

Ministry of the Environment

Safe Drinking Water Branch

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Ministère de l'Environnement

Direction du contrôle de la qualité de  
l'eau potable

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April 24, 2013

Mr. Joel Yusko  
Manager of Public Works  
Town of Espanola  
596 Second Avenue  
Espanola, ON P0P 1N0

Dear Mr. Yusko,

**Re: Final Inspection Report for the Espanola DWS Inspection Report #1-9ZWNNU**

Please find attached the Ministry of the Environment's final inspection report for the February 25, 2013 inspection of the Espanola Drinking Water System (DWS# 210000746). The primary focus of this inspection is to ensure compliance with Ministry of the Environment legislation and authorizing documents, as well as evaluating conformance with Ministry drinking water related policies and guidelines during the inspection review period. This report is based on a "focused" inspection. Although the inspection involved fewer activities than those normally undertaken by a detailed inspection, it contained the majority of the elements required to assess key compliance issues.

There were no issues of non-compliance identified during the current inspection period. However, please note the section of the report entitled "Other Inspection Findings".

Should you have any questions or concerns regarding the content of the attached report or associated appendices, please do not hesitate to contact me at (705) 942-6318.

Kind Regards,

A handwritten signature in black ink, appearing to read "Lori Greco".

Lori Greco  
Provincial Officer  
Ministry of the Environment, Safe Drinking Water Branch  
Sault Ste Marie Area Office

Enclosure

cc: Dave Parker – Assistant Manager of Public Works  
Jim Phippen - Operations Manager, OCWA Espanola Hub  
Keith Stringer – Cluster Manager, OCWA Espanola Hub  
Dan Clark, Process/Compliance Technician, OCWA Espanola Hub

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**Ministry of the Environment**

**ESPANOLA DRINKING WATER SYSTEM  
Inspection Report**

<b>Site Number:</b>	210000746
<b>Inspection Number:</b>	1-9ZWNJ
<b>Date of Inspection:</b>	Feb 25, 2013
<b>Inspected By:</b>	Lori Greco

**OWNER INFORMATION:**

**Company Name:** ESPANOLA, THE CORPORATION OF THE TOWN OF  
**Street Number:** 100 **Unit Identifier:** 2  
**Street Name:** TUDHOPE St  
**City:** ESPANOLA  
**Province:** ON **Postal Code:** P5E 1S6

**CONTACT INFORMATION**

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**Type:** Owner **Name:** Joel Yusko  
**Phone:** (705) 869-1751 **Fax:** (705) 869-4294  
**Email:** jyusko@espanola.ca  
**Title:** Manager of Public Works

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**Type:** Owner **Name:** Dave Parker  
**Phone:** (705) 869-1751 **Fax:** (705) 869-4294  
**Email:** dparker@espanola.ca  
**Title:** Assistant Manager of Public Works

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**Type:** Operating Authority **Name:** Jim Phippen  
**Phone:** (705) 869-5578 **Fax:** (705) 869-4374  
**Email:** jhippen@ocwa.com  
**Title:** OCWA, Senior Operations Manager, Espanola Hub

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**Type:** Operating Authority **Name:** Keith Stringer  
**Phone:** (705) 869-5578 x2224 **Fax:** (705) 869-4374  
**Email:** kstringer@ocwa.com  
**Title:** OCWA, Operations Manager, Espanola Hub

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**Type:** Operating Authority **Name:** Dan Clark  
**Phone:** (705) 869-5578 **Fax:** (705) 869-4374  
**Email:** dclark@ocwa.com  
**Title:** Process/Compliance Technician

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**INSPECTION DETAILS:**

**Site Name:** ESPANOLA DRINKING WATER SYSTEM  
**Site Address:** 1151 BASS LAKE RD ESPANOLA ON P5E 1P9  
**County/District:** Espanola  
**MOE District/Area Office:** Sudbury District  
**Health Unit:** SUDBURY AND DISTRICT HEALTH UNIT  
**Conservation Authority:** N/A  
**MNR Office:** Espanola Regional Office  
**Category:** Large Municipal Residential

**Site Number:** 210000746  
**Inspection Type:** Unannounced  
**Inspection Number:** 1-9ZWNNU  
**Date of Inspection:** Feb 25, 2013  
**Date of Previous Inspection:** Oct 26, 2011

## COMPONENTS DESCRIPTION

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**Site (Name):** RAW WATER

**Type:** Source

**Sub Type:**

**Comments:**

The source of raw water for the Espanola Drinking Water System is Lake Apsey, located to the south of the town. The area around the lake is mainly residential and undeveloped forest land. The raw water intake is a 600 millimetre diameter polyethylene (PE) pipe with the intake crib located 135m from the shore at an approximate depth of 12 metres.

Raw water is gravity fed into a concrete intake chamber, which is located below grade in the low lift pumping station. Raw water is then directed through two screens (9.5 millimetre openings), installed in sequence in a screen channel before being pumped 325 metres to the treatment plant by two low-lift pumps.

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**Site (Name):** TREATED WATER

**Type:** Treated Water POE

**Sub Type:**

**Comments:**

Raw water enters the treatment plant, a potassium permanganate solution is added to improve oxidation of iron and manganese, soda ash is added to boost alkalinity while polyaluminum chloride (PAC) and a polymer are added to aid coagulation and flocculation.

The process then includes 2 reactivator clarifiers (solids contact clarifiers which combine coagulation, flocculation and sedimentation in one unit), followed by injection with sodium hypochlorite and 3 dual media (silica sand and anthracite) filters. Soda ash, sodium hypochlorite and carbon dioxide (used to boost alkalinity and reduce pH), are injected prior to water entering the reservoir.

Post reservoir, caustic soda is added effectively boosting the pH level, and water is then gravity fed to the 2 clearwells. Just prior to entering the distribution system, hydrofluosilic acid, polyphosphates and (trim) sodium hypochlorite are injected.

Continuous analyzers for pH, fluoride and chlorine residual draw water just prior to the distribution system.

Sludge from the clarifier, backwash water and overflow water are pumped to sludge tanks then to the sanitary sewer.

This is a Class 4 plant.

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**Site (Name):** DISTRIBUTION (WATER INSPECTION)

**Type:** Other

**Sub Type:**

**Comments:**

The water treatment plant serves a population of approximately 5400 within the community of Espanola. Within the distribution system there is an elevated storage tank, 6 bleeders with backflow prevention, a continuous chlorine analyzer located at the STP and approximately 150 hydrants. The clearwells feed the town first with excess treated water filling the tower thus the tower is not included in ct calculations.

The water tower pressure/tank levels are monitored at the treatment plant. Neither a functioning chlorine analyzer nor a sampling port are available at the tower. There are approximately 2200 connections throughout the town of which 1911 are residential and 165 are commercial.

This is a Class 1 distribution system.

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## INSPECTION SUMMARY

### INTRODUCTION

- \* The primary focus of this inspection is to confirm compliance with Ministry of the Environment legislation and authorizing documents such as Orders and Certificates of Approval, as well as evaluating conformance with Ministry drinking water related policies and guidelines during the inspection period.

The Ministry is implementing a rigorous and comprehensive approach in the inspection of drinking water systems that keys on the source, treatment and distribution components of the system as well as management practices.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg.170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on a "focused" inspection of your system. Although the inspection involved fewer activities than those normally undertaken by a detailed inspection, it contained most of the elements required to assess key compliance issues.

Your system was chosen for a focused inspection during this inspection cycle because inspection findings over the past three years were such that the number of violations were minimal or non-existent, there were few or no orders issued to you that were of significance in the maintenance of water potability and there were no deficiencies as defined in O. Reg. 172/03. The undertaking of a focused inspection at your drinking water system during this year's inspection cycle does not ensure that a similar type of inspection will be conducted at any point in the future.

Unless otherwise stated, the review period for this inspection was October 1, 2011 to January 31, 2013.

### CAPACITY ASSESSMENT

- \* There was sufficient monitoring of flow as required by the Permit and Licence or Approval issued under Part V of the SDWA

Schedule C Condition 2.1 of Municipal Drinking Water Licence #210-101 for the Espanola DWS requires a sufficient number of flow measuring devices throughout the system to ensure continuous monitoring and recording of flow rates and daily volumes of water transported through the treatment and distribution systems. Flow meters are installed in the following locations:

- low lift discharge header
- high lift discharge header
- one on each filter train outlet (3 total)
- sludge disposal header
- backwash discharge header

### CAPACITY ASSESSMENT

- \* **The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Permit and Licence or Approval issued under Part V of the SDWA.**

The Espanola Drinking Water System operates under Permit to Take Water #3154-7E7N9V, issued May 2, 2008; this permit allows a maximum water taking of 10,500,000 L/day. Furthermore, the rated capacity for this drinking water system as outlined in Schedule C Condition 1.1 of Municipal Drinking Water Licence #210-101 is 10,500 m<sup>3</sup>/day.

There were no exceedances observed during the review period of October 1, 2011 to January 31, 2013. The maximum raw water flow recorded during this inspection period was 7359 m<sup>3</sup>/day on November 20, 2011.

### TREATMENT PROCESSES

- \* **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**

The Espanola Drinking Water System operates under Municipal Drinking Water Licence #210-101 and Drinking Water Works Permit (DWWP) #210-201; equipment identified in the permit was reviewed during the inspection. Changes to Schedule A of the DWWP include:

- 1) Upgrading of a number of watermains in areas with ongoing issues.
- 2) The Potassium Permanganate mixing process is now done manually; the two chemical mixing educators and bulk storage drums have been removed.
- 3) The four Sodium Hypochlorite storage tanks have been removed and replaced with one 3047 L storage tank, additionally the two chlorine feed pumps have been changed from diaphragm to peristaltic pumps.

Furthermore, the operator has indicated the Fluoride feed system and the post-chlorination feed pumps are scheduled to be upgraded.

- \* **The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.**

A Form 1 was completed (February 8, 2013) with respect to the replacement of a number of watermains within the Town of Espanola as part of the Infrastructure Renewal Program.

- \* **The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.**

A Form 2 was completed February 11, 2013 in conjunction with following changes made to Schedule A of DWWP #210-201:

- 1) The Potassium Permanganate mixing process is now done manually; the two chemical mixing educators and bulk storage drums have been removed.
- 2) The four Sodium Hypochlorite storage tanks have been removed and replaced with one 3047 L storage tank, additionally the two chlorine feed pumps have been changed from diaphragm to peristaltic pumps.

- \* **Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Permit, Licence or Approval issued under Part V of the SDWA at all times that water was being supplied to consumers.**

The "Procedure for Disinfection of Drinking Water in Ontario" states that a drinking water system that obtains water from a surface water supply must provide chemically assisted filtration (or equivalent) and chemical disinfection. In order to claim the 2.5-log Giardia, 2.0-log Cryptosporidium and 2.0-log virus removal credits, the filtration process must meet the following criteria:

- use a chemical coagulant at all times when the treatment plant is in operation;

## TREATMENT PROCESSES

- monitor and adjust chemical dosages in response to variations in raw water quality;
- maintain effective backwash procedures, including filter-to-waste or an equivalent procedure during filter ripening to ensure that the effluent turbidity requirements are met at all times;
- continuously monitor filtrate turbidity from each filter and;
- meet the performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month.

The Espanola WTP uses conventional filtration and chemical disinfection to achieve the following log removal credits:

	Crypto	Giardia	Viruses
Filtration	2.0	2.5	2.0
Chlorination	0	0.5	2.0
Totals	2.0	3.0	4.0
Required	2.0	3.0	4.0

### CONVENTIONAL FILTRATION:

The turbidity of the effluent from each filter unit is monitored continuously, a review of information for this inspection period indicates this system met the required criteria of 0.3 NTU in 95% of measurements each month while the filters were in operation.

Please note, Filter #2 was out of service from October 1, 2011 to January 17, 2012. Although the filter was out of service for this time period, filter efficiencies were reported on the monthly Process Values Summary Report indicating the filter had operated at an efficiency of 100% when in fact the filter was out of service. The reporting of such "null" data is misleading.

**\*\*Please review the section "Other Inspection Findings" for further detail and actions required.**

### CHLORINATION:

Chlorination is carried out at three locations in the water treatment plant. Pre-chlorination occurs downstream of the clarifiers (prior to filtration), with primary chlorination occurring after filtration process (prior to the reservoir and clearwells) followed by trim chlorination downstream of the highlift pumps (prior to distribution). CT is measured after the clearwells. Continuous trending has been developed and programmed into the SCADA system to ensure adequate CT is achieved at all times under changing water flows and conditions. The SCADA's main plant overview screen displays the CT required versus the actual CT achieved at a point in time.

Log book entries reviewed for the inspection period indicate the operator responded to low chlorine alarms promptly. A HACH handheld analyzer was used to crosscheck operational data to ensure chlorine readings were factual, additionally the actual CT was compared with the required CT to ensure proper disinfection had taken place.

Furthermore, the revised Operations Manual (09/02/11) provides an example demonstrating that the minimum free chlorine residual required would be 1.26 mg/L in order to achieve adequate disinfection under the following assumed conditions:

pH = 7.5, temperature = 0.5C, maximum pumping rate (2 pumps @ maximum flow) = 7.2 m<sup>3</sup>/min, minimum water level = 789.3 m<sup>3</sup>, with only the reservoir and one clearwell in service. The required CT for this scenario is 34.15 mg/L-min.

## TREATMENT PROCESSES

- \* **Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.**

Distribution system operators have been conducting additional weekly distribution chlorine monitoring at three dead end locations known to experience low residual. Although it appears recent watermain upgrades have resolved issues at two locations (Park Street and Second Avenue), lower chlorine residuals continue to be an issue on Syroid Street. The owner of the system has submitted a request to end the additional sampling for the Park Street and Second Avenue locations, sampling is to be continued at Syroid Street. Approval for this request is granted in part; the owner should continue weekly monitoring on Syroid Street as indicated, sampling at Park Street and Second Avenue should continue with periodic checks, ie. approximately every four weeks.

As previously indicated, the chlorine analyser at the wastewater treatment plant is unreliable at times when hot water is utilized at the plant. In effort to mitigate this issue, operators now isolate the chlorine analyser prior to turning on the hot water.

- \* **The Operator-in-Charge had ensured that all equipment used in the processes was monitored, inspected, and evaluated.**

Equipment associated with the Espanola WTP is monitored through OCWA's HANSEN maintenance management system. The system generates work orders on pre-set schedules based on manufacture's specifications, or other OCWA SOP's for equipment maintenance timelines. The facility work order summary along with associated WTP log books were reviewed and found to be in order.

The Espanola WTP distribution system is maintained by the Municipality. The operators for the WTP ensure the handheld meters for turbidity and chlorine are calibrated as required. Log books were reviewed for this inspection period and found to be in order.

## TREATMENT PROCESS MONITORING

- \* **Primary disinfection chlorine monitoring was being conducted at a location approved by Permit, Licence or Approval issued under Part V of the SDWA, or at/near a location where the intended CT had just been achieved.**

The primary disinfection chlorine residual is monitored after the clear wells prior to the trim chlorine injection point (before entering the distribution system). Data reviewed for this inspection period was reviewed and appears to be in order.

- \* **Continuous monitoring of each filter effluent line was being performed for turbidity.**

Large municipal residential systems that use surface water as the source are required to provide filtration. O. Reg.170/03, Schedule 7 section 7(3)(2) requires continuous monitoring for each filter effluent line. Continuous monitoring for turbidity is required only of the filter effluent that is directed to the next treatment stage and eventually to the distribution system.

The drinking water system in Espanola is equipped with two solid contact clarifiers followed by three dual media conventional filters; effluent from each filter is monitored continuously by on-line turbidity meters.

- \* **The secondary disinfectant residual was measured as required for the distribution system.**

Distribution chlorine is monitored continuously through the use of an online analyser located at the sewage treatment plant. Additionally, chlorine residual samples are taken throughout the distribution system by distribution operators.

### TREATMENT PROCESS MONITORING

- \* **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**

A review of log books indicate the operators are examining data within the required timeframe.

- \* **All continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or approval or order, were equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6.**

Continuous monitoring equipment being utilized for sampling and testing is equipped with alarms or shut-off mechanisms which satisfy the standards described in Schedule 6, of O.Reg. 170/03.

Alarm settings are as follows:

Treated Chlorine: Low Low (lock out HLP's) = 0.55 mg/L, Low alarm = 0.75 mg/L, Hi alarm = 2.8 mg/L

Fluoride: Hi Hi (pump lock out) = 1.20 mg/L, Hi alarm = 1.05 mg/L

Filter Turbidity: Low = 0 NTU, Hi = 0.4 NTU, Hi Hi (filter shutdown) – 1.0 NTU

Distribution Chlorine: Low = 0.1 mg/L, High = 3.5 mg/L

- \* **Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.**
- \* **All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.**

Continuous on-line analysers are checked at a minimum once per week, flow meter calibration checks are completed on an annual basis.

### OPERATIONS MANUALS

- \* **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

During the inspection, operations and maintenance manuals were reviewed and found to contain the required information including plans, drawings and process descriptions sufficient for the safe operation of the system. The operating authority should ensure this information is reviewed on a regular basis and amended to reflect current plant upgrades. This information is kept at the water treatment plant.

- \* **The operations and maintenance manuals did meet the requirements of the Permit and Licence or Approval issued under Part V of the SDWA.**

### LOGBOOKS

- \* **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.**

### SECURITY

### SECURITY

- \* **The owner had provided security measures to protect components of the drinking-water system.**

The operators have indicated that doors are locked and alarmed at the water treatment plant, the water tower and the low lift pumping station. Access to the plant is limited.

### CERTIFICATION AND TRAINING

- \* **The overall responsible operator had been designated for each subsystem.**
- \* **Operators in charge had been designated for all subsystems which comprised the drinking-water system.**
- \* **Only certified operators made adjustments to the treatment equipment.**

### WATER QUALITY MONITORING

- \* **All microbiological water quality monitoring requirements for distribution samples were being met.**

Per O. Reg. 170/03, the Espanola Drinking Water System is considered a Large Municipal Residential system serving an approximate population of 5400 individuals. As stated in O. Reg. 170/03 Schedule 10, 10-2 (1)(2) if the system serves 100,000 people or less, at least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system must be taken every month, with at least one of the samples being taken each week and tested for *Escherichia coli* (*E. coli*) and total coliforms. Additionally, section 10-2 (3) states that the owner of the drinking water system and operating authority for the system shall ensure that at least 25 percent of the samples required to be taken under subsection (1) are tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). The Espanola DWS is required to take a minimum of 13 samples each month,

During the inspection review period, a minimum of four samples were collected from the distribution system each week and tested for *E. coli* and total coliforms. HPC analysis was conducted on at least 25 percent of these samples.

- \* **All microbiological water quality monitoring requirements for treated samples were being met.**

Schedule 10-3 of O. Reg 170/03 states, the owner of a drinking water system and the operating authority for the system shall ensure that a treated water sample is taken at least once every week and tested for *E. coli*, total coliforms and HPC. A review of sampling data for the system confirms that such requirements have been met.

- \* **All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Schedule 13-2 of O. Reg. 170/03 requires that at least one water sample is taken every twelve months, if the system obtains water from a raw water supply that is surface water and tested for every parameter that is set out in Schedule 23. The Espanola Drinking Water System is a surface water system; a review of records confirms that the sampling requirements have been met. Sampling and analysis during this inspection period occurred January 9, 2013 and January 14, 2012.

**WATER QUALITY MONITORING**

- \* **All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Schedule 13-4 of O. Reg. 170/03 requires that at least one water sample is taken every twelve months, if the system obtains water from a raw water supply that is surface water and tested for every parameter that is set out in schedule 24. A review of records confirms that the sampling requirements have been met. Sampling and analysis during this inspection period occurred January 9, 2013 and January 14, 2012.

- \* **All trihalomethanes water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Schedule 13-6 of O. Reg. 170/03 requires that at least one distribution sample be taken every 3 months and tested for trihalomethanes (THM's). A review of data for the inspection period confirms sampling has been completed as required.

As of January 14, 2013 the running average for THM's was 40 ug/L which is below the standard of 100 ug/L. Results for this inspection period are as follows:

January 14, 2013 - 36 ug/L

September 17, 2012 - 39 ug/L

July 3, 2012 - 28 ug/L

April 16, 2012 - 44 ug/L

January 9, 2012 - 43 ug/L

October 12, 2011 - 41 ug/L

- \* **All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.**

Schedule 13-7 of O. Reg. 170/03 requires that the owner of a drinking water system and operating authority for the system shall ensure that at least one water sample is taken every three months and tested for nitrate and nitrite. A review of the water quality data for this inspection period confirms sampling has been completed in accordance with the regulation. Results for this inspection period are as follows:

January 14, 2013 - 0.026 mg/L

September 17, 2012 - 0.038 mg/L

July 3, 2012 - 0.035 mg/L

April 16, 2012 - 0.089 mg/L

January 9, 2012 - 0.092 mg/L

October 12, 2011 - 0.088 mg/L

- \* **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Schedule 13-8 of O. Reg. 170/03 requires that at least one sample be taken every 60 months and tested for sodium. A review of records indicate that sodium sampling has been completed in accordance with the regulation. The most recent sampling occurred January 9, 2012 (16.7 mg/L).

### WATER QUALITY MONITORING

- \* **All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met.**

Schedule 15.1 of O. Reg. 170/03 sets out the requirements for lead sampling and analysis, including the location to be sampled and number of samples required. Schedule 15.1 also outlines sampling protocol and corrective actions for adverse test results. Sampling conducted in 2009/2010 and has qualified the Espanola DWS for exemption from further residential plumbing sampling in accordance with 15.1-5(9) of O. Reg. 170/03. Alkalinity and pH testing of the distribution is required annually in each prescribed sampling period. Most recently alkalinity and pH testing was conducted August 22, 2012 and April 4, 2012. Distribution sampling for lead is required in every third 12 month period.

- \* **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

### WATER QUALITY ASSESSMENT

- \* **The audit samples collected by the inspector met the applicable Ontario Drinking Water Quality Standards and/or the aesthetic objectives or operation guidelines. The results of the audit sampling are summarized as follows:**

During the physical inspection one treated water sample and three distribution samples were collected and analyzed for E. coli and Total Coliforms. The results are as follows:

Treated: EC/TC - Non-Detect

Espanola Public Works: EC/TC - Non-Detect

OCWA Hub Office: EC/TC - Non-Detect

Home Hardware: EC/TC - Non-Detect

- \* **Records show that all water sample results taken during the review period met the Ontario Drinking Water Quality Standards (O. Reg. 169/03).**

### REPORTING & CORRECTIVE ACTIONS

- \* **Corrective actions (as per Schedule 17) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.**
- \* **All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.**
- \* **Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.**

### OTHER INSPECTION FINDINGS

**OTHER INSPECTION FINDINGS****\* The following issues were also noted during the inspection:**

During the inspection review process, it was noted that Filter #2 was out of service October 1, 2011 to January 17, 2012. Although the filter was down, filter efficiencies for the above noted timeframe were recorded on each "Process Values Summary" report indicating the filter had operated at an efficiency of 100% when in fact the filter was out of service. The Filtration Processes Technical Bulletin states, to calculate filter performance, use only the measurements taken when the particular filter effluent line is directing water to the next stage of the process, off-line measurements are not to be used in the calculations.

If a filter is out of service, the default value for efficiency must not be reported as 100%.

Please review the "Best Practices" section of this report.

**NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED**

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

Not Applicable

## SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

### 1. The following issues were also noted during the inspection:

During the inspection review process, it was noted that Filter #2 was out of service October 1, 2011 to January 17, 2012. Although the filter was down, filter efficiencies for the above noted timeframe were recorded on each "Process Values Summary" report indicating the filter had operated at an efficiency of 100% when in fact the filter was out of service. The Filtration Processes Technical Bulletin states, to calculate filter performance, use only the measurements taken when the particular filter effluent line is directing water to the next stage of the process, off-line measurements are not to be used in the calculations.

#### **Recommendation:**

The Owner and Operating Authority must take steps to review/amend SCADA programming, or other system(s) to ensure "null" values are not reported. If a filter is out of service, the default value for efficiency must not be reported as 100%.

**SIGNATURES**

Inspected By:

Lori Greco

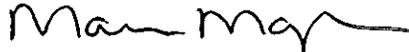
Signature: (Provincial Officer):



Reviewed &amp; Approved By:

Marnie Managhan

Signature: (Supervisor):



Review &amp; Approval Date:

April 25/13

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.



**Ministry of the Environment  
Drinking Water Inspection Report**

## **APPENDIX A**

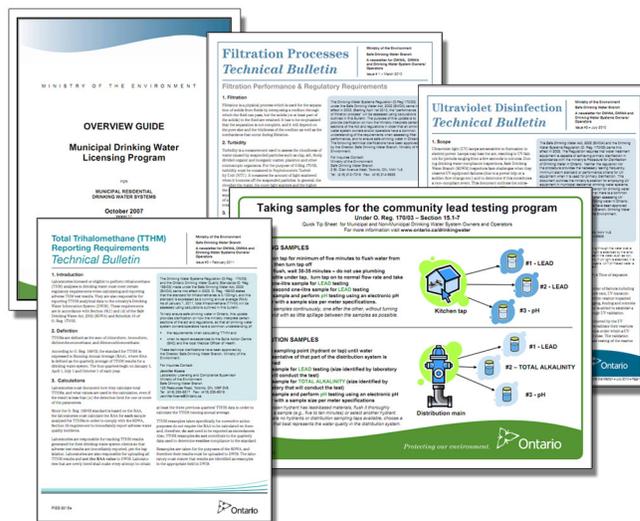
### **Stakeholder Appendix**

# Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are posted on the Ministry of the Environment's **Drinking Water Ontario** website at [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater) to help in the operation of your drinking water system.

Below is a list of key materials frequently used by owners and operators of municipal drinking water systems. To read or download these materials, go to **Drinking Water Ontario** and search in the **Resources** section by **Publication Number**.

Visit **Drinking Water Ontario** for more useful materials. Contact the Public Information Centre if you need assistance or have questions at 1-800-565-4923/416-325-4000 or [picemail.moe@ontario.ca](mailto:picemail.moe@ontario.ca).



PUBLICATION NUMBER	PUBLICATION TITLE
4448e01	Procedure for Disinfection of Drinking Water in Ontario
7152e	Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids
7467	Filtration Processes Technical Bulletin
7685	Ultraviolet Disinfection Technical Bulletin
8215	Total Trihalomethane (TTHM) Reporting Requirements Technical Bulletin (February 2011)
2601e	Overview Guide: Municipal Drinking Water Licensing Program
0000	Municipal Drinking Water Licensing Program Bulletin, Issue 1, January 2011
0000	Certification Guide for Operators and Water Quality Analysts
6560e	Taking Samples for the Community Lead Testing Program
7423e	Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption
7128e	Drinking Water System Contact List
4449e01	Technical Support Document for Ontario Drinking Water Quality Standards



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## **APPENDIX B**

### **MOE Audit Sample Results**

**APPENDIX**  
**TABLE 3**  
**ESPANOLA DRINKING WATER SYSTEM**  
**AUDIT SAMPLE RESULTS - 25-FEB-2013**  
**SUMMARY OF MICROBIOLOGICAL PARAMETERS - HEALTH RELATED**

**Sample Legend:**

- Sample # 1 - ESPANOLA BOARD OF WORKS KITCHEN DISTRIBUTION  
 Sample # 2 - ESPANOLA HOME HARDWARE LUNCH ROOM DISTRIBUTION  
 Sample # 3 - ESPANOLA OCWA HEAD OFFICE DISTRIBUTION  
 Sample # 4 - WTP TREATED

Parameter	Units	MC <sup>1</sup>	SAMPLE	SAMPLE	SAMPLE	SAMPLE
			# 1	# 2	# 3	# 4
NT: ESCHERICHIA COLI	C/100ML	0	ABSENT	ABSENT	ABSENT	ABSENT
NT: TOTAL COLIFORMS	C/100ML	0	ABSENT	ABSENT	ABSENT	ABSENT

**Notes:**

- Escherichia coli is a more definitive indicator of fecal contamination than fecal coliforms or total coliforms.
- At elevated levels, the general bacterial population may interfere with the detection of coliforms. This general population can be estimated from either background colony counts on the total coliform membrane filters or heterotrophic plate counts (HPC).

**Shortforms:**

- C/100mL - Count per 100 millilitre  
 C/mL - Count per millilitre

**Footnotes:**

- 1 Maximum Concentration as per O.Reg 169/03.
- 2 Aesthetic Objective.

**APPENDIX**

**TABLE 5**

**ESPANOLA DRINKING WATER SYSTEM  
AUDIT SAMPLE RESULTS - 25-FEB-2013**

**SUMMARY OF MICRO, CHEMICAL / PHYSICAL PARAMETERS - NOT HEALTH RELATED**

Sample Legend:

- Sample # 1 - ESPANOLA BOARD OF WORKS KITCHEN DISTRIBUTION
- Sample # 2 - ESPANOLA HOME HARDWARE LUNCH ROOM DISTRIBUTION
- Sample # 3 - ESPANOLA OCWA HEAD OFFICE DISTRIBUTION
- Sample # 4 - WTP TREATED

Parameter	Units	OBJECTIVE	TYPE OF OBJECTIVE	SAMPLE	SAMPLE	SAMPLE	SAMPLE
				# 1	# 2	# 3	# 4
NT: DETERIORATION INDICATORS	C/100ML	0	AO	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED

**Shortforms:**

- |     |   |           |                                |
|-----|---|-----------|--------------------------------|
| <T  | - A measurable trace amount; interpret with caution | AO        | - Aesthetic Objective          |
| <W  | - No measurable response (zero). <Reported value    | OG        | - Operational Guideline        |
| <=W | - No measurable response (zero). <Reported value    | FTU = NTU | - Nephelometric Turbidity Unit |
| <   | - Actual result is less than reported value         | TCU       | - True Colour Units            |
| ND  | - Not detected                                      | NG/L      | - Nanograms per litre          |
| NA  | - Result not available                              | UG/L      | - Micrograms per litre         |
| NS  | - Not sampled                                       | MG/L      | - Milligrams per litre         |
| DEG | - Degree celsius                                    |           |                                |

**Footnotes:**

- a Organic Nitrogen = (Total Kjeldahl Nitrogen - (Ammonia + Ammonium))
- b The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.
- c When sulphate levels exceed 500 mg/L, water may have a laxative effect on some people.
- d Applicable for all water at the point of consumption.

NO DATUM FOUND FOR THE FOLLOWING TABLE(S):

-TABLE 1 - SUMMARY OF PARAMETERS EXCEEDING ODWQS

-TABLE 2 - SUMMARY OF PARAMETERS EXCEEDING HALF OF THEIR HEALTH-RELATED ODWQS

-TABLE 4 - SUMMARY OF CHEMICAL/PHYSICAL PARAMETERS - HEALTH RELATED

-TABLE 6 - SUMMARY OF PARAMETERS WITH NO ODWQS



**Ministry of the Environment  
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## **APPENDIX C**

### **Inspection Rating Report (IRR)**

**Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2012-2013)**

<b>DWS Name:</b>	ESPANOLA DRINKING WATER SYSTEM
<b>DWS Number:</b>	210000746
<b>DWS Owner:</b>	Espanola, The Corporation Of The Town Of
<b>Municipal Location:</b>	Espanola

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Focused  
**Inspection Date:** February 25, 2013  
**Ministry Office:** Sudbury District

**Maximum Question Rating:** 488

Inspection Module	Non-Compliance Rating
Capacity Assessment	0 / 30
Treatment Processes	0 / 85
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 28
Water Quality Monitoring	0 / 104
Reporting & Corrective Actions	0 / 66
Treatment Process Monitoring	0 / 133
<b>TOTAL</b>	<b>0 / 488</b>

<b>Inspection Risk Rating</b>	<b>0.00%</b>
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<b>FINAL INSPECTION RATING:</b>	<b>100.00%</b>
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Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2012-2013)

**DWS Name:** ESPANOLA DRINKING WATER SYSTEM  
**DWS Number:** 210000746  
**DWS Owner:** Espanola, The Corporation Of The Town Of  
**Municipal Location:** Espanola

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Focused  
**Inspection Date:** February 25, 2013  
**Ministry Office:** Sudbury District

**Maximum Question Rating:** 488

**Inspection Risk Rating** | 0.00%

**FINAL INSPECTION RATING:** | 100.00%