

# Killaloe Drinking Water System

---

## 2013 Annual Water Report

Reporting period of January 1, 2013 – December 31, 2013



Prepared For: The Township of Killaloe, Hagarty & Richards

Prepared By:



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

This report has been prepared to satisfy the annual reporting requirements of the Provincial Regulations and Guid

## Contents

<b>Report Availability .....</b>	<b>4</b>
<b>Compliance Report Card .....</b>	<b>4</b>
<b>Quality Control Measures .....</b>	<b>5</b>
<b>System Process Description .....</b>	<b>6</b>
Raw Source .....	6
Treatment.....	6
Treatment Chemicals used during the reporting year: .....	7
<b>Summary of Non-Compliance .....</b>	<b>8</b>
Adverse Water Quality Incidents .....	8
Non-Compliance.....	8
Non-Compliance Identified in a Ministry Inspection: .....	8
<b>Flows .....</b>	<b>9</b>
Raw Water Flows.....	9
Total Monthly Flows (m3/d).....	9
Monthly Rated Flows.....	9
Treated Water Flows.....	10
Annual Total Flow Comparison.....	10
<b>Regulatory Sample Results Summary .....</b>	<b>11</b>
Microbiological Testing .....	11
Operational Testing.....	11
On-Line.....	11
In-House.....	11
Laboratory .....	11
Additional Legislated Samples .....	12
Inorganic Parameters .....	12
Lead Sampling:.....	13
Organic Parameters.....	13
<b>Maintenance Summary.....</b>	<b>15</b>

Maintenance Highlights .....15

**QEMS.....15**

**Water Taking and Transfer Data .....16**

**Small System Sampling Summary .....16**

    Sampling Results .....16

    Non-Compliance/Adverse Results..... 16

**Appendix A - Annual Record of Water Taking Report**

**Appendix B - WTRS Data and Submission Confirmation**

## Report Availability

This system does not serve more than 10,000 residence and the annual reports will be available to residence at the Township of Killaloe, Hagarty & Richards Municipal Office. Notification will be at the Municipal Office and copies provided free of charge if requested. The Township of Killaloe, Hagarty & Richards is located at, 1 John Street in the Village of Killaloe.

There are no systems additional drinking water systems that receive water from this facility.

## Compliance Report Card

Drinking Water System Number:	<b>220006026</b>
System Owner:	<b>Township of Killaloe, Hagarty and Richards</b>
Operating Authority:	Ontario Clean Water Agency
Drinking Water System Category:	Large Municipal Residential
Reporting Period:	January 1, 2013 – December 31, 2013

Compliance Event	# of Events	Details
Ministry of Environment Inspections	1	<ul style="list-style-type: none"> <li>Report received from October 24, 2013 inspection on January 18, 2013.</li> <li>Report received from July 10, 2013 Inspection on September 18, 2013</li> </ul>
Ministry of Labour Inspections	0	
QEMS External Audit	1	No Non-Conformances identified
AWQI's	4	3 Distribution THM 1 Treated Water Sodium
Non-Compliance	0	
Community Complaints	4	Water quality complaints
Spills	0	

## Quality Control Measures

The Township of Killaloe, Hagarty & Richards facilities are part of OCWA's operational Ottawa Valley Hub. The facilities are supported by hub, regional and corporate resources. Operational Services are delivered by OCWA staff who live and work in the community.

OCWA operates facilities in compliance with applicable regulations. The facility has comprehensive manuals detailing operations, maintenance, instrumentation, and emergency procedures. All procedures are treated as active documents, with annual reviews.

OCWA has additional "Value Added" and operational support services that the Township of Killaloe, Hagarty & Richards benefits from including:

- Access to a network of operational compliance and support experts at the regional and corporate level, as well as affiliated programs that include the following:
  - Quality & Environmental Management System, Occupational Health & Safety System and an internal compliance audit system.
  - Process Data Collection (PDC) facility operating information repository, which consolidates field data, online instrumentation, and electronic receipt of lab test results for reporting, tracking and analysis.
  - Work Management System (WMS) that tracks and reports maintenance activities, and creates predictive and preventative reports.
  - Outpost 5 wide-area SCADA system allows for process optimization and data logging, process trending, remote alarming and optimization of staff time.
- Client reporting which includes operational data, equipment inventory, financial statements, maintenance work orders, and capital status reports
- Site-Specific Contingency Plans and Standard Operating Procedures
- Use of accredited laboratories
- Access to a network of operational compliance and support experts at the hub, region and corporate level
- Additional support in response to unusual circumstances, and extra support in an emergency.
- Use of sampling schedules for external laboratory sampling

## System Process Description

### Raw Source

Raw water source for the Killaloe Drinking Water System is a Well located at the Treatment Plant.



### Treatment

Killaloe Water Treatment Plant is a single well, groundwater system equipped with greensand contactors that provide iron and manganese removal.



Pre-disinfection is provided using sodium hypochlorite and ultraviolet light. Secondary disinfection is being provided using stabilized hydrogen peroxide. The peroxide is injected prior to the clearwells and a residual is maintained through the distribution system.



### Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Potassium Permanganate	Contactant	Cariox
Sodium Hypochlorite	Disinfection	Brenntag
Hydrogen Peroxide (Huwa San)	Disinfection	San Eco Tech

## Summary of Non-Compliance

### Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Legislation	Details	Corrective Action Taken
07-Jan-2013	109696	Distribution	THM	170/03	THM Running Average 115 ug/L Individual result 26 ug/L	Resample and Test
09-Jan-2013	109716	Treated Water	Sodium	170/03	Treated sodium 27.1 mg/L	Resample and test. Resample result 30.4 mg/L. No further direction from health unit
08-Feb-2013	109938	Distribution	THM	170/03	Annual Running average 115 ug/L sample 26 ug/L	Resample and Test
08-Mar-2013	110208	Distribution	THM	170/03	THM Running Average 114 ug/L - Single sample 21 ug/L	Resample and Test

### Non-Compliance

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non compliances reported for this facility in 2013.				

### Non-Compliance Identified in a Ministry Inspection:

There were two (2) inspection reports received during this reporting period.

- Report received from October 24, 2013 inspection on January 18, 2013.
  - No action required
  - Inspection Rating 100%
- Report received from July 10, 2013 Inspection on September 18, 2013
  - One (1) Recommendation as a reminder of the expiry date of the Peroxide Trial in the Municipal License. The new licence has been received.
  - Inspection Rating 100%

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
No Actions Required in either inspection report received during this reporting period.				



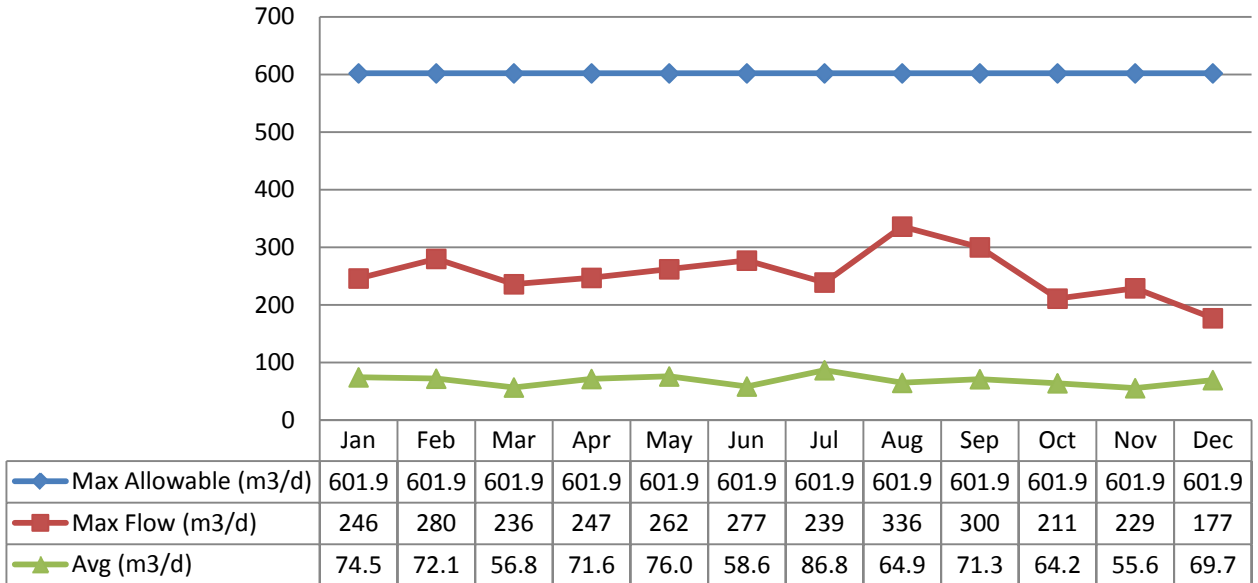
## Flows

The Killaloe Drinking Water System is operating on average under half the rated capacity. Additional flow data can be found in Appendix A – Annual Record of Water Taking.

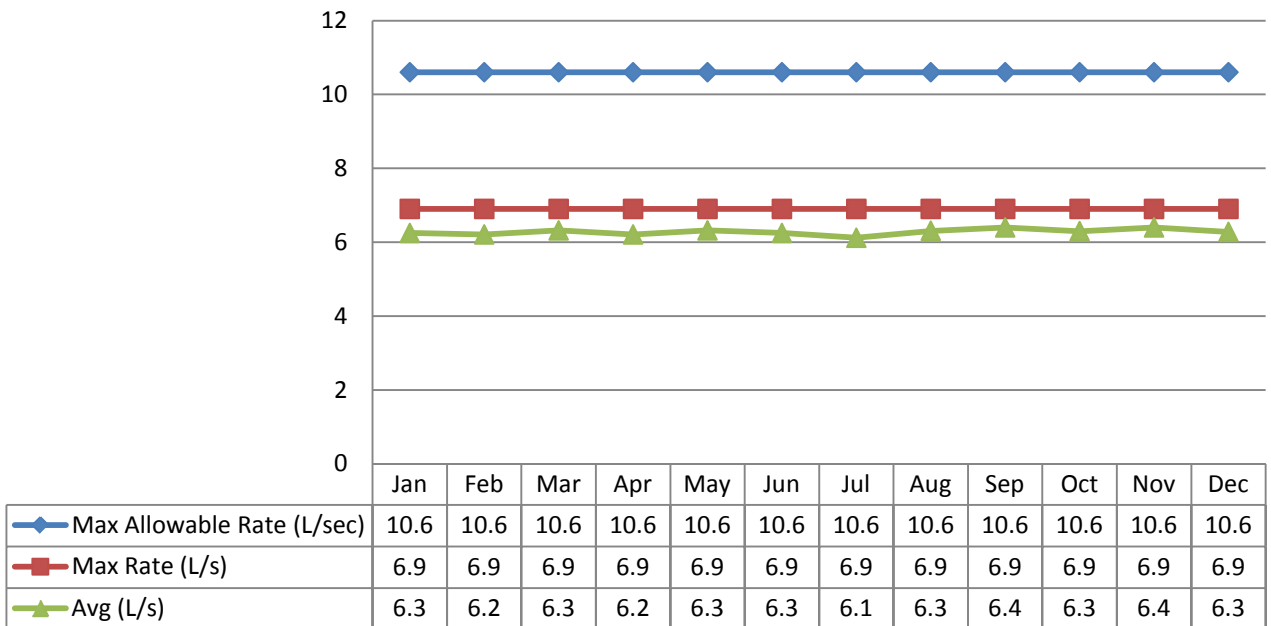
## Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water.

### Total Monthly Flows (m3/d)

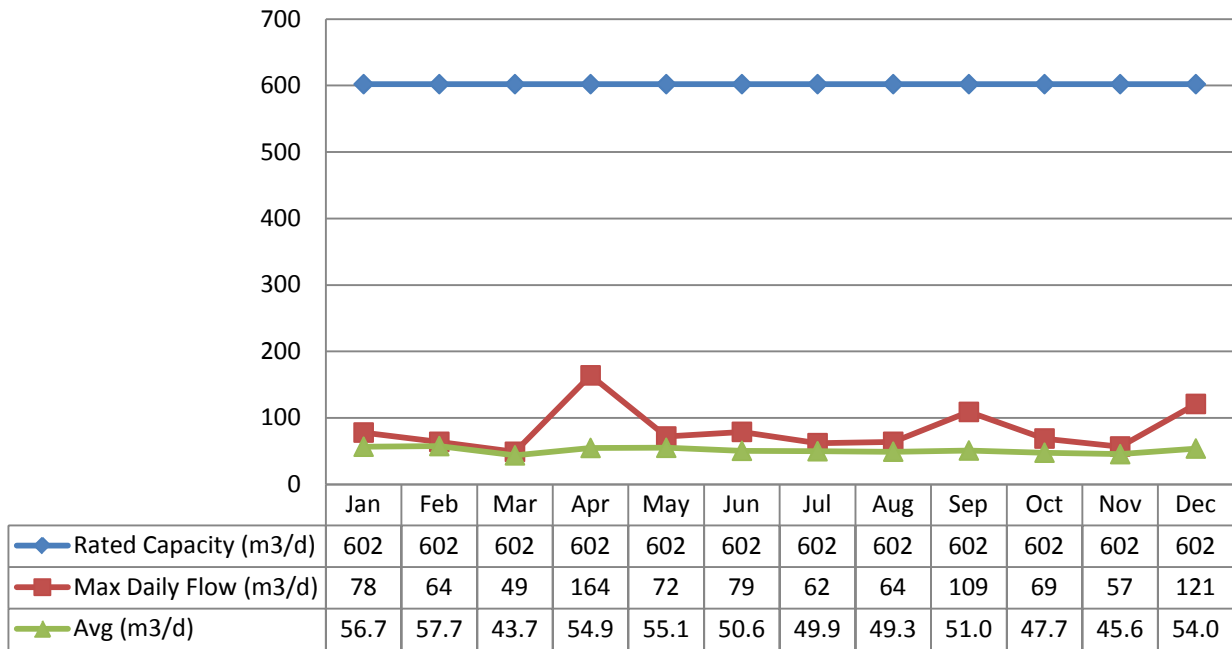


### Monthly Rated Flows

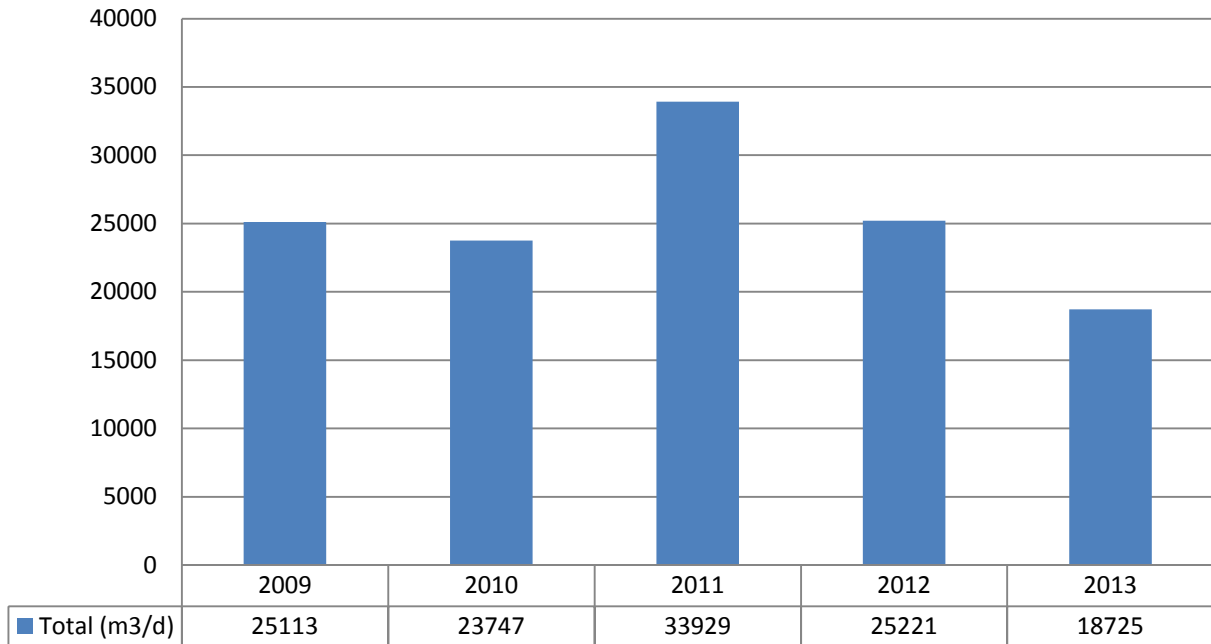


### Treated Water Flows

The Treated Water flows are regulated under the Municipal Licence.



### Annual Total Flow Comparison



## Regulatory Sample Results Summary

### Microbiological Testing

Location	Number of Samples	E.coli Results (min) - (max)	Total Coliform Results (min) - (max)	Number of HPC Samples	HPC Results (min) - (max)
Raw - RW	53	0 - 0	0 - 5	N/A	N/A
Treated - TW	53	0 - 0	0 - 0	53	0 - 7
Distribution - DW	108	0 - 0	0 - 0	108	0 - 11

### Operational Testing

#### On-Line

Parameter	Range of Results (min # - max #)
Primary Free Chlorine	0.12 – 1.0 mg/L
Pre Clearwell Peroxide	1 - 20 ppm
Post Clearwell Peroxide	1.1 - 20 ppm
Treated Turbidity	0 – 4.993 NTU
Distribution Peroxide	3 – 10.1 ppm
Distribution Free Chlorine	Chlorine is not used for secondary disinfection
Fluoride	Fluoride is not added at this facility

NOTE: spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. All spikes are reviewed for compliance with O.Reg 170/03

#### In-House

Parameter	# of grab samples taken	Range of Results (min # - max #)
Post Clearwell Peroxide Residual	247	5.8 – 9.2 ppm
Treated Turbidity	249	0.09 – 1.0 NTU
Treated Colour	104	0 – 3 TCU
Treated pH	104	7.83 – 8.19
Treated Iron	104	0.002 - 0.009 mg/L
Treated Manganese	104	0.094 - 0.013 mg/L
Distribution Free Chlorine	Chlorine is not used for secondary disinfection	
Distribution Peroxide Residual	108	3.1 – 7.7 ppm

#### Laboratory

Parameter	# of Samples	Range of Results (min # - max #)
Fluoride	Fluoride is not used at this facility	
Treated Alkalinity	12	221 - 249 mg/L
Treated Colour	12	<3 - 8 TCU
Treated Conductivity	12	692 - 757 uS/cm
Treated pH	12	8.05 – 8.41
Production Well Benzene	1	<0.32 ug/L
Production Well Ethylbenzene	1	<0.33 ug/L
Production Well m/p-xylene	1	<0.39 ug/L
Production Well o-xylene	1	<0.17 ug/L
Production Well Xylene: Total	1	<0.39 mg/L

Parameter	# of Samples	Range of Results (min # - max #)
Production Well Toluene	1	<0.36 ug/L
Test Well Benzene	1	<0.32 ug/L
Test Well Ethylbenzene	1	<0.33 ug/L
Test Well m/p-xylene	1	<0.39 ug/L
Test Well o-xylene	1	<0.17 ug/L
Test Well Xylene: Total	1	<0.39 mg/L
Test Well Toluene	1	<0.36 ug/L

### Additional Legislated Samples

Legal Document	Date of Issuance	Parameter	Date Sampled	Result	Unit of measure
Municipal License #259-101	16-Nov-2012	Backwash Effluent Suspended Solids	Annual Avg	2.167	mg/L
Municipal License #259-101	16-Nov-2012	Backwash Effluent pH	Annual Avg	8.109	no units
Municipal License #259-101	16-Nov-2012	Distribution Copper	15/01/2013	145	ug/L
Municipal License #259-101	16-Nov-2012	Distribution Lead	15/01/2013	0.2	ug/L
Municipal License #259-101	16-Nov-2012	Distribution THM	Annual Avg	24.2	ug/L

- Hydrogen peroxide residuals see Operational Testing
- HPC Testing Results see Microbiological testing
- pH testing results see Operational Testing

### Inorganic Parameters

These parameters are tested annually as a requirement under 170/03. Sodium and Fluoride are required to be tested every 5 years. Nitrates are tested quarterly as required under 170/03. In the event any of the parameters (except Sodium and Fluoride) exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

- MAC = Maximum Allowable Concentration as per O.Reg 169/03
- BDL = Below the laboratory detection level

Parameter	Sample Date	Result Value	MAC	MAC Exceedance	½ MAC Exceedance
Antimony: Sb (ug/L) - TW	2013/01/03	< 0.020	6	No	No
Arsenic: As (ug/L) - TW	2013/01/03	0.30	25	No	No
Barium: Ba (ug/L) - TW	2013/01/03	178.00	1000	No	No
Boron: B (ug/L) - TW	2013/01/03	127.00	5000	No	No
Cadmium: Cd (ug/L) - TW	2013/01/03	0.016	5	No	No
Chromium: Cr (ug/L) - TW	2013/01/03	1.00	50	No	No
Mercury: Hg (ug/L) - TW	2013/01/03	< 0.010	1	No	No
Selenium: Se (ug/L) - TW	2013/01/03	< 1.00	10	No	No
Sodium: Na (mg/L) - TW	2013/01/09	30.40	20	Yes	Yes

Parameter	Sample Date	Result Value	MAC	MAC Exceedance	½ MAC Exceedance
Uranium: U (ug/L) - TW	2013/01/03	2.56	20	No	No
Fluoride: F1 (mg/L) - TW	2013/01/03	0.27	1.5	No	No
Nitrite (mg/L) - TW	2013/01/02	< 0.0050	1	No	No
Nitrite (mg/L) - TW	2013/04/02	0.0030	1	No	No
Nitrite (mg/L) - TW	2013/07/02	< 0.0030	1	No	No
Nitrite (mg/L) - TW	2013/10/01	0.0030	1	No	No
Nitrate (mg/L) - TW	2013/01/02	< 0.013	10	No	No
Nitrate (mg/L) - TW	2013/04/02	< 0.0060	10	No	No
Nitrate (mg/L) - TW	2013/07/02	0.0080	10	No	No
Nitrate (mg/L) - TW	2013/10/01	0.0080	10	No	No

### Lead Sampling:

This facility is sampling under the exemption requirements of O.Reg 170/03 sampling program. The recently issued Municipal License requires lead sampling to be sampled every 6 months in 2014.

### Organic Parameters

These parameters are tested annually as a requirement under 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

- MAC = Maximum Allowable Concentration as per O.Reg 169/03
- BDL = Below the laboratory detection level

Parameter	Sample Date	Result Value	MAC	MAC Exceedance	½ MAC Exceedance
Alachlor (ug/L) - TW	2013/01/03	< 0.020	5	No	No
Aldicarb (ug/L) - TW	2013/01/03	< 0.010	9	No	No
Aldrin + Dieldrin (ug/L) - TW	2013/01/03	< 0.010	0.07	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2013/01/03	< 0.010	5	No	No
Azinphos-methyl (ug/L) - TW	2013/01/03	< 0.020	20	No	No
Bendiocarb (ug/L) - TW	2013/01/03	< 0.010	40	No	No
Benzene (ug/L) - TW	2013/01/03	< 0.32	5	No	No
Benzo(a)pyrene (ug/L) - TW	2013/01/03	< 0.0040	0.01	No	No
Bromoxynil (ug/L) - TW	2013/01/03	< 0.33	5	No	No
Carbaryl (ug/L) - TW	2013/01/03	< 0.010	90	No	No
Carbofuran (ug/L) - TW	2013/01/03	< 0.010	90	No	No
Carbon Tetrachloride (ug/L) - TW	2013/01/03	< 0.16	5	No	No
Chlordane:Total (ug/L) - TW	2013/01/03	< 0.010	7	No	No
Chlorpyrifos (ug/L) - TW	2013/01/03	< 0.020	90	No	No
Cyanazine (ug/L) - TW	2013/01/03	< 0.030	10	No	No

Parameter	Sample Date	Result Value	MAC	MAC Exceedance	½ MAC Exceedance
Diazinon (ug/L) - TW	2013/01/03	< 0.020	20	No	No
Dicamba (ug/L) - TW	2013/01/03	< 0.20	120	No	No
1,2-Dichlorobenzene (ug/L) - TW	2013/01/03	< 0.41	200	No	No
1,4-Dichlorobenzene (ug/L) - TW	2013/01/03	< 0.36	5	No	No
Dichlorodiphenyltrichloroethane(DDT) + metabolites (ug/L) - TW	2013/01/03	< 0.010	30	No	No
1,2-Dichloroethane (ug/L) - TW	2013/01/03	< 0.35	5	No	No
1,1-Dichloroethylene (ug/L) - TW	2013/01/03	< 0.33	14	No	No
Dichloromethane (ug/L) - TW	2013/01/03	< 0.35	50	No	No
2,4-Dichlorophenol (ug/L) - TW	2013/01/03	< 0.15	900	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2013/01/03	< 0.19	100	No	No
Diclofop-methyl (ug/L) - TW	2013/01/03	< 0.40	9	No	No
Dimethoate (ug/L) - TW	2013/01/03	< 0.030	20	No	No
Dinoseb (ug/L) - TW	2013/01/03	< 0.36	10	No	No
Diquat (ug/L) - TW	2013/01/03	< 1.00	70	No	No
Diuron (ug/L) - TW	2013/01/03	< 0.030	150	No	No
Glyphosate (ug/L) - TW	2013/01/03	< 6.00	280	No	No
Heptachlor+Hepachlor Epoxide (ug/L) - TW	2013/01/03	< 0.010	3	No	No
Lindane: (ug/L) - TW	2013/01/03	< 0.010	4	No	No
Malathion (ug/L) - TW	2013/01/03	< 0.020	190	No	No
Methoxychlor (ug/L) - TW	2013/01/03	< 0.010	900	No	No
Metolachlor (ug/L) - TW	2013/01/03	< 0.010	50	No	No
Metribuzin (ug/L) - TW	2013/01/03	< 0.020	80	No	No
Monochlorobenzene (ug/L) - TW	2013/01/03	< 0.30	80	No	No
Paraquat (ug/L) - TW	2013/01/03	< 1.00	10	No	No
Parathion (ug/L) - TW	2013/01/03	< 0.020	50	No	No
Pentachlorophenol (ug/L) - TW	2013/01/03	< 0.15	60	No	No
Phorate (ug/L) - TW	2013/01/03	< 0.010	2	No	No
Picloram (ug/L) - TW	2013/01/03	< 1.00	190	No	No
Polychlorinated Bichenysl(PCB) (ug/L) - TW	2013/01/03	< 0.040	3	No	No
Prometryne (ug/L) - TW	2013/01/03	< 0.030	1	No	No
Simazine (ug/L) - TW	2013/01/03	< 0.010	10	No	No
THM (ug/L) - DW	2013	26.50	100	Yes	Yes
Temephos (ug/L) - TW	2013/01/03	< 0.010	280	No	No
Terbufos (ug/L) - TW	2013/01/03	< 0.010	1	No	No
Tetrachloroethylene (ug/L) - TW	2013/01/03	< 0.35	30	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2013/01/03	< 0.14	100	No	No
Triallate (ug/L) - TW	2013/01/03	< 0.010	230	No	No

Parameter	Sample Date	Result Value	MAC	MAC Exceedance	½ MAC Exceedance
Trichloroethylene (ug/L) - TW	2013/01/03	< 0.44	5	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2013/01/03	< 0.25	5	No	No
2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW	2013/01/03	< 0.22	280	No	No
Trifluralin (ug/L) - TW	2013/01/03	< 0.020	45	No	No
Vinyl Chloride (ug/L) - TW	2013/01/03	< 0.17	2	No	No

## Maintenance Summary

OCWA uses a risk-based preventative maintenance framework that ensures assets are maintained to manufacturer's and/or industry standards. Maintenance is completed using various tools and operational supports. The Ottawa Valley Hub has specialized certified staff such as Millwrights, Electricians and Instrumentation Specialists to name a few.

OCWA uses a Workplace Maintenance System (WMS). WMS is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual basis. The service work is recorded in the work order history. This ensures routine and preventive maintenance is carried out. Emergency and capital repair maintenance is completed and added to the system.

Capital projects are listed and provided to the Township of Killaloe, Hagarty & Richards in the form of a "Capital Forecast". This list is developed by facility staff and provides recommendations for facility components requiring upgrading or improvement.

Preventative Maintenance Work Orders Completed	203
Operational Maintenance Work Orders Completed	30
Weekly Maintenance Work Orders Completed	408
Corrective Maintenance Work Orders Completed	8

- OCWA responded to 4 water quality complaints.

## Maintenance Highlights

WO#	Details
2854186	DWQMS External Audit
2846524	Purchase spare parts for peroxide analyzers
2922783	Replace alarm dialer and pribusion units
2791489	Purchase tanks for treatment plant
2813508	Annual UV intensity sensor calibration
2885902	Replace PLC at treatment facility

## QEMS

The Ontario Clean Water Agency has received Full scope accreditation. There was an on-site audit completed February 12, 2013. There were no non-conformances identified. The Internal Audit and

Management Review were completed. Minutes from the Management Review were provided to the Town on September 25, 2013.

## Water Taking and Transfer Data

2013 Data was submitted electronically on January 20, 2013 under permit #6713-62X4ER. The WTRS data and submission confirmation are attached in Appendix B.

## Small System Sampling Summary

The Ontario Clean Water Agency samples at four (4) small Ministry of Health regulated systems owned by The Township of Killaloe, Hagarty and Richards. Below is a summary of the sample results.

### Sampling Results

Location	Number of Samples	E.coli Results (min) - (max)	Total Coliform Results (min) – (max)
Killaloe Rink	10	0 – 0	0 – 420
Killaloe Medical Center	28	0 – 0	0 – 300
Killaloe Municipal Office	4	0 – 0	0 – 0
Round Lake Arena	4	0 – 0	0 – 0

### Non-Compliance/Adverse Results

Facility	Date	Legislation	Parameter	AWQI #	Problem	Corrective Action
Killaloe Medical Center	31-Jul-2013	319/09	Total Coliform	34545	300 cfu/100 mL	Post, Resample and Test
Killaloe Rink	15-Aug-2013	319/09	Total Coliform	34686	430 cfu/100 mL	Resample and test. resample came back with 23 cfu/100ml resulting in another AWQI under this same AWQI #
Killaloe Rink	18-Aug-2013	319/09	Total Coliform	34686	23 cfu/100 mL (Resample Result)	Chlorinate system flush and resample 24 & 48 hours apart. Resamples after chlorination showed no adverse results.



# Appendix A

## Annual Record of Water Taking Report

---

Personal information contained on this form is collected under the authority of the Ontario Water Resources Act, Section 20. The Purpose of the form is to record details and information about the taking of water annually. Questions should be directed to the respective hub office in your area.

*Les renseignements personnels qui figurent dans le présent formulaire sont recueillis en vertu de l'article 20 de la Loi sur les ressources en eau de l'Ontario. Ce formulaire sert à dossiers les détails et les renseignements concernant la prise d'eau annuelle. Prière d'adresser toutes questions au personnel du bureau régional de votre secteur.*

Year(Année): 2013 Permit No.(N° de permis): 6713-62X4ER Source: Well Water  
 Location: RW - Raw Water

Name of Permittee: Mailing Address:  
*Nom du titulaire du permis Adresse postale*

Location Of Taking: Twp. or Municipality: Concession: Lot:  
*Lieu de la prise d'eau Canton ou municipalité*  
 Township of Killaloe Hagarty and Richards

	Jan/2013	Feb/2013	Mar/2013	Apr/2013	May/2013	Jun/2013	Jul/2013	Aug/2013	Sep/2013	Oct/2013	Nov/2013	Dec/2013	<-- Total -->	<-- Avg. -->	<-- Max. -->	<-- Criteria-->
Total Hrs of Taking	100.7	88.1	76.8	95.3	101.7	77.3	120.8	87.7	93.0	87.8	72.5	94.3	1,096.0	91.33		
Avg Daily Rate of Taking(L/sec)	6.25	6.21	6.32	6.21	6.32	6.25	6.12	6.31	6.4	6.3	6.4	6.28		6.28		
Total Amt of Taking(m3)	2,309.0	2,020.0	1,762.0	2,148.0	2,355.0	1,757.0	2,692.0	2,012.0	2,138.0	1,990.0	1,669.0	2,159.0	25,011.0			
Avg Monthly Taking(m3/day)	74.48	72.14	56.84	71.6	75.97	58.57	86.84	64.9	71.27	64.19	55.63	69.65		68.51		
Max Daily Flow(m3)	246.0	280.0	236.0	247.0	262.0	277.0	239.0	336.0	300.0	211.0	229.0	177.0			336.0	601.92
Peak Daily Rate of Taking(L/sec)	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9			6.9	6.9
Peak Daily Rate of Taking(L/min)	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0	414.0			414.0	418.0

# Appendix B

## WTRS Data and Submission Confirmation

---



Location:WTRS /WT DATA /Input WT Record

WTRS-WT-008

**Water Taking Data submitted successfully.****Confirmation:**

Thank you for submitting your water taking data online.

Permit Number: 6713-62X4ER

Permit Holder: TOWNSHIP OF KILLALOE, HAGARTY, RICHARDS.

Received on:Jan 20, 2014 4:06 PM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

[Return to Main Page](#)

TOWNSHIP2 KILLALOE2 | 2014/01/20

version: v4.2.0.1

Last modified: 2013/12/11



This site maintained by  
the Government of Ontario

© 2014 [Queen's Printer for Ontario](#)

## Annual Water Taking Report

### For the Year 2013

Raw Flow: Sum (m3/d)

Municipality: Village of Killaloe	Year: 2013
Facility Name: [6069] - Killaloe Water Treatment Plant	Water Source: Well Water
Works: [220006026] - Killaloe Water Treatment Plant	Total Design Capacity (m3/day): 602.00
Classification: Class 1 Water Distribution, Class 2 Water Treatment	Population Served: 656

January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	93.000	76.000	76.000	22.000	22.000	22.000	246.000	57.000	57.000	57.000	22.000	22.000	22.000	190.000	60.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	60.000	60.000	21.000	21.000	21.000	241.000	96.000	96.000	96.000	35.000	35.000	35.000	199.000	83.000	83.000	83.000
February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	20.000	20.000	20.000	205.000	67.000	67.000	67.000	25.000	25.000	25.000	209.000	82.000	82.000	82.000	16.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	16.000	16.000	16.000	280.000	60.000	60.000	30.000	30.000	30.000	215.000	85.000	85.000	85.000			

### Annual Water Taking Report For the Year 2013

March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	16.000	16.000	16.000	174.000	51.000	51.000	51.000	24.000	24.000	24.000	179.000	80.000	80.000	80.000	17.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	17.000	17.000	236.000	53.000	53.000	53.000	21.000	21.000	21.000	153.000	93.000	93.000	12.000	12.000	12.000	12.000
April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	12.000	247.000	48.000	48.000	13.000	13.000	13.000	210.000	55.000	55.000	55.000	20.000	20.000	20.000	146.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	50.000	50.000	50.000	19.000	19.000	19.000	94.000	149.000	149.000	149.000	26.000	26.000	26.000	202.000	145.000	
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	145.000	145.000	27.000	27.000	27.000	262.000	72.000	72.000	72.000	27.000	27.000	27.000	195.000	99.000	99.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	99.000	12.000	12.000	12.000	12.000	227.000	73.000	73.000	22.000	22.000	22.000	188.000	80.000	80.000	80.000	18.000
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	18.000	18.000	85.000	85.000	85.000	85.000	31.000	31.000	31.000	277.000	53.000	53.000	53.000	14.000	14.000	

### Annual Water Taking Report For the Year 2013

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	14.000	194.000	59.000	59.000	59.000	14.000	14.000	14.000	166.000	65.000	65.000	65.000	12.000	12.000	12.000	
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	12.000	212.000	51.000	51.000	22.000	22.000	22.000	156.000	239.000	239.000	239.000	21.000	21.000	21.000	197.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	113.000	113.000	113.000	18.000	18.000	18.000	174.000	76.000	76.000	76.000	25.000	25.000	25.000	183.000	57.000	57.000
August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	57.000	34.000	34.000	34.000	34.000	152.000	90.000	90.000	13.000	13.000	13.000	185.000	53.000	53.000	53.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	37.000	37.000	37.000	191.000	67.000	67.000	67.000	16.000	16.000	16.000	336.000	61.000	61.000	61.000	17.000	17.000
September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water	17.000	17.000	211.000	48.000	48.000	27.000	27.000	27.000	300.000	73.000	73.000	73.000	24.000	24.000	24.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water	201.000	94.000	94.000	94.000	36.000	36.000	36.000	113.000	66.000	66.000	66.000	21.000	21.000	21.000	160.000	

### Annual Water Taking Report For the Year 2013

October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water																
	72.000	72.000	72.000	75.000	75.000	75.000	139.000	59.000	59.000	59.000	18.000	18.000	18.000	18.000	211.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water																
	56.000	56.000	20.000	20.000	20.000	174.000	76.000	76.000	76.000	19.000	19.000	19.000	166.000	51.000	51.000	51.000
November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water																
	22.000	22.000	22.000	223.000	53.000	53.000	53.000	18.000	18.000	18.000	18.000	229.000	47.000	47.000	20.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water																
	20.000	20.000	163.000	57.000	57.000	57.000	21.000	21.000	21.000	161.000	56.000	56.000	56.000	20.000	20.000	
December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
RW - Raw Water																
	20.000	173.000	58.000	58.000	58.000	20.000	20.000	20.000	166.000	55.000	55.000	55.000	23.000	23.000	23.000	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
RW - Raw Water																
	177.000	63.000	63.000	63.000	121.000	121.000	121.000	142.000	19.000	19.000	19.000	59.000	59.000	59.000	165.000	62.000