and approved by the Corporation's Mayor and Council, Municipal Manager Clerk, Public Works Superintendent and Overall Responsible Operator (ORO). This is a blueprint for the planning, operation and maintenance of the Township of Manitouwadge Drinking Water Supply System. An annual review by Mayor and Council, Municipal Manager Clerk, Public Works Superintendent and Overall Responsible Operator (ORO) will keep the document up to date and promote continual improvements. All recommended changes would be approved by Council resolution.

Endorsed by:

Mayor John MacEachern

Cecile Kerster, Municipal Manager Clerk

Omer Collin, Public Works Superintendent

Paul Richard, Acting Overall Responsible Operator

Signed and dated at the Township of Manitouwadge, this day of ,2013.

DWQMS INTERNAL AUDIT REPORT

TOWNSHIP OF MANITOUWADGE

CONDUCTED: 5/February/2013

Prepared for:

Township of Manitouwadge

Mr. Omer Collin
Public Works Superintendent
1 Mississauga Road
Manitouwadge, ON
P0T 2T0

Prepared by:

EQS Canada
Rodney MacGibbon

11/February/2013

IA-Manitou0502 Report

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LIST OF APPENDICES

1.0 OVERVIEW

The Internal Audit of the Township of Manitouwadge drinking-water operations was conducted to compare the existing operations to the requirements of MOE Drinking Water Quality Management Standard, Version Oct/2006 as documented in the Township of Manitouwadge Operational Plan and referenced procedures dated April, 2011.

The assessment took place on the 5th of February, 2013.

Primary Auditee contacts during the course of the audit were:

- Omer Collin, Superintendent Public Works & DWQMS Representative
- Kirk Tourout, Water/Wastewater ORO
- Paul Richard, Water/Wastewater Operator

A review of the Operational Plan was conducted at the EQS office in preparation for the on-site audit. On-site audit activities were conducted at the Township of Manitouwadge Municipal Offices and at the water treatment plant.

2.0 INTERNAL AUDIT SUMMARY

Those engaged in the audit were knowledgeable and positive. It was clear to the auditor that all operations staff members who participated in the audit are well aware of the impact of their work on Drinking Water Quality, and the importance of ensuring the provision of safe drinking for general wellbeing and health of the population that the Township of Manitouwadge drinking water system serves.

Due to the lack of any constructive feedback from CGSB, the Management System remained dormant since it was developed in April of 2010.

A total of 4 non-conformances were found relating to:
Element #14 – Review and Provision of Infrastructure
Element #15 – Infrastructure Maintenance, Rehabilitation and Renewal
Element #19 – Internal Audit
Element #20 – Management Review

3.0 AUDIT FINDINGS

Non-Conformance Details

Element #14 Review and Provision of Infrastructure
The Operational Plan shall document a procedure for the annual review... The Operating Authority shall implement and conform to the procedure...

Non-Conformance
There have been no reviews of the infrastructure since the QMS was developed in April, 2010.

Objective Evidence
Statement of fact from the QMS Representative and the ORO.

Element #15 – Infrastructure Maintenance, Rehabilitation and Renewal
The Operational Plan shall document a summary of the Operating Authority's... programs for the subject system.
The Operating Authority shall: a.) keep the summary current

Non-Conformance
The information (summary) in the Operational Plan is not current.

Objective Evidence
The Leak Detection program is not included.

Element #19 – Internal Audit
The Operating Authority shall... ensure that Internal Audits are conducted at least once every 12 months.

Non-Conformances
Internal audits not conducted as per the requirement.

Objective Evidence
There were no internal audits conducted between April, 2010 and February, 2013.

Element #20 – Management Review
Top Management... shall: a.) ensure that a Management Review is conducted at least once every 12 months.

Non-conformance
The frequency requirement for Management Reviews has not been maintained.

Objective Evidence
No Management Review had been conducted between Apr/2010 and 5/Feb/2013.

4.0 RECOMMENDATIONS

The Management System has not been fully implemented. The auditor strongly encourages the Operating Authority to make the required changes in scheduling/time management such that the QMS may be fully implemented. The non-conformances are simply errors of omission. Documented processes exist to address the unimplemented requirements.

Perhaps the Operating Authority can make use of one of more MicroSoft Outlook™ calendars to prevent errors of omission related to the review and reporting requirements of the QMS.

5.0 CONCLUSIONS

The Management System and the drinking water infrastructure are both adequately documented, and the operational aspects of the QMS have been implemented. With a little more effort the management aspects can be easily implemented as well.

Respectfully submitted,

Rodney MacGibbon
EQS Canada

Manitouwadge
Ontario, Canada

Township of Manitouwadge
DWQMS PROCEDURE

Title: Internal Audits	Control I.D.: P-13
Revision: 2	Effective Date: 13/May/11

1 Purpose
This procedure describes the Internal Audit process.

2 Scope
This procedure is applicable to all Internal Auditors for the Quality Management System.

3 References
DWQMS Element 19 – Internal Audits

4 Definitions and Acronyms
CAR – Corrective Action Report

5 Procedure

Preparation

5.1 Internal audits shall only be conducted by persons approved by the QMS Representative and having the following qualifications:

- Township of Manitouwadge employees who have completed internal audit training, or
- Employees of other operating authorities who have completed internal audit training.
- Qualified auditing contractors.

5.2 Internal Audits shall be conducted for each element of the DWQMS at least once every twelve months. Results of previous internal and external audits shall be considered when planning for each audit.

5.3 Internal audits shall be scheduled. The schedule shall be maintained by the Public Works Superintendent, and shall include the element to be audited, the month, and the assigned Auditor.

5.4 An audit checklist(s) template shall be maintained by the Public Works Supervisor for use by the Auditor(s). The checklist(s) shall be used by the internal Auditor as a guide, for record-keeping purposes, and for conducting the interviews and document review during the audit.

Conducting the Audit

5.5 The Auditor shall observe activities, review records, review previous internal and external audit results, and interview personnel as necessary to ensure that the status of the audited element of the QMS has been effectively assessed.

Reporting the Results

5.6 The Auditor shall submit a completed report, including the checklist, to the Public Works Superintendent within 30 days of the internal audit.

5.7 The report shall include any corrective actions requests (CARs) required to address discrepancies between the QMS and the DWQMS, or between the QMS and how it is actually implemented, including a reference to the applicable section of the Standard.

5.8 Responses to CARs shall be designated to the responsible individual by the Public Works Superintendent.

5.9 It shall be the responsibility of the Public Works Superintendent to ensure that all CARs are followed up and responses to the CARs are provided to the internal Auditor by the date documented on the CAR.

5.10 CARs shall be completed, addressed and filed as per the Corrective Action Procedure.

5.11 The QMS Representative shall maintain a summary of Internal Audit results that are to be presented for Management Review.

6 Associated Documents & Records

P-14 Corrective Action Procedure
D-1 Operational plan
F-1 CAR

F-2 CAR Log
F-3 Internal Audit Checklist

7 History of Changes

Revision	Date	Description	By
1	24/Apr/11	Initial Release	O. Collin
2	05/Feb/13	Updated Step 5.2	O. Collin

MANITOUWADGE
ONTARIO • CANADA

Township of Manitouwadge
DWQMS Work Instruction

Title: Secondary Disinfection CPP Response	Control I.D.: WI-2
Revision: 2	Effective Date: 13/May/11

1.0 Purpose

The purpose of this procedure is to define the steps to be taken in response to a secondary disinfection critical limit alarm.

2.0 Scope

This procedure is applicable to all treatment plant personnel.

3.0 References

DWQMS Element 8 – DWQMS Outcomes

4.0 Definitions

None

5.0 Procedure

5.1 Secondary disinfection is achieved through the process of Chlorination (injection of Sodium Hypochlorite).

5.2 The critical limit for secondary disinfection is 0.20 mg/L free chlorine

Below Critical Limit

5.3 In the event of a low critical limit alarm the Operator shall attempt to determine the cause of the alarm and take corrective action as follows:

5.3.1 Supply: ensure that a sufficient supply of Sodium Hypochlorite is available. If necessary, switch to alternate tank.

5.3.2 Pumps: ensure that the metering pumps are on and pumping effectively. If necessary, rotate pumps and repair, service or replace problem pump.

5.3.3 Analyzers: collect a grab sample from the analyzer and test the chlorine content. If necessary calibrate, repair or replace the analyzer.

NOTE: It will be necessary to continue taking grab samples until the analyzer is repaired or replaced to ensure chlorine content remains within the proper operating range.

5.3.4 Feed Rate: Increase the feed rate on the pump until residual begins to rise. The operator shall continue to monitor the chlorine residual until satisfied it will remain within the operating limits.

5.4 The Superintendent shall record all incidences of deviation and include a summary of the same for Management Review.

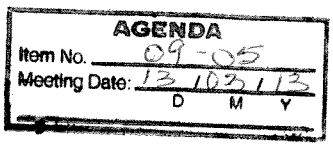
6.0 Associated Documents & Records

P-3 Risk Assessment Procedure
D-3 Risk Analysis Spreadsheet

7.0 History of Changes

Revision	Date	Description	By
1	24/Apr/11	Initial Release	O. Collin
2	05/Feb/13	Added 5.4	O. Collin

MARCH 13th, 2013 REGULAR COUNCIL MEETING – NEW BUSINESS ITEM 09-05:

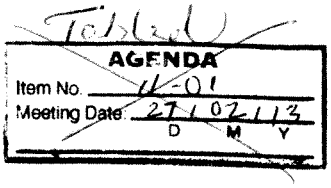


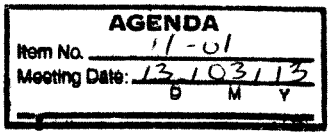
KPMG representative, Mr. Oscar A. Poloni, will provide a presentation to Council. Due to unforeseen circumstances, presentation will only be made available prior to the meeting for Council's review.

MANITOUWADGE MUNICIPAL HOUSING CORPORATION

MINUTES OF THE MEETING OF THE BOARD OF DIRECTORS

January 21, 2013





1. The meeting was called to order at 6:45p.m. (Resolution No. 12-467)

2. In attendance:

Kristine Costigan	Interim-Chairperson
Natalie Labbee	Director
Connie Hunter	Director
Sheldon Plummer	Director
Rita Aguiar	Property Manager

Absent:

Helen Williams	Secretary
Lisa Jomphe	Director

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3. The Board reviewed the Confidentiality and Conflict of Interest policies.
   Natalie Labbee and Kristine Costigan declared a Conflict of Interest in regards to item #11 under Board Discussions.

4. The minutes and resolutions of the meeting held on Wednesday, December 12th, 2012 were reviewed by the Board and accepted. (Resolution No. 12-468)

5. The minutes and resolutions for the emergency meeting held on Tuesday, January 8th, 2013 were reviewed by the board and accepted. (Resolution No. 12-469)

6. **Property Manager's Report:**

   We had 0 Move Outs and 2 scheduled move outs. We had 1 Move In and 2 Scheduled Move Ins. I have an anticipation of 4 Move Ins. We have 6 vacancies as of January 21st, 2013. There is $1241.00 in outstanding rent for the month of January and our O/S receivables are $4276.73($4513.28).

7. **Vacant Unit Report:**

   The Vacant Unit Report was provided to the Board.

8. **Tenant Request:**

   19-3:

   - The Board was updated in regard to this matter.

   19-5:

   - The Board was notified that we lost this tenant.

   23AO/27AO:

   - The Board was updated in regards to this matter.

9. **Board Discussion:**

- The Board was updated on the status of the elevator.
- The Board advised the Property Manager to look into buying the binder/cd version of policy templates.
- The Board discussed the training possibilities and were informed that we are tentatively looking at possibly holding it at the end of April.
- The Board was provided another copy of the HSC report and a few Board members are scheduled to meet on Monday, January 28th, 2013 in order to review the recommendations.
- The Board authorizes the capital purchase of 5 HRV units by Fred Allen Electric in the amount of $5621.75. (Resolution No. 12-470)
- The Board accepts the quote presented by HML for various renovations to units as a capital expenditure in the amount of $14,226.70. (Resolution No. 12-471)
- The Board decided that they will not be making any modifications to 17 Ohsweken Road, Apt. # 6.
- The Board resent the tender for the MKT Rent Analysis.
- The Board reviewed a copy of the letter that was sent to TBDSSAB on behalf of the Township.
- The Board accepts the quote submitted by J&J Equipment Rentals for snow removal for the 2013 season at $79.00 per hour. (Resolution No. 12-472)
- The Property Manager provided the Township with the information requested in regards to Snow Removal and the Board was also informed to the situation at 70 Graham Drive, Apt. # 3 in regards to the Water Account.
- Benefits discussion was tabled for the February Meeting as ~~there was no~~ quorum was lost RE Conflict of Interest.
- The Budget "year to date" figures for November/2012 & December 2012 were presented to the Board members for review.
- The Bank Reconciliation for November/2012 & December 2012 were reviewed and signed by the Interim-Chairperson.

10. **Disbursements:**

Disbursement Sheet #12-10 from December 13th to January 21st, 2013 in the amount of $49,581.77 was reviewed by the Board and accepted. (Resolution No. 12-473)

11. **Correspondence:**

The Board reviewed the Correspondence received from December 13th, 2012 to January 21st, 2013.

12. **Next Meeting:**

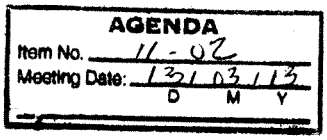
The next regular meeting will be held on Tuesday, February 19th, 2013 at 6:30 p.m. in the Common Room at Lakeview Terrace, 84 Huron Walk.

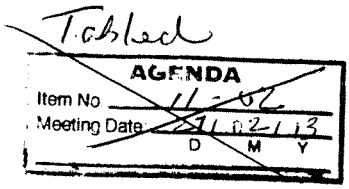
13. **Adjournment:**

The meeting was adjourned at 8:30p.m. (Resolution No. 12-474)

Interim - Chairperson

Director





Annual Mtg @ 1:07
Regular Bd Mtg @ 1:15

Please find attached the approved minutes from the January 16, 2013 Board of Health meeting, which were approved on February 20, 2013.

Our next meeting will be held on March 20, 2013.

If you have any questions, please feel free to contact me.

Thank you.

Barbara Moro

Executive Assistant to the Medical Officer of Health and the Chief Executive Officer
Secretary to the Board of Health
999 Balmoral Street
Thunder Bay ON P7B 6E7
Phone: 807-625-5965
Fax: 807-625-5973
email: barbara.moro@tbdhu.com

THUNDER BAY DISTRICT HEALTH UNIT

MINUTES OF MEETING: **BOARD OF HEALTH (ANNUAL MEETING)**

DATE: JANUARY 16, 2013

TIME: 1:07 P.M.

PLACE: BOARD ROOM

CHAIR: MR. DOUG HEATH

BOARD MEMBERS PRESENT:

Ms. C. Bryson
Mr. T. Fox
Ms. M. Harding
Mr. B. Kamphof
Mr. J. MacEachern
Mr. J. Masters
Ms. B. Metzler
Ms. D. Robinson
Mr. J. Virdiramo

VIA TELECONFERENCE:

Ms. G. Garbutt

REGRETS:

Mr. J. Daiter
Mr. N. Gale
Mr. A. Ruberto
Ms. L. Turk

ADMINISTRATION PRESENT:

Mr. D. Heath, Chief Executive Officer
Dr. D. Williams, Medical Officer of Health
Dr. J. DeMille, Associate Medical Officer of Health
Mr. K. Allan, Director, Health Protection
Ms. G. Daniels, Manager – Finance & Strategic Quality Initiatives
Ms. B. Moro, Executive Assistant to the Medical Officer of Health and Chief Executive Officer and Secretary to the Board of Health

The Chair called the meeting to order at 1:07 p.m.

1. DECLARATIONS OF PECUNIARY INTEREST

There were no declarations of pecuniary interest.

2. AGENDA APPROVAL

Resolution No.: 1 - 2013

MOVED BY: Mr. J. MacEachern
SECONDED BY: Mr. J. Virdiramo

THAT the Agenda for the Board of Health Annual Meeting to be held on January 16, 2013, be approved.

CARRIED

3. ELECTION OF CHAIR

Mr. D. Heath called for nominations from the Members for the appointment of Chair.

Ms. Maria Harding was nominated and the nomination was accepted.

There were no further nominations.

Ms. Maria Harding was acclaimed as Chair.

Ms. M. Harding assumed the Chair for the remainder of the meeting.

4. ELECTION OF VICE-CHAIR

Ms. M. Harding, Chair called for nominations from the Members for the appointment of Vice Chair.

Ms. Beatrice Metzler was nominated and the nomination was accepted.

There were no further nominations.

Ms. B. Metzler was acclaimed as Vice Chair.

5. ELECTION OF EXECUTIVE COMMITTEE MEMBERS-AT-LARGE

Ms. M. Harding, Chair called for nominations from the Members for the appointment of Members-at-Large to sit on the Executive Committee.

The following Members of the Board were nominated to sit as Members-At-Large on the Executive Committee and the nominations were accepted.

- Mr. John MacEachern
- Mr. Terry Fox

There were no further nominations.

Mr. John MacEachern and Mr. Terry Fox were acclaimed as Members-At-Large on the Executive Committee.

The Executive Committee will consist of the following members of the Board of Health:

- Ms. M. Harding, Chair
- Ms. B. Metzler, Vice-Chair
- Mr. J. Virdiramo, Past Chair
- Mr. J. MacEachern
- Mr. T. Fox

6. APPOINTMENT OF DESIGNATED BOARD MEMBER FOR SIGNING AUTHORITY

Report No. 2 - 2013 (Chief Executive Officer) relative to recommending the appointment of a designated Board Member for signing authority for the Thunder Bay District Health Unit for 2013.

Resolution No.: 2 - 2013

MOVED BY: Mr. T. Fox
SECONDED BY: Mr. J. MacEachern

THAT with respect to Report No. 2 – 2013 (Chief Executive Officer) we recommend that the following Board member be granted signing authority for the Thunder Bay District Health Unit for a period of one year commencing January 16, 2013 until the Board of Health's next Annual Meeting in 2014:

1. Mr. B. Kamphof

CARRIED

7. 2013 MEETING SCHEDULE

Report No. 1 - 2013 (Chief Executive Officer) relative to establishing the regular Board of Health meeting schedule for 2013.

Resolution No.: 3 - 2013

MOVED BY: Ms. B. Metzler
SECONDED BY: Ms. D. Robinson

THAT with respect to Report No. 1 – 2013 (Chief Executive Officer), we recommend that the following schedule for regular Board of Health meetings for 2013 be approved:

Wednesday, February 20, 2013	Wednesday, March 20, 2013
Wednesday, April 17, 2013	Wednesday, May 15, 2013
Wednesday, June 19, 2013	Wednesday, September 18, 2013
Wednesday, October 16, 2013	Wednesday, November 20, 2013
Wednesday, December 18, 2013	

AND THAT the meetings commence at 1:00 p.m.

CARRIED

8. ADJOURNMENT

Resolution No.: 4 - 2013

MOVED BY: Ms. C. Bryson
SECONDED BY: Mr. B. Kamphof

THAT the Board of Health Annual Meeting held on January 16, 2013, be adjourned at 1:14 p.m.

CARRIED

Chair, Board of Health

Chief Executive Officer

Recording Secretary

THUNDER BAY DISTRICT HEALTH UNIT

MINUTES OF MEETING: **BOARD OF HEALTH**

DATE: JANUARY 16, 2013

TIME: 1:15 P.M.

PLACE: BOARD ROOM

CHAIR: MR. DOUG HEATH

BOARD MEMBERS PRESENT:

Ms. C. Bryson
Mr. T. Fox
Ms. M. Harding
Mr. B. Kamphof
Mr. J. MacEachern
Mr. J. Masters
Ms. B. Metzler
Ms. D. Robinson
Mr. J. Virdiramo

VIA TELECONFERENCE:

Ms. G. Garbutt

REGRETS:

Mr. J. Daiter
Mr. N. Gale
Mr. A. Ruberto
Ms. L. Turk

ADMINISTRATION PRESENT:

Mr. D. Heath, Chief Executive Officer
Dr. D. Williams, Medical Officer of Health
Dr. J. DeMille, Associate Medical Officer of Health
Mr. K. Allan, Director, Health Protection
Ms. G. Daniels, Manager – Finance & Strategic Quality Initiatives
Ms. B. Moro, Executive Assistant to the Medical Officer of Health and Chief Executive Officer and Secretary to the Board of Health

The Chair called the meeting to order at 1:16 p.m.

1. DECLARATIONS OF PECUNIARY INTEREST

There were no declarations of pecuniary interest.

2. DECLARATIONS OF INTEREST

3. AGENDA APPROVAL

Resolution No.: 5 - 2013

MOVED BY: Mr. J. Masters
SECONDED BY: Mr. J. MacEachern

THAT the Agenda for the Regular Board of Health Meeting to be held on January 16, 2012, be approved.

CARRIED

4. INFORMATION SESSION

There was no information session at this meeting.

5. MINUTES OF THE PREVIOUS MEETINGS

5.01 Thunder Bay District Board of Health

The Minutes of the Meetings (Regular and Closed Session) for the Board of Health for the Thunder Bay District held on December 19, 2012, to be approved.

Resolution No.: 6 - 2013

MOVED BY: Ms. C. Bryson
SECONDED BY: Mr. B. Kamphof

THAT the Minutes of the Meetings (Regular and Closed Session) for the Board of Health for the Thunder Bay District held on December 19, 2012, be approved.

CARRIED

6. MATTERS ARISING FROM THE MINUTES

7. BOARD OF HEALTH (CLOSED SESSION) MEETING

There is no Board of Health (Closed Session) meeting scheduled at this time.

8. DECISIONS OF THE BOARD

8.1 HIV Anonymous Testing Program Budget

Report No. 3-2013 (Sexual Health and Clinical Programs) relative to providing the Board of Health with the proposed HIV Anonymous Testing Program Budget from the AIDS Bureau of the Ministry of Health and Long-Term Care.

Resolution No.: 7 - 2013

MOVED BY: Ms. B. Metzler
SECONDED BY: Mr. J. Virdiramo

THAT with respect to Report No. 3 – 2013 (Sexual Health and Clinical Programs), we recommend that:

- The application of HIV Anonymous Testing Program Budget of $58,471 be approved for submission to the Ministry of Health and Long-Term Care;

- AND THAT the Chief Executive Officer and Manager of Finance & Strategic Quality Initiatives be authorized to complete any administrative requirements of the respective budget submission processes, as required.

CARRIED

8.2 One-Time 100% Healthy Communities Fund Partnership Stream (CDP)

Report No. 4-2013 (Chronic Disease Prevention) relative to providing the Board of Health with the proposed one-time 100% Healthy Communities funding opportunity from the Ministry of Health and Long-Term Care.

8. DECISIONS OF THE BOARD (Continued)

8.2 One-Time 100% Healthy Communities Fund Partnership Stream (CDP) (Continued)

Resolution No.: 8 - 2013

MOVED BY: Ms. D. Robinson
SECONDED BY: Mr. T. Fox

THAT with respect to Report No. 4-2013 (Chronic Disease Prevention), we recommend that:

- The application of one-time 100% Healthy Communities Partnership Stream funding totaling $36,900 be approved for submission to the Ministry of Health and Long-Term Care; and

- The Chief Executive Officer and Manager of Finance & Strategic Quality Initiatives be authorized to complete any administrative requirements of the respective budget submission processes, as required.

CARRIED

8.3 alPHa Winter Symposium

Memorandum from Mr. D. Heath, Chief Executive Officer, dated December 28, 2013, containing a resolution relative to the above noted.

Resolution No.: 9 - 2013

MOVED BY: Mr. T. Fox
SECONDED BY: Ms. D. Robinson

THAT the following members of the Board be authorized to attend alPHa's Winter Symposium to be held in Toronto, Ontario on February 14 and 15, 2013:

8.0 DECISIONS OF THE BOARD (Continued)

8.3 alPHa Winter Symposium (Continued)

1. Ms. Beatrice Metzler
2. Ms. Maria Harding

AND THAT all expenses be paid in accordance to Policy No. BH-02-04 - Board Members' Reimbursement.

CARRIED

9. COMMUNICATIONS FOR INFORMATION

9.1 Respiratory Outbreaks – Influenza 2012 0 2013

Report No. 5-2013 (Medical Officer of Health) relative to providing the Board of Health with information relative to the respiratory outbreaks in institutions from November 2012 to early January 2013, for information.

Attachment 1: Pages 1 to 6 - Sections of the Ontario Respiratory Virus Bulletin 2012-2013, dated December 16 to 29, 2012 was distributed separately with the agenda.

Mr. K. Allan, Director – Health Protection and Ms. D. Binette, Manager – Infectious Disease Programs gave a presentation summarizing the outbreaks and the impacts of influenza on the local community, residents of the institutions and TBDHU resources.

9. COMMUNICATIONS FOR INFORMATION (Continued)

9.2 2013 Mileage Rate for Board of Health Members

Memorandum from Mr. D. Heath, Chief Executive Officer, dated December 28, 2013, relative to the above noted, for information, was placed on the desks.

9. COMMUNICATIONS FOR INFORMATION (Continued)

9.3 Oxycontin Update

Memorandum from Dr. D. Williams, Medical Officer of Health, dated January 9, 2013, advising that the report relative to the above noted will be presented at the February 20, 2013 Board of Health meeting, for information.

10. NEXT MEETING

The next meeting will be held on Wednesday, February 20, 2013.

11. ADJOURNMENT

Resolution No.: 10 - 2013

MOVED BY: Mr. J. MacEachern
SECONDED BY: Mr. J. Masters

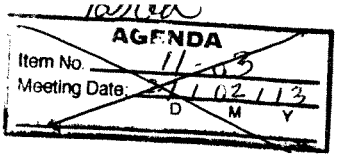
THAT the Board of Health meeting held on January 16, 2013 be adjourned at 2:16 p.m.

CARRIED

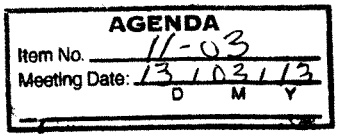
Chair, Board of Health

Chief Executive Officer

Recording Secretary



MINUTES OF THE REGULAR GENERAL MEETING
OF THE MANITOUWADGE ECONOMIC DEVELOPMENT CORPORATION
HELD ON January 17, 2013
IN THE COUNCIL CHAMBERS, MUNICIPAL COMPLEX



Present: Carole Desilets – Vice Chair
Ed Hedderson, Director
Karlson Hunter, Executive Director
Bob Kirkpatrick, Executive Director
Jimmy Moffat – Executive Director
Dave Raymond – Director
Kevin Turner – Director

Absent: Barbara St. Pierre, Chair
Grant Goodwin – Director
Ron Jung, Director
John MacEachern, Council Representative

Staff: Karen Robinson, Administrative Assistant/Treasurer
Cecile Kerster – Municipal Manager Cler

Guests: 0

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1. CALL TO ORDER

RESOLUTION NO. 2013-11

Moved by: Carole Desilets
Seconded by: Kevin Turner

RESOLVED that the . General Meeting of the Manitouwadge Economic Development Corporation commence at the hour of 7:16 PM.

CARRIED

2. APPROVAL OF MINUTES

RESOLUTION NO. 2013-12

Moved by: Dave Raymond
Seconded by: Jimmy Moffat

RESOLVED that the Minutes of the Regular Meeting of December 13, 2012 of the ManitouwadgeEconomic Development Corporation be accepted and filed. **CARRIED**

RESOLUTION NO. 2013-13

Moved by: Carole Desilets
Seconded by: Ed Hedderson

RESOLVED that the Minutes of the Special Meeting of the Executive on January 10, 2013 of the Manitouwadge Economic Development Corporation be accepted and filed.

CARRIED

4. DEPUTATIONS & MEETINGS

None

5. EXPENDITURE REPORT

- Expenditures for the month ending December 31, 2012.
- Resolution to accept expenditure report for month ending December 31, 2012.

RESOLUTION NO. 2013-14

Moved by: Jimmy Moffat
Seconded by: Dave Raymond

RESOLVED that the Expenditures Report of the Manitouwadge Economic Development Corporation for the month ending December 31, 2012 be accepted and filed.

CARRIED

6. CORRESPONDENCE (Items listed are available in folder for viewing at the Meeting)

6.1 Project completed by Brandon MacKinnon at Algoma University in the Sault using our Play in the Extreme Currency for his thesis.

7. NEW BUSINESS

7.1 Executive Committee – No elections due to all five members being acclaimed.

RESOLUTION NO. 2013-15

Moved by: Jimmy Moffat
Seconded by: Carole Desilets

RESOLVED that the following board members will be acclaimed as the 2013 Executive Committee along with the President and Vice-President, for the Manitouwadge Economic Development Corporation.

CARRIED

Barbara St. Pierre had instructed Karen Robinson to let her name stand for the Chair position.

(1) Barbara St. Pierre – Chair
(2) Carole Desilets – Vice Chair
(3) Karlson Hunter – Executive Director
(4) Robert Kirkpatrick – Executive Director
(5) Jimmy Moffat – Executive Director

8. OLD BUSINESS

8.1 **Decoration Contest Winners** – Karen Robinson informed the board of the winners of the Decoration Contest:

(1) Nicholas Family – 21 Moose Drive
(2) Martin Family – 48 Graham Drive
(3) Georgette Robichaud – Lakeview Apartments
(4) 1st Place Commercial – Manroc Developments
(5) 1st Place School – Manitouwadge Public

8.2 **Strategic Planning Session** – The new date for the Strategic Planning Session is February 7th, 2013 at 7:00 pm.

8.3 **MEDC and Township Meeting** – The new date for the MEDC and Township meeting will be March 7, 2013 at 7:00 pm.

8.4 **Report on Signage Update** – No update on the Signage at this meeting.

9. RESOLUTION TO GO INTO CLOSED SESSION

9.1 Personal matters about an identifiable individual.

RESOLUTION NO. 2013-16

Moved by: Jimmy Moffat
Seconded by: Carole Desilets

RESOLVED that the MEDC go into Closed Session at 7:47 pm.

CARRIED

RESOLUTION NO. 2013-17

Moved by: Jimmy Moffat
Seconded by: Carole Desilets

RESOLVED that the MEDC return from Closed Session at 8:11 pm.

CARRIED

10. ADJOURNMENT

RESOLUTION NO. 2011-18

Moved by: Jimmy Moffat
Seconded by: Ed Hedderson

RESOLVED that the Regular Meeting of the Manitouwadge Economic Development Corporation adjourn at the hour of 8.22 pm.

CARRIED

R Kirkpatrick
Robert Kirkpatrick – Acting Chair

Karen Robinson
Karen Robinson, Secretary/MEDC Treasurer

AGENDA
Item No. 11-04
Meeting Date: 13/03/13
D M Y

THE DISTRICT OF THUNDER BAY
SOCIAL SERVICES ADMINISTRATION BOARD

MINUTES OF BOARD MEETING NO. 01/2013
OF
THE DISTRICT OF THUNDER BAY SOCIAL SERVICES ADMINISTRATION BOARD

DATE OF MEETING: January 24, 2013

TIME OF MEETING: 10:06 AM

LOCATION OF MEETING: 3rd Floor Boardroom
TBDSSAB Headquarters
231 May Street South
Thunder Bay, ON

CHAIR: Mr. Robert (Bob) Katajamaki

PRESENT:

Mr. Robert (Bob) Katajamaki
Councillor Iain Angus
Councillor Andrew Foulds
Councillor Armand Giguere
Mayor Keith Hobbs
Reeve Kevin Holland
Councillor Sara Park
Councillor Aldo Ruberto
Councillor Kelly Tsubouchi
Councillor Joe Virdiramo

OFFICIALS:

Mr. William (Bill) Bradica,
Acting Chief Administrative Officer
Mr. Terry Flaherty, Director, Client Services Division
Ms. Karen Bradica, Manager, Quality Assurance
Ms. Lynda DaCosta, Manager, Human Resources
Ms. Jennifer Lible, Acting Manager, Client Services
Ms. Kathy McKay, Supervisor, Client Services
Mr. Aaron Park, Senior Planning & Social Policy Analyst
Ms. Julie Bench, Administrative Assistant
Mrs. Sandra Legros, Recording Secretary

REGRETS:
Mayor Mike King
Councillor Paul Pugh

Note: For the purposes of the Minutes references to TBDSSAB or the Board refers to The District of Thunder Bay Social Services Administration Board of Directors as relevant to specific agenda item; references to TBDHC or the Board refers to the Directors of Thunder Bay District Housing Corporation as relevant to specific agenda item. References to CAO refer jointly to the Chief Administrative Officer of TBDSSAB and Senior Administrator of TBDHC.

INAUGURAL BOARD MEETING

DISCLOSURES OF INTEREST

CONFIRMATION OF BOARD MEETING AGENDA

Bill Bradica, Acting CAO, provided an overview with respect to the agenda resolutions being presented.

Resolution No. 13/01

Moved by: Councillor J. Virdiramo
Seconded by: Councillor A. Ruberto

THAT with respect to the agendas for the Inaugural Board and Closed Session meetings of The District of Thunder Bay Social Services Administration Board for January 24, 2013, we recommend that the agendas as printed, including any additional information and new business, be confirmed.

CARRIED

Resolution No. 13/02

Moved by: Councillor J. Virdiramo
Seconded by: Councillor A. Ruberto

THAT with respect to the January 24, 2013 and the remainder of the 2013 agendas, we recommend:

1. that any matters discussed or resolutions passed which relate to the business of The District of Thunder Bay Social Services Administration Board (TBDSSAB) shall be deemed to have been discussed by the Directors of TBDSSAB.

2. that any matters discussed or resolutions passed which relate to the business of the Thunder Bay District Housing Corporation (TBDHC) shall be deemed to have been discussed by the Directors of TBDHC.

CARRIED

ELECTION OF OFFICERS

Election of Board Chair and Executive Officers

The first order of business was to elect a Chair and Board Executive in accordance with the *DSSAB Act,* for the term ending on December 31, 2013.

Chair

Bill Bradica, Acting CAO, advised Members of the Board that Councillor Andrew Foulds would not be able to attend the meeting until later and had indicated that he would like to vote if there was an alternate method available.

Bill Bradica, Acting CAO, responded to questions and it was the consensus of the Board that voting would be done only by those Board Members present.

Bill Bradica, Acting CAO, called for nominations for the position of Chair of TBDSSAB for the above noted term.

Councillor Armand Giguere and Mr. Robert Katajamaki were nominated and both accepted the nomination. There were no further nominations.

It was the consensus of the Board that voting be conducted by written ballot; ballots were collected with Mr. Robert Katajamaki elected as Chair.

Resolution No. 13/03

Moved by: Councillor K. Tsubouchi
Seconded by: Councillor J. Virdiramo

THAT the position of Chair of The District of Thunder Bay Social Services Administration Board for the term ending December 31, 2013, be filled by:

Mr. Robert Katajamaki

CARRIED

Vice-Chair

Chair R. Katajamaki called for nominations for the position of Vice-Chair of TBDSSAB for the above noted term.

Councillor Armand Giguere was nominated and declined the nomination. Councillor Aldo Ruberto was nominated and accepted the nomination. There were no further nominations.

Resolution No. 13/04

Moved by: Councillor K. Tsubouchi
Seconded by: Councillor J. Virdiramo

THAT the position of Vice-Chair of The District of Thunder Bay Social Services Administration Board, for the term ending December 31, 2013, be filled by:

Councillor Aldo Ruberto

CARRIED

Secretary/Treasurer

Chair R. Katajamaki called for nominations for the position of Secretary/Treasurer of TBDSSAB for the above noted term.

Councillor Armand Giguere and Councillor Joe Virdiramo were both nominated and accepted the nomination. There were no further nominations.

It was the consensus of the Board that voting be conducted by written ballot; ballots were collected with Councillor Armand Giguere elected as Secretary/Treasurer.

Resolution No. 13/05

Moved by: Councillor J. Virdiramo
Seconded by: Councillor A. Ruberto

THAT the position of Secretary/Treasurer of The District of Thunder Bay Social Services Administration Board, for the term ending December 31, 2013, be filled by:

Councillor Armand Giguere

CARRIED

TBDSSAB Committees

Memorandum from William Bradica, Acting CAO, dated January 11, 2013, relative to providing updated policies and terms of references for Board Committees, and containing resolutions for consideration relative to appointments to the relative committees.

Executive Committee

Chair R. Katajamaki called for appointments to the Executive Committee. Councillor Joe Virdiramo was nominated for the At Large position on the Executive Committee and accepted the appointment. There were no further nominations.

Resolution No. 13/06

Moved by: Councillor K. Tsubouchi
Seconded by: Councillor J. Virdiramo

THAT the following Members of The District of Thunder Bay Social Services Administration Board be appointed to the Executive Committee, for the term ending December 31, 2013:

1. Mr. Robert Katajamaki, Chair
2. Councillor Aldo Ruberto, Vice-Chair
3. Councillor Armand Giguere, Secretary/Treasurer
4. Councillor Iain Angus, Past Chair
5. Councillor Joe Virdiramo, At Large

AND THAT the Committee will meet on the following 2013 dates, commencing at 10:00 a.m., if agenda items warrant:

February 12, March 12, April 2, May 7, June 4, July 9, August 6, September 10, October 8, November 5, and December 3

AND THAT the Board Chair is appointed the Chair of the Executive Committee in accordance with the Committee Terms of Reference.

CARRIED

Audit Committee

Chair R. Katajamaki called for appointments to the Audit Committee. Councillor Joe Virdiramo was nominated for the At Large position and accepted the nomination. Reeve Kevin Holland was nominated for the At Large position and declined the nomination. There were no further nominations.

Resolution No. 13/07

Moved by: Reeve K. Holland
Seconded by: Councillor J. Virdiramo

THAT the following Members of The District of Thunder Bay Social Services Administration Board be appointed to the Audit Committee, for the term ending December 31, 2013:

1. Mr. Robert Katajamaki, Chair
2. Councillor Aldo Ruberto, Vice-Chair
3. Councillor Armand Giguere, Secretary/Treasurer
4. Councillor Joe Virdiramo, At Large

AND THAT the Committee will meet on the following 2013 dates commencing at 9:30 a.m.:

February 13 and April 3

AND THAT the Committee may meet on other dates as required and at the call of the Committee Chair;

AND THAT the Board Secretary/Treasurer is appointed the Chair of the Audit Committee in accordance with the Committee Terms of Reference.

CARRIED

Child Care Committee

Chair R. Katajamaki called for appointments to the Child Care Committee. All previous Child Care Committee Members agreed to remain on the Committee.

Resolution No. 13/08

Moved by: Reeve K. Holland
Seconded by: Councillor J. Virdiramo

THAT the following Members of The District of Thunder Bay Social Services Administration Board are appointed to the Child Care Committee for the term ending December 31, 2013:

1. Councillor Iain Angus
2. Councillor Sara Park
3. Councillor Aldo Ruberto
4. Councillor Joe Virdiramo

AND THAT the Committee will meet on the following 2013 dates commencing at 12:30 p.m.

February 20, May 22, September 18, and November 27

AND THAT Committee meetings may be cancelled or held on other dates depending on agenda items and urgent matters, in consultation with the Committee Chair;

AND THAT the Committee Chair be appointed at the first Committee meeting of the year.

CARRIED

Ontario Works Committee

Chair R. Katajamaki called for appointments to the Ontario Works Committee. The previous Ontario Works Committee Members in attendance agreed to remain on the Ontario Works Committee.

Resolution No. 13/09

Moved by: Reeve K. Holland
Seconded by: Councillor J. Virdiramo

THAT the following Members of The District of Thunder Bay Social Services Administration Board are appointed to the Ontario Works Committee for the term ending December 31, 2013:

1. Councillor Iain Angus
2. Councillor Armand Giguere
3. Councillor Paul Pugh
4. Councillor Joe Virdiramo

AND THAT the Committee will meet on the following 2013 dates commencing at 10:00 a.m.

February 20, May 22, September 18, and November 27

AND THAT Committee meetings may be cancelled or held on other dates depending on agenda items and urgent matters, in consultation with the Committee Chair;

AND THAT the Committee Chair be appointed at the first Committee meeting of the year.

CARRIED

Social Housing Committee

Chair R. Katajamaki called for appointments to the Social Housing Committee.

Councillor Paul Pugh had requested to remain on the Social Housing Committee. Two of the remaining previous Committee Members agreed to remain on the Ontario Works Committee, and Reeve Kevin Holland volunteered.

Resolution No. 13/10

Moved by: Councillor K. Tsubouchi
Seconded by: Councillor J. Virdiramo

THAT the following Members of The District of Thunder Bay Social Services Administration Board are appointed to the Social Housing Committee for the term ending December 31, 2013:

1. Councillor Paul Pugh
2. Mr. Robert Katajamaki
3. Reeve Kevin Holland
4. Councillor Armand Giguere

AND THAT the Committee will meet on the following 2013 dates commencing at 9:30 a.m.

February 22, May 24, September 20, and November 29

AND THAT Committee meetings may be cancelled or held on other dates depending on agenda items and urgent matters, in consultation with the Committee Chair;

AND THAT the Committee Chair be appointed at the first Committee meeting of the year.

CARRIED

Appointment of Board Members to Ad Hoc / Special Committees

Special Committee for Governance Review

Chair R. Katajamaki called for appointments to the Special Committee for Governance Review and the previous Committee Members agreed to remain on the Committee.

Resolution No. 13/11

Moved by: Councillor K. Tsubouchi
Seconded by: Councillor J. Virdiramo

THAT the following Members of The District of Thunder Bay Social Services Administration Board are appointed to the Special Committee on Governance Review for the term ending December 31, 2013, or until such time as the mandate has been fulfilled:

1. Councillor Iain Angus
2. Councillor Armand Giguere
3. Councillor Sara Park
4. Councillor Kelly Tsubouchi

AND THAT the Committee will meet on the following 2013 dates, commencing at 12:30 p.m., if agenda items warrant:

February 12, March 12, April 2, May 7, June 4, July 9, August 6, September 10, October 8,. November 5, and December 3

AND THAT Committee meetings may be cancelled or held on other dates depending on agenda items and urgent matters, in consultation with the Committee Chair;

AND THAT the Committee Chair be appointed at the first Committee meeting of the year.

CARRIED

Political Action Committee

Chair R. Katajamaki called for appointments for the At Large positions on the Political Action Committee. Councillor Andrew Foulds expressed interest in remaining on the Committee and Reeve Kevin Holland agreed to remain on the Committee as well.

Resolution No. 13/12

Moved by: Councillor K. Tsubouchi
Seconded by: Councillor J. Virdiramo

THAT the following Members of The District of Thunder Bay Social Services Administration Board be appointed to the Political Action Committee, for the term ending December 31, 2013:

1. Mr. Robert Katajamaki, Chair
2. Councillor Aldo Ruberto, Vice-Chair
3. Councillor Armand Giguere, Secretary/Treasurer
4. Councillor Andrew Foulds, At Large
5. Reeve Kevin Holland, At Large

AND THAT the Committee will meet on the following 2013 dates commencing at 12:30 p.m., if agenda items warrant:

February 22, May 24, September 20, and November 29

AND THAT the Board Chair is appointed the Chair of the Political Action Committee in accordance with the Committee Terms of Reference.

CARRIED

Destruction of Ballots

Resolution No. 13/12(A)

Moved by: Councillor S. Park
Seconded by: Mayor K. Hobbs

THAT with respect to the appointment of the Board Executive and Committee Members, we recommend that the written ballots be destroyed.

CARRIED

Manitouwadge Municipal Housing Corporation
Project in Difficulty Special Committee

Memorandum from Bill Bradica, Acting CAO, dated January 11, 2013, containing a resolution for consideration relative to the above noted Committee.

Bill Bradica, Acting CAO, provided an overview.

Resolution No. 13/13

Moved by: Councillor A. Giguere
Seconded by: Councillor A. Ruberto

THAT with respect to the Manitouwadge Municipal Housing Corporation – Project in Difficulty Special Committee, we recommend that the Committee be disbanded;

AND THAT any further review of the Manitouwadge Municipal Housing Corporation Project in Difficulty be referred to the Social Housing Committee under its approved mandate.

CARRIED

CONFIRMATION OF MEETING DATES

2013 TBDSSAB Meeting Dates and
Next Inaugural Meeting Date

Memorandum from William Bradica, Acting CAO, dated January 11, 2013, containing a resolution to confirm Board meeting dates for the Inaugural meeting in 2014 and the balance of 2013.

Bill Bradica, Acting CAO, provided an overview.

Resolution No. 13/14

Moved by: Councillor A. Ruberto
Seconded by: Councillor I. Angus

THAT the next Inaugural Meeting of The District of Thunder Bay Social Services Administration Board will be held on Thursday, January 23, 2014;

AND THAT the regularly scheduled meetings of The District of Thunder Bay Social Services Administration Board for the year 2013 be held in the City of Thunder Bay, beginning at 10:00 a.m. on the following dates:

February 21, March 28, April 18 (Includes the Annual General Meeting), May 23, June 27, July 25, September 19, October 24, November 28, and December 12.

AND THAT any changes to the meeting schedule can be made by resolution of the Board.

CARRIED

At 10:35 a.m. Jennifer Lible, Acting Manager, Client Services, and Kathy McKay, Supervisor, Client Services, entered the meeting room.

PRESENTATION

Social Services Modernization Project

Copies of the presentation were distributed at the meeting.

Bill Bradica, Acting CAO, provided a brief introduction to the presentation.

Presentation by Kathy McKay, Supervisor, Client Services relative to the Ontario Works – Social Services Modernization Project.

Kathy McKay, Supervisor, Client Services and Jennifer Lible, Acting Manager, Client Services, responded to questions. William Bradica, Acting CAO, also responded to questions.

At 10:51 a.m. Councillor A. Giguere left the meeting room.

At 11:02 a.m. Jennifer Lible, Acting Manager, Client Services, and Kathy McKay, Supervisor, Client Services, left the meeting room.

It was the consensus of the Board that the Closed Session meeting be held later in the meeting.

At 11:03 a.m. Lynda DaCosta, Manager, Human Resources, left the meeting room.

MINUTES OF PREVIOUS MEETINGS

Board Meetings

Minutes of Meeting No. 17/2012 and Meeting No. 18/2012 (Regular and Closed Session) of TBDSSAB, held on November 15, 2012, respectively, to be confirmed.

Resolution No. 13/16

Moved by: Mayor K. Hobbs
Seconded by: Councillor S. Park

THAT the Minutes of Meeting No. 17/2012 and Meeting No. 18/2012 (Regular and Closed Session) of The District of Thunder Bay Social Services Administration Board, held on November 15, 2012, respectively, be confirmed.

CARRIED

Minutes of Meeting No. 19/2012 and Meeting No. 20/2012 (Special and Special Closed Session) of TBDSSAB, held on December 6, 2012, respectively, to be confirmed.

Resolution No. 13/17

Moved by: Mayor K. Hobbs
Seconded by: Councillor S. Park

THAT the Minutes of Meeting No. 19/2012 and Meeting No. 20/2012 (Special and Special Closed Session) of The District of Thunder Bay Social Services Administration Board, held on December 6, 2012, respectively, be confirmed.

CARRIED

Committee Meetings

Executive Committee

Confirmed and Draft Minutes of the Executive Committee meeting held on December 5, 2012, and January 8, 2013, respectively, for information only.

Political Action Committee

Confirmed and Draft Minutes of the Political Action Committee meetings held on December 5, 2012 and January 9, 2013, respectively, for information only.

Memorandum from William Bradica, Acting CAO, dated January 11, 2013, containing a recommendation from the Political Action Committee relative to the discontinuation of the Community Access Program funding.

At 11:06 a.m. Councillor Giguere returned to the meeting room. Aaron Park, Senior Planning & Social Policy Analyst, also entered the meeting room.

Bill Bradica, Acting CAO, provided an overview. It was the consensus of the Board that funding advocacy for the Community Access Program be discontinued.

Child Care Committee

Draft Minutes of the Child Care Committee meeting held on December 7, 2012, for information only.

Special Committee on
Governance Review

Draft Minutes of the meeting of the Special Committee on Governance Review held on January 9, 2013, for information only.

Bill Bradica, Acting CAO, responded to questions with respect to the referral of strategic planning to the Executive Committee.

REPORTS OF OFFICERS

Analysis of Ex-Reserve Residents in
Receipt of Ontario Works Payments

At the September 20, 2012, Board meeting a resolution was passed requesting Administration conduct an analysis on Ex-Reserve residents in receipt of Ontario Works payments in the District of Thunder Bay and submit a report to the Board no later than January 2013.

Report No. 2013-01 (Service System Planning Division) relative to providing a brief analysis of the available data pertaining to the Indian Welfare System and highlights the absence of appropriate data on the subject to comprehensively respond to the Board's request, for information only.

Aaron Park, Senior Planning & Social Policy Analyst responded to questions. William Bradica, Acting CAO, and Terry Flaherty, Acting Director, Client Services Division, also responded to questions.

At 11:11 a.m. Karen Bradica, Manager, Quality Assurance, entered the meeting room.

Community Homelessness Prevention
Initiative Allocation Strategy

Report No. 2013-02 (Service System Planning Division) relative to providing the background to the formation of the Community Homelessness Prevention Initiative (CHPI) and seeking approval of Administration's 2013 (CHPI) allocation plan.

Memorandum from David Carter-Whitney, Assistant Deputy Minister, Social Policy Development Division, Ministry of Community and Social Services, dated December 27, 2012, relative to one-time grant funding to support the transition to the Community Homelessness Prevention Initiative, previously emailed to Members of the Board on January 22, 2013 and distributed at the meeting.

Bill Bradica, Acting CAO, provided a brief overview and responded to questions. Aaron Park, Senior Planning & Social Policy Analyst, provided additional information and responded to questions. Terry Flaherty, Acting Director, Client Services Division, also responded to questions.

It was the consensus of the Board that advocacy for continued funding under this program be referred to the Political Action Committee.

At 11:53 a.m. Councillor A. Foulds joined the meeting.

Resolution No. 13/18

Moved by: Councillor S. Park
Seconded by: Councillor K. Tsubouchi

THAT with respect to Report No. 2013-02 (Service System Planning Division), we, The District of Thunder Bay Social Services Administration Board (TBDSSAB or the Board), approve the 2013 Community Homelessness Prevention Initiative allocation plan as presented by Administration;

AND THAT funding for Emergency Shelters be in accordance with Option #3 as contained in Report No. 2013-02;

AND THAT the Board authorizes the Chair and the Chief Administrative Officer, or designate, of TBDSSAB to execute any required agreements with the service providers outlined in Report No. 2013-02;

AND THAT any necessary by-law be presented to the Board.

CARRIED

St. Joseph's Care Group – Sister Leila Greco
Apartments - Rent Supplement Agreement

Report No. 2013-03 (Service System Planning Division) relative to seeking Board approval to enter into a Rent Supplement Agreement with St. Joseph's Care Group of Thunder Bay for the funding of twenty (20) Rent-Geared-To-Income units.

Karen Bradica, Manager, Quality Assurance, responded to questions.

Resolution No. 13/19

Moved by: Mayor K. Hobbs
Seconded by: Councillor A. Ruberto

THAT with respect to Report No. 2013-03 (Service System Planning Division), we authorize Administration to enter into a Rent Supplement Agreement with St. Joseph's Care Group of Thunder Bay to provide rent supplement to low-income seniors residing at Sister Leila Greco Apartments, Thunder Bay;

AND THAT we authorize the Chair and Acting Chief Administrative Officer of The District of Thunder Bay Social Services Administration Board to execute a Rent Supplement Agreement with St. Joseph's Care Group of Thunder Bay for the funding of twenty (20) Rent-Geared-To-Income units under the Non-Profit Rent Supplement Program;

AND THAT any necessary By-law be presented to the Board for consideration.

CARRIED

Amendments to Records Retention
By-law No. 01-2012

Report No. 2013-04 (Corporate Services Division) relative to requesting approval of the amendment of By-Law No. 01-2012 to include two new series under the Property Management Records Retention Schedule.

Resolution No. 13/20

Moved by: Councillor I. Angus
Seconded by: Reeve K. Holland

THAT with respect to Report No. 2013-04 (Corporate Services Division), we, The District of Thunder Bay Social Services Administration Board, approve an amendment to By-Law No. 01-2012 the Records Retention

Schedule By-law, to include the following two new series in the existing Property Management Record Retention Schedule:

SS163 - to distinguish tenant arrears files from regular tenant files
SS164 - to establish a series for Landlord Rent Supplement Agreements

AND THAT any necessary By-law be presented to the Board for consideration.

CARRIED

It was the consensus of the Board that Report No. 2013-05 relative to the Rent Supplement Program / Rent Increase / Skyline Management Inc., be deferred until after the Closed Session meeting.

At 12:07 p.m. Karen Bradica, Manager, Quality Assurance and Aaron Park, Senior Planning & Social Policy Analyst, left the meeting room.

Political Action Committee
– Terms of Reference

Report No. 2013-06 (CAO's Office) relative to providing the Board with a recommendation from the Political Action Committee concerning the Political Action Committee Terms of Reference.

Resolution No. 13/22

Moved by: Councillor I. Angus
Seconded by: Reeve K. Holland

THAT with respect to Report No. 2013-06 (CAO's Office), we, The District of Thunder Bay Social Services Administration Board, approve the Political Action Committee Terms of Reference as attached to Report No. 2013-06;

AND THAT we authorize the Chief Administrative Officer, or designate, to amend the Terms of Reference with respect to housekeeping items, as may be required from time to time.

CARRIED

Child Care Committee
- Terms of Reference

Report No. 2013-07 (CAO's Office) relative to providing the Board with a recommendation from the Child Care Committee concerning the Child Care Committee Terms of Reference.

Resolution No. 13/23

Moved by: Reeve K. Holland
Seconded by: Councillor S. Park

THAT with respect to Report No. 2013-07 (CAO's Office), we, The District of Thunder Bay Social Services Administration Board, approve the Child Care Committee Terms of Reference as attached to Report No. 2013-07;

AND THAT we authorize the Chief Administrative Officer, or designate, to amend the Terms of Reference with respect to housekeeping items, as may be required from time to time.

CARRIED

NEW BUSINESS

Ontario Renovates

Letter from Janet Hope, Assistant Deputy Minister, Ministry of Municipal Affairs and Housing, dated January 18, 2013, relative to an additional funding allocation under the Ontario Renovates component for Year 2, was emailed to Members of the Board on January 23, 2013 and distributed at the meeting.

Bill Bradica, Acting CAO, provided an overview and responded to questions.

It was the consensus of the Board to forward a thank you letter from the Board Chair to Mr. Peter Boban, Team Lead, Regional Housing Services, Municipal Services Office – Northwestern, Ministry of Municipal Affairs and Housing, for his assistance with respect to this program.

At 12:12 p.m. the Chair called for the lunch break.

At 12:43 p.m. the Board reconvened in Open Session with Bill Bradica, Acting CAO, Lynda DaCosta, Manager, Human Resources, Sandra Legros, Recording Secretary and Julie Bench, Administrative Assistant, present.

CLOSED SESSION MEETING

Administration recommended that the Board adjourns to a closed meeting relative to receipt of information with respect to identifiable individuals, solicitor-client privilege, and labour relations.

Resolution No. 13/15

Moved by: Councillor A. Ruberto
Seconded by: Councillor I. Angus

THAT the Board adjourns to Closed Session relative to receipt of information with respect to labour relations as presented under Acting CAO Performance Review, solicitor-client privilege as presented under Legal Matters, and identifiable individuals as contained in the Rent Supplement memorandum.

CARRIED

At 1:48 p.m. the Board reconvened in Open Session with Bill Bradica, Acting CAO, Sandra Legros, Recording Secretary and Julie Bench, Administrative Assistant, present.

Rent Supplement Program / Rent
Increase / Skyline Management Inc.

Report No. 2013-05 (Client Services Division) relative to providing the Board with information regarding an increase to market rent above the allowable guideline, as determined annually by the Ministry of Municipal Affairs and Housing for Skyline Management Inc. Confidential Attachment #1 to Report No. 2013-05 presented in Closed Session only.

Bill Bradica, Acting CAO, provided an overview and responded to questions.

Resolution No. 13/21

Moved by: Councillor I. Angus
Seconded by: Reeve K. Holland

THAT with respect to Report No. 2013-05 (Client Services Division), we, The District of Thunder Bay Social Services Administration Board, approve the rent increases for Skyline Management Inc., as outlined in Confidential Attachment #1 of Report No. 2013-05, as presented in Closed Session.

CARRIED

BY-LAWS

First and Final Reading

Resolution No. 13/24

Moved by: Reeve K. Holland
Seconded by: Councillor A. Ruberto

THAT the following By-laws be introduced and now be given First and Final Reading, engrossed, signed by the Chair and Secretary, sealed and numbered:

1. A By-law to amend By-law Number 01 - 2012 relative adopting Records Retention Authority Schedules under The District of Thunder Bay Social Services Administration Board, as required under the *Municipal Act S.O. 2000,* and in particular the addition of Series #SS163 and #SS164 to Schedule "F" for Property Management Services.

   Explanation: A By-law to amend By-law No. 01-2012 by adding series to Schedule "F" for Property Management Services.
   Authorization: Board Meeting 2013/01/24

   BY-LAW NUMBER 01 – 2013

2. A By-law to amend By-law Number 11 - 2004, being a by-law authorizing the execution of rent-supplement agreements with Designated Non-Profit Housing Providers for the provision of certain duties and responsibilities for non-profit social housing projects located within the District of Thunder Bay, by amending Schedule "A" to include St. Joseph's Care Group of Thunder Bay – Sister Leila Greco Apartments.

   Explanation: A By-law to amend By-law No. 11-2004 by adding St. Josephs Care Group of Thunder Bay – Sister Leila Greco Apartments to Schedule "A".
   Authorization: Board Meeting 2013/01/24

   BY-LAW NUMBER 02 – 2013

   CARRIED

NEW BUSINESS (Continued)

New Premier of Ontario

It was the consensus of the Board that upon conclusion of the election for the new Liberal Party Leader that letters of congratulation be written from the Board Chair to the new Premier of Ontario and upon appointment to the Ministers for Community and Social Services, Children and Youth Services, Municipal Affairs and Housing, and Education.

NEXT MEETING

The next meeting of The District of Thunder Bay Social Services Administration Board will be held on Thursday, February 21, 2013, in the 3rd Floor Boardroom, TBDSSAB Headquarters, 231 May Street South, Thunder Bay, Ontario.

ADJOURNMENT

Resolution No. 13/25

Moved by: Reeve K. Holland
Seconded by: Councillor A. Ruberto

THAT the Inaugural Board Meeting No. 01/2013 of The District of Thunder Bay Social Services Administration Board, held on January 24, 2013, be adjourned at 1:54 p.m.

CARRIED

Chair

Secretary/Treasurer

MANITOUWADGE PUBLIC LIBRARY BOARD

A regular meeting of the Library Board was held in the Community Centre meeting room on Tuesday February 5th, 2013

Called to order at 6:30pm

Chairperson: Lise Lafrenière

Membres: Sue Partridge, Lisa Jomphe, Connie Hunter

Regrets : Ray Lelièvre, Cécile Lafrenière

CEO/ secretary: Janis Lamothe

No declarations of interest at this time

#06-13
Moved by: Lisa Jomphe
Seconded by: Connie Hunter

that the agenda for tonight's meeting and the minutes from the January 8th, 2013 meeting be adopted as distributed.

Carried

4. Business from the minutes:

01 Family night was held on the 28th of January in the library. The CEO partnered with the Early Years centre. There were more than 30 people in attendance.

02 The CEO attended the OLA conference in Toronto. She submitted a report to the Board.

03 Sue attended a meeting on January 14th in regards to the possibility of the Seniors moving into the Recreation building. Janis will follow up with a phone call to Cecile at the Town office.

04 The Board discussed the Banking and passed the following motion

#07-13
Moved by: Sue Partridge
Seconded by: Lisa Jomphe

that the Board authorizes the CEO to make deposits to the Library account minimum one per month or at the CEO's discretion, this will help keep the transaction fees to a minimum.

Carried.

05 The Board has decided to cancel a Pot Luck dinner.
06 The CEO presented the Board with the draft budget for 2013.

5. Financial Report

Deposits for January totalled (Township acc) = $8,545.38
(Library acc.) = $ 322.25

01 The CEO presented the Board with the bills submitted to the office since their last meeting, and they passed the following Motion:

#08-13
Moved by: Connie Hunter
Seconded by: Sue Partridge

that the Board approves the bills submitted to the office for payment since our last meeting, in the amount of $10,710.58.

Carried.

6. Correspondence

*Check from OLA fro December Cap student ($632.38)
*Check from Nipissing University proctoring ($100.00)
*Letter from Esther Meerschaut, book donation
*Copy of deleted facebook msg.
* Letter to Lise from Mayor in regards to the railing
* OLA magazine for Board members.

7. CEO's Report

Circulation for January		= 1376
Web Access	January	= 131
Facebook		= 10 New Likes

8. New Business

01 The library staff will be holding a craft day on the Saturday of "Frosty Days"

#09-13
Moved by: Connie Hunter
Seconded by: Lisa Jomphe

that we adjourn at 7:25 pm., till Tuesday March 5th , 2013, at 6:30 pm.

Carried.

Chairperson

Secretary

REPORT TO COUNCIL

Mar. 6, 2013

SUBMITTED BY: Connie Hunter

SUBJECT: Update on ARC activities.

During the February 28th, 2013 public meeting of the Manitouwadge Accommodation Review Committee (ARC) presentations were given by Erica Cotton, Vice Principal at B.A. Parker Public School and Geraldton Composite High School and David Jaremy, Prinicipal of Hornepayne Elementary and High Schools. These presentations described the decision process that lead to the housing the elementary and high schools in those communities under one roof.

In Geraldton, the elementary school building was declared "prohibitive to repair". The Ministry of Education gave the Superior Greenstone District School Board(SGDSB) $3.9 million redevelop unused space, build an addition to the high school and house the two schools in this remodeled building.

In Hornepayne, in the 1980s a building was built using federal, provincial and CN rail(which was a Crown Corpoartion) funds. This building housed a hotel, swimming pool, stores, businesses/services and the High School. As the closing date of the building approached Algoma District School Board(ADSB) had to find someplace to house the high school. With the population of Hornepayne anticipated to continue to decline the ADSB decided to build one new school to house kindergarten to grade 12 (K to 12).

In each case the elementary and high schools are considered two separate schools.

During each presentation it was stated that there were very few negative comments or opposition to housing two schools in one building. Mr. Jaremy stated that at the beginning of the process, comments received from parents of elementary level students involved the concern over potential negative influences of high school age students on elementary age students. By the time the school opened these children had become the high school students.

I just wanted to mention that Manitouwadge High School students have been to the Hornepayne High School to participate in sport events and Mr. Jaremy has been to the Manitouwadge High School for the same reason. Mr. Jaremy was very generous and genuine with his positive comments of the Manitouwadge High School facility as well as the quality of the staff and students.

The K-12 school model in both schools works well for these schools. Hornepayne has a staggered day between the schools. This provides them with the ability to share resources (i.e. when an elementary class is at lunch or in the gym a high school class can borrow computers). Advanced students can take advantage of a "Jump Ahead" program where they can take classes in the next grade higher. It is easier for students with special needs to transition more gradually from elementary to high school.

After the presentations the revised financial figures were displayed. These had been posted to the website a few days previous to the meeting. These figures are attached. Questions arising from these

figures were:

- Is there an enrolment level at which the SGDSB will decide to combine the schools?
- If so, what is the level?
- If the decision is made to house the schools in one building how will the SGDSB deal with the associated operating deficit without eliminating teaching positions?
- For a full list of questions please refer to the minutes of the meeting which will eventually be posted to the SGDSB website under the Manitouwadge ARC.

The next meeting is scheduled for March 28th, 2013 at the Manitouwadge High School. This will be a working meeting of the ARC and we will be welcoming delegations of individuals or groups.

Thank you.

Respectfully Submitted by: Connie Hunter
Councillor

Combined Statements for MNPS and MNHS

Posted to website - February 21, 2013

Based on 2012/13 REVISED ESTIMATE Enrolments	No Change	Option1 - moving gr. 7 & 8 into MNHS building	Option2 - moving All students into MNHS building & Build Addition	Option3 - moving All students into MNHS without build	Option4 - moving All students into MNHS with LARGER build	Option5 - moving gr. 7 & 8 into MNHS building without Build and with reorg of MNPS
Revenue - Grants, Solar, Daycare, Other Boards	3,316,733	This Option replaced by Option #5	2,461,028	2,332,883	2,577,622	3,113,000
Expenses:						
CLASSROOM - TEACHERS, EAs, LIBRARY ATTENDANCE	2,296,495		2,275,864	2,275,864	2,275,864	2,296,880
SCHOOL ADMINISTRATION	360,683		223,741	223,741	223,741	360,683
PLANT OPERATIONS - CUSTODIAL, UTILITIES, MAINTENANCE	638,050		543,545	521,545	543,545	631,050
TRANSPORTATION	26,935		26,935	26,935	26,935	26,935
Total Expenses	3,322,163		3,070,085	3,048,085	3,070,085	3,315,548
Net Financial Position to the Board	-5,430		-609,057	-715,202	-492,463	-202,548
Additional Information:	All Options: Do not reflect facility renewal grants or expenses; Average salaries have been used in analysis; Calculations are based on 2012/13 enrolment projections, current collective agreements and funding per 12/13 Revised Estimates.					
			Staffing Changes: Principal - (1.0) FTE Secretary - (1.0) FTE Custodial - (0.5) FTE **Facility:** PS on main floor Road access blocked HS on second floor Access to programming Seemless transition to secondary	**Staffing Changes:** Principal - (1.0) FTE Secretary - (1.0) FTE Custodial - (0.5) FTE **Facility:** Same as Option #2 Room conversions: 226/228 into computerlab convert current lab into regular classrooms 218/219 become one room French cart	**Staffing Changes:** Principal - (1.0) FTE Secretary - (1.0) FTE Custodial - (0.5) FTE **Facility:** Same as Option 2 but larger build	**Staffing Changes:** French teacher travels between schools **Facility:** Close 4 rooms in Public school French cart
CAPITAL REQUEST to Ministry:			**$3.38 Million** Additon, track, playground	**$980,000** Renovation, track, playground	**$4.72 Million** Addition, track, playground	**NIL**