



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Killaloe Water Treatment Plant

2009 Annual Water Reports

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Ontario Clean Water Agency
Agence Ontarienne Des Eaux

This document contains three different annual reports required for the Killaloe Water Treatment Facility; Section 11 Annual Report (as per Section 11 of Ontario Regulation 170/03), Summary Report (as per Schedule 22 of the Ontario Regulation 170/03), and the Summary of the raw water values that were submitted to the Ministry of the Environment (as per Ontario Regulation 387/04 (Water Taking and Transfer))

Contents

Ontario Regulation 170/03, Schedule 22 Summary Report	1
Who gets a copy of the Report:	1
What must the Report contain?	1
What else must the Report contain?	2
When Does the Report Get Submitted?	2
Annual Record of Water Taking	3
Ontario Regulation 170/03, Section 11, Annual Report.....	4
System Information	4
Regulatory Sample Results Summary	5
Microbiological Testing (170/03, Sch.10, Sch.11 or Sch.12):	5
Operational Testing (170/03, Sch.7, Sch.8 or Sch.9):	6
<i>On-Line</i>	6
<i>In-House</i>	6
<i>Laboratory</i>	6
Summary of additional samples:	7
Summary of inorganic parameters tested or most recent sample result:	7
Summary of Lead Sampling:	8
<i>Round #3 – December 15, 2009 to April 15, 2009</i>	8
<i>Round #4 – June 15, 2009 to October 15, 2009</i>	8
<i>Total Lead Program Summary</i>	8
Summary of Organic parameters tested or most recent result	9
Maintenance Summary.....	10
Brief Description	10
Ontario Regulation 387/04, Water Taking and Transfer Data	11

Ontario Regulation 170/03, Schedule 22 Summary Report

This report is a summary of water quality information for the Killaloe Water Treatment Facility, published in accordance with Schedule 22 of Ontario's Drinking-Water Systems Regulation for the reporting period of January 1, 2009 to December 31, 2009. The Killaloe Water Treatment Facility is categorized as a Large Municipal Residential Drinking Water System.

This report was prepared by the Ontario Clean Water Agency on behalf of the Township of Killaloe, Hagarty and Richards.

Who gets a copy of the Report:

- in the case of a drinking-water system owned by a municipality, the members of the municipal council;

What must the Report contain?

The report must,

- list the requirements of the Act, the regulations, the system's approval and any order that the system **failed to meet** at any time during the period covered by the report and specify the duration of the failure; and
- for each failure referred to in clause (a), describe the measures that were taken to correct the failure.

The following table lists the requirements that the system failed to meet and the measures taken to correct the failure:

Drinking Water Legislation	List the requirement(s) the system failed to meet	Specify the duration of the failure (i.e. date(s))	Describe the measures taken to correct the failure	Status (complete or outstanding)
170/03, 169/03	DW Trihalomethanes 105 ug/L (4 quarter rolling average)	Jan 23/09	Flushed system and resampled.	Complete
170/03, 169/03	DW Trihalomethanes 105 ug/L (4 quarter rolling average)	Jan 29/09	Sample resample to AWQI #86211. No further action required by Health Unit	Complete
170/03, 169/03	DW Trihalomethane 104 ug/L (4 quarter rolling average)	Apr 29/09	Flushed system and resampled.	Complete
170/03, 169/03	DW Trihalomethanes 104 ug/L (4 quarter rolling average)	May 07/09	Sample resample to AWQI #87840. No further action required by Health Unit	Complete
170/03, 169/03	DW Trihalomethanes 102 ug/L (4 quarter rolling average)	Oct 19/09	Flushed system and resampled.	Complete
170/03, 169/03	DW Trihalomethanes 102 ug/L (4 quarter rolling average)	Oct 26/09	Sample resample to AWQI #91910. No further action required by Health Unit	Complete

The Ministry of Environment 2009 inspection report noted the following:

Item #	Item	Action Taken to Address Item	Current Status (Complete, In progress)
The Ministry of Environment's last completed inspection was January 20, 2009. The Actions required were as follows:			
1	Provide an action plan advising how the owner and operating authority intends to proceed to investigate available options to control TTHM formation and to implement the desired solution through an application to this ministry for an amendment to Certificate of Approval Mo 8497-79SVZ	Upon receipt of the amended Certificate of Approval, a clearwell aeration system has been installed. Testing is currently being completed on a trial basis to see if there is a reduction in TTHM formation.	Action Plan Complete Trial is still in progress

What else must the Report contain?

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows and daily instantaneous peak flow rates.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval.

Attached please find a copy of the Annual Record of Water Taking for the Killaloe Water Treatment Facility. This document contains all required flow information.

When Does the Report Get Submitted?

If a report is prepared for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31.

Annual Record of Water Taking

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Annual Record Of Ground Water Taking Relevé annuel des prises d'eau de souterraine

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): 2009	Permit No.(N° de permis): 6713-62X4ER	Source: Well Water														
Location: RW - Raw Water																
Name of Permittee: Nom du titulaire du permis		Mailing Address: Adresse postale														
Location Of Taking: Lieu de la prise d'eau	Twp. or Municipality: Canton ou municipalité Township of Killaloe Hagarty and Richards	Concession: Lot:														
Rated Capacity(m3/day) capacité nominal 601.92	Peak Daily Rate Of Taking(L/Sec) Débit de pointe journalier 0	Peak Daily Rate of Taking (L/min) Débit de pointe journalier 636.0														
	Jan/2009	Feb/2009	Mar/2009	Apr/2009	May/2009	Jun/2009	Jul/2009	Aug/2009	Sep/2009	Oct/2009	Nov/2009	Dec/2009	<- Total ->	<- Avg. ->	<- Max. ->	<- Criteria ->
Total Hrs of Taking	167.6	131.6	152.7	165.4	173.1	154.1	157.6	144.2	104.9	117.0	90.0	91.4	1,649.6	137.47	173.1	
Total Amt of Taking(m3)	3,253.0	2,530.0	3,016.0	3,313.0	3,456.0	3,100.0	3,153.0	3,140.0	2,250.0	2,524.0	1,943.0	2,007.0	33,695.0	2,807.08	3,456.0	
Avg Daily Taking(m3)	104.94	90.36	97.29	110.43	111.48	103.33	101.71	101.29	75.0	81.42	64.77	64.74		92.23		601.92
%Rated Capacity(Avg. Daily Taking)	17.43	15.01	16.16	18.35	18.52	17.17	16.9	16.83	12.46	13.53	10.76	10.76				
Max Daily Flow(m3)	424.0	201.0	157.0	377.0	183.0	211.0	278.0	190.0	136.0	467.0	108.0	116.0			467.0	601.92
%Rated Capacity(Max Daily Flow)	70.44	33.39	26.08	62.63	30.4	35.05	46.19	31.57	22.59	77.59	17.94	19.27				
Avg Daily Rate of Taking(L/Sec)	5.36	5.31	5.43	5.53	5.54	5.57	5.48	6.0	5.82	5.99	5.98	6.04		5.68		
Peak Daily Rate of Taking(L/Sec)	5.8	6.3	6.0	6.9	6.9	5.9	6.1	6.3	6.2	6.2	6.3	6.3			6.9	0
Peak Daily Rate of Taking(L/min)	348.0	378.0	360.0	414.0	414.0	354.0	366.0	378.0	372.0	372.0	378.0	378.0			414.0	636.0
%Peak Daily Rate of Taking(L/min)	54.72	59.43	56.6	65.09	65.09	55.68	57.55	59.43	58.49	58.49	59.43	59.43				

Ontario Regulation 170/03, Section 11, Annual Report

System Information

Drinking Water System Name:	Killaloe Water Treatment Plant
Drinking Water System Number:	220006026
System Owner:	Township of Killaloe, Hagarty and Richards
Operating Authority:	Ontario Clean Water Agency
Drinking Water System Category:	Large Municipal Residential
Reporting Period:	January 1, 2009 – December 31, 2009

Summary Report (170/03 Schedule 22) will be available for inspection at:

Township of Killaloe, Hagarty and Richards 1 John Street Killaloe, ON K0J 2A0
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List all Drinking Water Systems which receive all of their drinking water from your system:

Name	Drinking Water System Number
No other systems receive water from this system	

Provide a brief description of the system:

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 Ultraviolet light and post disinfection is provided by sodium hypochlorite. pH adjustment equipment is installed but not required.

What Treatment Chemicals were used during the reporting year:

Chemical Name	Use	Supplier
Potassium Permanganate	Contactors	Cariox
Sodium Hypochlorite	Disinfection	Brenntag

Summary of any reports made to the Ministry under subsection 18 (1) of the Act or section 16-4 of Schedule 16:

DATE	AWQI #	Cause			Corrective Action Taken
		Parameter	Result	Exceedance of	
Jan 23/09	86211	DW Trihalomethanes	105 µg/L (4 quarter rolling average)	170/03, 169/03	Flushed system and resampled.

Jan 29/09	86295	DW Trihalomethanes	105 ug/L (4 quarter rolling average)	170/03, 169/03	Sample resample to AWQI #86211. No further action required by Health Unit
Apr 29/09	87840	DW Trihalomethane	104 ug/L (4 quarter rolling average)	170/03, 169/03	Flushed system and resampled.
May 07/09	87962	DW Trihalomethanes	104 ug/L (4 quarter rolling average)	170/03, 169/03	Sample resample to AWQI #87840. No further action required by Health Unit
Oct 19/09	91910	DW Trihalomethanes	102 ug/L (4 quarter rolling average)	170/03, 169/03	Flushed system and resampled.
Oct 26/09	92053	DW Trihalomethanes	102 ug/L (4 quarter rolling average)	170/03, 169/03	Sample resample to AWQI #91910. No further action required by Health Unit

Does your Drinking-Water System serve more that 10 000 people?

YES

NO

If yes, is your annual report available to the public at no charge on a web site on the internet?

YES

NO

Indicate how you notified system users that your annual report is available, and is free of charge?

- Via Township of Killaloe, Hagarty and Richards internet website

Regulatory Sample Results Summary

Microbiological Testing (170/03, Sch.10, Sch.11 or Sch.12):

	# of E-coli Samples Taken	E-Coli Results (min-max)	Total Coliform Results (min-max)	# of HPC Samples Taken	HPC Results (min-max)
Raw - RW	52	0 - 0	0 - 0		
Treated - TW	52	0 - 0	0 - 0	51 *	0 - 27
Distribution - DW	108	0 - 0	0 - 0	106*	0 - 14

*April 14, 2009 – No HPC testing on Treated Water and Distribution samples due to laboratory error

Operational Testing (170/03, Sch.7, Sch.8 or Sch.9):

NOTE: 8760 samples indicates an on-line analyzer

On-Line

	Range of Results (min # - max #)
Treated Turbidity	0 – 4.99 NTU
Treated Free Chlorine	0.49 – 2.72 mg/L
Fluoride	Not added at this facility
Distribution Free Chlorine	0.1 – 1.45 mg/L

Analyzer 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 samples taken	Range of Results (min # - max #)
Treated Free Chlorine	247	0.8 – 1.79 mg/L
Treated Turbidity	247	0.09 – 0.14 NTU
Treated Colour	105	0 – 1 TCU
Treated pH	105	7.52 – 7.75
Iron	105	0.001 – 0.006 mg/L
Manganese	105	0.019 – 0.05 mg/L
Potassium	105	0.07 – 0.093 mg/L
Distribution Free Chlorine	108	0.4 – 1.15 mg/L

Laboratory

Parameter	# of samples taken	Range of Results (min # - max #)
Fluoride	Fluoride is not used at this facility	
Treated Alkalinity	12	243 – 252 mg/L
Treated Colour	12	<2.0 – 2.0 TCU
Treated Conductivity	12	701 – 764 uS/cm
Treated pH	12	7.62 – 8.12
Treated Total Dissolved Solids	12	456 – 497 mg/L
Treated Hardness	12	284 – 339 mg/L
Distribution Alkalinity	12	242 – 253 mg/L
Distribution Colour	12	<2.0 – 4.0 TCU
Distribution Conductivity	12	705 – 763 uS/cm
Distribution pH	12	7.61 – 8.13
Distribution Total Solids	12	458 – 496 mg/L
Distribution Hardness	12	299 – 342 mg/L
Production Well Benzene	1	<0.5 ug/L
Production Well Ethylbenzene	1	<0.5 ug/L
Production Well m/p-xylene	1	<1.0 ug/L
Production Well o-xylene	1	<0.5 ug/L
Production Well Toluene	1	<0.5 ug/L
Test Well Benzene	1	<0.5 ug/L

Test Well Ethylbenzene	1	<0.5 ug/L
Test Well m/p-xylene	1	<1.0 ug/L
Test Well o-xylene	1	<0.5 ug/L
Test Well Toluene	1	<0.5 ug/L

Summary of additional samples:

Legal Document	Date of Issuance	Parameter	Date Sampled	Result	Unit of measure
Certificate of Approval #8497-79SRVZ	19-Dec-07	Backwash Suspended Solids	Jan 20/09	<2.0	mg/L
			Feb 17/09	<2.0	mg/L
			Mar 17/09	<2.0	mg/L
			Apr 21/09	<2.0	mg/L
			May 20/09	5.0	mg/L
			Jun 16/09	2.0	mg/L
			Jul 21/09	<2.0	mg/L
			Aug 18/09	3.0	mg/L
			Sep 15/09	2.0	mg/L
		Backwash pH	Jan 20/09	7.9	no units
			Feb 17/09	7.95	no units
			Mar 17/09	7.86	no units
			Apr 21/09	7.97	no units
			May 20/09	8.01	no units
			Jun 16/09	8.2	no units
			Jul 21/09	8.04	no units
			Aug 18/09	7.96	no units
Sep 15/09	7.92	no units			
Certificate of Approval #0621-7UES9F	01-Oct-09	Backwash Suspended Solids	Oct 20/09	2.0	mg/l
			Nov 17/09	<2.0	mg/L
			Dec 15/09	<2.0	mg/L
		Backwash pH	Oct 20/09	8.2	no units
			Nov 17/09	8.01	no units
			Dec 15/09	7.92	no units

Summary of inorganic parameters tested or most recent sample result:

MAC = Maximum Allowable Concentration as per O.Reg 169/03

Parameter	Sample Date	Result Value	Exceedance
Antimony: Sb (ug/L) - TW	2009/01/20	< 0.10	No
Arsenic: As (ug/L) - TW	2009/01/20	< 1.00	No
Barium: Ba (ug/L) - TW	2009/01/20	160.00	No
Boron: B (ug/L) - TW	2009/01/20	110.00	No
Cadmium: Cd (ug/L) - TW	2009/01/20	< 0.10	No
Chromium: Cr (ug/L) - TW	2009/01/20	4.00	No
Lead: Pb (ug/L)	2009/02/23	< 1.00	No
Mercury: Hg (ug/L) - TW	2009/01/20	< 0.10	No
Selenium: Se (ug/L) - TW	2009/01/20	< 1.00	No
Sodium: Na (mg/L) - TW	2008/01/15	28.00	Yes
Uranium: U (ug/L) - TW	2009/01/20	4.00	No

Fluoride Residual: Mean (mg/L) - TW	2008/01/15	0.28	No
Nitrite (mg/L) - TW	2009/01/06	< 0.10	No
Nitrite (mg/L) - TW	2009/04/07	< 0.10	No
Nitrite (mg/L) - TW	2009/07/06	< 0.10	No
Nitrite (mg/L) - TW	2009/10/06	< 0.10	No
Nitrate (mg/L) - TW	2009/01/06	< 0.10	No
Nitrate (mg/L) - TW	2009/04/07	< 0.10	No
Nitrate (mg/L) - TW	2009/07/06	< 0.10	No
Nitrate (mg/L) - TW	2009/10/06	< 0.10	No

Summary of Lead Sampling:

Relief from sampling requirements granted as per CofA #PB220006026RR-01

Round #3 - December 15, 2009 to April 15, 2009

	# Collected	# > 1/2 MAC	# > MAC	Sample #1 Result Range		Sample #2 Result Range		pH Range		Alkalinity Range	
				MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
Residential Samples	4	0	0	<0.001	0.002	<0.001	0.001	7.23	7.72	N/A	N/A
Non-Residential Samples	2	1	0	<0.001	0.006	0.001	0.002	7.47	7.53	N/A	N/A
Distribution Samples	4	0	0	<0.001	<0.001	N/A	N/A	7.31	7.47	246	247

Round #4 - June 15, 2009 to October 15, 2009

	# Collected	# > 1/2 MAC	# > MAC	Sample #1 Result Range		Sample #2 Result Range		pH Range		Alkalinity Range	
				MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
Residential Samples	4	1	0	<0.001	0.005	<0.001	0.003	7.4	7.6	N/A	N/A
Non-Residential Samples	2	0	0	0.001	0.004	0.001	0.002	7.4	7.6	N/A	N/A
Distribution Samples	4	0	0	<0.001	<0.001	N/A	N/A	7	7.6	249	250

Total Lead Program Summary

	Total # of Samples	# exceeded 1/2 Mac	% exceeded 1/2 MAC	# exceeded MAC	% exceeded MAC	Sampling Reduction Applies
Residential	4	1		0		Reduced Sampling next sampling Period December
Non Residential	2	0		0		

Total Plumbing Samples	21	2	10	0	0	2012
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Summary of Organic parameters tested or most recent result

MAC = Maximum Allowable Concentration as per O.Reg 169/03

Parameter	Sample Date	Result Value	Exceedance
Alachlor (ug/L) - TW	2009/01/20	< 0.50	No
Aldicarb (ug/L) - TW	2009/01/20	< 5.00	No
Aldrin + Dieldrin (ug/L) - TW	2009/01/20	< 0.010	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2009/01/20	< 0.20	No
Azinphos-methyl (ug/L) - TW	2009/01/20	< 2.00	No
Bendiocarb (ug/L) - TW	2009/01/20	< 2.00	No
Benzene (ug/L) - TW	2009/01/20	< 0.50	No
Benzo(a)pyrene (ug/L) - TW	2009/01/20	< 0.010	No
Bromoxynil (ug/L) - TW	2009/01/20	< 0.50	No
Carbaryl (ug/L) - TW	2009/01/20	< 5.00	No
Carbofuran (ug/L) - TW	2009/01/20	< 5.00	No
Carbon Tetrachloride (ug/L) - TW	2009/01/20	< 0.50	No
Chlordane:Total (ug/L) - TW	2009/01/20	< 0.020	No
Chlorpyrifos (ug/L) - TW	2009/01/20	< 1.00	No
Cyanazine (ug/L) - TW	2009/01/20	< 1.00	No
Diazinon (ug/L) - TW	2009/01/20	< 1.00	No
Dicamba (ug/L) - TW	2009/01/20	< 1.00	No
1,2-Dichlorobenzene (ug/L) - TW	2009/01/20	< 0.40	No
1,4-Dichlorobenzene (ug/L) - TW	2009/01/20	< 0.40	No
Dichlorodiphenyltrichloroethane(DDT) + metabolites (ug/L) - TW	2009/01/20	< 0.020	No
1,2-Dichloroethane (ug/L) - TW	2009/01/20	< 0.50	No
1,1-Dichloroethylene (ug/L) - TW	2009/01/20	< 0.50	No
Dichloromethane (ug/L) - TW	2009/01/20	< 4.00	No
2,4-Dichlorophenol (ug/L) - TW	2009/01/20	< 0.50	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2009/01/20	< 1.00	No
Diclofop-methyl (ug/L) - TW	2009/01/20	< 0.90	No
Dimethoate (ug/L) - TW	2009/01/20	< 2.50	No
Dinoseb (ug/L) - TW	2009/01/20	< 1.00	No
Diquat (ug/L) - TW	2009/01/20	< 7.00	No
Diuron (ug/L) - TW	2009/01/20	< 10.00	No
Glyphosate (ug/L) - TW	2009/01/20	< 10.00	No
Heptachlor+Hepachlor Epoxide (ug/L) - TW	2009/01/20	< 0.010	No
Lindane: (ug/L) - TW	2009/01/20	< 0.010	No
Malathion (ug/L) - TW	2009/01/20	< 5.00	No
Methoxychlor (ug/L) - TW	2009/01/20	< 0.020	No
Metolachlor (ug/L) - TW	2009/01/20	< 0.50	No
Metribuzin (ug/L) - TW	2009/01/20	< 5.00	No
Monochlorobenzene (ug/L) - TW	2009/01/20	< 0.20	No
Paraquat (ug/L) - TW	2009/01/20	< 1.00	No
Parathion (ug/L) - TW	2009/01/20	< 1.00	No
Pentachlorophenol (ug/L) - TW	2009/01/20	< 0.50	No

Phorate (ug/L) - TW	2009/01/20	< 0.50	No
Picloram (ug/L) - TW	2009/01/20	< 5.00	No
Polychlorinated Bichenysl(PCB) (ug/L) - TW	2009/01/20	< 0.10	No
Prometryne (ug/L) - TW	2009/01/20	< 0.25	No
Simazine (ug/L) - TW	2009/01/20	< 1.00	No
THM (ug/L)	2009	92.76	No
Temephos (ug/L) - TW	2009/01/20	< 10.00	No
Terbufos (ug/L) - TW	2009/01/20	< 0.40	No
Tetrachloroethylene (ug/L) - TW	2009/01/20	< 0.30	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2009/01/20	< 0.50	No
Triallate (ug/L) - TW	2009/01/20	< 1.00	No
Trichloroethylene (ug/L) - TW	2009/01/20	< 0.30	No
2,4,6-Trichlorophenol (ug/L) - TW	2009/01/20	< 0.50	No
2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW	2009/01/20	< 1.00	No
Trifluralin (ug/L) - TW	2009/01/20	< 0.40	No
Vinyl Chloride (ug/L) - TW	2009/01/20	< 0.20	No

Maintenance Summary

Brief Description

Magnetic locator for distribution locates
Installation of grounding rods on well casing, gen set and antenna
Raw water flow meter replacement and installation of ups
Installation of lightning protection
Repair/Rebuild chlorine lines
Annual maintenance of UV Systems
Install clearwell aeration system

Ontario Regulation 387/04, Water Taking and Transfer Data

2009 Data was submitted electronically on February 8, 2010 under permit #6713-62X4ER.

Raw flows are in m3/d

January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	90	103	103	103	63	72	72	72	78	78	78	121	69	69	69	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	80	80	80	203	71	71	71	82	82	82	424	165	165	165	96	96

February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	96	80	83	83	83	95	95	95	151	77	77	77	84	84	84	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	84	95	91	91	79	79	79	201	67	67	67	93	93			

March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	93	155	84	84	84	133	133	133	70	112	112	112	106	106	106	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	134	75	75	75	78	78	78	157	65	65	65	76	76	76	157	63

April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	63	63	80	80	80	142	76	76	94	94	94	94	94	74	78	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	78	90	90	90	377	347	112	112	83	83	83	159	109	109	109	

May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	112	112	112	70	88	88	88	90	90	90	183	124	124	124	101	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	101	101	101	114	117	117	142	142	142	96	97	97	97	132	132	132

June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	73	116	116	116	97	97	97	114	63	63	63	80	80	80	102	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	69	69	69	83	83	83	211	186	186	186	101	101	101	143	72	

July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	72	72	79	79	79	111	70	70	70	88	88	88	104	278	278	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	278	74	74	74	225	66	66	66	67	67	67	105	72	72	72	82

August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	82	82	82	78	116	116	81	81	81	190	135	135	135	134	134	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	134	189	89	89	89	62	62	62	135	90	90	90	67	67	67	96

September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	74	74	74	65	65	65	65	81	74	74	82	82	82	120	79	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	79	79	64	64	64	122	50	50	60	60	60	60	136	73	73	

October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	73	70	70	70	467	63	63	63	69	69	69	69	64	54	54	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	70	70	70	94	76	76	76	66	66	66	99	58	58	58	67	67

November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	67	90	50	50	50	62	62	62	108	51	51	51	68	68	68	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	85	61	61	61	62	62	62	80	57	57	57	65	65	65	85	

December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	54	54	54	67	67	67	95	56	56	56	64	64	64	92	50	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	50	106	49	49	49	116	55	55	61	61	61	61	61	75	63	75