



**NOVA SCOTIA
GROUNDWATER
OBSERVATION WELL
NETWORK**

2012 REPORT

Prepared: December 2012

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EXECUTIVE SUMMARY

The Nova Scotia Groundwater Observation Well Network was established in 1965 to monitor groundwater levels across the province. The network currently monitors both groundwater levels and groundwater quality and the results are used to: manage groundwater resources; assess drought conditions; evaluate the impact of human activities on groundwater; and, evaluate long-term groundwater trends. At the beginning of 2011 the network included 37 observation wells. One well was added during 2011, bringing the total number of active wells to 38 by the end of 2011. This report presents the monitoring results collected up to the end of 2011.

The observation wells are monitored with telemetric dataloggers that record water levels and groundwater temperature every hour and transmit the data to a central computer. The number of years of groundwater level data available at each observation well ranges from one to 45 years. Groundwater samples are collected from the wells periodically and tested for a number of parameters, including: general chemistry, metals, pesticides, volatile organic compounds (VOCs), tritium and perchlorate.

The groundwater level monitoring results indicate that 13 of the 38 observation wells exhibit statistically significant groundwater level trends, with five having small upward trends and eight having small downward trends. The downward trends tend to be larger than the upward trends, however, the size of the trends in most cases is relatively small (i.e., water level changes of less than 1 m). Three of the observation wells with downward trends are located in municipal wellfields and, therefore, water level drops in these wells are expected to have been caused by wellfield pumping.

The groundwater quality monitoring results indicate that nine of the 38 wells exceeded health-based drinking water guidelines. The parameters that exceeded health-based guidelines included: arsenic (at 5 wells), fluoride (2 wells), lead (1 well), nitrate (1 well) and uranium (1 well). Elevated levels of arsenic, fluoride and uranium are known to occur in groundwater in certain areas of the province due to their naturally-occurring presence in soil and bedrock. The elevated nitrate level was observed in a in an agricultural area and is likely caused by human activity.

Nineteen of the 37 wells exceeded aesthetic drinking water guidelines (or other non-health related guidelines), including the following parameters: manganese (at 14 wells), iron (8 wells), turbidity

(6 wells), pH (5 wells), chloride (1 well), colour (1 well) and total dissolved solids (1 well). The majority of these parameters are representative of naturally occurring water quality problems that are commonly encountered in water wells in Nova Scotia and elsewhere. Chloride was detected above background levels at five wells. The data suggests that two of these wells have been impacted by road salt, two have been impacted by sea water intrusion, and one has been impacted by naturally-occurring geologic formation salt.

The water quality results show that none of the observation wells exceeded drinking water guidelines for VOCs or pesticides. However, one VOC (toluene) was detected at low levels (i.e., 2 ug/L) in two of the observation wells. These wells are located beside roads and, therefore, the toluene may be due to gasoline runoff from roads. No pesticides were detected in any of the observation wells.

Of the 17 observation wells tested for tritium, 13 wells contained either recent water (recharged after 1952) or a mix of recent and old water (recharged before and after 1952). Only four of the 17 wells tested for tritium contained purely old water (recharged before 1952). These results suggest that most of the wells draw water from aquifers that are recharged relatively quickly. This is encouraging from a water quantity point of view because the aquifers are being regularly replenished with new water, however it also indicates that the aquifers are vulnerable to contaminants released at the surface that can be carried into the aquifer relatively quickly. This emphasizes the importance of source water protection in the province to ensure that groundwater is kept clean.

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1.0 INTRODUCTION

The Nova Scotia Groundwater Observation Well Network was established in 1965 to monitor groundwater levels across the province. The size of the Network has varied over the years, however, at the beginning of 2011 the network included 37 observation wells. One well was added to the Network during 2011, bringing the total number of active wells to 38 by the end of 2011. The Network is operated by Nova Scotia Environment (NSE) and is used for monitoring both groundwater levels and groundwater quality. The monitoring results are used to help manage groundwater resources, assess drought conditions, evaluate the impact of human activities on groundwater and evaluate long-term groundwater trends. This report presents the monitoring results to the end of 2011.

1.1 Historical Background

When the observation well network was initially established in 1965, it consisted of wells that were installed as part of the International Hydrologic Decade (1965-1974) and as part of regional groundwater resource evaluation studies undertaken in Nova Scotia during the 1960's and 1970's. Most of these wells were constructed specifically for observation purposes or drilled as test holes and then converted to observation wells. During the 1970's and 80's the network continued to expand until it included as many as 40 active wells, but many of these were abandoned in the 1990's. By 2003, the network consisted of 11 active wells.

After 2003, the network began expanding again. Three wells were added between 2003 and 2005, bringing the total number of wells to 14. Ten observation wells were added to the network in 2006, bringing the total number of wells to 24. All of the wells added to the network up to the end of 2006 were existing wells that were once part of the historic network, but were no longer being actively monitored. In 2007, two new observation wells were drilled and one existing inactive observation well was added back into the network. For the two wells drilled in 2007, water level monitoring began in May of 2008. Therefore, the total number of observation wells being monitored by the end of 2007 was 25. In 2008, three new observation wells were drilled and a former provincial park water supply well was converted to an observation well, bringing the total number of wells to 31 by the end of 2008. In 2009, four former provincial park water supply wells were converted to observation wells and one well was dropped from the network due to damage during site

redevelopment and from vandalism, bringing the total number of active wells to 35 by the end of 2009. In 2010, one well, drilled as a part of a sea water intrusion project by St. Francis Xavier University, was added as an observation well and one former municipal test well, completed by the Village of St. Peters, was converted to an observation well, bringing the total number of wells to 37 by the end of 2010. In 2011, another former provincial park water supply well was converted to an observation well, bringing the total number of active wells to 38 by the end of 2011.

Up until the 1990's, groundwater levels in each well were monitored using mechanical Stevens F Type chart recorders, which recorded water level changes on a paper chart that was retrieved from the field on a monthly or quarterly basis. In the late 1990's the chart recorders began to be replaced with electronic dataloggers and in 2003 an initiative began to equip the entire network with telemetric dataloggers, which are capable of transmitting the monitoring results by cell phone to a central computer.

Six reports have been previously published on the network:

- “Groundwater Hydrographs in Nova Scotia 1965-1981” (McIntosh, 1984);
- “Nova Scotia Groundwater Observation Well Network - 2007 Report” (NS Environment and Labour, 2007);
- “Nova Scotia Groundwater Observation Well Network - 2008 Report” (NS Environment, 2008);
- “Nova Scotia Groundwater Observation Well Network - 2009 Report” (NS Environment, 2009);
- “Nova Scotia Groundwater Observation Well Network - 2010 Report” (NS Environment, 2010); and
- “Nova Scotia Groundwater Observation Well Network - 2011 Report” (NS Environment, 2011).

In 2006, a web page was launched to provide public access to the network’s results. The website can be found at: <http://www.gov.ns.ca/nse/groundwater/groundwaternetwork.asp>. The webpage is updated with new groundwater level data on a quarterly basis. The majority of the historical hard copy water level data has been digitized and is available in spreadsheet format on the above referenced webpage.

1.2 Activities Completed in 2011

One well was added to the network in 2011: Smileys Park (086). This well was a former water supply well, located in Smileys Provincial Park near MacKay Section in Hants County. It is no longer in use as a water supply well and was converted to an observation well. In addition, one new observation well was drilled at Rainbow Haven Provincial Park in late 2011; however, monitoring at this well did not begin until 2012.

Cleaning was carried out at the Sydney (050) observation well in 2011. This well was installed in the 1970s and a recent downward water level trend suggested it may have become partially clogged due to chemical or biological incrustation. Further details about the cleaning operations and the results are provided in Section 3.12.

Water quality sampling was carried out at five observation wells in 2011, including Greenwood (003), Murray Siding (007), Lawrencetown (043), Kentville (048) and St. Peters (085).

1.3 Description of the Current Network

As of December 31st, 2011 the observation well network consisted of 38 wells. The wells are listed in Table 1.1 and the well locations are shown in Figure 1.1. As shown in Table 1.1, the number of years since monitoring began at each well is variable, but ranges from 1 year to 45 years and can be summarized as follows: wells with more than 40 years of data (5 wells); 30 years (6 wells); 20 years (10 wells); 10 years (3 wells); and less than 10 years (14 wells). Note that these figures do not necessarily reflect the number of years of monitoring data available for each well because there are data gaps in the records.

Currently, all of the observation wells in the network have dataloggers that record water levels and temperature every hour. Some of the wells also have telemetric systems that transmit the data by cell phone to a central computer. At the end of 2011, 17 of the wells were equipped with telemetric systems and the remaining 21 wells had dataloggers that are accessed in the field to retrieve data.

Groundwater samples are collected from the wells periodically and tested for a number of parameters, including general chemistry, metals, pesticides, volatile organic compounds, tritium and perchlorate. The wells are sampled at approximately two to five year intervals to monitor for changes in water quality. Most of the wells in the network have been sampled at least once; however, some wells have not been sampled due to technical limitations (such as old floats associated with former Stevens chart recorders that have become lodged in the well casing).

Note that the observation wells listed in Table 1.1 are typically named based on the nearest town or water body and the observation well number that is assigned to the well when it is added to the network. For example, “Truro (014)” is located in Truro and its network well ID number is 014. The three-digit observation well ID numbers have been in use since the network was developed in 1965. They are unique and are not reused, even after a well has been abandoned. Some of the observation wells in this report have been renamed since the initial 1984 network report in order to adhere to a consistent naming protocol. For example, “Truro (014)” was originally named “Truro 421” in the 1984 network report. The “421” was originally included in the well name because it was called “Department of Mines Test Hole 421” at the time of drilling. Because some of the original well names have changed, readers who wish to compare historical results from the 1984 network report with this report should cross-reference wells using the three-digit observation well ID number.

Table 1.1: Wells in the NS Groundwater Observation Well Network (as of Dec. 31, 2011)

No.	Well Name	Well ID#	County	Year Monitoring Started	Years Since Monitoring Began
1	Greenwood (003)	003	Kings	1966	45
2	Fraser Brook (004)	004	Colchester	1966	45
3	Wilmot (005)	005	Annapolis	1966	45
4	Murray Siding (007)	007	Colchester	1967	44
5	Wolfville (010)	010	Kings	1969	42
6	Truro (014)	014	Colchester	1971	40
7	Monastery (028)	028	Antigonish	1976	35
8	Point Aconi (030)	030	Cape Breton	1976	35
9	Lawrencetown (043)	043	Halifax	1978	33
10	Durham (045)	045	Pictou	1979	32
11	Kentville (048)	048	Kings	1980	31
12	Sydney (050)	050	Cape Breton	1984	27
13	North Grant (054)	054	Antigonish	1987	24
14	Stillwater (055)	055	Guysborough	1987	24
15	Sheet Harbour (056)	056	Halifax	1987	24
16	Hayden Lake (059)	059	Shelburne	1988	23
17	Meteghan (060)	060	Digby	1987	24
18	Annapolis Royal (062)	062	Digby	1990	21
19	Hebron (063)	063	Yarmouth	1990	21
20	Margaree (064)	064	Inverness	1990	21
21	Ingonish (065)	065	Victoria	1990	21
22	Debert (068)	068	Colchester	1993	18
23	Dalem Lake (069)	069	Victoria	1992	19
24	Amherst (071)	071	Cumberland	1993	18
25	Kelley River (073)	073	Cumberland	2006	5

No.	Well Name	Well ID#	County	Year Monitoring Started	Years Since Monitoring Began
26	Atlanta (074)	074	Kings	2008	3
27	Sheffield Mills (075)	075	Kings	2008	3
28	Fall River (076)	076	Halifax	2008	3
29	West Northfield (077)	077	Lunenburg	2008	3
30	Musquodoboit Harbour (078)	078	Halifax	2008	3
31	Lewis Lake (079)	079	Halifax	2008	3
32	Arisaig (080)	080	Antigonish	2009	2
33	Coldbrook (081)	081	Kings	2009	2
34	Long Point (082)	082	Inverness	2009	2
35	Tatamagouche (083)	083	Colchester	2009	2
36	Pugwash (084)	084	Cumberland	2010	1
37	St. Peters (085)	085	Richmond	2010	1
38	Smileys Park (086)	086	Hants	2011	<1

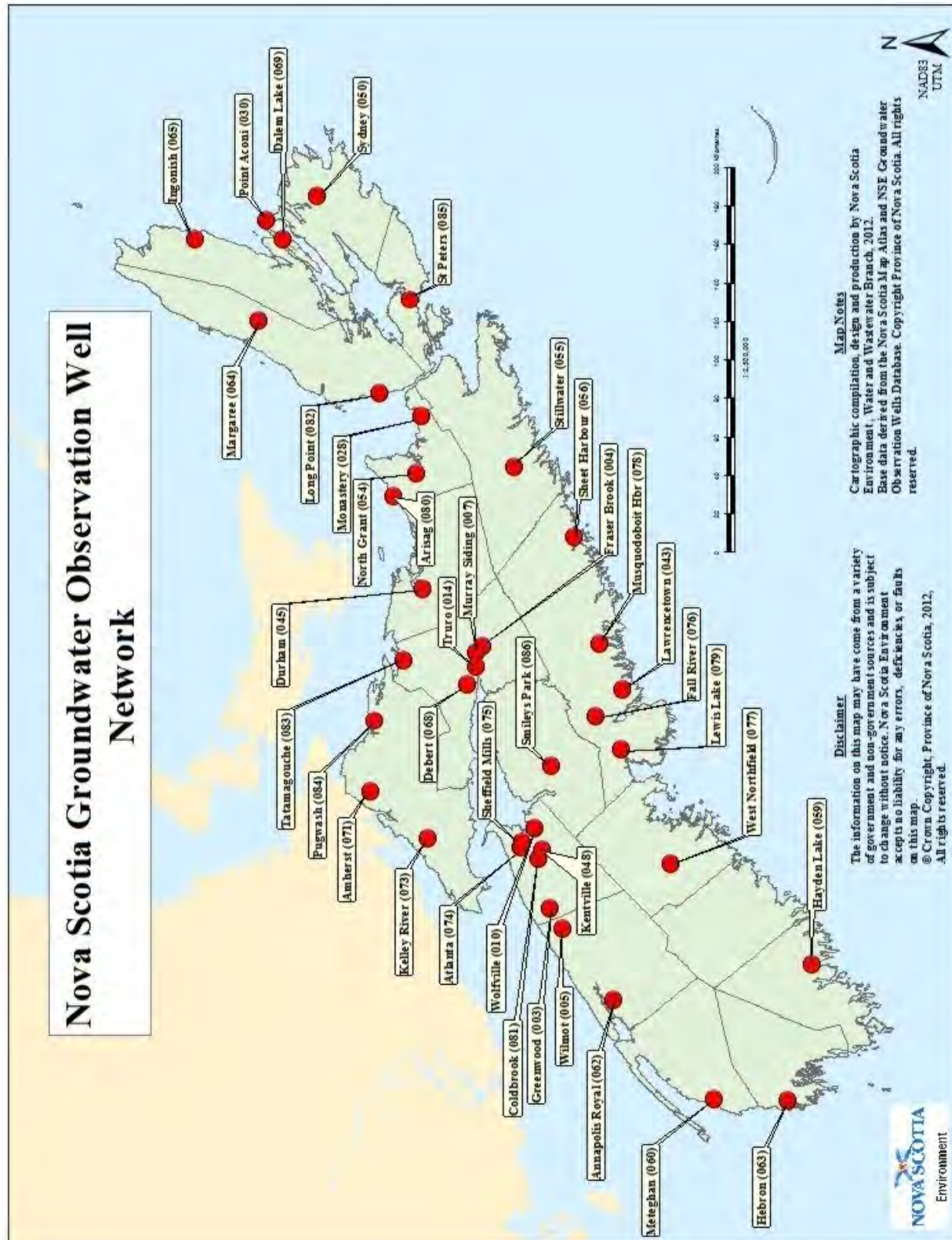


Figure 1.1: Map of Observation Well Locations (as of Dec. 31, 2011)

2.0 METHODS

2.1 Groundwater Level Monitoring

2.1.1 Field Methods

Each observation well in the network is equipped with a pressure transducer, temperature sensor and electronic datalogger that records water levels and water temperature every hour. There is also a second pressure transducer located above the water in each well that monitors atmospheric pressure so the water level measurements can be adjusted for atmospheric pressure changes. Some wells are also equipped with telemetric systems that transmit the monitoring data by cell phone to a central computer system once a week.

The wells are visited approximately every six months for field verification of the water level data and to change the telemetric system batteries. Water levels are verified in the field with a manual electronic water level tape.

After the raw water level data is collected, it goes through several adjustments before being added to the spreadsheet database. Data corrections are applied if the field measurement differs from the pressure transducer readings by more than 2.1 cm, which is the reported accuracy of the pressure transducers. If corrections are necessary, they are made by applying a linear adjustment between two field verified water levels. Next, the hourly water level data is averaged to obtain a single average daily water level for each day. Finally, the water level data are converted to a water level elevation (relative to mean sea level) using the elevation of the top of the well casing.

2.1.2 Data Assessment Methods

The water levels at each well were assessed for changes and long-term trends for the entire period on record, up to the end of 2011. The water level assessments were carried out by visual inspection of the water level graphs and through statistical analysis. The Mann-Kendall trend test (Gilbert, 1987) was used to determine if there was a trend in the water level data (i.e. upward trend, downward trend or no trend) for the period ending in 2011. This test is one of the most commonly used statistical methods to evaluate trends in environmental data and has been used in other studies in Nova Scotia to assess groundwater level trends (Rivard et al., 2012). The rate of annual change at each well was

determined using the Sen's slope estimator (Gilbert, 1987), a commonly-used linear slope estimator in environmental statistics.

The results of the statistical trend analyses are presented in Appendix E. Trend analyses were only completed for wells with 10 or more "usable" years of data. A year was considered usable if groundwater level data were available for at least 75% of the days in the year. Trends were considered to be "statistically significant" if there was at least an 80% confidence level that the trend was real. Note that "statistically significant" means there is statistical evidence that a trend is present, but it does not necessarily mean the trend is large.

If groundwater level changes or trends were identified, possible reasons for the change or trend were evaluated. Several factors can cause groundwater levels to fluctuate. The most common causes of groundwater level changes in Nova Scotia include: precipitation, seasonal variations, groundwater pumping and tidal effects. Each of these factors is discussed in further detail in the following paragraphs.

Fluctuations Due to Precipitation

Precipitation, such as rainfall or melting snow, will either run off into streams and other surface water bodies, be intercepted by vegetation, or seep into the ground. The portion that seeps into the ground is known as groundwater recharge. Groundwater recharge is difficult to measure, however, it has been estimated that recharge rates in Nova Scotia typically range from about 8 to 25% of precipitation. Groundwater recharge causes the groundwater levels in an aquifer to rise, although there is usually a delay between the precipitation event and when the groundwater level rises. The amount of precipitation and groundwater recharge varies throughout the province. Nova Scotia weather stations show the following mean annual total precipitations at selected locations between 1971 and 2000: Greenwood 1127 mm, Halifax 1452 mm, Sydney 1505 mm, and Yarmouth 1274 mm (Environment Canada, 2007).

Long-term trends in precipitation due to climate change can result in corresponding trends in groundwater levels. In cases where observation wells showed a significant groundwater level trend, the nearest climate station data was also evaluated for precipitation trends to assess whether or not climate change could be affecting groundwater levels.

Seasonal Fluctuations

In Nova Scotia, the spring and fall tend to have the highest amounts of precipitation and the summers tend to be drier. This seasonal variation is reflected in groundwater levels in the province's aquifers, which usually have higher water levels in the spring and lower levels in the summer. The lower groundwater levels in the late months of summer are the result of several factors, including: decreased precipitation, increased evaporation and the increased interception of water by vegetation. The typical seasonal variation in groundwater levels in Nova Scotia aquifers is usually less than about three metres.

Season fluctuations in groundwater levels in Nova Scotia can often be observed in the three typical patterns they produce in observation well hydrographs. These usually include two wet seasons (spring and fall) with rising groundwater levels, and a dry season in the summer with declining groundwater levels, as described below:

1. Spring Recharge - rising groundwater levels between March and May due to spring rainfall and melting snowpack . Maximum groundwater levels usually occur during this period.
2. Fall Recharge - rising groundwater levels between October and December due to fall precipitation.
3. Summer Recession - declining groundwater levels beginning in June and reaching minimum levels in September. Winter conditions of snowfall and frost can also limit recharge, resulting in a minor groundwater level recession in February.

Groundwater Pumping

The removal of water from an aquifer, by a well or wellfield, results in the lowering of the water level in the well and the surrounding aquifer. The lowering of groundwater levels as a result of pumping is referred to as drawdown. The amount of drawdown depends on how much is being pumped, the distance from the pumping well, and the characteristics of the aquifer (e.g., transmissivity, storativity, aquifer boundaries). In Nova Scotia, large wellfields in bedrock aquifers have been observed to cause groundwater drawdown in wells as far away as two to three kilometres.

Tidal Fluctuations

Aquifers and wells near the ocean can experience tidal fluctuations. Even though the water in a well may be fresh, the water level may rise and fall with the tide. The amount of water level fluctuation (i.e., amplitude) depends on the distance between the well and the ocean and aquifer properties. There is also a delay (i.e., time lag) between the rise or drop in the tide and the corresponding rise or drop in the well.

2.2 Groundwater Quality Monitoring

2.2.1 Field Methods

The observation wells have been tested for various chemical parameters including: general chemistry, metals, volatile organic compounds (VOC), pesticides, tritium and perchlorate. The general chemistry, metals, VOC and pesticides analyses were carried out at Maxxam Analytics in Bedford, NS; the tritium analyses were carried out at the Environmental Isotope Laboratory, University of Waterloo, Waterloo, ON; and, the perchlorate analyses were carried out by the National Water Research Institute in Burlington, ON.

The groundwater samples were collected using either a disposable bailer or a submersible pump that was cleaned after each sample was collected. Prior to collecting the samples each well was purged by either removing three well volumes, or by purging until electrical conductivity (EC) and temperature (T) became stable, based on the following approach: 1) begin to purge the well; 2) record the EC and T values after purging 0.5 well volumes; 3) repeat EC and T measurements after purging 1 well volume; 4) continue purging and recording EC and T values at 0.5 well volume intervals until EC and T values are within 10% of previous values. If a well was pumped completely dry, purging was considered complete.

The groundwater samples were collected into laboratory supplied bottles, stored in a chilled cooler and delivered to the laboratory within the specified holding times. Samples for general chemistry and metals were filtered in the field using 0.45 micron filters. Samples collected for metals were also preserved in the field using nitric acid.

2.2.2 Data Assessment Methods

The groundwater sample results for general chemistry, metals, VOCs and pesticides were assessed by comparing the results to the Canadian Drinking Water Quality Guidelines (Health Canada, 2012). Tritium and perchlorate results were assessed separately, as described in the paragraphs below. Note that the observation wells in the network are not used for drinking water, however, the drinking water guidelines are the most commonly used guidelines applied to water wells and they provide a useful reference point to judge the general water quality at each well.

Tritium is a short-lived isotope of hydrogen with a half-life of 12.43 years that is commonly used to assess the relative age of groundwater and how vulnerable an aquifer is to contamination (Clark and Fritz, 1997). During the 1950's, hydrogen bomb testing caused tritium levels to become elevated above naturally-occurring background levels in the earth's atmosphere. The elevated tritium levels are picked up by precipitation and carried into aquifers as the precipitation infiltrates in to the ground. Groundwater with tritium levels of less than 1.0 Tritium Units (TU) is considered relatively old, being recharged before hydrogen bomb testing began in 1952. Groundwater with more than 5.0 TU is considered to be predominantly recent water, being recharged after 1952 (Clark and Fritz, 1997). Groundwater with tritium levels between 1.0 and 5.0 TU is considered to be a mix of recent and old water.

Water wells with tritium levels less than 1.0 TU are considered to be recharged by older water and, therefore, are not as vulnerable to contamination as other wells. Water wells that contain recent water, or a mix of recent and old water, are more vulnerable to contamination because rapid recharge allows contaminants to move relatively quickly from the ground surface into the aquifer. Many of the wells in the observation well network have short casing lengths (i.e., less than seven metres) and long open-hole intervals that allow both shallow and deep groundwater to enter the well and, therefore, it is likely that these wells will contain a mix of recent and old water. This type of well construction is similar to the majority of water wells in Nova Scotia, which have a minimum casing length of 6.1 m, as required by the NS Well Construction Regulations.

Perchlorate is a groundwater contaminant that has received significant attention since 1997 when it was found in several water supplies in the United States. It is a compound consisting of one chlorine and four oxygen atoms that can exist as the solid salt of ammonium, potassium, or other metals, and it readily dissolves in water to produce the perchlorate ion (ClO_4^-). Perchlorate has been used in products such as rocket fuels, munitions, explosives, fireworks, road flares, fertilizers and air bag inflation systems. It can also occur naturally at low levels in the environment.

Recent sampling has detected the presence of very low levels of perchlorate in some Canadian drinking water sources (Health Canada, 2007). Groundwater samples from the Nova Scotia Observation Well Network were tested for perchlorate in 2004 and 2005 in order to evaluate the occurrence of perchlorate in Nova Scotia groundwater. There is currently no national drinking water guideline for perchlorate in Canada, however, Health Canada recommends a guidance value of 6 ug/L. Therefore, the perchlorate results from the observation well network were assessed by

comparison to the recommended Health Canada value of 6 ug/L. The perchlorate results are provided in Appendix C and are discussed in further detail in previous annual reports on the Groundwater Observation Well Network (see NSEL, 2007).

In observation wells where elevated chloride levels were detected, an assessment of the possible source of salt was carried out by calculating the bromide (Br) to chloride (Cl) ratio. Wells were considered to have elevated chloride levels if chloride concentrations exceeded typical background levels for groundwater in coastal areas of Nova Scotia (i.e., <50 mg/L). A commonly used guide for distinguishing salt sources in Nova Scotia is to calculate the ratio of $\text{Br}(\text{mg/L})/\text{Cl}(\text{mg/L}) \times 10,000$, and compare the result to the following three ranges:

1. Ratio <10 indicates road salt or halite brine;
2. Ratio >10 indicates formation brines; and
3. Ratio = 35 indicates a sea water influence.

3.0 RESULTS

This section presents the monitoring results for each observation well. Please refer to the appendices for well logs, groundwater level graphs, groundwater chemistry tables, groundwater temperature graphs, trend analysis details, well location maps and site photographs.

3.1 Greenwood (003)

Well Description

The Greenwood (003) observation well is located near Greenwood, Kings County. It was constructed in 1966 as part of a regional groundwater resource evaluation project (Trescott, 1968) and was originally named “Nova Scotia Department of Mines Test Hole 88”. The well is completed in an overburden aquifer comprised of outwash sand. It is 7.6 m deep and has 6.6 m of casing. The well location and construction information is shown in Table 3.1 and the well log is provided in Appendix A.

Table 3.1: Greenwood (003) Well Construction Information

Well Name	Greenwood (003)
Observation Well ID Number	003
NSE Well Log Number	661225
County	Kings
Nearest Community	Greenwood
UTM - Easting (m)	350680
UTM - Northing (m)	4985498
Year Monitoring Started	1966
Casing Depth (m, bgs)	6.6
Well Depth (m, bgs)	7.6
Elevation - top of casing (m, asl)	24.15
Geologic Unit	Pleistocene Outwash
Aquifer Material	Overburden - sand

Notes: bgs = below ground surface; asl = above sea level

The location of the Greenwood (003) observation well is shown in Figure F.1a, Appendix F. It is situated in a rural area where land use is primarily agricultural or undeveloped. The well is located in a wooded area behind a house (see Figure F.1b), with all other development at least a kilometre away. The nearest water well is a private well located approximately 120 m away.

Monitoring Results - Water Levels

The water level graphs for Greenwood (003) are shown in Figure B.1, Appendix B. This well has been monitored since 1966 and water levels have remained relatively consistent. The average depth to water is approximately 2.2 m below top of casing and the annual water level fluctuation is approximately 0.7 m. There is no visually obvious long-term water level trend, however, a statistical trend analysis (Appendix E) indicates that there is a slight upward trend, equivalent to approximately 0.3 cm/year.

The 2011 water levels were near, or above, historical high levels for this well during the majority of the year. The average water level elevation in 2011 was 22.00 m above sea level.

Monitoring Results - Water Chemistry and Temperature

The Greenwood (003) well was sampled in 2005, 2008 and 2011. Water chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, all samples exceeded aesthetic drinking water guidelines for turbidity, iron and manganese and the 2005 and 2008 samples did not meet pH guidelines. The elevated turbidity levels are expected due to the high iron and manganese concentrations. Note that the ion balance error reported in the general chemistry analysis exceeds the generally acceptable level of 5% and, therefore, these results should be viewed with caution. VOCs, pesticides and perchlorate were not detected at the Greenwood (003) well. The tritium level in this well was 5.76 TU, indicating that the water in this well is relatively recent (i.e., recharged after 1952).

A graph of the daily average groundwater temperature is presented in Appendix D. The average groundwater temperature was 7.92°C, with annual fluctuations between 5.41°C and 10.10°C.

3.2 Fraser Brook (004)

Well Description

The Fraser Brook (004) observation well is located near Lower Harmony, Colchester County. It was constructed in 1966 as part of a water resources study (Hennigar, 1966) that was carried out under the International Hydrologic Decade Program. It was originally named "Test Hole 100" and was one in a series of test wells installed in the Fraser Brook watershed.

The well is completed in siltstone. It is 18.3 m deep and the casing extends to a depth of 9.3 m. Well location and construction information is provided in Table 3.2 and the well log is provided in Appendix A. A 24-hour pump test conducted at this well indicated a transmissivity of 4.8 m²/day and a safe yield of 42 m³/day (6.5 igpm) (McIntosh, 1984).

Table 3.2: Fraser Brook (004) Well Construction Information

Well Name	Fraser Brook (004)
Observation Well ID Number	004
NSE Well Log Number	661226
County	Colchester
Nearest Community	Lower Harmony
UTM - Easting	486889
UTM - Northing	5021100
Year Monitoring Started	1966
Casing Depth (m, bgs)	9.3
Well Depth (m, bgs)	18.3
Elevation - top of casing (m, asl)	109.27
Geologic Unit	Canso Group
Aquifer Material	Bedrock - siltstone

Notes: bgs = below ground surface; asl = above sea level

The location of the Fraser Brook (004) observation well is shown in Figure F.2a, Appendix F. It is situated in a rural area where land use is primarily agricultural or undeveloped. The well was located in a wooded area (see Figure F.2b), however, in 2005 the majority of the trees were removed due to damage sustained during Hurricane Juan in 2003. The nearest water well is a domestic well, located approximately 1,000 m away.

Monitoring Results - Water Levels

The water level graphs for Fraser Brook (004) are shown in Figure B.2, Appendix B. This well has been monitored since 1966. The average depth to water in this well is 4.35 m below top of casing. There is no visually obvious long-term water level trend, however, the statistical trend analysis (Appendix E) indicates that there is a small statistically significant upward trend of about 0.3 cm/year.

The 2011 water levels generally fluctuated within the typical range for this well; however, water levels exceeded historical highs in March, October and November. The average water level elevation at this well in 2011 was 105.02 m above sea level, with an annual water level fluctuation of approximately 0.9 m.

Monitoring Results - Water Chemistry and Temperature

The Fraser Brook (004) well was not sampled in 2011. Water chemistry results from 2004 and 2008 are presented in Appendix C. The results indicate that arsenic exceeded the drinking water guideline in both water samples. No other parameters exceeded guidelines at this well. VOCs, pesticides and perchlorate were not detected. This well has not been tested for tritium.

A graph of the daily average groundwater temperature for this well is presented in Appendix D. The average groundwater temperature was 7.13°C, with annual fluctuations between 5.59°C and 8.70°C.

3.3 Wilmot (005)

Well Description

The Wilmot (005) observation well is located in Wilmot, Annapolis County. It was constructed May 1966 as part of a regional groundwater resource evaluation project (Trescott, 1968) and was originally named “Nova Scotia Department of Mines Test Hole 51”. The well is completed in an overburden aquifer comprising outwash gravel. It is 18.3 m deep and the casing depth extends to 6.4 m. The surficial geology of the area was classified as a stream alluvium deposit of the Quaternary Period. The alluvium deposit consisted of several feet of clay overlying fine to coarse gravel.

Table 3.3: Wilmot (005) Well Construction Information

Well Name	Wilmot (005)
Observation Well ID Number	005
NSE Well Log Number	661267
County	Annapolis
Nearest Community	Wilmot
UTM - Easting	340015
UTM - Northing	4979368
Year Monitoring Started	1966
Casing Depth (m, bgs)	6.4
Well Depth (m, bgs)	18.3
Elevation - top of casing (m, asl)	9.0
Geologic Unit	Pleistocene Outwash
Aquifer Material	Overburden - gravel

Notes: bgs = below ground surface; asl = above sea level

Well location and construction information is provided in Table 3.3 and the well log is provided in Appendix A. A 26 hour pumping test conducted at a nearby wellfield situated in a similar geological unit indicated a transmissivity of 621 m²/day and storativity of 1.9×10^{-3} (McIntosh, 1984).

The location of the Wilmot (005) observation well is shown in Figure F.3a, Appendix F. The well site, shown in Figure F.3b, is located south-west of Wilmot. It is situated in an actively farmed field, 100 m east of Baynard Road. South of the site, is a wooded area extending 75 m to the Annapolis River, where a hydrometric station measures surface water flow as part of the Canada/Nova Scotia Hydrometric Program. The nearest water well is a domestic well located approximately 150 m away.

Monitoring Results - Water Levels

The historical water level graphs for Wilmot (005) are shown in Figure B.3, Appendix B. This well has been monitored since 1966. The average depth to water in this well is 2.0 m below top of casing. There is no visually obvious long-term water level trend, however, the statistical trend analysis (Appendix E) indicates that there is a small statistically significant upward trend, equivalent to 0.5 cm/year.

The 2011 water levels generally fluctuated within the typical range for this well; however, water levels exceeded historical highs in March, October, November and December. The average water level elevation in 2011 was approximately 7.00 m above sea level and the annual water level fluctuation was approximately 2.6 m.

Monitoring Results - Water Chemistry and Temperature

The Wilmot (005) well was sampled in 2006 and 2010 and the water chemistry results are presented in Appendix C. The results indicate that health-based drinking water guidelines were exceeded for nitrate in both 2006 and 2010. The aesthetic guidelines were exceeded for turbidity in 2006 only; turbidity results in 2010 were within the aesthetic guidelines. VOCs were not detected in both 2006 and 2010. This well was tested for pesticides in 2010. Pesticides were not detected. This well has not been tested for either perchlorate or tritium.

A graph of the average daily temperature at this well is presented in Appendix D. The average groundwater temperature was 8.09°C, with annual fluctuations between 5.57°C and 10.43°C.

3.4 Murray Siding (007)

Well Description

The Murray Siding (007) observation well is located off Old Court House Branch Road near the community of Murray Siding, Colchester County. It was constructed August 1967 as part of a regional groundwater resource evaluation project (Hennigar, 1972) and was originally named "Nova Scotia Department of Mines Test Hole 191". The well is completed in a sandstone bedrock aquifer and is 8.5 m deep with 7.9 m of casing. Well location and construction information is provided in Table 3.4 and the well log is provided in Appendix A. This well was used as an observation well for an 80 hour pumping test conducted at a pumping well located approximately 100 m away. The results indicated a transmissivity of 672 m²/day and storativity of 8.7×10^{-2} (McIntosh, 1984).

Table 3.4: Murray Siding (007) Well Construction Information

Well Name	Murray Siding (007)
Observation Well ID Number	007
NSE Well Log Number	671074
County	Colchester
Nearest Community	Murray Siding
UTM - Easting	483114
UTM - Northing	5024186
Year Monitoring Started	1967
Casing Depth (m, bgs)	7.9
Well Depth (m, bgs)	8.5
Elevation - top of casing (m, asl)	25.32
Geologic Unit	Wolfville Formation
Aquifer Material	Bedrock - sedimentary

Notes: bgs = below ground surface; asl = above sea level

The location of the Murray Siding (007) observation well is shown in Figure F.4a, Appendix F, and a photograph of the well is shown in Figure F.4b. The well is located in a residential area where the residents obtain their water supplies from domestic drilled wells.

Monitoring Results - Water Levels

The water level graphs for Murray Siding (007) are shown in Figure B.4, Appendix B. This well has been monitored since August 1967 with data gaps in the monitoring record occurring in 1968-1969, 1976-1979, and 2001-2009. The Murray Siding well was brought back into the observation well network in December 2009 and water level monitoring resumed in January 2010.

The average water level elevation from 1967 to 2001 was 21.64 m above sea level and the average depth to water was approximately 3.68 m below top of casing. Visual inspection of the water level graph indicates there was a downward trend between 1985 and 2000, however, water levels appear to have recovered since monitoring resumed in 2010. The statistical trend analysis for this well (Appendix E), based on the entire period of record, indicates that there is a statistically significant downward trend of 1.2 cm/year.

The 2011 water levels generally fluctuated within the typical range for this well, with historical highs occurring in October and November. In 2011, the average water level elevation was 21.83 m above sea level and the annual water level fluctuation was approximately 1.5 m.

Monitoring Results - Water Chemistry and Temperature

The Murray Siding (005) well was sampled in 2011 and the water chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded. Aesthetic guidelines were exceeded for iron and manganese. VOCs and pesticides were not detected. This well has not been tested for either perchlorate or tritium.

A graph of the average daily temperature is presented in Appendix D. The average groundwater temperature was 9.12°C, with annual fluctuations between 6.27°C and 12.08°C.

3.5 Wolfville (010)

Well Description

The Wolfville (010) observation well is located in Wolfville, Kings County. It was constructed in December 1968 as part of a regional groundwater resource evaluation project (Trescott, 1969) and was originally named “Nova Scotia Department of Mines Test Hole 398”. This well has also been referred to as the “Wolfville 2” observation well. The well is completed in a sandstone aquifer. It is 17.7 m deep and penetrates 7.0 m into the bedrock. The casing depth extends to 22.7 m. Well location and construction information is provided in Table 3.5 and the well log is provided in Appendix A. A 29-day pump test was conducted at this well in 1969. The results indicated a transmissivity of 695 m²/day and storativity of 3×10^{-2} (McIntosh, 1984).

Table 3.5: Wolfville (010) Well Construction Information

Well Name	Wolfville (010)
Observation Well ID Number	010
NSE Well Log Number	681252
County	Kings
Nearest Community	Wolfville
UTM - Easting	392093
UTM - Northing	4993838
Year Monitoring Started	1969
Casing Depth (m, bgs)	22.7
Well Depth (m, bgs)	24.1
Elevation - top of casing (m, asl)	5.20
Geologic Unit	Wolfville Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

The location of the Wolfville (010) observation well is shown in Figure F.5a. The well is situated in a park within a residential area (see Figure F.5b). Land use in the vicinity of the well is urban. The wellfield for the Town of Wolfville, comprised of two pumping wells, is located approximately 750 m away.

Monitoring Results - Water Levels

The water level graphs for Wolfville (010) are shown in Figure B.5, Appendix B. This well has been monitored since 1969. Water levels appear to have declined during the period between 1980 and 2009, however, since 2009 they have increased back to pre-1980 levels. From 1970 to 1975, the average water level elevation was approximately 1.1 m above sea level and the annual water level fluctuation was about 2.0 m. Between 1980 and 2009, water levels dropped as low as 1.0 m below sea level, however, since 2010 the average water level has been approximately 1.3 m above sea level. The average depth to water in this well since 2010 has been approximately 3.9 m below top of casing.

The statistical trend analysis for this well (Appendix E) indicates that there is small downward trend in water levels, equivalent to approximately 1.5 cm/year. The reason for this decline has not been confirmed, however, it is likely related to pumping at the Town of Wolfville's production wells, which are located about 750 m away. Note that this trend analysis is based on the entire period of record and, therefore, it does not identify sub-trends within the data, such as the recent water level rise that has occurred since 2009.

The 2011 water levels generally remained near the higher end of the typical range for this well, and were at, or above, historical highs from August to December. The average water level in 2011 was 1.35 m above sea level, with an annual fluctuation of approximately 0.6 m.

Monitoring Results - Water Chemistry and Temperature

The Wolfville (010) well was sampled in 2004 and 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, turbidity, iron and manganese were above aesthetic drinking water guidelines in the 2008 sample. The elevated turbidity levels are expected to be associated with the high iron and manganese concentrations. The iron and manganese levels from the 2008 sample have increased by approximately two orders of magnitude compared to the 2004 sample results. The reason for this increase has not been determined. VOCs, pesticides and perchlorate were not detected in this well.

The chloride level in this well was 78 mg/L in 2004 and 87 mg/L in 2008. Although these levels do not exceed the aesthetic objective of 250 mg/L, they are elevated above the typical background level for groundwater in coastal Nova Scotia (<50 mg/L). For the 2004 sample results, the bromide/chloride ratio for this well was <10 (i.e., $0.06 \text{ mg/L} / 78 \text{ mg/L} \times 10,000 = 7.7$). For the 2008 sample results, the bromide/chloride ratio for this well was 9.2. Both of these results indicate that the source of the chloride is road salt. Please see Section 2.2.4 for a discussion of how this ratio is used to assess salt sources.

The tritium level in this well was 4.7 TU (+/- 0.4), indicating that the water in this well is either a mix of old and recent water (i.e., recharge occurred before and after 1952) or is recent (i.e., recharged occurred after 1952).

A graph of the average daily temperature for this well is presented in Appendix D. The average groundwater temperature was 9.24°C, with annual fluctuations between 8.01°C and 11.11°C.

3.6 Truro (014)

Well Description

The Truro (014) observation well is located in Truro, Colchester County. It was constructed in November 1970 as part of a regional groundwater resource evaluation project (Hennigar, 1972) and was originally named “Nova Scotia Department of Mines Test Hole 421”. It has also been referred to as the “Truro 421” observation well. The well is 91.4 m deep, penetrates 80.8 m into bedrock and the casing depth extends to 18.3 m. It is completed in a sandstone aquifer. Well location and construction information is provided in Table 3.6 and the well log is provided in Appendix A.

Table 3.6: Truro (014) Well Construction Information

Well Name	Truro (014)
Observation Well ID Number	014
NSE Well Log Number	701431
County	Colchester
Nearest Community	Truro
UTM - Easting	476052
UTM - Northing	5023778
Year Monitoring Started	1971
Casing Depth (m, bgs)	18.3
Well Depth (m, bgs)	91.4
Elevation - top of casing (m, asl)	9.83
Geologic Unit	Wolfville Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

The location of the Truro (014) observation well is shown in Figure F.6a, Appendix F, and a site photograph is shown in Figure F.5b. It is situated in an urban area where the surrounding land is predominantly developed. The well is located within the Town of Truro Public Works yard and is

adjacent to a golf course, several businesses and residences. The area is serviced by a municipal water supply and there are no other known water wells in the immediate vicinity.

Monitoring Results - Water Levels

The water level graphs for Truro (014) are shown in Figure B.6, Appendix B. This well has been monitored since 1971. The groundwater levels appear to have decreased slightly between 1971 and 1991. There is a data gap between 1991 and 2002 when no monitoring was carried out at this well; however, sometime after 1991 the groundwater levels in this well increased and have remained relatively consistent since 2003 when monitoring began again. The increased water level at this well is believed to be a result of the decommissioning of a municipal water supply well in 1994, which was located within a kilometre of the observation well. The trend analysis for this well (Appendix E) indicates there is statistically significant upward trend present, equivalent to approximately 2.6 cm/year.

The water level elevation between 1971 and 1991 ranged from about 6.5 to 7.5 m above sea level and the annual water level fluctuation was approximately 1.5 m. From 2003 to 2010, the average water level elevation was 7.9 m above sea level, with an annual water level fluctuation was about 1.2 m. The depth to water in this well has varied from approximately 1.3 m to 2.5 m below top of casing.

The 2011 water levels in this well were near its historical highs for the majority of the year. The average water level during 2011 was 8.0 m, with an annual water level fluctuation of approximately 1.0 m.

Monitoring Results - Water Chemistry and Temperature

The Truro (014) well has not been sampled due to a partial blockage of the casing, caused by an old float device from a Stevens chart recorder that is lodged in the well. Therefore, chemistry data are not available.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 8.67°C, with annual fluctuations between 3.84°C and 13.60°C.

3.7 Monastery (028)

Well Description

The Monastery (028) observation well is located near Monastery, Antigonish County. The well was installed in January 1974 as part of a groundwater resource evaluation study (Strait of Canso Natural Environment Committee, 1975) and was originally named “Nova Scotia Department of Mines Test Hole 449”. The well is completed in a sandstone aquifer. It is 158 m deep and the casing depth is unknown. Well location and construction information is provided in Table 3.7 and the well log is provided in Appendix A. A 50-hour pumping test was conducted at this well in 1974, indicating a transmissivity of 9.8 m²/day and a 20-year safe yield of 439 m³/day (67 igpm) (McIntosh, 1984).

Table 3.7: Monastery (028) Well Construction Information

Well Name	Monastery (028)
Observation Well ID Number	028
NSE Well Log Number	742420
County	Antigonish
Nearest Community	Monastery
UTM - Easting	606083
UTM - Northing	5052489
Year Monitoring Started	1976
Casing Depth (m, bgs)	NA
Well Depth (m, bgs)	158
Elevation - top of casing (m, asl)	23.12
Geologic Unit	Canso Group
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

The location of the Monastery (028) well is shown in Figure F.7a, Appendix F. It is situated in a rural area where land use is primarily agricultural. The well is located at the end of a hayfield (see Figure F.7b), approximately 1,000 m from the ocean. The nearest water well is a domestic well located approximately 230 m away.

Monitoring Results - Water Levels

The water level graphs for Monastery (028) are shown in Figure B.7, Appendix B. This well has been monitored since 1979 and the average water level elevation has decreased from about 15.5 m (between 1979 and 1987) to approximately 13.5 m in 2006. The annual water level fluctuation also decreased over the same period from about 1.5 m to 1.0 m. However, the water level in this well rebounded to its 1980s elevation after the well was purged during a sampling event in December 2006. The water level then slowly declined again until it rebounded once more during a sampling event in December 2008. It is suspected that the decline in water levels at this well during the 1990s and early 2000s may have been due to a slow decline in well efficiency, perhaps caused by biofouling. The sampling process involves pumping water from the well, which may temporarily rehabilitate the well and allow water levels to rebound.

The trend analysis (Appendix E) indicates there is a downward statistically significant trend present, equivalent to 3.3 cm/year. The depth to water in this well has varied from approximately 6.4 m to 11.0 m below top of casing.

The 2011 water levels in this well were near its historical lows for the majority of the year. The average water level in 2011 was 13.44 m above sea level, with a water level fluctuation of approximately 0.8 m.

Monitoring Results - Water Chemistry and Temperature

The Monastery (028) well was sampled in 2006 and 2008, and the results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded in either of the samples. VOCs, pesticides and perchlorate were not detected.

The tritium level in this well was 0.94 TU (+/- 0.17), indicating that the water is relatively old (i.e., recharge occurred before 1952).

A graph of the average daily temperature for this well is presented in Appendix D. The average groundwater temperature was 8.07°C, with annual fluctuations between 7.81°C and 8.27°C.

3.8 Point Aconi (030)

Well Description

The Point Aconi (030) observation well is located near Point Aconi, Cape Breton County. It was constructed in August 1976 to monitor groundwater levels at the Prince Mine, located about 2 km away. The well is completed in a sandstone aquifer. It is 30.5 m deep, penetrates 26.2 m into the bedrock and the casing depth extends to 12.8 m. Well location and construction information is provided in Table 3.8 and the well log is provided in Appendix A.

The location of the Point Aconi (030) well is shown in Figure F.8a, Appendix F, and a site photograph is shown in Figure F.8b. It is situated in an urban area where the land use is primarily residential. There are several residences located within 300 m of the well, one of which is immediately adjacent to the well. The nearest water well is a domestic well located approximately 18 m away.

Table 3.8: Point Aconi (030) Well Construction Information

Well Name	Point Aconi (030)
Observation Well ID Number	030
NSE Well Log Number	761408
County	Cape Breton
Nearest Community	Point Aconi
UTM - Easting	707986
UTM - Northing	5133152
Year Monitoring Started	1976
Casing Depth (m, bgs)	12.8
Well Depth (m, bgs)	30.5
Elevation - top of casing (m, asl)	29.97
Geologic Unit	Inverness Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Point Aconi (030) are shown in Figure B.8, Appendix B. This well has been monitored since 1976. The average water level elevation at the Point Aconi (030) well is 27.44 m above sea level and the annual water level fluctuation is about 5.94 m. The depth to water in this well is approximately 2.5 m below top of casing. There is no visually obvious long-term water level trend in this well and the statistical trend analysis (Appendix E) indicates that there is no statistically significant trend present.

The 2011 water levels fluctuated within the typical historical range for this well, except during September when water levels dropped to historical lows. The average water level in 2011 was 27.55 m above sea level, with a water level fluctuation of approximately 6.3 m.

Monitoring Results - Water Chemistry and Temperature

The Point Aconi (030) well was sampled in 2005 and 2008. Water chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded. Manganese was above the aesthetic drinking water guideline in the 2005 sample but was below the guideline in the 2008 sample. VOCs, pesticides and perchlorate were not detected.

The tritium level in this well was 3.62 TU (+/- 0.34), indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature for this well is presented in Appendix D. The average groundwater temperature was 8.55°C, with annual fluctuations between 4.23°C and 13.70°C.

3.9 Lawrencetown (043)

Well Description

The Lawrencetown (043) observation well is located near Upper Lawrencetown, Halifax County. It was constructed in March 1977 as part of a saltwater intrusion investigation in the Lawrencetown area (Cross, 1980) and was originally named “Nova Scotia Department of the Environment, Test Hole L3”. It has also been referred to as the “Lawrencetown L3” observation well. Three other test wells were drilled near this well (i.e., Lawrencetown L1, L2 and L4) but were decommissioned in August 1994 by sealing the entire length of the wells with alternating layers of bentonite and sand.

Table 3.9: Lawrencetown (043) Well Construction Information

Well Name	Lawrencetown (043)
Observation Well ID Number	043
NSE Well Log Number	771538
County	Halifax
Nearest Community	Upper Lawrencetown
UTM - Easting	464172
UTM - Northing	4947712
Year Monitoring Started	1978
Casing Depth (m, bgs)	44.2
Well Depth (m, bgs)	53
Elevation - top of casing (m, asl)	4.73
Geologic Unit	Goldenville Formation
Aquifer Material	Bedrock - quartzite

Notes: bgs = below ground surface; asl = above sea level

The Lawrencetown (043) well is completed in a fractured bedrock aquifer comprised of quartzite. It is 53.0 m deep, penetrates 49.4 m into the bedrock and the casing depth extends to 44.2 m. Well location and construction information is provided in Table 3.9 and the well log is provided in

Appendix A. A 1.5-hour pump test was conducted at this well in 1977 and the results indicated a transmissivity of $2.8 \text{ m}^2/\text{day}$ a safe yield rate of $95 \text{ m}^3/\text{day}$ (14.5 igpm) (McIntosh, 1984).

The location of the Lawrencetown (043) observation well is shown in Figure F.9a, Appendix F. It is situated in a rural area where land use is primarily residential. The well is located within 100 m of the ocean (see Figure F.9b) and there are two domestic wells nearby, both located approximately 50 m away.

Monitoring Results - Water Levels

The water level graphs for Lawrencetown (043) are shown in Figure B.9, Appendix B. This well has been monitored since 1978, although a data gap exists for the ten year period from 1992 to 2002. A visual inspection of the historical water level graph indicates that water levels have declined by approximately 1.0 m since monitoring began. The decline is expected to be caused by the increased use of a nearby domestic well located 50 m away. The trend analysis (Appendix E) indicated there is a statistically significant downward trend present, equivalent to approximately 2.2 cm/year.

The average water level elevation at the Lawrencetown (043) well for the monitoring period 1978-1992 was approximately 3.6 m above sea level and the annual water level fluctuation was about 0.6 m. Between 2002 and 2009, the average water level declined to approximately 2.89 m above sea level, with a 1.26 m average annual fluctuation. During this time period, the average depth to water in this well has varied from 1.61 m to 2.07 m below top of casing, and the hourly water level data shows tidal fluctuations of approximately 0.3 m. There is also a daily drawdown and subsequent recovery of approximately 0.8 m at this well, which likely reflects domestic water use patterns associated with a nearby domestic well.

The 2011 water levels fluctuated within the typical historical range for this well; however, water levels briefly dropped below the historical lows in June and August. In 2011 the average water level elevation was 2.92 m above sea level and the annual water level fluctuation was approximately 1.3 m.

Monitoring Results - Water Chemistry and Temperature

The Lawrencetown (043) well was sampled in 2004, 2008 and 2011. The chemistry results are presented in Appendix C. The results indicate that arsenic concentrations exceeded the health-based drinking water guideline in all samples. VOCs and pesticides were not detected. Tritium results

reported from a previous study (Bottomley, 1983) were non-detect, indicating this water is relatively old (i.e., recharged prior to 1952).

It should also be noted that the chloride level in this well (150 mg/L in 2004, 180 mg/L in 2008 and 170 mg/L in 2011) is elevated above the typical background level for groundwater in coastal Nova Scotia (<50 mg/L), although it is below the aesthetic objective of 250 mg/L. The ocean is less than 100 m from this well and, therefore, the elevated chloride level is likely due to seawater influence. The bromide/chloride ratio at this well also indicates a seawater influence. The bromide/chloride ratio at this well was 35 (i.e., $0.53 \text{ mg/L} / 150 \text{ mg/L} \times 10,000 = 35$). Please see Section 2.2.4 for a discussion of how this ratio is used to assess salt sources.

A graph of the average daily groundwater temperature in this well is presented in Appendix D. The average temperature was 8.42°C, with annual fluctuations between 5.82°C and 11.28°C.

3.10 Durham (045)

Well Description

The Durham (045) observation well is located near Durham, Pictou County. It was constructed in July 1978 as part of a regional groundwater resource evaluation project (Gibb and McMullin, 1980) and was originally named “Nova Scotia Department of the Environment Test Hole Durham 3”. The well is completed in a sandstone and shale aquifer. It is 75.3 m deep, penetrates 69.2 m into the bedrock and the casing depth is unknown. Well location and construction information is provided in Table 3.10 and the well log is provided in Appendix A. A 72-hour pump test was conducted at this well in 1978, indicating a transmissivity of $14 \text{ m}^2/\text{day}$ and storativity of 3.2×10^{-4} (McIntosh, 1984).

The location of the Durham (045) observation well is shown in Figure F.10a, Appendix F. It is situated in a rural area, where the land use is primarily agricultural. The well is located in a wooded area, about 3 m from the edge of a hayfield. The nearest water well is a domestic well located approximately 500 m away.

Table 3.10: Durham (045) Well Construction Information

Well Name	Durham (045)
Observation Well ID Number	045
NSE Well Log Number	782683
County	Pictou
Nearest Community	Durham
UTM - Easting	516224
UTM - Northing	5052105
Year Monitoring Started	1979
Casing Depth (m, bgs)	NA
Well Depth (m, bgs)	75.3
Elevation - top of casing (m, asl)	14.88
Geologic Unit	Boss Point Formation
Aquifer Material	Bedrock - sandstone/shale

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Durham (045) are shown in Figure B.10, Appendix B. This well has been monitored since 1979. The water levels appear to have risen slightly since monitoring began and the amount of annual water level fluctuation has varied throughout the monitoring period. The trend analysis (Appendix E) indicates there is a small statistically significant upward trend, equivalent to approximately 1.6 cm/year. The typical average depth to water in this well ranges between 3 m and 4 m below top of casing.

From 1979 to 1989 the average water level elevation was approximately 11.0 m above sea level, then from 1989 to 2004 average water levels rose slightly, to approximately 11.6 m above sea level. Since 2004 the average water levels have decreased by approximately 0.7 m.

The 2011 water levels fluctuated within the typical historical range for this well. The average water level in 2011 was 11.62 m above sea level and the annual water level fluctuation was 1.9 m.

Monitoring Results - Water Chemistry and Temperature

The Durham (045) well was sampled in 2005 and 2009, and the chemistry results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded. VOCs, pesticides and perchlorate were not detected.

The tritium level in this well was 2.04 TU, indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the hourly temperature in this well is presented in Appendix D. The average annual groundwater temperature was 7.58°C, with annual fluctuations between 6.24°C and 9.30°C.

3.11 Kentville (048)

Well Description

The Kentville (048) observation well is located near Kentville, Kings County. The well was constructed in May 1977 as part of a water supply investigation for the Kentville Industrial Park (Callan, 1977) and was previously named the “Kentville Industrial Park” observation well. The well is completed in a sandstone aquifer. It is 106.7 m deep and the casing depth extends to 30.5 m. Well location and construction information is provided in Table 3.11 and the well log is in Appendix A. A 72-hour pump test was conducted at this well in June 1977 and the results indicated a transmissivity of 84 m²/day and a storativity of 3×10^{-4} (Callan, 1977).

Table 3.11: Kentville (048) Well Construction Information

Well Name	Kentville (048)
Observation Well ID Number	048
NSE Well Log Number	772021
County	Kings
Nearest Community	Kentville
UTM - Easting	377628
UTM - Northing	4992245
Year Monitoring Started	1980
Casing Depth (m, bgs)	30.5
Well Depth (m, bgs)	106.7
Elevation - top of casing (m, asl)	12.79
Geologic Unit	Wolfville Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

The location of the Kentville (048) observation well is shown in Figure F.11a, Appendix F. It is situated in a wooded area (see Figure F.11b) and the surrounding land use includes an industrial park (Annapolis Valley Regional Industrial Park), residential properties and undeveloped land. This well lies within the wellhead protection area for the Town of Kentville wellfield, which includes seven production wells. The wellfield was initially developed in the late 1970's to supply the nearby industrial park and was expanded to become the primary water supply for the Town of Kentville in 2002. The nearest production well is located approximately 150 m away from the Kentville (048) observation well.

Monitoring Results - Water Levels

The water level graphs for Kentville (048) are shown in Figure B.11, Appendix B. This well has been monitored since 1980. A visual inspection of the historical water level graph indicates that the water level dropped slightly (i.e., approximately 0.2 m) between 1995 and 2008, but rose again to pre-1995 levels after 2008. The trend analysis for this well (Appendix E) indicates there is a small statistically significant downward trend, equivalent to 0.4 cm/year.

The 2011 water levels fluctuated within the typical historical range for this well, except in January, February and March when the water levels were at historical highs. The average water level elevation in 2011 was 7.18 m above sea level and the annual water level fluctuation was 0.69 m. The average depth to water in this well in 2011 was 5.61 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Kentville (048) well was sampled in 2005, 2007 and 2011 and the results are presented in Appendix C. In 2005, no drinking water guidelines were exceeded. In 2007 and 2011, lead exceeded the health-based drinking water guideline, and chloride, iron and total dissolved solids exceeded the aesthetic drinking water guidelines. No pesticides or VOC's have been detected in any of the sampling events.

The chloride level in this well was at 230 mg/L in 2005, which is elevated above the typical background level for groundwater in coastal Nova Scotia (<50 mg/L). In 2007 and 2011, the chloride level in this well increased to 270 mg/L and 290 mg/L, respectively, which exceeded the aesthetic objective of 250 mg/L. The well is located approximately 15 km from the ocean and, therefore, the elevated chloride levels are not expected to be caused by sea water. The

bromide/chloride ratio at this well indicated the salt source is likely to be road salt. The bromide/chloride ratio at this well was 7.4 (i.e., $0.2 \text{ mg/L} / 270 \text{ mg/L} \times 10,000 = 7.4$). Please see Section 2.2.4 for a discussion of how this ratio is used to assess salt sources.

The perchlorate level in this well was 0.05 ug/L, which is below the recommended Health Canada guidance value of 6 ug/L. The tritium level in this well was 3.8 TU (+/- 0.3), indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 6.76°C, with annual fluctuations between 1.85°C and 11.23°C.

3.12 Sydney (050)

Well Description

The Sydney (050) observation well is located near Sydney, Cape Breton County. It was constructed in 1977 as part of a regional water resource study in the Sydney Coalfield (Baechler, 1986) and has also been referred to as the “Sydney Watershed “ observation well. The well is completed in a sandstone aquifer and is 100.6 m deep with a casing depth extending to 6.1 m. Well location and construction information is provided in Table 3.12 and the well log is provided in Appendix A. A 72-hour pump test was conducted at this well in the 1980's and the results indicated a transmissivity of 71 m²/day (Baechler, 1986).

Table 3.12: Sydney (050) Well Construction Information

Well Name	Sydney (050)
Observation Well ID Number	050
NSE Well Log Number	771077
County	Cape Breton
Nearest Community	Sydney
UTM - Easting	720589
UTM - Northing	5106450
Year Monitoring Started	1984
Casing Depth (m, bgs)	6.7
Well Depth (m, bgs)	100.6
Elevation - top of casing (m, asl)	64.10
Geologic Unit	South Bar Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

The well was cleaned in November 2011 because a downward water level trend suggested it may have become partially clogged due to chemical or biological incrustation. The cleaning process

involved eight hours of jetting, followed by overnight chlorination, followed by another four hours of jetting. A downhole video of the well was completed before and after the cleaning process.

The location of the Sydney (050) observation well is shown in Figure F.12a, Appendix F. It is situated in a rural area where land use is primarily residential and undeveloped land. The well is located within the Sydney wellfield, which consists of 11 production wells. The wellfield, which began operating in 1996, pumps an average of 16,000 m³/day and is the largest municipal wellfield in Nova Scotia. The nearest production well is approximately 200 m from the Sydney (050) observation well.

Monitoring Results - Water Levels

The water level graphs for Sydney (050) are shown in Figure B.12, Appendix B. This well has been monitored since 1984. The water levels decreased when the Sydney wellfield began pumping in 1996; after a period of less than one year, water levels stabilized until approximately 2008 when a declining trend was observed. As discussed above, the well was cleaned in November 2011 because the declining water level was suspected to be related to fouling of the well. However, the water level did not initially appear to recover when water level monitoring resumed in December 2011, after the well had been cleaned. (Note: the water level did eventually recover in January 2012 and has since returned to typical historical levels. Further details about the recovery of water levels will be provided in subsequent annual reports).

The trend analysis for this well (Appendix E) indicates there is a statistically significant downward trend, equivalent to approximately 6.9 cm/year. Note that the trend analysis does not include data collected after December 2011 when the water levels started to recover after the well was cleaned.

The average water level elevation at this well from 1984 to 1994 (i.e., before the wellfield began pumping) was approximately 59.9 m above sea level and the annual water level fluctuation varied between 0.7 m and 1.0 m. Between 2004 and 2009 the average water level elevation was approximately 58.7 m above sea level, with an annual water level fluctuation of up to approximately 3 m. The depth to water in this well is between 5.0 and 6.0 m below top of casing.

The 2011 water levels at this well remained at historically low levels. The average water level elevation in 2011 was 57.14 m above sea level and the annual water level fluctuation was 2.10 m. The average depth to water in this well in 2011 was 6.96 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Sydney (050) well was sampled in 2005 and 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, manganese was above the aesthetic drinking water guideline in both samples. VOCs, pesticides and perchlorate were not detected.

The tritium level in this well was 4.92 TU (+/- 0.43), indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 7.35°C, with annual fluctuations between 5.84°C and 9.02°C.

3.13 North Grant (054)

Well Description

The North Grant (054) observation well is located in Lower North Grant, Antigonish County. This well was constructed in 1987 to expand the NS Groundwater Observation Well Network. The well is completed in slate and is 39.0 m deep and the casing extends to a depth of 13.1 m. Well location and construction information is provided in Table 3.13 and the well log is provided in Appendix A.

The location of the North Grant (054) observation well is shown in Figure F.13a, Appendix F. The well is situated approximately 15 km northwest of the town of Antigonish, and approximately 3.0 m from the side of North Grant Road (see Figure F.13b). It is located approximately 100 m from Wrights River, and there is a domestic drilled well located within 150 m.

Table 3.13: North Grant (054) Well Construction Information

Well Name	North Grant (054)
Observation Well ID Number	054
NSE Well Log Number	871262
County	Antigonish
Nearest Community	Lower North Grant
UTM - Easting	576403
UTM - Northing	5055139
Year Monitoring Started	1987
Casing Depth (m, bgs)	13.1
Well Depth (m, bgs)	39.0
Elevation - top of casing (m, asl)	21.7
Geologic Unit	Horton Group
Aquifer Material	Bedrock - shale/slate

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for North Grant (054) are shown in Figure B.13, Appendix B. This well has been monitored since 1987; however, there is a gap in the monitoring data between 1997 and 2006. Water levels at this well have declined approximately 40 cm since 1997. From 1987 to 1997, the average water level elevation was approximately 19.8 m above sea level and the annual water level fluctuation was about 0.9 m. The average water level elevation for the period between 2006 and 2011 was slightly lower, at 19.4 m above sea level, and the average annual water level fluctuation for this period was approximately 1.1 m. A trend analysis was not completed for this well as there was because there is insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels remained within the historical range for this well. The average water level elevation in 2011 was 19.47 m above sea level and the annual water level fluctuation was 0.65 m. The average depth to water in this well in 2011 was 2.26 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The North Grant (054) well was sampled in 2006 and 2008 and the chemistry results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded in 2006; however, the 2008 sample exceeded health-based guidelines for arsenic and aesthetic guidelines for turbidity and iron. VOCs and pesticides were not detected.

The tritium level in this well was 1.95 TU (+/- 0.22), indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature at this well is presented in Appendix D. The average groundwater temperature was 8.02°C, with annual fluctuations between 6.56°C and 9.81°C.

3.14 Stillwater (055)

Well Description

The Stillwater (055) observation well is located in Stillwater, Guysborough County. This well was constructed in 1987 to expand the NS Groundwater Observation Well Network. It is completed in fractured bedrock comprised of greywacke. The well is 36.0 m deep and the casing extends to 13.4 m depth. Well location and construction information are provided in Table 3.14 and the well log is provided in Appendix A.

The location of the Stillwater (055) observation well is shown in Figure F.14, Appendix F. The well is located in a wooded area off Route #7 on Department of Natural Resources' property adjacent to a gravel road leading to a rifle range. The nearest water well is a domestic drilled well located within 250 m. The St. Mary's River is approximately 750 m away, and the well is located 2 km from an Environment Canada Hydrometric Station on St. Mary's River.

Table 3.14: Stillwater (055) Well Construction Information

Well Name	Stillwater (055)
Observation Well ID Number	055
NSE Well Log Number	871263
County	Guysborough
Nearest Community	Stillwater
UTM - Easting	579938
UTM - Northing	5004212
Year Monitoring Started	1987
Casing Depth (m, bgs)	13.4
Well Depth (m, bgs)	36.0
Elevation - top of casing (m, asl)	26.9
Geologic Unit	Goldenville Formation
Aquifer Material	Bedrock - greywacke

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Stillwater (055) are shown in Figure B.14, Appendix B. This well has been monitored since 1987; however, monitoring stopped in the summer of 1995 and did not resume until May 2006. Water levels appear to have remained relatively consistent over time. Trend analysis was not completed for this well because there was insufficient water level data available (i.e., <10 years of useable data).

From 1987 to 1995, the average water level elevation at this well was approximately 25.0 m above sea level and the annual water level fluctuation was about 1.1 m. The average water level elevation for the period between 2006 and 2011 was slightly higher, at 25.08 m above sea level, and the annual water level fluctuation for this period was up to 1.4 m.

The 2011 water levels remained within the historical range for this well. The average water level elevation in 2011 was 25.05 m above sea level and the annual water level fluctuation was 1.15 m. The average depth to water in this well in 2011 was 1.82 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Stillwater (055) well was sampled in 2006 and 2008 and the chemistry results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded in 2006, however, the aesthetic guideline for manganese was exceeded in 2008. One VOC (toluene) was measured at the detection limit of 1 ug/L in 2006 but it was not detected in 2008. No pesticides were detected at this well.

The tritium level in this well was 3.82 TU (+/- 0.34), indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 7.31°C, with annual fluctuations between 4.63°C and 9.97°C.

3.15 Sheet Harbour (056)

Well Description

The Sheet Harbour (056) observation well is located in Sheet Harbour, Halifax County. The well was constructed in 1987 to expand the NS Groundwater Observation Well Network. The well is completed in a bedrock aquifer and is 46.4 m deep with 7.01 m of casing. Well location and construction information is provided in Table 3.15 and the well log is provided in Appendix A.

The location of the Sheet Harbour (056) observation well is shown in Figure F.15a, Appendix F. It is situated in a rural area where the surrounding land is predominantly undeveloped. The well is located in a field, about 50 m north of Route #7 (see Figure F.15b). It is located approximately 5.0 m from the East Halfway Brook and there is a domestic drilled well within 35 m of the observation well.

Table 3.15: Sheet Harbour (056) Well Construction Information

Well Name	Sheet Harbour (056)
Observation Well ID Number	056
NSE Well Log Number	871264
County	Halifax
Nearest Community	Sheet Harbour
UTM - Easting	543176
UTM - Northing	4972468
Year Monitoring Started	1987
Casing Depth (m, bgs)	7.01
Well Depth (m, bgs)	46.4
Elevation - top of casing (m, asl)	38.06
Geologic Unit	Goldenville Formation
Aquifer Material	Bedrock - Quartzite

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Sheet Harbour (056) are shown in Figure B.15, Appendix B. Based on a visual inspection of the historical water level graph, the water level at this well increased over time by approximately 1 m. The average water level elevation at this well was as follows: 35.9 m (1987 to 1993); 36.2 m (1994 to 1999); and 36.9 m (2007 to 2009). A trend analysis was not completed for this well because there was insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels remained at, or close to, the historical highs for this well throughout most of the year. In 2011, the average water level elevation was 36.79 m above sea level and the annual water level fluctuation was 0.72 m. The depth to water in this well in 2011 was 1.27 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Sheet Harbour (056) well was sampled in 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, arsenic was detected at 10 ug/L, which is equal to but does not exceed the drinking water guideline for arsenic. In addition, the aesthetic guideline for manganese was exceeded. No VOCs or pesticides were detected at this well.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 7.26°C, with annual fluctuations between 4.92°C and 9.38°C.

3.16 Hayden Lake (059)

Well Description

The Hayden Lake (059) observation well is located near East Jordan, Shelburne County. The well was constructed in 1987 to expand the NS Groundwater Observation Well Network. It is completed in fractured bedrock comprised of greywacke. The well is 48.8 m deep and the casing extends to 6.1 m depth. Well location and construction information is provided in Table 3.16 and the well log is provided in Appendix A.

The location of the Hayden Lake (059) observation well is shown in Figure F.16, Appendix F. It is situated in a rural area where the surrounding land is primarily undeveloped. The well is located adjacent to the Hayden Lake Water Treatment Plant, which supplies the Town of Lockeport. The nearest water well is a domestic well located approximately 300 m away.

Table 3.16: Hayden Lake (059) Well Construction Information

Well Name	Hayden Lake (059)
Observation Well ID Number	059
NSE Well Log Number	870189
County	Shelburne
Nearest Community	East Jordan
UTM - Easting	321365
UTM - Northing	4849195
Year Monitoring Started	1988
Casing Depth (m, bgs)	6.1
Well Depth (m, bgs)	48.8
Elevation - top of casing (m, asl)	2.94
Geologic Unit	Goldenville Formation
Aquifer Material	Bedrock - greywacke

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Hayden Lake (059) are shown in Figure B.16, Appendix B. This well has been monitored since 1988. There is no visually obvious long-term water level trend and the statistical trend analysis (Appendix E) indicates that there is no statistically significant trend present.

The 2011 water levels were within the historically observed water level range for this well; however, the water levels dropped close to historical lows between January and April, and in November and December. The average water level elevation in 2011 was 1.44 m above sea level and the annual water level fluctuation was 0.68 m. The depth to water in 2011 was 1.50 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Hayden Lake (059) well was sampled in 2005 and 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, the pH level in the 2008 sample did not meet the aesthetic drinking water guideline.

Note that one VOC (chloroform) was detected below the drinking water guideline in 2005; however, it was not detected in the 2008 sample. Chloroform is produced when chlorine reacts with organic matter and may have been present in this well as a result of chlorine use and storage at the nearby water treatment plant.

Perchlorate was detected at very low levels (0.014 ug/L), but was far below the recommended Health Canada guidance value of 6 ug/L. No pesticides were detected at this well.

The tritium level in this well was 3.4 TU, indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 8.64°C, with annual fluctuations between 6.62°C and 10.80°C.

3.17 Meteghan (060)

Well Description

The Meteghan (060) observation well is located near the community of Meteghan River, Digby County. The well was constructed in March 1987 to expand the NS Groundwater Observation Well Network. The well is completed in slate and is 61.0 m deep with 12.19 m of casing. Well location and construction information is provided in Table 3.17 and the well log is provided in Appendix A.

The location of the Meteghan (060) observation well is shown in Figure F.17a, Appendix F. The well is situated on the lawn of a private property (see Figure F.17b), located 100 m south of the Meteghan River. The nearest water well is a domestic dug well approximately 30 m away.

Table 3.17: Meteghan (060) Well Construction Information

Well Name	Meteghan (060)
Observation Well ID Number	060
NSE Well Log Number	870188
County	Digby
Nearest Community	Meteghan River
UTM - Easting	250890
UTM - Northing	4900628
Year Monitoring Started	1987
Casing Depth (m, bgs)	12.19
Well Depth (m, bgs)	61.0
Elevation - top of casing (m, asl)	13.8
Geologic Unit	Halifax Formation
Aquifer Material	Bedrock-slate

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Meteghan (060) are shown in Figure B.17, Appendix B. This well has been monitored since mid-December 1987. There is no visually obvious long-term water level trend, however, the statistical trend analysis (Appendix E) indicates there is a statistically significant downward trend, equivalent to approximately 1.1 cm/year.

The 2011 water levels were within the historical range for this well. The average water level elevation in 2011 was 9.26 m above sea level and the annual water level fluctuation was 0.64 m. The average depth to water in 2011 was 4.55 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Meteghan (060) well was sampled in 2006 and 2008 and the chemistry data are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, aesthetic drinking water guidelines were exceeded for turbidity, iron and manganese in both the 2006 and 2008 samples. The elevated turbidity is expected due to the high iron and manganese levels. VOCs and pesticides were not detected.

The tritium level in this well was 0.46 TU (+/- 0.14), indicating that the water in this well is old water (i.e., recharge occurred before 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 8.87°C, with annual fluctuations between 7.95°C and 9.80°C.

3.18 Annapolis Royal (062)

Well Description

The Annapolis Royal (062) observation well is located near Lake La Rose, Annapolis County. The well was constructed in December 1989 to expand the NS Groundwater Observation Well Network. The well is completed in granite and is 62.8 m deep with 24.3 m of casing. Well location and construction information is provided in Table 3.18 and the well log is provided in Appendix A.

The location of the Annapolis Royal (062) observation well is shown in Figure F.18, Appendix F. It is situated in a rural area where the surrounding land is primarily undeveloped. The well is located 500 m from Lake La Rose, the former water supply for the Town of Annapolis Royal. The nearest water well is a domestic well located approximately 1,000 m away.

Table 3.18: Annapolis Royal (062) Well Construction Information

Well Name	Annapolis Royal (062)
Observation Well ID Number	062
NSE Well Log Number	891722
County	Annapolis
Nearest Community	Lake La Rose
UTM - Easting	303029
UTM - Northing	4952588
Year Monitoring Started	1990
Casing Depth (m, bgs)	24.3
Well Depth (m, bgs)	62.8
Elevation - top of casing (m, asl)	121.06
Geologic Unit	Liscomb Complex
Aquifer Material	Bedrock - granite

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Annapolis Royal (062) are shown in Figure B.18, Appendix B. This well has been monitored since 1990 and water levels have remained relatively constant. A trend analysis has not been completed because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels were within the historically observed water level range for this well. The average water level elevation in 2011 was 109.73 m above sea level and the annual water level fluctuation was 1.07 m. The average depth to water in 2011 was 11.33 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Annapolis Royal (062) well was sampled in 2005, 2007 and 2010 and the results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, turbidity (2007) and manganese (2005, 2007 and 2010) exceeded the aesthetic drinking water guidelines. One VOC, toluene, was detected at 2 ug/L in 2005 and at 1 ug/L in 2007. These toluene levels are below the aesthetic drinking water guideline of 24 ug/L. The well is located beside a road and, therefore, toluene (a chemical found in gasoline) may be due to runoff from the road. Toluene was not detected in the 2010 sample. Pesticides and perchlorate were not detected.

The tritium level in this well was measured in 2005 and found to be 0.27 TU, (+/- 0.17), indicating the water in the well is relatively old (i.e., recharge occurred before 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature is 7.99°C, with annual fluctuations between 7.79°C and 8.19°C.

3.19 Hebron (063)

Well Description

The Hebron (063) observation well is located near Dayton, Yarmouth County. The well was constructed in 1989 to expand the NS Groundwater Observation Well Network. The well is completed in slate and is 45.7 m deep with 12.2 m of casing. Well location and construction information is provided in Table 3.19 and the well log is provided in Appendix A.

The location of the Hebron (063) observation well is shown in Figure F.19, Appendix F. It is situated in a rural area and the surrounding land use is primarily residential. The well is located approximately 100 m from Lake Milo and 1,000 m from the ocean. The nearest water well is a domestic well located approximately 90 m away.

Table 3.19: Hebron (063) Well Construction Information

Well Name	Hebron (063)
Observation Well ID Number	063
NSE Well Log Number	891721
County	Yarmouth
Nearest Community	Dayton
UTM - Easting	250697
UTM - Northing	4862322
Year Monitoring Started	1990
Casing Depth (m, bgs)	12.2
Well Depth (m, bgs)	45.7
Elevation - top of casing (m, asl)	23.89
Geologic Unit	Whiterock Formation
Aquifer Material	Bedrock - slate

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Hebron (063) are shown in Figure B.19, Appendix B. This well has been monitored since 1990 and water levels have been relatively constant, although there appears to be a slight increase in the average water level (up by about 0.3 m) since the 1990s. A trend analysis was not completed for this well because there was insufficient water level data available (i.e., <10 years of useable data). The hourly water level data for this well shows tidal fluctuations with an amplitude of approximately 0.05 m.

The 2011 water levels were generally within the historically observed water level range for this well. The average water level elevation in 2011 was 21.52 m above sea level and the annual water level fluctuation was 1.35 m. The average depth to water in 2011 was 2.37 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Hebron (063) well was sampled in 2005 and 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, the aesthetic drinking water guidelines were exceeded for turbidity, iron and manganese. In addition, the low pH in this well did not meet the aesthetic guideline in the 2005 sample and was equal to the guideline in the 2008 sample. The elevated turbidity levels in this well are expected due to the high iron and manganese levels. Note that the ion balance error reported in the general chemistry analysis was 23% in 2005 and 13% in 2008, which exceeds the generally acceptable level of 5% and, therefore, these results should be viewed with caution. VOCs, pesticides and perchlorate were not detected at this well.

The tritium level in this well was 4.6 TU, indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature in this well is provided in Appendix D. The average groundwater temperature was 8.78°C, with annual fluctuations between 6.02°C and 11.47°C.

3.20 Margaree (064)

Well Description

The Margaree (064) observation well is located near the community of Margaree Valley, Inverness County. The well was constructed in January 1990 to expand the NS Groundwater Observation Well Network. The well is completed in a bedrock aquifer and is 45.7 m deep with 12.2 m of casing. Well location and construction information is provided in Table 3.20 and the well log is provided in Appendix A.

The location of the Margaree (064) observation well is shown in Figure F.20a, Appendix F. The well is situated 1.5 km northwest of the town of Margaree Valley. It is located at the end of a field (see Figure F.20b), 25 m from the northeast branch of the Margaree River, where Nova Scotia Environment has a surface water quality station and Environment Canada has a hydrometric station that measures river water levels. The land surrounding the well is used for growing hay.

Table 3.20: Margaree (064) Well Construction Information

Well Name	Margaree (064)
Observation Well ID Number	064
NSE Well Log Number	902524
County	Inverness
Nearest Community	Margaree Valley
UTM - Easting	655717
UTM - Northing	5137031
Year Monitoring Started	1990
Casing Depth (m, bgs)	12.2
Well Depth (m, bgs)	45.7
Elevation - top of casing (m, asl)	46.5
Geologic Unit	Windsor Group
Aquifer Material	Bedrock-conglomerate

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Margaree (064) are shown in Figure B.20, Appendix B. This well has been monitored since 1990, with a data gap from early 1998 to mid-2006. The water levels appear to have increased by approximately 0.5 m between 1990 and 1998, and then declined by a similar amount between 2006 and 2011. The statistical trend analysis for this well (Appendix E) indicates there is a statistically significant downward trend, equivalent to approximately 1.6 cm/year.

The 2011 water levels in this well were near historical lows for the majority of the year. The average water level elevation in 2011 was 42.48 m above sea level and the annual water level fluctuation was 1.15 m. The average depth to water in 2011 was 4.05 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Margaree (064) well was sampled in 2006 and 2008 and the chemistry results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded. VOCs and pesticides were not detected.

The tritium level in this well was 0.41 TU (+/- 0.14), indicating that the water in this well is old water (i.e., recharge occurred before 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 7.86°C, with annual fluctuations between 6.43°C and 9.20°C.

3.21 Ingonish (065)

Well Description

The Ingonish (065) observation well is located near the community of Ingonish Beach, Victoria County. The well was constructed in December 1989 to expand the NS Groundwater Observation Well Network. The well is completed in a bedrock aquifer and is 45.7 m deep with 12.2 m of casing. Well location and construction information is provided in Table 3.21 and the well log is provided in Appendix A.

The location of the Ingonish (065) observation well is shown in Figure F.21a, Appendix F. The well is situated on the Highlands Links golf course, within the Cape Breton Highlands Park. It is located 1.5 km south of Ingonish Centre and is approximately 30 m northwest of Clyde Burn Brook. The well is in a forested area, adjacent to a small storage building (see site photograph in Figure F.21b).

Table 3.21: Ingonish (065) Well Construction Information

Well Name	Ingonish (065)
Observation Well ID Number	065
NSE Well Log Number	892288
County	Victoria
Nearest Community	Ingonish Beach
UTM - Easting	698083
UTM - Northing	5170473
Year Monitoring Started	1990
Casing Depth (m, bgs)	12.2
Well Depth (m, bgs)	45.7
Elevation - top of casing (m, asl)	7.0
Geologic Unit	Early Devonian Granodiorite
Aquifer Material	Bedrock - granodiorite

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Ingonish (065) are shown in Figure B.21, Appendix B. This well has been monitored since November 1990 with a data gap between mid-1998 to late 2006. Water levels appear to have remained relatively consistent over time. A trend analysis has not completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels were generally within the historically observed water level range for this well. The average water level elevation in 2011 was 2.12 m above sea level and the annual water level fluctuation was 2.38 m. The average depth to water in 2011 was 4.51 m below top of casing.

Monitoring Results - Water Chemistry

The Ingonish (065) well was sampled in 2009 and the chemistry results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded. Note that the ion balance error reported in the general chemistry analysis was 10%, which exceeds the generally acceptable level of 5% and, therefore, these results should be viewed with caution. VOCs and pesticides were not detected.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 6.41°C, with annual fluctuations between 5.94°C and 6.88°C.

3.22 Debert (068)

Well Description

The Debert (068) observation well is located near the community of Debert, Colchester County. The well was constructed in August 1983 as a domestic water supply and was added to the NS Observation Well Network in 1993 to expand the network. The well is completed in a bedrock aquifer comprised of conglomerate. It is 46.6 m deep and has 7.9 m of casing. Well location and construction information is provided in Table 3.22 and the well log is provided in Appendix A.

The location of the Debert (068) observation well is shown in Figure F.22, Appendix F. The well is situated within the Debert Industrial Park, north of Highway 104. It is located in a cleared area beside a parking lot.

Table 3.22: Debert (068) Well Construction Information

Well Name	Debert (068)
Observation Well ID Number	068
NSE Well Log Number	832002
County	Colchester
Nearest Community	Debert
UTM - Easting	466921
UTM - Northing	5028483
Year Monitoring Started	1993
Casing Depth (m, bgs)	7.9
Well Depth (m, bgs)	46.6
Elevation - top of casing (m, asl)	28.4
Geologic Unit	Wolfville Formation
Aquifer Material	Bedrock-conglomerate

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Debert (068) are shown in Figure B.22, Appendix B. Monitoring began at this well in 1993; however, there is a gap in monitoring data between 1996 and 2006. The average water level in this well appears to have increased by approximately 1.5 m between 2006 and 2009. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels at this well were at, or near, historical high levels for the majority of the year. The average water level elevation in 2011 was 25.75 m above sea level and the annual water level fluctuation was 2.47 m. The average depth to water in 2011 was 2.60 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Debert (068) well has not been sampled and, therefore, water chemistry results are not available.

A graph of the daily average temperature in this well is presented in Appendix D. The average groundwater temperature was 8.28°C, with annual fluctuations between 6.17 °C and 10.11°C.

3.23 Dalem Lake (069)

Well Description

The Dalem Lake (069) observation well is located near the community of New Dominion, Victoria County. This well was drilled in 1992 to expand the Groundwater Observation Well Network. The well is completed in a sandstone aquifer and is 61.0 m deep with 12.4 m of casing. Well location and construction information is provided in Table 3.23.

The location of the Dalem Lake (069) observation well is shown in Figure F.23, Appendix F. The well is located approximately 75 m south of the 105 Trans-Canada Highway. There are no other wells in the nearby and the surrounding land has recently been logged.

Table 3.23: Dalem Lake (069) Well Construction Information

Well Name	Dalem Lake (069)
Observation Well ID Number	069
NSE Well Log Number	943326
County	Victoria
Nearest Community	New Dominion
UTM - Easting	698221
UTM - Northing	5124576
Year Monitoring Started	1992
Casing Depth (m, bgs)	12.4
Well Depth (m, bgs)	61.0
Elevation - top of casing (m, asl)	93.8
Geologic Unit	South Bar Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Dalem Lake (069) are shown in Figure B.23, Appendix B. This well has been monitored since 1992 with a data gap between 1997 and early 2006. Water levels have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels were generally within the historically observed water level range for this well. The average water level elevation in 2011 was 86.86 m above sea level and the annual water level fluctuation was 0.61 m. The average depth to water in 2011 was 6.89 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Dalem Lake (069) well was sampled in 2006 and 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, manganese was above the aesthetic guideline in both the 2006 and the 2008 samples. VOCs and pesticides were not detected.

The tritium level in this well was 3.61 TU (+/- 0.30), indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 6.85°C, with annual fluctuations between 6.27 and 7.37°C.

3.24 Amherst (071)

Well Description

The Amherst (071) observation well is located near the Town of Amherst, Cumberland County. It was drilled in July 1986 as a test well for the Town of Amherst's wellfield and was originally named "Test Hole No. 86-9". The well is completed in a sandstone aquifer and is 116.5 m deep with 5.8 m of casing. Well location and construction information is provided in Table 3.24 and the well log is provided in Appendix A.

The location of the Amherst (071) observation well is shown in Figure F.24, Appendix F. The well is situated in a field approximately 175 m northwest of Route 66 (i.e., Tyndal Road). There are two domestic wells within 125 m of this observation well and the Town of Amherst's wellfield is located nearby.

Table 3.24: Amherst (071) Well Construction Information

Well Name	Amherst (071)
Observation Well ID Number	071
NSE Well Log Number	862667
County	Cumberland
Nearest Community	Amherst
UTM - Easting	411279
UTM - Northing	5079213
Year Monitoring Started	1993
Casing Depth (m, bgs)	5.8
Well Depth (m, bgs)	116.5
Elevation - top of casing (m, asl)	17.8
Geologic Unit	Balfron Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Amherst (071) are shown in Figure B.24, Appendix B. Monitoring began at this well in 1993 and water levels appear to have remained relatively consistent; however, there is no data for the period between 1996 and 2006 and, therefore, the variability of the water level at this well is somewhat uncertain. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels were near historical highs for most of the year, except during July, August, September and October when the water levels were within the normal range for this well. The average water level elevation in 2011 was 15.29 m above sea level and the annual water level fluctuation was 1.55 m. The average depth to water in 2011 was 2.47 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Amherst (071) well was sampled in 2006 and 2009 and the chemistry results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded. VOCs and pesticides were not detected.

The tritium level in this well was 4.0 TU (+/- 0.32), indicating that the water in this well is either a mix of old and recent water (i.e., recharge occurred before and after 1952) or is recent water (i.e., recharge occurred after 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 7.30°C, with annual fluctuations between 5.97°C and 8.65°C.

3.25 Kelley River (073)

Well Description

The Kelley River (073) observation well is located near the community of River Herbert, Cumberland County. This well was drilled as part of a hydrogeological investigation of the Kelley River Basin in 1972 (Hennigar, 1974). This well is referred to as “Observation well No.2” in the report entitled “Hydrogeology of the Kelley River IHD Benchmark Basin Cumberland County, NS” (Hennigar, 1974). The well is completed in a sandstone aquifer and is approximately 11.6 m deep with 4.2 m of casing. Well location and construction information is provided in Table 3.25 and the well log is provided in Appendix A.

Table 3.25: Kelley River (073) Well Construction Information

Well Name	Kelley River (073)
Observation Well ID Number	073
NSE Well Log Number	721858
County	Cumberland
Nearest Community	River Herbert
UTM - Easting	386806
UTM - Northing	5049171
Year Monitoring Started	2006
Casing Depth (m, bgs)	4.2
Well Depth (m, bgs)	11.6
Elevation - top of casing (m, asl)	33.1
Geologic Unit	Malagash Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

The location of the Kelley River (073) observation well is shown in Figure F.25, Appendix F. The well is located within the Chignecto Game Sanctuary, 13 km from the Boars Back Ridge Road. It is in a wooded area and is located 18 m from Nova Scotia Environment's surface water quality station and Environment Canada's hydrometric station on Kelley River.

Monitoring Results - Water Levels

The water level graphs for Kelley River (073) are shown in Figure B.25, Appendix B. This well has been monitored since 2006 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels were generally within the normal range for this well, however, historical highs were exceeded during March, April, May, August, October and November. The average water level elevation in 2011 was 31.66 m above sea level and the annual water level fluctuation was 1.12 m. The average depth to water in 2011 was 1.47 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Kelley River (073) well was sampled in 2007 and the chemistry results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded. VOCs and pesticides were not detected.

The tritium level in this well was 3.78 TU (+/- 0.32), indicating that the water in this well is a mix of old and recent water (i.e., recharge occurred before and after 1952).

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 6.72°C, with annual fluctuations between 6.23°C and 7.17°C.

3.26 Atlanta (074)

Well Description

The Atlanta (074) observation well is located near the community of Atlanta, Kings County. The well was constructed in 2007 as part of an aquifer evaluation project completed by Nova Scotia Department of Environment and Labour. The well is completed in a sandstone aquifer and is 53.4 m deep with 36.0 m of casing. Well location and construction information is provided in Table 3.26 and the well log is provided in Appendix A. A 72-hour pumping test conducted at this well in 2007 indicated a transmissivity of 105 m²/day, hydraulic conductivity of 5.7 m/day and a safe yield of 1,227 m³/day (188 igpm).

Table 3.26: Atlanta (074) Well Construction Information

Well Name	Atlanta (074)
Observation Well ID Number	074
NSE Well Log Number	070613
County	Kings
Nearest Community	Atlanta
UTM - Easting	381956
UTM - Northing	5000758
Year Monitoring Started	2008
Casing Depth (m, bgs)	36.0
Well Depth (m, bgs)	53.4
Elevation - top of casing (m, asl)	NA
Geologic Unit	Blomidon Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

The location of the Atlanta (074) observation well is shown in Figure F.26a, Appendix F. The well is located approximately 250 m south of Bains Road and is surrounded by undeveloped land in a wooded area. It is located 150 m from the nearest domestic well and 150 m from the Habitant River.

Monitoring Results - Water Levels

The water level graphs for Atlanta (074) are shown in Figure B.26, Appendix B. This well has been monitored since May 2008 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels were at, or close to, historical highs for this well for the majority of the year. The average water level elevation in 2011 was 14.05 m above sea level and the annual water level fluctuation was 0.34 m. The average depth to water in 2011 was 2.15 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Atlanta (074) well was sampled in 2007 and 2010 and the results are presented in Appendix C. The results indicate that the health-based drinking water guideline was exceeded for uranium in 2007 and 2010. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 6.09°C, with an annual temperature range between 4.58°C and 7.12°C.

3.27 Sheffield Mills (075)

Well Description

The Sheffield Mills (075) observation well is located near the community of Sheffield Mills, Kings County. The well was constructed in 2007 as part of an aquifer evaluation project completed by Nova Scotia Department of Environment and Labour. The well is completed in a sandstone aquifer and is 53.4 m deep with 19.2 m of casing. Well location and construction information is provided in Table 3.27 and the well log is provided in Appendix A. A 72-hour pumping test conducted at this well in 2007 indicated a transmissivity of 72.4 m²/day, hydraulic conductivity of 5.7 m/day and a safe yield of 371 m³/day (57 igpm).

Table 3.27: Sheffield Mills (075) Well Construction Information

Well Name	Sheffield Mills (075)
Observation Well ID Number	075
NSE Well Log Number	070618
County	Kings
Nearest Community	Sheffield Mills
UTM - Easting	384693
UTM - Northing	5000590
Year Monitoring Started	2008
Casing Depth (m, bgs)	19.2
Well Depth (m, bgs)	53.4
Elevation - top of casing (m, asl)	NA
Geologic Unit	Wolfville Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

The location of the Sheffield Mills (075) observation well is shown in Figure F.27a, Appendix F. The well is located south of Highway 221 in an active agricultural field which is used for growing vegetables (see Figure F.27b). It is located 165 m from the Habitant River and there are several houses with domestic wells located within 300 m.

Monitoring Results - Water Levels

The water level graphs for Sheffield Mills (075) are shown in Figure B.27, Appendix B. This well has been monitored since May 2008 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels generally fluctuated within the historical range for this well, however, historical highs were exceeded in several months during the spring and fall. The average water level elevation in 2011 was 3.47 m above sea level and the annual water level fluctuation was 0.51 m. The average depth to water in 2011 was 5.63 m below ground surface.

Monitoring Results - Water Chemistry and Temperature

The Sheffield Mills (075) well was sampled in 2007 and 2010 and the results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 8.41°C, with a range between 8.10°C and 8.98°C.

3.28 Fall River (076)

Well Description

The Fall River (076) observation well is located in the community of Fall River, Halifax County. The well was constructed in February 2008 by NSE and NSDNR to expand the Groundwater Observation Well Network. The well is completed in a slate aquifer and is 61.0 m deep with 13.1 m of casing. Well location and construction information is provided in Table 3.28 and the well log is provided in Appendix A. A 4-hour constant rate pumping test was conducted at this well in 2008 by NSDNR (Kennedy et al., 2009). The results indicated a transmissivity of 0.07 m²/day, hydraulic conductivity of 1.21 x 10⁻³ m/day and an estimated safe yield of 2.13 m³/day (0.3 igpm).

Table 3.28: Fall River (076) Well Construction Information

Well Name	Fall River (076)
Observation Well ID Number	076
NSE Well Log Number	080824
County	Halifax
Nearest Community	Fall River
UTM - Easting	450243
UTM - Northing	4962226
Year Monitoring Started	2008
Casing Depth (m, bgs)	13.1
Well Depth (m, bgs)	61.0
Elevation - top of casing (m, asl)	108.67
Geologic Unit	Halifax Formation
Aquifer Material	Bedrock - slate

Notes: bgs = below ground surface; asl = above sea level

The location of the Fall River (076) observation well is shown in Figure F.28a, Appendix F, and a photograph of the well is shown in Figure F.28b. The well is located in a baseball field in a subdivision development and is within 100 m of the nearest domestic well.

Monitoring Results - Water Levels

The water level graphs for Fall River (076) are shown in Figure B.28, Appendix B. This well has been monitored since March 2008 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels generally fluctuated within the historical range for this well, however, historical highs were exceeded in several months during the spring and fall. The average water level elevation in 2011 was 104.88 m above sea level and the annual water level fluctuation was 5.71 m. The average depth to water in 2011 was 3.79 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Fall River (076) well was sampled in 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded, however, three aesthetic drinking water guidelines were exceeded, including pH, iron and manganese. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 7.89°C, with fluctuations between 6.86°C and 9.33°C.

3.29 West Northfield (077)

Well Description

The West Northfield (077) observation well is located adjacent to the LaHave River in the community of West Northfield, Lunenburg County. The well was constructed in March 2008 by NSE to expand the Groundwater Observation Well Network. The well is completed in a slate aquifer and is 48.8 m deep with 12.8 m of casing. Well location and construction information is provided in Table 3.29 and the well log is provided in Appendix A. A 5-hour pumping test (i.e., step-test) was conducted at this well in 2008 by NSDNR (Kennedy et al., 2009). The results indicated a transmissivity of 0.44 m²/day, hydraulic conductivity of 1.44 X 10⁻² m/day and an estimated safe yield of 10.53 m³/day (1.6 igpm).

Table 3.29: West Northfield (077) Well Construction Information

Well Name	West Northfield (077)
Observation Well ID Number	077
NSE Well Log Number	080132
County	Lunenburg
Nearest Community	West Northfield
UTM - Easting	373416
UTM - Northing	4922807
Year Monitoring Started	2008
Casing Depth (m, bgs)	12.8
Well Depth (m, bgs)	48.8
Elevation - top of casing (m, asl)	50.84
Geologic Unit	Halifax Formation
Aquifer Material	Bedrock - slate

Notes: bgs = below ground surface; asl = above sea level

The location of the West Northfield (077) observation well is shown in Figure F.29a, Appendix F, and a photograph of the well is shown in Figure F.29b. The well is located adjacent to the LaHave River (within 50 m of the river) beside a bridge that crosses the LaHave. It is located within 100 m from the nearest domestic well. Note that surface water flow data is also collected at this location as part of the Canada/Nova Scotia Hydrometric Program.

Monitoring Results - Water Levels

The water level graphs for West Northfield (077) are shown in Figure B.29, Appendix B. This well has been monitored since May 2008 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels generally fluctuated within the historical range for this well, however, historical highs were exceeded in several months during the spring and fall. The average water level elevation in 2011 was 49.80 m above sea level and the annual water level fluctuation was 1.59 m. The average depth to water in 2011 was 1.04 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The West Northfield (077) well was sampled in 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded, however, the aesthetic drinking water guideline for manganese was exceeded. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 8.20°C, with fluctuations between 7.30°C and 9.21°C.

3.30 Musquodoboit Harbour (078)

Well Description

The Musquodoboit Harbour (078) observation well is located adjacent to the Musquodoboit River in the community of Musquodoboit Harbour, Halifax County. The well was constructed in March 2008 by NSE and NSDNR to expand the Groundwater Observation Well Network. The well is completed in a slate aquifer and is 61.0 m deep with 27.1 m of casing.

Well location and construction information is provided in Table 3.30 and the well log is provided in Appendix A. A 1.5-hour constant rate pumping test was conducted at this well in 2008 by NSDNR (Kennedy et al., 2009). The results indicated a transmissivity of 0.010 m²/day, hydraulic conductivity of 1.5×10^{-4} m/day and an estimated safe yield of 0.31 m³/day (0.05 igpm). Note that this well is completed in bedrock, however, there is a sand and gravel layer that is approximately 25 m thick which overlies the bedrock at this location. During drilling, it was estimated that the yield of this overlying sand and gravel aquifer was approximately 1,300 m³/day (200 igpm).

Table 3.30: Musquodoboit Harbour (078) Well Construction Information

Well Name	Musquodoboit Harbour (078)
Observation Well ID Number	078
NSE Well Log Number	080861
County	Halifax
Nearest Community	Musquodoboit Harbour
UTM - Easting	488125
UTM - Northing	4959880
Year Monitoring Started	2008
Casing Depth (m, bgs)	27.1
Well Depth (m, bgs)	61.0
Elevation - top of casing (m, asl)	7.71
Geologic Unit	Halifax Formation
Aquifer Material	Bedrock - slate

Notes: bgs = below ground surface; asl = above sea level

The location of the Musquodoboit Harbour (078) observation well is shown in Figure F.30a, Appendix F, and a photograph of the well is shown in Figure F.30b. The well is located on the edge of a ball field near a wetland and the Musquodoboit River (within 200 m of the river). It is located within 300 m from the nearest domestic well.

Monitoring Results - Water Levels

The water level graphs for Musquodoboit Harbour (078) are shown in Figure B.30, Appendix B. This well has been monitored since May 2008 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels generally fluctuated within the historical range for this well, however, historical highs were exceeded during several months of the year. The average water level elevation in 2011 was 5.09 m above sea level and the annual water level fluctuation was 2.65 m. The average depth to water in 2011 was 2.62 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Musquodoboit Harbour (078) well was sampled in 2008 and the chemistry results are presented in Appendix C. The results indicate that the health-based drinking water guideline was exceeded for fluoride, and no aesthetic drinking water guidelines were exceeded. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 7.46°C, with fluctuations between 6.16°C and 8.93°C.

3.31 Lewis Lake (079)

Well Description

The Lewis Lake (079) observation well is located in the Jerry Lawrence Provincial Park near the community of Lewis Lake, Halifax County. The well was constructed in 1969 as a water supply for the park and was converted to an observation well in 2008 because it was no longer in use as a water supply well.

This well is completed in a granite aquifer and is 77.0 m deep with 7.6 m of casing. Well location and construction information is provided in Table 3.31 and the well log is provided in Appendix A. A 3-hour pumping test (i.e., step-test) was conducted at this well in 2008 by NSDNR (Kennedy et al., 2009). The results indicated a transmissivity of 1.53 m²/day, hydraulic conductivity of 2.7x10⁻² m/day and an estimated safe yield of 57.31 m³/day (8.8 igpm).

Table 3.31: Lewis Lake (079) Well Construction Information

Well Name	Lewis Lake (079)
Observation Well ID Number	079
NSE Well Log Number	690090
County	Halifax
Nearest Community	Lewis Lake
UTM - Easting	433048
UTM - Northing	4948873
Year Monitoring Started	2008
Casing Depth (m, bgs)	7.6
Well Depth (m, bgs)	77.0
Elevation - top of casing (m, asl)	82
Geologic Unit	Late Devonian Granite
Aquifer Material	Bedrock - granite

Notes: bgs = below ground surface; asl = above sea level

The location of the Lewis Lake (079) observation well is shown in Figure F.31a, Appendix F, and a photograph of the well is shown in Figure F.31b. The well is located in a forested area within 100 m of Lewis Lake. The nearest domestic well is approximately 1,000 m away.

Monitoring Results - Water Levels

The water level graphs for Lewis Lake (079) are shown in Figure B.31, Appendix B. This well has been monitored since 2008 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels generally fluctuated within the historical range for this well. The average water level elevation in 2011 was 69.40 m above sea level and the annual water level fluctuation was 0.68 m. The average depth to water in 2011 was 2.44 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Lewis Lake (079) well was sampled in 2008 and the chemistry data are presented in Appendix C. The results indicate that health-based drinking water guidelines were exceeded for arsenic and fluoride, and aesthetic drinking water guidelines were exceeded for manganese. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 7.45°C, with fluctuations between 6.76°C and 8.17°C.

3.32 Arisaig (080)

Well Description

The Arisaig (080) observation well is located in Arisaig Provincial Park, near Arisaig in Antigonish County. The well was constructed in 1977 as a water supply for the park and was converted to an observation well in 2009 because it was no longer in use as a water supply well. The location of the Arisaig (080) observation well is shown in Figure F.32a, Appendix F.

The well is completed in a bedrock aquifer and is 91.5 m deep with 12.2 m of casing. Well location and construction information is provided in Table 3.32 and the well log is provided in Appendix A.

Table 3.32: Arisaig (080) Well Construction Information

Well Name	Arisaig (080)
Observation Well ID Number	080
NSE Well Log Number	770542
County	Antigonish
Nearest Community	Arisaig
UTM - Easting	564737
UTM - Northing	5067204
Year Monitoring Started	2009
Casing Depth (m, bgs)	12.2
Well Depth (m, bgs)	91.5
Elevation - top of casing (m, asl)	27.67
Geologic Unit	Earltown Formation
Aquifer Material	Bedrock - shale

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Arisaig (080) are shown in Figure B.32, Appendix B. This well has been monitored since 2009 and water levels appear to have remained relatively consistent after an initial six month period of steadily levels. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels remained relatively constant with minimal fluctuation. The average water level elevation in 2011 was 20.59 m above sea level and the annual water level fluctuation was 0.32 m. The average depth to water in 2011 was 7.09 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Arisaig (080) well was sampled in 2009 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, the pH level does not meet the drinking water aesthetic objective. The pH at the Arisaig (080) well was 8.63 and Health Canada recommends a range between 6.5 and 8.5. Pesticides were not detected. With respect to VOCs, toluene was detected at 2 ug/L, but was below drinking water guideline of 24 ug/L. This well has not been sampled for tritium or perchlorate.

The chloride level in this well was 57 mg/L. Although this does not exceed the aesthetic objective of 250 mg/L, it is elevated above the typical background level for groundwater in coastal Nova Scotia (<50 mg/L). The ocean is about 500 m from this well and, therefore, the elevated chloride level may be due to seawater influence. The bromide/chloride ratio for this well was 35 (i.e., $0.2 \text{ mg/L} / 57 \text{ mg/L} \times 10,000 = 35$). This result indicates that the source of the chloride is sea water. Please see Section 2.2.4 for a discussion of how this ratio is used to assess salt sources.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature at this well was 7.82°C.

3.33 Coldbrook (081)

Well Description

The Coldbrook (081) observation well is located in the Coldbrook Provincial Park near the community of Coldbrook, Kings County. The well was constructed in 1961 as a water supply for the park and was converted to an observation well in 2009 because it was no longer in use as a water supply well. The location of the Coldbrook (081) observation well is shown in Figure F.33a, Appendix F, and a photograph of the well is shown in Figure F.33b.

The well is completed in a bedrock aquifer and is 70.7 m deep with 52.4 m of casing. Well location and construction information is provided in Table 3.33 and the well log is provided in Appendix A. A 1-hour pumping test was conducted at this well in 1974. The results indicated a specific capacity of 6.29 m²/day and an estimated short-term safe yield of 26.18 m³/day (8.8 igpm).

Table 3.33: Coldbrook (081) Well Construction Information

Well Name	Coldbrook (081)
Observation Well ID Number	081
NSE Well Log Number	610135
County	Kings
Nearest Community	Coldbrook
UTM - Easting	376149
UTM - Northing	4991748
Year Monitoring Started	2009
Casing Depth (m, bgs)	52.4
Well Depth (m, bgs)	70.7
Elevation - top of casing (m, asl)	27
Geologic Unit	Wolfville Formation
Aquifer Material	Bedrock - sandstone

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Coldbrook (081) are shown in Figure B.33, Appendix B. This well has been monitored since 2009 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels remained relatively constant with some minor seasonal fluctuation. The average water level elevation in 2011 was 9.86 m above sea level and the annual water level fluctuation was 0.82 m. The average depth to water in 2011 was 14.43 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Coldbrook (081) well was sampled in 2009 and the chemistry results are presented in Appendix C. The results indicate that all parameters are within the drinking water guidelines. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 8.05°C.

3.34 Long Point (082)

Well Description

The Long Point (082) observation well is located in the Long Point Provincial Park near the community of Long Point, Inverness County. The well was constructed in 1974 as a water supply for the park and was converted to an observation well in 2009 because it was no longer in use as a water supply well. The location of the Long Point (082) observation well is shown in Figure F.34a, Appendix F, and a photograph of the well is shown in Figure F.34b.

The well is completed in a bedrock aquifer and is 18.6 m deep with 13.1 m of casing. Well location and construction information is provided in Table 3.34 and the well log is provided in Appendix A. A pumping test was conducted at this well in 1974. The results indicated a transmissivity of $3.6 \text{ m}^2/\text{day}$ and an estimated safe yield of $13.7 \text{ m}^3/\text{day}$ (2.1 igpm).

Table 3.34: Long Point (082) Well Construction Information

Well Name	Long Point (082)
Observation Well ID Number	082
NSE Well Log Number	742421
County	Inverness
Nearest Community	Long Point
UTM - Easting	618131
UTM - Northing	5074277
Year Monitoring Started	2009
Casing Depth (m, bgs)	13.1
Well Depth (m, bgs)	18.5
Elevation - top of casing (m, asl)	10.17
Geologic Unit	Mabou Group
Aquifer Material	Bedrock - mudstone/sandstone

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Long Point (082) are shown in Figure B.34, Appendix B. This well has been monitored since 2009 and water levels appear to have remained relatively consistent. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels remained relatively constant with some minor seasonal fluctuation. The average water level elevation in 2011 was 8.85 m above sea level and the annual water level fluctuation was 0.82 m. The average depth to water in 2011 was 1.32 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Long Point (082) well was sampled in 2009 and the chemistry results are presented in Appendix C. The results indicate that no drinking water guidelines were exceeded. Pesticides were not detected. With respect to VOCs, toluene was detected at 2 ug/L, but was below drinking water guideline of 24 ug/L. This well has not been sampled for tritium or perchlorate.

The chloride level in this well was 61 mg/L. Although this level does not exceed the aesthetic objective of 250 mg/L, it is elevated above the typical background level for groundwater in coastal Nova Scotia (<50 mg/L). The bromide/chloride ratio for this well was >10 (i.e., $0.25 \text{ mg/L} / 61 \text{ mg/L} \times 10,000 = 41$). This result indicates that the source of the chloride is formation salt, indicating the well may be influenced by the nearby Windsor Group/Carbonate bedrock. Please see Section 2.2.4 for a discussion of how this ratio is used to assess salt sources.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 11.20°C.

3.35 Tatamagouche (083)

Well Description

The Tatamagouche (083) observation well is located at the Tatamagouche Provincial Park, 1.5 km east of the community of Tatamagouche, Colchester County. The well was constructed in 1951 as a water supply for the park and was converted to an observation well in 2009 because it was no longer in use as a water supply well. The location of the Tatamagouche (083) observation well is shown in Figure F.35a, Appendix F.

The well is completed in a bedrock aquifer and is 24.5 m deep with an unknown casing length. Well location and construction information is provided in Table 3.35 and the well log is provided in Appendix A. A 22-hour pumping test was conducted at this well in 1974. The results indicated a transmissivity of 1.72 m²/day and an estimated safe yield of 13.09 m³/day (2.0 igpm).

Table 3.35: Tatamagouche (083) Well Construction Information

Well Name	Tatamagouche (083)
Observation Well ID Number	083
NSE Well Log Number	510124
County	Colchester
Nearest Community	Tatamagouche
UTM - Easting	479226
UTM - Northing	5061591
Year Monitoring Started	2009
Casing Depth (m, bgs)	unknown
Well Depth (m, bgs)	24.5
Elevation - top of casing (m, asl)	16
Geologic Unit	Tatamagouche Formation
Aquifer Material	Bedrock - sandstone/siltstone

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Tatamagouche (083) are shown in Figure B.35, Appendix B. This well has been monitored since 2009 and water levels appear to have remained relatively consistent with regular seasonal fluctuations. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels remained relatively constant, with a seasonal decline of approximately 1 m in the summer and early fall. The average water level elevation in 2011 was 14.13 m above sea level and the annual water level fluctuation was 1.29 m. The average depth to water in 2011 was 1.87 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Tatamagouche (083) well was sampled in 2008 and the chemistry results are presented in Appendix C. The results indicate that no health-based drinking water guidelines were exceeded; however, aesthetic drinking water guidelines were exceeded for colour, pH, turbidity, and manganese. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 8.67°C.

3.36 Pugwash (084)

Well Description

The Pugwash (084) observation well is located in the Village of Pugwash, Cumberland County. The well was constructed in 2010 to support a sea water intrusion study under the Atlantic Climate Adaption Solutions program (Ferguson and Beebe, 2012). The well was added to the NS Groundwater Observation Well Network in November 2010. The location of the Pugwash (084) observation well is shown in Figure F.36a, Appendix F.

The well is completed in a bedrock aquifer and is 61.6 m deep with a casing length of 12.2 m. It is adjacent to the ocean. Well location and construction information is provided in Table 3.36a and the well log is provided in Appendix A. A pumping test was conducted at this well indicated a transmissivity of 30 m²/day and a storativity of 10⁻⁴ (Beebe, 2011).

Table 3.36a: Pugwash (084) Well Construction Information

Well Name	Pugwash (084)
Observation Well ID Number	084
NSE Well Log Number	100983
County	Colchester
Nearest Community	Pugwash
UTM - Easting	448360
UTM - Northing	5077961
Year Monitoring Started	2010
Casing Depth (m, bgs)	12.2
Well Depth (m, bgs)	61.6
Elevation - top of casing (m, asl)	NA
Geologic Unit	Cumberland Group
Aquifer Material	Bedrock - Shale/sandstone

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Pugwash (084) are shown in Figure B.36, Appendix B. This well has been monitored since 2010 and water levels appear to have remained relatively consistent, with both seasonal fluctuations and daily fluctuations which are likely associated with a tidal influence. A trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The average water level elevation in 2011 was 4.54 m above sea level and the annual water level fluctuation was 1.18 m. The average depth to water in 2011 was 0.46 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Pugwash (084) observation well has not been sampled by Nova Scotia Environment, however, test results for selected inorganic and metal parameters have been reported by Beebe (2011) and are presented in Table 3.36b. No guidelines were exceeded for the parameters that were tested.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 8.78°C, with fluctuations between 8.42°C and 9.36°C.

Table 3.36b: Pugwash (084) Groundwater Chemistry Results (from Beebe, 2011)

Parameter	Units	Drinking Water Guideline	Detection Limit	Sample Name Pugwash 2
Inorganics				
Total Alkalinity (Total as CaCO ₃)	mg/L	-	30	120
Bromide (Br)	mg/L	-	0.5	ND
Chloride (Cl)	mg/L	250 AO	5	26
Fluoride (F)	mg/L	1.5	0.5	ND
Nitrate (N)	mg/L	10	0.06	0.21
Nitrite (N)	mg/L	1	0.06	ND
Orthophosphate (P)	mg/L	-	0.3	ND
pH	no units	6.5 to 8.5 AO	-	7.75
Sulphate (SO ₄)	mg/L	500 AO	20	270
Metals				
Aluminium (Al)	ug/L	-	5	ND
Calcium (Ca)	ug/L	-	100	120,000
Copper (Cu)	ug/L	1,000 AO	2	ND
Iron (Fe)	ug/L	300 AO	50	ND
Lead (Pb)	ug/L	10	0.5	ND
Magnesium (Mg)	ug/L	-	100	9,200
Manganese (Mn)	ug/L	50 AO	2	26
Phosphorus (P)	ug/L	-	100	130
Potassium (K)	ug/L	-	100	4,100
Sodium (Na)	ug/L	200,000 AO	100	40,000
Sulphur (S)	ug/L	-	5,000	91,000
Zinc (Zn)	ug/L	5,000 AO	5	ND

Notes: All guidelines are health-based MACs or IMACs, unless otherwise indicated.

AO = Aesthetic Objective.

ND = Not Detected.

3.37 St. Peters (085)

Well Description

The St. Peters (085) observation well is located on Oban Road, approximately 1 km north of the Village of St. Peters, Richmond County. The well was constructed in 2006 as a test well to explore for a water supply for St. Peters. It was converted to an observation well in December 2010. The location of the St. Peters (085) observation well is shown in Figure F.37, Appendix F.

The well is completed in a bedrock aquifer and is 112.9 m deep with a casing length of 18.3m. Well location and construction information is provided in Table 3.37 and the well log is provided in Appendix A.

Table 3.37: St. Peters (085) Well Construction Information

Well Name	St. Peters (085)
Observation Well ID Number	085
NSE Well Log Number	062067
County	Richmond
Nearest Community	St. Peters
UTM - Easting	664778
UTM - Northing	5059282
Year Monitoring Started	2010
Casing Depth (m, bgs)	18.3
Well Depth (m, bgs)	112.9
Elevation - top of casing (m, asl)	NS
Geologic Unit	Cumberland Group
Aquifer Material	Bedrock - conglomerate

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for St Peters (085) are shown in Figure B.37, Appendix B. This well has been monitored since 2010 and a visual inspection of the water level graph suggests there is a slight upward trend present. A statistical trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels appear to have an upward trend, with levels increasing by a total of approximately 0.5 m over the year. The average water level elevation in 2011 was 1.72 m above sea level and the annual water level fluctuation was 0.45 m. The average depth to water in 2011 was 3.28 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The St. Peters (085) well was sampled in 2011 and the chemistry results are presented in Appendix C. The results indicate that the health-based drinking water guideline was exceeded for arsenic, and the aesthetic drinking water guideline was exceeded for pH. VOCs and pesticides were not detected. This well has not been sampled for tritium or perchlorate.

A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 6.55°C, with fluctuations between 5.56°C and 8.64°C.

3.38 Smileys Park (086)

Well Description

The Smileys Park (086) observation well is located in Smileys Provincial Park, near the community of McKay Section, Hants County. The well was constructed in 1967 as a water supply for the park and was converted to an observation well in 2011 because it was no longer in use as a water supply well.

The location of the Smileys Park (086) observation well is shown in Figure F.38, Appendix F. The well is completed in a surficial aquifer and is 9.8 m deep with a casing length of 8.2 m. Well location and construction information is provided in Table 3.38 and the well log is provided in Appendix A.

Table 3.38: Smileys Park (086) Well Construction Information

Well Name	Smileys Park (086)
Observation Well ID Number	086
NSE Well Log Number	670564
County	Hants
Nearest Community	McKay Section
UTM - Easting	424131
UTM - Northing	4984939
Year Monitoring Started	2011
Casing Depth (m, bgs)	8.23
Well Depth (m, bgs)	9.8
Elevation - top of casing (m, asl)	35
Geologic Unit	Quaternary – Alluvial Deposits
Aquifer Material	Surficial – Clay & Gravel

Notes: bgs = below ground surface; asl = above sea level

Monitoring Results - Water Levels

The water level graphs for Smileys Park (086) are shown in Figure B.38, Appendix B. This well has been monitored since July 2011. A statistical trend analysis has not been completed for this well because there are insufficient water level data available (i.e., <10 years of useable data).

The 2011 water levels show two distinct periods, one characterized by lower water levels during the summer and early fall, and the other characterized by higher water levels associated with fall recharge beginning in October. The average water level elevation in 2011 (July to December) was 28.94 m above sea level and the annual water level fluctuation was 2.44 m. The average depth to water in 2011 (July to December) was 6.06 m below top of casing.

Monitoring Results - Water Chemistry and Temperature

The Smileys Park (086) well has not been sampled by Nova Scotia Environment. A graph of the average daily temperature in this well is presented in Appendix D. The average groundwater temperature was 9.14°C, with fluctuations between 7.43°C and 11.01°C.

4.0 SUMMARY & CONCLUSIONS

4.1 Groundwater Levels

Table 4.1 presents a summary of groundwater level trends for each observation well and further details are provided in Appendix E. Trend analyses were only carried out on wells with at least ten years of “useable” water level data. A year was considered useable if data were available for at least 75% of the year. Fifteen of the observation wells had enough water level data available to complete trend analyses. The remaining 23 wells had either been monitored for less than ten years, or had data gaps that caused some years of monitoring data to be unusable. Trends were considered statistically significant if the confidence level was greater than 80%.

The trend analysis results indicate that 13 of the wells exhibit statistically significant groundwater level trends, with five having small upward trends and eight having small downward trends. The downward trends are larger than the upward trends; however, the size of the trends in most cases is relatively small (i.e., water level changes of less than 1 m).

Upward trends were observed at the following wells: Greenwood (003), Fraser Brook (004), Wilmot (005), Truro (014) and Durham (045). The largest upward trend was 2.6 cm/year at the Truro (014) observation well, which resulted in a total rise of approximately 0.8 m over the entire monitoring period. The reason for the upward trends at these wells has not been determined, however, possible reasons include: reduced pumping rates in nearby water wells, increased annual precipitation, greater infiltration rates due to changes in land use, and reduction in evapotranspiration rates. The increased water level at the Truro (014) observation well is likely due to the decommissioning of a nearby municipal water supply well in 1994.

Downward trends were observed at the following wells: Murray Siding (007), Wolfville (010), Monastery (028), Lawrencetown (043), Kentville (048), Sydney (050), Meteghan (060) and Margaree (064). The largest downward trend was 6.9 cm/year at the Sydney (050) observation well, which resulted in a total decline of approximately 2.5 m since monitoring began. The reason for the downward trends at these wells has not been confirmed, however, three of the observation wells are located in municipal wellfields where water level declines are expected to be associated with wellfield pumping. It should be noted that the recent water level drop at the Sydney (050)

observation well is suspected to be caused by well clogging, which was recently addressed by cleaning the well.

Table 4.1: Summary of Groundwater Level Trends

Well Name	Year Monitoring Started	No. of Usable Years¹	Average Yearly Water Level Change (cm/year)²	Total Water Level Change Since Monitoring Began (m)	Water Level Trend³
Greenwood (003)	1966	21	NA	NA	No Trend
Fraser Brook (004)	1966	20	0.4	0.1	Up
Wilmot (005)	1966	19	NA	NA	No Trend
Murray Siding (007)	1967	13	-2.5	-1	Down
Wolfville (010)	1969	21	-2.3	-0.7	Down
Truro (014)	1971	17	NA	NA	No Trend
Monastery (028)	1976	11	NA	NA	No Trend
Point Aconi (030)	1976	17	NA	NA	No Trend
Lawrencetown (043)	1978	13	NA	NA	No Trend
Durham (045)	1979	24	1.8	0.7	Up
Kentville (048)	1980	16	-0.8	-0.6	Down
Sydney (050)	1984	15	-5.8	-1.2	Down
North Grant (054)	1987	8	NA	NA	Insufficient Data
Stillwater (055)	1987	7	NA	NA	Insufficient Data
Sheet Harbour (056)	1987	7	NA	NA	Insufficient Data
Hayden Lake (059)	1988	15	0.9	0.2	Up
Meteghan (060)	1987	9	NA	NA	Insufficient Data
Annapolis Royal (062)	1990	8	NA	NA	Insufficient Data
Hebron (063)	1990	8	NA	NA	Insufficient Data
Margaree (064)	1990	8	NA	NA	Insufficient Data
Ingonish (065)	1990	7	NA	NA	Insufficient Data

Well Name	Year Monitoring Started	No. of Usable Years ¹	Average Yearly Water Level Change (cm/year) ²	Total Water Level Change Since Monitoring Began (m)	Water Level Trend ³
Debert (068)	1993	4	NA	NA	Insufficient Data
Dalem Lake (069)	1992	6	NA	NA	Insufficient Data
Amherst (071)	1993	3	NA	NA	Insufficient Data
Kelley River (073)	2006	3	NA	NA	Insufficient Data
Atlanta (074)	2008	1	NA	NA	Insufficient Data
Sheffield Mills (075)	2008	1	NA	NA	Insufficient Data
Fall River (076)	2008	1	NA	NA	Insufficient Data
West Northfield (077)	2008	1	NA	NA	Insufficient Data
Musquodoboit Hbr (078)	2008	1	NA	NA	Insufficient Data
Lewis Lake (079)	2008	<1	NA	NA	Insufficient Data
Arisaig (080)	2009	<1	NA	NA	Insufficient Data
Coldbrook (081)	2009	<1	NA	NA	Insufficient Data
Long Point (082)	2009	<1	NA	NA	Insufficient Data
Tatamagouche (083)	2009	<1	NA	NA	Insufficient Data
Pugwash (084)	2010	<1	NA	NA	Insufficient Data
St. Peters (085)	2010	<1	NA	NA	Insufficient Data

Notes:

1. For a year to be considered a “useable” year, data must be available for at least 75% of the year.
2. Positive (+) values indicate upward trend and negative (-) values indicate downward trend.
3. The trend is considered to be statistically significant if the confidence level is 80% or more.
5. Insufficient data means there are less than 10 useable years of data available.

4.2 Groundwater Quality

Table 4.2 presents a summary of the groundwater quality results for each of the network’s observation wells. Detailed chemistry results are available in Appendix C. The results indicate that nine of the 38 wells exceeded health-based drinking water guidelines in the most recent sampling

event. The parameters that exceeded health-based guidelines include: arsenic (5 wells), fluoride (2 wells), lead (1 well), nitrate (1 well) and uranium (1 well). Most of these exceedances (including arsenic, fluoride and uranium) are associated with naturally-occurring dissolved minerals that are known to occur in groundwater in certain areas of the province. The nitrate exceedance was observed at a well located in an agricultural area, and is likely to be caused by human activity.

Nineteen of the 38 wells exceeded aesthetic drinking water guidelines (or other non-health related guidelines) in the most recent sampling event. The parameters that exceeded aesthetic drinking water guidelines include: manganese (at 14 wells), iron (8 wells), turbidity (6 wells), pH (5 wells), chloride (1 well), colour (1 well) and total dissolved solids (1 well). The majority of these parameters are representative of naturally-occurring water quality problems that are commonly encountered in water wells in Nova Scotia and elsewhere. Chloride was detected above background levels at five wells, including one well where the chloride level was above the aesthetic drinking water guideline. Based on the chemistry and location of these wells, it appears that two of the wells have been impacted by road salt, two have been impacted by sea water intrusion, and one has been impacted by naturally-occurring salt contained in the geologic formation.

The water quality results show that none of the observation wells exceeded drinking water guidelines for volatile organic compounds (VOCs) or pesticides. However, one VOC (toluene) was detected at two observation wells at low levels (i.e., 2 ug/L). The source of the toluene has not been determined; however, these wells are located beside roads and, therefore, the toluene may be associated with gasoline runoff from roads. No pesticides were detected in any of the observation wells.

The groundwater temperature data collected at each observation well (see Appendix D) show that all of the observation wells experience seasonal temperature fluctuations. The peak groundwater temperatures usually occur between September and January and the lowest temperatures usually occur between March and June. The temperature range at each observation well is variable, however, the typical range is between 6°C and 10°C, with a typical average temperature of approximately 8°C.

Of the 17 observation wells tested for tritium, 13 wells contained either recent water (recharged after 1952) or a mix of recent and old water (recharged before and after 1952). Only four of the 17 wells tested for tritium contained purely old water (recharged before 1952). These results suggest that

most of the wells draw water from aquifers that are recharged relatively quickly. This is encouraging from a water quantity point of view because the aquifers are being regularly replenished with new water, but it also indicates that the aquifers are vulnerable to contaminants released at the surface that can be carried into the aquifer relatively quickly. This vulnerability emphasizes the importance of implementing source water protection measures to ensure that aquifers are protected from surface activities.

Table 4.2: Summary of Groundwater Quality Results

Well Name	Parameters Exceeding Health-Based Drinking Water Guidelines	Parameters Exceeding Aesthetic Drinking Water Guidelines (or other non-health guidelines)	Comments
Greenwood (003)	None	Turbidity, Iron, Manganese	None
Fraser Brook (004)	Arsenic	None	None
Wilmot (005)	Nitrate	None	None
Murray Siding (007)	None	Iron, Manganese	None
Wolfville (010)	None	Turbidity, Iron, Manganese	Chloride exceeds background
Truro (014)	Not sampled	Not sampled	Not sampled
Monastery (028)	None	None	None
Point Aconi (030)	None	None	None
Lawrencetown (043)	Arsenic	None	Chloride exceeds background
Durham (045)	None	None	None
Kentville (048)	Lead	Chloride, Iron, TDS	None
Sydney (050)	None	Manganese	None
North Grant (054)	Arsenic	Turbidity, Iron	None
Stillwater (055)	None	Manganese	None
Sheet Harbour (056)	None	Manganese	Arsenic was detected at a level

Well Name	Parameters Exceeding Health-Based Drinking Water Guidelines	Parameters Exceeding Aesthetic Drinking Water Guidelines (or other non-health guidelines)	Comments
			equal to the guideline (10 ug/L)
Hayden Lake (059)	None	pH	None
Meteghan (060)	None	Turbidity, Iron, Manganese	None
Annapolis Royal (062)	None	Manganese	None
Hebron (063)	None	Turbidity, Iron, Manganese	None
Margaree (064)	None	None	None
Ingonish (065)	None	None	None
Debert (068)	Not sampled	Not sampled	Not sampled
Dalem Lake (069)	None	Manganese	None
Amherst (071)	None	None	None
Kelley River (073)	None	None	None
Atlanta (074)	Uranium	None	None
Sheffield Mills (075)	None	None	None
Fall River (076)	None	pH, Iron, Manganese	None
West Northfield (077)	None	Manganese	None
Musquodoboit Hbr (078)	Fluoride	None	None
Lewis Lake (079)	Arsenic, Fluoride	Manganese	None
Arisaig (080)	None	pH	Toluene detected below guidelines; Chloride exceeds background
Coldbrook (081)	None	None	None
Long Point (082)	None	None	Toluene detected below guidelines; Chloride exceeds background

Well Name	Parameters Exceeding Health-Based Drinking Water Guidelines	Parameters Exceeding Aesthetic Drinking Water Guidelines (or other non- health guidelines)	Comments
Tatamagouche (083)	None	pH, Turbidity, Manganese, Colour	None
Pugwash (084)	None	None	None
St Peters (085)	Arsenic	pH	None

Note: Some wells have been sampled multiple times. This table summarizes the most recent sample results.

5.0 REFERENCES

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APPENDIX A

WELL LOGS

Table A-1: Summary of Observation Well Construction Information

Well#	Address	Community	County	Date	Well Depth	Casing Depth	Depth to Bedrock	Depth to Static Level	Water Yield	Driller	Type of Well
					(ft)	(ft)	(ft)	(ft)	(gpm)		
661225	NS OBS WELL - GREENWOOD (003)	GREENWOOD	KINGS	20-Jun-66	25	21.5				1	DRILLED
661226	NS OBS WELL - FRASER BROOK (004)	LOWER HARMONY	COLCHESTER	11-Jul-66	60		2		5	1	DRILLED
661267	NS OBS WELL - WILMOT (005)	WILMOT	ANNAPOLIS	18-May-66	60	21				1	DRILLED
671074	NS OBS WELL - MURRAY SIDING (007)	MURRAYS SIDING	COLCHESTER	02-Aug-67	28	26	26			1	DRILLED
681252	NS OBS WELL - WOLFVILLE (010)	WOLFVILLE	KINGS	17-Dec-68	79	74.5	35			1	DRILLED
701431	NS OBS WELL - TRURO (014)	TRURO	COLCHESTER	16-Nov-70	300	60	35			1	DRILLED
742420	NS OBS WELL - MONASTERY (028)	MONASTERY	ANTIGONISH	01-Jan-74	520				40	1	DRILLED
761408	NS OBS WELL - POINT ACONI (030)	POINT ACONI	CAPE BRETON	11-Aug-76	100	42	14		10	45	DRILLED
771538	NS OBS WELL - LAWRENCETOWN (043)	UPPER LAWRENCETOWN	HALIFAX	16-Mar-77	175	145	10	4	8	83	DRILLED
772021	NS OBS WELL - KENTVILLE (048)	KENTVILLE	KINGS	20-May-77	400	100	95		150	20	DRILLED
771077	NS OBS WELL - SYDNEY (050)	SYDNEY	CAPE BRETON	09-Mar-77	330	22	13		250	45	DRILLED
782683	NS OBS WELL - DURHAM (045)	DURHAM	PICTOU	01-Jul-78	247		20		100	4	DRILLED
832002	NS OBS WELL - DEBERT (068)	DEBERT	COLCHESTER	13-Aug-83	153	26		112	10	6	DRILLED
871262	NS OBS WELL - NORTH GRANT (054)	LOWER NORTH GRANT	ANTIGONISH	30-Mar-87	150	43		14	20	2	DRILLED
871263	NS OBS WELL - STILLWATER (055)	STILLWATER	GUYSBOROUGH	01-Apr-87	118	44		30	4.5	2	DRILLED
871264	NS OBS WELL - SHEET HARBOUR (056)	BEAVER HARBOUR	HALIFAX	06-Apr-87	150	23		10	0.7	2	DRILLED
870189	NS OBS WELL - HAYDEN LAKE (059)	EAST JORDAN	SHELBURNE	31-Mar-87	160	20	10		3.7	210	DRILLED
870188	NS OBS WELL - METEGHAN (060)	METEGHAN RIVER	DIGBY	31-Mar-87	200	40			0.7	210	DRILLED
891721	NS OBS WELL - HEBRON (063)	DAYTON	YARMOUTH	19-Dec-89	150	40	3		45	210	DRILLED
891722	NS OBS WELL - ANNAPOLIS ROYAL (062)	LAKE LA ROSE	ANNAPOLIS	20-Dec-89	205	80	71		0.5	210	DRILLED
892288	NS OBS WELL - INGNISH (065)	INGONISH	VICTORIA	12-Dec-89	150	40			100	45	DRILLED
902524	NS OBS WELL - MARGAREE (064)	MARGAREE VALLEY	INVERNESS	16-Jan-90	150	40			10	45	DRILLED
943326	NS OBS WELL - DALEM LAKE (069)	NEW DOMINION	VICTORIA	01-Jan-92	200	40.5					DRILLED
862667	NS OBS WELL - AMHERST (071)	AMHERST	CUMBERLAND	29-Jul-86	382	20	15			32	DRILLED
721858	NS OBS WELL - KELLEY RIVER (073)	RIVER HEBERT	CUMBERLAND	01-Dec-71	50	13.6					DRILLED
070613	NS OBS WELL - ATLANTA (074)	ATLANTA	KINGS	29-Aug-07	175	118	112		100	307	DRILLED
070618	NS OBS WELL - SHEFFIELD MILLS (075)	SHEFFIELD MILLS	KINGS	29-Aug-07	175	63	16		60	307	DRILLED
080824	NS OBS WELL - FALL RIVER (076)	FALL RIVER	HALIFAX	28-Feb-08	200	43	3.5	12	1.5	695	DRILLED
080132	NS OBS WELL - WEST NORTHFIELD (077)	WEST NORTHFIELD	LUNENBURG	06-Mar-08	160	42	24		7	307	DRILLED
080861	NS OBS WELL - MUSQUODOBOIT HBR (078)	MUSQUODOBOIT HARBOUR	HALIFAX	06-Mar-08	200	89	81		0.5	734	DRILLED
690090	NS OBS WELL - LEWIS LAKE (079)	LEWIS LAKE	HALIFAX	11-Jun-69	250	25	20		6	3	DRILLED
770542	NS OBS WELL - ARISAIG (080)	ARISAIG	ANTIGONISH	05-Jul-77	300	40	30			15	DRILLED
610135	NS OBS WELL - COLDBROOK (081)	COLDBROOK	KINGS	01-Jan-61	232	172		45			DRILLED
742421	NS OBS WELL - LONG POINT (082)	LONG POINT	INVERNESS	01-Aug-74	61	43		7.5			DRILLED
510124	NS OBS WELL - TATAMAGOUCHE (083)	TATAMAGOUCHE	COLCHESTER	01-Jan-51	80.4					33	DRILLED
100983	NS OBS WELL - PUGWASH (084)	PUGWASH	CUMBERLAND	30-Sep-10	202	40	24	9	75	882	DRILLED
062067	NS OBS WELL - ST. PETERS (085)	ST. PETER'S	RICHMOND	02-Mar-06	370	60	42		12.5	446	DRILLED
670564	NS OBS WELL - SMILEYS PARK (086)	MCKAY SECTION	HANTS	27-Mar-67	32	27			60	18	DRILLED

Well Report

(Summary Log)

NSEL Well No. 661225

Well Type **DRILLED**

Certified Well Contractor				Well Owner/Contractor Information				
Name <input type="text" value="MINES"/>				Well Drilled For: Owner <input type="text" value="NS DEPT. OF MINES"/>				
Certificate No. <input type="text" value="1"/>				or Contractor/Builder/Consultant, etc. <input type="text"/>				
Company <input type="text" value="N. S. DEPARTMENT OF MINES"/>				Civic Address of Well <input type="text" value="NS OBS WELL - GREENWOOD (003)"/>				
				Lot Number <input type="text"/> Subdivision <input type="text"/>				
				County <input type="text" value="KINGS"/> Postal Code <input type="text"/>				
				Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="GREENWOOD"/>				
Well Location								
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :				
Atlas or Map Book <input type="text"/>		Map Sheet <input type="text" value="21H2"/>		Northing (m) <input type="text" value="4985498"/>				
Map Page No. <input type="text"/>		Reference Map <input type="text" value="B"/>		Easting (m) <input type="text" value="350680"/>				
Reference Letter <input type="text"/>		Tract No. <input type="text" value="7"/>		Property (PID) <input type="text"/>				
Reference Number <input type="text"/>		Claim <input type="text" value="M"/>		Well Location Sketch Available <input type="checkbox"/>				
Roamer Letter <input type="text"/>								
Roamer Number <input type="text"/>								
Depth in feet <input type="text"/> Primary Lithology <input type="text"/> Secondary Lithology <input type="text"/>								
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	25		FINE GRAINED	SAND		COARSE GRAIN	SAND	<input type="checkbox"/>
Well Construction Information			Dug Well Information			Water Yield		
Total depth below surface (ft) <input type="text" value="25"/>			Depth of liner (crock) (ft) <input type="text"/>			Estimated Yield (igpm) <input type="text"/>		
Depth to bedrock (ft) <input type="text"/>			Reservoir material <input type="text"/>			Method <input type="text"/>		
Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			Reservoir vol. (cu.yd) <input type="text"/>			Rate (igpm) <input type="text"/>		
Outer Well Casing:			Reservoir material size <input type="text"/>			Duration (hrs) <input type="text"/>		
From (ft) <input type="text" value="0"/> To (ft) <input type="text" value="22"/>			Apron Material <input type="text"/>			Depth to water at end of test (ft) <input type="text"/>		
Diameter (in) <input type="text" value="4.5"/>			Apron depth (ft) <input type="text"/>			Total drawdown (ft) <input type="text"/>		
Length of casing above ground :			Apron thickness (ft) <input type="text"/>			Water level recovered to (ft) <input type="text"/>		
(ft) <input type="text"/> (in) <input type="text"/>			Apron width (ft) <input type="text"/>			Recovery time (hrs) <input type="text"/>		
Driveshoe make <input type="text"/>			Apron volume (cu.yd) <input type="text"/>			Depth to static level (ft) <input type="text"/>		
			Bottom material <input type="text"/>			Overflow <input type="checkbox"/>		
Comments <input type="text" value="NS OBSERVATION WELL - GREENWOOD (003)"/>				Well Status/Water Use/Date Completed				
				Final status of well <input type="text" value="OBSERVATION WELL"/>				
				Water use <input type="text" value="MONITORING"/>				
				Method of drilling <input type="text"/>				
				Date well completed <input type="text" value="20-Jun-66"/>				

Well Report

(Summary Log)

NSEL Well No. 661226

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MINES"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF MINES"/>
Certificate No. <input type="text" value="1"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="N. S. DEPARTMENT OF MINES"/>	Civic Address of Well <input type="text" value="NS OBS WELL - FRASER BROOK (004)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="COLCHESTER"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="LOWER HARMONY"/>

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	<input type="text"/>	Map Sheet	<input type="text" value="11E6"/>	Northing (m)	<input type="text" value="5021100"/>
Map Page No.	<input type="text"/>	Reference Map	<input type="text" value="A"/>	Easting (m)	<input type="text" value="486889"/>
Reference Letter	<input type="text"/>	Tract No.	<input type="text" value="81"/>	Property (PID)	<input type="text"/>
Reference Number	<input type="text"/>	Claim	<input type="text" value="J"/>	Well Location Sketch Available	<input type="checkbox"/>
Roamer Letter	<input type="text"/>				
Roamer Number	<input type="text"/>				

Depth in feet	Primary Lithology	Secondary Lithology						
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	2	REDDISH	SANDY	TILL				<input type="checkbox"/>
6	60	REDDISH	LAMINATED	SILTSTONE	GRAY	LAYERS	SILTSTONE	<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="60"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text" value="6.5"/>
Depth to bedrock (ft) <input type="text" value="2"/>	Reservoir material <input type="text"/>	Method <input type="text" value="PUMP TEST"/>
Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text" value="5"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text" value="24"/>
From (ft) <input type="text"/> To (ft) <input type="text"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="6"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text" value="29.5"/>
Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/>	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
Driveshoe make <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments	<input type="text" value="NS OBSERVATION WELL - FRASER BROOK (004)"/>	Well Status/Water Use/Date Completed	
		Final status of well	<input type="text" value="OBSERVATION WELL"/>
		Water use	<input type="text" value="MONITORING"/>
		Method of drilling	<input type="text"/>
		Date well completed	<input type="text" value="11-Jul-66"/>

Well Report

(Summary Log)

NSE Well No.

Well Type

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MINES"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF MINES"/>
Certificate No. <input type="text" value="1"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="N. S. DEPARTMENT OF MINES"/>	Civic Address of Well <input type="text" value="NS OBS WELL - WILMOT (005)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="ANNAPOLIS"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="WILMOT"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input type="text"/>	Map Sheet <input type="text" value="21A14"/>	Northing (m) <input type="text" value="4979368"/>
Map Page No. <input type="text"/>	Reference Map <input type="text" value="D"/>	Easting (m) <input type="text" value="340015"/>
Reference Letter <input type="text"/>	Tract No. <input type="text" value="71"/>	Property (PID) <input type="text"/>
Reference Number <input type="text"/>	Claim <input type="text" value="G"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Letter <input type="text"/>		
Roamer Number <input type="text"/>		

Depth in feet	Primary Lithology	Secondary Lithology
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="60"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text"/>	Reservoir material <input type="text"/>	Method <input type="text"/>
Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
From (ft) <input type="text" value="0"/> To (ft) <input type="text" value="21"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="4.5"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground :	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
(ft) <input type="text"/> (in) <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
Driveshoe make <input type="text"/>	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
	Final status of well <input type="text" value="OBSERVATION WELL"/>
	Water use <input type="text" value="MONITORING"/>
	Method of drilling <input type="text"/>
	Date well completed <input type="text" value="18-May-66"/>

Well Report

(Summary Log)

NSE Well No.

Well Type

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MINES"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF MINES"/>
Certificate No. <input type="text" value="1"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="N. S. DEPARTMENT OF MINES"/>	Civic Address of Well <input type="text" value="NS OBS WELL - MURRAY SIDING (007)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="COLCHESTER"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="MURRAYS SIDING"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input type="text"/>	Map Sheet <input type="text" value="11E6"/>	Northing (m) <input type="text" value="5024186"/>
Map Page No. <input type="text"/>	Reference Map <input type="text" value="A"/>	Easting (m) <input type="text" value="483114"/>
Reference Letter <input type="text"/>	Tract No. <input type="text" value="107"/>	Estimated GPS Accuracy (m, +/-) <input type="text" value="50"/>
Reference Number <input type="text"/>	Claim <input type="text" value="K"/>	Property (PID) <input type="text"/>
Roamer Letter <input type="text"/>	Well Construction Sketch Available <input type="checkbox"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Number <input type="text"/>		

Depth in feet	Primary Lithology	Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	26		COARSE GRAIN	SAND		COARSE GRAIN	GRAVEL	<input type="checkbox"/>
26	28			SANDSTONE			SILTSTONE	<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="28"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text" value="26"/>	Reservoir material <input type="text"/>	Method <input type="text"/>
Water bearing fractures encountered at (ft) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
From (ft) <input type="text" value="0"/> To (ft) <input type="text" value="26"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="6"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/>	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
Driveshoe make <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

<p>Comments NS OBS WELL - MURRAY SIDING (007) NOTE: WELL AND CASING DEPTH MEASURED TO BE 18 FT BGS ON 20 MAY 2010; ASSUME WELL COLLAPSE.</p>	<p>Well Status/Water Use/Date Completed</p> <p>Final status of well <input type="text" value="OBSERVATION WELL"/></p> <p>Water use <input type="text" value="MONITORING"/></p> <p>Method of drilling <input type="text"/></p> <p>Date well completed <input type="text" value="02-Aug-67"/></p>
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Well Report

(Summary Log)

NSEL Well No. 681252

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MINES"/> Certificate No. <input type="text" value="1"/> Company <input type="text" value="N. S. DEPARTMENT OF MINES"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF MINES"/> or Contractor/Builder/Consultant, etc. <input type="text"/> Civic Address of Well <input type="text" value="NS OBS WELL - WOLFFVILLE (010)"/> Lot Number <input type="text"/> Subdivision <input type="text"/> County <input type="text" value="KINGS"/> Postal Code <input type="text"/> Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="WOLFFVILLE"/>

Well Location		
NS Atlas or Map Book Reference : Atlas or Map Book <input type="text"/> Map Page No. <input type="text"/> Reference Letter <input type="text"/> Reference Number <input type="text"/> Roamer Letter <input type="text"/> Roamer Number <input type="text"/>	NTS Map Reference : Map Sheet <input type="text" value="21H1"/> Reference Map <input type="text" value="B"/> Tract No. <input type="text" value="78"/> Claim <input type="text" value="K"/>	GPS (WGS84 UTM) : Northing (m) <input type="text" value="4993828"/> Easting (m) <input type="text" value="392086"/> Property (PID) <input type="text"/> Well Location Sketch Available <input type="checkbox"/>

Depth in feet	Primary Lithology	Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	3	RED	CLAYEY	TILL				<input type="checkbox"/>
3	15		FINE GRAINED	SAND			GRAVEL	<input type="checkbox"/>
15	35	RED	CLAYEY	TILL				<input type="checkbox"/>
35	79	RED		SANDSTONE				<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="79"/> Depth to bedrock (ft) <input type="text" value="35"/> Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Outer Well Casing: From (ft) <input type="text"/> To (ft) <input type="text" value="75"/> Diameter (in) <input type="text" value="4.5"/> Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/> Driveshoe make <input type="text"/>	Depth of liner (crock) (ft) <input type="text"/> Reservoir material <input type="text"/> Reservoir vol. (cu.yd) <input type="text"/> Reservoir material size <input type="text"/> Apron Material <input type="text"/> Apron depth (ft) <input type="text"/> Apron thickness (ft) <input type="text"/> Apron width (ft) <input type="text"/> Apron volume (cu.yd) <input type="text"/> Bottom material <input type="text"/>	Estimated Yield (igpm) <input type="text"/> Method <input type="text"/> Rate (igpm) <input type="text"/> Duration (hrs) <input type="text"/> Depth to water at end of test (ft) <input type="text"/> Total drawdown (ft) <input type="text"/> Water level recovered to (ft) <input type="text"/> Recovery time (hrs) <input type="text"/> Depth to static level (ft) <input type="text"/> Overflow <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBSERVATION WELL - WOLFFVILLE (010) <input style="width:100%; height:100%;" type="text"/>	Final status of well <input type="text" value="OBSERVATION WELL"/> Water use <input type="text" value="MONITORING"/> Method of drilling <input type="text"/> Date well completed <input type="text" value="17-Dec-68"/>

Well Report

(Summary Log)

NSEL Well No. 701431

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MINES"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF MINES"/>
Certificate No. <input type="text" value="1"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="N. S. DEPARTMENT OF MINES"/>	Civic Address of Well <input type="text" value="NS OBS WELL - TRURO (014)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="COLCHESTER"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="TRURO"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input type="text"/>	Map Sheet <input type="text" value="11E6"/>	Northing (m) <input type="text" value="5023778"/>
Map Page No. <input type="text"/>	Reference Map <input type="text" value="B"/>	Easting (m) <input type="text" value="476052"/>
Reference Letter <input type="text"/>	Tract No. <input type="text" value="99"/>	Property (PID) <input type="text"/>
Reference Number <input type="text"/>	Claim <input type="text" value="F"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Letter <input type="text"/>		
Roamer Number <input type="text"/>		

Depth in feet	Primary Lithology	Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	20			GRAVEL				<input type="checkbox"/>
20	35			GLACIAL TILL				<input type="checkbox"/>
35	300			SHALE		SEAM	SANSTONE	<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="300"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text" value="35"/>	Reservoir material <input type="text"/>	Method <input type="text"/>
Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
From (ft) <input type="text" value="0"/> To (ft) <input type="text" value="60"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="6"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/>	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
Driveshoe make <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments <input type="text" value="NS OBSERVATION WELL - TRURO (014)"/>	Well Status/Water Use/Date Completed Final status of well <input type="text" value="OBSERVATION WELL"/> Water use <input type="text" value="MONITORING"/> Method of drilling <input type="text"/> Date well completed <input type="text" value="16-Nov-70"/>
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Well Report

(Summary Log)

NSEL Well No. 742420

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MINES"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF MINES"/>
Certificate No. <input type="text" value="1"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="N. S. DEPARTMENT OF MINES"/>	Civic Address of Well <input type="text" value="NS OBS WELL - MONASTERY (028)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="ANTIGONISH"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="MONASTERY"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input type="text"/>	Map Sheet <input type="text" value="11F12"/>	Northing (m) <input type="text" value="5052489"/>
Map Page No. <input type="text"/>	Reference Map <input type="text" value="A"/>	Easting (m) <input type="text" value="606083"/>
Reference Letter <input type="text"/>	Tract No. <input type="text" value="91"/>	Property (PID) <input type="text"/>
Reference Number <input type="text"/>	Claim <input type="text"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Letter <input type="text"/>		
Roamer Number <input type="text"/>		

Depth in feet	Primary Lithology	Secondary Lithology
From To Colour 1 Description 1 Lithology 1 Colour 2 Description 2 Lithology 2 Water Found		
0 1	CLAYEY TILL	
1 520	SANDSTONE	SHALE & CONGLOM

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="520"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text" value="67"/>
Depth to bedrock (ft) <input type="text"/>	Reservoir material <input type="text"/>	Method <input type="text"/>
Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text" value="40"/>
Outer Well Casing: From (ft) <input type="text"/> To (ft) <input type="text"/>	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text" value="50"/>
Diameter (in) <input type="text"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Driveshoe make <input type="text"/>	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBSERVATION WELL - MONASTERY (028)	Final status of well <input type="text" value="OBSERVATION WELL"/>
	Water use <input type="text" value="MONITORING"/>
	Method of drilling <input type="text"/>
	Date well completed <input type="text" value="01-Jan-74"/>

Well Report

(Summary Log)

NSEL Well No. 761408

Well Type **DRILLED**

Certified Well Contractor				Well Owner/Contractor Information				
Name <input type="text" value="MCDONALD, IAN"/>				Well Drilled For: Owner <input type="text" value="CAPE BRETON DEVELOPMEN"/>				
Certificate No. <input type="text" value="45"/>				or Contractor/Builder/Consultant, etc. <input type="text"/>				
Company <input type="text" value="ISLAND WELL DRILLERS"/>				Civic Address of Well <input type="text" value="NS OBS WELL - POINT ACONI (030)"/>				
				Lot Number <input type="text"/> Subdivision <input type="text"/>				
				County <input type="text" value="CAPE BRETON"/> Postal Code <input type="text"/>				
				Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="POINT ACONI"/>				
Well Location								
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :				
Atlas or Map Book <input type="text" value="MAP"/>		Map Sheet <input type="text" value="11K8"/>		Northing (m) <input type="text" value="5133152"/>				
Map Page No. <input type="text" value="43"/>		Reference Map <input type="text" value="B"/>		Easting (m) <input type="text" value="707986"/>				
Reference Letter <input type="text" value="A"/>		Tract No. <input type="text" value="70"/>		Property (PID) <input type="text"/>				
Reference Number <input type="text" value="1"/>		Claim <input type="text"/>		Well Location Sketch Available <input type="checkbox"/>				
Roamer Letter <input type="text" value="O"/>								
Roamer Number <input type="text" value="13"/>								
Depth in feet <input type="text"/> Primary Lithology <input type="text"/> Secondary Lithology <input type="text"/>								
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	14			SHALE & CLAY				<input type="checkbox"/>
14	100			SANDSTONE				<input type="checkbox"/>
Well Construction Information			Dug Well Information			Water Yield		
Total depth below surface (ft) <input type="text" value="100"/>			Depth of liner (crock) (ft) <input type="text"/>			Estimated Yield (igpm) <input type="text" value="10"/>		
Depth to bedrock (ft) <input type="text" value="14"/>			Reservoir material <input type="text"/>			Method <input type="text" value="PUMPED"/>		
Water bearing fractures encountered at (ft): <input type="text" value="70"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			Reservoir vol. (cu.yd) <input type="text"/>			Rate (igpm) <input type="text" value="10"/>		
Outer Well Casing:			Reservoir material size <input type="text"/>			Duration (hrs) <input type="text" value="1"/>		
From (ft) <input type="text" value="6"/> To (ft) <input type="text" value="42"/>			Apron Material <input type="text"/>			Depth to water at end of test (ft) <input type="text"/>		
Diameter (in) <input type="text" value="6"/>			Apron depth (ft) <input type="text"/>			Total drawdown (ft) <input type="text"/>		
Length of casing above ground :			Apron thickness (ft) <input type="text"/>			Water level recovered to (ft) <input type="text"/>		
(ft) <input type="text"/> (in) <input type="text"/>			Apron width (ft) <input type="text"/>			Recovery time (hrs) <input type="text"/>		
Driveshoe make <input type="text" value="UNKNOWN"/>			Apron volume (cu.yd) <input type="text"/>			Depth to static level (ft) <input type="text"/>		
			Bottom material <input type="text"/>			Overflow <input type="checkbox"/>		
Comments <input type="text" value="NS OBSERVATION WELL - POINT ACONI (030)"/>				Well Status/Water Use/Date Completed				
				Final status of well <input type="text" value="OBSERVATION WELL"/>				
				Water use <input type="text" value="MONITORING"/>				
				Method of drilling <input type="text" value="ROTARY"/>				
				Date well completed <input type="text" value="11-Aug-76"/>				

Well Report

Environment and Labour

(Summary Log)

NSEL Well No. 771538

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name EDWARDS, HARRY A.	Well Drilled For: Owner NS DEPT. OF ENVIRONMENT
Certificate No. 83	or Contractor/Builder/Consultant, etc.
Company H. J. EDWARDS WELL DRILLING LTD.	Civic Address of Well NS OBS WELL - LAWRENCETOWN (043)
	Lot Number Subdivision
	County HALIFAX Postal Code
	Nearest Community in Atlas/Map Book ATLAS UPPER LAWRENCETOWN

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book MAP	Map Sheet	Northing (m) 4947712
Map Page No. 24	Reference Map	Easting (m) 464172
Reference Letter D	Tract No.	Property (PID)
Reference Number 3	Claim	Well Location Sketch Available <input type="checkbox"/>
Roamer Letter N		
Roamer Number 11		

Depth in feet		Primary Lithology		Secondary Lithology					
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found	
0	5			SAND & GRAVEL & BOU				<input type="checkbox"/>	
5	12			BOULDER & ROCK				<input type="checkbox"/>	
12	152	GRAY		QUARTZITE			SLATE	<input type="checkbox"/>	
152	165	DARK GRA		SLATE		QUARTZ VEINS		<input checked="" type="checkbox"/>	
165	174	GREENISH		QUARTZITE			SLATE	<input type="checkbox"/>	

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) 175	Depth of liner (crock) (ft)	Estimated Yield (igpm) 14.5
Depth to bedrock (ft) 10	Reservoir material	Method
Water bearing fractures encountered at (ft): 152 155	Reservoir vol. (cu.yd)	Rate (igpm) 8
Outer Well Casing: From (ft) 0 To (ft) 145	Reservoir material size	Duration (hrs) 1.5
Diameter (in) 6	Apron Material	Depth to water at end of test (ft)
Length of casing above ground : (ft) (in)	Apron depth (ft)	Total drawdown (ft)
Driveshoe make UNKNOWN	Apron thickness (ft)	Water level recovered to (ft)
	Apron width (ft)	Recovery time (hrs)
	Apron volume (cu.yd)	Depth to static level (ft) 4
	Bottom material	Overflow <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBSERVATION WELL - LAWRENCETOWN (043)	Final status of well OBSERVATION WELL
	Water use MONITORING
	Method of drilling ROTARY
	Date well completed 16-Mar-77

Well Report

(Summary Log)

NSEL Well No. 782683

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input style="width:90%;" type="text" value="STEWART, EDMUND"/>	Well Drilled For: Owner <input style="width:100%;" type="text" value="NS DEPT. OF ENVIRONMENT"/>
Certificate No. <input style="width:100%;" type="text" value="4"/>	or Contractor/Builder/Consultant, etc. <input style="width:100%;" type="text"/>
Company <input style="width:90%;" type="text" value="E. D. STEWART LTD."/>	Civic Address of Well <input style="width:100%;" type="text" value="NS OBS WELL - DURHAM (045)"/>
	Lot Number <input style="width:100%;" type="text"/> Subdivision <input style="width:100%;" type="text"/>
	County <input style="width:100%;" type="text" value="PICTOU"/> Postal Code <input style="width:100%;" type="text"/>
	Nearest Community in Atlas/Map Book <input style="width:100%;" type="text" value="ATLAS"/> <input style="width:100%;" type="text" value="DURHAM"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input style="width:100%;" type="text"/>	Map Sheet <input style="width:100%;" type="text" value="11E10"/>	Northing (m) <input style="width:100%;" type="text" value="5052105"/>
Map Page No. <input style="width:100%;" type="text"/>	Reference Map <input style="width:100%;" type="text"/>	Easting (m) <input style="width:100%;" type="text" value="516224"/>
Reference Letter <input style="width:100%;" type="text"/>	Tract No. <input style="width:100%;" type="text"/>	Property (PID) <input style="width:100%;" type="text"/>
Reference Number <input style="width:100%;" type="text"/>	Claim <input style="width:100%;" type="text"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Letter <input style="width:100%;" type="text"/>		
Roamer Number <input style="width:100%;" type="text"/>		

Depth in feet	Primary Lithology	Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	20		SANDY	TILL				<input type="checkbox"/>
20	247	RED		SANDSTONE & SHALE	GRAY		SANDSTONE & SHA	<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input style="width:100%;" type="text" value="247"/>	Depth of liner (crock) (ft) <input style="width:100%;" type="text"/>	Estimated Yield (igpm) <input style="width:100%;" type="text" value="100"/>
Depth to bedrock (ft) <input style="width:100%;" type="text" value="20"/>	Reservoir material <input style="width:100%;" type="text"/>	Method <input style="width:100%;" type="text" value="PUMPED"/>
Water bearing fractures encountered at (ft): <input style="width:100%;" type="text"/>	Reservoir vol. (cu.yd) <input style="width:100%;" type="text"/>	Rate (igpm) <input style="width:100%;" type="text" value="100"/>
Outer Well Casing: From (ft) <input style="width:100%;" type="text"/> To (ft) <input style="width:100%;" type="text"/>	Reservoir material size <input style="width:100%;" type="text"/>	Duration (hrs) <input style="width:100%;" type="text" value="72"/>
Diameter (in) <input style="width:100%;" type="text"/>	Apron Material <input style="width:100%;" type="text"/>	Depth to water at end of test (ft) <input style="width:100%;" type="text"/>
Length of casing above ground : (ft) <input style="width:100%;" type="text"/> (in) <input style="width:100%;" type="text"/>	Apron depth (ft) <input style="width:100%;" type="text"/>	Total drawdown (ft) <input style="width:100%;" type="text"/>
Driveshoe make <input style="width:100%;" type="text"/>	Apron thickness (ft) <input style="width:100%;" type="text"/>	Water level recovered to (ft) <input style="width:100%;" type="text"/>
	Apron width (ft) <input style="width:100%;" type="text"/>	Recovery time (hrs) <input style="width:100%;" type="text"/>
	Apron volume (cu.yd) <input style="width:100%;" type="text"/>	Depth to static level (ft) <input style="width:100%;" type="text"/>
	Bottom material <input style="width:100%;" type="text"/>	Overflow <input type="checkbox"/>

Comments <input style="width:95%;" type="text" value="NS OBSERVATION WELL - DURHAM (045)"/>	Well Status/Water Use/Date Completed	
	Final status of well	<input style="width:100%;" type="text" value="OBSERVATION WELL"/>
	Water use	<input style="width:100%;" type="text" value="MONITORING"/>
	Method of drilling	<input style="width:100%;" type="text"/>
	Date well completed	<input style="width:100%;" type="text" value="01-Jul-78"/>

Well Report

(Summary Log)

NSEL Well No. 772021

Well Type **DRILLED**

Certified Well Contractor				Well Owner/Contractor Information				
Name <input type="text" value="HOPPER, RUSSELL"/>				Well Drilled For: Owner <input type="text" value="NS DEPT. OF DEVELOPMENT"/>				
Certificate No. <input type="text" value="20"/>				or Contractor/Builder/Consultant, etc. <input type="text" value="CBCL"/>				
Company <input type="text" value="HOPPER BROS. LTD."/>				Civic Address of Well <input type="text" value="NS OBS WELL - KENTVILLE (048)"/>				
				Lot Number <input type="text"/> Subdivision <input type="text"/>				
				County <input type="text" value="KINGS"/> Postal Code <input type="text"/>				
				Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="KENTVILLE"/>				
Well Location								
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :				
Atlas or Map Book <input type="text"/>		Map Sheet <input type="text" value="21A2"/>		Northing (m) <input type="text" value="4992245"/>				
Map Page No. <input type="text"/>		Reference Map <input type="text" value="A"/>		Easting (m) <input type="text" value="377628"/>				
Reference Letter <input type="text"/>		Tract No. <input type="text" value="71"/>		Property (PID) <input type="text"/>				
Reference Number <input type="text"/>		Claim <input type="text"/>		Well Location Sketch Available		<input type="checkbox"/>		
Roamer Letter <input type="text"/>								
Roamer Number <input type="text"/>								
Depth in feet		Primary Lithology		Secondary Lithology				
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	55		FINE GRAINED	SAND		MEDIUM GRAINE	SAND	<input type="checkbox"/>
55	60		MEDIUM GRAIN	SAND		COARSE GRAIN	SAND	<input type="checkbox"/>
60	95			GRAVEL				<input checked="" type="checkbox"/>
95	380	GRAY		SANDSTONE		INTERBEDDED	SHALE	<input checked="" type="checkbox"/>
380	400	BROWN	ARGILLACEOU	METASEDIMENT	PURPLE			<input type="checkbox"/>
Well Construction Information				Dug Well Information		Water Yield		
Total depth below surface (ft) <input type="text" value="400"/>				Depth of liner (crock) (ft) <input type="text"/>		Estimated Yield (igpm) <input type="text" value="150"/>		
Depth to bedrock (ft) <input type="text" value="95"/>				Reservoir material <input type="text"/>		Method <input type="text" value="PUMPED"/>		
Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>				Reservoir vol. (cu.yd) <input type="text"/>		Rate (igpm) <input type="text" value="150"/>		
Outer Well Casing:				Reservoir material size <input type="text"/>		Duration (hrs) <input type="text" value="72"/>		
From (ft) <input type="text" value="0"/> To (ft) <input type="text" value="100"/>				Apron Material <input type="text"/>		Depth to water at end of test (ft) <input type="text" value="122"/>		
Diameter (in) <input type="text" value="8"/>				Apron depth (ft) <input type="text"/>		Total drawdown (ft) <input type="text" value="140"/>		
Length of casing above ground :				Apron thickness (ft) <input type="text"/>		Water level recovered to (ft) <input type="text"/>		
(ft) <input type="text"/> (in) <input type="text"/>				Apron width (ft) <input type="text"/>		Recovery time (hrs) <input type="text"/>		
Driveshoe make <input type="text"/>				Apron volume (cu.yd) <input type="text"/>		Depth to static level (ft) <input type="text"/>		
				Bottom material <input type="text"/>		Overflow <input type="checkbox"/>		
Comments				Well Status/Water Use/Date Completed				
<input type="text" value="NS OBSERVATION WELL - KENTVILLE (048)"/>				Final status of well <input type="text" value="OBSERVATION WELL"/>				
				Water use <input type="text" value="MONITORING"/>				
				Method of drilling <input type="text"/>				
				Date well completed <input type="text" value="20-May-77"/>				

Well Report

(Summary Log)

NSEL Well No. 771077

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name: MCDONALD, IAN	Well Drilled For: Owner: NS DEPT. OF ENVIRONMENT
Certificate No.: 45	or Contractor/Builder/Consultant, etc.:
Company: ISLAND WELL DRILLERS	Civic Address of Well: NS OBS WELL - SYDNEY (050)
	Lot Number: Subdivision:
	County: CAPE BRETON Postal Code:
	Nearest Community in Atlas/Map Book: ATLAS SYDNEY

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book: MAP	Map Sheet: 11K1	Northing (m): 5106450
Map Page No.: 24	Reference Map: A	Easting (m): 720589
Reference Letter: A	Tract No.: 66	Property (PID):
Reference Number: 5	Claim:	Well Location Sketch Available: <input type="checkbox"/>
Roamer Letter: J		
Roamer Number: 13		

Depth in feet	Primary Lithology	Secondary Lithology
From To	Colour 1 Description 1	Colour 2 Description 2
0 13	BOULDER & GRAVEL	
13 330	COAL & SHALE & SANDS	

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft): 330	Depth of liner (crock) (ft):	Estimated Yield (igpm): 250
Depth to bedrock (ft): 13	Reservoir material:	Method: PUMPED
Water bearing fractures encountered at (ft): 63	Reservoir vol. (cu.yd):	Rate (igpm): 250
Outer Well Casing:	Reservoir material size:	Duration (hrs): 1
From (ft): 6 To (ft): 22	Apron Material:	Depth to water at end of test (ft):
Diameter (in): 6	Apron depth (ft):	Total drawdown (ft):
Length of casing above ground :	Apron thickness (ft):	Water level recovered to (ft):
(ft): (in):	Apron width (ft):	Recovery time (hrs):
Driveshoe make: UNKNOWN	Apron volume (cu.yd):	Depth to static level (ft):
	Bottom material:	Overflow: <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBSERVATION WELL - SYDNEY (050)	Final status of well: OBSERVATION WELL
	Water use: MONITORING
	Method of drilling: ROTARY
	Date well completed: 09-Mar-77

Well Report

(Summary Log)

NSEL Well No. 871262

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="CHISHOLM, WAYNE"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF ENVIRONMENT"/>
Certificate No. <input type="text" value="2"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="G. W. REID WELL DRILLING LTD."/>	Civic Address of Well <input type="text" value="NS OBS WELL - NORTH GRANT (054)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="ANTIGONISH"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="LOWER NORTH GRANT"/>

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	<input type="text"/>	Map Sheet	<input type="text"/>	Northing (m)	<input type="text" value="5055139"/>
Map Page No.	<input type="text" value="29"/>	Reference Map	<input type="text"/>	Easting (m)	<input type="text" value="576403"/>
Reference Letter	<input type="text" value="C"/>	Tract No.	<input type="text"/>	Property (PID)	<input type="text"/>
Reference Number	<input type="text" value="4"/>	Claim	<input type="text"/>	Well Location Sketch Available	<input type="checkbox"/>
Roamer Letter	<input type="text" value="M"/>				
Roamer Number	<input type="text" value="12"/>				

Depth in feet	Primary Lithology	Secondary Lithology						
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	34			MUD				<input type="checkbox"/>
34	150			SHALE			SLATE	<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="150"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text"/>	Reservoir material <input type="text"/>	Method <input type="text" value="AIR LIFT"/>
Water bearing fractures encountered at (ft) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text" value="20"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
From (ft) <input type="text"/> To (ft) <input type="text" value="43"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="6"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground :	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
(ft) <input type="text"/> (in) <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
Driveshoe make <input type="text"/>	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text" value="14"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments	<input type="text" value="NS OBSERVATION WELL NORTH GRANT (054)"/>	Well Status/Water Use/Date Completed	
		Final status of well	<input type="text" value="OBSERVATION WELL"/>
		Water use	<input type="text" value="OTHER"/>
		Method of drilling	<input type="text"/>
		Date well completed	<input type="text" value="30-Mar-87"/>

Well Report

(Summary Log)

NSEL Well No. 871263

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="CHISHOLM, WAYNE"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF ENVIRONMENT"/>
Certificate No. <input type="text" value="2"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="G. W. REID WELL DRILLING LTD."/>	Civic Address of Well <input type="text" value="NS OBS WELL - STILLWATER (055)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="GUYSBOROUGH"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="STILLWATER"/>

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	<input type="text"/>	Map Sheet	<input type="text"/>	Northing (m)	<input type="text" value="5004212"/>
Map Page No.	<input type="text" value="30"/>	Reference Map	<input type="text"/>	Easting (m)	<input type="text" value="579938"/>
Reference Letter	<input type="text" value="C"/>	Tract No.	<input type="text"/>	Property (PID)	<input type="text"/>
Reference Number	<input type="text" value="4"/>	Claim	<input type="text"/>	Well Location Sketch Available	<input type="checkbox"/>
Roamer Letter	<input type="text" value="P"/>				
Roamer Number	<input type="text" value="12"/>				

Depth in feet	Primary Lithology	Secondary Lithology						
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	24			MUD			GRAVEL	<input type="checkbox"/>
24	38			ROCK				<input type="checkbox"/>
38	118			BEDROCK				<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="118"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text"/>	Reservoir material <input type="text"/>	Method <input type="text" value="AIR LIFT"/>
Water bearing fractures encountered at (ft) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text" value="4.5"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
From (ft) <input type="text"/> To (ft) <input type="text" value="44"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="6"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground :	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
(ft) <input type="text"/> (in) <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
Driveshoe make <input type="text"/>	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text" value="30"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments NS OBSERVATION WELL STILLWATER (055)	Well Status/Water Use/Date Completed	
	Final status of well	<input type="text" value="OBSERVATION WELL"/>
	Water use	<input type="text" value="MONITORING"/>
	Method of drilling	<input type="text"/>
	Date well completed	<input type="text" value="01-Apr-87"/>

Well Report

(Summary Log)

NSEL Well No. 871264

Well Type **DRILLED**

Certified Well Contractor		Well Owner/Contractor Information	
Name	CHISHOLM, WAYNE	Well Drilled For: Owner	NS DEPT. OF ENVIRONMENT
Certificate No.	2	or Contractor/Builder/Consultant, etc.	
Company	G. W. REID WELL DRILLING LTD.	Civic Address of Well	NS OBS WELL - SHEET HARBOUR (056)
		Lot Number	Subdivision
		County	Postal Code
		Nearest Community in Atlas/Map Book	BEAVER HARBOUR

Well Location

NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	<input type="text"/>	Map Sheet	<input type="text"/>	Northing (m)	<input type="text" value="4972468"/>
Map Page No.	<input type="text" value="28"/>	Reference Map	<input type="text"/>	Easting (m)	<input type="text" value="543176"/>
Reference Letter	<input type="text" value="E"/>	Tract No.	<input type="text"/>	Property (PID)	<input type="text"/>
Reference Number	<input type="text" value="2"/>	Claim	<input type="text"/>	Well Location Sketch Available	<input type="checkbox"/>
Roamer Letter	<input type="text" value="H"/>				
Roamer Number	<input type="text" value="14"/>				

Depth in feet		Primary Lithology			Secondary Lithology			
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	8			GRAVEL				<input type="checkbox"/>
8	18			ROCK				<input type="checkbox"/>
18	150			BEDROCK				<input type="checkbox"/>

Well Construction Information		Dug Well Information		Water Yield	
Total depth below surface (ft)	<input type="text" value="150"/>	Depth of liner (crock) (ft)	<input type="text"/>	Estimated Yield (igpm)	<input type="text"/>
Depth to bedrock (ft)	<input type="text"/>	Reservoir material	<input type="text"/>	Method	<input type="text" value="AIR LIFT"/>
Water bearing fractures encountered at (ft)	<input type="text"/>	Reservoir vol. (cu.yd)	<input type="text"/>	Rate (igpm)	<input type="text" value="0.7"/>
<input type="text"/>	<input type="text"/>	Reservoir material size	<input type="text"/>	Duration (hrs)	<input type="text"/>
Outer Well Casing:		Apron Material	<input type="text"/>	Depth to water at end of test (ft)	<input type="text"/>
From (ft)	<input type="text"/>	Apron depth (ft)	<input type="text"/>	Total drawdown (ft)	<input type="text"/>
To (ft)	<input type="text" value="23"/>	Apron thickness (ft)	<input type="text"/>	Water level recovered to (ft)	<input type="text"/>
Diameter (in)	<input type="text" value="6"/>	Apron width (ft)	<input type="text"/>	Recovery time (hrs)	<input type="text"/>
Length of casing above ground :		Apron volume (cu.yd)	<input type="text"/>	Depth to static level (ft)	<input type="text" value="10"/>
(ft)	<input type="text"/>	Bottom material	<input type="text"/>	Overflow	<input type="checkbox"/>
(in)	<input type="text"/>				
Driveshoe make	<input type="text"/>				

Comments	NS OBSERVATION WELL SHEET HARBOUR (056)	Well Status/Water Use/Date Completed	
		Final status of well	OBSERVATION WELL
		Water use	OTHER
		Method of drilling	
		Date well completed	06-Apr-87

Well Report

(Summary Log)

NSEL Well No. 870189

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name: MOWAT, DONALD	Well Drilled For: Owner: NS DEPT. OF ENVIRONMENT
Certificate No.: 210	or Contractor/Builder/Consultant, etc.:
Company: MOWAT'S WELL DRILLING LTD.	Civic Address of Well: NS OBS WELL - HAYDEN LAKE (059)
	Lot Number: Subdivision:
	County: SHELBURNE Postal Code:
	Nearest Community in Atlas/Map Book: ATLAS EAST JORDAN

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book: MAP	Map Sheet:	Northing (m): 4849195
Map Page No.: 10	Reference Map:	Easting (m): 321365
Reference Letter: C	Tract No.:	Property (PID):
Reference Number: 5	Claim:	Well Location Sketch Available: <input type="checkbox"/>
Roamer Letter: G		
Roamer Number: 7		

Depth in feet	Primary Lithology	Secondary Lithology
From To	Colour 1 Description 1	Colour 2 Description 2
0 10	CLAY	BOULDER
10 160	GREYWACKE	

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft): 160	Depth of liner (crock) (ft):	Estimated Yield (igpm): 3.7
Depth to bedrock (ft): 10	Reservoir material:	Method: AIR LIFT
Water bearing fractures encountered at (ft): 30	Reservoir vol. (cu.yd):	Rate (igpm): 3.7
Outer Well Casing:	Reservoir material size:	Duration (hrs):
From (ft): 0 To (ft): 20	Apron Material:	Depth to water at end of test (ft):
Diameter (in): 6	Apron depth (ft):	Total drawdown (ft):
Length of casing above ground :	Apron thickness (ft):	Water level recovered to (ft):
(ft): (in):	Apron width (ft):	Recovery time (hrs):
Driveshoe make:	Apron volume (cu.yd):	Depth to static level (ft):
	Bottom material:	Overflow: <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBSERVATION WELL - HAYDEN LAKE (059)	Final status of well: OBSERVATION WELL
	Water use: MONITORING
	Method of drilling:
	Date well completed: 31-Mar-87

Well Report

(Summary Log)

NSE Well No. 870188

Well Type DRILLED

Certified Well Contractor

Name MOWAT, DONALD
 Certificate No. 210
 Company MOWAT'S WELL DRILLING LTD.

Well Owner/Contractor Information

Well Drilled For: Owner NS DEPT. OF ENVIRONMENT
 or Contractor/Builder/Consultant, etc.
 Civic Address of Well NS OBS WELL - METEGHAN (060)
 Lot Number Subdivision
 County DIGBY Postal Code
 Nearest Community in Atlas/Map Book METEGHAN RIVER

Well Location

NS Atlas or Map Book Reference :
 Atlas or Map Book
 Map Page No. 4
 Reference Letter A
 Reference Number 4
 Roamer Letter F
 Roamer Number 16

NTS Map Reference :
 Map Sheet
 Reference Map
 Tract No.
 Claim

GPS (WGS84 UTM) :
 Northing (m) 4900628
 Easting (m) 250890
 Property (PID)
 Well Location Sketch Available ☐

Depth in feet

Primary Lithology

Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	4			GRAVEL				<input type="checkbox"/>
4	200			SLATE				<input type="checkbox"/>

Well Construction Information

Total depth below surface (ft) 200
 Depth to bedrock (ft)
 Water bearing fractures encountered at (ft):
 90 180
 Outer Well Casing:
 From (ft) To (ft) 40
 Diameter (in) 6
 Length of casing above ground :
 (ft) (in)
 Driveshoe make

Dug Well Information

Depth of liner (crock) (ft)
 Reservoir material
 Reservoir vol. (cu.yd)
 Reservoir material size
 Apron Material
 Apron depth (ft)
 Apron thickness (ft)
 Apron width (ft)
 Apron volume (cu.yd)
 Bottom material

Water Yield

Estimated Yield (igpm)
 Method AIR LIFT
 Rate (igpm) 0.7
 Duration (hrs)
 Depth to water at end of test (ft)
 Total drawdown (ft)
 Water level recovered to (ft)
 Recovery time (hrs)
 Depth to static level (ft)
 Overflow ☐

Comments NS OBSERVATION WELL METEGHAN (060)

Well Status/Water Use/Date Completed

Final status of well OBSERVATION WELL
 Water use MONITORING
 Method of drilling
 Date well completed 31-Mar-87

Well Report

(Summary Log)

NSEL Well No. 891722

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name: MOWAT, DONALD	Well Drilled For: Owner: NS DEPT. OF ENVIRONMENT
Certificate No.: 210	or Contractor/Builder/Consultant, etc.:
Company: MOWAT'S WELL DRILLING LTD.	Civic Address of Well: NS OBS WELL - ANNAPOLIS ROYAL (062)
	Lot Number: Subdivision:
	County: ANnapolis Postal Code:
	Nearest Community in Atlas/Map Book: ATLAS LAKE LA ROSE

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book: MAP	Map Sheet:	Northing (m): 4952588
Map Page No.: 8	Reference Map:	Easting (m): 303029
Reference Letter: A	Tract No.:	Property (PID):
Reference Number: 4	Claim:	Well Location Sketch Available: <input type="checkbox"/>
Roamer Letter: H		
Roamer Number: 14		

Depth in feet	Primary Lithology	Secondary Lithology
From To	Colour 1 Description 1 Lithology 1	Colour 2 Description 2 Lithology 2 Water Found
0 71	CLAY	BOULDER
71 205	GRANITE	

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft): 205	Depth of liner (crock) (ft):	Estimated Yield (igpm): 0.5
Depth to bedrock (ft): 71	Reservoir material:	Method: AIR LIFT
Water bearing fractures encountered at (ft): 120	Reservoir vol. (cu.yd):	Rate (igpm): 0.5
Outer Well Casing:	Reservoir material size:	Duration (hrs):
From (ft): 0 To (ft): 80	Apron Material:	Depth to water at end of test (ft):
Diameter (in): 6	Apron depth (ft):	Total drawdown (ft):
Length of casing above ground :	Apron thickness (ft):	Water level recovered to (ft):
(ft): (in):	Apron width (ft):	Recovery time (hrs):
Driveshoe make:	Apron volume (cu.yd):	Depth to static level (ft):
	Bottom material:	Overflow: <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBSERVATION WELL - ANNAPOLIS ROYAL (062)	Final status of well: OBSERVATION WELL
	Water use: MONITORING
	Method of drilling:
	Date well completed: 20-Dec-89

Well Report

(Summary Log)

NSEL Well No. 891721

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MOWAT, DONALD"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF ENVIRONMENT"/>
Certificate No. <input type="text" value="210"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="MOWAT'S WELL DRILLING LTD."/>	Civic Address of Well <input type="text" value="NS OBS WELL - HEBRON (063)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="YARMOUTH"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="DAYTON"/>

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	<input type="text" value="MAP"/>	Map Sheet	<input type="text"/>	Northing (m)	<input type="text" value="4862322"/>
Map Page No.	<input type="text" value="5"/>	Reference Map	<input type="text"/>	Easting (m)	<input type="text" value="250697"/>
Reference Letter	<input type="text" value="A"/>	Tract No.	<input type="text"/>	Property (PID)	<input type="text"/>
Reference Number	<input type="text" value="3"/>	Claim	<input type="text"/>	Well Location Sketch Available	<input type="checkbox"/>
Roamer Letter	<input type="text" value="F"/>				
Roamer Number	<input type="text" value="14"/>				

Depth in feet	Primary Lithology	Secondary Lithology
From To Colour 1 Description 1 Lithology 1 Colour 2 Description 2 Lithology 2 Water Found		
0 3	TOPSOIL	<input type="checkbox"/>
3 140	SLATE	<input type="checkbox"/>
140 144	QUARTZITE	<input type="checkbox"/>
144 150	SHALE	<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="150"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text" value="45"/>
Depth to bedrock (ft) <input type="text" value="3"/>	Reservoir material <input type="text"/>	Method <input type="text" value="AIR LIFT"/>
Water bearing fractures encountered at (ft): <input type="text" value="57"/> <input type="text" value="150"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text" value="45"/>
Outer Well Casing: From (ft) <input type="text" value="0"/> To (ft) <input type="text" value="40"/>	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
Diameter (in) <input type="text" value="6"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Driveshoe make <input type="text"/>	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments <input type="text" value="NS OBSERVATION WELL - HEBRON (063)"/>	Well Status/Water Use/Date Completed	
	Final status of well	<input type="text" value="OBSERVATION WELL"/>
	Water use	<input type="text" value="MONITORING"/>
	Method of drilling	<input type="text"/>
	Date well completed	<input type="text" value="19-Dec-89"/>

Well Report

(Summary Log)

NSE Well No. 902524

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input style="width:90%;" type="text" value="MCDONALD, IAN"/>	Well Drilled For: Owner <input style="width:100%;" type="text" value="NS DEPT. OF ENVIRONMENT"/>
Certificate No. <input style="width:100%;" type="text" value="45"/>	or Contractor/Builder/Consultant, etc. <input style="width:100%;" type="text"/>
Company <input style="width:90%;" type="text" value="ISLAND WELL DRILLERS"/>	Civic Address of Well <input style="width:90%;" type="text" value="NS OBS WELL - MARGAREE (064)"/>
	Lot Number <input style="width:100%;" type="text"/>
	County <input style="width:100%;" type="text" value="INVERNESS"/> Postal Code <input style="width:100%;" type="text"/>
	Nearest Community in Atlas/Map Book <input style="width:100%;" type="text" value="MARGAREE VALLEY"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input style="width:100%;" type="text"/>	Map Sheet <input style="width:100%;" type="text"/>	Northing (m) <input style="width:100%;" type="text" value="5137031"/>
Map Page No. <input style="width:100%;" type="text" value="38"/>	Reference Map <input style="width:100%;" type="text"/>	Easting (m) <input style="width:100%;" type="text" value="655717"/>
Reference Letter <input style="width:100%;" type="text" value="A"/>	Tract No. <input style="width:100%;" type="text"/>	Property (PID) <input style="width:100%;" type="text"/>
Reference Number <input style="width:100%;" type="text" value="1"/>	Claim <input style="width:100%;" type="text"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Letter <input style="width:100%;" type="text" value="L"/>		
Roamer Number <input style="width:100%;" type="text" value="12"/>		

Depth in feet	Primary Lithology	Secondary Lithology
From To Colour 1 Description 1 Lithology 1 Colour 2 Description 2 Lithology 2 Water Found		
0 9		GRAVEL TILL <input type="checkbox"/>
9 150		CONGLOMERATE <input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input style="width:100%;" type="text" value="150"/>	Depth of liner (crock) (ft) <input style="width:100%;" type="text"/>	Estimated Yield (igpm) <input style="width:100%;" type="text"/>
Depth to bedrock (ft) <input style="width:100%;" type="text"/>	Reservoir material <input style="width:100%;" type="text"/>	Method <input style="width:100%;" type="text" value="AIR LIFT"/>
Water bearing fractures encountered at (ft): <input style="width:100%;" type="text"/>	Reservoir vol. (cu.yd) <input style="width:100%;" type="text"/>	Rate (igpm) <input style="width:100%;" type="text" value="10"/>
Outer Well Casing: From (ft) <input style="width:100%;" type="text"/> To (ft) <input style="width:100%;" type="text" value="40"/>	Reservoir material size <input style="width:100%;" type="text"/>	Duration (hrs) <input style="width:100%;" type="text"/>
Diameter (in) <input style="width:100%;" type="text" value="6"/>	Apron Material <input style="width:100%;" type="text"/>	Depth to water at end of test (ft) <input style="width:100%;" type="text"/>
Length of casing above ground : (ft) <input style="width:100%;" type="text"/> (in) <input style="width:100%;" type="text"/>	Apron depth (ft) <input style="width:100%;" type="text"/>	Total drawdown (ft) <input style="width:100%;" type="text"/>
Driveshoe make <input style="width:100%;" type="text"/>	Apron thickness (ft) <input style="width:100%;" type="text"/>	Water level recovered to (ft) <input style="width:100%;" type="text"/>
	Apron width (ft) <input style="width:100%;" type="text"/>	Recovery time (hrs) <input style="width:100%;" type="text"/>
	Apron volume (cu.yd) <input style="width:100%;" type="text"/>	Depth to static level (ft) <input style="width:100%;" type="text"/>
	Bottom material <input style="width:100%;" type="text"/>	Overflow <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
<p>NO FRACTURE INCREASED FR 80' - NS OBSERVATION WELL MARGAREE (064)</p>	Final status of well <input style="width:100%;" type="text"/>
	Water use <input style="width:100%;" type="text"/>
	Method of drilling <input style="width:100%;" type="text"/>
	Date well completed <input style="width:100%;" type="text" value="16-Jan-90"/>

Well Report

(Summary Log)

NSE Well No. 892288

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MCDONALD, IAN"/>	Well Drilled For: Owner <input type="text" value="DEPT. OF ENVIRONMENT"/>
Certificate No. <input type="text" value="45"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="ISLAND WELL DRILLERS"/>	Civic Address of Well <input type="text" value="NS OBS WELL - INGONISH (065)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="VICTORIA"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="INGONISH"/>

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	<input type="text"/>	Map Sheet	<input type="text"/>	Northing (m)	<input type="text" value="5170473"/>
Map Page No.	<input type="text" value="42"/>	Reference Map	<input type="text"/>	Easting (m)	<input type="text" value="698083"/>
Reference Letter	<input type="text" value="A"/>	Tract No.	<input type="text"/>	Property (PID)	<input type="text"/>
Reference Number	<input type="text" value="2"/>	Claim	<input type="text"/>	Well Location Sketch Available	<input type="checkbox"/>
Roamer Letter	<input type="text" value="F"/>				
Roamer Number	<input type="text" value="10"/>				

Depth in feet	Primary Lithology	Secondary Lithology						
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	30			GRAVEL			BOULDERS	<input type="checkbox"/>
30	33			GRANITE				<input type="checkbox"/>
33	150			GRANITE				<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="150"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text"/>	Reservoir material <input type="text"/>	Method <input type="text" value="AIR LIFT"/>
Water bearing fractures encountered at (ft): <input type="text" value="44"/> <input type="text" value="149"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text" value="100"/>
Outer Well Casing: From (ft) <input type="text"/> To (ft) <input type="text" value="40"/>	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
Diameter (in) <input type="text" value="6"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Driveshoe make <input type="text"/>	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBSERVATION WELL INGONISH (065) <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>	Final status of well <input type="text" value="OBSERVATION WELL"/>
	Water use <input type="text"/>
	Method of drilling <input type="text"/>
	Date well completed <input type="text" value="12-Dec-89"/>

Well Report

(Summary Log)

NSE Well No. 832002

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="JOHNSON, GREGORY I."/>	Well Drilled For: Owner <input type="text" value="PHILLIP"/> <input type="text" value="BARLEY"/>
Certificate No. <input type="text" value="6"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text" value="HUB WELL DRILLING LTD."/>	Civic Address of Well <input type="text" value="NS OBS WELL - DEBERT (068)"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="COLCHESTER"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text"/> <input type="text" value="DEBERT"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input type="text"/>	Map Sheet <input type="text" value="11E6"/>	Northing (m) <input type="text" value="5028483"/>
Map Page No. <input type="text"/>	Reference Map <input type="text" value="C"/>	Easting (m) <input type="text" value="466921"/>
Reference Letter <input type="text"/>	Tract No. <input type="text" value="60"/>	Property (PID) <input type="text"/>
Reference Number <input type="text"/>	Claim <input type="text"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Letter <input type="text"/>		
Roamer Number <input type="text"/>		

Depth in feet	Primary Lithology	Secondary Lithology
From To	Colour 1 Description 1	Lithology 1 Colour 2 Description 2 Lithology 2 Water Found
0 18		CLAY <input type="checkbox"/>
18 153		CONGLOMERATE <input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="153"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text"/>	Reservoir material <input type="text"/>	Method <input type="text"/>
Water bearing fractures encountered at (ft): <input type="text" value="112"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text" value="10"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
From (ft) <input type="text"/> To (ft) <input type="text" value="26"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="4"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/>	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
Driveshoe make <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text" value="112"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments <input type="text" value="NS OBSERVATION WELL DEBERT (068)"/>	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Well Status/Water Use/Date Completed</th> </tr> </thead> <tbody> <tr> <td>Final status of well</td> <td><input type="text" value="WATER SUPPLY WELL"/></td> </tr> <tr> <td>Water use</td> <td><input type="text" value="DOMESTIC"/></td> </tr> <tr> <td>Method of drilling</td> <td><input type="text"/></td> </tr> <tr> <td>Date well completed</td> <td><input type="text" value="13-Aug-83"/></td> </tr> </tbody> </table>	Well Status/Water Use/Date Completed		Final status of well	<input type="text" value="WATER SUPPLY WELL"/>	Water use	<input type="text" value="DOMESTIC"/>	Method of drilling	<input type="text"/>	Date well completed	<input type="text" value="13-Aug-83"/>
Well Status/Water Use/Date Completed											
Final status of well	<input type="text" value="WATER SUPPLY WELL"/>										
Water use	<input type="text" value="DOMESTIC"/>										
Method of drilling	<input type="text"/>										
Date well completed	<input type="text" value="13-Aug-83"/>										

Well Report

(Summary Log)

NSE Well No. 943326

Well Type DRILLED

Certified Well Contractor

Name

Certificate No.

Company ISLAND WELL DRILLERS

Well Owner/Contractor Information

Well Drilled For: Owner NS DEPT. OF ENVIRONMENT

or Contractor/Builder/Consultant, etc.

Civic Address of Well NS OBS WELL - DALEM LAKE (069)

Lot Number Subdivision

County VICTORIA Postal Code

Nearest Community in Atlas/Map Book ATLAS DALEM LAKE

Well Location

NS Atlas or Map Book Reference :

Atlas or Map Book MAP

Map Page No. 38

Reference Letter E

Reference Number 2

Roamer Letter O

Roamer Number 12

NTS Map Reference :

Map Sheet

Reference Map

Tract No.

Claim

GPS (WGS84 UTM) :

Northing (m) 5124576

Easting (m) 698221

Property (PID)

Well Location Sketch Available ☐

Depth in feet

Primary Lithology

Secondary Lithology

Well Construction Information

Total depth below surface (ft) 200

Depth to bedrock (ft)

Water bearing fractures encountered at (ft):

Outer Well Casing:

From (ft) 0 To (ft) 41

Diameter (in) 6

Length of casing above ground :

(ft) (in)

Driveshoe make

Dug Well Information

Depth of liner (crock) (ft)

Reservoir material

Reservoir vol. (cu.yd)

Reservoir material size

Apron Material

Apron depth (ft)

Apron thickness (ft)

Apron width (ft)

Apron volume (cu.yd)

Bottom material

Water Yield

Estimated Yield (igpm)

Method

Rate (igpm)

Duration (hrs)

Depth to water at end of test (ft)

Total drawdown (ft)

Water level recovered to (ft)

Recovery time (hrs)

Depth to static level (ft)

Overflow ☐

Comments NS OBSERVATION WELL - DALEM LAKE (069)

Well Status/Water Use/Date Completed

Final status of well OBSERVATION WELL

Water use MONITORING

Method of drilling

Date well completed 01-Jan-94

Well Report

(Summary Log)

NSE Well No.

Well Type

Certified Well Contractor	Well Owner/Contractor Information
Name <input style="width:90%;" type="text" value="CHAPPELL, WALTER"/>	Well Drilled For: Owner <input style="width:10%;" type="text"/> <input style="width:80%;" type="text" value="TOWN OF AMHERST"/>
Certificate No. <input style="width:10%;" type="text" value="32"/>	or Contractor/Builder/Consultant, etc. <input style="width:90%;" type="text"/>
Company <input style="width:90%;" type="text" value="WALTER CHAPPELL WELL DRILLING LTD."/>	Civic Address of Well <input style="width:90%;" type="text" value="NS OBS WELL - AMHERST (071)"/>
	Lot Number <input style="width:10%;" type="text"/> Subdivision <input style="width:80%;" type="text"/>
	County <input style="width:20%;" type="text" value="CUMBERLAND"/> Postal Code <input style="width:20%;" type="text"/>
	Nearest Community in Atlas/Map Book <input style="width:10%;" type="text" value="ATLAS"/> <input style="width:70%;" type="text" value="AMHERST"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input style="width:100%;" type="text" value="MAP"/>	Map Sheet <input style="width:100%;" type="text"/>	Northing (m) <input style="width:100%;" type="text" value="5079213"/>
Map Page No. <input style="width:100%;" type="text" value="18"/>	Reference Map <input style="width:100%;" type="text"/>	Easting (m) <input style="width:100%;" type="text" value="411279"/>
Reference Letter <input style="width:100%;" type="text" value="B"/>	Tract No. <input style="width:100%;" type="text"/>	Property (PID) <input style="width:100%;" type="text"/>
Reference Number <input style="width:100%;" type="text" value="2"/>	Claim <input style="width:100%;" type="text"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Letter <input style="width:100%;" type="text" value="G"/>		
Roamer Number <input style="width:100%;" type="text" value="8"/>		

Depth in feet		Primary Lithology			Secondary Lithology			
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	15			TILL				<input type="checkbox"/>
15	45			SANDSTONE				<input type="checkbox"/>
45	101	REDDISH		SHALE	BROWN			<input type="checkbox"/>
101	109	BROWN	FINE GRAINED	SANDSTONE				<input type="checkbox"/>
109	114	REDDISH	FINE GRAINED					<input type="checkbox"/>
114	124	REDDISH	FINE GRAINED	SANDSTONE		MEDIUM GRAINE		<input type="checkbox"/>
124	127	BROWN	FINE GRAINED	SHALE				<input type="checkbox"/>
127	130			SHALE			SANDSTONE	<input type="checkbox"/>
130	157	REDDISH	MEDIUM GRAIN	SANDSTONE	RED	COARSE GRAINE		<input type="checkbox"/>
157	161	GRAYISH	MEDIUM GRAIN	SANDSTONE		COARSE GRAINE		<input type="checkbox"/>
161	165	REDDISH		SHALE	BROWN			<input type="checkbox"/>
165	166	BROWN		MUDSTONE				<input type="checkbox"/>
166	196	GRAYISH	MEDIUM GRAIN	SANDSTONE				<input type="checkbox"/>
196	198	REDDISH		SHALE			SANDSTONE	<input type="checkbox"/>
198	202	REDDISH		SILTSTONE				<input type="checkbox"/>
202	206	BROWN		SHALE				<input type="checkbox"/>
206	211	BROWN		SILTSTONE				<input type="checkbox"/>
211	227	BROWN		SILTSTONE			SHALE	<input type="checkbox"/>
227	235	REDDISH		SHALE				<input type="checkbox"/>
235	258	BROWN		SILTSTONE	GREENIS			<input type="checkbox"/>
258	262	REDDISH	MEDIUM GRAIN	SANDSTONE				<input type="checkbox"/>
262	263	REDDISH		SHALE				<input type="checkbox"/>
263	277	REDDISH	MEDIUM GRAIN	SANDSTONE				<input type="checkbox"/>
277	281	REDDISH		SHALE				<input type="checkbox"/>
281	294	BROWN		SILTSTONE				<input type="checkbox"/>
294	296	BROWN		SHALE				<input type="checkbox"/>
296	358	BROWN	FINE GRAINED	SILTSTONE			SHALE	<input type="checkbox"/>
358	370	REDDISH		SANDSTONE				<input type="checkbox"/>
370	378	GRAYISH		SANDSTONE				<input type="checkbox"/>
378	382	BROWN		SILTSTONE				<input type="checkbox"/>

Well Construction Information		Dug Well Information	Water Yield	
Total depth below surface (ft)	<input type="text" value="382"/>	Depth of liner (crock) (ft)	<input type="text"/>	
Depth to bedrock (ft)	<input type="text" value="15"/>	Reservoir material	<input type="text"/>	
Water bearing fractures encountered at (ft):		Reservoir vol. (cu.yd)	<input type="text"/>	
<input type="text" value="140"/>	<input type="text"/>	Reservoir material size	<input type="text"/>	
Outer Well Casing:		Apron Material	<input type="text"/>	
From (ft)	<input type="text" value="0"/>	Apron depth (ft)	<input type="text"/>	
To (ft)	<input type="text" value="20"/>	Apron thickness (ft)	<input type="text"/>	
Diameter (in)	<input type="text" value="6"/>	Apron width (ft)	<input type="text"/>	
Length of casing above ground :		Apron volume (cu.yd)	<input type="text"/>	
(ft)	<input type="text"/>	Bottom material	<input type="text"/>	
(in)	<input type="text"/>			
Driveshoe make	<input type="text"/>			
<div>Comments</div> <div>NS OBSERVATION WELL - AMHERST (071)</div>		Well Status/Water Use/Date Completed		
		Final status of well	<input type="text" value="TEST HOLE"/>	
		Water use	<input type="text" value="MONITORING"/>	
		Method of drilling	<input type="text"/>	
		Date well completed	<input type="text" value="29-Jul-86"/>	

Well Report

(Summary Log)

NSE Well No. 721858

Well Type DRILLED

Certified Well Contractor

Name

Certificate No.

Company

Well Owner/Contractor Information

Well Drilled For: Owner NS DEPT. OF ENVIRONMENT

or Contractor/Builder/Consultant, etc.

Civic Address of Well NS OBS WELL - KELLEY RIVER (073)

Lot Number Subdivision

County CUMBERLAND Postal Code

Nearest Community in Atlas/Map Book ATLAS KELLEY RIVER

Well Location

NS Atlas or Map Book Reference :

Atlas or Map Book MAP

Map Page No. 12

Reference Letter D

Reference Number 5

Roamer Letter

Roamer Number

NTS Map Reference :

Map Sheet

Reference Map

Tract No.

Claim

GPS (WGS84 UTM) :

Northing (m) 5049171

Easting (m) 386806

Property (PID)

Well Location Sketch Available ☐

Depth in feet

Primary Lithology

Secondary Lithology

Well Construction Information

Total depth below surface (ft) 38

Depth to bedrock (ft)

Water bearing fractures encountered at (ft):

Outer Well Casing:

From (ft) 0 To (ft) 14

Diameter (in)

Length of casing above ground :

(ft) (in)

Driveshoe make

Dug Well Information

Depth of liner (crock) (ft)

Reservoir material

Reservoir vol. (cu.yd)

Reservoir material size

Apron Material

Apron depth (ft)

Apron thickness (ft)

Apron width (ft)

Apron volume (cu.yd)

Bottom material

Water Yield

Estimated Yield (igpm)

Method

Rate (igpm)

Duration (hrs)

Depth to water at end of test (ft)

Total drawdown (ft)

Water level recovered to (ft)

Recovery time (hrs)

Depth to static level (ft)

Overflow ☐

Comments NS OBSERVATION WELL - KELLEY RIVER (073)

Well Status/Water Use/Date Completed

Final status of well OBSERVATION WELL

Water use MONITORING

Method of drilling

Date well completed 01-Jul-72

Well Report

(Summary Log)

NSE Well No. 070618

Well Type DRILLED

Certified Well Contractor

Name ROGERS, KIRK
 Certificate No. 307
 Company K. D. ROGERS WELL DRILLING LTD.

Well Owner/Contractor Information

Well Drilled For: Owner NS DEPT. OF ENVIRONMENT &
 or Contractor/Builder/Consultant, etc.
 Civic Address of Well NS OBS WELL - SHEFFIELD MILLS (075)
 Lot Number Subdivision
 County KINGS Postal Code B0P 1H0
 Nearest Community in Atlas/Map Book ATLAS SHEFFIELD MILLS

Well Location

NS Atlas or Map Book Reference : NTS Map Reference : GPS (WGS84 UTM) :
 Atlas or Map Book ATLAS Map Sheet Northing (m) 5000590
 Map Page No. 47 Reference Map Easting (m) 384693
 Reference Letter V Tract No. Property (PID) 55301667
 Reference Number 2 Claim Well Location Sketch Available ☒
 Roamer Letter D
 Roamer Number 6

Depth in feet

Primary Lithology

Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	16			SAND				<input type="checkbox"/>
16	175			SANDSTONE				<input checked="" type="checkbox"/>

Well Construction Information

Total depth below surface (ft) 175
 Depth to bedrock (ft) 16
 Water bearing fractures encountered at (ft):
 60 175
 Outer Well Casing:
 From (ft) 0 To (ft) 63
 Diameter (in) 6
 Length of casing above ground :
 (ft) 4 (in)
 Driveshoe make MEDIUM

Dug Well Information

Depth of liner (crock) (ft)
 Reservoir material
 Reservoir vol. (cu.yd)
 Reservoir material size
 Apron Material
 Apron depth (ft)
 Apron thickness (ft)
 Apron width (ft)
 Apron volume (cu.yd)
 Bottom material

Water Yield

Estimated Yield (igpm)
 Method AIR LIFT
 Rate (igpm) 60
 Duration (hrs) 1
 Depth to water at end of test (ft)
 Total drawdown (ft)
 Water level recovered to (ft) 20
 Recovery time (hrs) 24
 Depth to static level (ft)
 Overflow ☐

Comments NS OBSERVATION WELL - SHEFFIELD MILLS (075)
 FRACTURES 60-175 FT. WELL LOC AT EDGE OF FIELD. WELLHEAD 4 FT ABOVE GROUND.

Well Status/Water Use/Date Completed

Final status of well OBSERVATION WELL
 Water use MONITORING
 Method of drilling ROTARY
 Date well completed 29-Aug-07

Well Report

(Summary Log)

NSE Well No. 080824
Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name JACOBS, BYRON	Well Drilled For: Owner NS DEPT. OF ENVIRONMENT &
Certificate No. 695	or Contractor/Builder/Consultant, etc.
Company BLUENOSE WELL DRILLING	Civic Address of Well NS OBS WELL - FALL RIVER (076); TAMARACK DRIVE
	Lot Number 65 Subdivision
	County HALIFAX Postal Code
	Nearest Community in Atlas/Map Book ATLAS FALL RIVER

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	ATLAS	Map Sheet		Northing (m)	4962226
Map Page No.	58	Reference Map		Easting (m)	450243
Reference Letter	Y	Tract No.		Estimated GPS Accuracy (m, +/-)	50
Reference Number	4	Claim		Property (PID)	40372922
Roamer Letter	F	Well Construction Sketch Available	<input checked="" type="checkbox"/>	Well Location Sketch Available	<input checked="" type="checkbox"/>
Roamer Number	5				

Depth in feet	Primary Lithology	Secondary Lithology
From To Colour 1 Description 1 Lithology 1 Colour 2 Description 2 Lithology 2 Water Found		
0 4		
4 200	SLATE	

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) 200	Depth of liner (crock) (ft)	Estimated Yield (igpm)
Depth to bedrock (ft) 3.5	Reservoir material	Method AIR LIFT
Water bearing fractures encountered at (ft): 18 41 102	Reservoir vol. (cu.yd)	Rate (igpm) 1.5
Outer Well Casing: From (ft) 0 To (ft) 43	Reservoir material size	Duration (hrs) 1
Diameter (in) 6	Apron Material	Depth to water at end of test (ft) 195
Length of casing above ground : (ft) 1 (in)	Apron depth (ft)	Total drawdown (ft)
Driveshoe make HEAVY WALL	Apron thickness (ft)	Water level recovered to (ft)
	Apron width (ft)	Recovery time (hrs)
	Apron volume (cu.yd)	Depth to static level (ft) 12
	Bottom material	Overflow <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBS WELL - FALL RIVER (076); WB FRACT 18' 5 GPM, 41' 0.5 GPM, 102' 1 GPM. WELL LOC SKETCH: NEAR BALLFIELD OFF TALISMAN DR. WELL SKETCH SHOWS 8.75" HOLE FOR CASING, 6" BOREHOLE, BENTONITE SEAL ABOVE DRIVE SHOE. LOT FROM POL.	Final status of well OBSERVATION WELL
	Water use MONITORING
	Method of drilling ROTARY
ADDRESS TAMARACK DRIVE (POL), TALISMAN DRIVE (LOG).	Date well completed 28-Feb-08

Well Report

(Summary Log)

NSE Well No. 080132

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name: ROGERS, KIRK Certificate No.: 307 Company: K. D. ROGERS WELL DRILLING	Well Drilled For: Owner: NS DEPT. OF ENVIRONMENT & or Contractor/Builder/Consultant, etc. Civic Address of Well: NS OBS WELL - WEST NORTHFIELD (077); BRUHM ROAD Lot Number: Subdivision: County: LUNENBURG Postal Code: B4V 2W1 Nearest Community in Atlas/Map Book: ATLAS WEST NORTHFIELD

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	ATLAS	Map Sheet		Northing (m)	4922807
Map Page No.	73	Reference Map		Easting (m)	373416
Reference Letter	Z	Tract No.		Estimated GPS Accuracy (m, +/-)	50
Reference Number	2	Claim		Property (PID)	60200029
Roamer Letter	A	Well Construction Sketch Available	<input type="checkbox"/>	Well Location Sketch Available	<input type="checkbox"/>
Roamer Number	1				

Depth in feet	Primary Lithology	Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	10							<input type="checkbox"/>
10	24			SAND & SILT				<input checked="" type="checkbox"/>
24	160			SLATE				<input checked="" type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft): 160 Depth to bedrock (ft): 24 Water bearing fractures encountered at (ft): 124 Outer Well Casing: From (ft): 0 To (ft): 42 Diameter (in): 6 Length of casing above ground : (ft): 3 (in): Driveshoe make: MEDIUM	Depth of liner (crock) (ft): Reservoir material: Reservoir vol. (cu.yd): Reservoir material size: Apron Material: Apron depth (ft): Apron thickness (ft): Apron width (ft): Apron volume (cu.yd): Bottom material:	Estimated Yield (igpm): Method: AIR LIFT Rate (igpm): 7 Duration (hrs): 1 Depth to water at end of test (ft): Total drawdown (ft): Water level recovered to (ft): 32 Recovery time (hrs): 1 Depth to static level (ft): Overflow: <input type="checkbox"/>

Comments : NS OBS WELL - WEST NORTHFIELD (077); DIST TO OFF-SITE SEPTIC: 100+ FT. ADDRESS HWY #10 (POL), BRUHM RD (LOG).	Well Status/Water Use/Date Completed Final status of well: OBSERVATION WELL Water use: MONITORING Method of drilling: ROTARY Date well completed: 06-Mar-08
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Well Report

(Summary Log)

NSE Well No. 080861

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name JACOBS, LARRY	Well Drilled For: Owner NS DEPT. OF ENVIRONMENT &
Certificate No. 734	or Contractor/Builder/Consultant, etc.
Company BLUENOSE WELL DRILLING	Civic Address of Well NS OBS WELL - MUSQUODOBOIT HBR (078); 104 PARK RD
	Lot Number Subdivision DALE BENNETT PARK
	County HALIFAX Postal Code
	Nearest Community in Atlas/Map Book ATLAS MUSQUODOBOIT HARBOUR

Well Location								
NS Atlas or Map Book Reference :			NTS Map Reference :			GPS (WGS84 UTM) :		
Atlas or Map Book	ATLAS		Map Sheet			Northing (m)	4959880	
Map Page No.	59		Reference Map			Easting (m)	488125	
Reference Letter	Y		Tract No.			Estimated GPS Accuracy (m, +/-)	50	
Reference Number	5		Claim			Property (PID)	40591471	
Roamer Letter	D		Well Construction Sketch Available	<input checked="" type="checkbox"/>		Well Location Sketch Available	<input checked="" type="checkbox"/>	
Roamer Number	1							

Depth in feet		Primary Lithology		Secondary Lithology				
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	66							<input type="checkbox"/>
66	81		COARSE GRAIN SAND					<input checked="" type="checkbox"/>
81	200		SEE COMMENTS					<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) 200	Depth of liner (crock) (ft)	Estimated Yield (igpm)
Depth to bedrock (ft) 81	Reservoir material	Method AIR LIFT
Water bearing fractures encountered at (ft): 66 81 95	Reservoir vol. (cu.yd)	Rate (igpm) 0.5
Outer Well Casing:	Reservoir material size	Duration (hrs) 1
From (ft) 0 To (ft) 89	Apron Material	Depth to water at end of test (ft) 195
Diameter (in) 6	Apron depth (ft)	Total drawdown (ft)
Length of casing above ground :	Apron thickness (ft)	Water level recovered to (ft)
(ft) 1 (in)	Apron width (ft)	Recovery time (hrs)
Driveshoe make HEAVY WALL	Apron volume (cu.yd)	Depth to static level (ft)
	Bottom material	Overflow <input type="checkbox"/>

Comments : NS OBS WELL - MUSQUODOBOIT HBR (078); WB FRACT 66-81, 95 FT. WELL SKETCH: CASED OFF SAND WITH COBBLES WITH 200 GPM; BENTONITE SEAL ABOVE DRIVE SHOE; 6" BOREHOLE BELOW CASING. WELL LOC SKETCH: WELL NEAR PARKING LOT. STRAT: 81-200 FT NOT GIVEN.

CIVIC & ADDRESS FROM POL.

Well Status/Water Use/Date Completed	
Final status of well	OBSERVATION WELL
Water use	MONITORING
Method of drilling	ROTARY
Date well completed	06-Mar-08

Well Report

(Summary Log)

NSE Well No. 690090

Well Type DRILLED

Certified Well Contractor

Name BOWMASTER
 Certificate No. 3
 Company WILLIAM BOWMASTER, SR.

Well Owner/Contractor Information

Well Drilled For: Owner NS DEPT. OF LANDS & FORES
 or Contractor/Builder/Consultant, etc.
 Civic Address of Well NS OBS WELL - LEWIS LAKE (079)
 Lot Number Subdivision
 County HALIFAX Postal Code
 Nearest Community in Atlas/Map Book LEWIS LAKE

Well Location

NS Atlas or Map Book Reference :

Atlas or Map Book MAP
 Map Page No. 20
 Reference Letter D
 Reference Number 5
 Roamer Letter H
 Roamer Number 8

NTS Map Reference :

Map Sheet
 Reference Map
 Tract No.
 Claim

GPS (WGS84 UTM) :

Northing (m) 4948873
 Easting (m) 433048
 Estimated GPS Accuracy (m, +/-) 50
 Property (PID)

Well Construction Sketch Available ☐

Well Location Sketch Available ☐

Depth in feet

Primary Lithology

Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	20							<input type="checkbox"/>
20	250			GRANITE				<input type="checkbox"/>

Well Construction Information

Total depth below surface (ft) 250
 Depth to bedrock (ft) 20
 Water bearing fractures encountered at (ft):
 240 250
 Outer Well Casing:
 From (ft) 6 To (ft) 25
 Diameter (in) 6
 Length of casing above ground :
 (ft) (in)
 Driveshoe make UNKNOWN

Dug Well Information

Depth of liner (crock) (ft)
 Reservoir material
 Reservoir vol. (cu.yd)
 Reservoir material size
 Apron Material
 Apron depth (ft)
 Apron thickness (ft)
 Apron width (ft)
 Apron volume (cu.yd)
 Bottom material

Water Yield

Estimated Yield (igpm)
 Method
 Rate (igpm) 6
 Duration (hrs) 1.5
 Depth to water at end of test (ft) 27
 Total drawdown (ft)
 Water level recovered to (ft)
 Recovery time (hrs)
 Depth to static level (ft)
 Overflow ☐

Comments : NS OBS WELL - LEWIS LAKE (079) FORMER PARK WATER SUPPLY WELL; CONVERTED TO OBSERVATION WELL IN 2008.

Well Status/Water Use/Date Completed

Final status of well OBSERVATION WELL
 Water use MONITORING
 Method of drilling ROTARY
 Date well completed 11-Jun-69

Well Report

(Summary Log)

NSE Well No. 770542

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input style="width:90%;" type="text" value="HINGLEY, FLEMING"/> Certificate No. <input style="width:10%;" type="text" value="15"/> Company <input style="width:90%;" type="text" value="A & W WELL DRILLING LTD."/>	Well Drilled For: Owner <input style="width:10%;" type="text"/> NS DEPT. OF ENVIRONMENT or Contractor/Builder/Consultant, etc. <input style="width:90%;" type="text"/> Civic Address of Well <input style="width:90%;" type="text" value="NS OBS WELL - ARISAIG (080)"/> Lot Number <input style="width:10%;" type="text"/> Subdivision <input style="width:80%;" type="text"/> County <input style="width:30%;" type="text" value="ANTIGONISH"/> Postal Code <input style="width:30%;" type="text"/> Nearest Community in Atlas/Map Book <input style="width:15%;" type="text"/> ARISAIG

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	<input style="width:50%;" type="text" value="MAP"/>	Map Sheet	<input style="width:50%;" type="text"/>	Northing (m)	<input style="width:50%;" type="text" value="5067204"/>
Map Page No.	<input style="width:50%;" type="text" value="29"/>	Reference Map	<input style="width:50%;" type="text"/>	Easting (m)	<input style="width:50%;" type="text" value="564737"/>
Reference Letter	<input style="width:50%;" type="text" value="B"/>	Tract No.	<input style="width:50%;" type="text"/>	Estimated GPS Accuracy (m, +/-)	<input style="width:50%;" type="text" value="50"/>
Reference Number	<input style="width:50%;" type="text" value="3"/>	Claim	<input style="width:50%;" type="text"/>	Property (PID)	<input style="width:50%;" type="text"/>
Roamer Letter	<input style="width:50%;" type="text" value="L"/>	Well Construction Sketch Available <input type="checkbox"/>		Well Location Sketch Available <input type="checkbox"/>	
Roamer Number	<input style="width:50%;" type="text" value="9"/>				

Depth in feet	Primary Lithology	Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
1	20			GRAVEL & SAND				<input type="checkbox"/>
20	30			SHALE				<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input style="width:50%;" type="text" value="300"/> Depth to bedrock (ft) <input style="width:50%;" type="text" value="30"/> Water bearing fractures encountered at (ft) <input style="width:15%;" type="text"/> <input style="width:15%;" type="text"/> <input style="width:15%;" type="text"/> <input style="width:15%;" type="text"/> <input style="width:15%;" type="text"/> <input style="width:15%;" type="text"/> Outer Well Casing: From (ft) <input style="width:10%;" type="text" value="1"/> To (ft) <input style="width:10%;" type="text" value="40"/> Diameter (in) <input style="width:50%;" type="text" value="6"/> Length of casing above ground : (ft) <input style="width:20%;" type="text"/> (in) <input style="width:20%;" type="text"/> Driveshoe make <input style="width:50%;" type="text" value="UNKNOWN"/>	Depth of liner (crock) (ft) <input style="width:50%;" type="text"/> Reservoir material <input style="width:50%;" type="text"/> Reservoir vol. (cu.yd) <input style="width:50%;" type="text"/> Reservoir material size <input style="width:50%;" type="text"/> Apron Material <input style="width:50%;" type="text"/> Apron depth (ft) <input style="width:50%;" type="text"/> Apron thickness (ft) <input style="width:50%;" type="text"/> Apron width (ft) <input style="width:50%;" type="text"/> Apron volume (cu.yd) <input style="width:50%;" type="text"/> Bottom material <input style="width:50%;" type="text"/>	Estimated Yield (igpm) <input style="width:50%;" type="text"/> Method <input style="width:50%;" type="text"/> Rate (igpm) <input style="width:50%;" type="text"/> Duration (hrs) <input style="width:50%;" type="text"/> Depth to water at end of test (ft) <input style="width:50%;" type="text"/> Total drawdown (ft) <input style="width:50%;" type="text"/> Water level recovered to (ft) <input style="width:50%;" type="text"/> Recovery time (hrs) <input style="width:50%;" type="text"/> Depth to static level (ft) <input style="width:50%;" type="text"/> Overflow <input type="checkbox"/>

Comments	Well Status/Water Use/Date Completed
NS OBS WELL - ARISAIG (080) FORMER PARK WATER SUPPLY WELL FOR ARISAIG PARK; CONVERTED TO MONITORING WELL IN 2009.	Final status of well <input style="width:90%;" type="text" value="OBSERVATION WELL"/> Water use <input style="width:90%;" type="text" value="MONITORING"/> Method of drilling <input style="width:90%;" type="text" value="ROTARY"/> Date well completed <input style="width:50%;" type="text" value="05-Jul-77"/>

Well Report

(Summary Log)

NSE Well No.

Well Type

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF LANDS AND FOR"/> or Contractor/Builder/Consultant, etc. <input type="text"/>
Certificate No. <input type="text"/>	Civic Address of Well <input type="text" value="NS OBS WELL - LONG POINT (082)"/> HWY 19
Company <input type="text"/>	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="INVERNESS"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="LONG POINT"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input type="text"/>	Map Sheet <input type="text"/>	Northing (m) <input type="text" value="5074277"/>
Map Page No. <input type="text"/>	Reference Map <input type="text"/>	Easting (m) <input type="text" value="618131"/>
Reference Letter <input type="text"/>	Tract No. <input type="text"/>	Estimated GPS Accuracy (m, +/-) <input type="text" value="50"/>
Reference Number <input type="text"/>	Claim <input type="text"/>	Property (PID) <input type="text" value="50017490"/>
Roamer Letter <input type="text"/>	Well Construction Sketch Available <input type="checkbox"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Number <input type="text"/>		

Depth in feet	Primary Lithology	Secondary Lithology
<input type="text"/>	<input type="text"/>	<input type="text"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="61"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text"/>	Reservoir material <input type="text"/>	Method <input type="text"/>
Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
From (ft) <input type="text" value="0"/> To (ft) <input type="text" value="43"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="6"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground :	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
(ft) <input type="text"/> (in) <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
Driveshoe make <input type="text"/>	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text" value="7.5"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments : NS OBS WELL - LONG POINT (082) FORMER PARK SUPPLY WELL CONVERTED TO OBSERVATION WELL IN 2009; WELL CONSTRUCTION DATE ASSUMED TO BE 1-AUG-1974 FROM PUMPING TEST RECORDS;	Well Status/Water Use/Date Completed
	Final status of well <input type="text" value="OBSERVATION WELL"/>
	Water use <input type="text" value="MONITORING"/>
	Method of drilling <input type="text"/>
	Date well completed <input type="text" value="01-Aug-74"/>

Well Report

(Summary Log)

NSE Well No. 510124

Well Type DRILLED

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="MATTATALL, EARL"/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF LANDS AND FOR"/>
Certificate No. <input type="text" value="33"/>	or Contractor/Builder/Consultant, etc. <input type="text"/>
Company <input type="text"/>	Civic Address of Well <input type="text" value="NS OBS WELL - TATAMAGOUCHE (083) 2660 HWY 6"/>
	Lot Number <input type="text"/> Subdivision <input type="text"/>
	County <input type="text" value="COLCHESTER"/> Postal Code <input type="text"/>
	Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="TATAMAGOUCHE"/>

Well Location		
NS Atlas or Map Book Reference :	NTS Map Reference :	GPS (WGS84 UTM) :
Atlas or Map Book <input type="text"/>	Map Sheet <input type="text"/>	Northing (m) <input type="text" value="5061591"/>
Map Page No. <input type="text"/>	Reference Map <input type="text"/>	Easting (m) <input type="text" value="479226"/>
Reference Letter <input type="text"/>	Tract No. <input type="text"/>	Estimated GPS Accuracy (m, +/-) <input type="text" value="50"/>
Reference Number <input type="text"/>	Claim <input type="text"/>	Property (PID) <input type="text" value="20419768"/>
Roamer Letter <input type="text"/>	Well Construction Sketch Available <input type="checkbox"/>	Well Location Sketch Available <input type="checkbox"/>
Roamer Number <input type="text"/>		

Depth in feet	Primary Lithology	Secondary Lithology
<input type="text"/>	<input type="text"/>	<input type="text"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="80.4"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text"/>	Reservoir material <input type="text"/>	Method <input type="text"/>
Water bearing fractures encountered at (ft): <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text"/>
From (ft) <input type="text"/> To (ft) <input type="text"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text"/>
Diameter (in) <input type="text" value="4"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground :	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text"/>
(ft) <input type="text"/> (in) <input type="text"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
Driveshoe make <input type="text"/>	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

Comments : NS OBS WELL - TATAMAGOUCHE (083) FORMER PARK SUPPLY WELL CONVERTED TO OBSERVATION WELL IN 2009.	Well Status/Water Use/Date Completed
	Final status of well <input type="text" value="OBSERVATION WELL"/>
	Water use <input type="text" value="MONITORING"/>
	Method of drilling <input type="text"/>
	Date well completed <input type="text" value="01-Jan-51"/>

Certified Well Contractor		Well Owner/Contractor Information	
Name	JOHNSON, BRIAN	Well Drilled For: Owner	ST. FX UNIVERSITY WELL #3
Certificate No.	882	or Contractor/Builder/Consultant, etc.	ST. FX UNIVERSITY
Company	HUB WELL DRILLING LTD.	Civic Address of Well	NS OBS WELL - PUGWASH (084); 247 WATER ST.
		Lot Number	Subdivision
		County	CUMBERLAND
		Postal Code	
		Nearest Community in Atlas/Map Book	ATLAS PUGWASH

Well Location					
NS Atlas or Map Book Reference :		NTS Map Reference :		GPS (WGS84 UTM) :	
Atlas or Map Book	ATLAS	Map Sheet		Northing (m)	5077959
Map Page No.	17	Reference Map		Easting (m)	448364
Reference Letter	Y	Tract No.		Estimated GPS Accuracy (m, +/-)	50
Reference Number	3	Claim		Property (PID)	25156936
Roamer Letter	C	Well Construction Sketch Available	<input type="checkbox"/>	Well Location Sketch Available	<input checked="" type="checkbox"/>
Roamer Number	6				

Depth in feet		Primary Lithology		Secondary Lithology				
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
0	24	BROWN		CLAY & SAND				<input type="checkbox"/>
24	70	BROWN		SHALE				<input type="checkbox"/>
70	133	BROWN		SANDSTONE				<input type="checkbox"/>
133	202	BROWN		SHALE	BROWN	SANDY	SHALE	<input type="checkbox"/>

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="202"/>	Depth of liner (crock) (ft) <input type="text"/>	Estimated Yield (igpm) <input type="text"/>
Depth to bedrock (ft) <input type="text" value="24"/>	Reservoir material <input type="text"/>	Method <input type="text" value="AIR LIFT"/>
Water bearing fractures encountered at (ft): <input type="text" value="51"/> <input type="text" value="75"/> <input type="text" value="85"/> <input type="text" value="120"/> <input type="text"/> <input type="text"/>	Reservoir vol. (cu.yd) <input type="text"/>	Rate (igpm) <input type="text" value="75"/>
Outer Well Casing:	Reservoir material size <input type="text"/>	Duration (hrs) <input type="text" value="1"/>
From (ft) <input type="text" value="0"/> To (ft) <input type="text" value="40"/>	Apron Material <input type="text"/>	Depth to water at end of test (ft) <input type="text" value="202"/>
Diameter (in) <input type="text" value="6"/>	Apron depth (ft) <input type="text"/>	Total drawdown (ft) <input type="text"/>
Length of casing above ground : (ft) <input type="text" value="2"/> (in) <input type="text" value="0"/>	Apron thickness (ft) <input type="text"/>	Water level recovered to (ft) <input type="text" value="9"/>
Driveshoe make <input type="text" value="REGULAR HEAVY"/>	Apron width (ft) <input type="text"/>	Recovery time (hrs) <input type="text"/>
	Apron volume (cu.yd) <input type="text"/>	Depth to static level (ft) <input type="text" value="9"/>
	Bottom material <input type="text"/>	Overflow <input type="checkbox"/>

<p>Comments : NS OBS WELL - PUGWASH (084); WELL #3. DIST TO ON & OFF-SITE SEPTIC: NONE, TO WATERCOURSE & WELL N/A. CIVIC 247 (LOG), MULTIPLE 227 & 247 & 249 (NSCAF). SEE LOGS 100981 & 100982 FOR WELLS #1 & 2.</p>	<p>Well Status/Water Use/Date Completed</p>
<p>NOTE: THIS WELL WAS DRILLED BY ST. FX AS PART OF SEA WATER INTRUSION PROJECT (ATLANTIC CLIMATE ADAPTION SOLUTIONS PROJECT) AND THEN CONVERTED TO A PROVINCIAL OBSERVATION WELL IN 2010.</p>	<p>Final status of well OBSERVATION WELL</p>
	<p>Water use OBSERVATION</p>
	<p>Method of drilling ROTARY</p>
	<p>Date well completed 30-Sep-10</p>

Well Report

(Summary Log)

NSE Well No. 062067

Well Type DRILLED

Certified Well Contractor

Name MCDONALD, JAMIE
 Certificate No. 446
 Company ISLAND WELL DRILLERS LTD.

Well Owner/Contractor Information

Well Drilled For: Owner VILLAGE OF ST. PETER'S
 or Contractor/Builder/Consultant, etc. DILLON CONSULTING LTD (SYDNEY)
 Civic Address of Well NS OBS WELL - ST. PETERS (085); OBAN ROAD
 Lot Number Subdivision
 County RICHMOND Postal Code
 Nearest Community in Atlas/Map Book MAP ST. PETER'S

Well Location

NS Atlas or Map Book Reference : NTS Map Reference : GPS (WGS84 UTM) :
 Atlas or Map Book MAP Map Sheet Northing (m) 5061576
 Map Page No. 39 Reference Map Easting (m) 667038
 Reference Letter B Tract No. Estimated GPS Accuracy (m, +/-) 50
 Reference Number 4 Claim Property (PID) 75086793
 Roamer Letter K Well Construction Sketch Available ☐ Well Location Sketch Available ☐
 Roamer Number 8

Depth in feet

Primary Lithology

Secondary Lithology

From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found
16	42	RED		HARDPAN				<input type="checkbox"/>
0	16	RED		FIRECLAY			BOULDERS	<input type="checkbox"/>
42	370	REDDISH B	SEE COMMENT	CONGLOMERATE		STRINGERS	SANDSTONE & SHA	<input type="checkbox"/>

Well Construction Information

Total depth below surface (ft) 370
 Depth to bedrock (ft) 42
 Water bearing fractures encountered at (ft):
☐ ☐ ☐ ☐ ☐ ☐
 Outer Well Casing:
 From (ft) 0 To (ft) 60
 Diameter (in) 6.625
 Length of casing above ground :
 (ft) 2 (in)
 Driveshoe make ROTARY - UNSPECI

Dug Well Information

Depth of liner (crock) (ft)
 Reservoir material
 Reservoir vol. (cu.yd)
 Reservoir material size
 Apron Material
 Apron depth (ft)
 Apron thickness (ft)
 Apron width (ft)
 Apron volume (cu.yd)
 Bottom material

Water Yield

Estimated Yield (igpm)
 Method AIR LIFT
 Rate (igpm) 12.5
 Duration (hrs) 2
 Depth to water at end of test (ft)
 Total drawdown (ft)
 Water level recovered to (ft)
 Recovery time (hrs)
 Depth to static level (ft)
 Overflow ☐

Comments : NS OBS WELL - ST. PETERS (085); WATER STEADILY INCREASED FROM 200'-370'. WATER COLOUR REDDISH. WELL STATUS: OBSERVATION WELL & TEST HOLE. DRILLING FLUID: BAROID QUICK FOAM. STRAT: 42-370 FT RED/BROWN CONGLOMERATE WITH MINOR SANDSTONE & SHALE STRINGERS.

NOTE: THIS WELL WAS ORIGINALLY DRILLED AS A MUNICIPAL TEST WELL IN 2006 AND CONVERTED TO A PROVINCIAL OBSERVATION WELL IN 2010.

Well Status/Water Use/Date Completed

Final status of well OBSERVATION WELL
 Water use OBSERVATION
 Method of drilling ROTARY
 Date well completed 02-Mar-06

Well Report

(Summary Log)

NSE Well No.
Well Type

Certified Well Contractor	Well Owner/Contractor Information
Name <input type="text" value="TRASK, JAMES L."/> Certificate No. <input type="text" value="18"/> Company <input type="text" value="S. G. TRASK AND SONS LTD."/>	Well Drilled For: Owner <input type="text" value="NS DEPT. OF LANDS & FORES"/> or Contractor/Builder/Consultant, etc. <input type="text"/> Civic Address of Well <input type="text" value="NS OBS WELL - SMILEYS PARK (086)"/> Lot Number <input type="text"/> Subdivision <input type="text"/> County <input type="text" value="HANTS"/> Postal Code <input type="text"/> Nearest Community in Atlas/Map Book <input type="text" value="ATLAS"/> <input type="text" value="MCKAY SECTION"/>

Well Location		
NS Atlas or Map Book Reference : Atlas or Map Book <input type="text" value="MAP"/> Map Page No. <input type="text" value="20"/> Reference Letter <input type="text" value="C"/> Reference Number <input type="text" value="1"/> Roamer Letter <input type="text" value="O"/> Roamer Number <input type="text" value="7"/>	NTS Map Reference : Map Sheet <input type="text"/> Reference Map <input type="text"/> Tract No. <input type="text"/> Claim <input type="text"/> Well Construction Sketch Available <input type="checkbox"/>	GPS (WGS84 UTM) : Northing (m) <input type="text" value="4984939"/> Easting (m) <input type="text" value="424131"/> Estimated GPS Accuracy (m, +/-) <input type="text" value="50"/> Property (PID) <input type="text"/> Well Location Sketch Available <input type="checkbox"/>

Depth in feet	Primary Lithology	Secondary Lithology																																				
<table border="1" style="width:100%"> <tr> <th>From</th> <th>To</th> <th>Colour 1</th> <th>Description 1</th> <th>Lithology 1</th> <th>Colour 2</th> <th>Description 2</th> <th>Lithology 2</th> <th>Water Found</th> </tr> <tr> <td>0</td> <td>25</td> <td></td> <td></td> <td>DRIFT & CLAY</td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> </tr> <tr> <td>25</td> <td>32</td> <td>GRAY</td> <td></td> <td>GRAVEL & CLAY</td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> </tr> <tr> <td>32</td> <td>61</td> <td>RED</td> <td></td> <td>CLAY</td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> </tr> </table>	From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found	0	25			DRIFT & CLAY				<input type="checkbox"/>	25	32	GRAY		GRAVEL & CLAY				<input type="checkbox"/>	32	61	RED		CLAY				<input type="checkbox"/>		
From	To	Colour 1	Description 1	Lithology 1	Colour 2	Description 2	Lithology 2	Water Found																														
0	25			DRIFT & CLAY				<input type="checkbox"/>																														
25	32	GRAY		GRAVEL & CLAY				<input type="checkbox"/>																														
32	61	RED		CLAY				<input type="checkbox"/>																														

Well Construction Information	Dug Well Information	Water Yield
Total depth below surface (ft) <input type="text" value="32"/> Depth to bedrock (ft) <input type="text"/> Water bearing fractures encountered at (ft): <input type="text" value="16"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Outer Well Casing: From (ft) <input type="text" value="6"/> To (ft) <input type="text" value="27"/> Diameter (in) <input type="text" value="6"/> Length of casing above ground : (ft) <input type="text"/> (in) <input type="text"/> Driveshoe make <input type="text" value="UNKNOWN"/>	Depth of liner (crock) (ft) <input type="text"/> Reservoir material <input type="text"/> Reservoir vol. (cu.yd) <input type="text"/> Reservoir material size <input type="text"/> Apron Material <input type="text"/> Apron depth (ft) <input type="text"/> Apron thickness (ft) <input type="text"/> Apron width (ft) <input type="text"/> Apron volume (cu.yd) <input type="text"/> Bottom material <input type="text"/>	Estimated Yield (igpm) <input type="text"/> Method <input type="text" value="PUMPED"/> Rate (igpm) <input type="text" value="60"/> Duration (hrs) <input type="text" value="8"/> Depth to water at end of test (ft) <input type="text" value="16"/> Total drawdown (ft) <input type="text" value="14"/> Water level recovered to (ft) <input type="text" value="16"/> Recovery time (hrs) <input type="text" value="8"/> Depth to static level (ft) <input type="text"/> Overflow <input type="checkbox"/>

Comments : NS OBS WELL - SMILEYS PARK (086) <p style="text-align:center">NOTE: THIS WAS A FORMER WATER SUPPLY WELL FOR SMILEYS PROVINCIAL PARK. IT WAS CONVERTED TO A PROVINCIAL OBSERVATION WELL IN 2011.</p>	Well Status/Water Use/Date Completed Final status of well <input type="text"/> Water use <input type="text" value="DOMESTIC"/> Method of drilling <input type="text" value="CABLE TOOL"/> Date well completed <input type="text" value="27-Mar-67"/>
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APPENDIX B
GROUNDWATER LEVEL GRAPHS

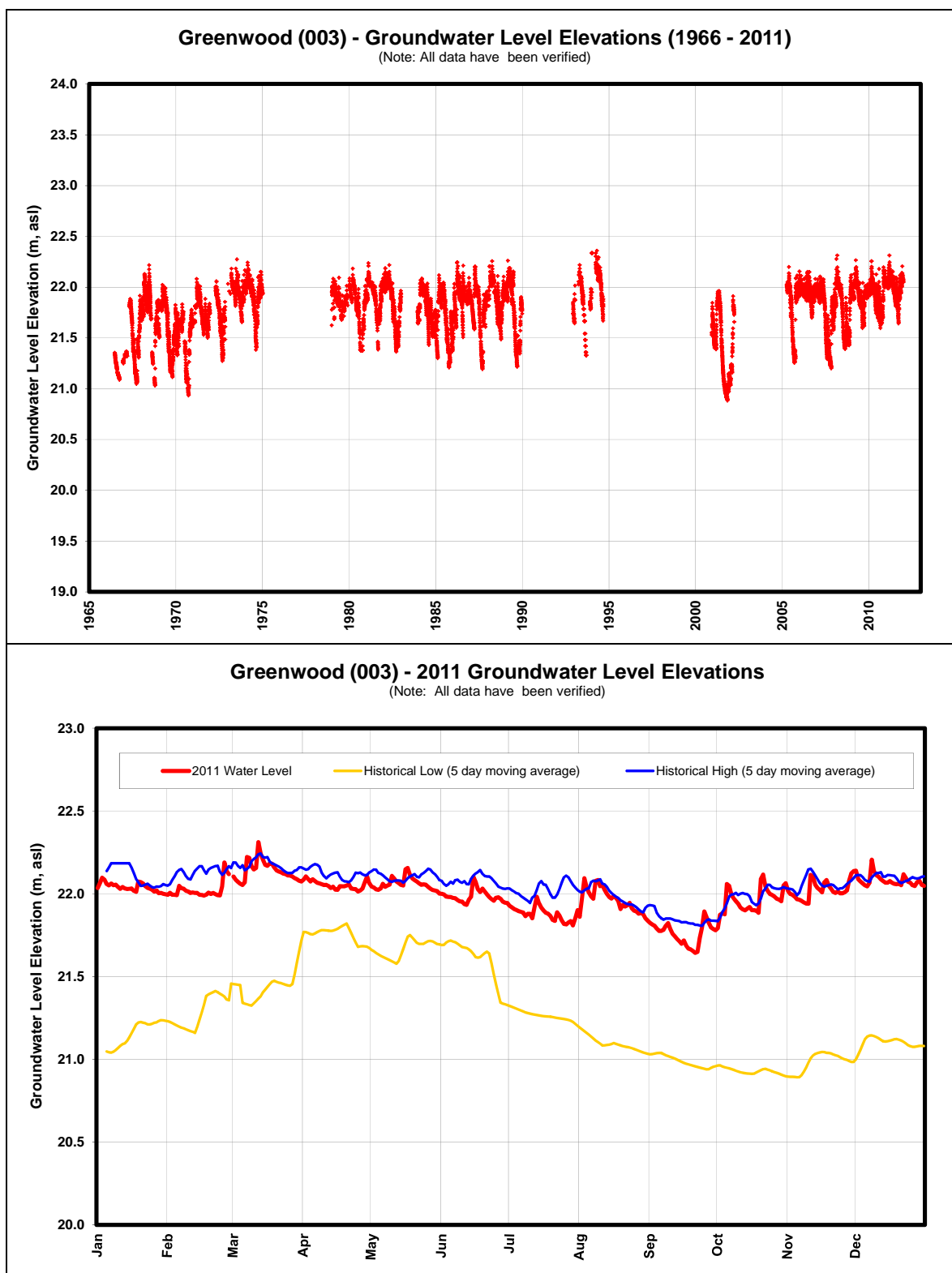


Figure B.1: Greenwood (003) Groundwater Level Elevations

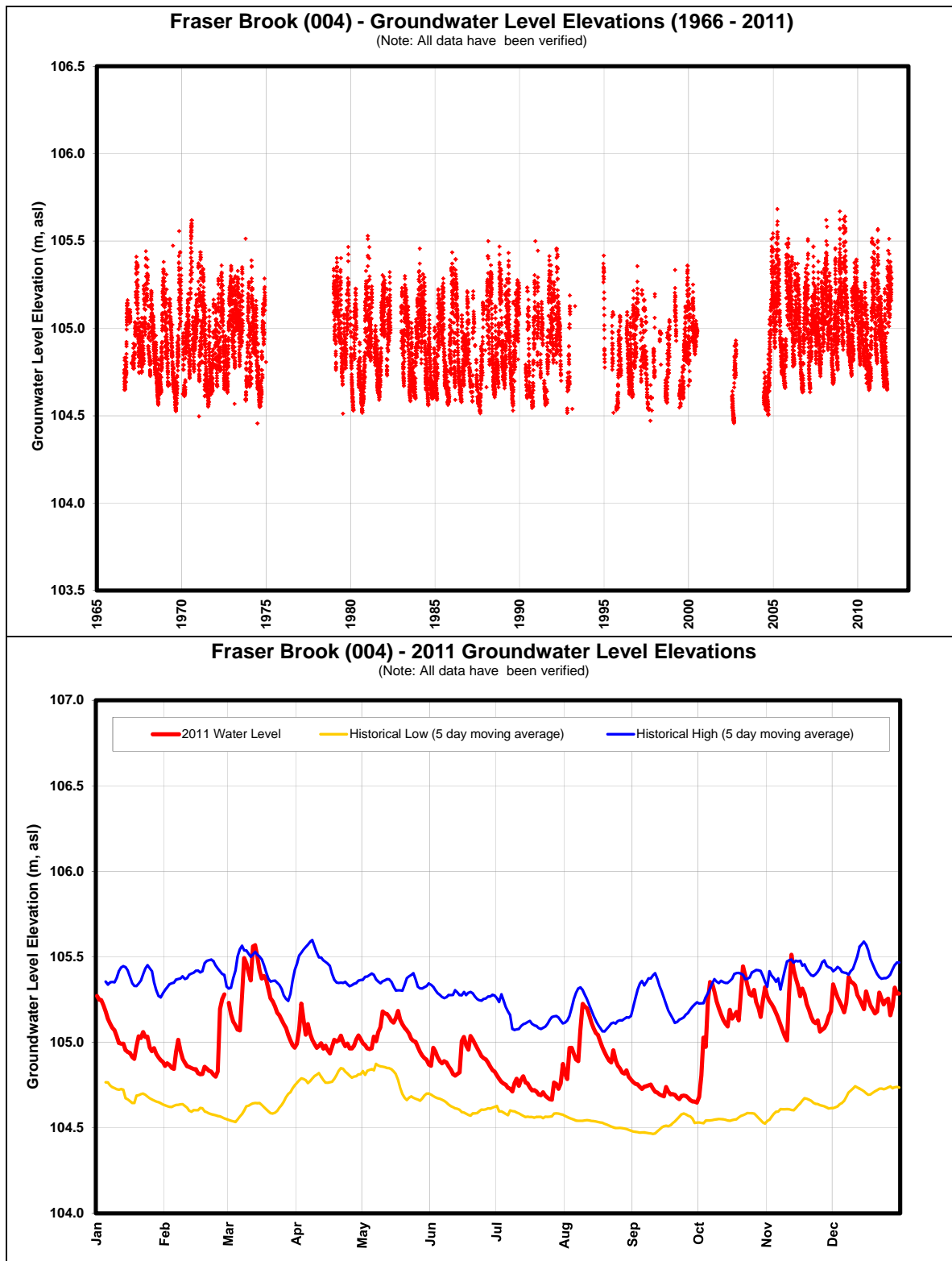


Figure B.2: Fraser Brook (004) Groundwater Level Elevations

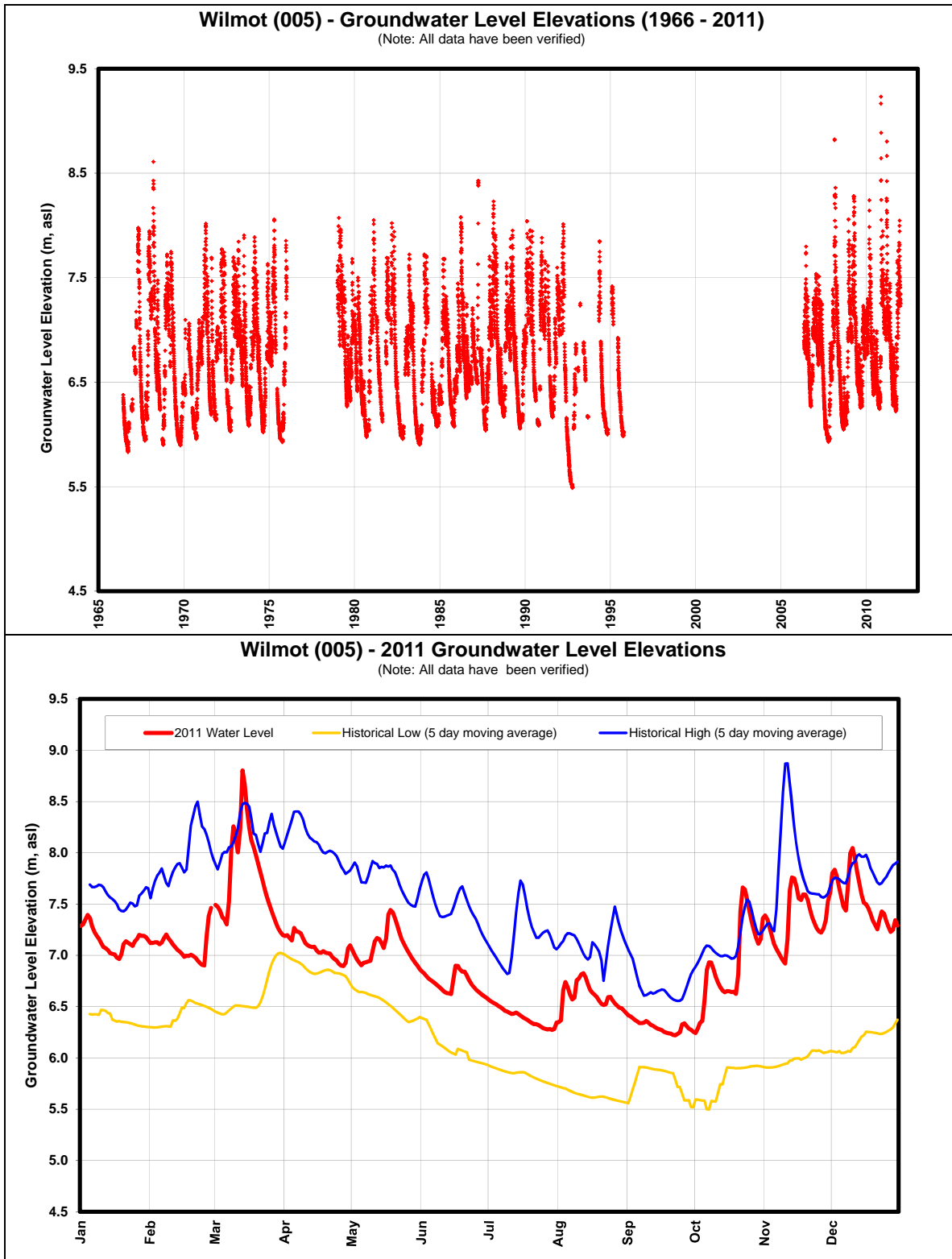


Figure B.3: Wilmot (005) Groundwater Level Elevations

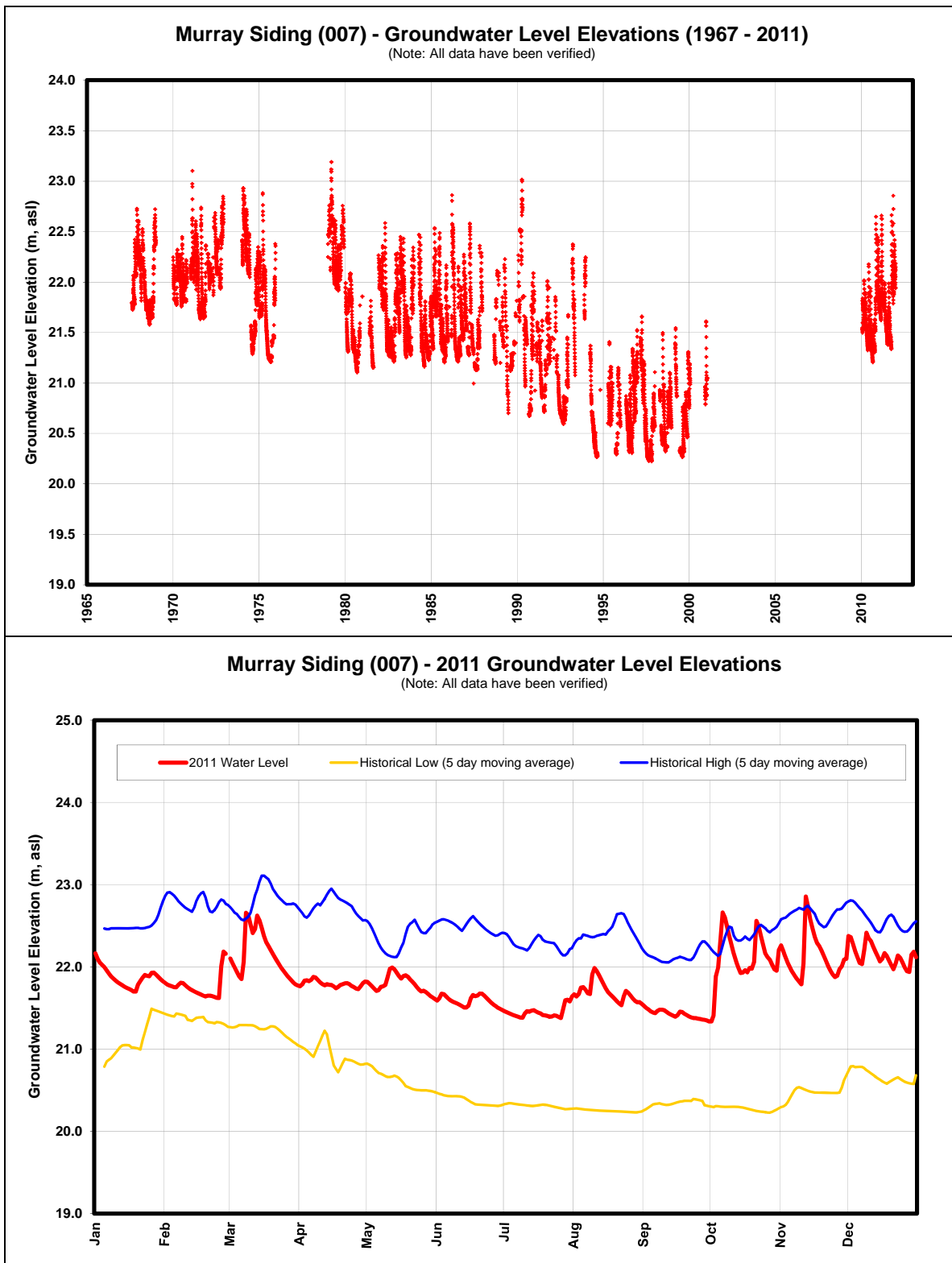


Figure B.4: Murray Siding (007) Groundwater Level Elevations

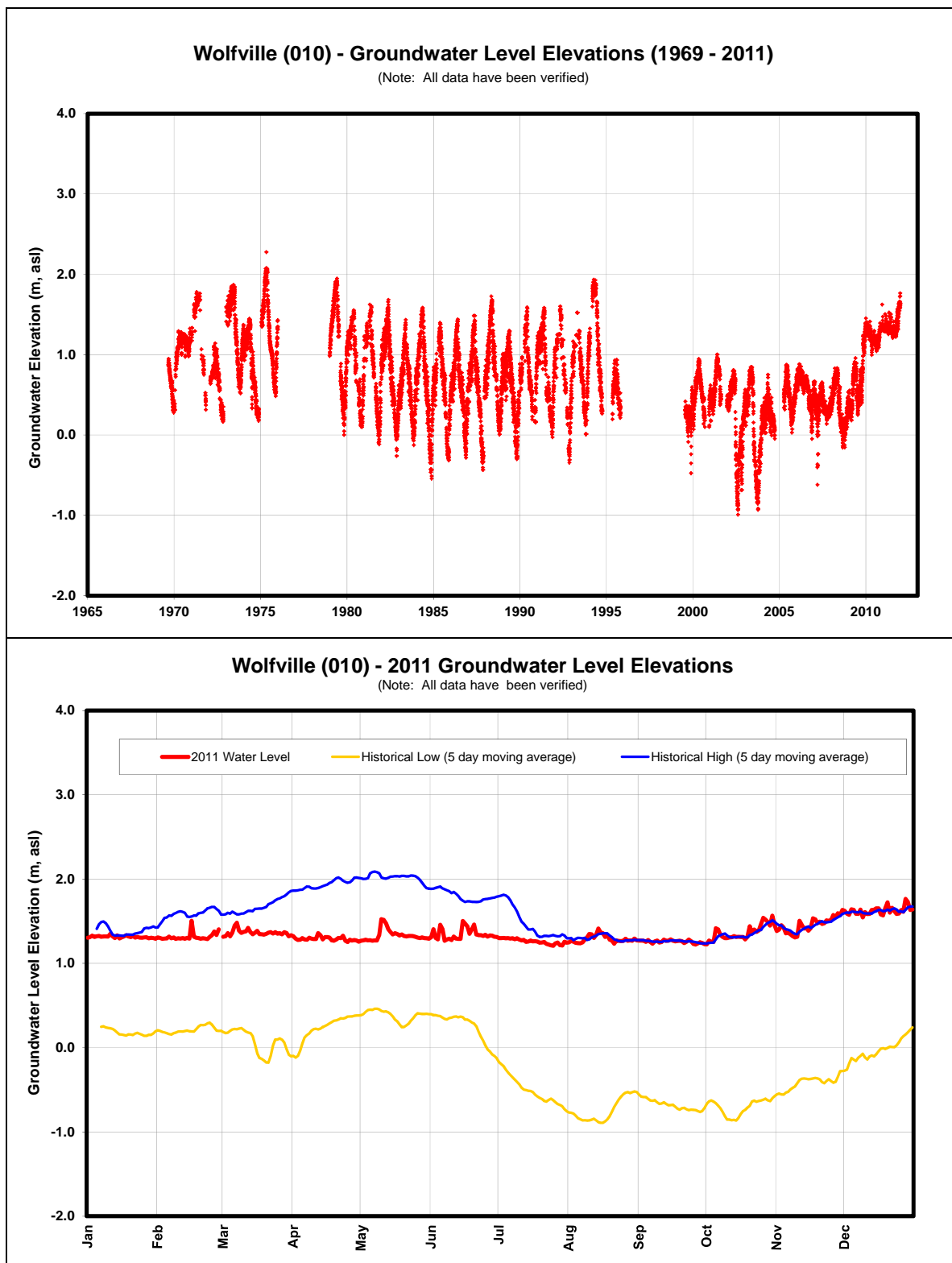


Figure B.5: Wolfville (010) Groundwater Level Elevations

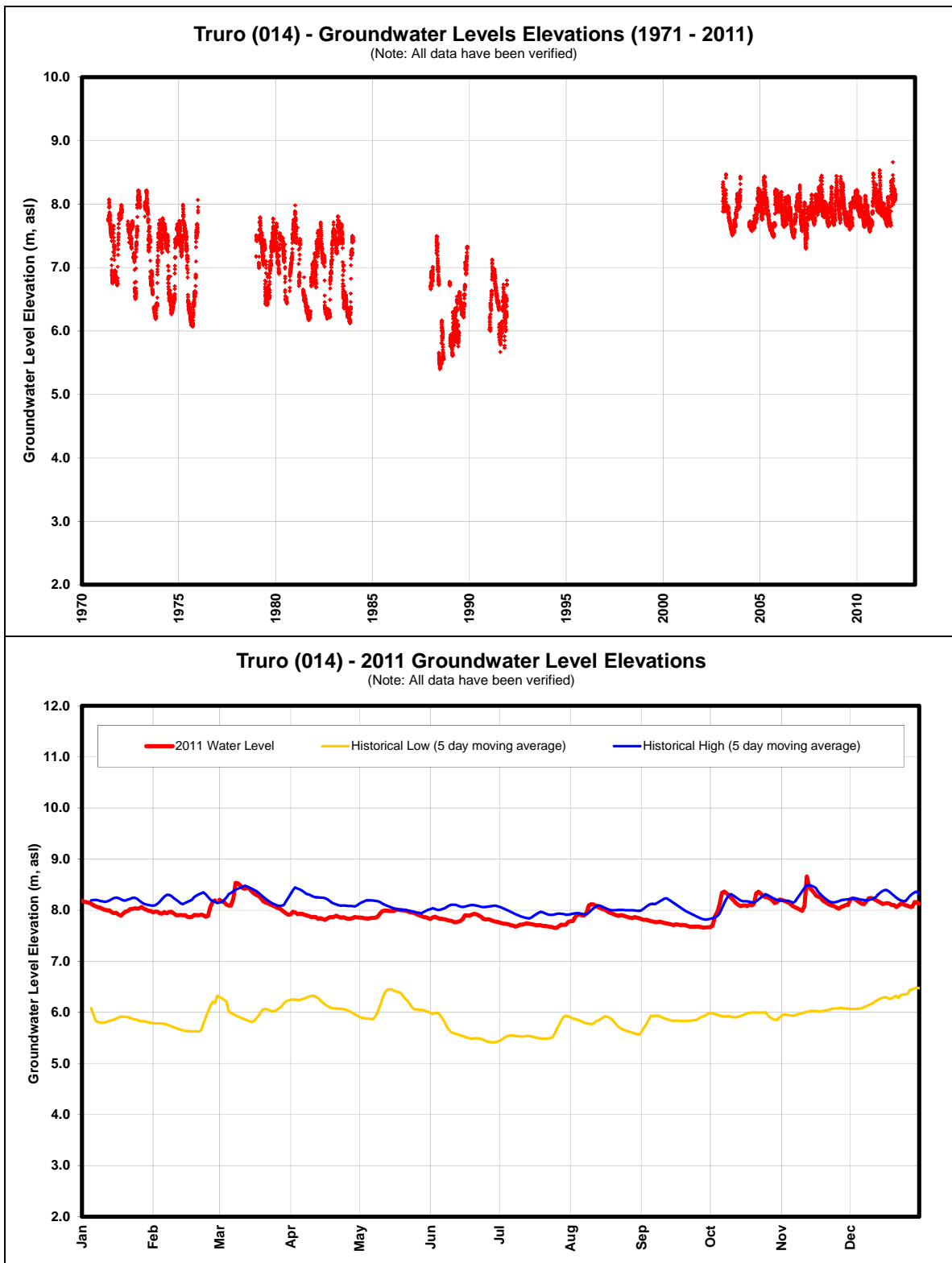


Figure B.6: Truro (014) Groundwater Level Elevations

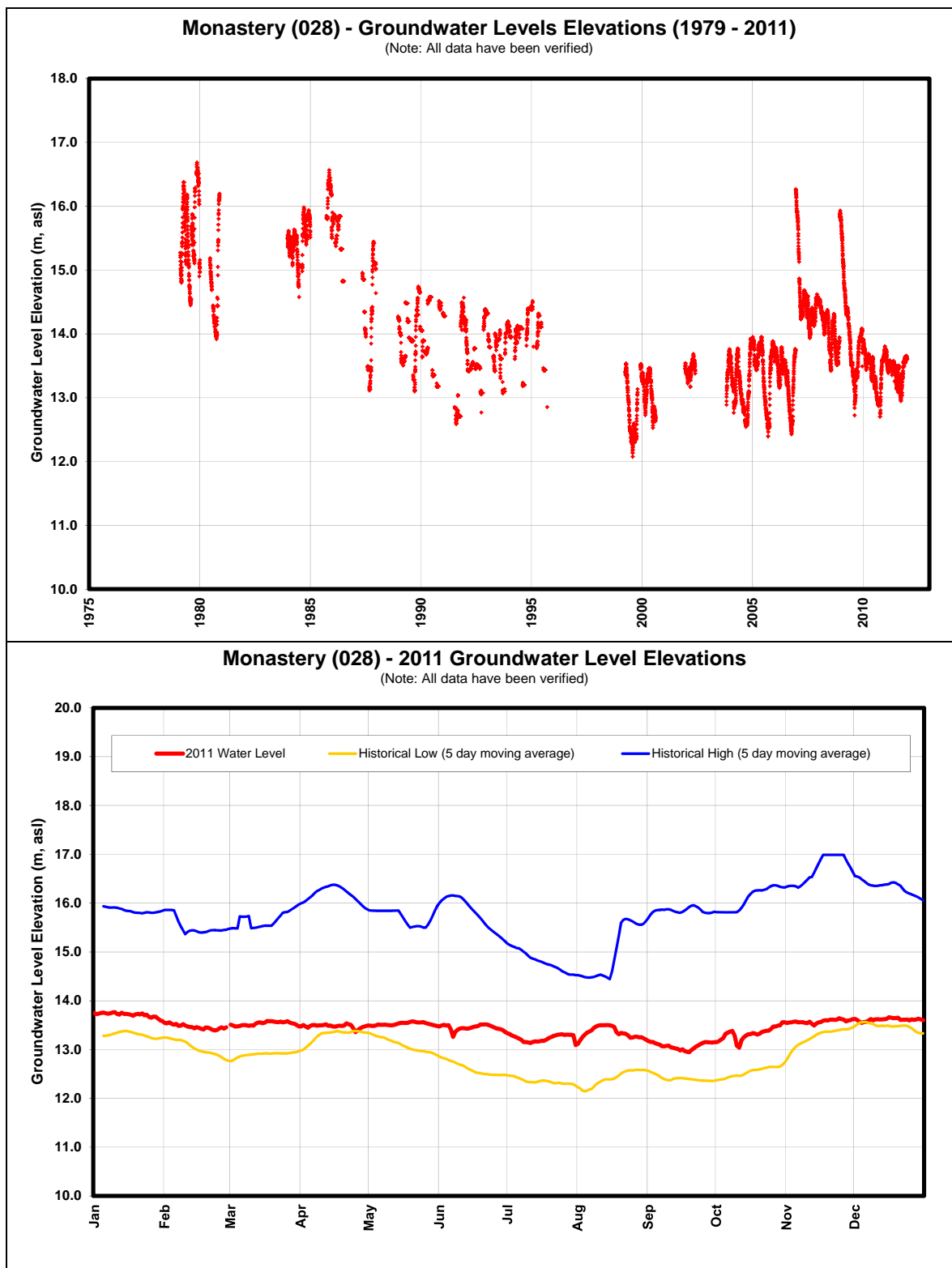


Figure B.7: Monastery (028) Groundwater Level Elevations

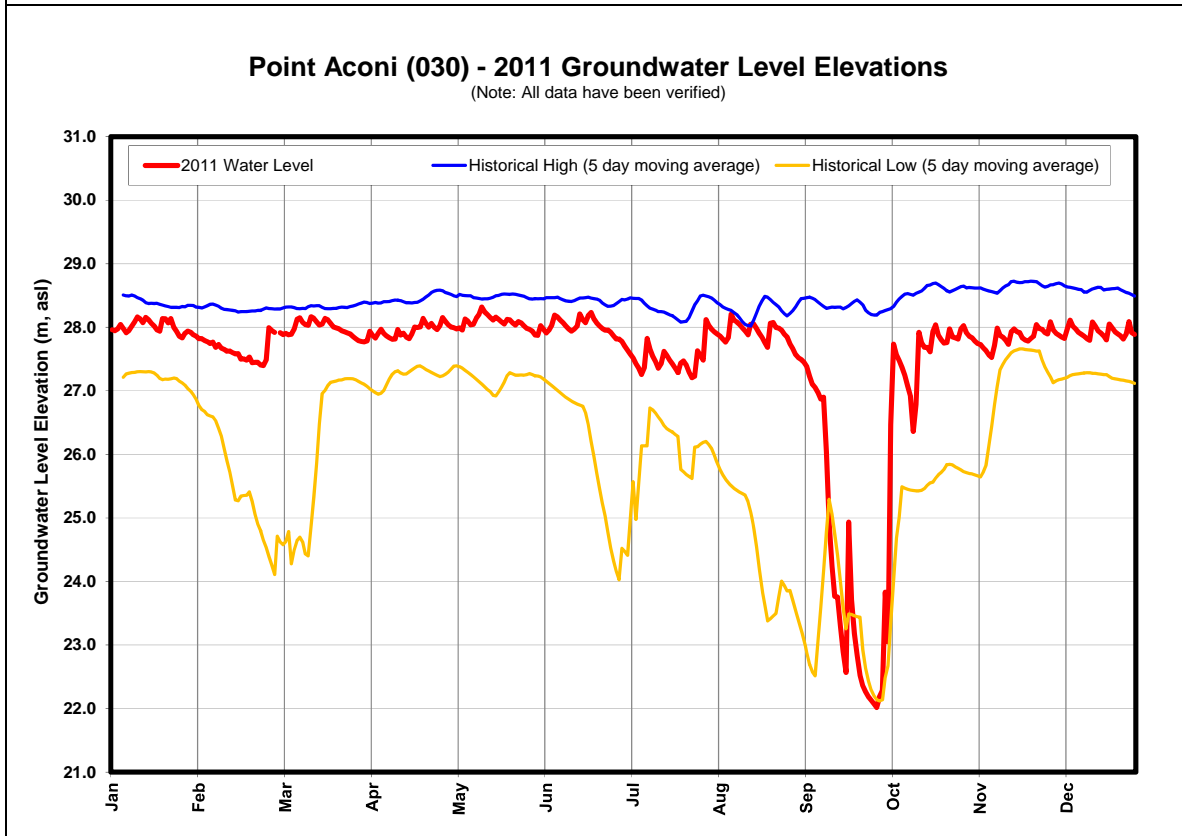
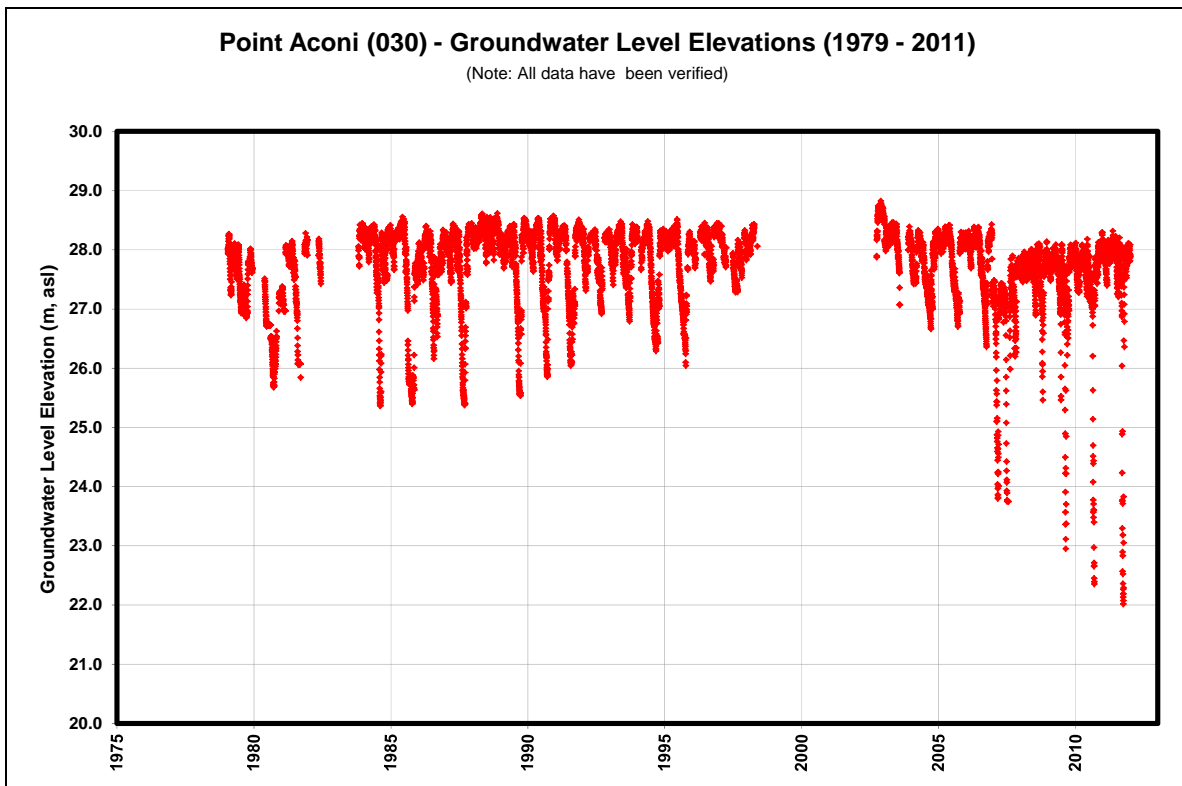


Figure B.8: Point Aconi (030) Groundwater Level Elevations

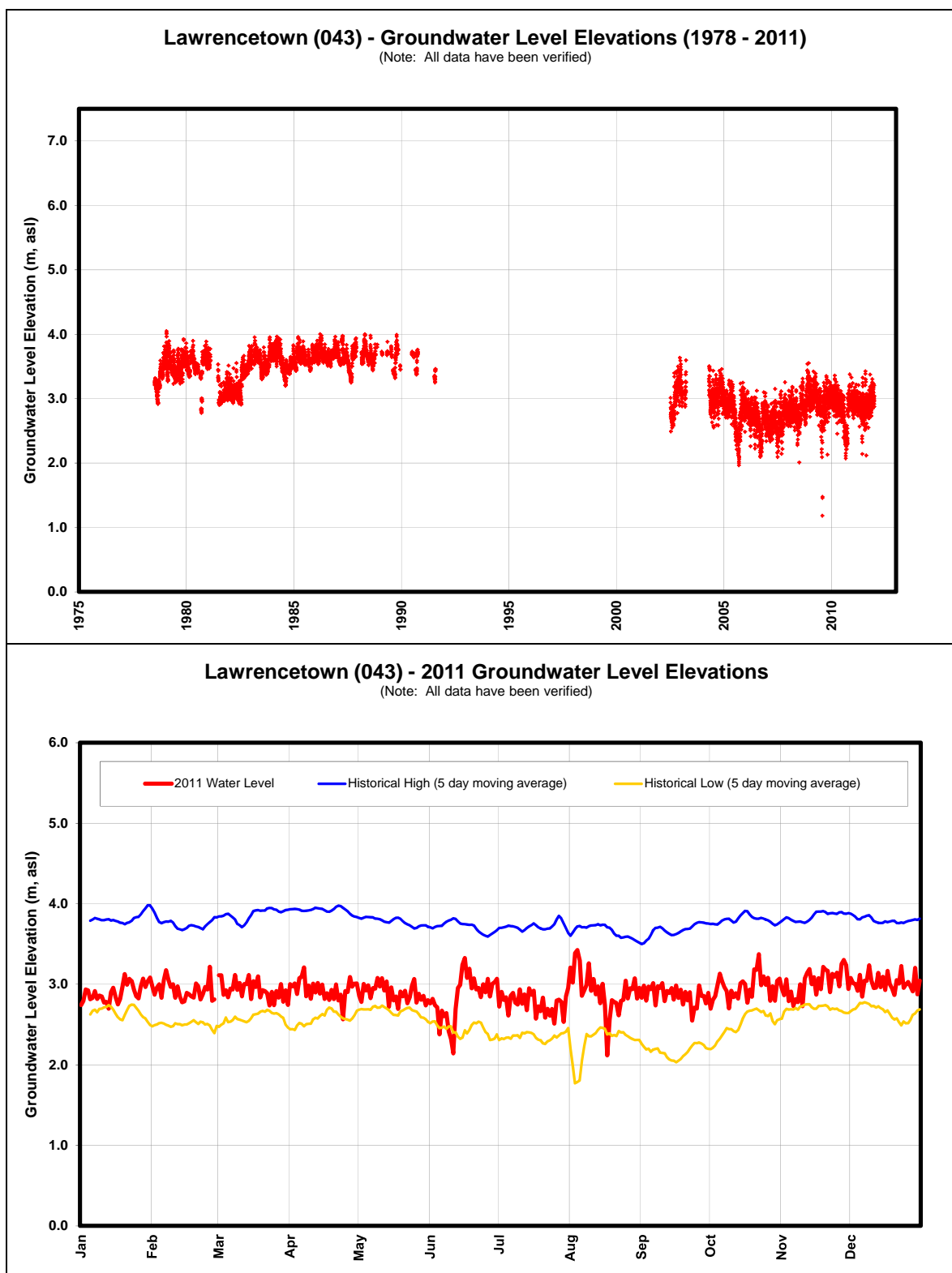


Figure B.9: Lawrencetown (043) Groundwater Level Elevations

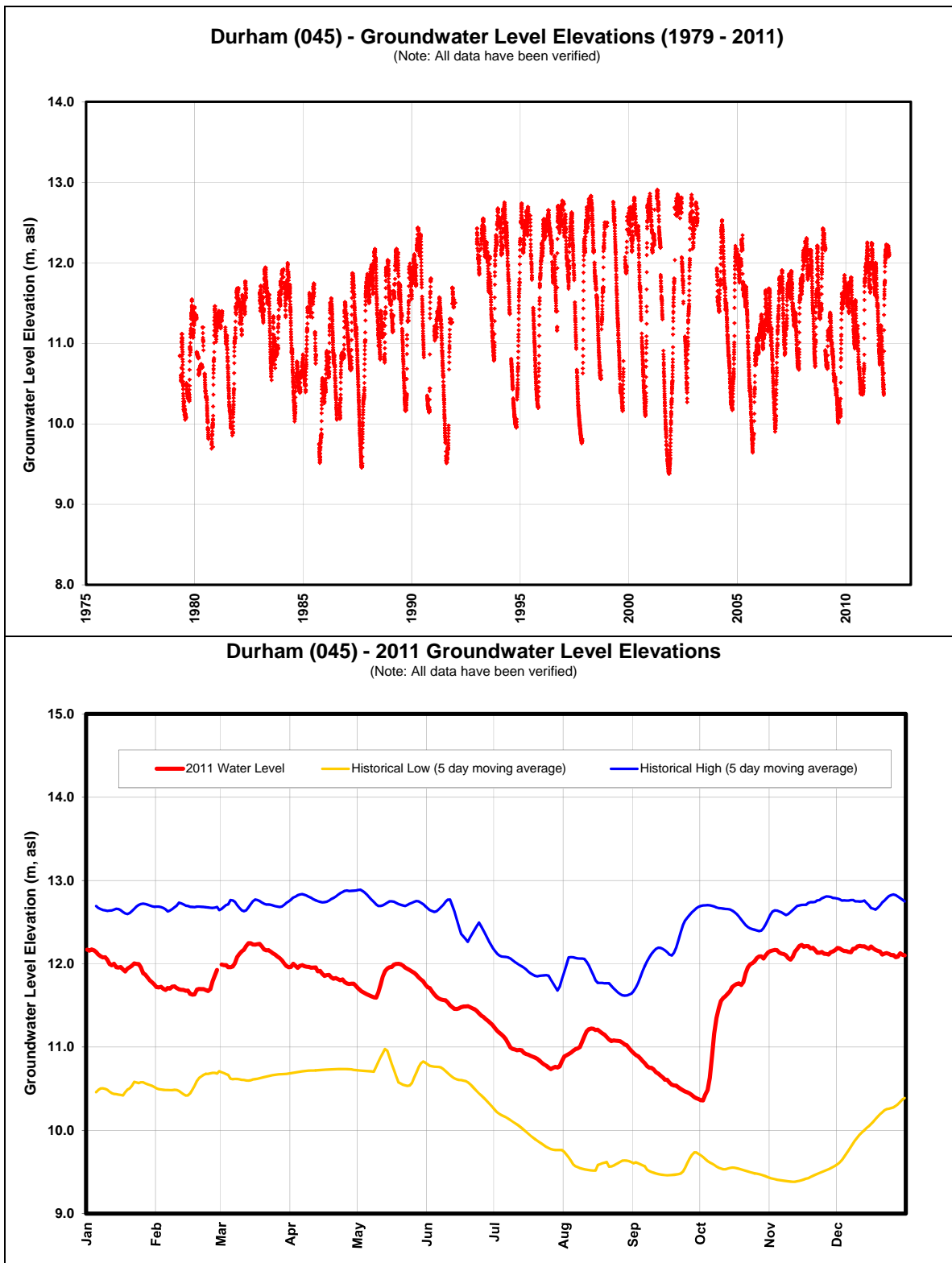


Figure B.10: Durham (045) Groundwater Level Elevations

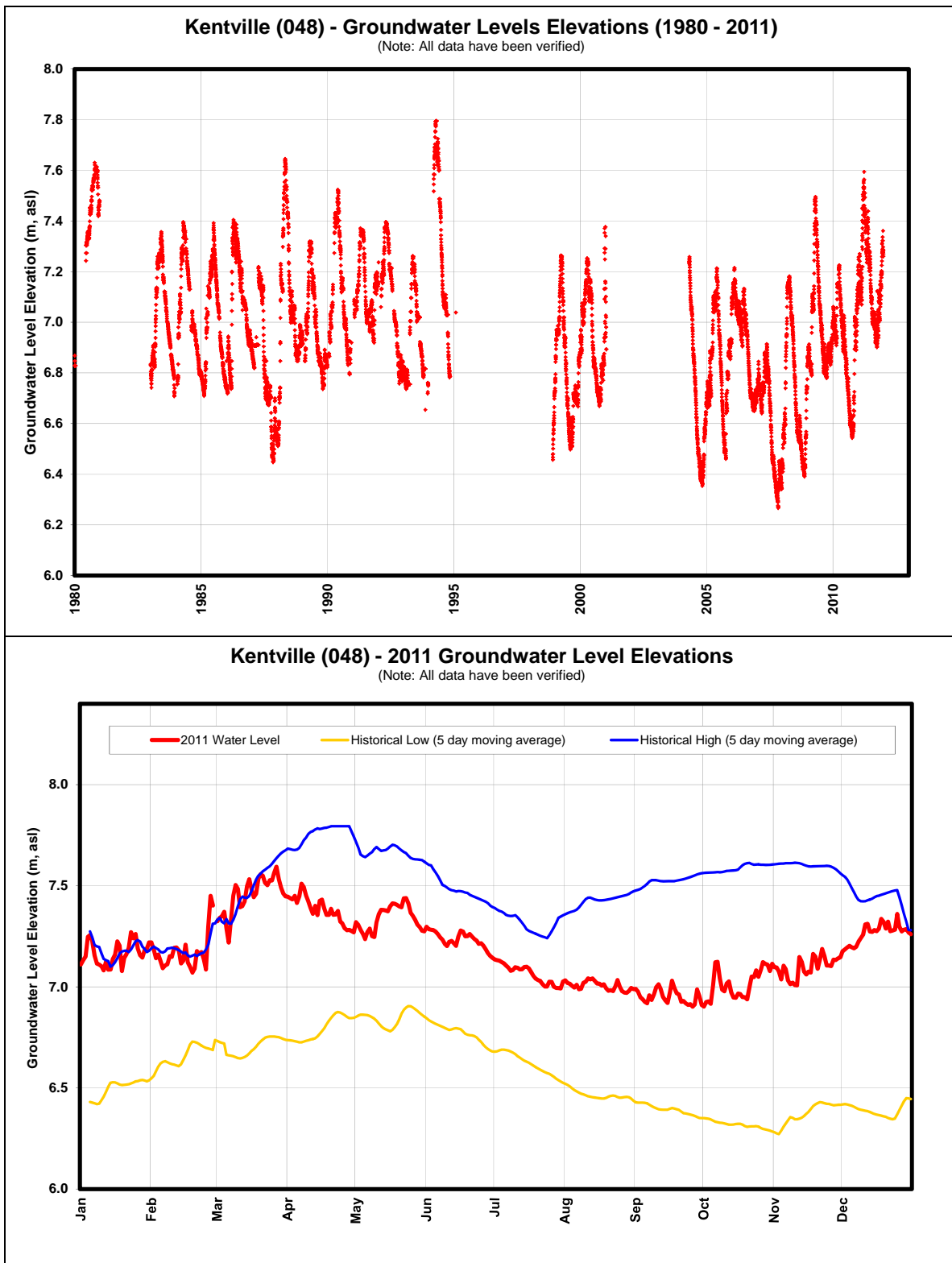


Figure B.11: Kentville (048) Groundwater Level Elevations

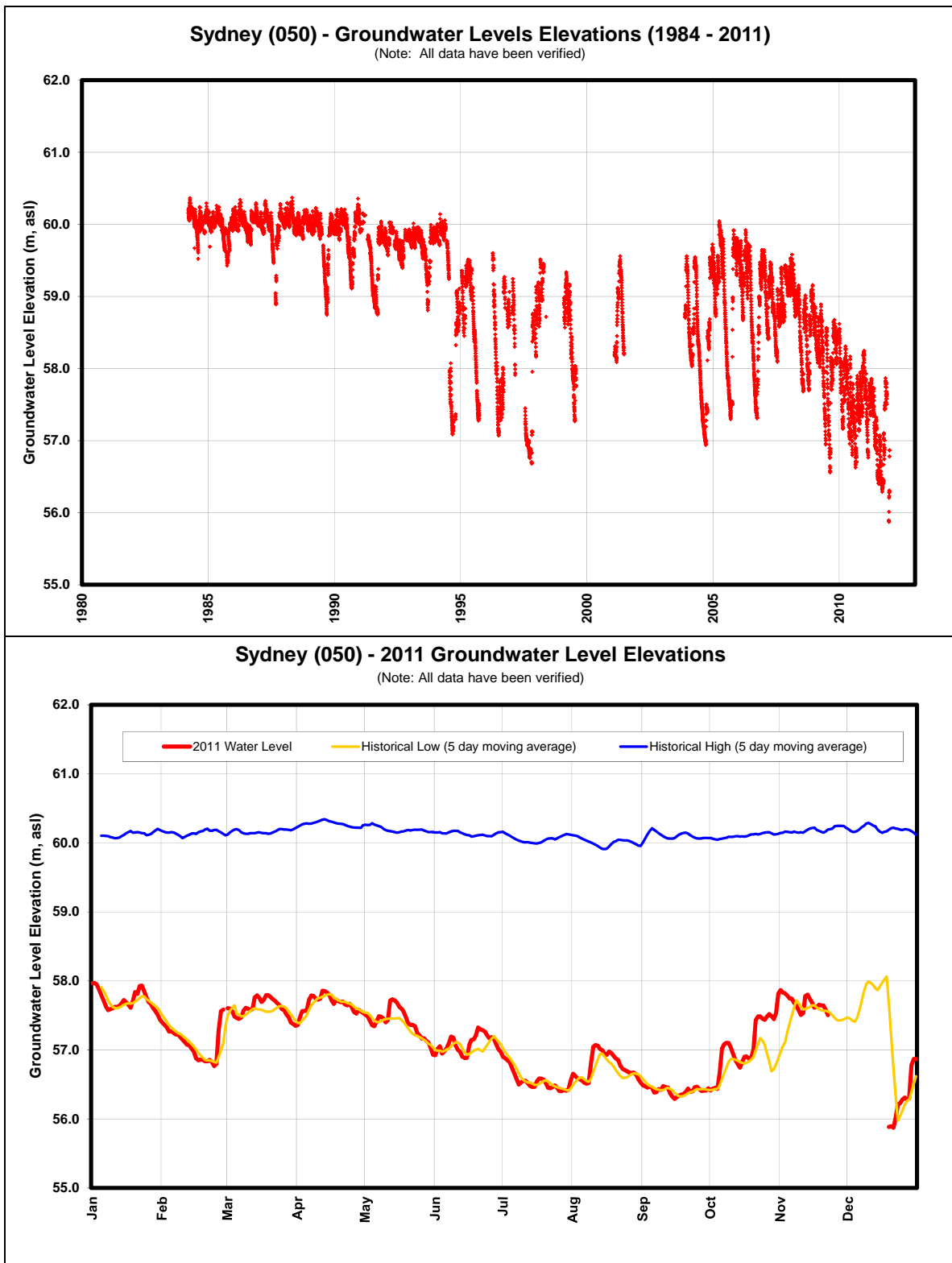


Figure B.12: Sydney (050) Groundwater Level Elevations

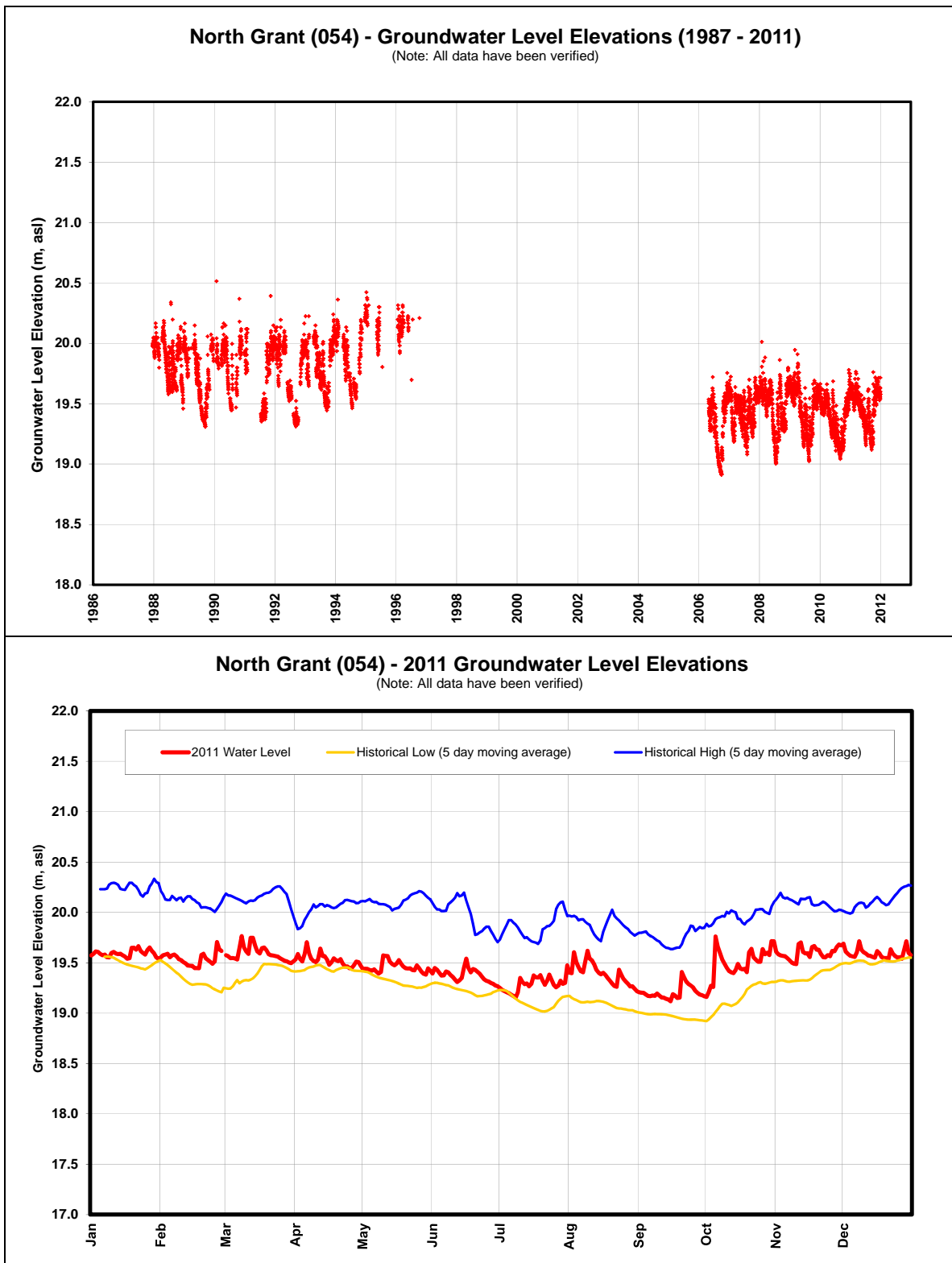


Figure B.13: North Grant (054) Groundwater Level Elevations

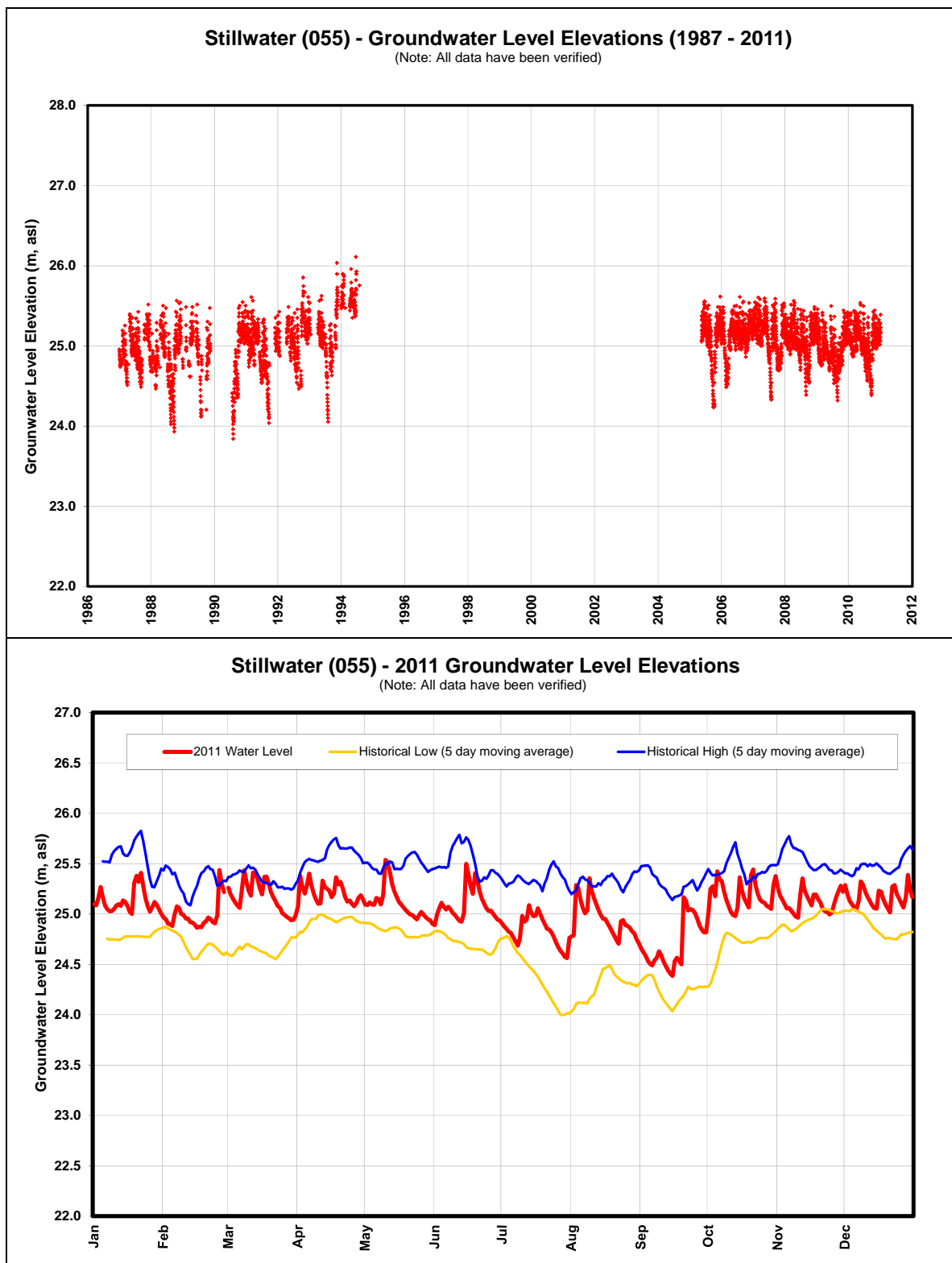


Figure B.14: Stillwater (055) Groundwater Level Elevations

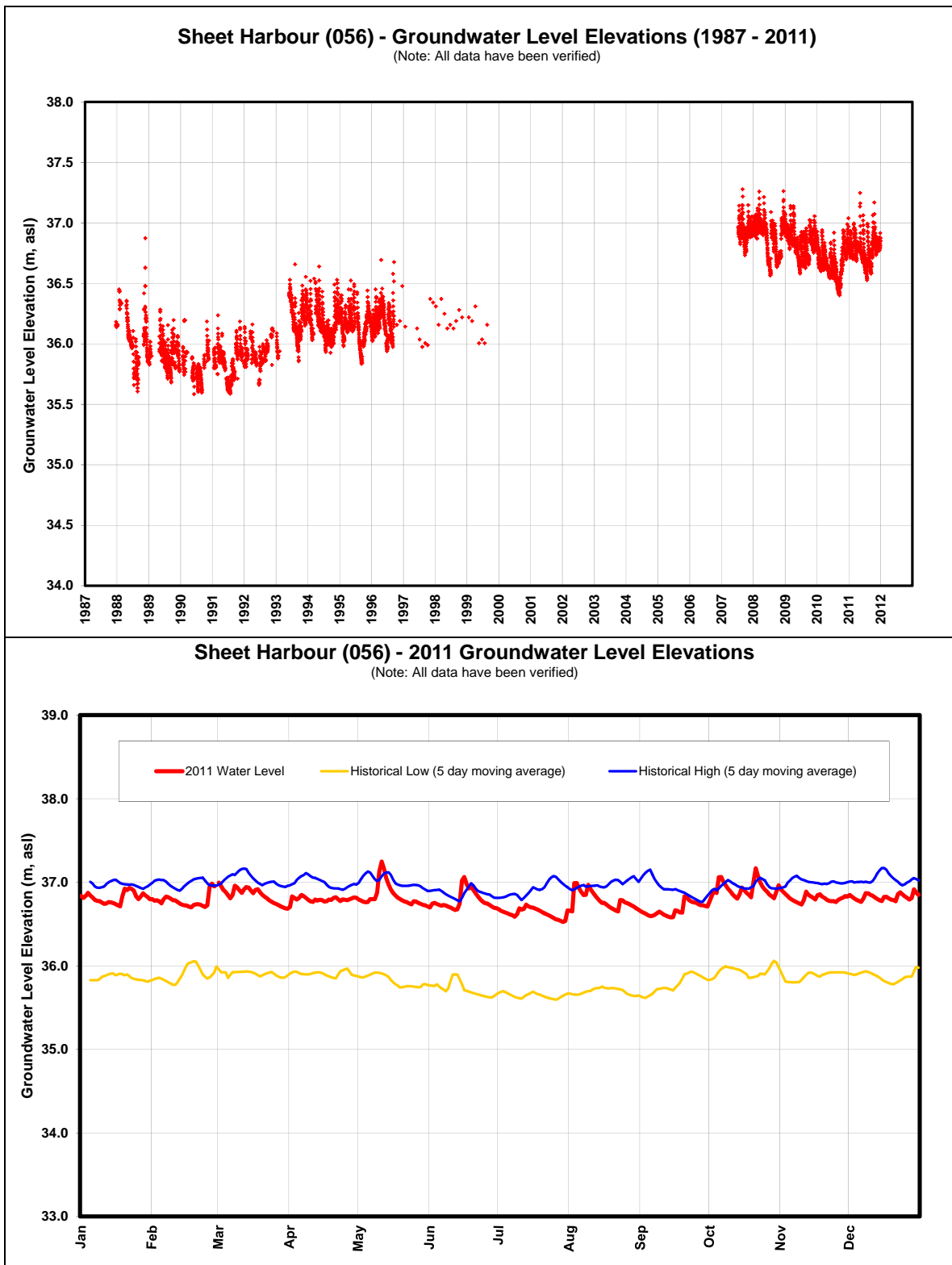


Figure B.15: Sheet Hbr (056) Groundwater Level Elevations

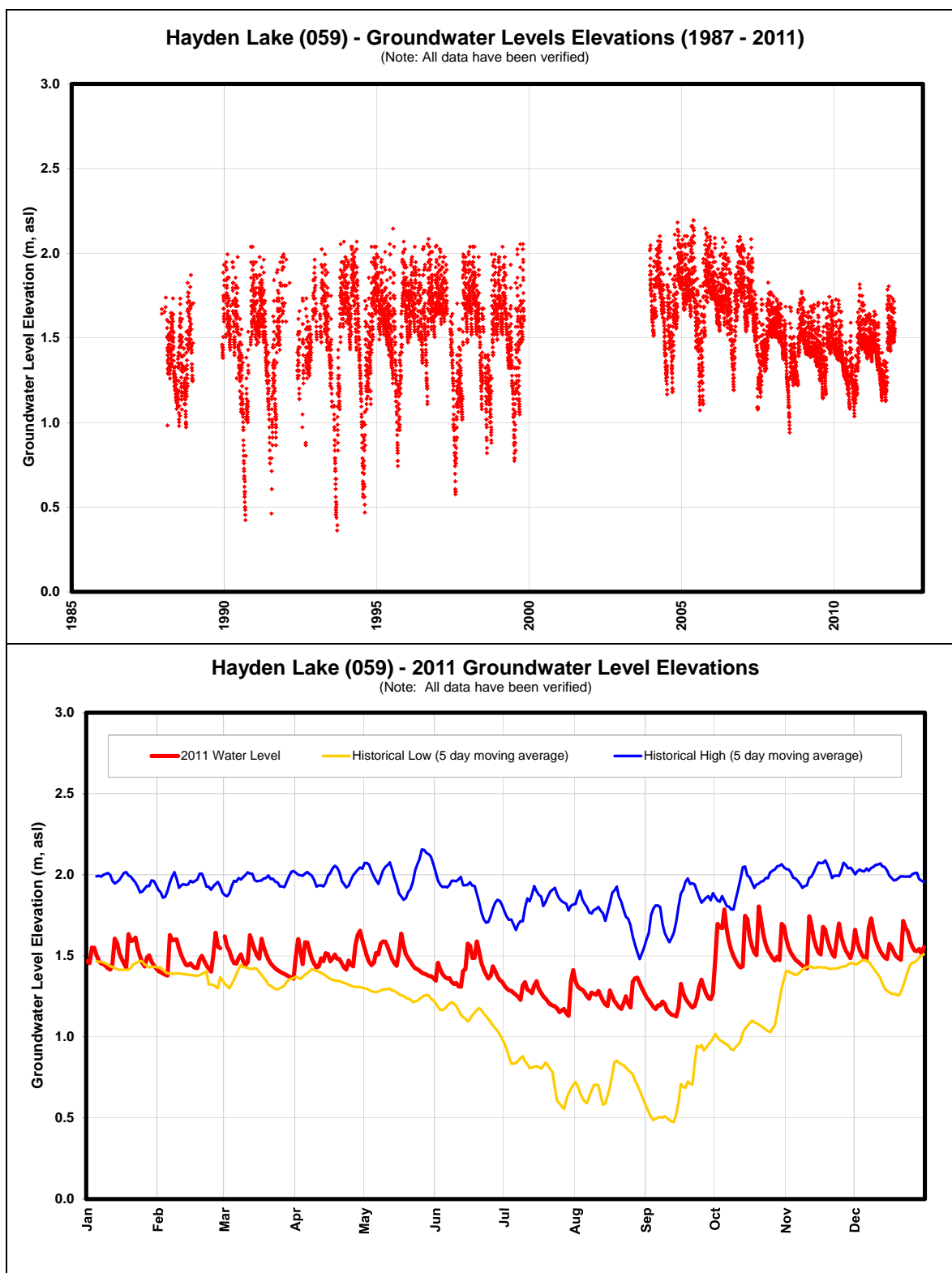


Figure B.16: Hayden Lake (059) Groundwater Level Elevations

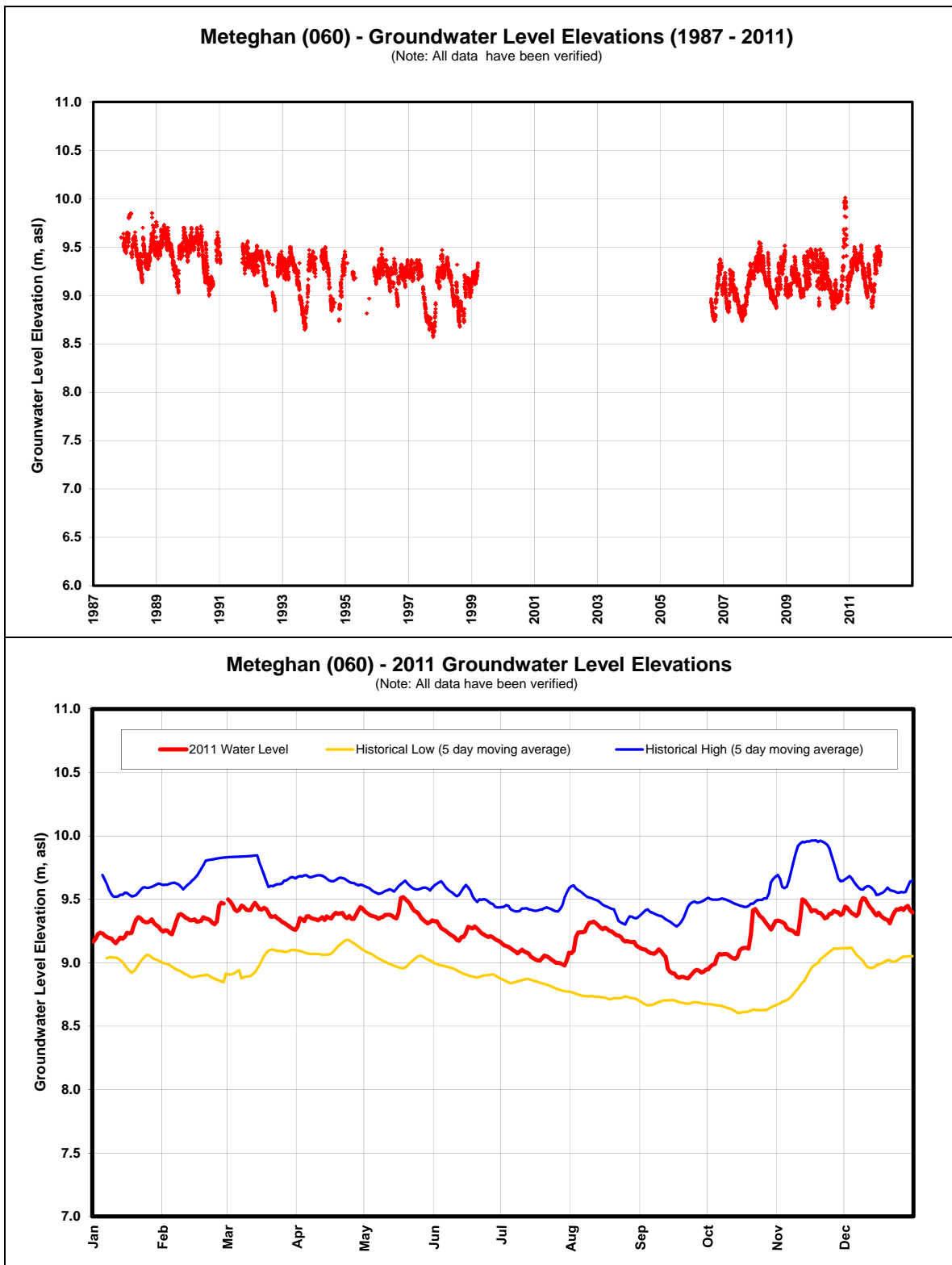


Figure B.17: Meteghan (060) Groundwater Level Elevations

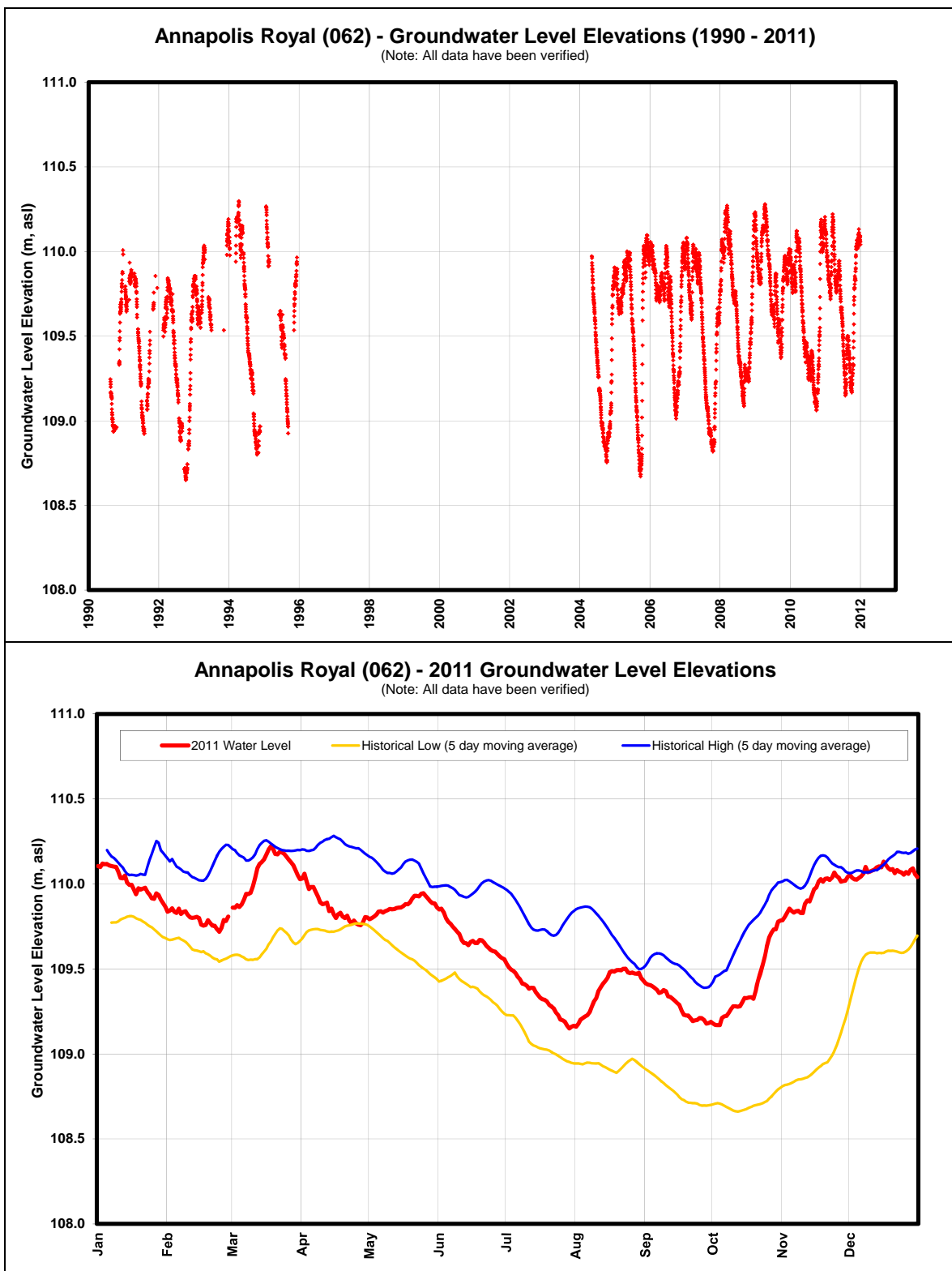


Figure B.18: Annapolis Royal (062) Groundwater Level Elevations

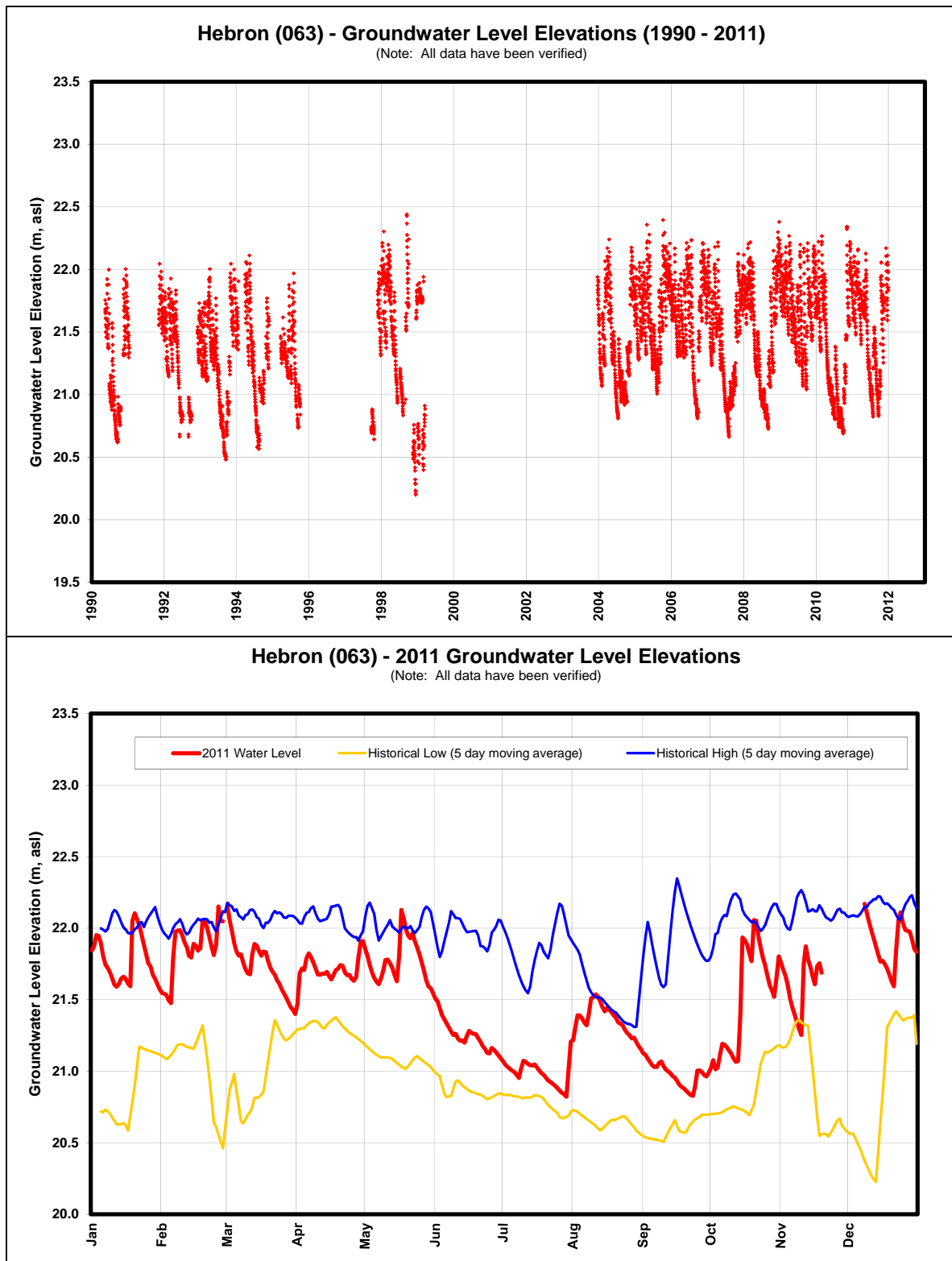


Figure B.19: Hebron (063) Groundwater Level Elevations

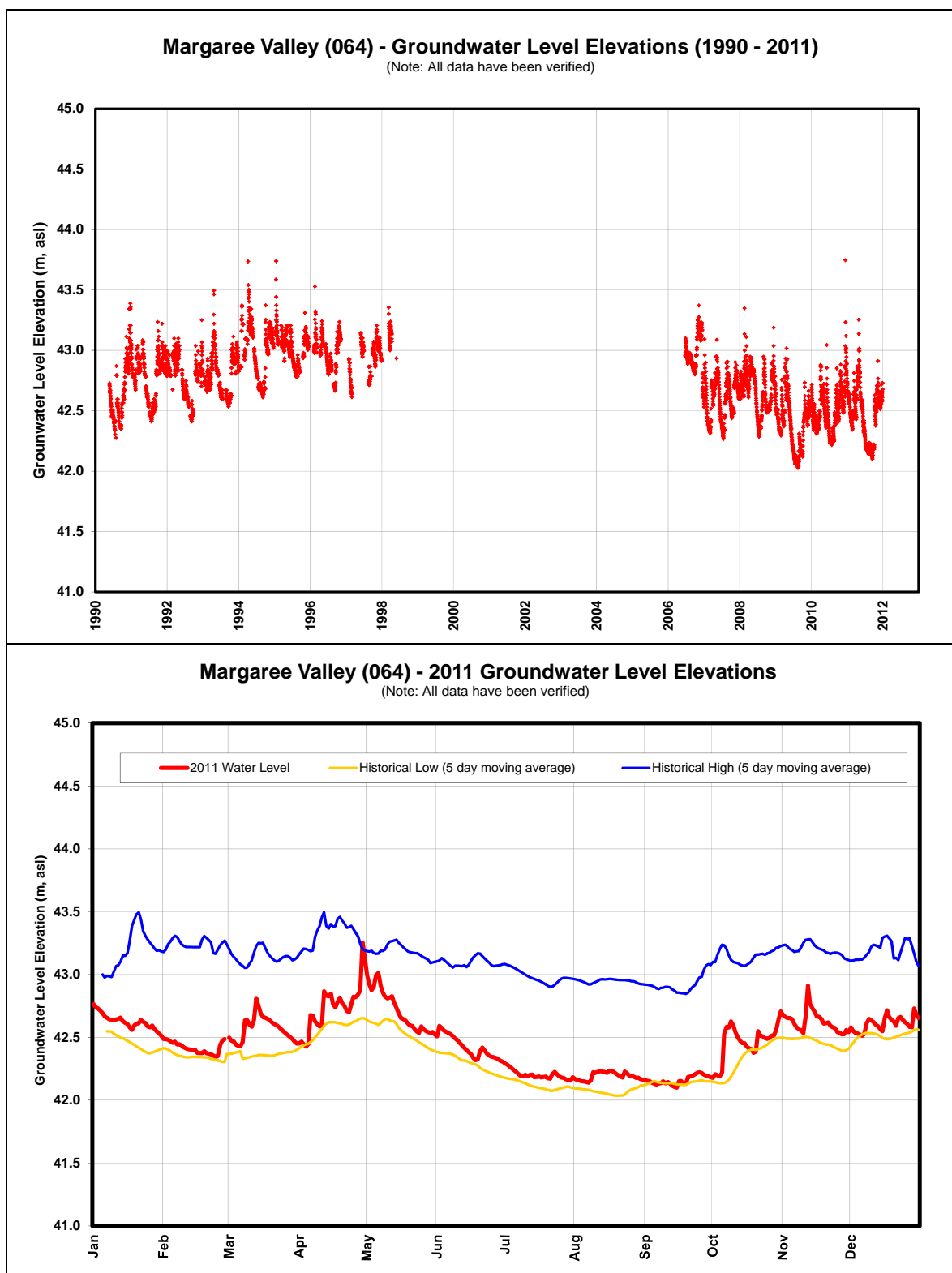


Figure B.20: Margaree (064) Groundwater Level Elevations

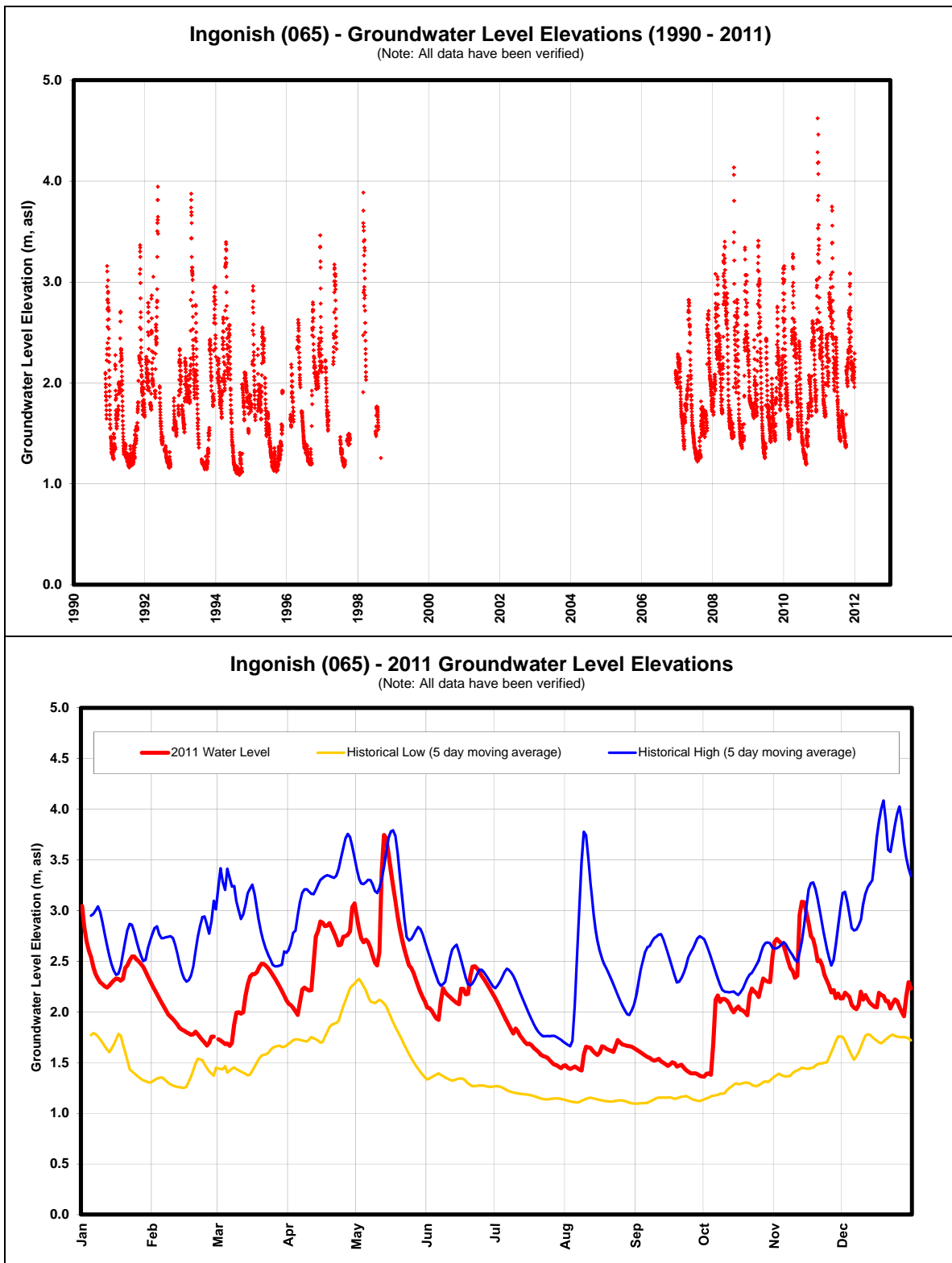


Figure B.21: Ingonish (065) Groundwater Level Elevations

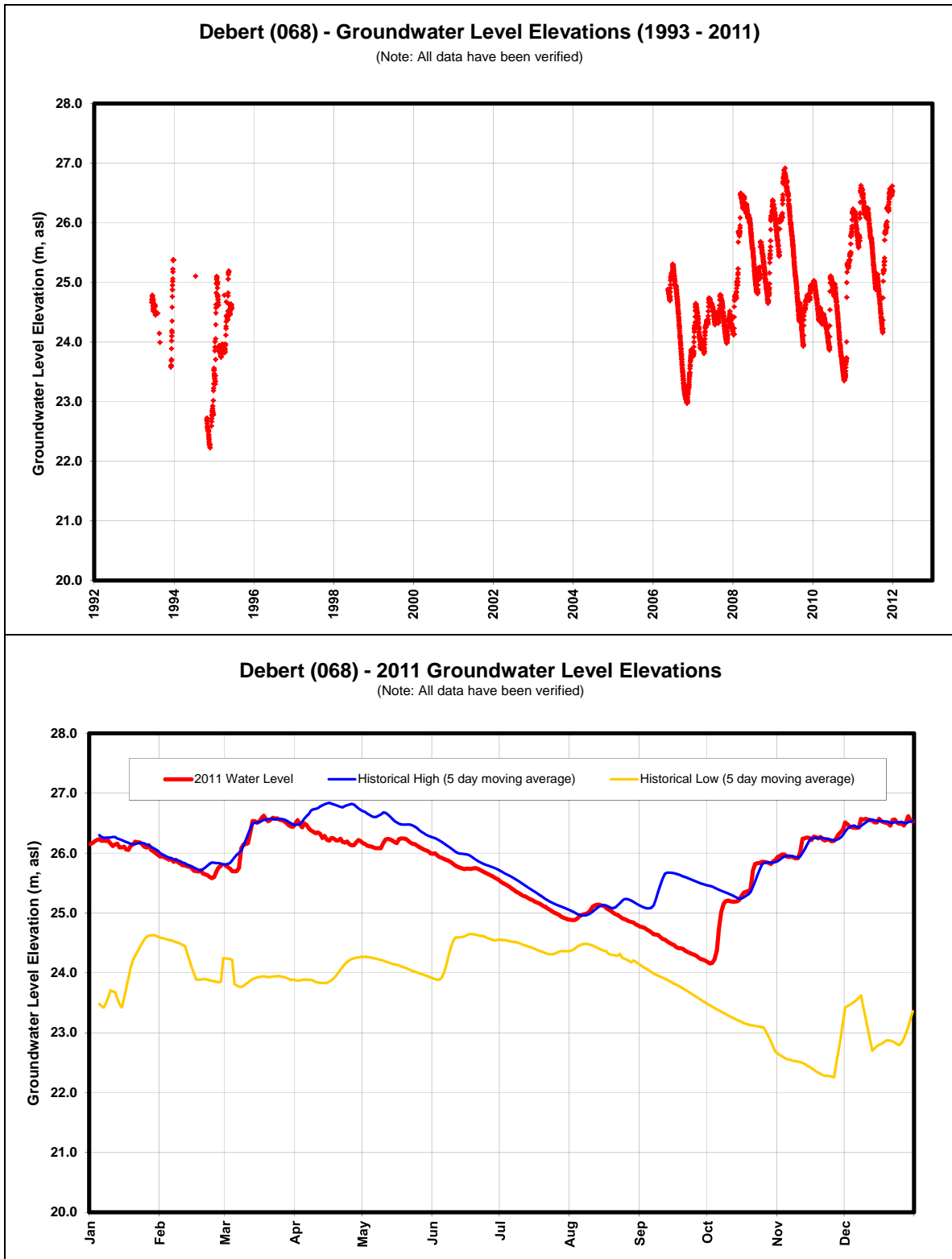


Figure B.22: Debert (068) Groundwater Level Elevations

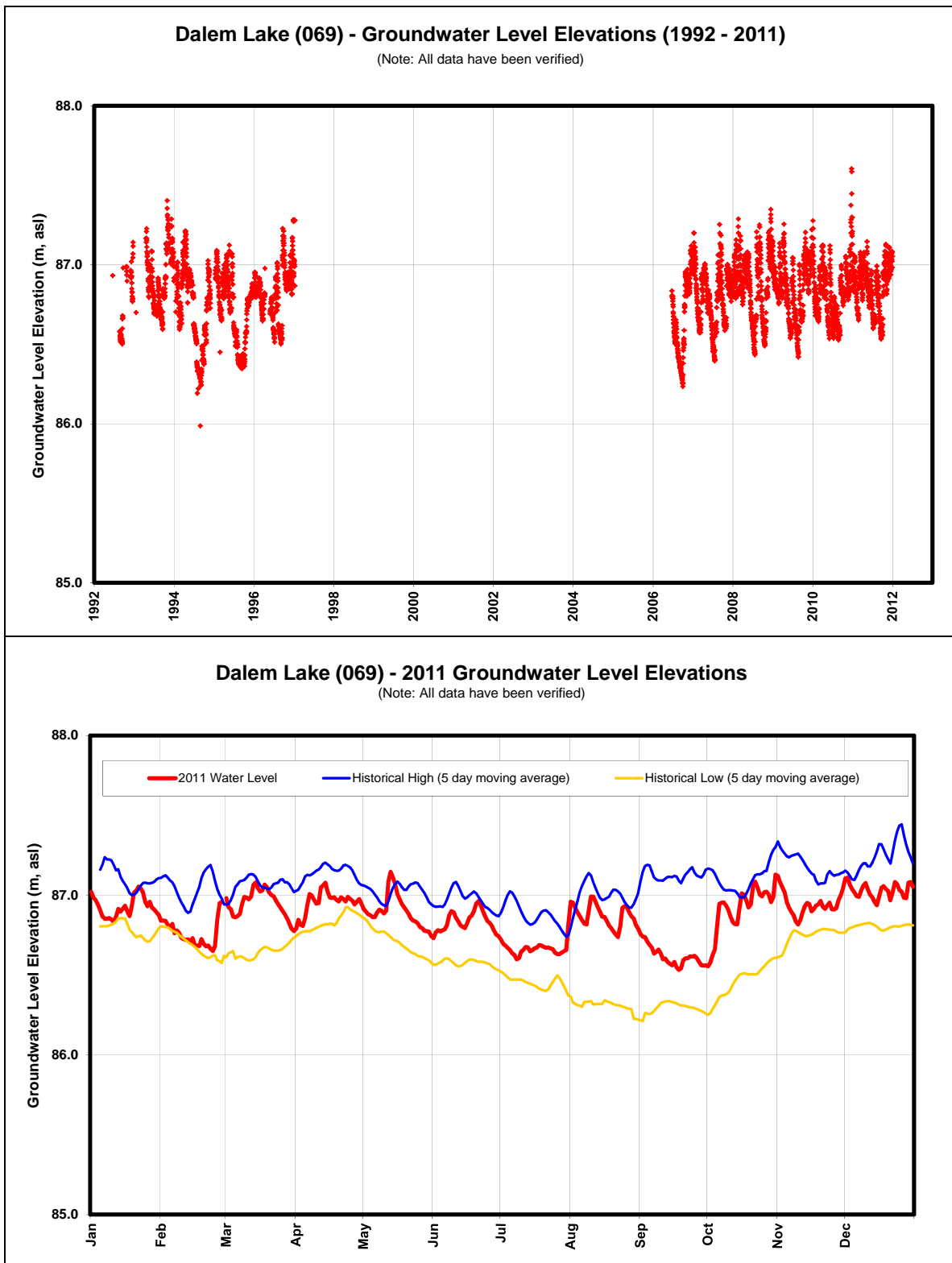


Figure B.23: Dalem Lake (069) Groundwater Level Elevations

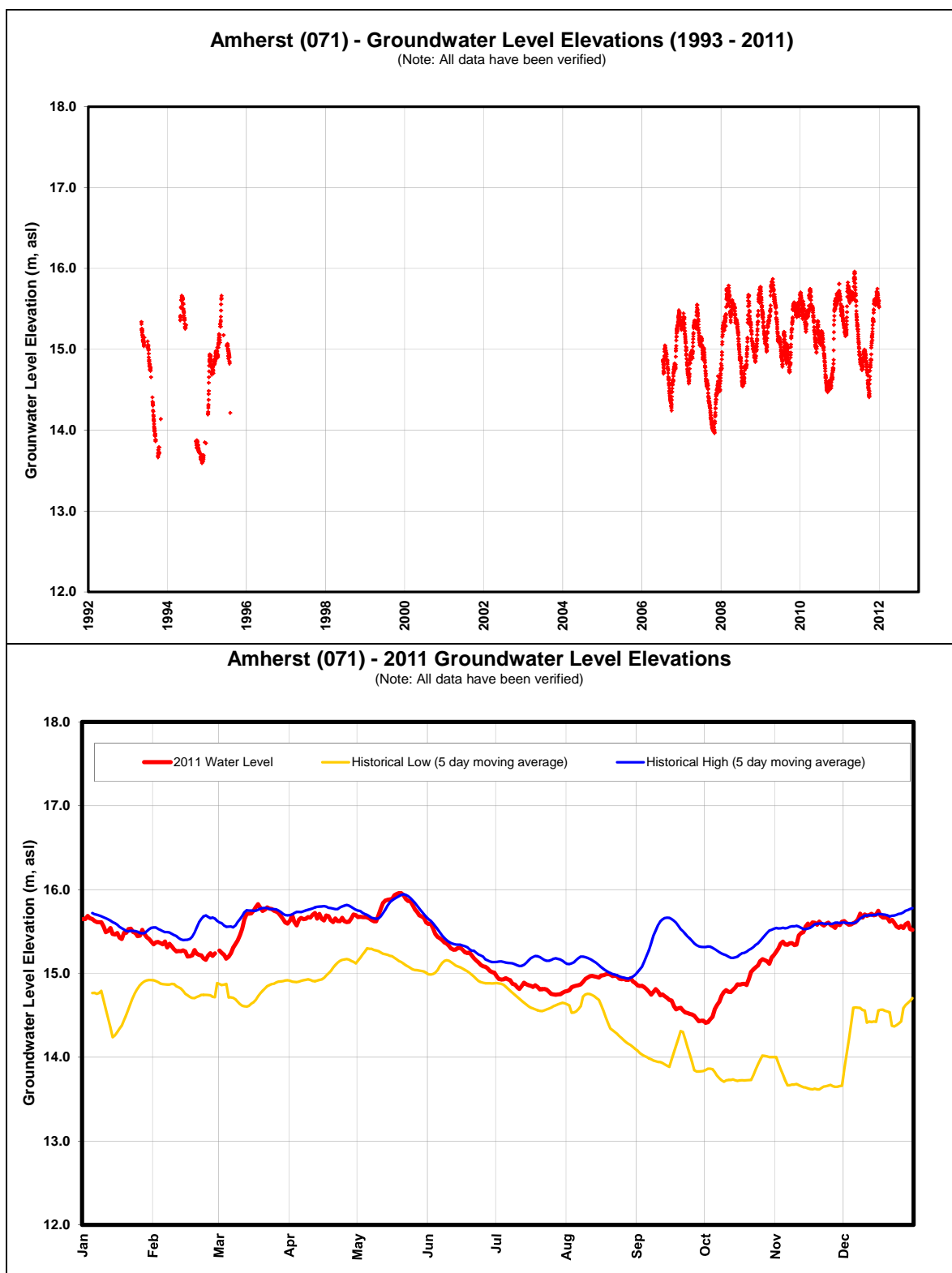


Figure B.24: Amherst (071) Groundwater Level Elevations

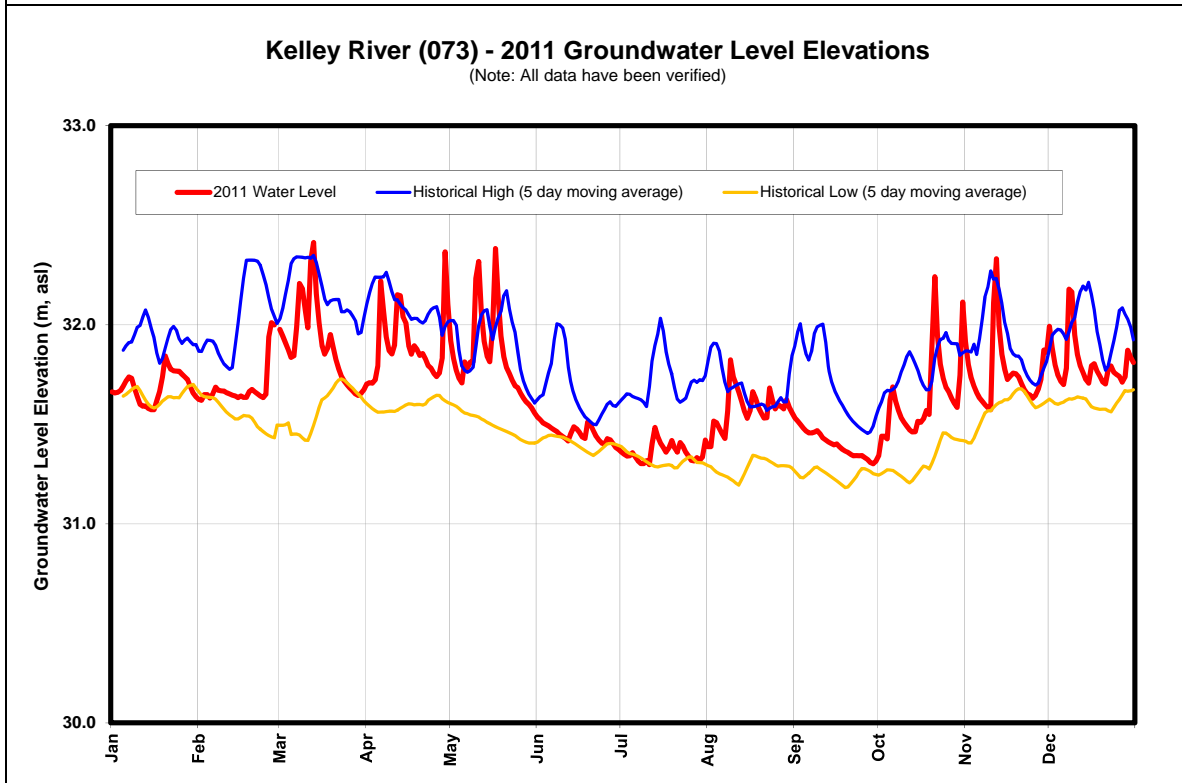
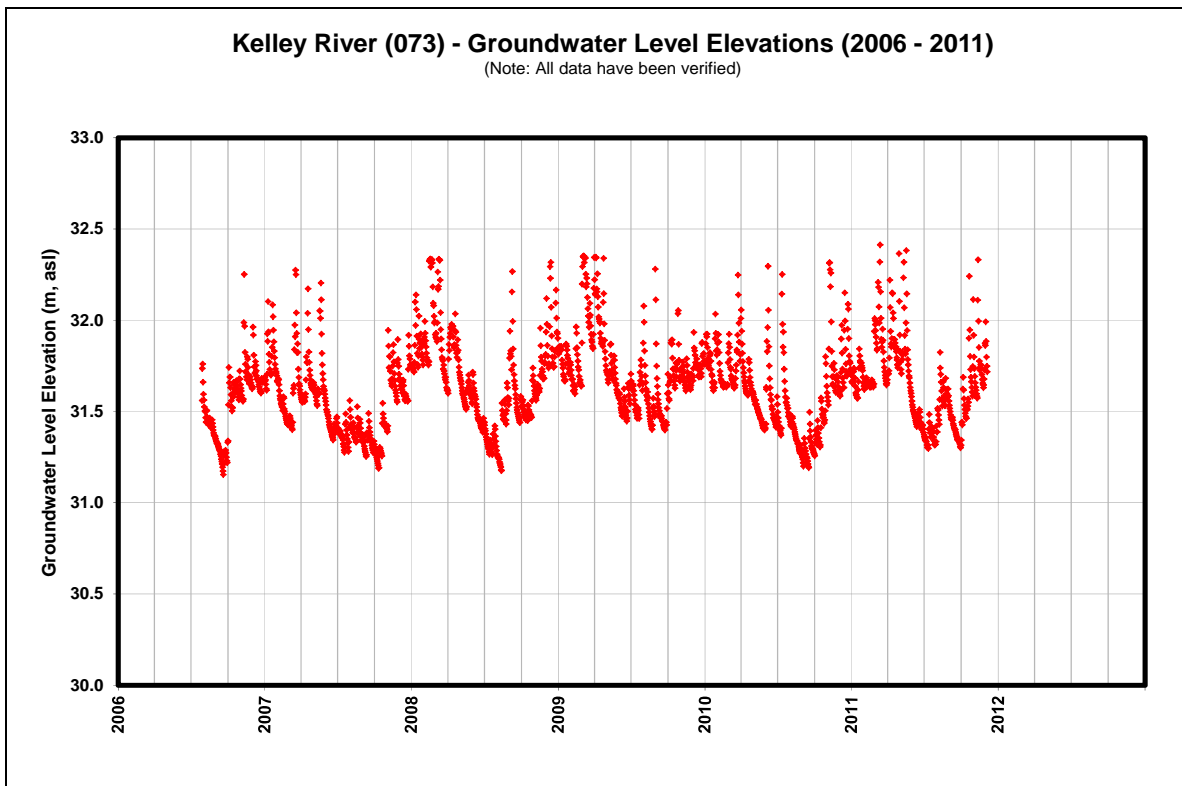


Figure B.25: Kelley River (073) Groundwater Level Elevations

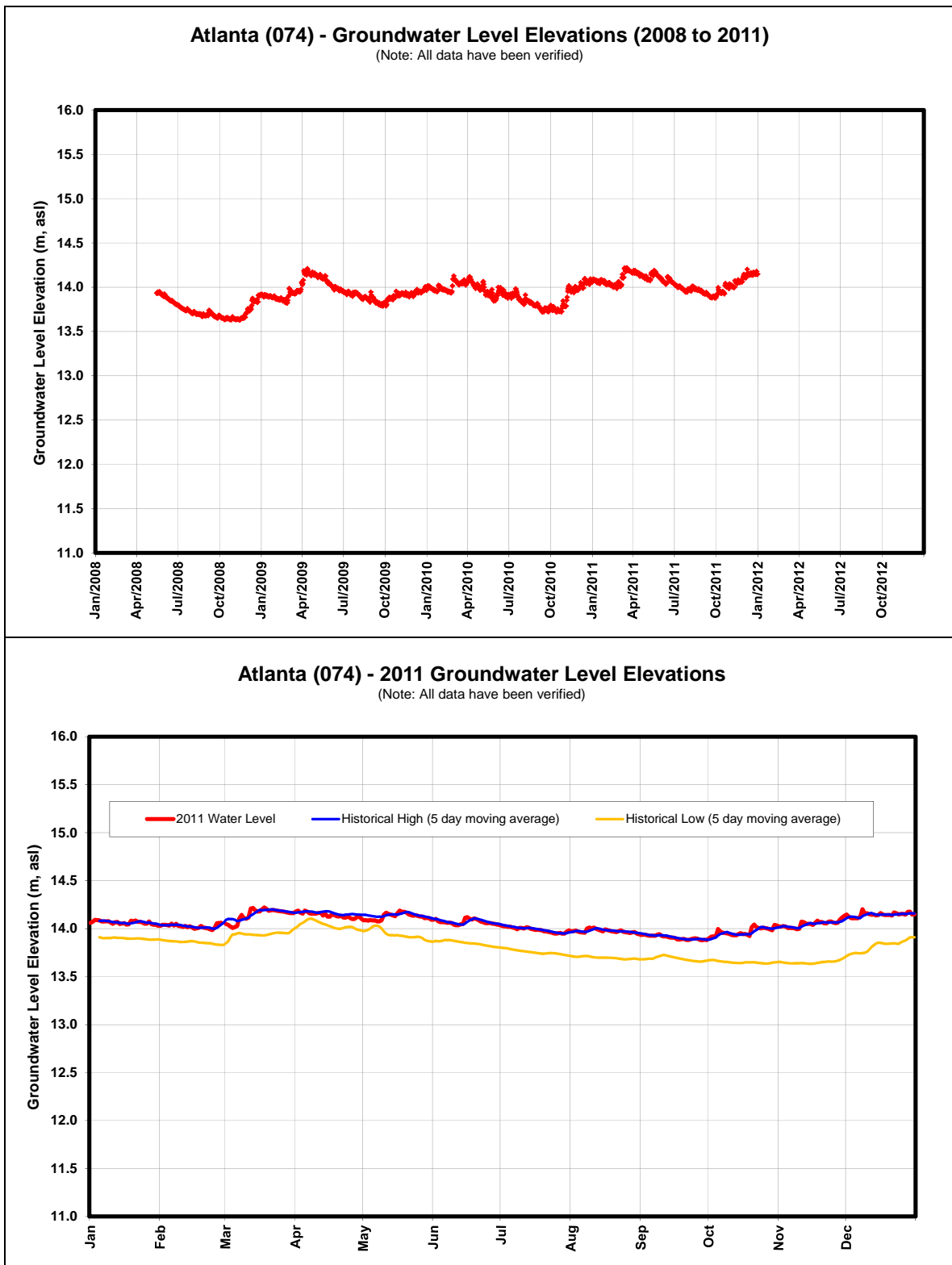


Figure B.26: Atlanta (074) Groundwater Level Elevations

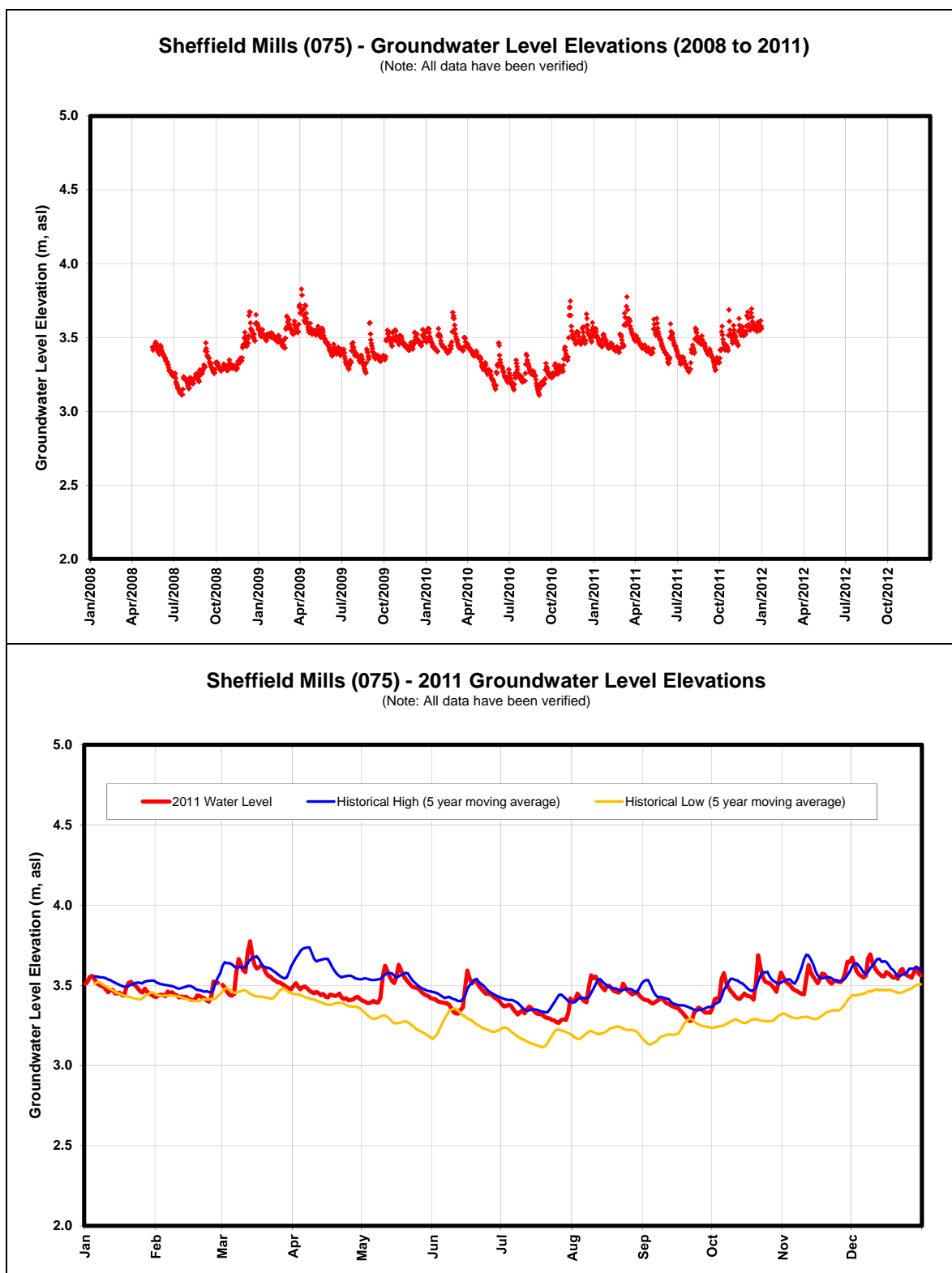


Figure B.27: Sheffield Mills (075) Groundwater Level Elevations

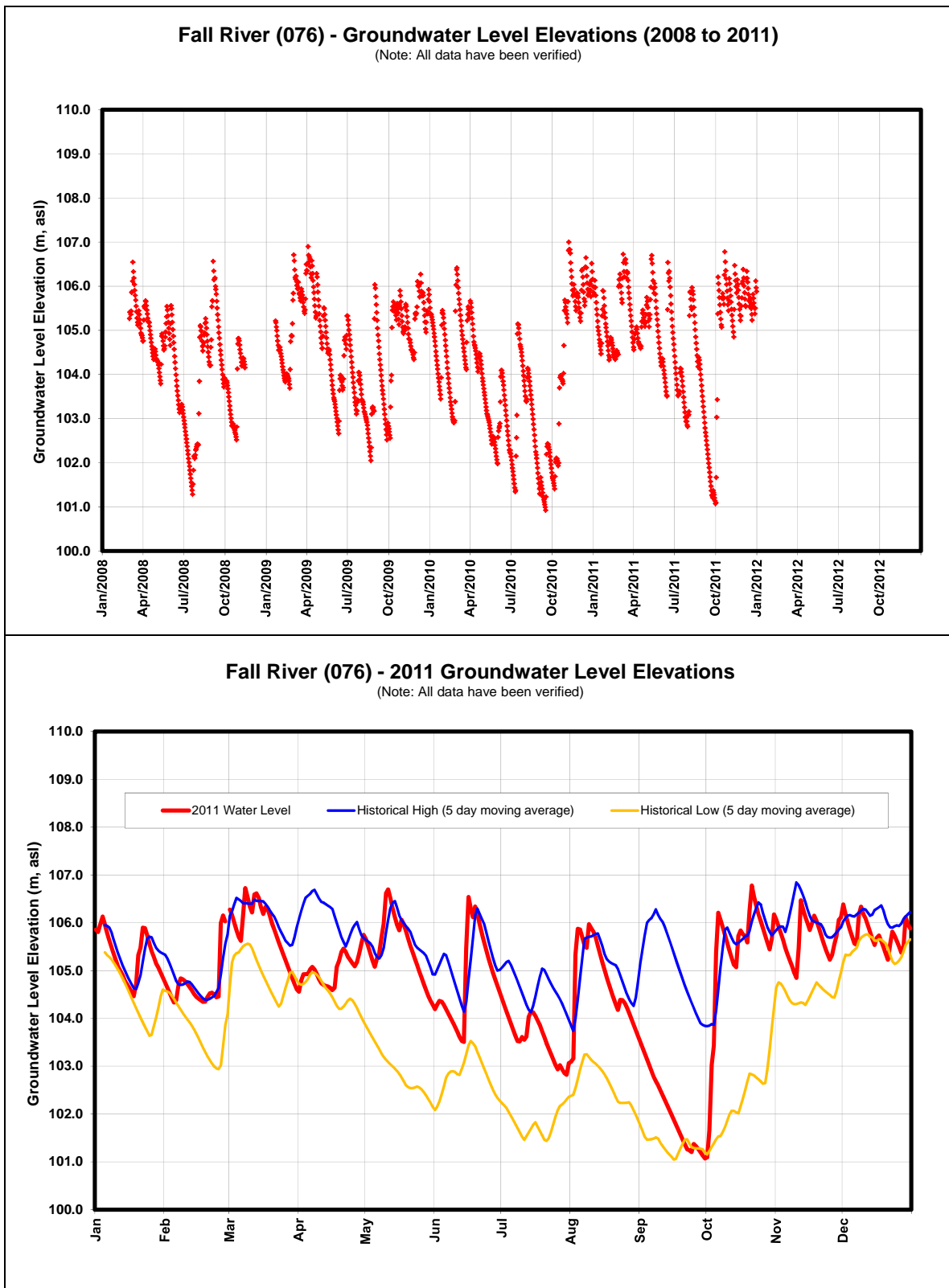


Figure B.28: Fall River (076) Groundwater Level Elevations

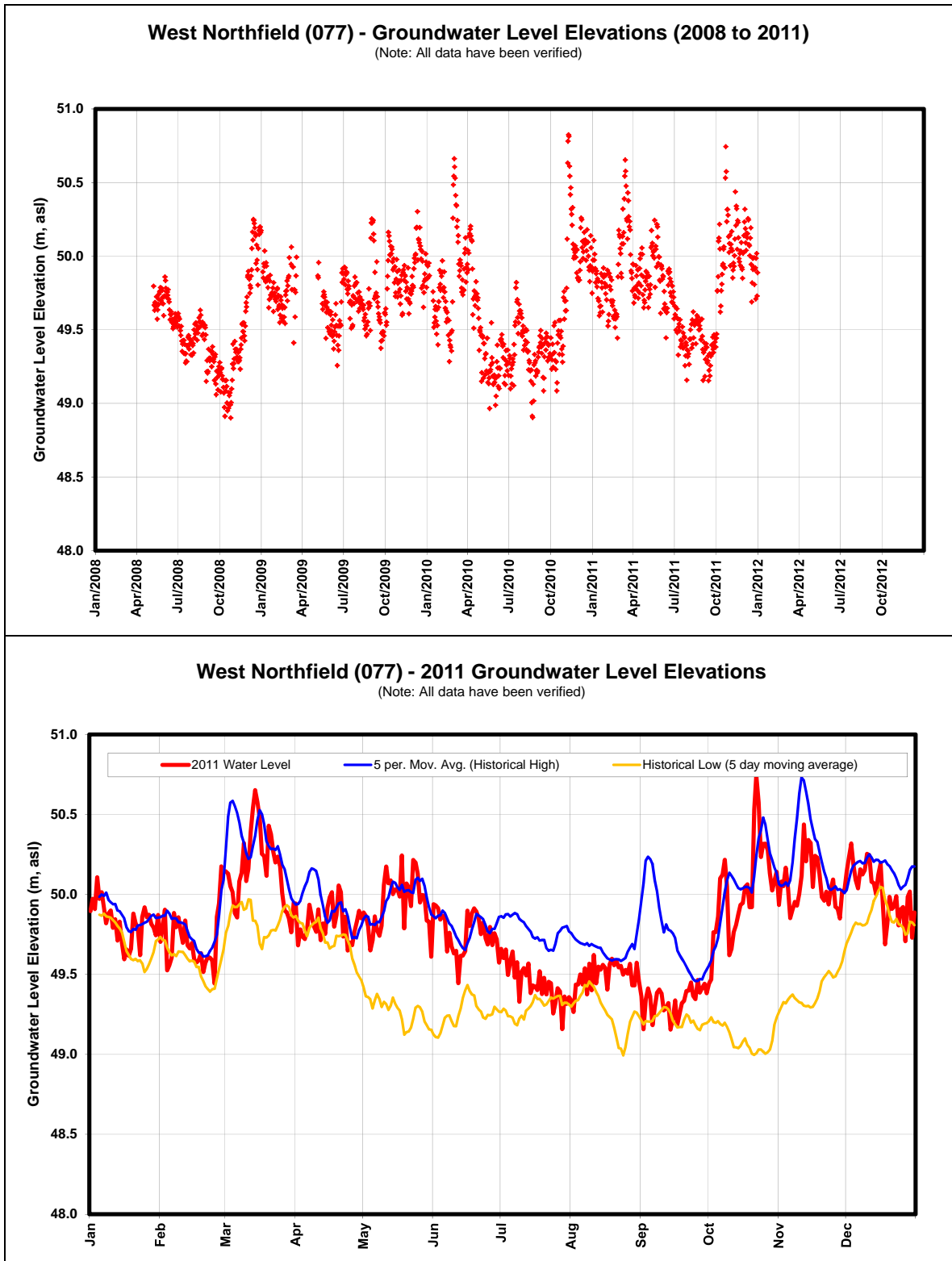


Figure B.29: West Northfield (077) Groundwater Level Elevations

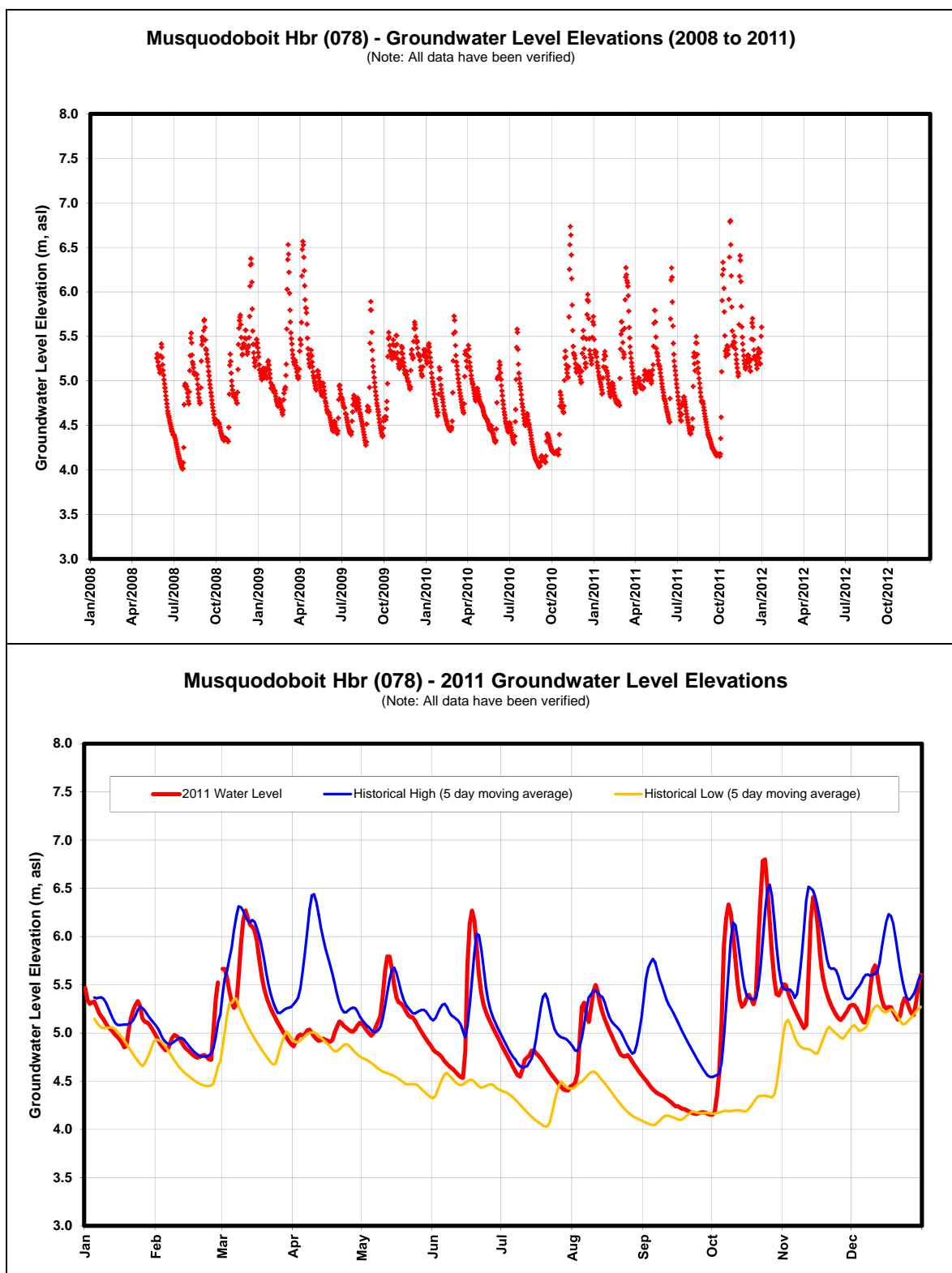


Figure B.30: Musquodoboit Harbour (078) Groundwater Level Elevations

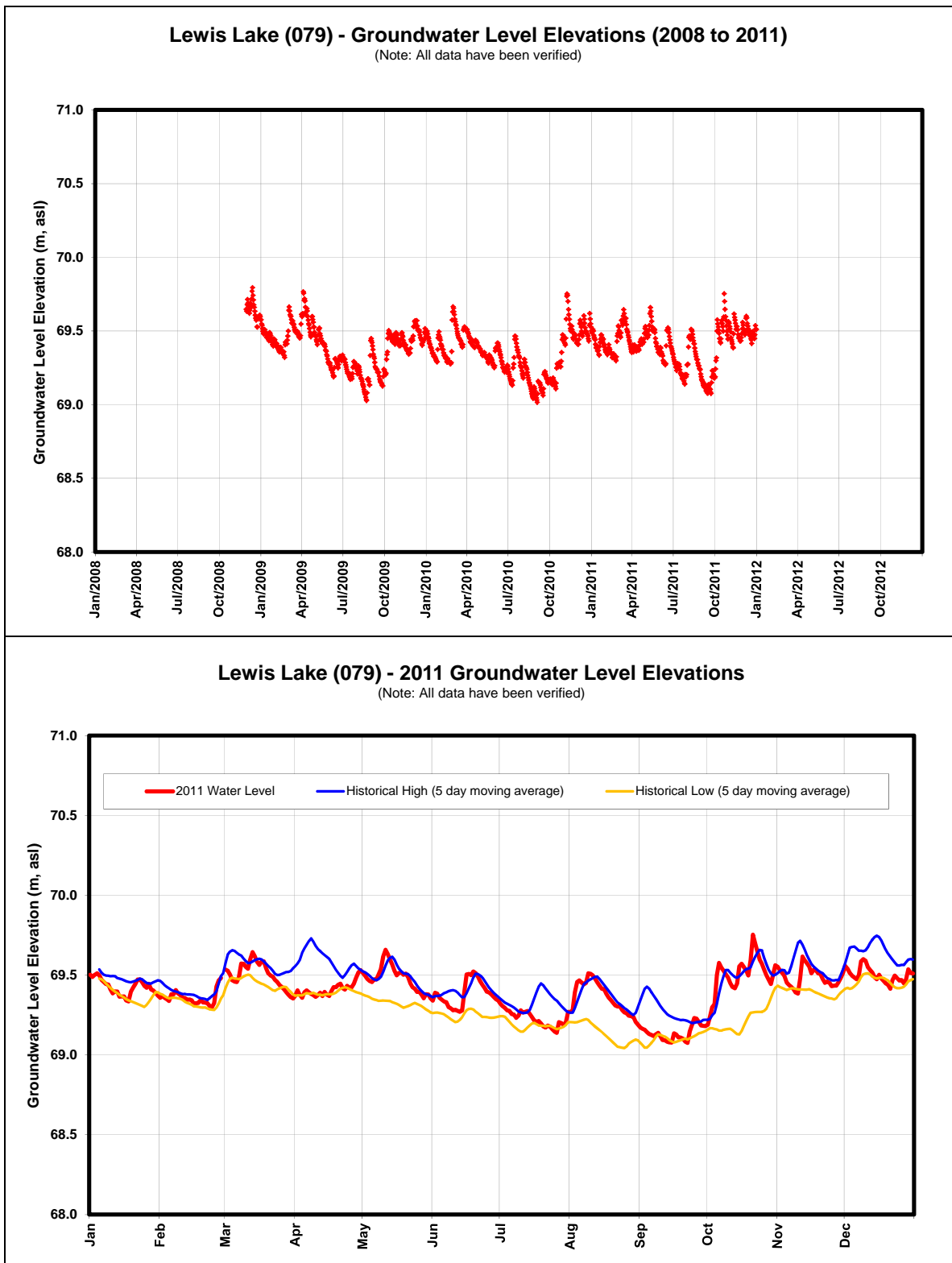


Figure B.31: Lewis Lake (079) Groundwater Level Elevations

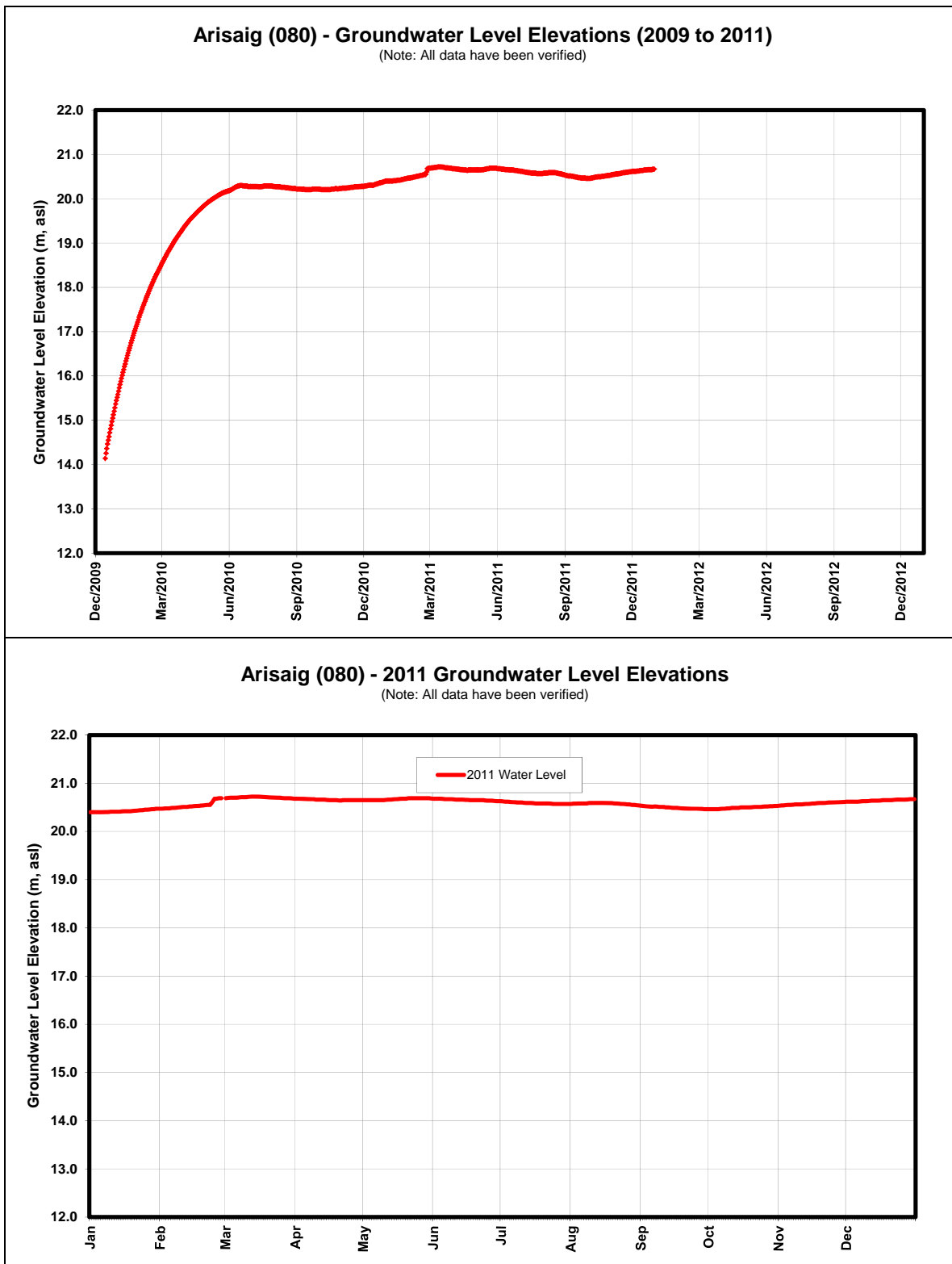


Figure B.32: Arisaig (080) Groundwater Level Elevations

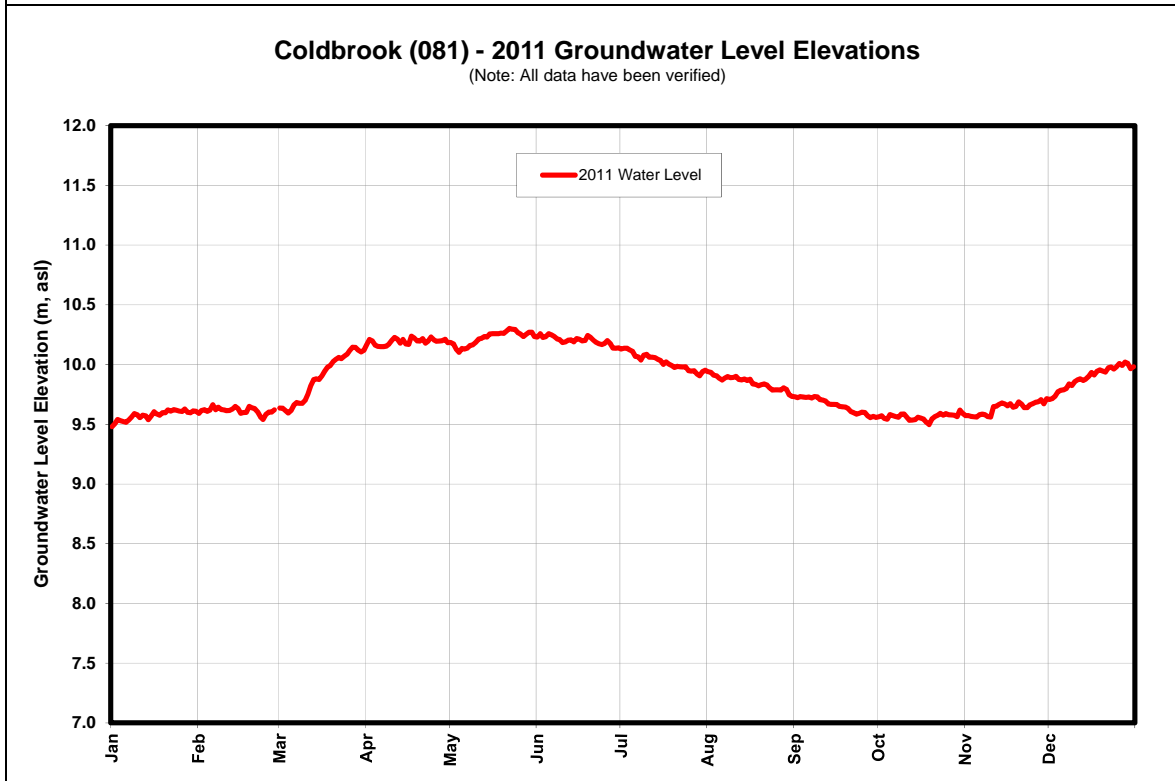
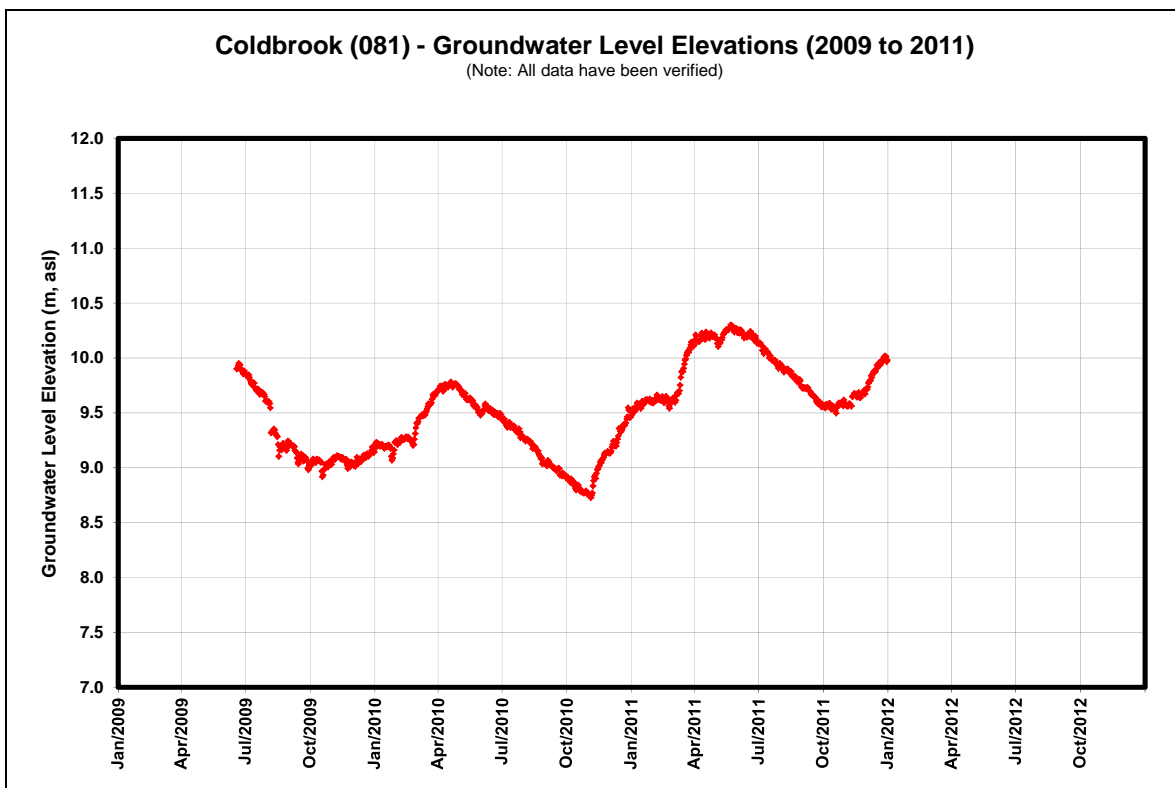


Figure B.33: Coldbrook (081) Groundwater Level Elevations

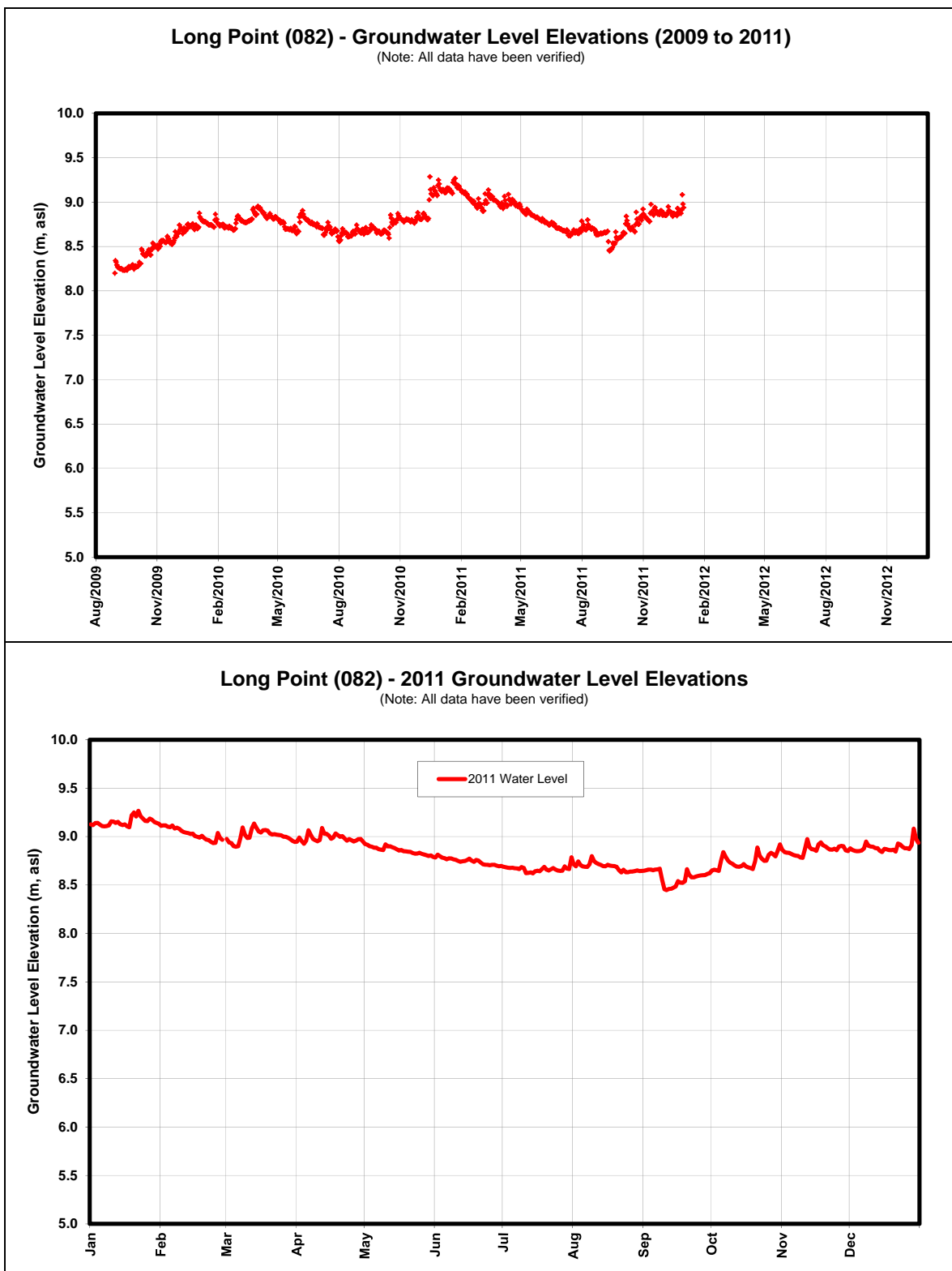


Figure B.34: Long Point (082) Groundwater Level Elevations

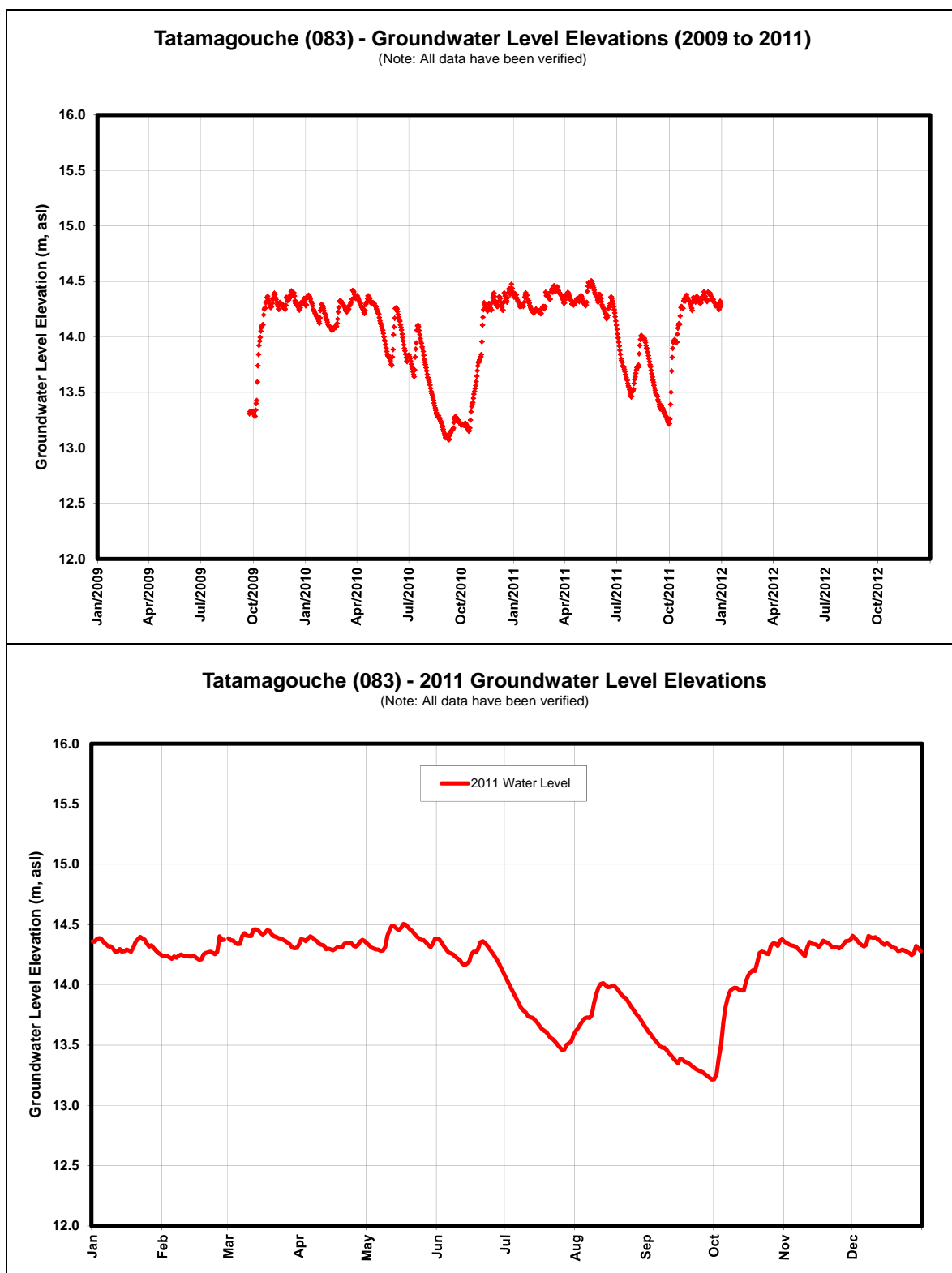


Figure B.35: Tatamagouche (083) Groundwater Level Elevations

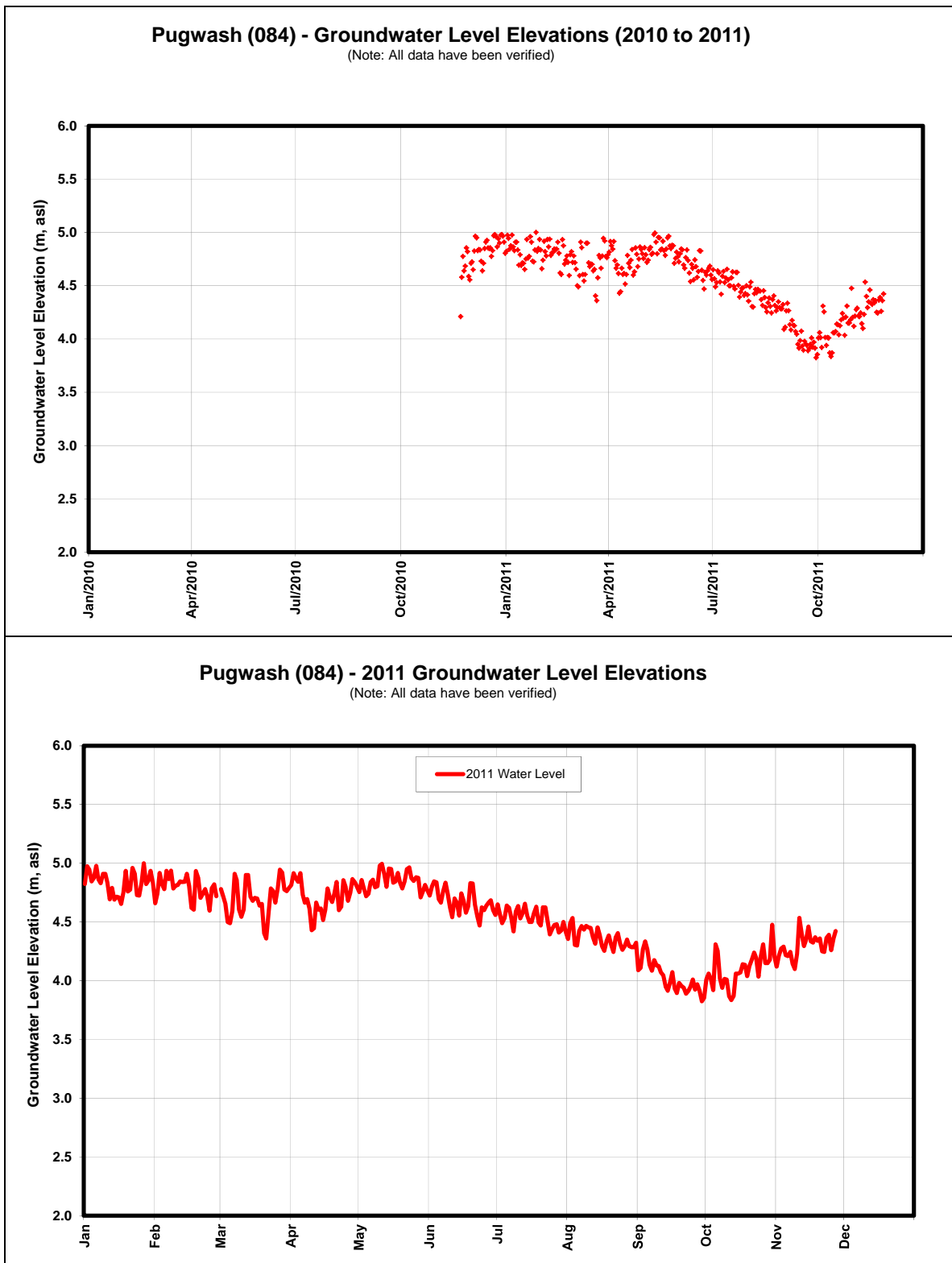


Figure B.36: Pugwash (084) Groundwater Level Elevations

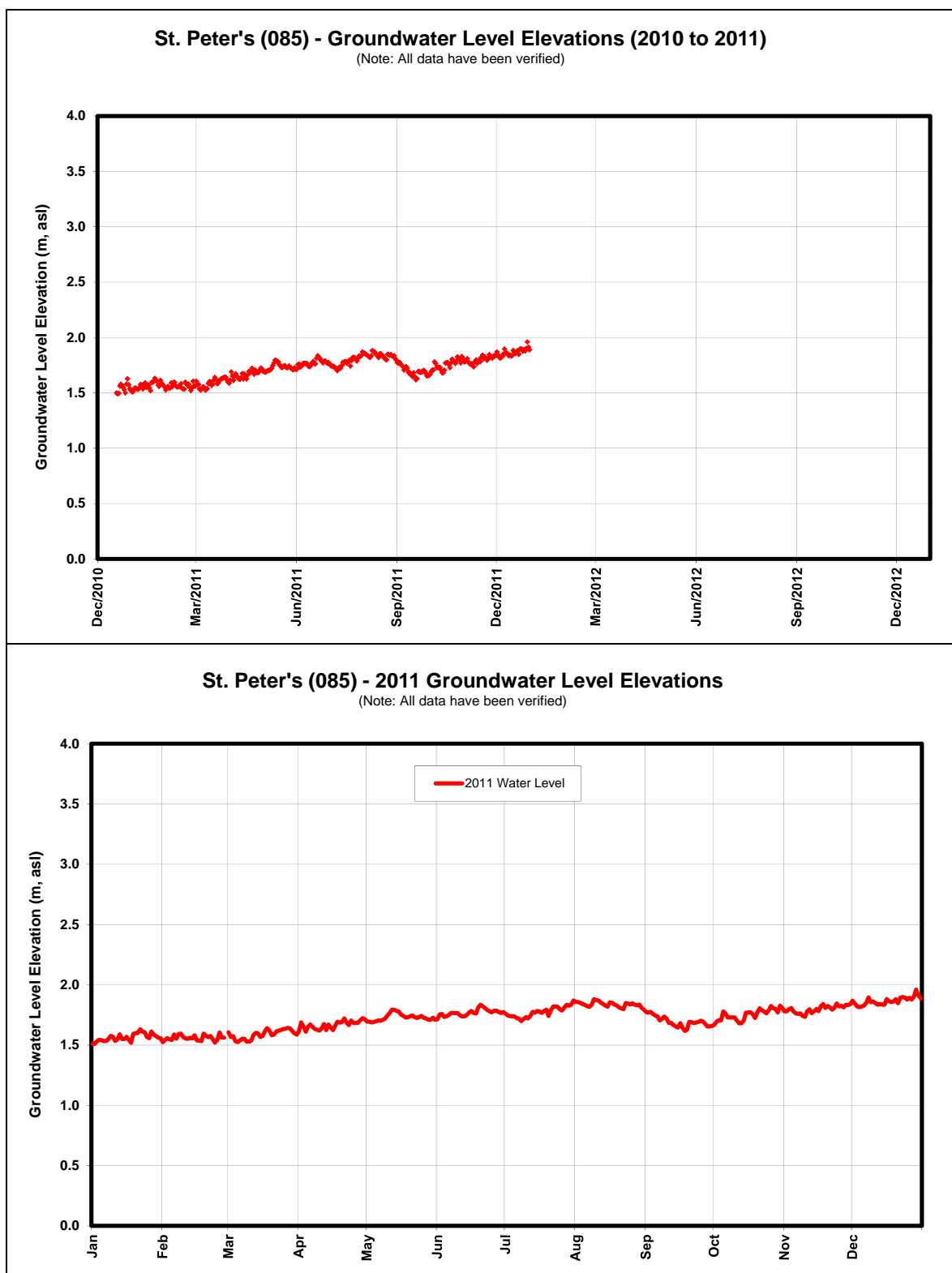


Figure B.37: St. Peter's (085) Groundwater Level Elevations

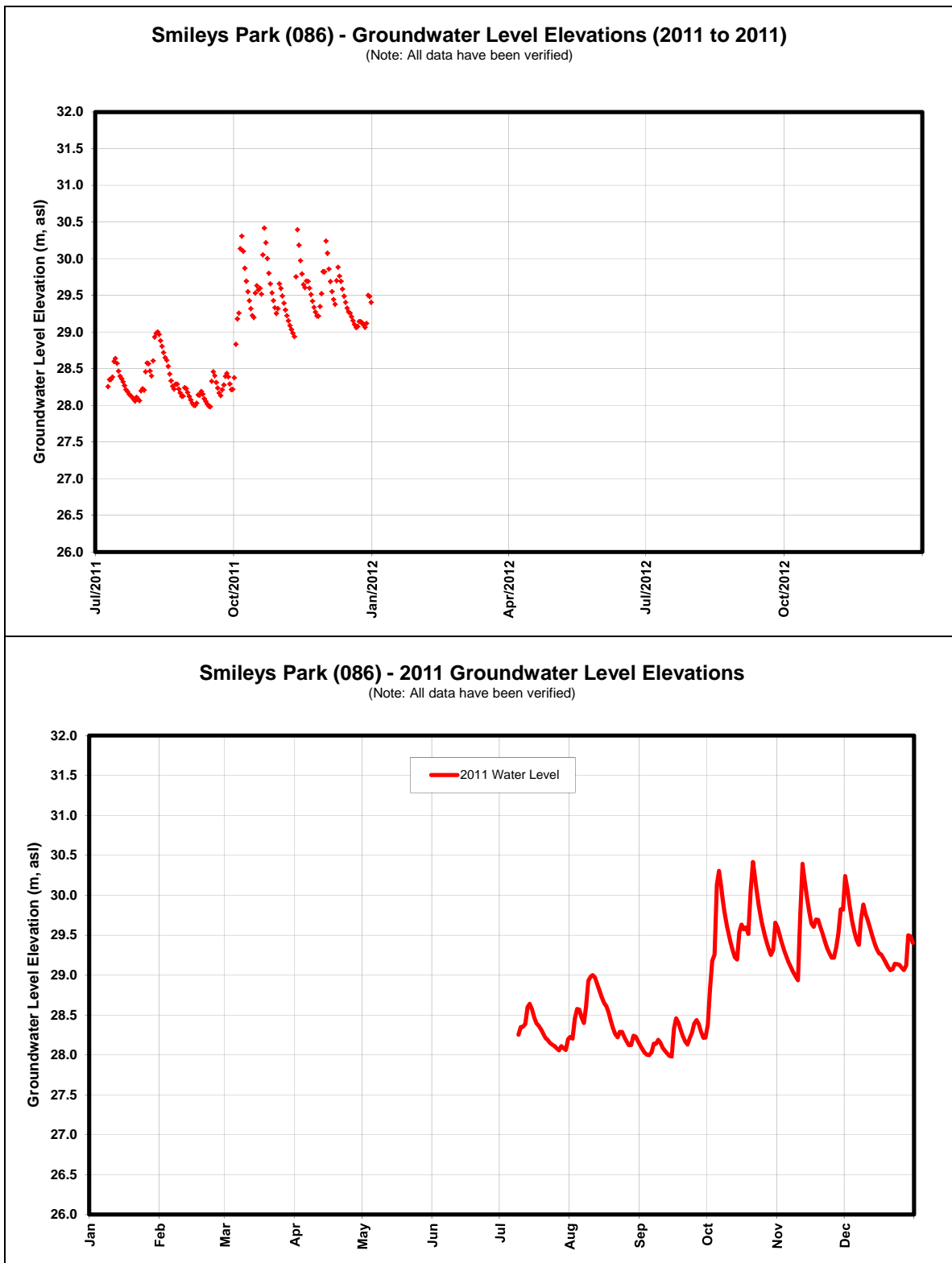


Figure B.38: Smileys Park (086) Groundwater Level Elevations

APPENDIX C
GROUNDWATER CHEMISTRY RESULTS

Table C1. Summary of Parameters Tested at Each Well

Observation Well		General Chemistry	Metals	VOC	Pesticides	Tritium	Perchlorate
Greenwood (003)	23-Nov-2005	✓	✓	✓	✓	✓	✓
	18-Dec-2008	✓	✓	✓	✓		
	6-Jul-2011	✓	✓	✓	✓		
Fraser Brook (004)	10-Dec-2004	✓	✓	✓	✓		✓
	3-Dec-2008	✓	✓	✓	✓		
Wilmot (005)	29-Nov-2006	✓	✓	✓			
	12-May-2010	✓	✓	✓	✓		
Murray Siding (007)	22-Nov-2011	✓	✓	✓	✓		
Wolfville (010)	22-Dec-2004	✓	✓	✓	✓	✓	✓
	18-Dec-2008	✓	✓	✓	✓		
Truro (014)	NA						
Monastery (028)	15-Dec-2006	✓	✓	✓	✓	✓	✓
	9-Dec-2008	✓	✓	✓	✓		
Point Aconi (030)	15-Sep-2005	✓	✓	✓	✓	✓	✓
	10-Dec-2008	✓	✓	✓	✓		
Lawrencetown (043)	18-Nov-2004	✓	✓				
	5-Dec-2008	✓	✓	✓	✓		
	16-Nov-2011	✓	✓	✓	✓		
Durham (045)	5-Oct-2005	✓	✓	✓	✓	✓	✓
	21-Jan-2009	✓	✓	✓	✓		
Kentville (048)	15-Jun-2005	✓	✓		✓	✓	✓
	7-Nov-2007	✓	✓	✓	✓		
	5-Jul-2011	✓	✓	✓	✓		
Sydney (050)	15-Sep-2005	✓	✓	✓	✓	✓	✓
	11-Dec-2008	✓	✓	✓	✓		
North Grant (054)	13-Dec-2006	✓	✓	✓	✓	✓	
	22-Jul-2008	✓	✓	✓	✓		
Stillwater (055)	13-Dec-2006	✓	✓	✓	✓	✓	
	4-Dec-2008	✓	✓	✓	✓		
Sheet Harbour (056)	5-Dec-2008	✓	✓	✓	✓		
Hayden Lake (059)	9-Jun-2005	✓	✓	✓	✓	✓	✓
	16-Dec-2008	✓	✓	✓	✓		
Meteghan (060)	12-Dec-2006	✓	✓	✓	✓	✓	
	17-Dec-2008	✓	✓	✓	✓		
Annapolis Royal (062)	9-Nov-2005	✓	✓	✓	✓	✓	✓
	26-Nov-2007	✓	✓	✓	✓		
	1-Jun-2010	✓	✓	✓	✓		
Hebron (063)	9-Jun-2005	✓	✓	✓	✓	✓	✓
	17-Dec-2008	✓	✓	✓	✓		
Margaree (064)	14-Dec-2006	✓	✓	✓	✓	✓	
	10-Dec-2008	✓	✓	✓	✓		
Ingonish (065)	25-Aug-2009	✓	✓	✓	✓		
Debert (068)	NA						
Dalem Lake (069)	14-Dec-2006	✓	✓	✓	✓	✓	
	11-Dec-2008	✓	✓	✓	✓		
Amherst (071)	16-Dec-2006	✓	✓	✓	✓	✓	
	8-Jan-2009	✓	✓	✓	✓		
Kelley River (073)	12-Jan-2007	✓	✓	✓	✓	✓	
	9-Jun-2009	✓	✓	✓	✓		
Atlanta (074)	3-Sep-2007	✓	✓	✓	✓		
	8-Jun-2010	✓	✓	✓	✓		
Sheffield Mills (075)	10-Sep-2007	✓	✓	✓	✓		
	9-Jun-2010	✓	✓	✓	✓		
Fall River (076)	20-May-2008	✓	✓	✓	✓		
West Northfield (077)	12-Jun-2008	✓	✓	✓	✓		
Musquodoboit Hbr (078)	22-May-2008	✓	✓	✓	✓		
Lewis Lake (079)	31-Jul-2008	✓	✓	✓	✓		
Arisaig (080)	8-Sep-2009	✓	✓	✓	✓		
Coldbrook (081)	8-Aug-2009	✓	✓	✓	✓		
Long Point (082)	12-Aug-2009	✓	✓	✓	✓		
Tatamagouche (083)	21-Jul-2008	✓	✓	✓	✓		
Pugwash (084)	NA						
St Peters (085)	19-Jul-2011	✓	✓	✓	✓		
Smileys Park (086)	NA						

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Greenwood (003)			Fraser Brook (004)		Wilmot (005)		Murray Siding (007)
				23-Nov-2005	18-Dec-2008	6-Jul-2011	10-Dec-2004	3-Dec-2008	29-Nov-2006	12-May-2010	22-Nov-2011
General Chemistry											
Total Alkalinity (Total as CaCO3)	mg/L	-	5	ND	ND	6	74	71	16	27	69
Chloride (Cl)	mg/L	250 AO	1	6	3	2	5	5	22	14	46
Colour	TCU	15 AO	5	5	7	ND	ND	ND	ND	ND	ND
Hardness (CaCO3)	mg/L	-	-	10	5	3	79.1	75	180	100	86
Nitrate + Nitrite	mg/L	10	0.05	ND	0.12	0.11	ND	1.2	30	17	0.93
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	ND	0.02	0.02	ND
Nitrate (N)	mg/L	10	0.05	ND	0.12	0.11	ND	1.2	30	17	0.93
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	0.22	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon (C)	mg/L	-	0.5	2	0.8	0.7	ND	0.5	ND	ND	ND
Orthophosphate (P)	mg/L	-	0.01	0.05	ND	ND	0.02	0.03	0.07	0.08	ND
pH	pH	6.5 - 8.5 OV	-	6.41	6.49	6.6	7.6	8.05	6.7	7.28	7.22
Reactive Silica (SiO2)	mg/L	-	0.5	11	11	11	7.8	7.1	7.9	7.7	11
Sulphate (SO4)	mg/L	500 AO	2	9	5	2	5	4	27	21	6
Turbidity	NTU	5 OV	0.1	39	5.4	15	0.2	0.3	50	0.2	2.3
Conductivity	uS/cm	-	-	79	41	1100	166	160	410	280	290
Anion Sum	me/L	-	-	0.372	0.18	0.22	1.73	1.73	3.65	2.56	2.89
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	6	74	70	16	27	69
Calculated TDS	mg/L	500 AO	1	40	28	28	94	95	275	182	165
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	me/L	-	-	0.549	0.38	0.34	1.78	1.71	3.92	2.46	2.82
Ion Balance (% Difference)	%	-	-	19.2	35.7	21.4	1.56	0.58	3.58	1.99	1.23
Langelier Index (@ 20C)	N/A	-	-	-	-	-4.02	-0.68	-0.188	-1.75	-1.12	-0.949
Langelier Index (@ 4C)	N/A	-	-	-	-	-4.27	-1.08	-0.44	-2	-1.37	-1.2
Saturation pH (@ 20C)	N/A	-	-	-	-	10.6	8.28	8.24	8.45	8.4	8.17
Saturation pH (@ 4C)	N/A	-	-	-	-	10.9	8.68	8.49	8.7	8.65	8.42
Calcium (Ca)	mg/L	-	0.1	2.2	1.2	0.815	19.3	18	56	36	23
Magnesium (Mg)	mg/L	-	0.1	1	0.4	0.217	7.5	7.3	8.5	3.6	6.87
Phosphorus (P)	mg/L	-	0.1	ND	ND	0.136	ND	ND	0.2	ND	ND
Potassium (K)	mg/L	-	0.1	2.4	1.7	1.54	1	1	3.1	2.8	1.25
Sodium (Na)	mg/L	200 AO	0.1	3.6	2.1	2.33	4	4.3	7.5	6.8	24.3
Bromide (Br)	mg/L	-	0.5	ND	ND	ND	0.03	ND	-	ND	ND
Fluoride (F)	mg/L	1.5	0.1	ND	ND	ND	ND	ND	-	ND	ND
Metals											
Aluminum (Al)	ug/L	-	10	47	18	20.3	ND	ND	ND	13	6.5
Antimony (Sb)	ug/L	6	2	ND	ND	ND (1)	ND	ND	ND	ND	ND (1)
Arsenic (As)	ug/L	10	2	2	ND	1.9	14	15	ND	ND	ND (1)
Barium (Ba)	ug/L	1000	5	59	25	11.7	5	6	89	53	56.3
Beryllium (Be)	ug/L	-	2	ND	ND	ND (1)	ND	ND	ND	ND	ND (1)
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Boron (B)	ug/L	5000	5	ND	ND	ND (50)	30	27	14	15	ND (50)
Cadmium (Cd)	ug/L	5	0.3	ND	ND	0.032	ND	ND	ND	ND	0.041
Chromium (Cr)	ug/L	50	2	ND	ND	1.6	ND	ND	ND	ND	ND (1)
Cobalt (Co)	ug/L	-	1	3	1	0.48	ND	ND	ND	ND	0.4
Copper (Cu)	ug/L	1000 AO	2	3	ND	2.7	ND	ND	ND	10	ND
Iron (Fe)	ug/L	300 AO	50	8700	4300	4020	ND	ND	ND	ND	614
Lead (Pb)	ug/L	10	0.5	1.7	ND	0.97	ND	ND	2.3	0.7	ND
Manganese (Mn)	ug/L	50 AO	2	140	84	70.2	ND	ND	15	14	92.8
Molybdenum (Mo)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (Hg)	ug/L	1	0.01	-	ND	ND	-	ND	-	ND	0.018
Nickel (Ni)	ug/L	-	2	4	2	ND	ND	ND	3	2	ND
Selenium (Se)	ug/L	10	2	ND	ND	ND (1)	ND	ND	ND	ND	ND (1)
Silver (Ag)	ug/L	-	0.5	ND	ND	ND (0.1)	ND	ND	ND	ND	ND (0.1)
Strontium (Sr)	ug/L	-	5	9	ND	2.8	150	150	160	120	157
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Tin (Sn)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	ND	ND (5)	ND	ND	ND	ND	ND
Uranium (U)	ug/L	20	0.1	0.2	ND	ND	1.5	1.4	ND	ND	ND
Vanadium (V)	ug/L	-	2	ND	ND	ND	2	2	ND	ND	ND
Zinc (Zn)	ug/L	5000 AO	5	87	60	34.3	ND	ND	7	24	5.2

Notes:

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ND = not detected

ND() = not detected at the detection limit shown in brackets ()

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Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Wolfville (010)		Monastery (028)		Point Aconi (030)	
				22-Dec-2004	18-Dec-2008	15-Dec-2006	9-Dec-2008	15-Sep-2005	10-Dec-2008
General Chemistry									
Total Alkalinity (Total as CaCO3)	mg/L	-	5	25	10	240	220	140	130
Chloride (Cl)	mg/L	250 AO	1	78	87	31	24	19	11
Colour	TCU	15 AO	5	ND	14	ND	ND	ND	ND
Hardness (CaCO3)	mg/L	-	-	101	67	120	95	140	160
Nitrate + Nitrite	mg/L	10	0.05	1.9	1.5	ND	ND	ND	1.3
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	ND	ND
Nitrate (N)	mg/L	10	0.05	1.9	1.5	ND	ND	ND	1.3
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	ND	0.63	0.14	0.12	ND	ND
Total Organic Carbon (C)	mg/L	-	0.5	ND	1.6	2.1	1	ND	1.3
Orthophosphate (P)	mg/L	-	0.01	ND	0.01	ND	ND	ND	ND
pH	pH	6.5 - 8.5 OV	-	6.5	6.53	8.14	8.23	8.01	7.97
Reactive Silica (SiO2)	mg/L	-	0.5	17	14	11	13	7.6	9.2
Sulphate (SO4)	mg/L	500 AO	2	12	11	72	59	10	21
Turbidity	NTU	5 OV	0.1	0.9	68	0.2	0.3	ND	0.2
Conductivity	uS/cm	-	-	382	370	660	640	380	340
Anion Sum	me/L	-	-	3.08	2.99	7.13	6.36	3.6	3.38
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	25	10	235	220	140	126
Calculated TDS	mg/L	500 AO	1	196	201	417	365	207	194
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	3	4	1	1
Cation Sum	me/L	-	-	3.3	3.4	7.51	6.28	4.11	3.66
Ion Balance (% Difference)	%	-	-	3.3	6.42	2.61	0.63	6.56	3.98
Langelier Index (@ 20C)	N/A	-	-	-2.12	-2.59	0.553	0.539	0.41	0.423
Langelier Index (@ 4C)	N/A	-	-	-2.52	-2.84	0.304	0.29	0.16	0.173
Saturation pH (@ 20C)	N/A	-	-	8.62	9.12	7.59	7.69	7.6	7.55
Saturation pH (@ 4C)	N/A	-	-	9.02	9.37	7.84	7.94	7.85	7.8
Calcium (Ca)	mg/L	-	0.1	27.4	19	31	25	44	55
Magnesium (Mg)	mg/L	-	0.1	7.8	4.6	9.3	7.7	6.3	5.8
Phosphorus (P)	mg/L	-	0.1	ND	ND	ND	ND	ND	ND
Potassium (K)	mg/L	-	0.1	2	1.9	2.3	3.6	4	1
Sodium (Na)	mg/L	200 AO	0.1	28.3	29	120	98	30	10
Bromide (Br)	mg/L	-	0.5	0.06	ND	ND	ND	-	ND
Fluoride (F)	mg/L	1.5	0.1	ND	ND	0.3	ND	-	ND
Metals									
Aluminum (Al)	ug/L	-	10	ND	ND	ND	ND	15	ND
Antimony (Sb)	ug/L	6	2	ND	ND	ND	0.78	ND	ND
Arsenic (As)	ug/L	10	2	ND	ND	6	4.1	ND	ND
Barium (Ba)	ug/L	1000	5	69	46	25	25	40	18
Beryllium (Be)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Boron (B)	ug/L	5000	5	26	23	250	220	35	ND
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND	ND	ND	ND
Chromium (Cr)	ug/L	50	2	ND	ND	ND	ND	ND	ND
Cobalt (Co)	ug/L	-	1	ND	2	ND	ND	ND	ND
Copper (Cu)	ug/L	1000 AO	2	ND	ND	7	ND	6	ND
Iron (Fe)	ug/L	300 AO	50	230	20000	ND	ND	ND	ND
Lead (Pb)	ug/L	10	0.5	ND	ND	ND	ND	0.6	ND
Manganese (Mn)	ug/L	50 AO	2	14	1300	42	48	360	7.9
Molybdenum (Mo)	ug/L	-	2	ND	ND	3	ND	ND	ND
Mercury (Hg)	ug/L	1	0.01	-	ND	ND	ND	-	ND
Nickel (Ni)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Selenium (Se)	ug/L	10	2	ND	ND	ND	ND	ND	ND
Silver (Ag)	ug/L	-	0.5	ND	ND	ND	ND	ND	ND
Strontium (Sr)	ug/L	-	5	110	67	2400	2600	230	110
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND	ND
Tin (Sn)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Uranium (U)	ug/L	20	0.1	ND	ND	0.6	0.72	0.3	0.36
Vanadium (V)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Zinc (Zn)	ug/L	5000 AO	5	ND	ND	34	ND	18	ND

Notes:

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Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Lawrencetown (043)			Durham (045)		Kentville (048)		
				18-Nov-2004	5-Dec-2008	16-Nov-2011	5-Oct-2005	21-Jan-2009	15-Jun-2005	7-Nov-2007	5-Jul-2011
General Chemistry											
Total Alkalinity (Total as CaCO3)	mg/L	-	5	82	82	90	140	110	20	22	21
Chloride (Cl)	mg/L	250 AO	1	150	180	170	44	19	230	270	290
Colour	TCU	15 AO	5	ND	ND	ND	ND	ND	ND	ND	8
Hardness (CaCO3)	mg/L	-	-	98.9	100	120	86	72	150	180	180
Nitrate + Nitrite	mg/L	10	0.05	ND	ND	ND	ND	ND	1.2	0.96	1
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (N)	mg/L	10	0.05	ND	ND	ND	ND	ND	1.2	0.96	1
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	0.19	0.12	0.09	0.11	ND	0.06	ND	ND
Total Organic Carbon (C)	mg/L	-	0.5	ND	0.5	ND	ND	ND	ND	ND	ND
Orthophosphate (P)	mg/L	-	0.01	ND	ND	ND	ND	0.01	ND	0.05	ND
pH	pH	6.5 - 8.5 OV	-	7.3	8.14	8.06	8.16	7.95	6.84	7.39	6.94
Reactive Silica (SiO2)	mg/L	-	0.5	7.3	8.5	7.9	11	9.8	11	11	11
Sulphate (SO4)	mg/L	500 AO	2	ND	ND	3	16	11	16	19	21
Turbidity	NTU	5 OV	0.1	1	0.2	ND	ND	0.5	5	0.7	1.7
Conductivity	uS/cm	-	-	695	710	730	410	290	910	1000	28
Anion Sum	me/L	-	-	5.92	6.77	6.68	4.31	2.95	7.36	8.5	9.01
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	82	81	89	134	108	20.3	22	21
Calculated TDS	mg/L	500 AO	1	341	375	370	243	167	223	503	537
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	1	ND	2	ND	ND	ND	ND
Cation Sum	me/L	-	-	6.19	6.39	6.39	4.22	2.92	8.18	8.67	9.32
Ion Balance (% Difference)	%	-	-	2.27	2.89	2.22	1.01	0.51	5.28	0.99	1.69
Langelier Index (@ 20C)	N/A	-	-	-0.85	0.039	0.046	0.382	0.008	-1.54	-0.975	-1.45
Langelier Index (@ 4C)	N/A	-	-	-1.25	-0.21	-0.202	0.132	-0.242	-1.79	-1.22	-1.7
Saturation pH (@ 20C)	N/A	-	-	8.15	8.1	8.01	7.78	7.94	8.38	8.37	8.39
Saturation pH (@ 4C)	N/A	-	-	8.55	8.35	8.26	8.03	8.19	8.63	8.61	8.64
Calcium (Ca)	mg/L	-	0.1	26.1	27	30	30	25	52	58	58.6
Magnesium (Mg)	mg/L	-	0.1	8.2	8.8	10.5	2.7	2.3	5.6	7.5	7.92
Phosphorus (P)	mg/L	-	0.1	ND	ND	ND	0.1	ND	ND (0.2)	ND	ND
Potassium (K)	mg/L	-	0.1	1.9	1.9	1.9	1.6	1.3	4.9	5.4	5.77
Sodium (Na)	mg/L	200 AO	0.1	95.4	98	91.3	57	33	120	120	128
Bromide (Br)	mg/L	-	0.5	0.53	ND	ND	ND	ND	ND	ND	ND
Fluoride (F)	mg/L	1.5	0.1	0.11	0.1	ND	0.3	0.2	ND	ND	ND
Metals											
Aluminum (Al)	ug/L	-	10	ND	ND	10.2	16	12	ND	ND	ND (5)
Antimony (Sb)	ug/L	6	2	ND	ND	ND (1)	ND	ND	ND	ND	ND (1)
Arsenic (As)	ug/L	10	2	56	58	65.7	4	2	ND	ND	ND (1)
Barium (Ba)	ug/L	1000	5	26	41	38.7	130	110	64	76	79.6
Beryllium (Be)	ug/L	-	2	ND	ND	ND (1)	ND	ND	ND	ND	ND (1)
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Boron (B)	ug/L	5000	5	93	110	100	38	27	5.7	6	ND (50)
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND	ND	ND	ND	ND	0.042
Chromium (Cr)	ug/L	50	2	ND	ND	ND (1)	ND	ND	ND	ND	ND (1)
Cobalt (Co)	ug/L	-	1	ND	ND	ND (0.4)	ND	ND	ND	ND	ND (0.4)
Copper (Cu)	ug/L	1000 AO	2	ND	ND	ND	ND	ND	ND	ND	ND
Iron (Fe)	ug/L	300 AO	50	ND	ND	51	ND	ND	ND	410	585
Lead (Pb)	ug/L	10	0.5	ND	ND	ND	ND	ND	ND	45	72.9
Manganese (Mn)	ug/L	50 AO	2	16	32	26.9	21	ND	ND	12	21.9
Molybdenum (Mo)	ug/L	-	2	ND	ND	ND	8	4	ND	ND	ND
Mercury (Hg)	ug/L	1	0.01	-	ND	ND	-	ND	-	0.01	0.033
Nickel (Ni)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Se)	ug/L	10	2	ND	ND	ND (1)	ND	ND	ND	ND	ND (1)
Silver (Ag)	ug/L	-	0.5	ND	ND	ND (0.1)	ND	ND	ND	ND	ND (0.1)
Strontium (Sr)	ug/L	-	5	1100	1400	1380	1100	520	210	260	256
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Tin (Sn)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	ND (5)
Uranium (U)	ug/L	20	0.1	ND	ND	ND	0.7	0.9	ND	ND	ND
Vanadium (V)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Zinc (Zn)	ug/L	5000 AO	5	ND	ND	10.6	21	ND	150	8	ND

Notes:

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Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Sydney (050)		North Grant (054)		Stillwater (055)	
				15-Sep-2005	11-Dec-2008	13-Dec-2006	22-Jul-2008	13-Dec-2006	4-Dec-2008
General Chemistry									
Total Alkalinity (Total as CaCO3)	mg/L	-	5	83	90	93	92	58	64
Chloride (Cl)	mg/L	250 AO	1	7	5	30	27	5	5
Colour	TCU	15 AO	5	ND	8	ND	ND	ND	ND
Hardness (CaCO3)	mg/L	-	-	87	89	38	36	58	53
Nitrate + Nitrite	mg/L	10	0.05	0.17	ND	0.55	0.7	0.13	0.1
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	ND	ND
Nitrate (N)	mg/L	10	0.05	0.17	ND	0.55	0.7	0.13	0.1
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	ND	ND	ND	ND	0.09	0.06
Total Organic Carbon (C)	mg/L	-	0.5	ND	1.3	2.5	ND	2.5	0.8
Orthophosphate (P)	mg/L	-	0.01	ND	ND	ND	ND	ND	ND
pH	pH	6.5 - 8.5 OV	-	8.03	7.7	7.83	8.03	7.32	7.28
Reactive Silica (SiO2)	mg/L	-	0.5	8.6	8	9.6	9.8	12	11
Sulphate (SO4)	mg/L	500 AO	2	7	7	35	31	6	4
Turbidity	NTU	5 OV	0.1	0.3	0.2	1.1	53	0.4	0.6
Conductivity	uS/cm	-	-	210	190	340	340	140	140
Anion Sum	me/L	-	-	2.02	2.1	3.5	3.3	1.44	1.52
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	82	90	93	91	58	64
Calculated TDS	mg/L	500 AO	1	115	116	209	206	89	88
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	ND	ND	ND	ND
Cation Sum	me/L	-	-	2.07	2.05	3.43	3.58	1.5	1.4
Ion Balance (% Difference)	%	-	-	1.29	1.2	1.07	4.07	2.18	4.11
Langelier Index (@ 20C)	N/A	-	-	0.069	-0.207	-0.526	-0.363	-0.962	-0.998
Langelier Index (@ 4C)	N/A	-	-	-0.182	-0.458	-0.776	-0.613	-1.21	-1.25
Saturation pH (@ 20C)	N/A	-	-	7.96	7.91	8.36	8.39	8.28	8.28
Saturation pH (@ 4C)	N/A	-	-	8.21	8.16	8.61	8.64	8.53	8.53
Calcium (Ca)	mg/L	-	0.1	30	31	12	11	19	18
Magnesium (Mg)	mg/L	-	0.1	3	2.8	2.2	2.2	2.2	2
Phosphorus (P)	mg/L	-	0.1	ND	ND	ND	ND	ND	ND
Potassium (K)	mg/L	-	0.1	1.7	1.4	1	1	1.8	1.6
Sodium (Na)	mg/L	200 AO	0.1	6.6	5.5	61	61	6.8	7
Bromide (Br)	mg/L	-	0.5	ND	ND	ND	ND	ND	ND
Fluoride (F)	mg/L	1.5	0.1	0.1	0.1	0.6	0.6	ND	ND
Metals									
Aluminum (Al)	ug/L	-	10	11	ND	46	620	35	20
Antimony (Sb)	ug/L	6	2	ND	ND	ND	ND	ND	ND
Arsenic (As)	ug/L	10	2	ND	ND	3	15	ND	ND
Barium (Ba)	ug/L	1000	5	93	91	88	110	11	10
Beryllium (Be)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Boron (B)	ug/L	5000	5	15	10	610	560	8	8
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND	ND	ND	ND
Chromium (Cr)	ug/L	50	2	ND	ND	ND	ND	ND	ND
Cobalt (Co)	ug/L	-	1	ND	ND	ND	ND	ND	1
Copper (Cu)	ug/L	1000 AO	2	7	ND	ND	ND	ND	ND
Iron (Fe)	ug/L	300 AO	50	80	250	85	4900	ND	ND
Lead (Pb)	ug/L	10	0.5	ND	ND	ND	0.6	ND	ND
Manganese (Mn)	ug/L	50 AO	2	630	830	8	27	37	100
Molybdenum (Mo)	ug/L	-	2	ND	ND	3	3	ND	ND
Mercury (Hg)	ug/L	1	0.01	-	ND	ND	ND	ND	ND
Nickel (Ni)	ug/L	-	2	ND	ND	ND	ND	ND	3
Selenium (Se)	ug/L	10	2	ND	ND	ND	ND	ND	ND
Silver (Ag)	ug/L	-	0.5	ND	ND	ND	ND	ND	ND
Strontium (Sr)	ug/L	-	5	230	180	180	180	64	71
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND	ND
Tin (Sn)	ug/L	-	2	ND	ND	ND	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	ND	ND	24	ND	ND
Uranium (U)	ug/L	20	0.1	ND	ND	1.3	2.1	0.5	0.3
Vanadium (V)	ug/L	-	2	ND	ND	2	17	ND	ND
Zinc (Zn)	ug/L	5000 AO	5	6	ND	ND	8	ND	ND

Notes:

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Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Sheet Harbour (056)	Hayden Lake (059)		Meteghan (060)	
				5-Dec-2008	9-Jun-2005	16-Dec-2008	12-Dec-2006	17-Dec-2008
General Chemistry								
Total Alkalinity (Total as CaCO3)	mg/L	-	5	96	14	12	67	63
Chloride (Cl)	mg/L	250 AO	1	7	9.2	9	16	17
Colour	TCU	15 AO	5	ND	ND	ND	6	ND
Hardness (CaCO3)	mg/L	-	-	81	15	13	85	77
Nitrate + Nitrite	mg/L	10	0.05	ND	ND	0.06	ND	ND
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	ND
Nitrate (N)	mg/L	10	0.05	ND	ND	0.06	ND	ND
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	ND	ND	ND	0.07	0.08
Total Organic Carbon (C)	mg/L	-	0.5	0.6	0.8	0.6	3.3	0.6
Orthophosphate (P)	mg/L	-	0.01	ND	ND	ND	ND	ND
pH	pH	6.5 - 8.5 OV	-	7.99	6.74	6.33	7.42	7.31
Reactive Silica (SiO2)	mg/L	-	0.5	11	5.9	7.6	8.7	9
Sulphate (SO4)	mg/L	500 AO	2	4	4.3	4	13	13
Turbidity	NTU	5 OV	0.1	0.3	ND	0.1	59	49
Conductivity	uS/cm	-	-	220	70	64	200	200
Anion Sum	me/L	-	-	2.19	0.622	0.58	2.11	2.04
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	95	13.6	12	67	63
Calculated TDS	mg/L	500 AO	1	121	41.2	40	124	119
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	ND	ND	ND
Cation Sum	me/L	-	-	2.07	0.659	0.57	2.29	2.15
Ion Balance (% Difference)	%	-	-	2.82	2.9	0.87	4.09	2.63
Langelier Index (@ 20C)	N/A	-	-	0.053	-2.86	-3.4	-0.765	-0.956
Langelier Index (@ 4C)	N/A	-	-	-0.198	-3.11	-3.65	-1.02	-1.21
Saturation pH (@ 20C)	N/A	-	-	7.94	9.6	9.73	8.19	8.27
Saturation pH (@ 4C)	N/A	-	-	8.19	9.85	9.98	8.44	8.52
Calcium (Ca)	mg/L	-	0.1	27	3.7	3.1	22	19
Magnesium (Mg)	mg/L	-	0.1	2.9	1.5	1.3	7.3	6.8
Phosphorus (P)	mg/L	-	0.1	ND	ND	ND	ND	ND
Potassium (K)	mg/L	-	0.1	1.9	0.9	1	1.7	1.7
Sodium (Na)	mg/L	200 AO	0.1	9.5	7.5	6.6	8.5	9.2
Bromide (Br)	mg/L	-	0.5	ND	ND	ND	ND	ND
Fluoride (F)	mg/L	1.5	0.1	0.1	ND	ND	0.6	0.6
Metals								
Aluminum (Al)	ug/L	-	10	ND	25	73	ND	ND
Antimony (Sb)	ug/L	6	2	ND	ND	ND	ND	ND
Arsenic (As)	ug/L	10	2	10	ND	ND	ND	ND
Barium (Ba)	ug/L	1000	5	7	7.4	8	5	6
Beryllium (Be)	ug/L	-	2	ND	ND	ND	ND	ND
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND
Boron (B)	ug/L	5000	5	18	6.9	7	47	51
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND	ND	ND
Chromium (Cr)	ug/L	50	2	ND	ND	ND	ND	ND
Cobalt (Co)	ug/L	-	1	ND	ND	ND	ND	ND
Copper (Cu)	ug/L	1000 AO	2	ND	37	ND	ND	ND
Iron (Fe)	ug/L	300 AO	50	77	ND	ND	4900	4600
Lead (Pb)	ug/L	10	0.5	ND	ND	ND	ND	ND
Manganese (Mn)	ug/L	50 AO	2	160	13	10	60	52
Molybdenum (Mo)	ug/L	-	2	ND	ND	ND	ND	ND
Mercury (Hg)	ug/L	1	0.01	ND	-	ND	ND	ND
Nickel (Ni)	ug/L	-	2	ND	ND	ND	ND	ND
Selenium (Se)	ug/L	10	2	ND	ND	ND	ND	ND
Silver (Ag)	ug/L	-	0.5	ND	ND	ND	ND	ND
Strontium (Sr)	ug/L	-	5	170	19	20	36	35
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND
Tin (Sn)	ug/L	-	2	2	ND	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	ND	ND	ND	ND
Uranium (U)	ug/L	20	0.1	1	ND	ND	ND	ND
Vanadium (V)	ug/L	-	2	ND	ND	ND	ND	ND
Zinc (Zn)	ug/L	5000 AO	5	ND	21	5	5	ND

Notes:

AO = Aesthetic Objective.

OV = Other Value - see Drinking Water Guidelines (Health Canada 2012) for details.

ND = not detected

ND() = not detected at the detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Annapolis Royal (062)		Hebron (063)		Margaree (064)			
				9-Nov-2005	26-Nov-2007	1-Jun-2010	9-Jun-2005	17-Dec-2008	14-Dec-2006	10-Dec-2008	
General Chemistry											
Total Alkalinity (Total as CaCO3)	mg/L	-	5	52	54	55	23	24	160	160	
Chloride (Cl)	mg/L	250 AO	1	6	6	6	49	57	10	8	
Colour	TCU	15 AO	5	ND	ND	ND	5.8	8	ND	ND	
Hardness (CaCO3)	mg/L	-	-	43	41	44	71	65	210	190	
Nitrate + Nitrite	mg/L	10	0.05	ND	ND	ND	ND	ND	ND	ND	
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	ND	ND	ND	
Nitrate (N)	mg/L	10	0.05	ND	ND	ND	ND	ND	ND	ND	
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	ND	ND	ND	ND	0.05	0.13	0.12	
Total Organic Carbon (C)	mg/L	-	0.5	ND	ND	ND	1.2	1.6	3.6	ND	
Orthophosphate (P)	mg/L	-	0.01	0.03	0.02	0.02	ND	0.01	ND	ND	
pH	pH	6.5 - 8.5 OV	-	7.3	8.03	7.77	6.29	6.5	8.13	8.11	
Reactive Silica (SiO2)	mg/L	-	0.5	14	12	13	17	16	12	16	
Sulphate (SO4)	mg/L	500 AO	2	7	7	8	13	16	93	87	
Turbidity	NTU	5 OV	0.1	0.2	15	0.2	150	45	0.2	0.7	
Conductivity	uS/cm	-	-	130	140	140	270	310	510	510	
Anion Sum	me/L	-	-	1.38	1.4	1.43	2.12	2.41	5.48	5.17	
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	52	53	54	23.2	24	160	154	
Calculated TDS	mg/L	500 AO	1	89	88	89	169	174	311	295	
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	ND	ND	ND	2	2	
Cation Sum	me/L	-	-	1.44	1.42	1.43	3.38	3.14	5.5	4.95	
Ion Balance (% Difference)	%	-	-	2.2	0.71	0	22.9	13.2	0.182	2.17	
Langelier Index (@ 20C)	N/A	-	-	-1.15	-0.431	-0.657	-2.47	-2.29	0.525	0.484	
Langelier Index (@ 4C)	N/A	-	-	-1.41	-0.682	-0.909	-2.72	-2.54	0.276	0.235	
Saturation pH (@ 20C)	N/A	-	-	8.45	8.46	8.43	8.76	8.79	7.61	7.63	
Saturation pH (@ 4C)	N/A	-	-	8.71	8.71	8.68	9.01	9.04	7.85	7.88	
Calcium (Ca)	mg/L	-	0.1	15	14	15	18	16	41	41	
Magnesium (Mg)	mg/L	-	0.1	1.6	1.5	1.7	6.3	6	26	21	
Phosphorus (P)	mg/L	-	0.1	ND	ND	-	ND	0.1	ND	ND	
Potassium (K)	mg/L	-	0.1	1	1.2	1.1	1.7	1.8	1.7	1.3	
Sodium (Na)	mg/L	200 AO	0.1	13	13	12	20	20	28	27	
Bromide (Br)	mg/L	-	0.5	ND	ND	ND	0.5	0.5	ND	ND	
Fluoride (F)	mg/L	1.5	0.1	0.2	0.2	0.2	ND	ND	0.6	0.6	
Metals											
Aluminum (Al)	ug/L	-	10	ND	ND	ND	ND	ND	12	ND	
Antimony (Sb)	ug/L	6	2	ND	ND	ND	ND	ND	ND	ND	
Arsenic (As)	ug/L	10	2	4	4	4	ND	ND	ND	ND	
Barium (Ba)	ug/L	1000	5	52	66	77	14	17	21	19	
Beryllium (Be)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	
Boron (B)	ug/L	5000	5	12	12	13	8.8	10	450	490	
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND	ND	ND	ND	ND	
Chromium (Cr)	ug/L	50	2	ND	ND	1	ND	ND	ND	ND	
Cobalt (Co)	ug/L	-	1	ND	ND	ND	ND	ND	ND	ND	
Copper (Cu)	ug/L	1000 AO	2	ND	ND	ND	ND	ND	ND	ND	
Iron (Fe)	ug/L	300 AO	50	ND	ND	ND	27000	26000	ND	ND	
Lead (Pb)	ug/L	10	0.5	ND	1	ND	ND	ND	ND	ND	
Manganese (Mn)	ug/L	50 AO	2	110	93	95	440	460	5	ND	
Molybdenum (Mo)	ug/L	-	2	4	4	4	ND	ND	ND	ND	
Mercury (Hg)	ug/L	1	0.01	-	0.02	ND	-	ND	ND	ND	
Nickel (Ni)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	
Selenium (Se)	ug/L	10	2	ND	ND	ND	ND	ND	ND	ND	
Silver (Ag)	ug/L	-	0.5	ND	ND	ND	ND	ND	ND	ND	
Strontium (Sr)	ug/L	-	5	59	61	71	91	92	15000	14000	
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND	ND	ND	
Tin (Sn)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	
Titanium (Ti)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	
Uranium (U)	ug/L	20	0.1	1.9	3.6	2.6	ND	ND	ND	ND	
Vanadium (V)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND	
Zinc (Zn)	ug/L	5000 AO	5	ND	ND	ND	16	ND	ND	ND	

Notes:

AO = Aesthetic Objective.

OV = Other Value - see Drinking Water Guidelines (Health Canada 2012) for details.

ND = not detected

ND() = not detected at the detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Ingonish (065)	Dalem Lake (069)		Amherst (071)	
				25-Aug-2009	14-Dec-2006	11-Dec-2008	16-Dec-2006	8-Jan-2009
General Chemistry								
Total Alkalinity (Total as CaCO3)	mg/L	-	5	13	63	65	120	120
Chloride (Cl)	mg/L	250 AO	1	9	38	38	33	32
Colour	TCU	15 AO	5	ND	ND	ND	ND	ND
Hardness (CaCO3)	mg/L	-	-	18	120	100	83	74
Nitrate + Nitrite	mg/L	10	0.05	0.15	ND	0.06	1.3	1.4
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	0.01
Nitrate (N)	mg/L	10	0.05	0.15	ND	0.06	1.3	1.4
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	ND	ND	ND	ND	ND
Total Organic Carbon (C)	mg/L	-	0.5	0.6	2.6	ND	2.3	ND
Orthophosphate (P)	mg/L	-	0.01	ND	0.01	ND	0.04	0.05
pH	pH	6.5 - 8.5 OV	-	7.4	7.8	7.77	8.08	7.97
Reactive Silica (SiO2)	mg/L	-	0.5	8.2	12	12	11	11
Sulphate (SO4)	mg/L	500 AO	2	4	8	7	40	42
Turbidity	NTU	5 OV	0.1	ND	0.3	1.2	ND	0.3
Conductivity	uS/cm	-	-	65	260	260	430	390
Anion Sum	me/L	-	-	0.6	2.51	2.54	4.3	4.26
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	13	62	65	120	117
Calculated TDS	mg/L	500 AO	1	44	150	145	260	259
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	ND	1	1
Cation Sum	me/L	-	-	0.73	2.77	2.45	4.55	4.46
Ion Balance (% Difference)	%	-	-	9.77	4.97	1.8	2.89	2.29
Langelier Index (@ 20C)	N/A	-	-	-2.12	-0.191	-0.263	0.17	0.007
Langelier Index (@ 4C)	N/A	-	-	-2.37	-0.442	-0.514	-0.08	-0.242
Saturation pH (@ 20C)	N/A	-	-	9.52	7.99	8.03	7.91	7.96
Saturation pH (@ 4C)	N/A	-	-	9.77	8.24	8.28	8.16	8.21
Calcium (Ca)	mg/L	-	0.1	4.7	38	33	26	24
Magnesium (Mg)	mg/L	-	0.1	1.5	6.1	5.3	4.3	3.6
Phosphorus (P)	mg/L	-	0.1	ND	ND	ND	ND	ND
Potassium (K)	mg/L	-	0.1	0.79	1.3	1.2	1.3	1.2
Sodium (Na)	mg/L	200 AO	0.1	8	7.5	7.5	66	68
Bromide (Br)	mg/L	-	0.5	ND	ND	ND	ND	ND
Fluoride (F)	mg/L	1.5	0.1	ND	0.2	0.2	0.6	0.6
Metals								
Aluminum (Al)	ug/L	-	10	6.6	ND	ND	ND	ND
Antimony (Sb)	ug/L	6	2	ND	ND	ND	ND	ND
Arsenic (As)	ug/L	10	2	ND	4	3	ND	ND
Barium (Ba)	ug/L	1000	5	7.7	150	150	170	180
Beryllium (Be)	ug/L	-	2	ND	ND	ND	ND	ND
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND
Boron (B)	ug/L	5000	5	ND	9	5	12	11
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND	ND	ND
Chromium (Cr)	ug/L	50	2	ND	ND	ND	ND	ND
Cobalt (Co)	ug/L	-	1	ND	ND	ND	ND	ND
Copper (Cu)	ug/L	1000 AO	2	ND	ND	ND	ND	ND
Iron (Fe)	ug/L	300 AO	50	ND	180	160	ND	ND
Lead (Pb)	ug/L	10	0.5	ND	ND	ND	ND	ND
Manganese (Mn)	ug/L	50 AO	2	ND	330	350	3	ND
Molybdenum (Mo)	ug/L	-	2	ND	ND	ND	50	56
Mercury (Hg)	ug/L	1	0.01	ND	ND	ND	ND	ND
Nickel (Ni)	ug/L	-	2	ND	ND	ND	ND	ND
Selenium (Se)	ug/L	10	2	ND	ND	ND	ND	ND
Silver (Ag)	ug/L	-	0.5	ND	ND	ND	ND	ND
Strontium (Sr)	ug/L	-	5	27	77	58	58	58
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND
Tin (Sn)	ug/L	-	2	ND	ND	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	ND	ND	ND	ND
Uranium (U)	ug/L	20	0.1	0.58	ND	ND	3.7	3.8
Vanadium (V)	ug/L	-	2	ND	ND	ND	5	4
Zinc (Zn)	ug/L	5000 AO	5	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

OV = Other Value - see Drinking Water Guidelines (Health Canada 2012) for details.

ND = not detected

ND() = not detected at the detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Kelley River (073)		Atlanta (074)		Sheffield Mills (075)		Fall River (076)
				12-Jan-2007	9-Jun-2009	3-Sep-2007	8-Jun-2010	10-Sep-2007	9-Jun-2010	20-May-2008
General Chemistry										
Total Alkalinity (Total as CaCO3)	mg/L	-	5	22	26	95	88	95	97	ND
Chloride (Cl)	mg/L	250 AO	1	8	7	8	8	6	5	12
Colour	TCU	15 AO	5	ND	ND	ND	ND	ND	ND	42
Hardness (CaCO3)	mg/L	-	-	13	14	75	50	98	95	13
Nitrate + Nitrite	mg/L	10	0.05	0.07	ND	0.74	0.61	0.78	0.12	0.14
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	ND	ND	ND
Nitrate (N)	mg/L	10	0.05	0.07	ND	0.74	0.61	0.78	0.12	0.12
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	ND	ND	ND	ND	ND	ND	0.07
Total Organic Carbon (C)	mg/L	-	0.5	2.7	ND	ND	ND	ND	ND	1.1
Orthophosphate (P)	mg/L	-	0.01	ND	ND	ND	ND	ND	ND	ND
pH	pH	6.5 - 8.5 OV	-	7.22	7.1	8.08	8.12	7.99	8.05	6
Reactive Silica (SiO2)	mg/L	-	0.5	4.3	4.9	11	10	8.9	8.8	4
Sulphate (SO4)	mg/L	500 AO	2	4	4	4	4	3	3	14
Turbidity	NTU	5 OV	0.1	0.2	0.2	ND	0.3	ND	0.6	4.6
Conductivity	uS/cm	-	-	81	86	210	200	210	200	110
Anion Sum	me/L	-	-	0.765	0.81	2.26	2.1	2.17	2.15	0.69
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	22	26	94	87	94	96	ND
Calculated TDS	mg/L	500 AO	1	46	51	135	120	124	117	54
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	1	1	ND	1	ND
Cation Sum	me/L	-	-	0.746	0.86	2.47	2	2.31	2.08	0.95
Ion Balance (% Difference)	%	-	-	1.26	2.99	4.44	2.44	3.13	1.65	15.9
Langlier Index (@ 20C)	N/A	-	-	-2.19	-2.21	0.116	-0.049	0.147	0.211	-
Langlier Index (@ 4C)	N/A	-	-	-2.44	-2.47	-0.135	-0.3	-0.104	-0.04	-
Saturation pH (@ 20C)	N/A	-	-	9.41	9.31	7.96	8.17	7.84	7.84	-
Saturation pH (@ 4C)	N/A	-	-	9.66	9.57	8.22	8.42	8.09	8.09	-
Calcium (Ca)	mg/L	-	0.1	3.6	3.9	27	18	35	34	3.4
Magnesium (Mg)	mg/L	-	0.1	1	1.1	2.2	1.5	2.7	2.4	1.1
Phosphorus (P)	mg/L	-	0.1	ND	ND	ND	-	ND	-	ND
Potassium (K)	mg/L	-	0.1	1	0.9	2.2	2.2	2.5	2.3	0.9
Sodium (Na)	mg/L	200 AO	0.1	11	13	21	22	6.8	3.2	8.1
Bromide (Br)	mg/L	-	0.5	ND	ND	ND	ND	ND	-	0.5
Fluoride (F)	mg/L	1.5	0.1	ND	ND	ND	ND	ND	ND	ND
Metals										
Aluminum (Al)	ug/L	-	10	ND	ND	ND	17	ND	ND	45
Antimony (Sb)	ug/L	6	2	ND	ND	ND	ND	ND	ND	ND
Arsenic (As)	ug/L	10	2	ND	ND	ND	ND	ND	ND	ND
Barium (Ba)	ug/L	1000	5	24	170	8	7	18	16	14
Beryllium (Be)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND
Boron (B)	ug/L	5000	5	14	30	13	16	7	7	6
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND	0.04	ND	ND	ND
Chromium (Cr)	ug/L	50	2	ND	ND	ND	2	ND	ND	ND
Cobalt (Co)	ug/L	-	1	ND	ND	ND	ND	ND	ND	4
Copper (Cu)	ug/L	1000 AO	2	ND	ND	ND	3	ND	ND	ND
Iron (Fe)	ug/L	300 AO	50	87	ND	ND	ND	ND	ND	8700
Lead (Pb)	ug/L	10	0.5	ND	ND	ND	0.6	ND	ND	1.5
Manganese (Mn)	ug/L	50 AO	2	20	2	ND	3	ND	ND	770
Molybdenum (Mo)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND
Mercury (Hg)	ug/L	1	0.01	ND	ND	ND	ND	ND	ND	ND
Nickel (Ni)	ug/L	-	2	ND	ND	ND	ND	ND	ND	5
Selenium (Se)	ug/L	10	2	ND	ND	2	5	ND	ND	ND
Silver (Ag)	ug/L	-	0.5	ND	ND	ND	ND	ND	ND	ND
Strontium (Sr)	ug/L	-	5	20	22	280	250	420	420	11
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND	ND	ND
Tin (Sn)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND
Uranium (U)	ug/L	20	0.1	ND	ND	21	25	8.4	9.7	ND
Vanadium (V)	ug/L	-	2	ND	ND	ND	ND	ND	ND	ND
Zinc (Zn)	ug/L	5000 AO	5	ND	130	ND	16	ND	6	21

Notes:

AO = Aesthetic Objective.

OV = Other Value - see Drinking Water Guidelines (Health Canada 2012) for details.

ND = not detected

ND() = not detected at the detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	West Northfield (077)	Musquodoboit Hbr (078)	Lewis Lake (079)	Arisaig (080)	Coldbrook (081)
				12-Jun-2008	22-May-2008	31-Jul-2008	8-Sep-2009	5-Aug-2009
General Chemistry								
Total Alkalinity (Total as CaCO3)	mg/L	-	5	57	81	62	240 (30)	37
Chloride (Cl)	mg/L	250 AO	1	15	8	11	57	3
Colour	TCU	15 AO	5	7	5	6	7	ND
Hardness (CaCO3)	mg/L	-	-	80	21	21	10	33
Nitrate + Nitrite	mg/L	10	0.05	ND	ND	ND	ND	0.16
Nitrite (N)	mg/L	1	0.01	ND	ND	ND	ND	ND
Nitrate (N)	mg/L	10	0.05	ND	ND	ND	ND	0.16
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	ND	0.16	ND	0.11	ND
Total Organic Carbon (C)	mg/L	-	0.5	ND	ND	0.5	ND (5)	ND
Orthophosphate (P)	mg/L	-	0.01	ND	ND	0.03	0.04	0.03
pH	pH	6.5 - 8.5 OV	-	8.1	7.78	7.8	8.63	7.36
Reactive Silica (SiO2)	mg/L	-	0.5	9.1	2.4	20	2.1	11
Sulphate (SO4)	mg/L	500 AO	2	32	9	7	ND	ND
Turbidity	NTU	5 OV	0.1	0.5	0.6	3.6	240	4.7
Conductivity	uS/cm	-	-	240	210	170	610	84
Anion Sum	me/L	-	-	2.31	2.13	1.83	6.52	0.85
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	57	81	61	233	37
Calculated TDS	mg/L	500 AO	1	139	119	124	353	54
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	ND	ND	9	ND
Cation Sum	me/L	-	-	2.31	2.14	1.98	6.37	0.82
Ion Balance (% Difference)	%	-	-	0	0.23	3.94	1.16	1.8
Langelier Index (@ 20C)	N/A	-	-	-0.081	-0.857	-0.889	0.109	-1.32
Langelier Index (@ 4C)	N/A	-	-	-0.331	-1.11	-1.14	-140	-1.57
Saturation pH (@ 20C)	N/A	-	-	8.18	8.64	8.69	8.52	8.68
Saturation pH (@ 4C)	N/A	-	-	8.43	8.89	8.94	8.77	8.93
Calcium (Ca)	mg/L	-	0.1	27	6.4	7.5	3.5	12
Magnesium (Mg)	mg/L	-	0.1	3	1.3	0.5	0.4	1.1
Phosphorus (P)	mg/L	-	0.1	ND	ND	ND	ND	ND
Potassium (K)	mg/L	-	0.1	0.9	4.5	4.4	1.8	1.2
Sodium (Na)	mg/L	200 AO	0.1	16	37	33	140	2.9
Bromide (Br)	mg/L	-	0.5	ND	ND	2.6	ND	ND
Fluoride (F)	mg/L	1.5	0.1	1.1	1.6	2.5	1.1	0.1
Metals								
Aluminum (Al)	ug/L	-	10	ND	ND	ND	53	ND
Antimony (Sb)	ug/L	6	2	ND	ND	ND	ND	ND
Arsenic (As)	ug/L	10	2	ND	ND	18	ND	ND
Barium (Ba)	ug/L	1000	5	6	5	72	36	10
Beryllium (Be)	ug/L	-	2	ND	ND	ND	ND	ND
Bismuth (Bi)	ug/L	-	2	ND	ND	ND	ND	ND
Boron (B)	ug/L	5000	5	27	120	35	74	7
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND	ND	ND
Chromium (Cr)	ug/L	50	2	ND	ND	ND	ND	ND
Cobalt (Co)	ug/L	-	1	ND	ND	ND	ND	ND
Copper (Cu)	ug/L	1000 AO	2	ND	ND	ND	ND	ND
Iron (Fe)	ug/L	300 AO	50	150	ND	140	59	ND
Lead (Pb)	ug/L	10	0.5	ND	ND	0.7	ND	ND
Manganese (Mn)	ug/L	50 AO	2	150	35	60	16	ND
Molybdenum (Mo)	ug/L	-	2	6	5	3	3	ND
Mercury (Hg)	ug/L	1	0.01	0.01	0.01	ND	ND	ND
Nickel (Ni)	ug/L	-	2	ND	ND	ND	ND	ND
Selenium (Se)	ug/L	10	2	ND	ND	ND	ND	ND
Silver (Ag)	ug/L	-	0.5	ND	ND	ND	ND	ND
Strontium (Sr)	ug/L	-	5	99	39	100	62	61
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND	ND	ND
Tin (Sn)	ug/L	-	2	ND	ND	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	ND	ND	ND	ND
Uranium (U)	ug/L	20	0.1	0.2	ND	0.2	ND	0.2
Vanadium (V)	ug/L	-	2	ND	ND	ND	ND	ND
Zinc (Zn)	ug/L	5000 AO	5	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

OV = Other Value - see Drinking Water Guidelines (Health Canada 2012) for details.

ND = not detected

ND() = not detected at the detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C2: General Chemistry and Metal Results

Parameter	Units	Drinking Water Guideline	Detection Limit	Long Point (082)	Tatamagouche (083)	St Peters (085)
				12-Aug-2009	21-Jul-2008	19-Jul-2011
General Chemistry						
Total Alkalinity (Total as CaCO3)	mg/L	-	5	99	210	200
Chloride (Cl)	mg/L	250 AO	1	61	7	20
Colour	TCU	15 AO	5	ND	25	ND
Hardness (CaCO3)	mg/L	-	-	130	20	11
Nitrate + Nitrite	mg/L	10	0.05	0.10	ND	ND
Nitrite (N)	mg/L	1	0.01	ND	ND	ND
Nitrate (N)	mg/L	10	0.05	0.10	ND	ND
Nitrogen (Ammonia Nitrogen)	mg/L	-	0.05	ND	ND	ND
Total Organic Carbon (C)	mg/L	-	0.5	ND	ND	ND
Orthophosphate (P)	mg/L	-	0.01	ND	ND	0.05
pH	pH	6.5 - 8.5 OV	-	7.64	9.12	9
Reactive Silica (SiO2)	mg/L	-	0.5	8.0	8	8.3
Sulphate (SO4)	mg/L	500 AO	2	29	18	69
Turbidity	NTU	5 OV	0.1	0.1	21	0.6
Conductivity	uS/cm	-	-	400	440	580
Anion Sum	me/L	-	-	4.32	4.78	6.01
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	-	1	99	187	182
Calculated TDS	mg/L	500 AO	1	246	270	348
Carb. Alkalinity (calc. as CaCO3)	mg/L	-	1	ND	23	17
Cation Sum	me/L	-	-	4.31	4.89	5.7
Ion Balance (% Difference)	%	-	-	0.12	1.14	2.65
Langelier Index (@ 20C)	N/A	-	-	-0.111	0.784	0.286
Langelier Index (@ 4C)	N/A	-	-	-0.361	0.534	0.038
Saturation pH (@ 20C)	N/A	-	-	7.75	8.34	8.71
Saturation pH (@ 4C)	N/A	-	-	8.00	8.59	8.96
Calcium (Ca)	mg/L	-	0.1	44	6.3	2.88
Magnesium (Mg)	mg/L	-	0.1	5.8	0.9	0.929
Phosphorus (P)	mg/L	-	0.1	ND	ND	ND
Potassium (K)	mg/L	-	0.1	1.7	0.4	0.755
Sodium (Na)	mg/L	200 AO	0.1	37	100	126
Bromide (Br)	mg/L	-	0.5	ND	ND	-
Fluoride (F)	mg/L	1.5	0.1	0.1	0.9	0.4
Metals						
Aluminum (Al)	ug/L	-	10	ND	100	25.1
Antimony (Sb)	ug/L	6	2	ND	ND	ND (1)
Arsenic (As)	ug/L	10	2	ND	8	29.7
Barium (Ba)	ug/L	1000	5	100	68	20.7
Beryllium (Be)	ug/L	-	2	ND	ND	ND (1)
Bismuth (Bi)	ug/L	-	2	ND	ND	ND
Boron (B)	ug/L	5000	5	19	61	114
Cadmium (Cd)	ug/L	5	0.3	ND	ND	ND
Chromium (Cr)	ug/L	50	2	ND	ND	ND (1)
Cobalt (Co)	ug/L	-	1	ND	ND	ND (0.4)
Copper (Cu)	ug/L	1000 AO	2	ND	ND	ND
Iron (Fe)	ug/L	300 AO	50	ND	150	ND
Lead (Pb)	ug/L	10	0.5	ND	ND	ND
Manganese (Mn)	ug/L	50 AO	2	2	160	3.3
Molybdenum (Mo)	ug/L	-	2	ND	15	7.3
Mercury (Hg)	ug/L	1	0.01	ND	0.01	ND
Nickel (Ni)	ug/L	-	2	ND	ND	ND
Selenium (Se)	ug/L	10	2	ND	ND	ND (1)
Silver (Ag)	ug/L	-	0.5	ND	ND	ND (0.1)
Strontium (Sr)	ug/L	-	5	200	71	39.2
Thallium (Tl)	ug/L	-	0.1	ND	ND	ND
Tin (Sn)	ug/L	-	2	ND	ND	ND
Titanium (Ti)	ug/L	-	2	ND	5	ND
Uranium (U)	ug/L	20	0.1	0.7	11	0.31
Vanadium (V)	ug/L	-	2	ND	ND	ND
Zinc (Zn)	ug/L	5000 AO	5	10	6	ND

Notes:

AO = Aesthetic Objective.

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ND = not detected

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Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Greenwood (003)			Fraser Brook (004)		Murray Siding (007)	Wilmot (005)	
			23-Nov-2005	18-Dec-2008	06-Jul-2011	10-Dec-2004	03-Dec-2008	22-Nov-2011	29-Nov-2006	12-May-2010
CHLOROBENZENES										
1,2-Dichlorobenzene	200	0.5	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILES										
1,1,1-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	24 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

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Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Wolfville (010)		Monastery (028)		Point Aconi (030)		Lawrencetown (043)	
			22-Dec-2004	18-Dec-2008	15-Dec-2006	09-Dec-2008	15-Sep-2005	10-Dec-2008	05-Dec-2008	16-Nov-2011
CHLOROENZES										
1,2-Dichlorobenzene	200	0.5	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILES										
1,1,1-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	24 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

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Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Durham (045)		Kentville (048)		Sydney (050)	
			05-Oct-2005	21-Jan-2009	07-Nov-2007	05-Jul-2011	15-Sep-2005	11-Dec-2008
CHLOROENZES								
1,2-Dichlorobenzene	200	0.5	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND	ND	ND	ND
VOLATILES								
1,1,1-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND	ND	ND	ND
Benzene	5	1	ND	ND	ND	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND	ND	ND	ND
Bromoform	100	1	ND	ND	ND	ND	ND	ND
Bromomethane	-	8	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND	ND	ND	ND
Chloroethane	-	8	ND	ND	ND	ND	ND	ND
Chloroform	100	1	ND	ND	ND	ND	ND	ND
Chloromethane	-	8	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND	ND	ND	ND
Styrene	-	1	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND	ND	ND	ND
Toluene	24 AO	1	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND () = not detected at the elevated detection limit shown in brackets ()

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Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	North Grant (054)		Stillwater (055)		Sheet Harbour (056)
			13-Dec-2006	22-Jul-2008	13-Dec-2006	04-Dec-2008	05-Dec-2008
CHLORO BENZENES							
1,2-Dichlorobenzene	200	0.5	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND	ND	ND
VOLATILES							
1,1,1-Trichloroethane	-	1	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND	ND	ND
Benzene	5	1	ND	ND	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND	ND	ND
Bromoform	100	1	ND	ND	ND	ND	ND
Bromomethane	-	8	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND	ND	ND
Chloroethane	-	8	ND	ND	ND	ND	ND
Chloroform	100	1	ND	ND	ND	ND	ND
Chloromethane	-	8	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND	ND	ND
Styrene	-	1	ND	ND	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND	ND	ND
Toluene	24 AO	1	ND	ND	1	ND	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND	ND	ND

Notes:

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ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Hayden Lake (059)		Meteghan (060)		Annapolis Royal (062)			Hebron (063)	
			09-Jun-2005	16-Dec-2008	13-Dec-2006	17-Dec-2008	09-Nov-2005	26-Nov-2007	01-Jun-2010	09-Jun-2005	17-Dec-2008
CHLOROENZES											
1,2-Dichlorobenzene	200	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILES											
1,1,1-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	100	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	100	1	3.2	ND	ND	ND	ND (2)	ND	ND	ND	ND
Chloromethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	-	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	24 AO	1	ND	ND	ND	ND	2	1	ND	ND	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Margaree (064)		Ingonish (065)	Dalem Lake (069)	
			14-Dec-2006	10-Dec-2008	25-Aug-2009	14-Dec-2006	11-Dec-2008
CHLOROENZES							
1,2-Dichlorobenzene	200	0.5	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND	ND	ND
VOLATILES							
1,1,1-Trichloroethane	-	1	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND	ND	ND
Benzene	5	1	ND	ND	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND	ND	ND
Bromoform	100	1	ND	ND	ND	ND	ND
Bromomethane	-	8	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND	ND	ND
Chloroethane	-	8	ND	ND	ND	ND	ND
Chloroform	100	1	ND	ND	ND	ND	ND
Chloromethane	-	8	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND	ND	ND
Styrene	-	1	ND	ND	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND	ND	ND
Toluene	24 AO	1	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Amherst (071)		Kelley River (073)		Atlanta (074)		Sheffield Mills (075)	
			16-Dec-2006	08-Jan-2009	12-Jan-2007	09-Jun-2009	03-Sep-2007	08-Jun-2010	10-Sep-2007	09-Jun-2010
CHLOROENZES										
1,2-Dichlorobenzene	200	0.5	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILES										
1,1,1-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	-	8	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	24 AO	1	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

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Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Fall River (076)	West Northfield (077)	Musquodoboit Hbr (078)	Lewis Lake (079)	Arisaig (080)	Coldbrook (081)
			20-May-2008	12-Jun-2008	22-May-2008	31-Jul-2008	08-Sep-2009	05-Aug-2009
CHLOROENZES								
1,2-Dichlorobenzene	200	0.5	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND	ND	ND	ND
VOLATILES								
1,1,1-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND	ND	ND	ND
Benzene	5	1	ND	ND	ND	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND	ND	ND	ND
Bromoform	100	1	ND	ND	ND	ND	ND	ND
Bromomethane	-	8	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND	ND	ND	ND
Chloroethane	-	8	ND	ND	ND	ND	ND	ND
Chloroform	100	1	ND	ND	ND	ND	ND	ND
Chloromethane	-	8	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND	ND	ND	ND
Styrene	-	1	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND	ND	ND	ND
Toluene	24 AO	1	ND	ND	ND	ND	2	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C3: Volatile Organic Compound (VOC) Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Long Point (082)	Tatamagouche (083)	St Peters (085)
			12-Aug-2009	21-Jul-2008	19-Jul-2011
CHLORO BENZENES					
1,2-Dichlorobenzene	200	0.5	ND	ND	ND
1,3-Dichlorobenzene	-	1	ND	ND	ND
1,4-Dichlorobenzene	5	1	ND	ND	ND
Chlorobenzene	80	1	ND	ND	ND
VOLATILES					
1,1,1-Trichloroethane	-	1	ND	ND	ND
1,1,2,2-Tetrachloroethane	-	1	ND	ND	ND
1,1,2-Trichloroethane	-	1	ND	ND	ND
1,1-Dichloroethane	-	2	ND	ND	ND
1,1-Dichloroethylene	14	2	ND	ND	ND
1,2-Dichloroethane	5	1	ND	ND	ND
1,2-Dichloropropane	-	1	ND	ND	ND
Benzene	5	1	ND	ND	ND
Bromodichloromethane	16	1	ND	ND	ND
Bromoform	100	1	ND	ND	ND
Bromomethane	-	8	ND	ND	ND
Carbon Tetrachloride	5	1	ND	ND	ND
Chloroethane	-	8	ND	ND	ND
Chloroform	100	1	ND	ND	ND
Chloromethane	-	8	ND	ND	ND
cis-1,2-Dichloroethylene	-	2	ND	ND	ND
cis-1,3-Dichloropropene	-	2	ND	ND	ND
Dibromochloromethane	100	1	ND	ND	ND
Ethylbenzene	2.4 AO	1	ND	ND	ND
Ethylene Dibromide	-	1	ND	ND	ND
Methylene Chloride(Dichloromethane)	-	3	ND	ND	ND
o-Xylene	300 AO	1	ND	ND	ND
p+m-Xylene	300 AO	2	ND	ND	ND
Styrene	-	1	ND	ND	ND
Tetrachloroethylene	30	1	ND	ND	ND
Toluene	24 AO	1	2	ND	ND
trans-1,2-Dichloroethylene	-	2	ND	ND	ND
trans-1,3-Dichloropropene	-	1	ND	ND	ND
Trichloroethylene	5	1	ND	ND	ND
Trichlorofluoromethane (FREON 11)	-	8	ND	ND	ND
Vinyl Chloride	2	1	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Greenwood (003)			Fraser Brook (004)		Wilmot (005)	Murray Siding (007)
			23-Nov-2005	18-Dec-2008	6-Jul-2011	10-Dec-2004	3-Dec-2008	12-May-2010	22-Nov-2011
Herbicides									
Atrazine	5	0.2	ND	ND	ND	ND	ND	ND	ND
De-ethyl Atrazine		0.3	ND	ND	ND	ND	ND	ND	ND
Butylate		0.5	ND	ND	ND	ND	ND	ND	ND
Cyanazine	10	0.5	ND	ND	ND	ND	ND	ND	ND
Desmetryn		0.3	ND	ND	ND	ND	ND	ND	ND
Diphenylamine		0.1	ND	ND	ND	ND	ND	ND	ND
Eptam		0.5	ND	ND	ND	ND	ND	ND	ND
Ethalfuralin		0.5	ND	ND	ND	ND	ND	ND	ND
Hexazinone		0.1	ND	ND	ND	ND	ND	ND	ND
Metalaxyl		0.3	ND	ND	ND	ND	ND	ND	ND
Metribuzin	80	0.3	ND	ND	ND	ND	ND	ND	ND
Metolachlor	50	0.2	ND	ND	ND	ND	ND	ND	ND
Pirimicarb		0.5	ND	ND	ND	ND	ND	ND	ND
Profluralin		0.5	ND	ND	ND	ND	ND	ND	ND
Prometryn		0.2	ND	ND	ND	ND	ND	ND	ND
Propazine		0.1	ND	ND	ND	ND	ND	ND	ND
Simazine	10	0.5	ND	ND	ND	ND	ND	ND	ND
Terbuthylazine		0.1	ND	ND	ND	ND	ND	ND	ND
Terbutryn		0.2	ND	ND	ND	ND	ND	ND	ND
Triallate		0.3	ND	ND	ND	ND	ND	ND	ND
Triadimefon		0.3	ND	ND	ND	ND	ND	ND	ND
Trifluralin	45	0.2	ND	ND	ND	ND	ND	ND	ND
Organochlorine Pesticides									
Alachlor		0.5	ND	-	ND	ND	ND	ND	ND
Aldrin + Dieldrin	0.7	0.5	ND	ND	ND	ND	ND	ND	ND
BHC, alpha-		0.3	ND	ND	ND	ND	ND	ND	ND
BHC, beta-		0.3	ND	ND	ND	ND	ND	ND	ND
Captan		1	ND	ND	ND	ND	ND	ND	ND
Chlorbenside		0.1	ND	ND	ND	ND	ND	ND	ND
Chlordane, alpha-		0.5	ND	ND	ND	ND	ND	ND	ND
Chlordane, gamma-		0.5	ND	ND	ND	ND	ND	ND	ND
Chlorfenson (Ovex)		0.2	ND	ND	ND	ND	ND	ND	ND
Chlorothalonil (Daconil)		1	ND	ND	ND	ND	ND	ND	ND
Chlorpropham		0.2	ND	ND	ND	ND	ND	ND	ND
Dacthal (DCPA)		0.1	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE		0.01	ND (0.1)	ND (0.1)	ND	ND (0.1)	ND (0.1)	ND (0.1)	ND
DDT - orthopara (2,4')		0.01	ND (0.2)	ND (0.2)	ND	ND (0.2)	ND (0.2)	ND (0.2)	ND
DDT - parapara (4,4')		0.01	ND (0.2)	ND (0.2)	ND	ND (0.2)	ND (0.2)	ND (0.2)	ND
Diallate(e/z)		0.5	ND	ND	ND	ND	ND	ND	ND
Dichlobenil		0.2	ND	ND	ND	ND	ND	ND	ND
Dichloran		0.5	ND	ND	ND	ND	ND	ND	ND
Dichlofluanid		0.5	ND	ND	ND	ND	ND	ND	ND
Dicofol		0.2	ND	ND	ND	ND	ND	ND	ND
Endosulfan I		0.5	ND	ND	ND	ND	ND	ND	ND
Endosulfan II		0.5	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulphate		0.5	ND	ND	ND	ND	ND	ND	ND
Endrin		0.5	ND	ND	ND	ND	ND	ND	ND
Folpet		1	ND	ND	ND	ND	ND	ND	ND
Heptachlor		0.5	ND	ND	ND	ND	ND	ND	ND
Lindane (BHC), gamma-		0.5	ND	ND	ND	ND	ND	ND	ND
Methidathion		0.3	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	900	0.1	ND	ND	ND	ND	ND	ND	ND
Mirex		0.3	ND	ND	ND	ND	ND	ND	ND
Nitrofen		0.2	ND	ND	ND	ND	ND	ND	ND
Permethrin-cis/trans		0.5	ND	ND	ND	ND	ND	ND	ND
Procymidone		0.2	ND	ND	ND	ND	ND	ND	ND
Pronamide		0.2	ND	ND	ND	ND	ND	ND	ND
Quintozene (Pentachloronitrobenzene)		0.5	ND	ND	ND	-	-	-	ND
Tecnazene		0.5	ND	ND	ND	ND	ND	ND	ND
Tetradifon		0.2	ND	ND	ND	ND	ND	ND	ND
Tolyfluanid		0.5	ND	ND	ND	ND	ND	ND	ND
Vinclozolin		0.5	ND	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Wolfville (010)		Monastery (028)	Point Aconi (030)		Lawrencetown (043)	
			22-Dec-2004	18-Dec-2008	15-Dec-2006	15-Sep-2005	10-Dec-2008	5-Dec-2008	16-Nov-2011
Herbicides									
Atrazine	5	0.2	ND	ND	ND	ND	ND	ND	ND
De-ethyl Atrazine		0.3	ND	ND	ND	ND	ND	ND	ND
Butylate		0.5	ND	ND	ND	ND	ND	ND	ND
Cyanazine	10	0.5	ND	ND	ND	ND	ND	ND	ND
Desmetryn		0.3	ND	ND	ND	ND	ND	ND	ND
Diphenylamine		0.1	ND	ND	ND	ND	ND	ND	ND
Eptam		0.5	ND	ND	ND	ND	ND	ND	ND
Ethalfuralin		0.5	ND	ND	ND	ND	ND	ND	ND
Hexazinone		0.1	ND	ND	ND	ND	ND	ND	ND
Metalaxyl		0.3	ND	ND	ND	ND	ND	ND	ND
Metribuzin	80	0.3	ND	ND	ND	ND	ND	ND	ND
Metolachlor	50	0.2	ND	ND	ND	ND	ND	ND	ND
Pirimicarb		0.5	ND	ND	ND	ND	ND	ND	ND
Profluralin		0.5	ND	ND	ND	ND	ND	ND	ND
Prometryn		0.2	ND	ND	ND	ND	ND	ND	ND
Propazine		0.1	ND	ND	ND	ND	ND	ND	ND
Simazine	10	0.5	ND	ND	ND	ND	ND	ND	ND
Terbutylazine		0.1	ND	ND	ND	ND	ND	ND	ND
Terbutryn		0.2	ND	ND	ND	ND	ND	ND	ND
Triallate		0.3	ND	ND	ND	ND	ND	ND	ND
Triadimefon		0.3	ND	ND	ND	ND	ND	ND	ND
Trifluralin	45	0.2	ND	ND	ND	ND	ND	ND	ND
Organochlorine Pesticides									
Alachlor		0.5	ND	-	ND	ND	-	-	ND
Aldrin + Dieldrin	0.7	0.5	ND	ND	ND	ND	ND	ND	ND
BHC, alpha-		0.3	ND	ND	ND	ND	ND	ND	ND
BHC, beta-		0.3	ND	ND	ND	ND	ND	ND	ND
Captan		1	ND	ND	ND	ND	ND	ND	ND
Chlorbenside		0.1	ND	ND	ND	ND	ND	ND	ND
Chlordane, alpha-		0.5	ND	ND	ND	ND	ND	ND	ND
Chlordane, gamma-		0.5	ND	ND	ND	ND	ND	ND	ND
Chlorfenson (Ovex)		0.2	ND	ND	ND	ND	ND	ND	ND
Chlorothalonil (Daconil)		1	ND	ND	ND	ND	ND	ND	ND
Chlorpropham		0.2	ND	ND	ND	ND	ND	ND	ND
Dacthal (DCPA)		0.1	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE		0.01	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND
DDT - orthopara (2,4')		0.01	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND
DDT - parapara (4,4')		0.01	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND
Diallate(e/z)		0.5	ND	ND	ND	ND	ND	ND	ND
Dichlobenil		0.2	ND	ND	ND	ND	ND	ND	ND
Dichloran		0.5	ND	ND	ND	ND	ND	ND	ND
Dichlofluanid		0.5	ND	ND	ND	ND	ND	ND	ND
Dicofol		0.2	ND	ND	ND	ND	ND	ND	ND
Endosulfan I		0.5	ND	ND	ND	ND	ND	ND	ND
Endosulfan II		0.5	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulphate		0.5	ND	ND	ND	ND	ND	ND	ND
Endrin		0.5	ND	ND	ND	ND	ND	ND	ND
Folpet		1	ND	ND	ND	ND	ND	ND	ND
Heptachlor		0.5	ND	ND	ND	ND	ND	ND	ND
Lindane (BHC), gamma-		0.5	ND	ND	ND	ND	ND	ND	ND
Methidathion		0.3	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	900	0.1	ND	ND	-	ND	ND	ND	ND
Mirex		0.3	ND	ND	ND	ND	ND	ND	ND
Nitrofen		0.2	ND	ND	ND	ND	ND	ND	ND
Permethrin-cis/trans		0.5	ND	ND	ND	ND	ND	ND	ND
Procymidone		0.2	ND	ND	ND	ND	ND	ND	ND
Pronamide		0.2	ND	ND	ND	ND	ND	ND	ND
Quintozene (Pentachloronitrobenzene)		0.5	-	ND	-	ND	ND	ND	ND
Tecnazene		0.5	ND	ND	ND	ND	ND	ND	ND
Tetradifon		0.2	ND	ND	ND	ND	ND	ND	ND
Tolyfluanid		0.5	ND	ND	ND	ND	ND	ND	ND
Vinclozolin		0.5	ND	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND() = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Durham (045)		Kentville (048)			Sydney (050)	
			5-Oct-2005	21-Jan-2009	15-Jun-2005	7-Nov-2007	5-Jul-2011	15-Sep-2005	11-Dec-2008
Herbicides									
Atrazine	5	0.2	ND	ND	ND (1)	ND	ND	ND	ND
De-ethyl Atrazine		0.3	ND	ND	-	ND	ND	ND	ND
Butylate		0.5	ND	ND	-	ND	ND	ND	ND
Cyanazine	10	0.5	ND	ND	-	ND	ND	ND	ND
Desmetryn		0.3	ND	ND	-	ND	ND	ND	ND
Diphenylamine		0.1	ND	ND	-	ND	ND	ND	ND
Eptam		0.5	ND	ND	-	ND	ND	ND	ND
Ethalfuralin		0.5	ND	ND	-	ND	ND	ND	ND
Hexazinone		0.1	ND	ND	-	ND	ND	ND	ND
Metalaxyl		0.3	ND	ND	-	ND	ND	ND	ND
Metribuzin	80	0.3	ND	ND	-	ND	ND	ND	ND
Metolachlor	50	0.2	ND	ND	-	ND	ND	ND	ND
Pirimicarb		0.5	ND	ND	-	ND	ND	ND	ND
Profluralin		0.5	ND	ND	-	ND	ND	ND	ND
Prometryn		0.2	ND	ND	-	ND	ND	ND	ND
Propazine		0.1	ND	ND	-	ND	ND	ND	ND
Simazine	10	0.5	ND	ND	-	ND	ND	ND	ND
Terbuthylazine		0.1	ND	ND	-	ND	ND	ND	ND
Terbutryn		0.2	ND	ND	-	ND	ND	ND	ND
Triallate		0.3	ND	ND	-	ND	ND	ND	ND
Triadimefon		0.3	ND	ND	-	ND	ND	ND	ND
Trifluralin	45	0.2	ND	ND	-	ND	ND	ND	ND
Organochlorine Pesticides									
Alachlor		0.5	ND	ND	-	ND	ND	ND	ND
Aldrin + Dieldrin	0.7	0.5	ND	ND	-	ND	ND	ND	ND
BHC, alpha-		0.3	ND	ND	-	ND	ND	ND	ND
BHC, beta-		0.3	ND	ND	-	ND	ND	ND	ND
Captan		1	ND	ND	-	ND	ND	ND	ND
Chlorbenside		0.1	ND	ND	-	ND	ND	ND	ND
Chlordane, alpha-		0.5	ND	ND	-	ND	ND	ND	ND
Chlordane, gamma-		0.5	ND	ND	-	ND	ND	ND	ND
Chlorfenson (Ovex)		0.2	ND	ND	-	ND	ND	ND	ND
Chlorothalonil (Daconil)		1	ND	ND	-	ND	ND	ND	ND
Chlorpropham		0.2	ND	ND	-	ND	ND	ND	ND
Dacthal (DCPA)		0.1	ND	ND	-	ND	ND	ND	ND
4,4'-DDE		0.01	ND (0.1)	ND (0.1)	ND	ND (0.1)	ND	ND (0.1)	ND (0.1)
DDT - orthopara (2,4')		0.01	ND (0.2)	ND (0.2)	ND	ND (0.2)	ND	ND (0.2)	ND (0.2)
DDT - parapara (4,4')		0.01	ND (0.2)	ND (0.2)	ND	ND (0.2)	ND	ND (0.2)	ND (0.2)
Diallate(e/z)		0.5	ND	ND	-	ND	ND	ND	ND
Dichlobenil		0.2	ND	ND	-	ND	ND	ND	ND
Dichloran		0.5	ND	ND	-	ND	ND	ND	ND
Dichlofluanid		0.5	ND	ND	-	ND	ND	ND	ND
Dicofol		0.2	ND	ND	-	ND	ND	ND	ND
Endosulfan I		0.5	ND	ND	-	ND	ND	ND	ND
Endosulfan II		0.5	ND	ND	-	ND	ND	ND	ND
Endosulfan Sulphate		0.5	ND	ND	-	ND	ND	ND	ND
Endrin		0.5	ND	ND	-	ND	ND	ND	ND
Folpet		1	ND	ND	-	ND	ND	ND	ND
Heptachlor		0.5	ND	ND	-	ND	ND	ND	ND
Lindane (BHC), gamma-		0.5	ND	ND	-	ND	ND	ND	ND
Methidathion		0.3	ND	ND	-	ND	ND	ND	ND
Methoxychlor	900	0.1	ND	ND	-	ND	ND	ND	ND
Mirex		0.3	ND	ND	-	ND	ND	ND	ND
Nitrofen		0.2	ND	ND	-	ND	ND	ND	ND
Permethrin-cis/trans		0.5	ND	ND	-	ND	ND	ND	ND
Procymidone		0.2	ND	ND	-	ND	ND	ND	ND
Pronamide		0.2	ND	ND	-	ND	ND	ND	ND
Quintozone (Pentachloronitrobenzene)		0.5	ND	ND	-	ND	ND	ND	ND
Tecnazene		0.5	ND	ND	-	ND	ND	ND	ND
Tetradifon		0.2	ND	ND	-	ND	ND	ND	ND
Tolyfluanid		0.5	ND	ND	-	ND	ND	ND	ND
Vinclozolin		0.5	ND	ND	-	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND () = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	North Grant (054)		Stillwater (055)		Sheet Harbour (056)	Hayden Lake (059)	
			12-Dec-2006	22-Jul-2008	12-Dec-2006	4-Dec-2008	5-Dec-2008	9-Jun-2005	16-Dec-2008
Herbicides									
Atrazine	5	0.2	ND	ND	ND	ND	ND	ND (2.5)	ND
De-ethyl Atrazine		0.3	ND	ND	ND	ND	ND	-	ND
Butylate		0.5	ND	ND	ND	ND	ND	-	ND
Cyanazine	10	0.5	ND	ND	ND	ND	ND	-	ND
Desmetryn		0.3	ND	ND	ND	ND	ND	-	ND
Diphenylamine		0.1	ND	ND	ND	ND	ND	-	ND
Eptam		0.5	ND	ND	ND	ND	ND	-	ND
Ethalfuralin		0.5	ND	ND	ND	ND	ND	-	ND
Hexazinone		0.1	ND	ND	ND	ND	ND	-	ND
Metalaxyl		0.3	ND	ND	ND	ND	ND	-	ND
Metribuzin	80	0.3	ND	ND	ND	ND	ND	-	ND
Metolachlor	50	0.2	ND	ND	ND	ND	ND	-	ND
Pirimicarb		0.5	ND	ND	ND	ND	ND	-	ND
Profluralin		0.5	ND	ND	ND	ND	ND	-	ND
Prometryn		0.2	ND	ND	ND	ND	ND	-	ND
Propazine		0.1	ND	ND	ND	ND	ND	-	ND
Simazine	10	0.5	ND	ND	ND	ND	ND	-	ND
Terbuthylazine		0.1	ND	ND	ND	ND	ND	-	ND
Terbutryn		0.2	ND	ND	ND	ND	ND	-	ND
Triallate		0.3	ND	ND	ND	ND	ND	-	ND
Triadimefon		0.3	ND	ND	ND	ND	ND	-	ND
Trifluralin	45	0.2	ND	ND	ND	ND	ND	-	ND
Organochlorine Pesticides									
Alachlor		0.5	ND	ND	ND	ND	-	-	-
Aldrin + Dieldrin	0.7	0.5	ND	ND (0.02)	ND	ND	ND	-	ND
BHC, alpha-		0.3	ND	ND (0.1)	ND	ND	ND	-	ND
BHC, beta-		0.3	ND	ND (0.1)	ND	ND	ND	-	ND
Captan		1	ND	ND	ND	ND	ND	-	ND
Chlorbenside		0.1	ND	ND	ND	ND	ND	-	ND
Chlordane, alpha-		0.5	ND	ND (0.06)	ND	ND	ND	-	ND
Chlordane, gamma-		0.5	ND	ND (0.06)	ND	ND	ND	-	ND
Chlorfenson (Ovex)		0.2	ND	ND	ND	ND	ND	-	ND
Chlorothalonil (Daconil)		1	ND	ND	ND	ND	ND	-	ND
Chlorpropham		0.2	ND	ND	ND	ND	ND	-	ND
Dacthal (DCPA)		0.1	ND	ND	ND	ND	ND	-	ND
4,4'-DDE		0.01	ND	ND	ND	ND (0.1)	ND (0.1)	ND	ND (0.1)
DDT - orthopara (2,4')		0.01	ND	ND	ND	ND (0.2)	ND (0.2)	ND	ND (0.2)
DDT - parapara (4,4')		0.01	ND	ND	ND	ND (0.2)	ND (0.2)	ND	ND (0.2)
Diallate(e/z)		0.5	ND	ND	ND	ND	ND	-	ND
Dichlobenil		0.2	ND	ND	ND	ND	ND	-	ND
Dichloran		0.5	ND	ND	ND	ND	ND	-	ND
Dichlofluanid		0.5	ND	ND	ND	ND	ND	-	ND
Dicofol		0.2	ND	ND	ND	ND	ND	-	ND
Endosulfan I		0.5	ND	ND (0.2)	ND	ND	ND	-	ND
Endosulfan II		0.5	ND	ND (0.2)	ND	ND	ND	-	ND
Endosulfan Sulphate		0.5	ND	ND (0.2)	ND	ND	ND	-	ND
Endrin		0.5	ND	ND (0.02)	ND	ND	ND	-	ND
Folpet		1	ND	ND	ND	ND	ND	-	ND
Heptachlor		0.5	ND	ND (0.1)	ND	ND	ND	-	ND
Lindane (BHC), gamma-		0.5	ND	ND (0.1)	ND	ND	ND	-	ND
Methidathion		0.3	ND	ND	ND	ND	ND	-	ND
Methoxychlor	900	0.1	ND	ND	ND	ND	ND	-	ND
Mirex		0.3	ND	ND	ND	ND	ND	-	ND
Nitrofen		0.2	ND	ND	ND	ND	ND	-	ND
Permethrin-cis/trans		0.5	ND	ND	ND	ND	ND	-	ND
Procymidone		0.2	ND	ND	ND	ND	ND	-	ND
Pronamide		0.2	ND	ND	ND	ND	ND	-	ND
Quintozene (Pentachloronitrobenzene)		0.5	ND	ND	ND	ND	ND	-	ND
Tecnazene		0.5	ND	ND	ND	ND	ND	-	ND
Tetradifon		0.2	ND	ND	ND	ND	ND	-	ND
Tolyfluanid		0.5	ND	ND	ND	ND	ND	-	ND
Vinclozolin		0.5	ND	ND	ND	ND	ND	-	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND () = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Meteghan (060)		Annapolis Royal (062)			Hebron (063)	
			13-Dec-2006	17-Dec-2008	9-Nov-2005	26-Nov-2007	1-Jun-2010	9-Jun-2005	17-Dec-2008
Herbicides									
Atrazine	5	0.2	ND	ND	ND	ND	ND	ND (2.5)	ND
De-ethyl Atrazine		0.3	ND	ND	ND	ND	ND	-	ND
Butylate		0.5	ND	ND	ND	ND	ND	-	ND
Cyanazine	10	0.5	ND	ND	ND	ND	ND	-	ND
Desmetryn		0.3	ND	ND	ND	ND	ND	-	ND
Diphenylamine		0.1	ND	ND	ND	ND	ND	-	ND
Eptam		0.5	ND	ND	ND	ND	ND	-	ND
Ethalfuralin		0.5	ND	ND	ND	ND	ND	-	ND
Hexazinone		0.1	ND	ND	ND	ND	ND	-	ND
Metalaxyl		0.3	ND	ND	ND	ND	ND	-	ND
Metribuzin	80	0.3	ND	ND	ND	ND	ND	-	ND
Metolachlor	50	0.2	ND	ND	ND	ND	ND	-	ND
Pirimicarb		0.5	ND	ND	ND	ND	ND	-	ND
Profluralin		0.5	ND	ND	ND	ND	ND	-	ND
Prometryn		0.2	ND	ND	ND	ND	ND	-	ND
Propazine		0.1	ND	ND	ND	ND	ND	-	ND
Simazine	10	0.5	ND	ND	ND	ND	ND	-	ND
Terbuthylazine		0.1	ND	ND	ND	ND	ND	-	ND
Terbutryn		0.2	ND	ND	ND	ND	ND	-	ND
Triallate		0.3	ND	ND	ND	ND	ND	-	ND
Triadimefon		0.3	ND	ND	ND	ND	ND	-	ND
Trifluralin	45	0.2	ND	ND	ND	ND	ND	-	ND
Organochlorine Pesticides									
Alachlor		0.5	ND	ND	ND	ND	ND	-	-
Aldrin + Dieldrin	0.7	0.5	ND	ND	ND	ND	ND	-	ND
BHC, alpha-		0.3	ND	ND	ND	ND	ND	-	ND
BHC, beta-		0.3	ND	ND	ND	ND	ND	-	ND
Captan		1	ND	ND	ND	ND	ND	-	ND
Chlorbenseide		0.1	ND	ND	ND	ND	ND	-	ND
Chlordane, alpha-		0.5	ND	ND	ND	ND	ND	-	ND
Chlordane, gamma-		0.5	ND	ND	ND	ND	ND	-	ND
Chlorfenson (Ovex)		0.2	ND	ND	ND	ND	ND	-	ND
Chlorothalonil (Daconil)		1	ND	ND	ND	ND	ND	-	ND
Chlorpropham		0.2	ND	ND	ND	ND	ND	-	ND
Dacthal (DCPA)		0.1	ND	ND	ND	ND	ND	-	ND
4,4'-DDE		0.01	ND	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND	ND (0.1)
DDT - orthopara (2,4')		0.01	ND	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND	ND (0.2)
DDT - parapara (4,4')		0.01	ND	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND	ND (0.2)
Diallate(e/z)		0.5	ND	ND	ND	ND	ND	-	ND
Dichlobenil		0.2	ND	ND	ND	ND	ND	-	ND
Dichloran		0.5	ND	ND	ND	ND	ND	-	ND
Dichlofluanid		0.5	ND	ND	ND	ND	ND	-	ND
Dicofol		0.2	ND	ND	ND	ND	ND	-	ND
Endosulfan I		0.5	ND	ND	ND	ND	ND	-	ND
Endosulfan II		0.5	ND	ND	ND	ND	ND	-	ND
Endosulfan Sulphate		0.5	ND	ND	ND	ND	ND	-	ND
Endrin		0.5	ND	ND	ND	ND	ND	-	ND
Folpet		1	ND	ND	ND	ND	ND	-	ND
Heptachlor		0.5	ND	ND	ND	ND	ND	-	ND
Lindane (BHC), gamma-		0.5	ND	ND	ND	ND	ND	-	ND
Methidathion		0.3	ND	ND	ND	ND	ND	-	ND
Methoxychlor	900	0.1	ND	ND	ND	ND	ND	-	ND
Mirex		0.3	ND	ND	ND	ND	ND	-	ND
Nitrofen		0.2	ND	ND	ND	ND	ND	-	ND
Permethrin-cis/trans		0.5	ND	ND	ND	ND	ND	-	ND
Procymidone		0.2	ND	ND	ND	ND	ND	-	ND
Pronamide		0.2	ND	ND	ND	ND	ND	-	ND
Quintozene (Pentachloronitrobenzene)		0.5	ND	ND	ND	ND	ND	-	ND
Tecnazene		0.5	ND	ND	ND	ND	ND	-	ND
Tetradifon		0.2	ND	ND	ND	ND	ND	-	ND
Tolyfluanid		0.5	ND	ND	ND	ND	ND	-	ND
Vinclozolin		0.5	ND	ND	ND	ND	ND	-	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND () = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Margaree (064)		Ingonish (065)	Dalem Lake (069)		Amherst (071)	
			14-Dec-2006	8-Dec-2008	25-Aug-2009	14-Dec-2006	11-Dec-2008	16-Dec-2006	8-Jan-2009
Herbicides									
Atrazine	5	0.2	ND	ND	ND	ND	ND	ND	ND
De-ethyl Atrazine		0.3	ND	ND	ND	ND	ND	ND	ND
Butylate		0.5	ND	ND	ND	ND	ND	ND	ND
Cyanazine	10	0.5	ND	ND	ND	ND	ND	ND	ND
Desmetryn		0.3	ND	ND	ND	ND	ND	ND	ND
Diphenylamine		0.1	ND	ND	ND	ND	ND	ND	ND
Eptam		0.5	ND	ND	ND	ND	ND	ND	ND
Ethalfuralin		0.5	ND	ND	ND	ND	ND	ND	ND
Hexazinone		0.1	ND	ND	ND	ND	ND	ND	ND
Metalaxyl		0.3	ND	ND	ND	ND	ND	ND	ND
Metribuzin	80	0.3	ND	ND	ND	ND	ND	ND	ND
Metolachlor	50	0.2	ND	ND	ND	ND	ND	ND	ND
Pirimicarb		0.5	ND	ND	ND	ND	ND	ND	ND
Profluralin		0.5	ND	ND	ND	ND	ND	ND	ND
Prometryn		0.2	ND	ND	ND	ND	ND	ND	ND
Propazine		0.1	ND	ND	ND	ND	ND	ND	ND
Simazine	10	0.5	ND	ND	ND	ND	ND	ND	ND
Terbutylazine		0.1	ND	ND	ND	ND	ND	ND	ND
Terbutryn		0.2	ND	ND	ND	ND	ND	ND	ND
Triallate		0.3	ND	ND	ND	ND	ND	ND	ND
Triadimefon		0.3	ND	ND	ND	ND	ND	ND	ND
Trifluralin	45	0.2	ND	ND	ND	ND	ND	ND	ND
Organochlorine Pesticides									
Alachlor		0.5	ND	ND	ND	ND	ND	ND	ND
Aldrin + Dieldrin	0.7	0.5	ND	ND	ND (0.02)	ND	ND	ND	ND
BHC, alpha-		0.3	ND	ND	ND (0.1)	ND	ND	ND	ND
BHC, beta-		0.3	ND	ND	ND (0.1)	ND	ND	ND	ND
Captan		1	ND	ND	ND	ND	ND	ND	ND
Chlorbenside		0.1	ND	ND	ND	ND	ND	ND	ND
Chlordane, alpha-		0.5	ND	ND	ND (0.06)	ND	ND	ND	ND
Chlordane, gamma-		0.5	ND	ND	ND (0.06)	ND	ND	ND	ND
Chlorfenson (Ovex)		0.2	ND	ND	ND	ND	ND	ND	ND
Chlorothalonil (Daconil)		1	ND	ND	ND	ND	ND	ND	ND
Chlorpropham		0.2	ND	ND	ND	ND	ND	ND	ND
Dacthal (DCPA)		0.1	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE		0.01	ND	ND (0.1)	ND	ND	ND (0.1)	ND	ND
DDT - orthopara (2,4')		0.01	ND	ND (0.2)	ND	ND	ND (0.2)	ND	ND
DDT - parapara (4,4')		0.01	ND	ND (0.2)	ND	ND	ND (0.2)	ND	ND
Diallate(e/z)		0.5	ND	ND	ND	ND	ND	ND	ND
Dichlobenil		0.2	ND	ND	ND	ND	ND	ND	ND
Dichloran		0.5	ND	ND	ND	ND	ND	ND	ND
Dichlofluanid		0.5	ND	ND	ND	ND	ND	ND	ND
Dicofol		0.2	ND	ND	ND	ND	ND	ND	ND
Endosulfan I		0.5	ND	ND	ND (0.2)	ND	ND	ND	ND
Endosulfan II		0.5	ND	ND	ND (0.2)	ND	ND	ND	ND
Endosulfan Sulphate		0.5	ND	ND	ND (0.2)	ND	ND	ND	ND
Endrin		0.5	ND	ND	ND (0.02)	ND	ND	ND	ND
Folpet		1	ND	ND	ND	ND	ND	ND	ND
Heptachlor		0.5	ND	ND	ND (0.1)	ND	ND	ND	ND
Lindane (BHC), gamma-		0.5	ND	ND	ND (0.1)	ND	ND	ND	ND
Methidathion		0.3	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	900	0.1	ND	ND	ND	ND	ND	ND	ND
Mirex		0.3	ND	ND	ND	ND	ND	ND	ND
Nitrofen		0.2	ND	ND	ND	ND	ND	ND	ND
Permethrin-cis/trans		0.5	ND	ND	ND	ND	ND	ND	ND
Procymidone		0.2	ND	ND	ND	ND	ND	ND	ND
Pronamide		0.2	ND	ND	ND	ND	ND	ND	ND
Quintozene (Pentachloronitrobenzene)		0.5	ND	ND	ND	ND	ND	ND	ND
Tecnazene		0.5	ND	ND	ND	ND	ND	ND	ND
Tetradifon		0.2	ND	ND	ND	ND	ND	ND	ND
Tolyfluanid		0.5	ND	ND	ND	ND	ND	ND	ND
Vinclozolin		0.5	ND	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND () = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Kelley River (073)		Atlanta (074)		Sheffield Mills (075)	
			12-Jan-2007	9-Jun-2009	3-Sep-2007	8-Jun-2010	10-Sep-2007	9-Jun-2010
Herbicides								
Atrazine	5	0.2	ND	ND	ND	ND	ND	ND
De-ethyl Atrazine		0.3	ND	ND	ND	ND	ND	ND
Butylate		0.5	ND	ND	ND	ND	ND	ND
Cyanazine	10	0.5	ND	ND	ND	ND	ND	ND
Desmetryn		0.3	ND	ND	ND	ND	ND	ND
Diphenylamine		0.1	ND	ND	ND	ND	ND	ND
Eptam		0.5	ND	ND	ND	ND	ND	ND
Ethalfuralin		0.5	ND	ND	ND	ND	ND	ND
Hexazinone		0.1	ND	ND	ND	ND	ND	ND
Metalaxyl		0.3	ND	ND	ND	ND	ND	ND
Metribuzin	80	0.3	ND	ND	ND	ND	ND	ND
Metolachlor	50	0.2	ND	ND	ND	ND	ND	ND
Pirimicarb		0.5	ND	ND	ND	ND	ND	ND
Profluralin		0.5	ND	ND	ND	ND	ND	ND
Prometryn		0.2	ND	ND	ND	ND	ND	ND
Propazine		0.1	ND	ND	ND	ND	ND	ND
Simazine	10	0.5	ND	ND	ND	ND	ND	ND
Terbutylazine		0.1	ND	ND	ND	ND	ND	ND
Terbutryn		0.2	ND	ND	ND	ND	ND	ND
Triallate		0.3	ND	ND	ND	ND	ND	ND
Triadimefon		0.3	ND	ND	ND	ND	ND	ND
Trifluralin	45	0.2	ND	ND	ND	ND	ND	ND
Organochlorine Pesticides								
Alachlor		0.5	ND	ND	ND	ND	ND	ND
Aldrin + Dieldrin	0.7	0.5	ND	ND (0.02)	ND	ND	ND	ND
BHC, alpha-		0.3	ND	ND (0.1)	ND	ND	ND	ND
BHC, beta-		0.3	ND	ND (0.1)	ND	ND	ND	ND
Captan		1	ND	ND	ND	ND	ND	ND
Chlorbenside		0.1	ND	ND	ND	ND	ND	ND
Chlordane, alpha-		0.5	ND	ND (0.06)	ND	ND	ND	ND
Chlordane, gamma-		0.5	ND	ND (0.06)	ND	ND	ND	ND
Chlorfenson (Ovex)		0.2	ND	ND	ND	ND	ND	ND
Chlorothalonil (Daconil)		1	ND	ND	ND	ND	ND	ND
Chlorpropham		0.2	ND	ND	ND	ND	ND	ND
Dacthal (DCPA)		0.1	ND	ND	ND	ND	ND	ND
4,4'-DDE		0.01	ND (0.1)	ND	ND	ND	ND	ND
DDT - orthopara (2,4')		0.01	ND (0.2)	ND	ND	ND	ND	ND
DDT - parapara (4,4')		0.01	ND (0.2)	ND	ND	ND	ND	ND
Diallate(e/z)		0.5	ND	ND	ND	ND	ND	ND
Dichlobenil		0.2	ND	ND	ND	ND	ND	ND
Dichloran		0.5	ND	ND	ND	ND	ND	ND
Dichlofluanid		0.5	ND	ND	ND	ND	ND	ND
Dicofol		0.2	ND	ND	ND	ND	ND	ND
Endosulfan I		0.5	ND	ND (0.2)	ND	ND	ND	ND
Endosulfan II		0.5	ND	ND (0.2)	ND	ND	ND	ND
Endosulfan Sulphate		0.5	ND	ND (0.2)	ND	ND	ND	ND
Endrin		0.5	ND	ND (0.02)	ND	ND	ND	ND
Folpet		1	ND	ND	ND	ND	ND	ND
Heptachlor		0.5	ND	ND (0.1)	ND	ND	ND	ND
Lindane (BHC), gamma-		0.5	ND	ND (0.1)	ND	ND	ND	ND
Methidathion		0.3	ND	ND	ND	ND	ND	ND
Methoxychlor	900	0.1	ND	ND	ND	ND	ND	ND
Mirex		0.3	ND	ND	ND	ND	ND	ND
Nitrofen		0.2	ND	ND	ND	ND	ND	ND
Permethrin-cis/trans		0.5	ND	ND	ND	ND	ND	ND
Procymidone		0.2	ND	ND	ND	ND	ND	ND
Pronamide		0.2	ND	ND	ND	ND	ND	ND
Quintozone (Pentachloronitrobenzene)		0.5	ND	ND	ND	ND	ND	ND
Tecnazene		0.5	ND	ND	ND	ND	ND	ND
Tetradifon		0.2	ND	ND	ND	ND	ND	ND
Tolyfluanid		0.5	ND	ND	ND	ND	ND	ND
Vinclozolin		0.5	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND () = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Fall River (076)	West Northfield (077)	Musquodoboit Hbr (078)	Lewis Lake (079)	Arisaig (080)	Coldbrook (081)
			20-May-2008	12-Jun-2008	22-May-2008	31-Jul-2008	8-Sep-2009	5-Aug-2009
Herbicides								
Atrazine	5	0.2	ND	ND	ND	ND	ND	ND
De-ethyl Atrazine		0.3	ND	ND	ND	ND	ND	ND
Butylate		0.5	ND	ND	ND	ND	ND	ND
Cyanazine	10	0.5	ND	ND	ND	ND	ND	ND
Desmetryn		0.3	ND	ND	ND	ND	ND	ND
Diphenylamine		0.1	ND	ND	ND	ND	ND	ND
Eptam		0.5	ND	ND	ND	ND	ND	ND
Ethalfuralin		0.5	ND	ND	ND	ND	ND	ND
Hexazinone		0.1	ND	ND	ND	ND	ND	ND
Metalaxyl		0.3	ND	ND	ND	ND	ND	ND
Metribuzin	80	0.3	ND	ND	ND	ND	ND	ND
Metolachlor	50	0.2	ND	ND	ND	ND	ND	ND
Pirimicarb		0.5	ND	ND	ND	ND	ND	ND
Profluralin		0.5	ND	ND	ND	ND	ND	ND
Prometryn		0.2	ND	ND	ND	ND	ND	ND
Propazine		0.1	ND	ND	ND	ND	ND	ND
Simazine	10	0.5	ND	ND	ND	ND	ND	ND
Terbutylazine		0.1	ND	ND	ND	ND	ND	ND
Terbutryn		0.2	ND	ND	ND	ND	ND	ND
Triallate		0.3	ND	ND	ND	ND	ND	ND
Triadimefon		0.3	ND	ND	ND	ND	ND	ND
Trifluralin	45	0.2	ND	ND	ND	ND	ND	ND
Organochlorine Pesticides								
Alachlor		0.5	ND	ND	ND	ND	ND	ND
Aldrin + Dieldrin	0.7	0.5	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.05)
BHC, alpha-		0.3	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
BHC, beta-		0.3	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Captan		1	ND	ND	ND	ND	ND	ND
Chlorbenside		0.1	ND	ND	ND	ND	ND	ND
Chlordane, alpha-		0.5	ND (0.06)	ND (0.06)	ND (0.06)	ND (0.06)	ND (0.06)	ND (0.06)
Chlordane, gamma-		0.5	ND (0.06)	ND (0.06)	ND (0.06)	ND (0.06)	ND (0.06)	ND (0.06)
Chlorfenson (Ovex)		0.2	ND	ND	ND	ND	ND	ND
Chlorothalonil (Daconil)		1	ND	ND	ND	ND	ND	ND
Chlorpropham		0.2	ND	ND	ND	ND	ND	ND
Dacthal (DCPA)		0.1	ND	ND	ND	ND	ND	ND
4,4'-DDE		0.01	ND	ND	ND	ND	ND	ND
DDT - orthopara (2,4')		0.01	ND	ND	ND	ND	ND	ND
DDT - parapara (4,4')		0.01	ND	ND	ND	ND	ND	ND
Diallate(e/z)		0.5	ND	ND	ND	ND	ND	ND
Dichlobenil		0.2	ND	ND	ND	ND	ND	ND
Dichloran		0.5	ND	ND	ND	ND	ND	ND
Dichlofluanid		0.5	ND	ND	ND	ND	ND	ND
Dicofol		0.2	ND	ND	ND	ND	ND	ND
Endosulfan I		0.5	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Endosulfan II		0.5	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Endosulfan Sulphate		0.5	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Endrin		0.5	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Folpet		1	ND	ND	ND	ND	ND	ND
Heptachlor		0.5	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Lindane (BHC), gamma-		0.5	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Methidathion		0.3	ND	ND	ND	ND	ND	ND
Methoxychlor	900	0.1	ND	ND	ND	ND	ND	ND
Mirex		0.3	ND	ND	ND	ND	ND	ND
Nitrofen		0.2	ND	ND	ND	ND	ND	ND
Permethrin-cis/trans		0.5	ND	ND	ND	ND	ND	ND
Procymidone		0.2	ND	ND	ND	ND	ND	ND
Pronamide		0.2	ND	ND	ND	ND	ND	ND
Quintozene (Pentachloronitrobenzene)		0.5	ND	ND	ND	ND	ND	ND
Tecnazene		0.5	ND	ND	ND	ND	ND	ND
Tetradifon		0.2	ND	ND	ND	ND	ND	ND
Tolyfluanid		0.5	ND	ND	ND	ND	ND	ND
Vinclozolin		0.5	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND () = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Long Point (082)	Tatamagouche (083)	St. Peters (085)
			12-Aug-2009	21-Jul-2008	19-Jul-2011
Herbicides					
Atrazine	5	0.2	ND	ND	ND
De-ethyl Atrazine		0.3	ND	ND	ND
Butylate		0.5	ND	ND	ND
Cyanazine	10	0.5	ND	ND	ND
Desmetryn		0.3	ND	ND	ND
Diphenylamine		0.1	ND	ND	ND
Eptam		0.5	ND	ND	ND
Ethalfuralin		0.5	ND	ND	ND
Hexazinone		0.1	ND	ND	ND
Metalaxyl		0.3	ND	ND	ND
Metribuzin	80	0.3	ND	ND	ND
Metolachlor	50	0.2	ND	ND	ND
Pirimicarb		0.5	ND	ND	ND
Profluralin		0.5	ND	ND	ND
Prometryn		0.2	ND	ND	ND
Propazine		0.1	ND	ND	ND
Simazine	10	0.5	ND	ND	ND
Terbutylazine		0.1	ND	ND	ND
Terbutryn		0.2	ND	ND	ND
Triallate		0.3	ND	ND	ND
Triadimefon		0.3	ND	ND	ND
Trifluralin	45	0.2	ND	ND	ND
Organochlorine Pesticides					
Alachlor		0.5	ND	ND	ND
Aldrin + Dieldrin	0.7	0.5	ND (0.05)	ND (0.02)	ND
BHC, alpha-		0.3	ND (0.1)	ND (0.1)	ND
BHC, beta-		0.3	ND (0.1)	ND (0.1)	ND
Captan		1	ND	ND	ND
Chlorbenside		0.1	ND	ND	ND
Chlordane, alpha-		0.5	ND (0.06)	ND (0.06)	ND
Chlordane, gamma-		0.5	ND (0.06)	ND (0.06)	ND
Chlorfenson (Ovex)		0.2	ND	ND	ND
Chlorothalonil (Daconil)		1	ND	ND	ND
Chlorpropham		0.2	ND	ND	ND
Dacthal (DCPA)		0.1	ND	ND	ND
4,4'-DDE		0.01	ND	ND	ND
DDT - orthopara (2,4')		0.01	ND	ND	ND
DDT - parapara (4,4')		0.01	ND	ND	ND
Diallate(e/z)		0.5	ND	ND	ND
Dichlobenil		0.2	ND	ND	ND
Dichloran		0.5	ND	ND	ND
Dichlofuanid		0.5	ND	ND	ND
Dicofol		0.2	ND	ND	ND
Endosulfan I		0.5	ND (0.2)	ND (0.2)	ND
Endosulfan II		0.5	ND (0.2)	ND (0.2)	ND
Endosulfan Sulphate		0.5	ND (0.2)	ND (0.2)	ND
Endrin		0.5	ND (0.02)	ND (0.02)	ND
Folpet		1	ND	ND	ND
Heptachlor		0.5	ND (0.1)	ND (0.1)	ND
Lindane (BHC), gamma-		0.5	ND (0.1)	ND (0.1)	ND
Methidathion		0.3	ND	ND	ND
Methoxychlor	900	0.1	ND	ND	ND
Mirex		0.3	ND	ND	ND
Nitrofen		0.2	ND	ND	ND
Permethrin-cis/trans		0.5	ND	ND	ND
Procymidone		0.2	ND	ND	ND
Pronamide		0.2	ND	ND	ND
Quintozene (Pentachloronitrobenzene)		0.5	ND	ND	ND
Tecnazene		0.5	ND	ND	ND
Tetradifon		0.2	ND	ND	ND
Tolyfluanid		0.5	ND	ND	ND
Vinclozolin		0.5	ND	ND	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND () = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Greenwood (003)			Fraser Brook (004)		Wilmot (005)	Murray Siding (007)
			23-Nov-2005	18-Dec-2008	6-Jul-2011	10-Dec-2004	3-Dec-2008	12-May-2010	22-Nov-2011
Organophosphorus Pesticides									
Aspon		0.2	ND	ND	ND	ND	ND	ND	ND
Azinphos ethyl		0.5	ND	ND	ND	ND	ND	ND	ND
Azinphos methyl	20	1	ND	ND	ND	ND	ND	ND	ND
Bromacil		0.1	ND	ND	ND	ND	ND	ND	ND
Benfluralin		0.1	ND	ND	ND	ND	ND	ND	ND
Bromophos		0.1	ND	ND	ND	ND	ND	ND	ND
Bromophos-ethyl		0.3	ND	ND	ND	ND	ND	ND	ND
Carbophenothion		0.3	ND	ND	ND	ND	ND	ND	ND
Chlorfenvinphos(e/z)		0.1	ND	ND	ND	ND	ND	ND	ND
Chlormephos		0.5	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	90	0.2	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos-methyl		0.1	ND	ND	ND	ND	ND	ND	ND
Chlorthiophos		0.3	ND	ND	ND	ND	ND	ND	ND
Cyanophos		0.2	ND	ND	ND	ND	ND	ND	ND
Demeton		1	ND	ND	ND	ND	ND	ND	ND
Diazinon	20	0.3	ND	ND	ND	ND	ND	ND	ND
Dichlofenthion		0.2	ND	ND	ND	ND	ND	ND	ND
Dichlorvos/Naled		0.1	ND	ND	ND	ND	ND	ND	ND
Dicrotophos		0.5	ND	ND	ND	ND	ND	ND	ND
Dimethoate	20	0.5	ND	ND	ND	ND	ND	ND	ND
Dioxathion		1	ND	ND	ND	ND	ND	ND	ND
Disulfoton (Di-Syston)		1	ND	ND	ND	ND	ND	ND	ND
EPN		0.5	ND	ND	ND	ND	ND	ND	ND
Ethion		0.2	ND	ND	ND	ND	ND	ND	ND
Fenchlorphos (Ronnel)		0.1	ND	ND	ND	ND	ND	ND	ND
Fenitrothion		0.5	ND	ND	ND	ND	ND	ND	ND
Fensulfothion		0.1	ND	ND	ND	ND	ND	ND	ND
Fenthion		0.1	ND	ND	ND	ND	ND	ND	ND
Fonofos		0.1	ND	ND	ND	ND	ND	ND	ND
Iodofenphos		0.1	ND	ND	ND	ND	ND	ND	ND
Isofenphos		0.3	ND	ND	ND	ND	ND	ND	ND
Malaoxon		1	ND	ND	ND	ND	ND	ND	ND
Malathion	190	0.5	ND	ND	ND	ND	ND	ND	ND
Mevinphos-cis/trans (Phosdrin)		0.1	ND	ND	ND	ND	ND	ND	ND
Omethoate		1	ND	ND	ND	ND	ND	ND	ND
Parathion	50	0.5	ND	ND	ND	ND	ND	ND	ND
Parathion methyl		0.5	ND	ND	ND	ND	ND	ND	ND
Phorate (Thimet)	2	0.5	ND	ND	ND	ND	ND	ND	ND
Phosalone		0.2	ND	ND	ND	ND	ND	ND	ND
Phosmet		0.2	ND	ND	ND	ND	ND	ND	ND
Phosphamidon		0.2	ND	ND	ND	ND	ND	ND	ND
Pirimiphos-ethyl		0.5	ND	ND	ND	ND	ND	ND	ND
Pirimiphos-methyl		0.2	ND	ND	ND	ND	ND	ND	ND
Profenophos		0.5	ND	ND	ND	ND	ND	ND	ND
Pyrazophos		0.1	ND	ND	ND	ND	ND	ND	ND
Quinalphos		0.3	ND	ND	ND	ND	ND	ND	ND
Sulfotep		0.1	ND	ND	ND	ND	ND	ND	ND
Terbufos	1	0.3	ND	ND	ND	ND	ND	ND	ND
Tetrachlorvinphos (Stirophos)		0.2	ND	ND	ND	-	-	ND	ND
Other									
Hexachlorobenzene		0.2	ND	ND	ND	ND	ND	ND	ND
Iprodione		1	-	-	ND	-	-	ND	ND
Propiconazole		0.5	-	-	ND	-	-	ND	ND

Notes:

AO = Aesthetic Objective.

ND = not detected

ND() = not detected at the elevated detection limit shown in brackets ()

All guidelines are health-based MACs or IMACs, unless otherwise indicated.

Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Wolfville (010)		Monastery (028)	Point Aconi (030)		Lawrencetown (043)	
			22-Dec-2004	18-Dec-2008	15-Dec-2006	15-Sep-2005	10-Dec-2008	5-Dec-2008	16-Nov-2011
Organophosphorus Pesticides									
Aspon		0.2	ND	ND	ND	ND	ND	ND	ND
Azinphos ethyl		0.5	ND	ND	ND	ND	ND	ND	ND
Azinphos methyl	20	1	ND	ND	ND	ND	ND	ND	ND
Bromacil		0.1	ND	ND	ND (1)	ND	ND	ND	ND
Benfluralin		0.1	ND	ND	ND	ND	ND	ND	ND
Bromophos		0.1	ND	ND	ND	ND	ND	ND	ND
Bromophos-ethyl		0.3	ND	ND	ND	ND	ND	ND	ND
Carbophenothion		0.3	ND	ND	ND	ND	ND	ND	ND
Chlorfenvinphos(e/z)		0.1	ND	ND	ND	ND	ND	ND	ND
Chlormephos		0.5	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	90	0.2	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos-methyl		0.1	ND	ND	ND	ND	ND	ND	ND
Chlorthiophos		0.3	ND	ND	ND	ND	ND	ND	ND
Cyanophos		0.2	ND	ND	ND	ND	ND	ND	ND
Demeton		1	ND	ND	ND	ND	ND	ND	ND
Diazinon	20	0.3	ND	ND	ND	ND	ND	ND	ND
Dichlofenthion		0.2	ND	ND	ND	ND	ND	ND	ND
Dichlorvos/Naled		0.1	ND	ND	ND	ND	ND	ND	ND
Dicrotophos		0.5	ND	ND	ND	ND	ND	ND	ND
Dimethoate	20	0.5	ND	ND	ND	ND	ND	ND	ND
Dioxathion		1	ND	ND	ND	ND	ND	ND	ND
Disulfoton (Di-Syston)		1	ND	ND	ND	ND	ND	ND	ND
EPN		0.5	ND	ND	ND	ND	ND	ND	ND
Ethion		0.2	ND	ND	ND	ND	ND	ND	ND
Fenchlorphos (Ronnell)		0.1	ND	ND	-	ND	ND	ND	ND
Fenitrothion		0.5	ND	ND	ND	ND	ND	ND	ND
Fensulfotthion		0.1	ND	ND	ND	ND	ND	ND	ND
Fenthion		0.1	ND	ND	ND	ND	ND	ND	ND
Fonofos		0.1	ND	ND	ND	ND	ND	ND	ND
Iodofenphos		0.1	ND	ND	ND	ND	ND	ND	ND
Isofenphos		0.3	ND	ND	ND	ND	ND	ND	ND
Malaoxon		1	ND	ND	ND	ND	ND	ND	ND
Malathion	190	0.5	ND	ND	ND	ND	ND	ND	ND
Mevinphos-cis/trans (Phosdrin)		0.1	ND	ND	ND	ND	ND	ND	ND
Omethoate		1	ND	ND	ND	ND	ND	ND	ND
Parathion	50	0.5	ND	ND	ND	ND	ND	ND	ND
Parathion methyl		0.5	ND	ND	ND	ND	ND	ND	ND
Phorate (Thimet)	2	0.5	ND	ND	ND	ND	ND	ND	ND
Phosalone		0.2	ND	ND	ND	ND	ND	ND	ND
Phosmet		0.2	ND	ND	ND	ND	ND	ND	ND
Phosphamidon		0.2	ND	ND	ND	ND	ND	ND	ND
Pirimiphos-ethyl		0.5	ND	ND	ND	ND	ND	ND	ND
Pirimiphos-methyl		0.2	ND	ND	ND	ND	ND	ND	ND
Profenophos		0.5	ND	ND	ND	ND	ND	ND	ND
Pyrazophos		0.1	ND	ND	ND	ND	ND	ND	ND
Quinalphos		0.3	ND	ND	ND	ND	ND	ND	ND
Sulfotep		0.1	ND	ND	ND	ND	ND	ND	ND
Terbufos	1	0.3	ND	ND	ND	ND	ND	ND	ND
Tetrachlorvinphos (Stirophos)		0.2	-	ND	-	ND	ND	ND	ND
Other									
Hexachlorobenzene		0.2	ND	ND	ND	ND	ND	ND	ND
Iprodione		1	-	-	-	-	-	-	ND
Propiconazole		0.5	-	-	-	-	-	-	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND() = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Durham (045)		Kentville (048)			Sydney (050)	
			5-Oct-2005	21-Jan-2009	15-Jun-2005	7-Nov-2007	5-Jul-2011	15-Sep-2005	11-Dec-2008
Organophosphorus Pesticides									
Aspon		0.2	ND	ND	-	ND	ND	ND	ND
Azinphos ethyl		0.5	ND	ND	-	ND	ND	ND	ND
Azinphos methyl	20	1	ND	ND	-	ND	ND	ND	ND
Bromacil		0.1	ND	ND	-	ND	ND	ND	ND
Benfluralin		0.1	ND	ND	-	ND	ND	ND	ND
Bromophos		0.1	ND	ND	-	ND	ND	ND	ND
Bromophos-ethyl		0.3	ND	ND	-	ND	ND	ND	ND
Carbophenothion		0.3	ND	ND	-	ND	ND	ND	ND
Chlorfenvinphos(e/z)		0.1	ND	ND	-	ND	ND	ND	ND
Chlormephos		0.5	ND	ND	-	ND	ND	ND	ND
Chlorpyrifos	90	0.2	ND	ND	-	ND	ND	ND	ND
Chlorpyrifos-methyl		0.1	ND	ND	-	ND	ND	ND	ND
Chlorthiophos		0.3	ND	ND	-	ND	ND	ND	ND
Cyanophos		0.2	ND	ND	-	ND	ND	ND	ND
Demeton		1	ND	ND	-	ND	ND	ND	ND
Diazinon	20	0.3	ND	ND	ND (2)	ND	ND	ND	ND
Dichlofenthion		0.2	ND	ND	-	ND	ND	ND	ND
Dichlorvos/Naled		0.1	ND	ND	-	ND	ND	ND	ND
Dicrotophos		0.5	ND	ND	-	ND	ND	ND	ND
Dimethoate	20	0.5	ND	ND	-	ND	ND	ND	ND
Dioxathion		1	ND	ND	-	ND	ND	ND	ND
Disulfoton (Di-Syston)		1	ND	ND	-	ND	ND	ND	ND
EPN		0.5	ND	ND	-	ND	ND	ND	ND
Ethion		0.2	ND	ND	-	ND	ND	ND	ND
Fenchlorphos (Ronnel)		0.1	ND	ND	-	ND	ND	ND	ND
Fenitrothion		0.5	ND	ND	-	ND	ND	ND	ND
Fensulfotihion		0.1	ND	ND	-	ND	ND	ND	ND
Fenthion		0.1	ND	ND	-	ND	ND	ND	ND
Fonofos		0.1	ND	ND	-	ND	ND	ND	ND
Iodofenphos		0.1	ND	ND	-	ND	ND	ND	ND
Isofenphos		0.3	ND	ND	-	ND	ND	ND	ND
Malaoxon		1	ND	ND	-	ND	ND	ND	ND
Malathion	190	0.5	ND	ND	ND (2)	ND	ND	ND	ND
Mevinphos-cis/trans (Phosdrin)		0.1	ND	ND	-	ND	ND	ND	ND
Omethoate		1	ND	ND	-	ND	ND	ND	ND
Parathion	50	0.5	ND	ND	ND (2)	ND	ND	ND	ND
Parathion methyl		0.5	ND	ND	ND (2)	ND	ND	ND	ND
Phorate (Thimet)	2	0.5	ND	ND	-	ND	ND	ND	ND
Phosalone		0.2	ND	ND	-	ND	ND	ND	ND
Phosmet		0.2	ND	ND	-	ND	ND	ND	ND
Phosphamidon		0.2	ND	ND	-	ND	ND	ND	ND
Pirimiphos-ethyl		0.5	ND	ND	-	ND	ND	ND	ND
Pirimiphos-methyl		0.2	ND	ND	-	ND	ND	ND	ND
Profenophos		0.5	ND	ND	-	ND	ND	ND	ND
Pyrazophos		0.1	ND	ND	-	ND	ND	ND	ND
Quinalphos		0.3	ND	ND	-	ND	ND	ND	ND
Sulfotep		0.1	ND	ND	-	ND	ND	ND	ND
Terbufos	1	0.3	ND	ND	-	ND	ND	ND	ND
Tetrachlorvinphos (Stirophos)		0.2	ND	ND	-	ND	ND	ND	ND
Other									
Hexachlorobenzene		0.2	ND	ND	-	ND	ND	ND	ND
Iprodione		1	-	-	-	ND	ND	-	-
Propiconazole		0.5	-	-	-	ND	ND	-	-

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND() = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	North Grant (054)		Stillwater (055)		Sheet Harbour (056)	Hayden Lake (059)	
			12-Dec-2006	22-Jul-2008	12-Dec-2006	4-Dec-2008	5-Dec-2008	9-Jun-2005	16-Dec-2008
Organophosphorus Pesticides									
Aspon	20	0.2	ND	ND	ND	ND	ND	-	ND
Azinphos ethyl		0.5	ND	ND	ND	ND	ND	-	ND
Azinphos methyl		1	ND	ND	ND	ND	ND	-	ND
Bromacil		0.1	ND	ND	ND	ND	ND	-	ND
Benfluralin		0.1	ND	ND	ND	ND	ND	-	ND
Bromophos		0.1	ND	ND	ND	ND	ND	-	ND
Bromophos-ethyl		0.3	ND	ND	ND	ND	ND	-	ND
Carbophenothion		0.3	ND	ND	ND	ND	ND	-	ND
Chlorfenvinphos(e/z)	90	0.1	ND	ND	ND	ND	ND	-	ND
Chlormephos		0.5	ND	ND	ND	ND	ND	-	ND
Chlorpyrifos		0.2	ND	ND (0.01)	ND	ND	ND	-	ND
Chlorpyrifos-methyl		0.1	ND	ND	ND	ND	ND	-	ND
Chlorthiophos		0.3	ND	ND	ND	ND	ND	-	ND
Cyanophos		0.2	ND	ND	ND	ND	ND	-	ND
Demeton	20	1	ND	ND	ND	ND	ND	-	ND
Diazinon		0.3	ND	ND (0.02)	ND	ND	ND	ND (5)	ND
Dichlofenthion		0.2	ND	ND	ND	ND	ND	-	ND
Dichlorvos/Naled		0.1	ND	ND	ND	ND	ND	-	ND
Dicrotophos	20	0.5	ND	ND	ND	ND	ND	-	ND
Dimethoate		0.5	ND	ND	ND	ND	ND	-	ND
Dioxathion		1	ND	ND	ND	ND	ND	-	ND
Disulfoton (Di-Syston)		1	ND	ND	ND	ND	ND	-	ND
EPN		0.5	ND	ND	ND	ND	ND	-	ND
Ethion		0.2	ND	ND	ND	ND	ND	-	ND
Fenchlorphos (Ronnell)		0.1	ND	ND	ND	ND	ND	-	ND
Fenitrothion		0.5	ND	ND	ND	ND	ND	-	ND
Fensulfotihion		0.1	ND	ND	ND	ND	ND	-	ND
Fenthion		0.1	ND	ND	ND	ND	ND	-	ND
Fonofos		0.1	ND	ND	ND	ND	ND	-	ND
Iodofenphos		0.1	ND	ND	ND	ND	ND	-	ND
Isofenphos		0.3	ND	ND	ND	ND	ND	-	ND
Malaoxon		1	ND	ND	ND	ND	ND	-	ND
Malathion		0.5	ND	ND	ND	ND	ND	ND (5)	ND
Mevinphos-cis/trans (Phosdrin)	190	0.1	ND	ND	ND	ND	ND	-	ND
Omethoate		1	ND	ND	ND	ND	ND	-	ND
Parathion	50	0.5	ND	ND	ND	ND	ND	ND (5)	ND
Parathion methyl	2	0.5	ND	ND	ND	ND	ND	ND (5)	ND
Phorate (Thimet)		0.5	ND	ND	ND	ND	ND	-	ND
Phosalone		0.2	ND	ND	ND	ND	ND	-	ND
Phosmet		0.2	ND	ND	ND	ND	ND	-	ND
Phosphamidon		0.2	ND	ND	ND	ND	ND	-	ND
Pirimiphos-ethyl		0.5	ND	ND	ND	ND	ND	-	ND
Pirimiphos-methyl		0.2	ND	ND	ND	ND	ND	-	ND
Profenophos		0.5	ND	ND	ND	ND	ND	-	ND
Pyrazophos		0.1	ND	ND	ND	ND	ND	-	ND
Quinalphos		0.3	ND	ND	ND	ND	ND	-	ND
Sulfotep		0.1	ND	ND	ND	ND	ND	-	ND
Terbufos		0.3	ND	ND	ND	ND	ND	-	ND
Tetrachlorvinphos (Stirophos)	1	0.2	ND	ND	ND	ND	ND	-	ND
Other									
Hexachlorobenzene		0.2	ND	ND	ND	ND	ND	-	ND
Iprodione		1	-	ND	-	-	-	-	-
Propiconazole		0.5	-	ND	-	-	-	-	-

Notes:

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 ND = not detected
 ND() = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Meteghan (060)		Annapolis Royal (062)			Hebron (063)	
			13-Dec-2006	17-Dec-2008	9-Nov-2005	26-Nov-2007	1-Jun-2010	9-Jun-2005	17-Dec-2008
Organophosphorus Pesticides									
Aspon		0.2	ND	ND	ND	ND	ND	-	ND
Azinphos ethyl		0.5	ND	ND	ND	ND	ND	-	ND
Azinphos methyl	20	1	ND	ND	ND	ND	ND	-	ND
Bromacil		0.1	ND	ND	ND	ND	ND	-	ND
Benfluralin		0.1	ND	ND	ND	ND	ND	-	ND
Bromophos		0.1	ND	ND	ND	ND	ND	-	ND
Bromophos-ethyl		0.3	ND	ND	ND	ND	ND	-	ND
Carbophenothion		0.3	ND	ND	ND	ND	ND	-	ND
Chlorfenvinphos(e/z)		0.1	ND	ND	ND	ND	ND	-	ND
Chlormephos		0.5	ND	ND	ND	ND	ND	-	ND
Chlorpyrifos	90	0.2	ND	ND	ND	ND	ND	-	ND
Chlorpyrifos-methyl		0.1	ND	ND	ND	ND	ND	-	ND
Chlorthiophos		0.3	ND	ND	ND	ND	ND	-	ND
Cyanophos		0.2	ND	ND	ND	ND	ND	-	ND
Demeton		1	ND	ND	ND	ND	ND	-	ND
Diazinon	20	0.3	ND	ND	ND	ND	ND	ND (5)	ND
Dichlofenthion		0.2	ND	ND	ND	ND	ND	-	ND
Dichlorvos/Naled		0.1	ND	ND	ND	ND	ND	-	ND
Dicrotophos		0.5	ND	ND	ND	ND	ND	-	ND
Dimethoate	20	0.5	ND	ND	ND	ND	ND	-	ND
Dioxathion		1	ND	ND	ND	ND	ND	-	ND
Disulfoton (Di-Syston)		1	ND	ND	ND	ND	ND	-	ND
EPN		0.5	ND	ND	ND	ND	ND	-	ND
Ethion		0.2	ND	ND	ND	ND	ND	-	ND
Fenchlorphos (Ronnel)		0.1	ND	ND	ND	ND	ND	-	ND
Fenitrothion		0.5	ND	ND	ND	ND	ND	-	ND
Fensulfotthion		0.1	ND	ND	ND	ND	ND	-	ND
Fenthion		0.1	ND	ND	ND	ND	ND	-	ND
Fonofos		0.1	ND	ND	ND	ND	ND	-	ND
Iodofenphos		0.1	ND	ND	ND	ND	ND	-	ND
Isofenphos		0.3	ND	ND	ND	ND	ND	-	ND
Malaoxon		1	ND	ND	ND	ND	ND	-	ND
Malathion	190	0.5	ND	ND	ND	ND	ND	ND (5)	ND
Mevinphos-cis/trans (Phosdrin)		0.1	ND	ND	ND	ND	ND	-	ND
Omethoate		1	ND	ND	ND	ND	ND	-	ND
Parathion	50	0.5	ND	ND	ND	ND	ND	ND (5)	ND
Parathion methyl		0.5	ND	ND	ND	ND	ND	ND (5)	ND
Phorate (Thimet)	2	0.5	ND	ND	ND	ND	ND	-	ND
Phosalone		0.2	ND	ND	ND	ND	ND	-	ND
Phosmet		0.2	ND	ND	ND	ND	ND	-	ND
Phosphamidon		0.2	ND	ND	ND	ND	ND	-	ND
Pirimiphos-ethyl		0.5	ND	ND	ND	ND	ND	-	ND
Pirimiphos-methyl		0.2	ND	ND	ND	ND	ND	-	ND
Profenophos		0.5	ND	ND	ND	ND	ND	-	ND
Pyrazophos		0.1	ND	ND	ND	ND	ND	-	ND
Quinalphos		0.3	ND	ND	ND	ND	ND	-	ND
Sulfotep		0.1	ND	ND	ND	ND	ND	-	ND
Terbufos	1	0.3	ND	ND	ND	ND	ND	-	ND
Tetrachlorvinphos (Stirophos)		0.2	ND	ND	ND	ND	ND	-	ND
Other									
Hexachlorobenzene		0.2	ND	ND	ND	ND	ND	-	ND
Iprodione		1	-	-	-	ND	ND	-	-
Propiconazole		0.5	-	-	-	ND	ND	-	-

Notes:

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 ND = not detected
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 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Margaree (064)		Ingonish (065)	Dalem Lake (069)		Amherst (071)	
			14-Dec-2006	8-Dec-2008	25-Aug-2009	14-Dec-2006	11-Dec-2008	16-Dec-2006	8-Jan-2009
Organophosphorus Pesticides									
Aspon		0.2	ND	ND	ND	ND	ND	ND	ND
Azinphos ethyl		0.5	ND	ND	ND	ND	ND	ND	ND
Azinphos methyl	20	1	ND	ND	ND	ND	ND	ND	ND
Bromacil		0.1	ND	ND	ND	ND	ND	ND	ND
Benfluralin		0.1	ND	ND	ND	ND	ND	ND	ND
Bromophos		0.1	ND	ND	ND	ND	ND	ND	ND
Bromophos-ethyl		0.3	ND	ND	ND	ND	ND	ND	ND
Carbophenothion		0.3	ND	ND	ND	ND	ND	ND	ND
Chlorfenvinphos(e/z)		0.1	ND	ND	ND	ND	ND	ND	ND
Chlormephos		0.5	ND	ND	ND	ND	ND	ND	ND
Chlorpyrifos	90	0.2	ND	ND	ND (0.01)	ND	ND	ND	ND
Chlorpyrifos-methyl		0.1	ND	ND	ND	ND	ND	ND	ND
Chlorthiophos		0.3	ND	ND	ND	ND	ND	ND	ND
Cyanophos		0.2	ND	ND	ND	ND	ND	ND	ND
Demeton		1	ND	ND	ND	ND	ND	ND	ND
Diazinon	20	0.3	ND	ND	ND (0.02)	ND	ND	ND	ND
Dichlofenthion		0.2	ND	ND	ND	ND	ND	ND	ND
Dichlorvos/Naled		0.1	ND	ND	ND	ND	ND	ND	ND
Dicrotophos		0.5	ND	ND	ND	ND	ND	ND	ND
Dimethoate	20	0.5	ND	ND	ND	ND	ND	ND	ND
Dioxathion		1	ND	ND	ND	ND	ND	ND	ND
Disulfoton (Di-Syston)		1	ND	ND	ND	ND	ND	ND	ND
EPN		0.5	ND	ND	ND	ND	ND	ND	ND
Ethion		0.2	ND	ND	ND	ND	ND	ND	ND
Fenchlorphos (Ronnell)		0.1	ND	ND	ND	ND	ND	ND	ND
Fenitrothion		0.5	ND	ND	ND	ND	ND	ND	ND
Fensulfotihion		0.1	ND	ND	ND	ND	ND	ND	ND
Fenthion		0.1	ND	ND	ND	ND	ND	ND	ND
Fonofos		0.1	ND	ND	ND	ND	ND	ND	ND
Iodofenphos		0.1	ND	ND	ND	ND	ND	ND	ND
Isofenphos		0.3	ND	ND	ND	ND	ND	ND	ND
Malaoxon		1	ND	ND	ND	ND	ND	ND	ND
Malathion	190	0.5	ND	ND	ND	ND	ND	ND	ND
Mevinphos-cis/trans (Phosdrin)		0.1	ND	ND	ND	ND	ND	ND	ND
Omethoate		1	ND	ND	ND	ND	ND	ND	ND
Parathion	50	0.5	ND	ND	ND	ND	ND	ND	ND
Parathion methyl		0.5	ND	ND	ND	ND	ND	ND	ND
Phorate (Thimet)	2	0.5	ND	ND	ND	ND	ND	ND	ND
Phosalone		0.2	ND	ND	ND	ND	ND	ND	ND
Phosmet		0.2	ND	ND	ND	ND	ND	ND	ND
Phosphamidon		0.2	ND	ND	ND	ND	ND	ND	ND
Pirimiphos-ethyl		0.5	ND	ND	ND	ND	ND	ND	ND
Pirimiphos-methyl		0.2	ND	ND	ND	ND	ND	ND	ND
Profenophos		0.5	ND	ND	ND	ND	ND	ND	ND
Pyrazophos		0.1	ND	ND	ND	ND	ND	ND	ND
Quinalphos		0.3	ND	ND	ND	ND	ND	ND	ND
Sulfotep		0.1	ND	ND	ND	ND	ND	ND	ND
Terbufos	1	0.3	ND	ND	ND	ND	ND	ND	ND
Tetrachlorvinphos (Stirophos)		0.2	ND	ND	ND	ND	ND	ND	ND
Other									
Hexachlorobenzene		0.2	ND	ND	ND	ND	ND	ND	ND
Iprodione		1	-	-	ND	-	-	-	-
Propiconazole		0.5	-	-	ND	-	-	-	-

Notes:

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 ND = not detected
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 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Kelley River (073)		Atlanta (074)		Sheffield Mills (075)	
			12-Jan-2007	9-Jun-2009	3-Sep-2007	8-Jun-2010	10-Sep-2007	9-Jun-2010
Organophosphorus Pesticides								
Aspon		0.2	ND	ND	ND	ND	ND	ND
Azinphos ethyl		0.5	ND	ND	ND	ND	ND	ND
Azinphos methyl	20	1	ND	ND	ND	ND	ND	ND
Bromacil		0.1	ND	ND	ND	ND	ND	ND
Benfluralin		0.1	ND	ND	ND	ND	ND	ND
Bromophos		0.1	ND	ND	ND	ND	ND	ND
Bromophos-ethyl		0.3	ND	ND	ND	ND	ND	ND
Carbophenothion		0.3	ND	ND	ND	ND	ND	ND
Chlorfenvinphos(e/z)		0.1	ND	ND	ND	ND	ND	ND
Chlormephos		0.5	ND	ND	ND	ND	ND	ND
Chlorpyrifos	90	0.2	ND	ND (0.01)	ND	ND	ND	ND
Chlorpyrifos-methyl		0.1	ND	ND	ND	ND	ND	ND
Chlorthiophos		0.3	ND	ND	ND	ND	ND	ND
Cyanophos		0.2	ND	ND	ND	ND	ND	ND
Demeton		1	ND	ND	ND	ND	ND	ND
Diazinon	20	0.3	ND	ND (0.02)	ND	ND	ND	ND
Dichlofenthion		0.2	ND	ND	ND	ND	ND	ND
Dichlorvos/Naled		0.1	ND	ND	ND	ND	ND	ND
Dicrotophos		0.5	ND	ND	ND	ND	ND	ND
Dimethoate	20	0.5	ND	ND	ND	ND	ND	ND
Dioxathion		1	ND	ND	ND	ND	ND	ND
Disulfoton (Di-Syston)		1	ND	ND	ND	ND	ND	ND
EPN		0.5	ND	ND	ND	ND	ND	ND
Ethion		0.2	ND	ND	ND	ND	ND	ND
Fenchlorphos (Ronnell)		0.1	ND	ND	ND	ND	ND	ND
Fenitrothion		0.5	ND	ND	ND	ND	ND	ND
Fensulfotthion		0.1	ND	ND	ND	ND	ND	ND
Fenthion		0.1	ND	ND	ND	ND	ND	ND
Fonofos		0.1	ND	ND	ND	ND	ND	ND
Iodofenphos		0.1	ND	ND	ND	ND	ND	ND
Isofenphos		0.3	ND	ND	ND	ND	ND	ND
Malaoxon		1	ND	ND	ND	ND	ND	ND
Malathion	190	0.5	ND	ND	ND	ND	ND	ND
Mevinphos-cis/trans (Phosdrin)		0.1	ND	ND	ND	ND	ND	ND
Omethoate		1	ND	ND	ND	ND	ND	ND
Parathion	50	0.5	ND	ND	ND	ND	ND	ND
Parathion methyl		0.5	ND	ND	ND	ND	ND	ND
Phorate (Thimet)	2	0.5	ND	ND	ND	ND	ND	ND
Phosalone		0.2	ND	ND	ND	ND	ND	ND
Phosmet		0.2	ND	ND	ND	ND	ND	ND
Phosphamidon		0.2	ND	ND	ND	ND	ND	ND
Pirimiphos-ethyl		0.5	ND	ND	ND	ND	ND	ND
Pirimiphos-methyl		0.2	ND	ND	ND	ND	ND	ND
Profenophos		0.5	ND	ND	ND	ND	ND	ND
Pyrazophos		0.1	ND	ND	ND	ND	ND	ND
Quinalphos		0.3	ND	ND	ND	ND	ND	ND
Sulfotep		0.1	ND	ND	ND	ND	ND	ND
Terbufos	1	0.3	ND	ND	ND	ND	ND	ND
Tetrachlorvinphos (Stirophos)		0.2	ND	ND	ND	ND	ND	ND
Other								
Hexachlorobenzene		0.2	ND	ND	ND	ND	ND	ND
Iprodione		1	-	ND	-	-	-	-
Propiconazole		0.5	-	ND	-	-	-	-

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND() = not detected at the elevated detection limit shown in brackets ()
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 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Fall River (076)	West Northfield (077)	Musquodoboit Hbr (078)	Lewis Lake (079)	Arisaig (080)	Coldbrook (081)
			20-May-2008	12-Jun-2008	22-May-2008	31-Jul-2008	8-Sep-2009	5-Aug-2009
Organophosphorus Pesticides								
Aspon	20	0.2	ND	ND	ND	ND	ND	ND
Azinphos ethyl		0.5	ND	ND	ND	ND	ND	ND
Azinphos methyl		1	ND	ND	ND	ND	ND	ND
Bromacil		0.1	ND	ND	ND	ND	ND	ND
Benfluralin	90	0.1	ND	ND	ND	ND	ND	ND
Bromophos		0.1	ND	ND	ND	ND	ND	ND
Bromophos-ethyl		0.3	ND	ND	ND	ND	ND	ND
Carbophenothion		0.3	ND	ND	ND	ND	ND	ND
Chlorfenvinphos(e/z)	20	0.1	ND	ND	ND	ND	ND	ND
Chlormephos		0.5	ND	ND	ND	ND	ND	ND
Chlorpyrifos		0.2	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Chlorpyrifos-methyl		0.1	ND	ND	ND	ND	ND	ND
Chlorthiophos	20	0.3	ND	ND	ND	ND	ND	ND
Cyanophos		0.2	ND	ND	ND	ND	ND	ND
Demeton		1	ND	ND	ND	ND	ND	ND
Diazinon		0.3	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Dichlofenthion	190	0.2	ND	ND	ND	ND	ND	ND
Dichlorvos/Naled		0.1	ND	ND	ND	ND	ND	ND
Dicrotophos		0.5	ND	ND	ND	ND	ND	ND
Dimethoate		0.5	ND	ND	ND	ND	ND	ND
Dioxathion	50	1	ND	ND	ND	ND	ND	ND
Disulfoton (Di-Syston)		1	ND	ND	ND	ND	ND	ND
EPN		0.5	ND	ND	ND	ND	ND	ND
Ethion		0.2	ND	ND	ND	ND	ND	ND
Fenchlorphos (Ronnell)	2	0.1	ND	ND	ND	ND	ND	ND
Fenitrothion		0.5	ND	ND	ND	ND	ND	ND
Fensulfotthion		0.1	ND	ND	ND	ND	ND	ND
Fenthion		0.1	ND	ND	ND	ND	ND	ND
Fonofos	1	0.1	ND	ND	ND	ND	ND	ND
Iodofenphos		0.1	ND	ND	ND	ND	ND	ND
Isofenphos		0.3	ND	ND	ND	ND	ND	ND
Malaoxon		1	ND	ND	ND	ND	ND	ND
Malathion	1	0.5	ND	ND	ND	ND	ND	ND
Mevinphos-cis/trans (Phosdrin)		0.1	ND	ND	ND	ND	ND	ND
Omethoate		1	ND	ND	ND	ND	ND	ND
Parathion		0.5	ND	ND	ND	ND	ND	ND
Parathion methyl	1	0.5	ND	ND	ND	ND	ND	ND
Phorate (Thimet)		0.5	ND	ND	ND	ND	ND	ND
Phosalone		0.2	ND	ND	ND	ND	ND	ND
Phosmet		0.2	ND	ND	ND	ND	ND	ND
Phosphamidon	1	0.2	ND	ND	ND	ND	ND	ND
Pirimiphos-ethyl		0.5	ND	ND	ND	ND	ND	ND
Pirimiphos-methyl		0.2	ND	ND	ND	ND	ND	ND
Profenophos		0.5	ND	ND	ND	ND	ND	ND
Pyrazophos	1	0.1	ND	ND	ND	ND	ND	ND
Quinalphos		0.3	ND	ND	ND	ND	ND	ND
Sulfotep		0.1	ND	ND	ND	ND	ND	ND
Terbufos		0.3	ND	ND	ND	ND	ND	ND
Tetrachlorvinphos (Stirophos)	1	0.2	ND	ND	ND	ND	ND	ND
Other								
Hexachlorobenzene		0.2	ND	ND	ND	ND	ND	ND
Iprodione		1	ND	ND	ND	ND	ND	ND
Propiconazole	1	0.5	ND	ND	ND	ND	ND	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND() = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C4: Pesticide Results (ug/L)

Parameter	Drinking Water Guideline	Detection Limit	Long Point (082)	Tatamagouche (083)	St. Peters (085)
			12-Aug-2009	21-Jul-2008	19-Jul-2011
Organophosphorus Pesticides					
Aspon		0.2	ND	ND	ND
Azinphos ethyl		0.5	ND	ND	ND
Azinphos methyl	20	1	ND	ND	ND
Bromacil		0.1	ND	ND	ND
Benfluralin		0.1	ND	ND	ND
Bromophos		0.1	ND	ND	ND
Bromophos-ethyl		0.3	ND	ND	ND
Carbophenothion		0.3	ND	ND	ND
Chlorfenvinphos(e/z)		0.1	ND	ND	ND
Chlormephos		0.5	ND	ND	ND
Chlorpyrifos	90	0.2	ND (0.01)	ND (0.01)	ND
Chlorpyrifos-methyl		0.1	ND	ND	ND
Chlorthiophos		0.3	ND	ND	ND
Cyanophos		0.2	ND	ND	ND
Demeton		1	ND	ND	ND
Diazinon	20	0.3	ND (0.02)	ND (0.02)	ND
Dichlofenthion		0.2	ND	ND	ND
Dichlorvos/Naled		0.1	ND	ND	ND
Dicrotophos		0.5	ND	ND	ND
Dimethoate	20	0.5	ND	ND	ND
Dioxathion		1	ND	ND	ND
Disulfoton (Di-Syston)		1	ND	ND	ND
EPN		0.5	ND	ND	ND
Ethion		0.2	ND	ND	ND
Fenchlorphos (Ronnell)		0.1	ND	ND	ND
Fenitrothion		0.5	ND	ND	ND
Fensulfothion		0.1	ND	ND	ND
Fenthion		0.1	ND	ND	ND
Fonofos		0.1	ND	ND	ND
Iodofenphos		0.1	ND	ND	ND
Isofenphos		0.3	ND	ND	ND
Malaoxon		1	ND	ND	ND
Malathion	190	0.5	ND	ND	ND
Mevinphos-cis/trans (Phosdrin)		0.1	ND	ND	ND
Omethoate		1	ND	ND	ND
Parathion	50	0.5	ND	ND	ND
Parathion methyl		0.5	ND	ND	ND
Phorate (Thimet)	2	0.5	ND	ND	ND
Phosalone		0.2	ND	ND	ND
Phosmet		0.2	ND	ND	ND
Phosphamidon		0.2	ND	ND	ND
Pirimiphos-ethyl		0.5	ND	ND	ND
Pirimiphos-methyl		0.2	ND	ND	ND
Profenophos		0.5	ND	ND	ND
Pyrazophos		0.1	ND	ND	ND
Quinalphos		0.3	ND	ND	ND
Sulfotep		0.1	ND	ND	ND
Terbufos	1	0.3	ND	ND	ND
Tetrachlorvinphos (Stirophos)		0.2	ND	ND	ND
Other					
Hexachlorobenzene		0.2	ND	ND	ND
Iprodione		1	ND	ND	ND
Propiconazole		0.5	ND	ND	ND

Notes:

AO = Aesthetic Objective.
 ND = not detected
 ND() = not detected at the elevated detection limit shown in brackets ()
 All guidelines are health-based MACs or IMACs, unless otherwise indicated.
 Shaded values exceed guidelines.

Table C5: Tritium Results

Observation Well	Date Sampled	Tritium Level (TU)	Accuracy (+/- TU)	Age Estimate (Recent is >1952)
Wolfville (010)	22-Dec-2004	4.7	0.4	Mix/Recent
Hayden Lake (059)	9-Jun-2005	3.4	0.3	Mix
Hebron (063)	9-Jun-2005	4.6	0.4	Mix/Recent
Kentville (048)	15-Jun-2005	3.8	0.3	Mix
Point Aconi (030)	15-Sep-2005	3.62	0.34	Mix
Sydney (050)	15-Sep-2005	4.92	0.43	Mix/Recent
Durham (045)	5-Oct-2005	2.04	0.28	Mix
Annapolis Royal (062)	9-Nov-2005	0.27	0.17	Old
Greenwood (003)	23-Nov-2005	5.76	0.47	Recent
Meteghan (060)	12-Dec-2006	0.46	0.14	Old
North Grant (054)	13-Dec-2006	1.95	0.22	Mix
Stillwater (055)	13-Dec-2006	3.82	0.34	Mix
Margaree (064)	14-Dec-2006	0.41	0.14	Old
Dalem Lake (069)	14-Dec-2006	3.61	0.3	Mix
Monastery (028)	15-Dec-2006	0.94	0.17	Old
Amherst (071)	16-Dec-2006	4.0	0.32	Mix/Recent
Kelley River (073)	12-Jan-2007	3.78	0.32	Mix

Age Estimate Guide	Tritium Level (TU)
Recent (recharged after 1952)	>5
Mixture of recent and old	1 to 5
Old (recharged before 1952)	<1
Source: Clark and Fritz, 1997	

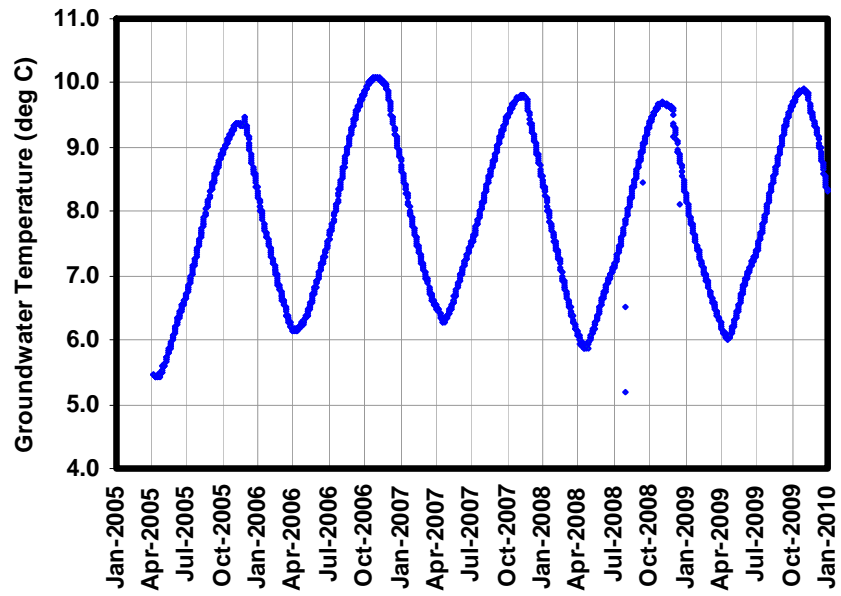
Table C6: Perchlorate Results

Observation Well	Date Sampled	Recommended Guidance Value (Health Canada, 2007)	Detection Limit	Perchlorate Result
		(ug/L)	(ug/L)	(ug/L)
Fraser Brook (004)	10-Dec-2004	6	0.2	ND
Wolfville (010)	22-Dec-2004	6	0.2	ND
Hayden Lake (059)	9-Jun-2005	6	0.011	0.014
Hebron (063)	9-Jun-2005	6	0.011	ND
Kentville (048)	15-Jun-2005	6	0.011	0.05
Point Aconi (030)	15-Sep-2005	6	0.011	ND
Sydney (050)	15-Sep-2005	6	0.011	ND
Durham (045)	5-Oct-2005	6	0.011	ND
Annapolis Royal (062)	9-Nov-2005	6	0.011	ND
Greenwood (003)	23-Nov-2005	6	0.011	ND
Monastery (028)	15-Dec-2006	6	0.011	ND

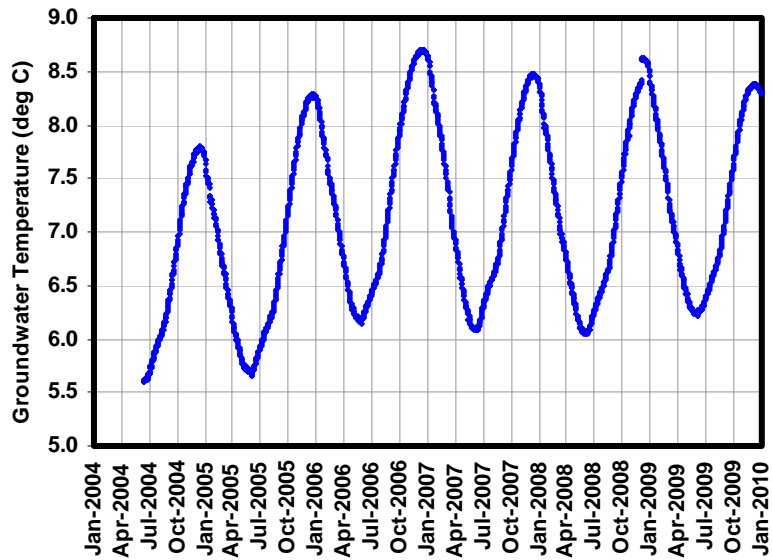
ND = Not Detected

APPENDIX D
GROUNDWATER TEMPERATURE GRAPHS

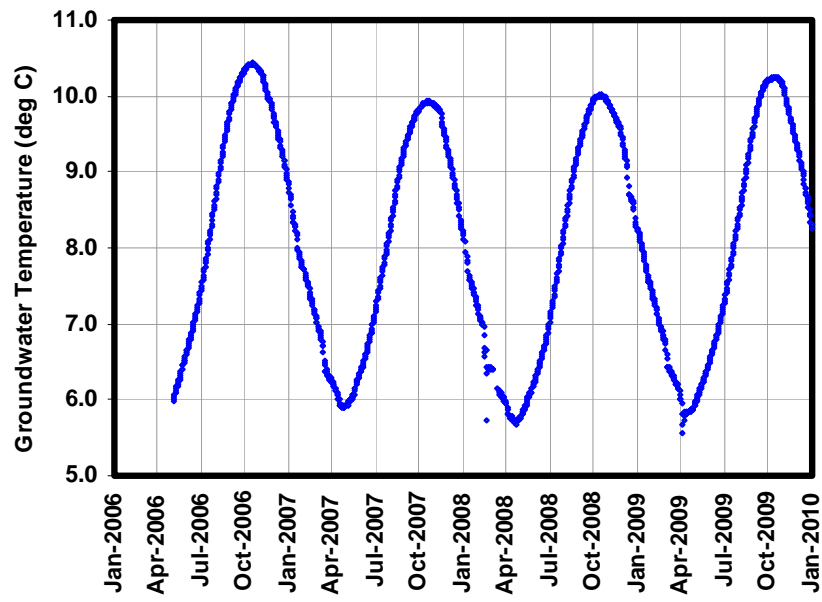
Greenwood (003)



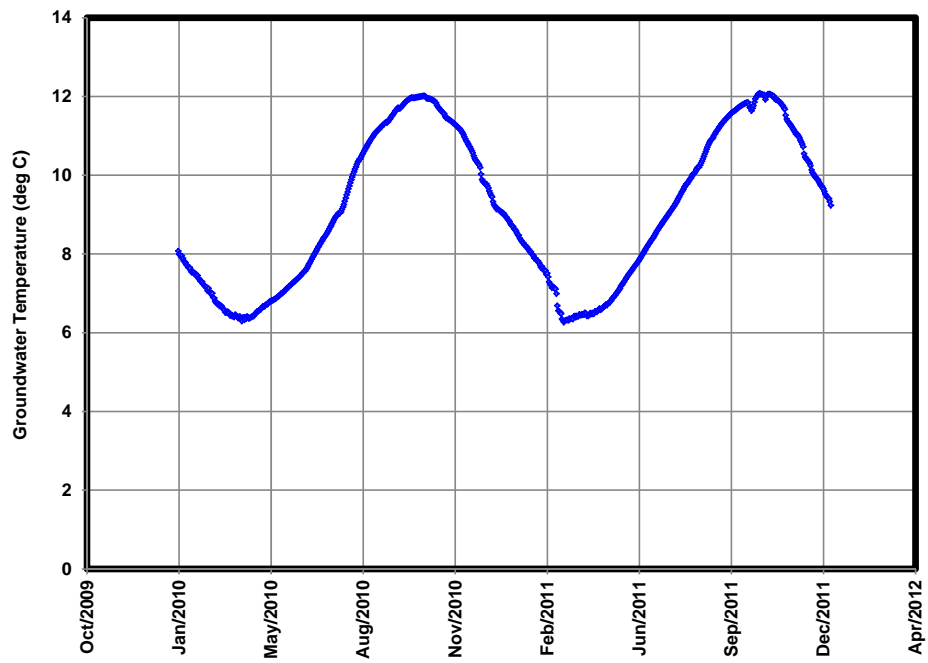
Fraser Brook (004)



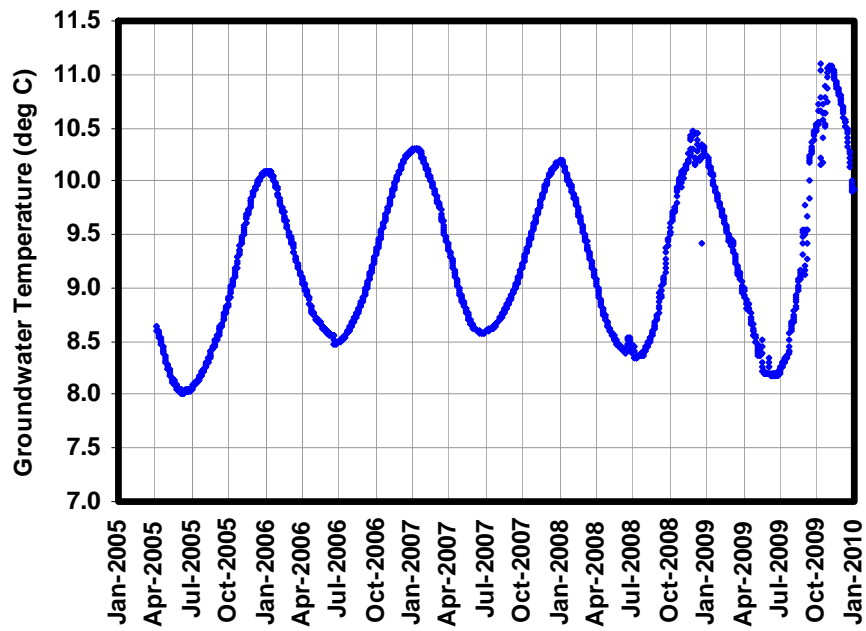
Wilmot (005)



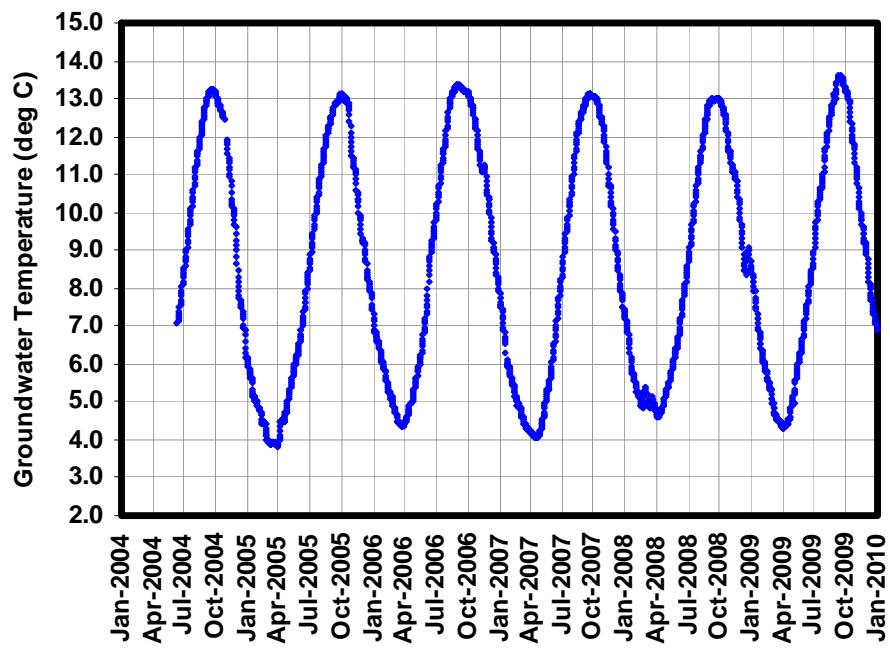
Murray Siding (007)



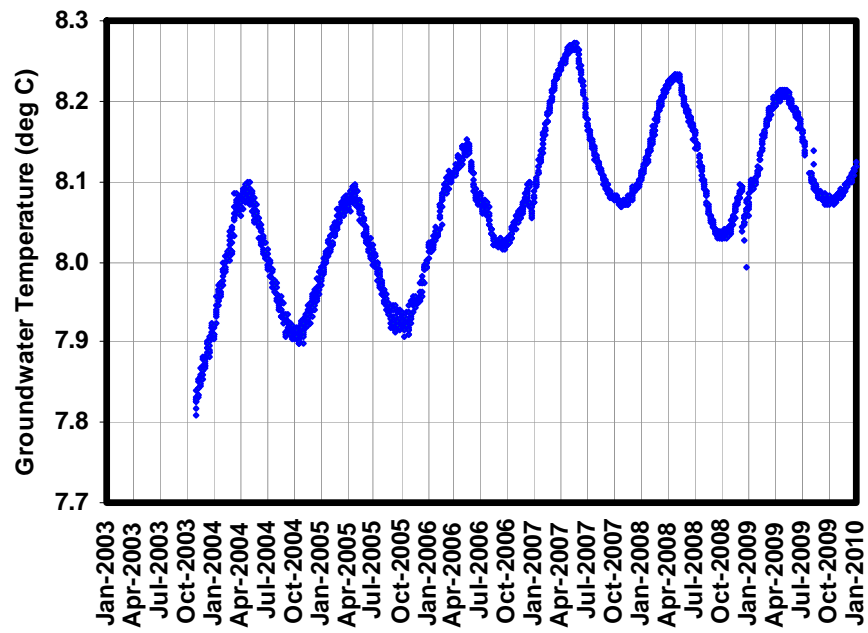
Wolfville (010)



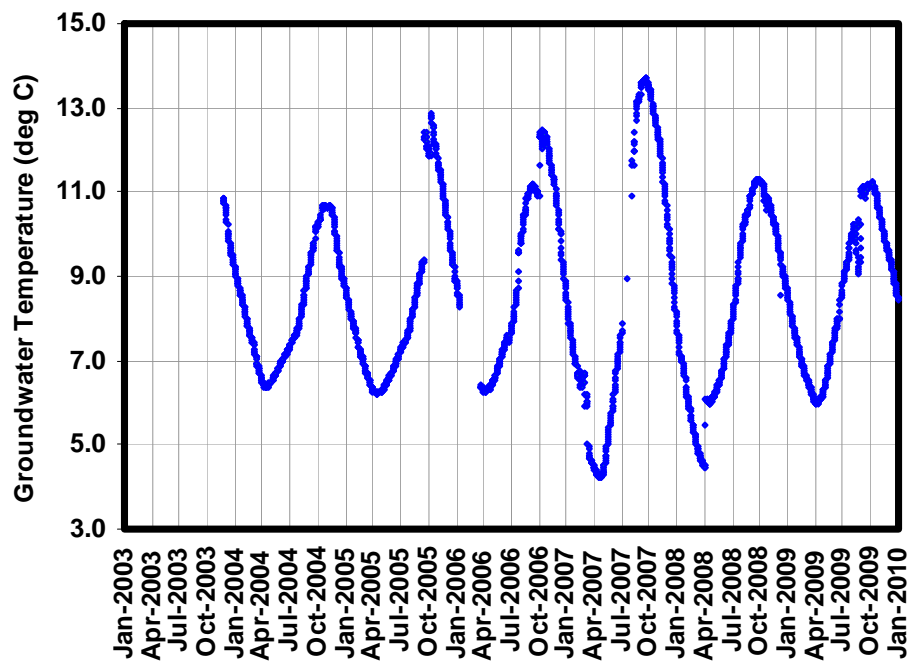
Truro (014)



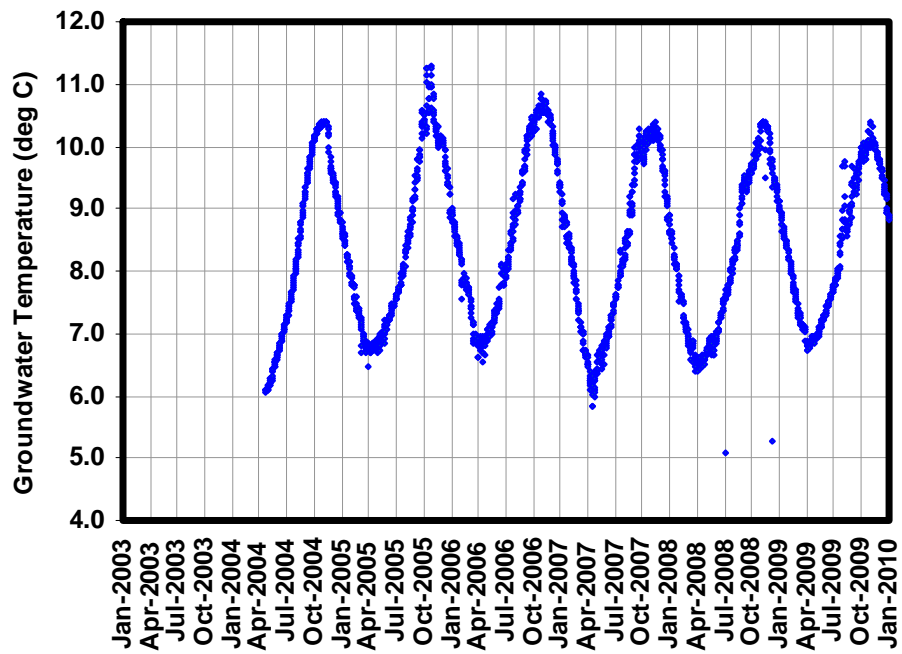
Monastery (028)



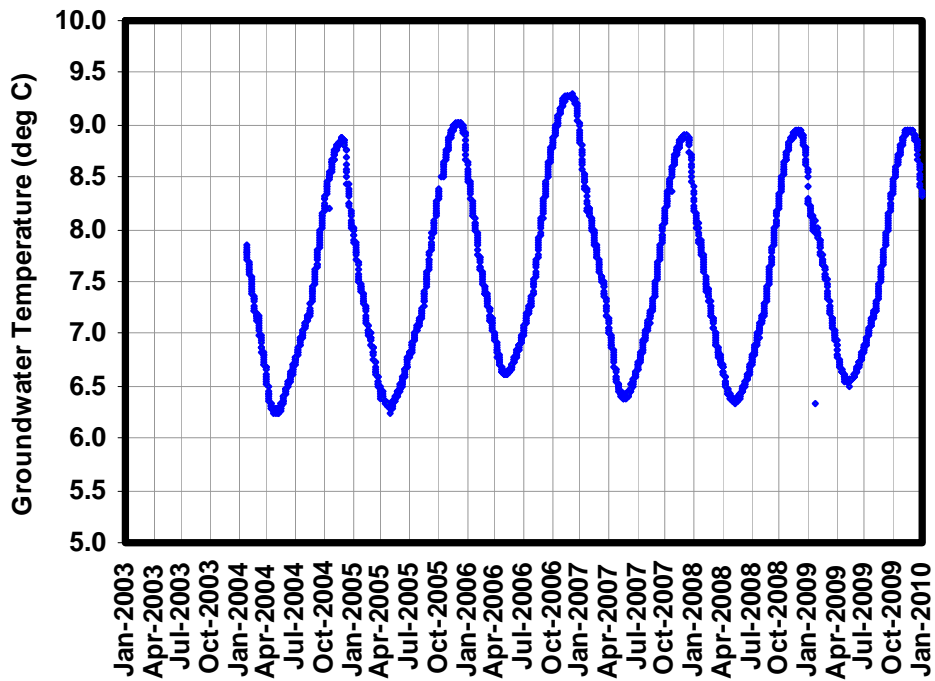
Point Aconi (030)



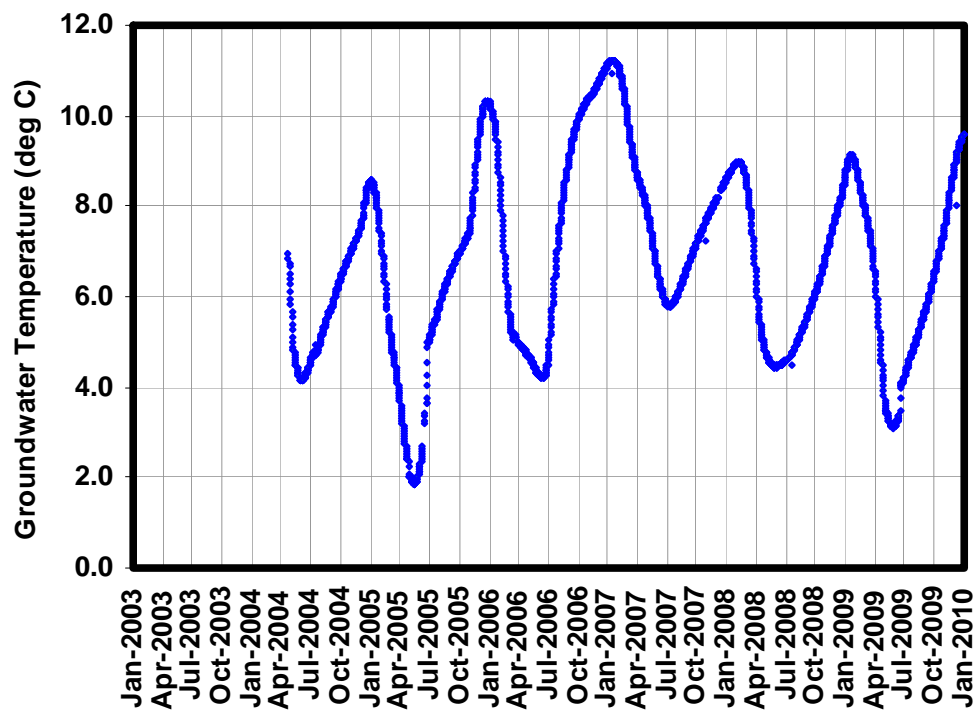
Lawrencetown (043)



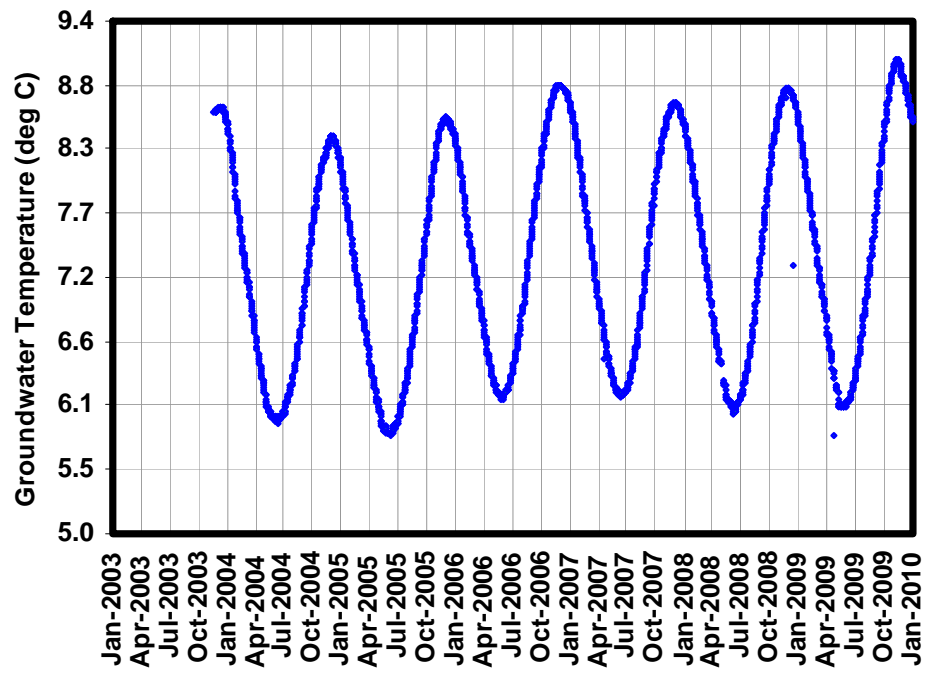
Durham (045)



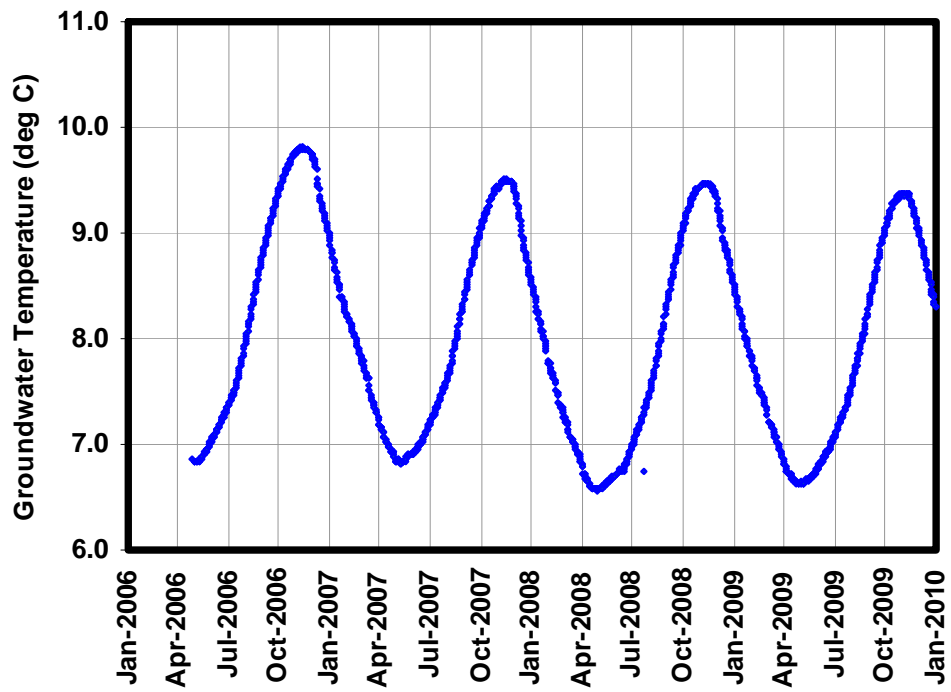
Kentville (048)



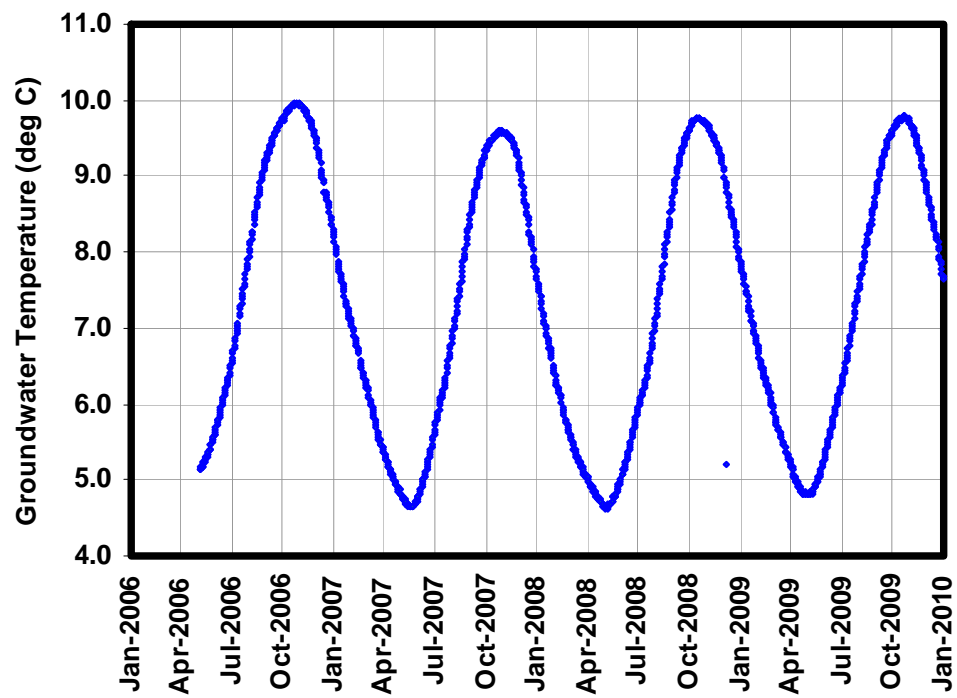
Sydney (050)



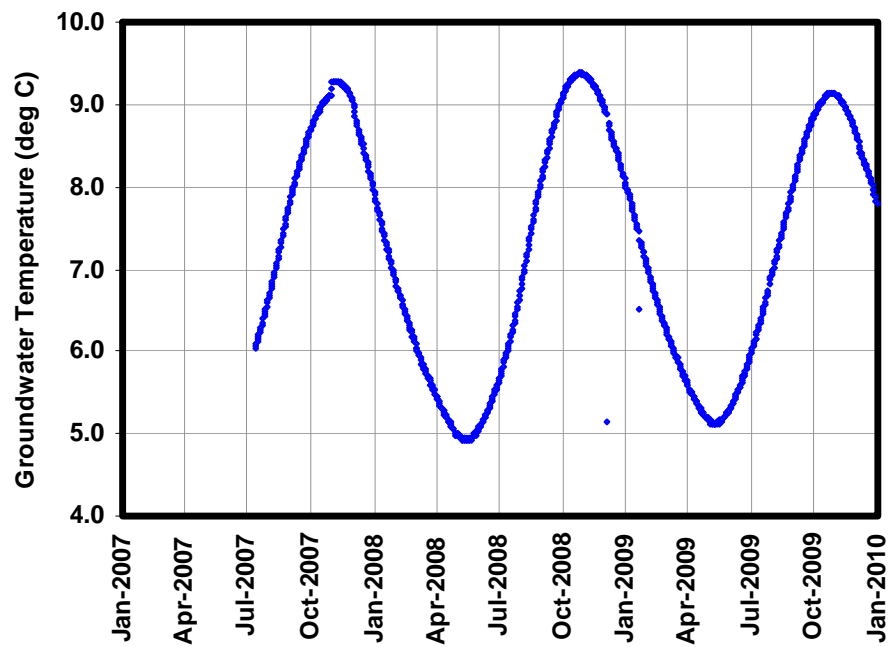
North Grant (054)



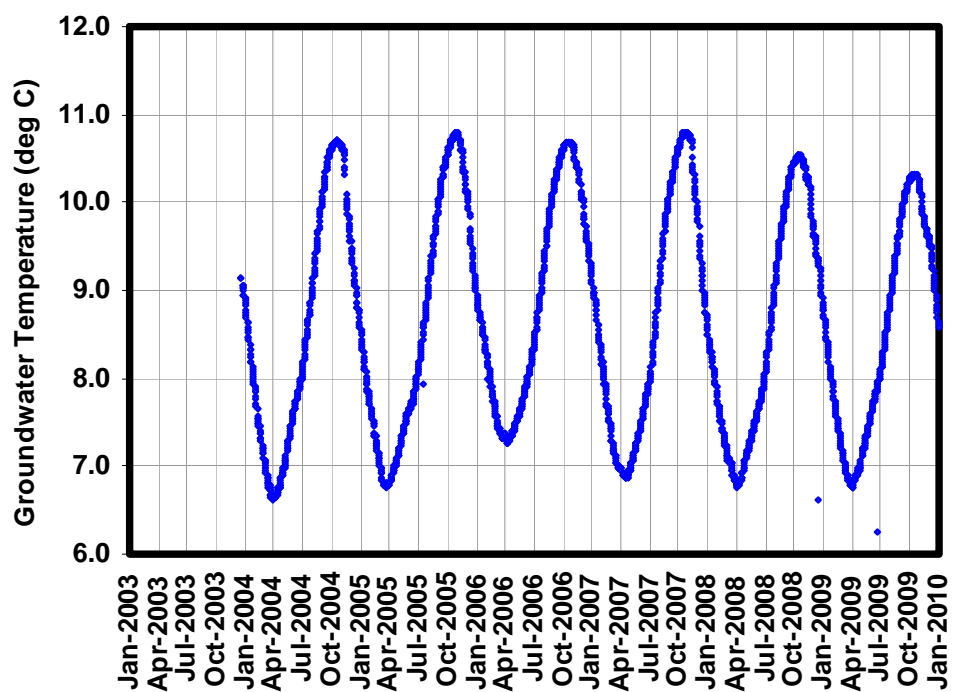
Stillwater (055)



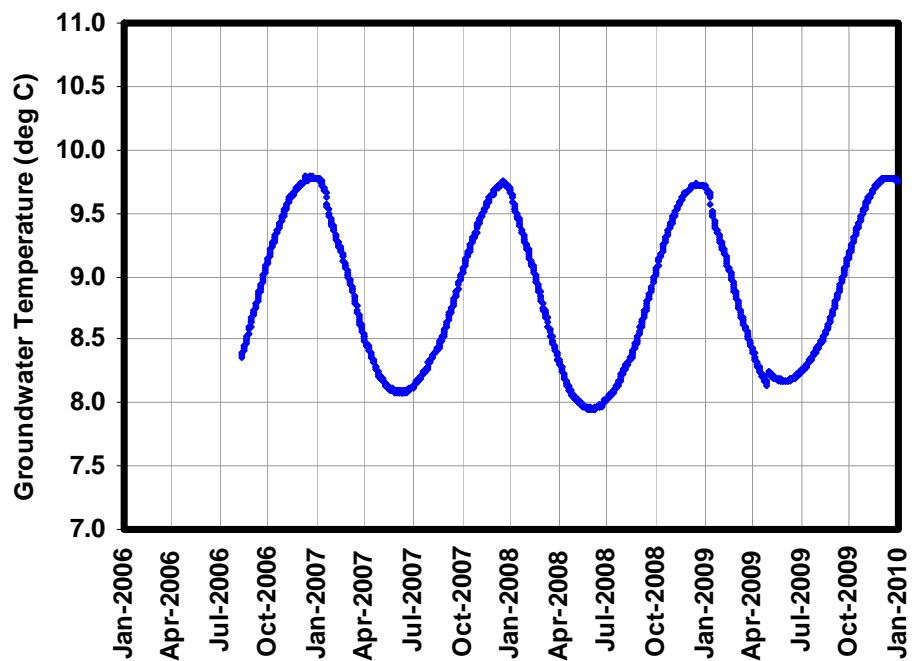
Sheet Harbour (056)



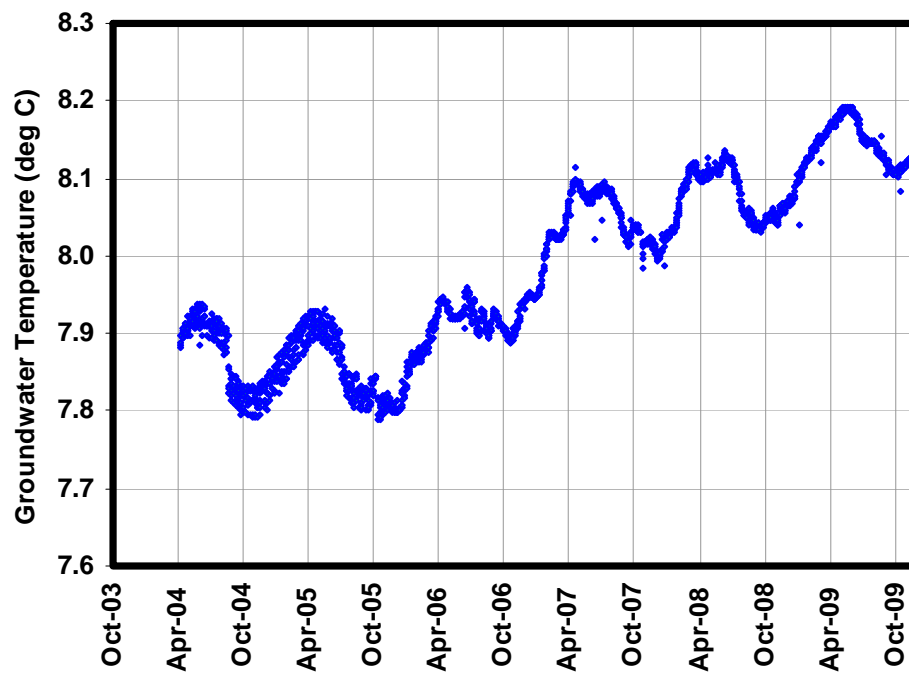
Hayden Lake (059)



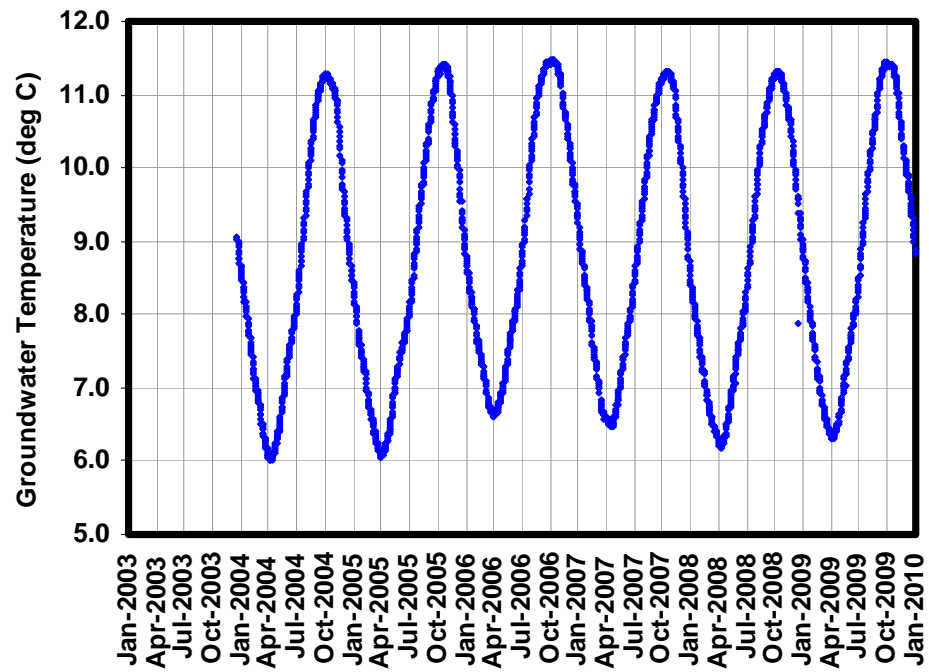
Meteghan (060)



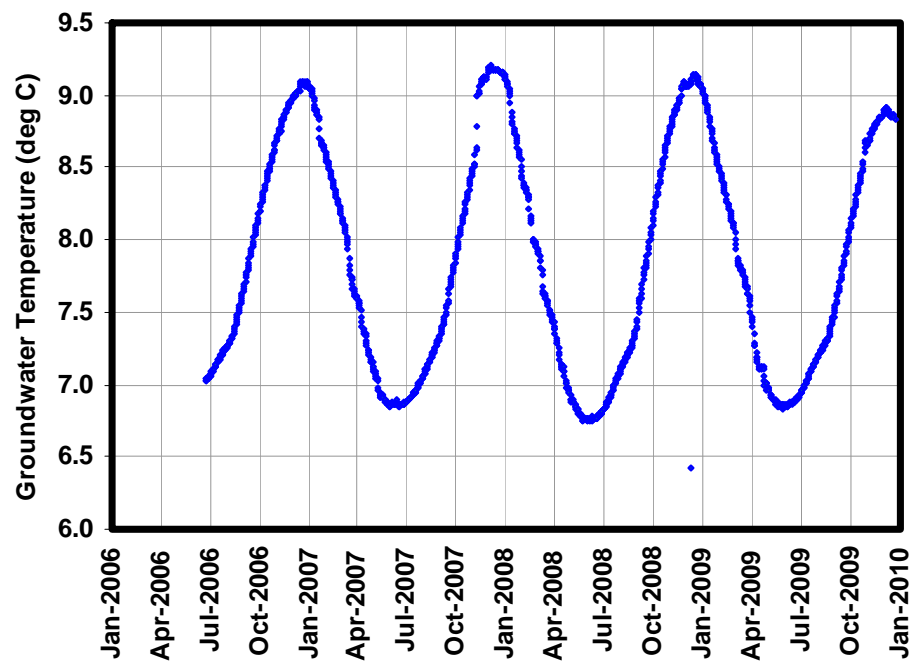
Annapolis Royal (062)



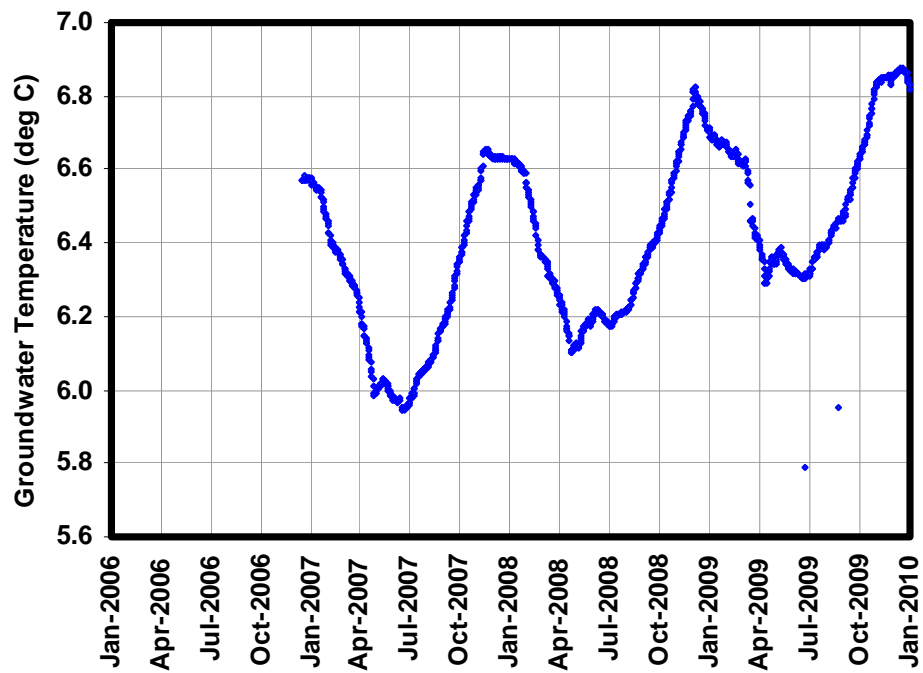
Hebron (063)



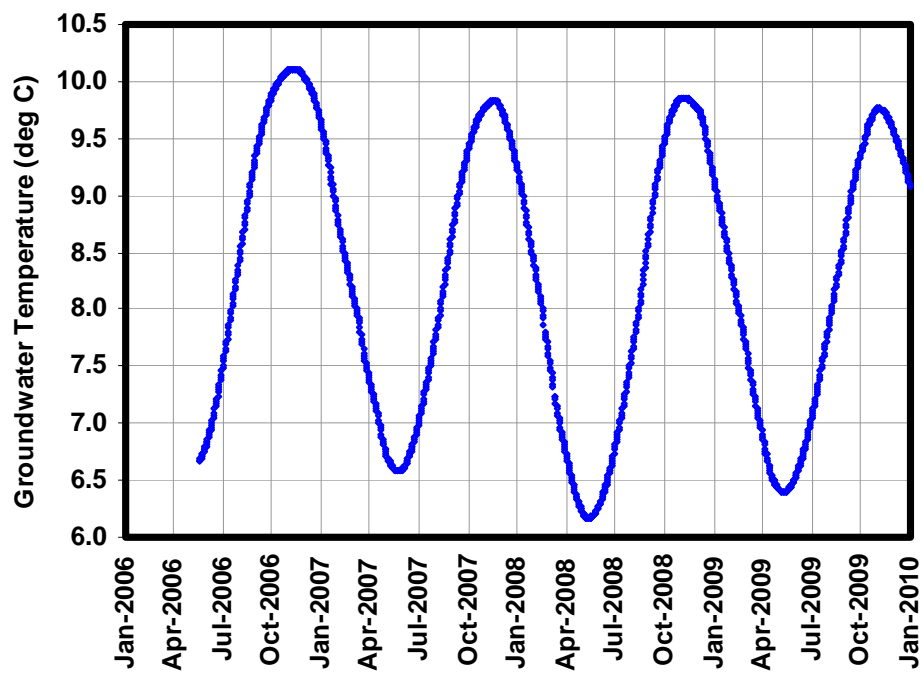
Margaree (064)



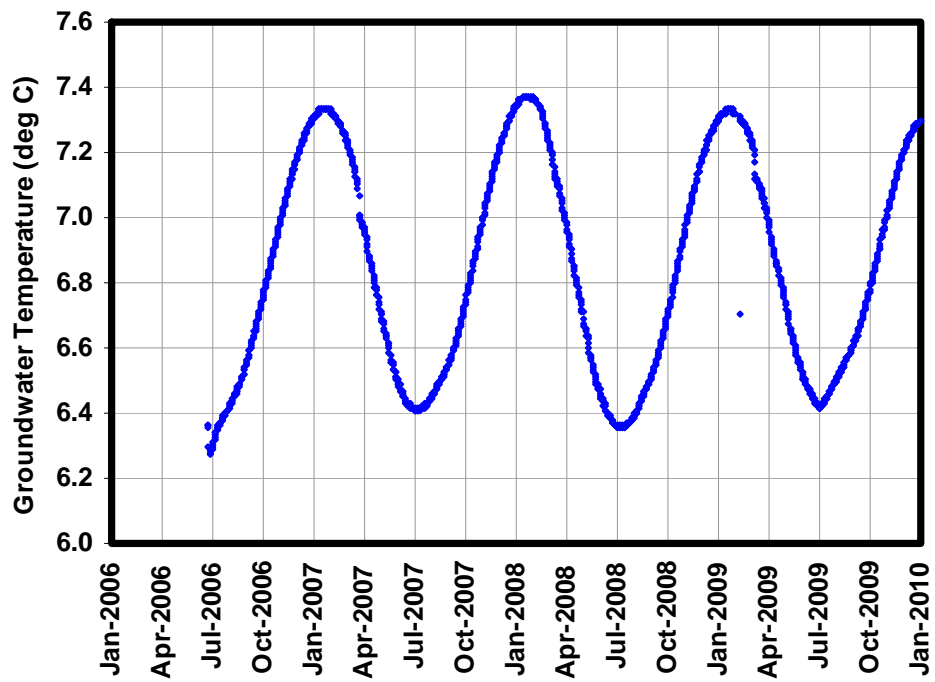
Ingonish (065)



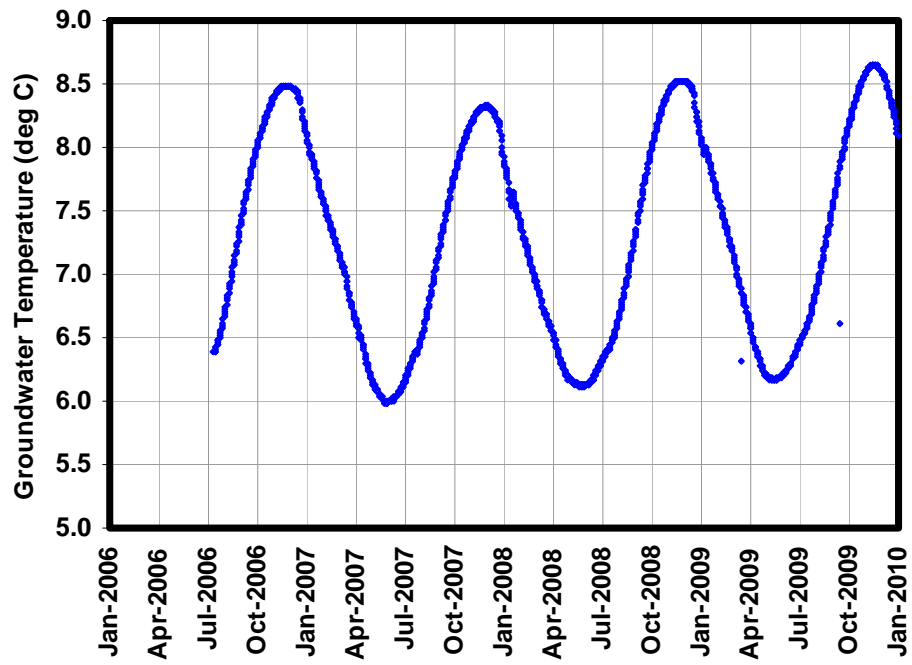
Debert (068)



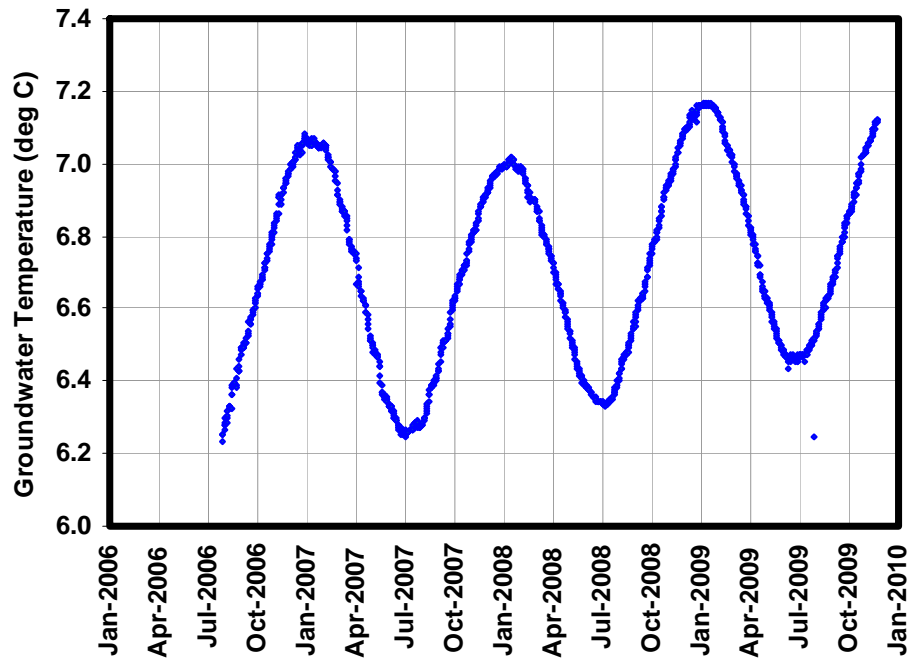
Dalem Lake (069)



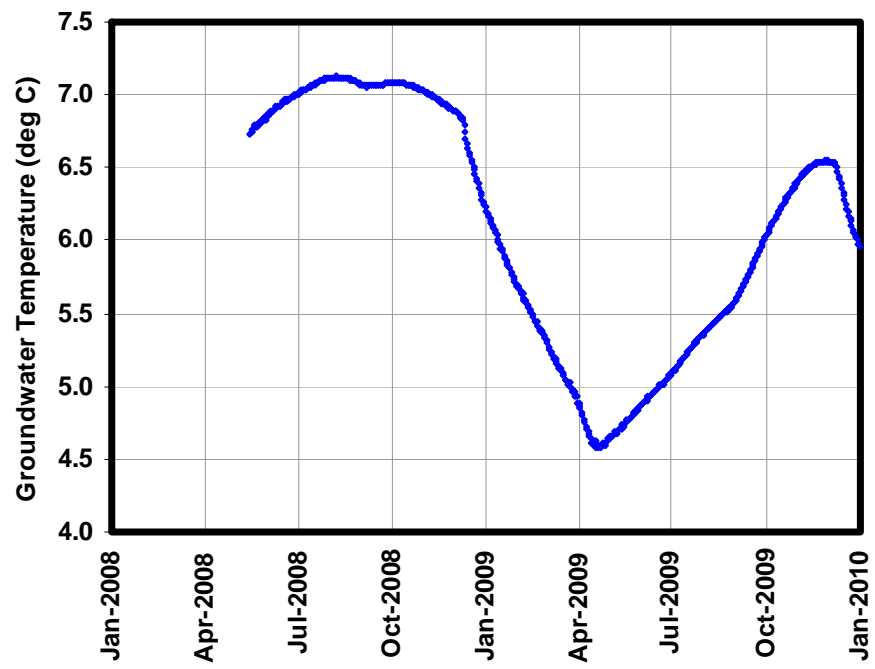
Amherst (071)



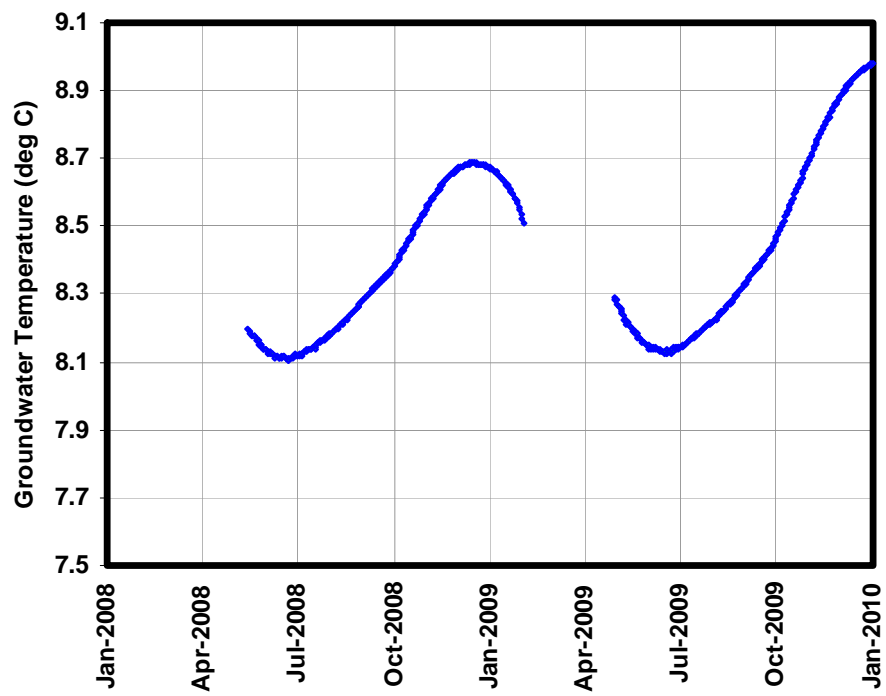
Kelley River (073)



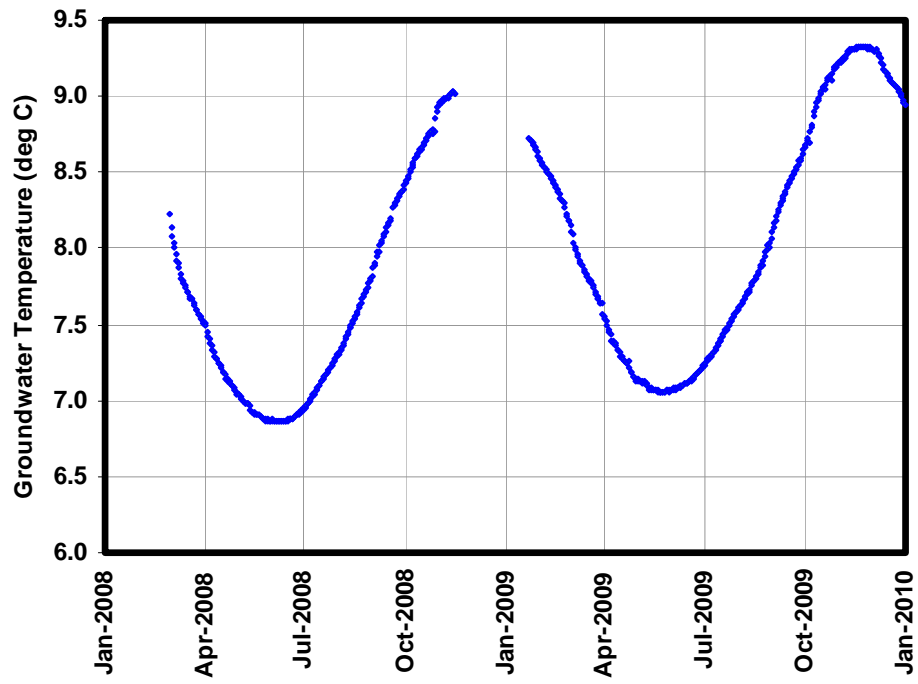
Atlanta (074)



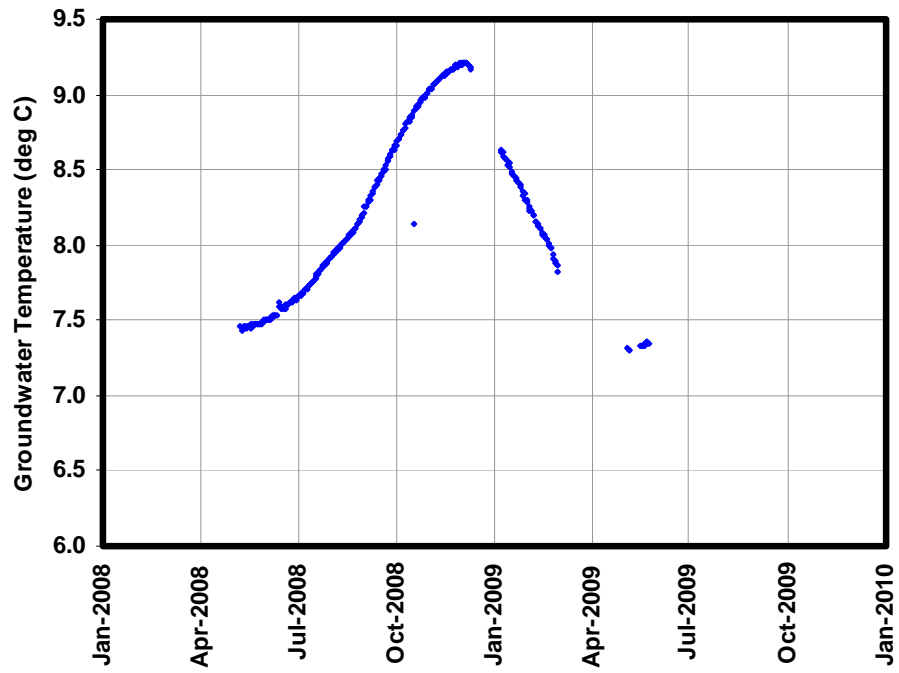
Sheffield Mills (075)



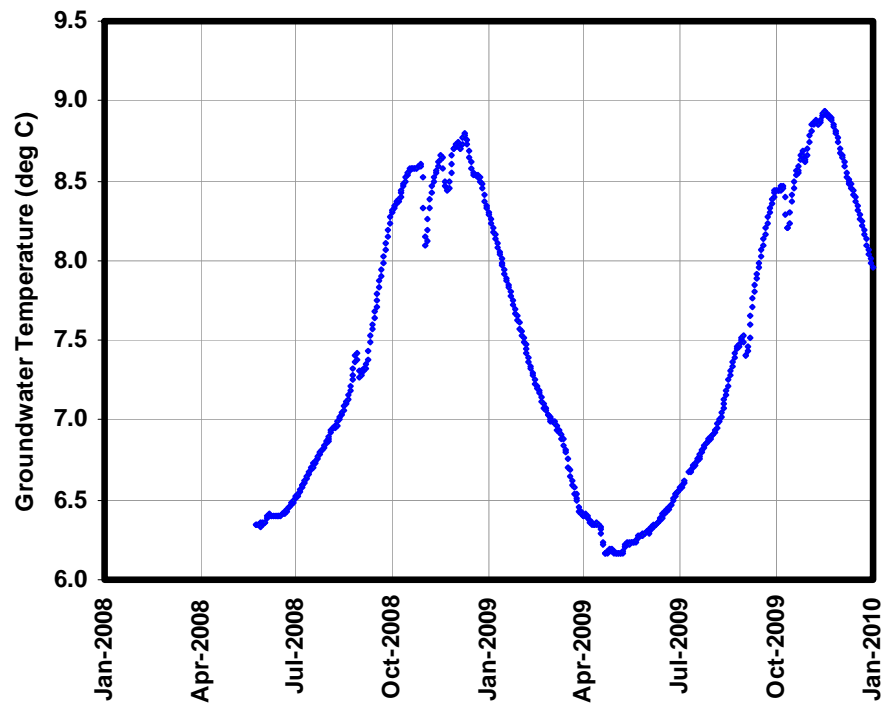
Fall River (076)



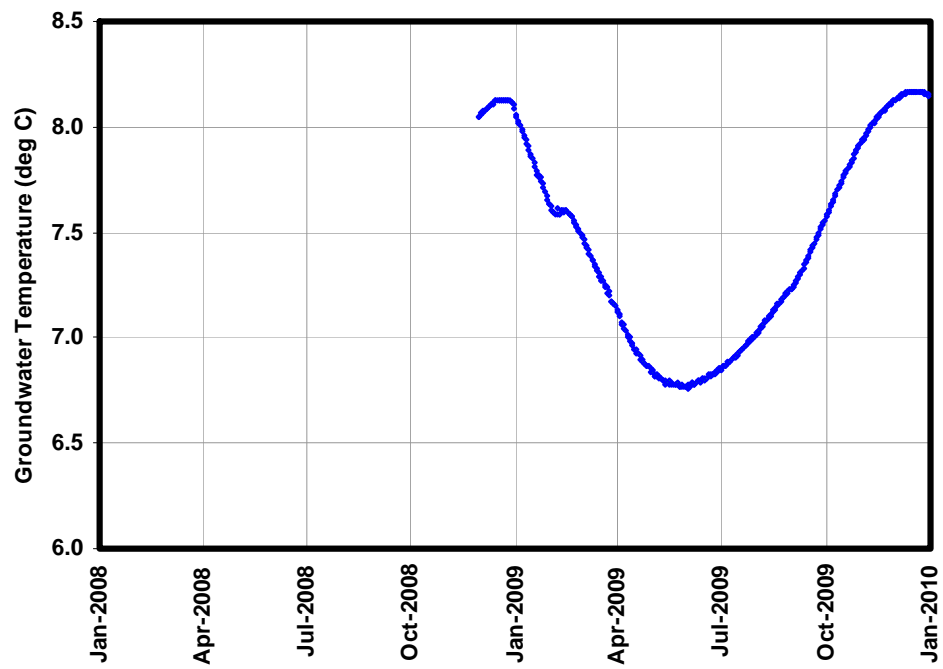
West Northfield (077)



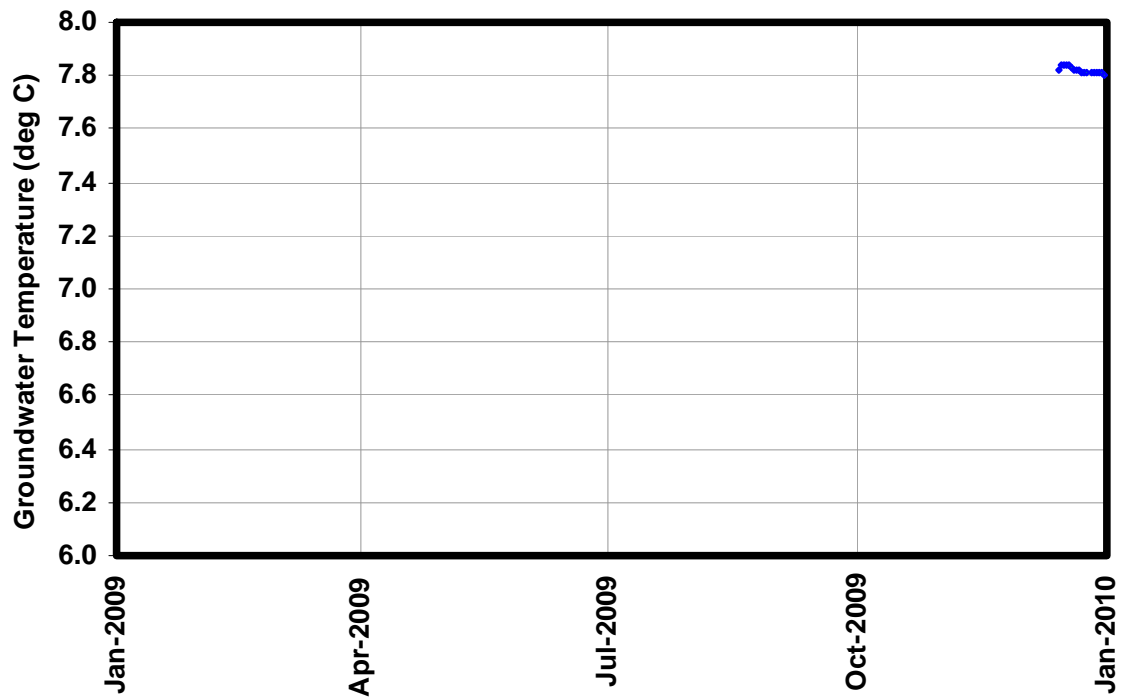
Musquodoboit Harbour (078)



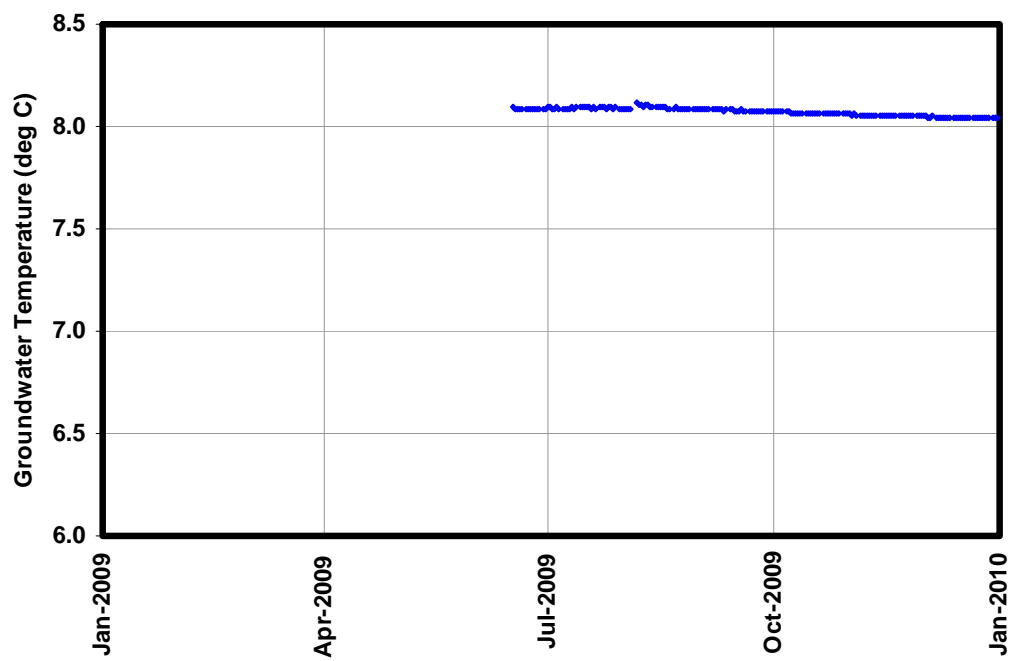
Lewis Lake (079)



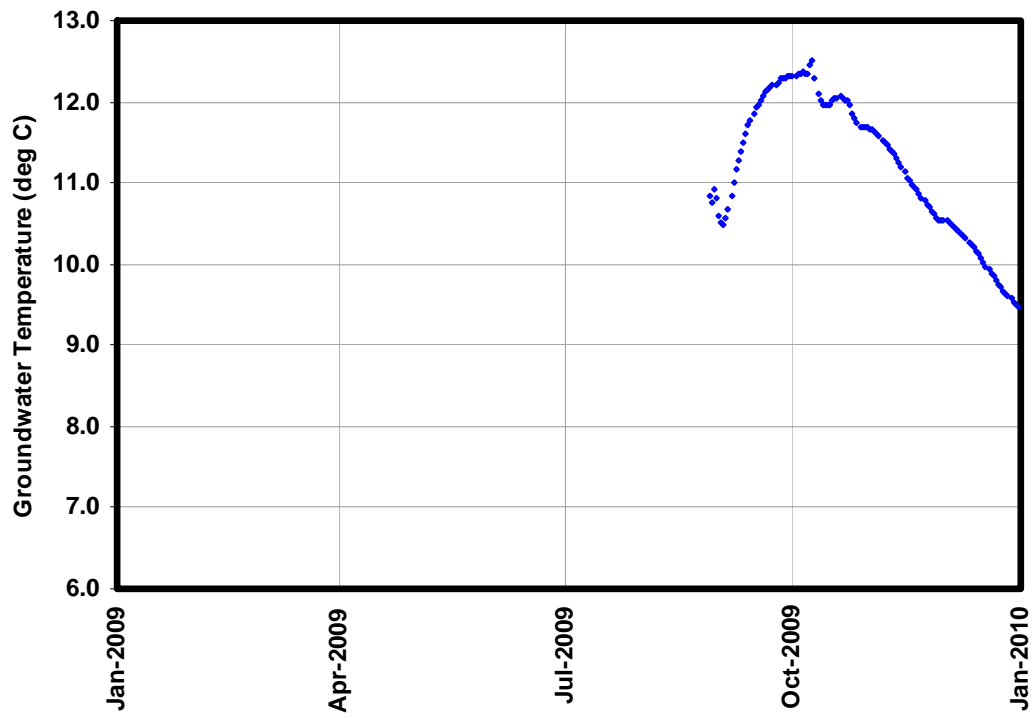
Arisaig (080)



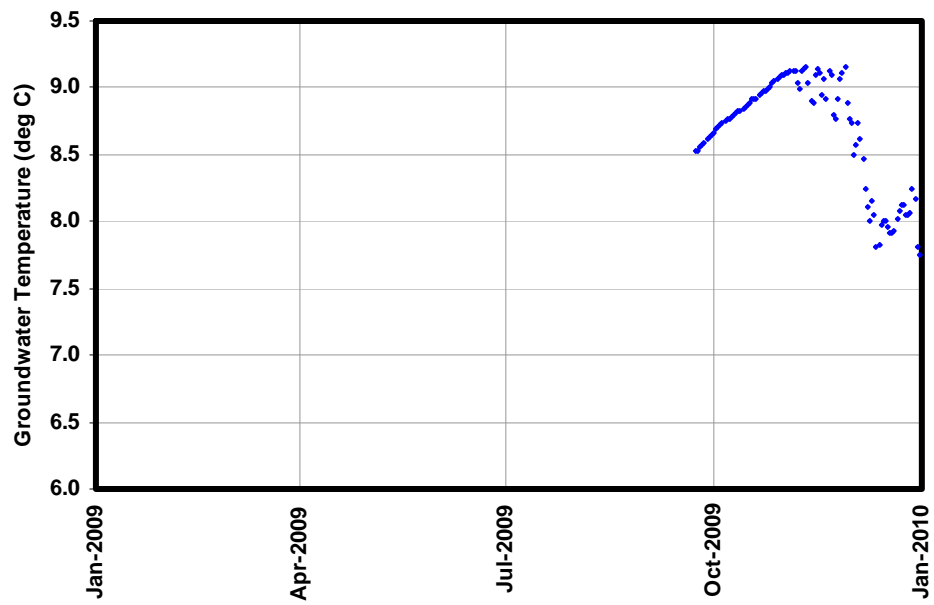
Coldbrook (081)



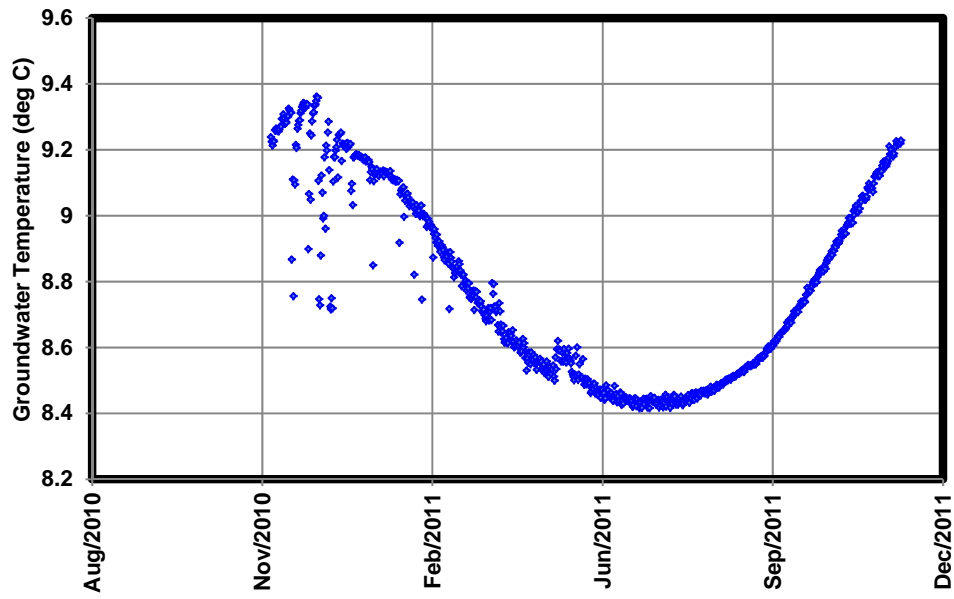
Long Point (082)



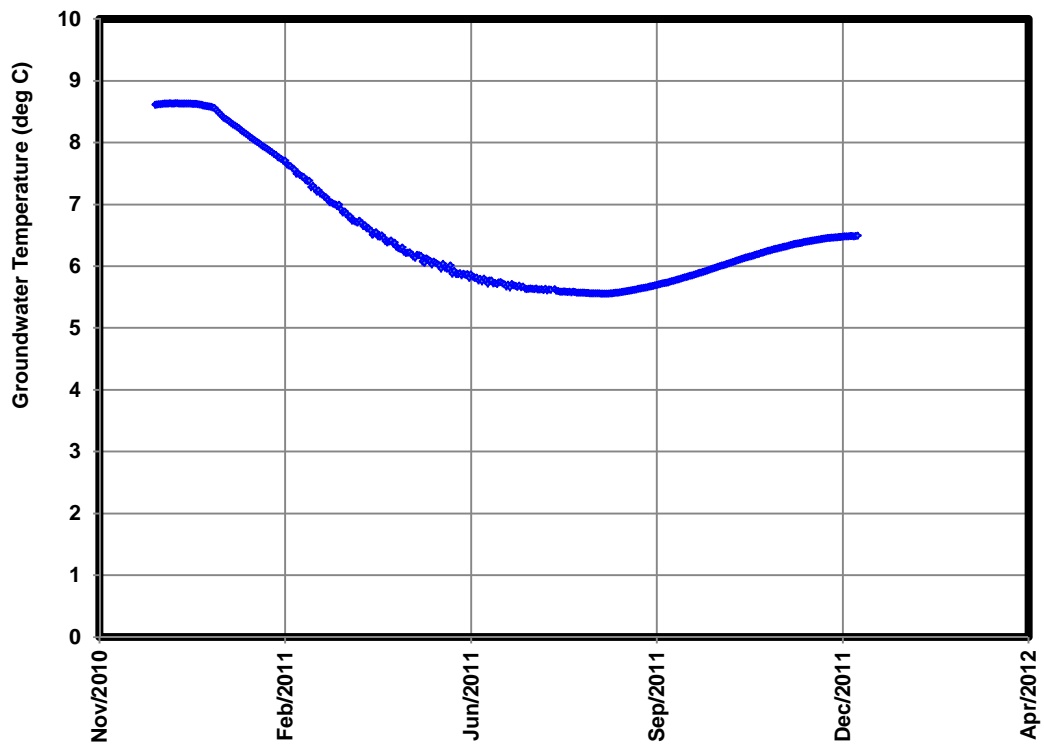
Tatamagouche (083)



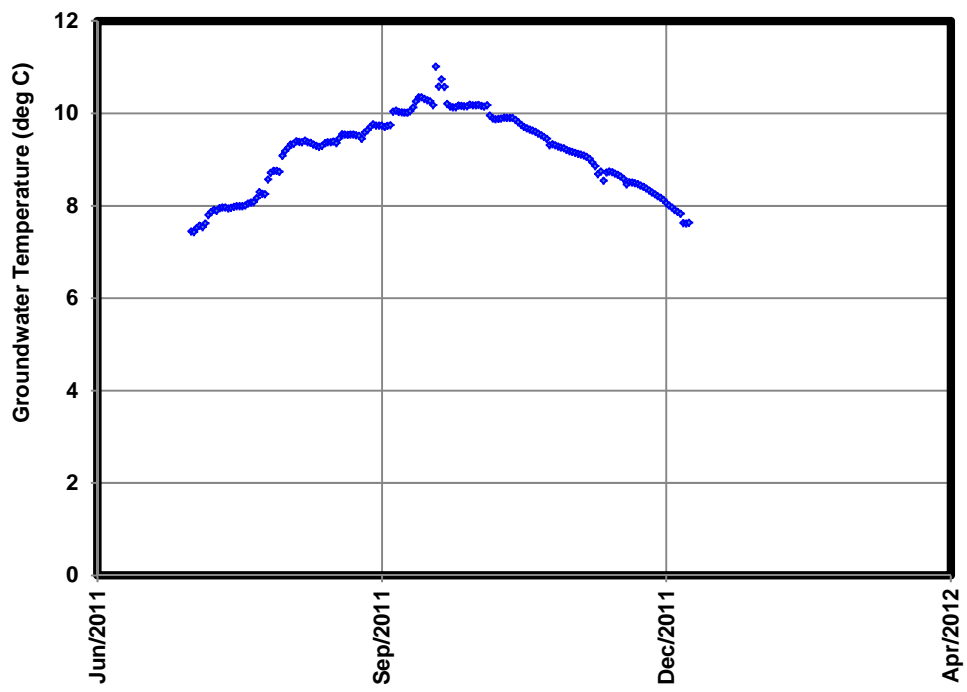
Pugwash (084)



St. Peters (085)



Smileys Park (086)



APPENDIX E
WATER LEVEL TREND ANALYSIS

Table E1. Water Level Statistical Trend Analyses

Observation Well	Well Number	First Year	Last Year	n ¹	Mann-Kendall Statistics		Confidence Level ⁴
					S ²	Q ³ (cm/year)	
Greenwood	003	1966	2011	23	37	0.3	80%
Fraser Brook	004	1966	2011	22	99	0.3	99%
Wilmot	005	1966	2011	21	54	0.5	90%
Murray Siding	007	1968	2011	15	-39	-1.2	95%
Wolfville	010	1969	2011	23	-97	-1.5	99%
Truro	014	1971	2011	19	63	2.6	95%
Monastery	028	1976	2011	13	-28	-3.3	95%
Point Aconi	030	1976	2011	19	-21	-0.4	<80%
Lawrencetown	043	1978	2011	15	-31	-2.2	90%
Durham	045	1979	2011	26	75	1.6	95%
Kentville	048	1980	2011	18	-35	-0.4	90%
Sydney	050	1984	2011	18	-110	-6.9	99%
North Grant	054	1987	2011	7	NA	NA	NA
Stillwater	055	1987	2011	9	NA	NA	NA
Sheet Harbour	056	1987	2011	9	NA	NA	NA
Hayden Lake	059	1988	2011	17	8	0.2	<80%
Meteghan	060	1987	2011	11	-13	-1.1	80%
Annapolis Royal	062	1990	2011	7	NA	NA	NA
Hebron	063	1990	2011	9	NA	NA	NA
Margaree	064	1990	2011	10	-21	-1.6	95%
Ingonish	065	1990	2011	9	NA	NA	NA
Debert	068	1993	2011	6	NA	NA	NA
Dalem Lake	069	1992	2011	8	NA	NA	NA
Amherst	071	1993	2011	5	NA	NA	NA
Kelley River	073	2006	2011	5	NA	NA	NA
Atlanta	074	2008	2011	3	NA	NA	NA
Sheffield Mills	075	2008	2011	3	NA	NA	NA
Fall River	076	2008	2011	3	NA	NA	NA
West Northfield	077	2008	2011	3	NA	NA	NA
Musquodoboit Hbr	078	2008	2011	3	NA	NA	NA
Lewis Lake	079	2008	2011	3	NA	NA	NA
Arisaig	080	2009	2011	2	NA	NA	NA
Coldbrook	081	2009	2011	2	NA	NA	NA
Long Point	082	2009	2011	2	NA	NA	NA
Tatamagouche	083	2009	2011	2	NA	NA	NA
Pugwash	084	2010	2011	1	NA	NA	NA
St. Peters	085	2010	2011	1	NA	NA	NA
Smileys Park	086	2011	2011	<1	NA	NA	NA

Notes:

1. n is the number of "usable" years. For a year of data to be considered a "usable", data must be available for at least 75% of the year, unless otherwise noted. Trend analyses were not completed for wells with less than 10 years of usable data.
2. S is the Mann-Kendall statistic, which is based on the differences between data values. Positive values indicate upward trends and negative values indicate downward trends (Gilbert, 1987).
3. Q is Sen's estimator of slope. Positive values indicate upward trends and negative values indicate downward trends (Gilbert, 1987).
4. The trend is considered to be statistically significant if the confidence level is at least 80%.
5. NA = Not Applicable (there were insufficient data to complete a trend analysis at this well).

APPENDIX F
WELL LOCATION MAPS &
SITE PHOTOGRAPHS

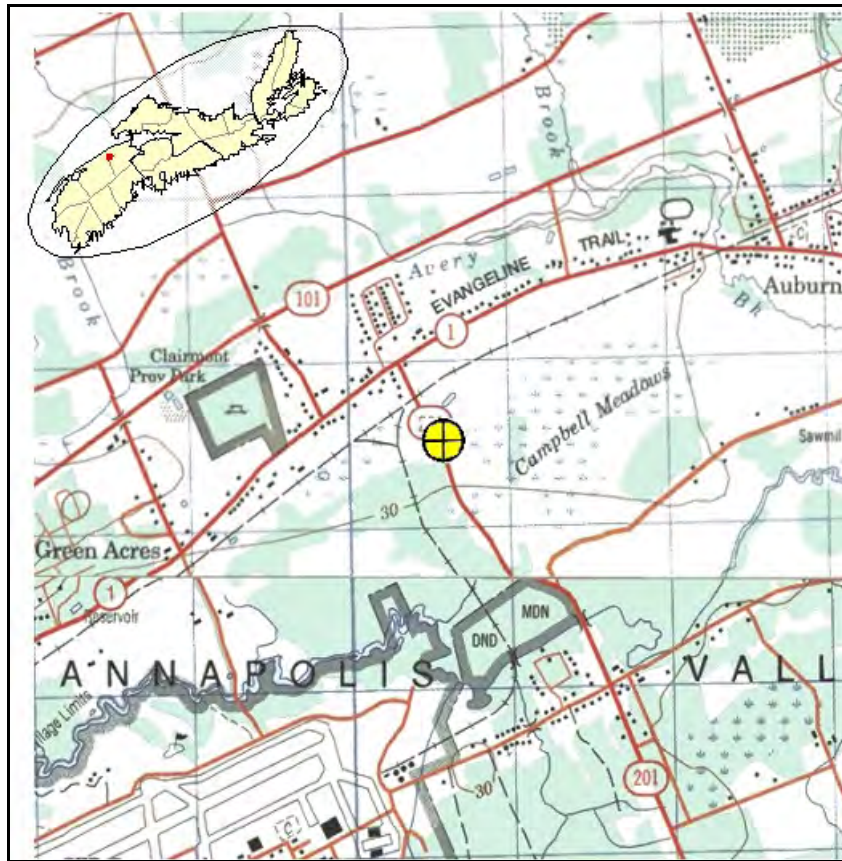


Figure F.1a: Greenwood (003) Well Location



Figure F.1b: Greenwood (003) Site Photograph

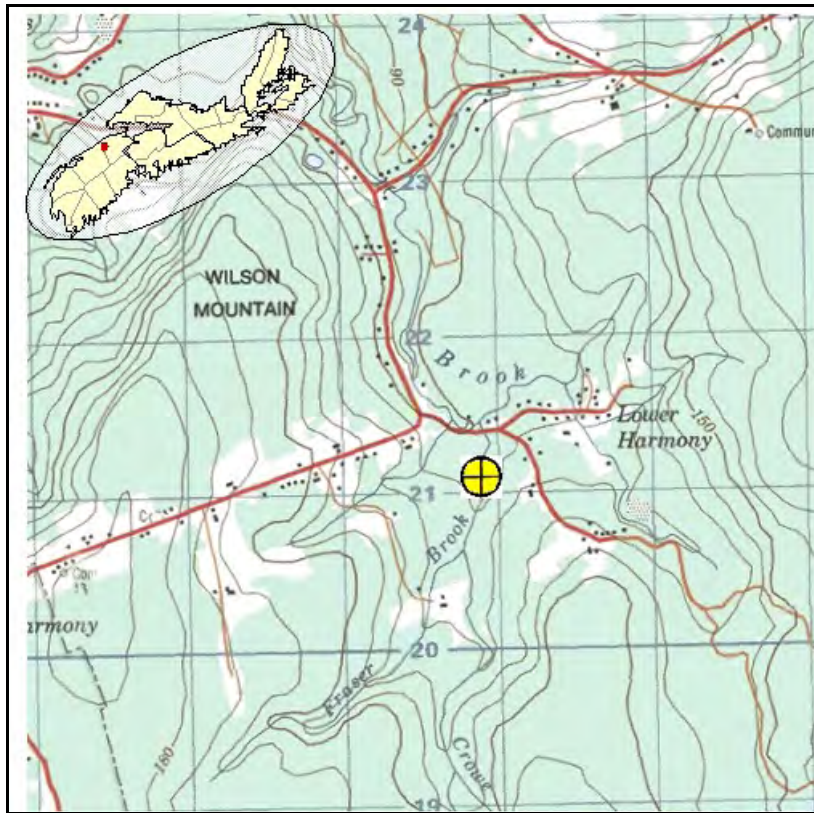


Figure F.2a: Fraser Brook (004) Well Location



Figure F.2b: Fraser Brook (004) Site Photograph



Figure F.3a: Wilmot (005) Well Location



Figure F.3b: Wilmot (005) Site Photograph



Figure F.4a: Murray Siding (007) Well Location



Figure F.4b: Murray Siding (007) Site Photograph

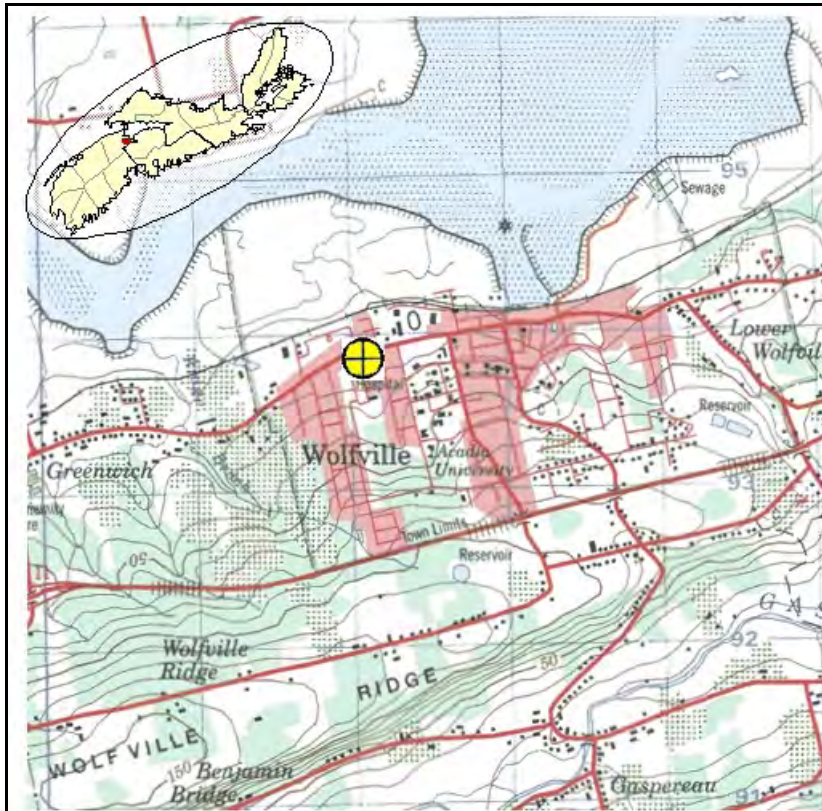


Figure F.5a: Wolfville (010) Well Location



Figure F.5b: Wolfville (010) Site Photograph

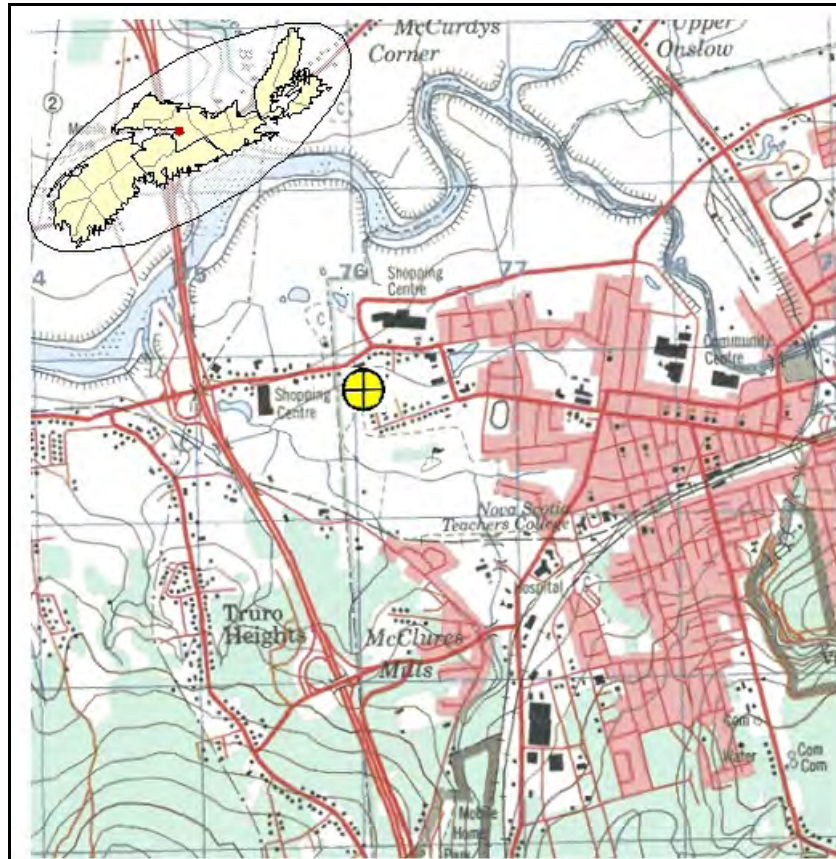


Figure F.6a: Truro (014) Well Location



Figure F.6b: Truro (014) Site Photograph



Figure F.7a: Monastery (028) Well Location



Figure F.7b: Monastery (028) Site Photograph



Figure F.8a: Point Aconi (030) Well Location



Figure F.8b: Point Aconi (030) Site Photograph

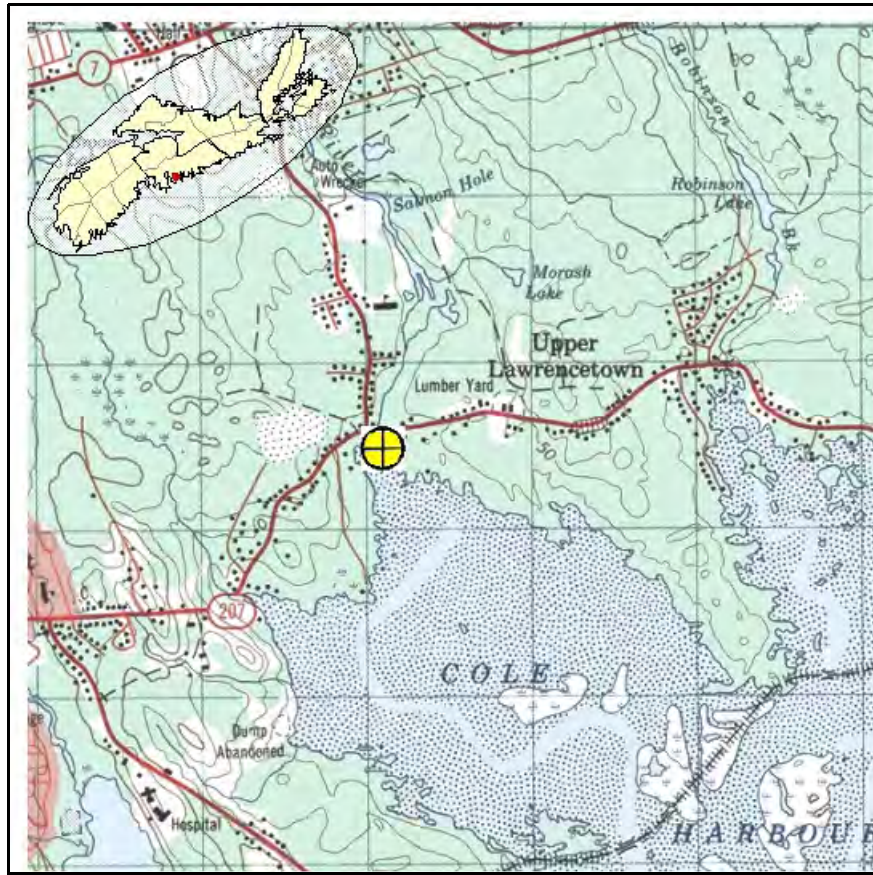


Figure F.9a: Lawrencetown (043) Well Location



Figure F.9b: Lawrencetown (043) Site Photograph

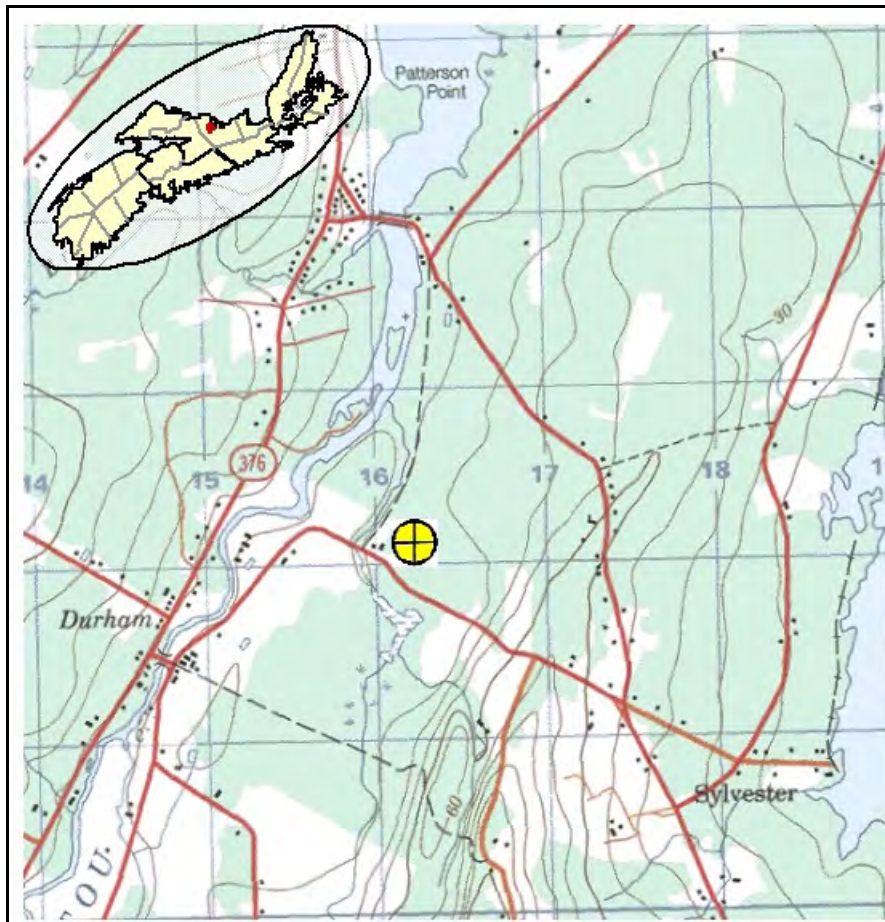


Figure F.10a: Durham (045) Well Location



Figure F.10b: Durham (045) Site Photograph

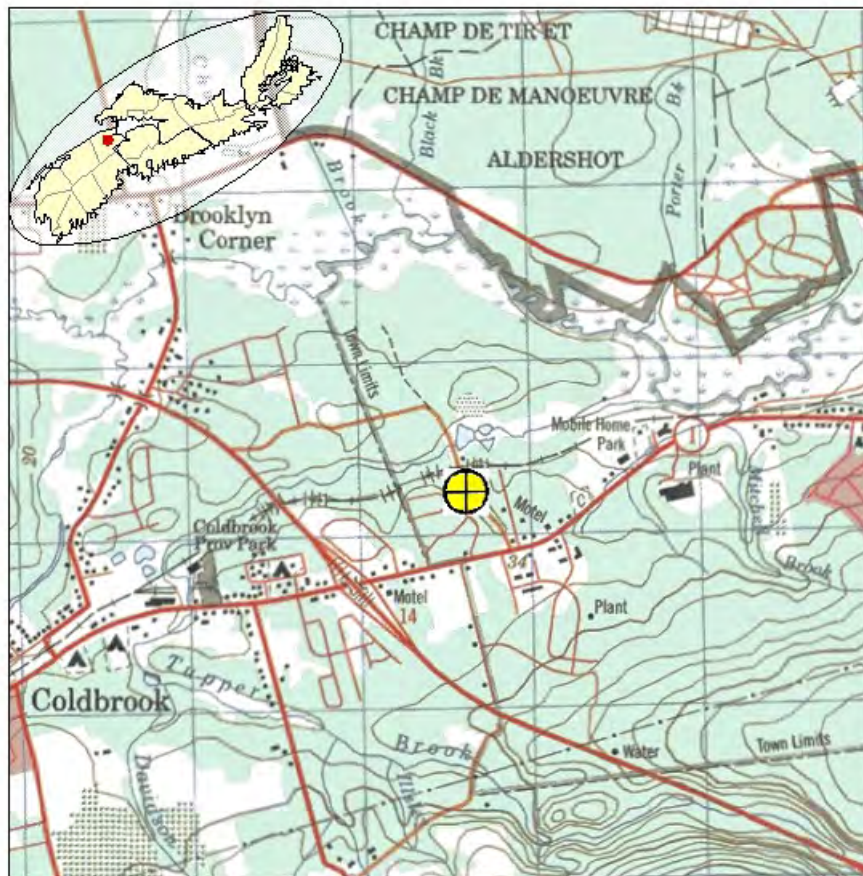


Figure F.11a: Kentville (048) Well Location



Figure F.11b: Kentville (048) Site Photograph

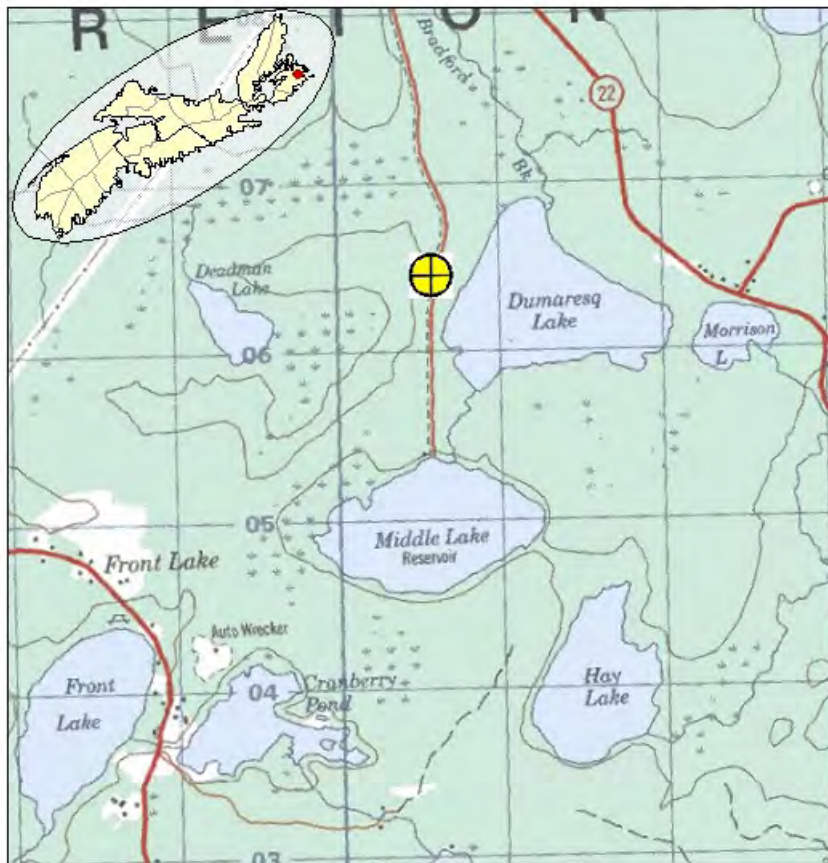


Figure F.12a: Sydney (050) Well Location



Figure F.12b: Sydney (050) Site Photograph



Figure F.13a: North Grant (054) Well Location



Figure F.13b: North Grant (054) Site Photograph

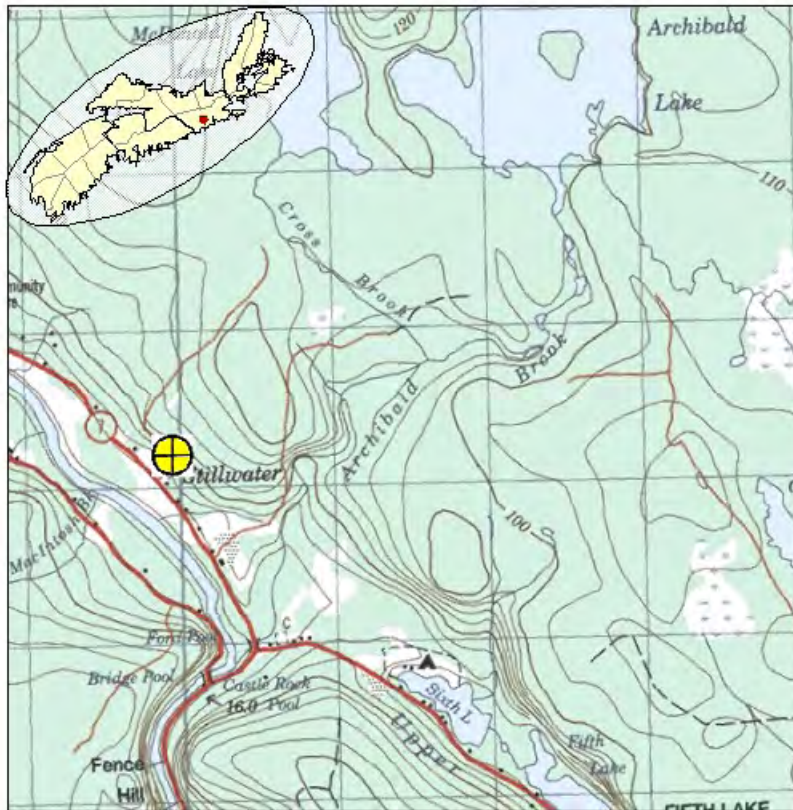


Figure F.14a: Stillwater (055) Well Location



Figure F.14b: Stillwater (055) Site Photograph



Figure F.15a: Sheet Harbour (056) Well Location



Figure F.15b: Sheet Harbour Site Photograph



Figure F.16a: Hayden Lake (059) Well Location



Figure F.16b: Hayden Lake (059) Site Photograph



Figure F.17a: Meteghan (060) Well Location



Figure F.17b: Meteghan (060) Site Photograph

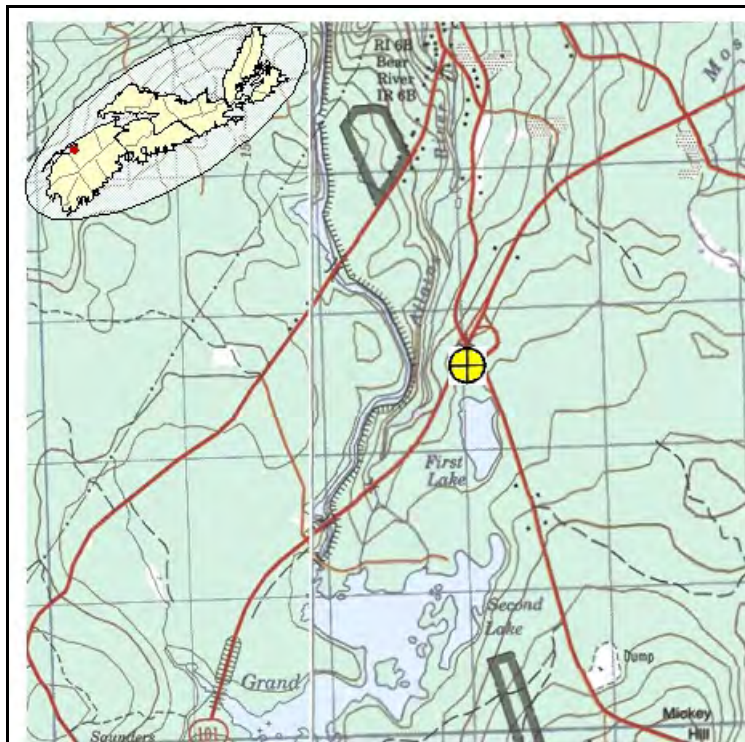


Figure F.18a: Annapolis Royal (062) Well Location



Figure F.18b: Annapolis Royal (062) Site Photograph

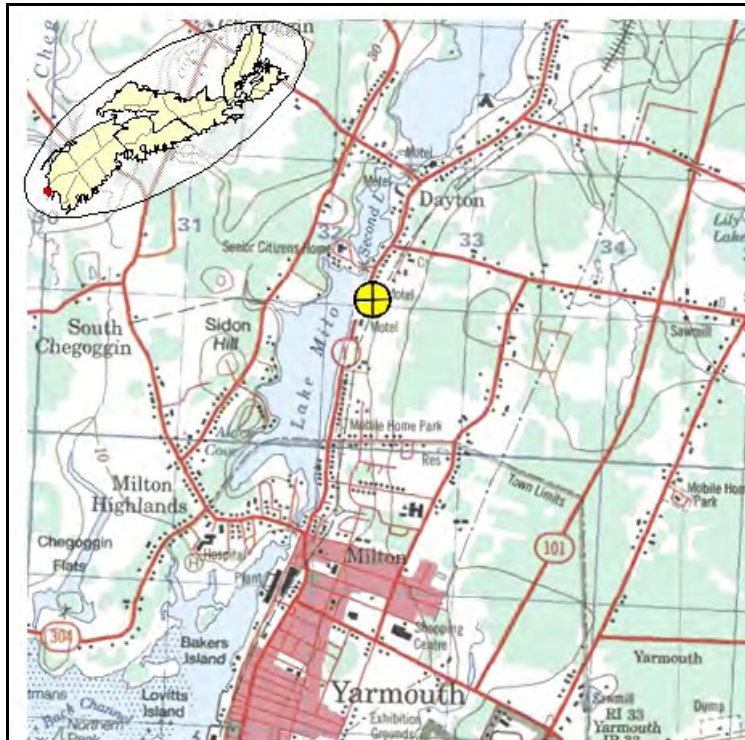


Figure F.19a: Hebron (063) Well Location



Figure F.19b: Hebron (063) Site Photograph

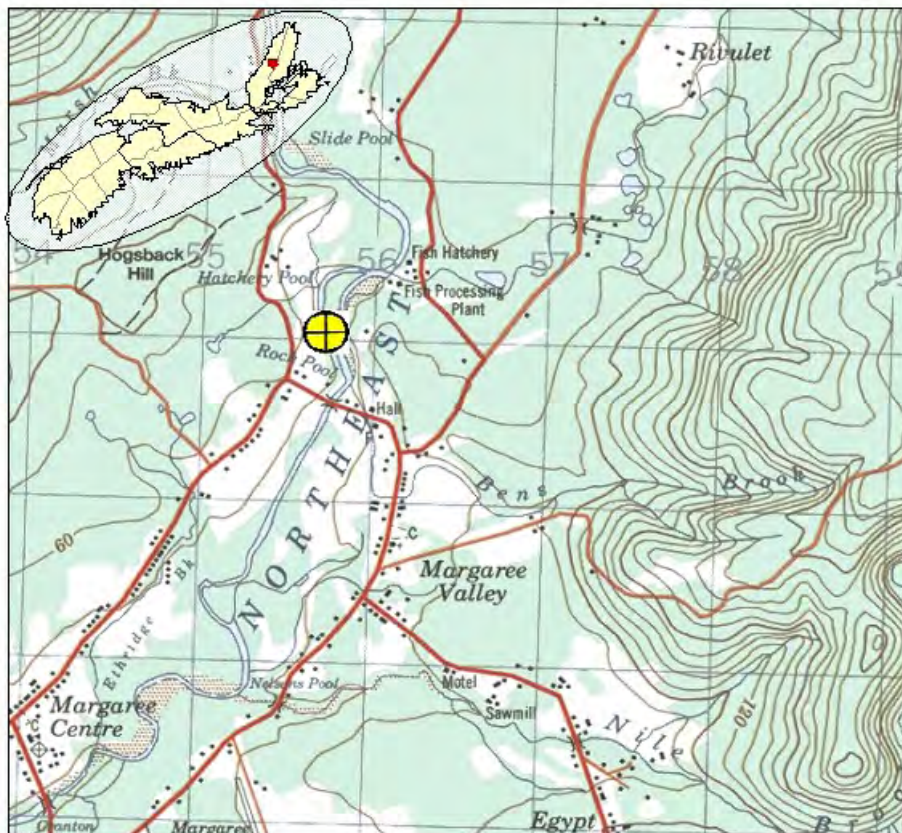


Figure F.20a: Margaret (064) Well Location



Figure F.20b: Margaret (064) Site Photograph

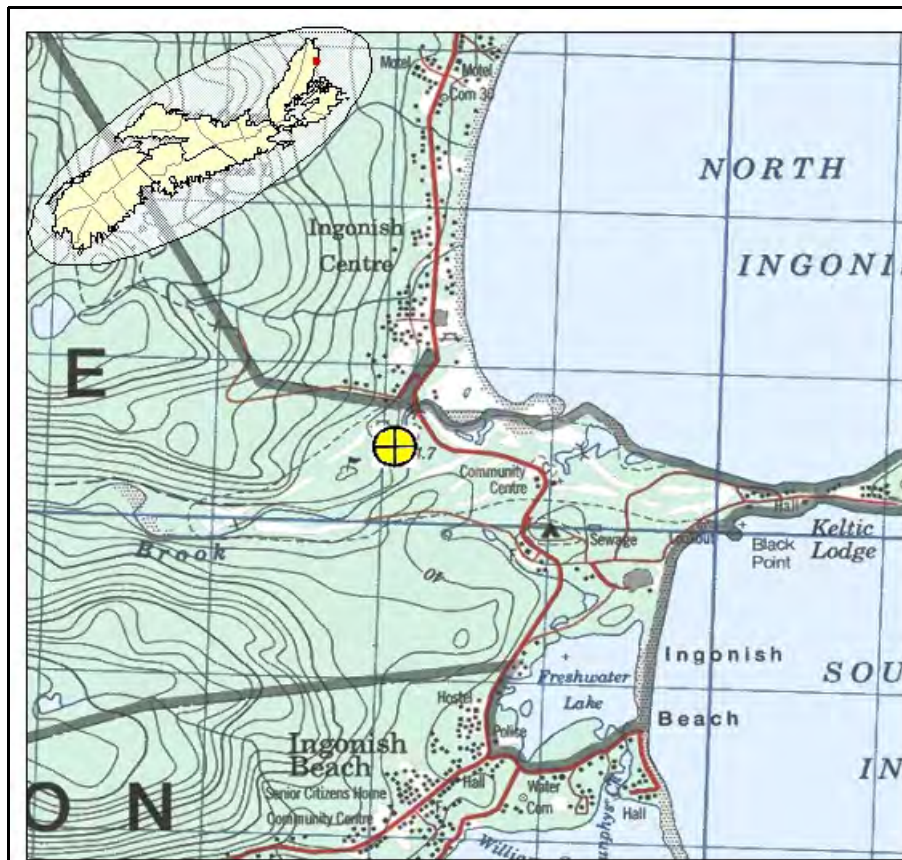




Figure F.22a: Debert (068) Well Location



Figure F.22b: Debert (068) Site Photograph



Figure F.23: Dalem Lake (069) Well Location

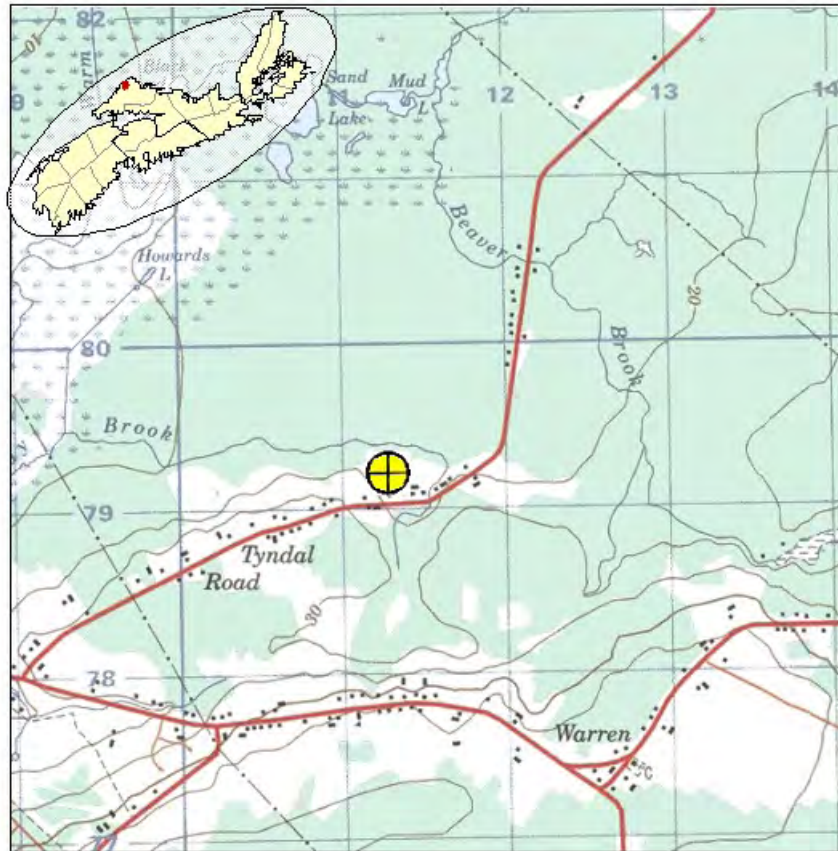


Figure F.24a: Amherst (071) Well Location



Figure F.24b: Amherst (071) Site Photograph



Figure F.25a: Kelley River (073) Well Location



Figure F.25b: Kelley River (073) Site Photograph



Figure F.26a: Atlanta (074) Well Location



Figure F.26b: Atlanta (074) Site Photo

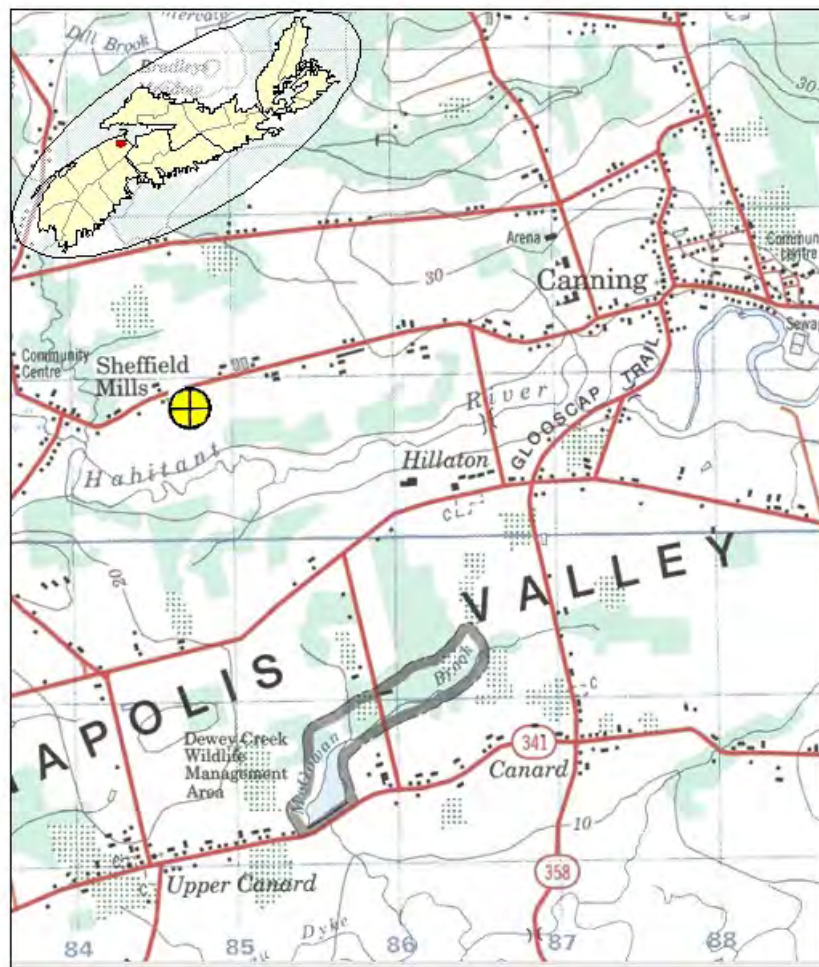


Figure F.27a: Sheffield Mills (075) Well Location



Figure F.27b: Sheffield Mills (075) Site Photograph



Figure F.28a: Fall River (076) Well Location



Figure F.28b: Fall River (076) Site Photograph

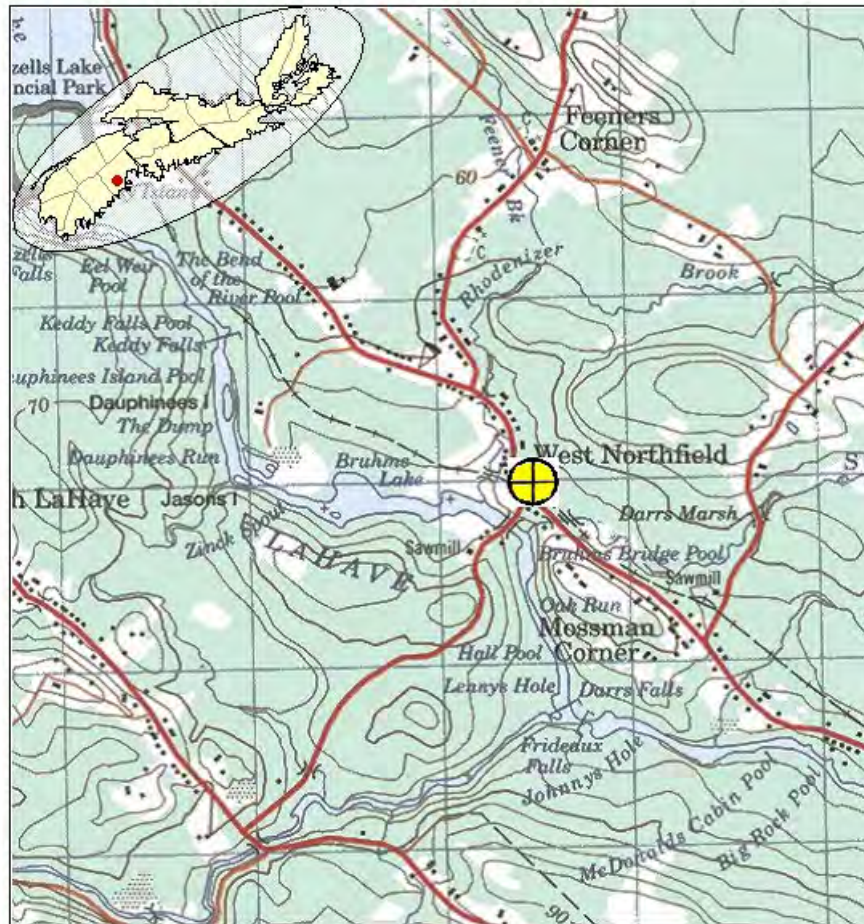


Figure F.29a: West Northfield (077) Well Location



Figure F.29b: West Northfield (077) Site Photo

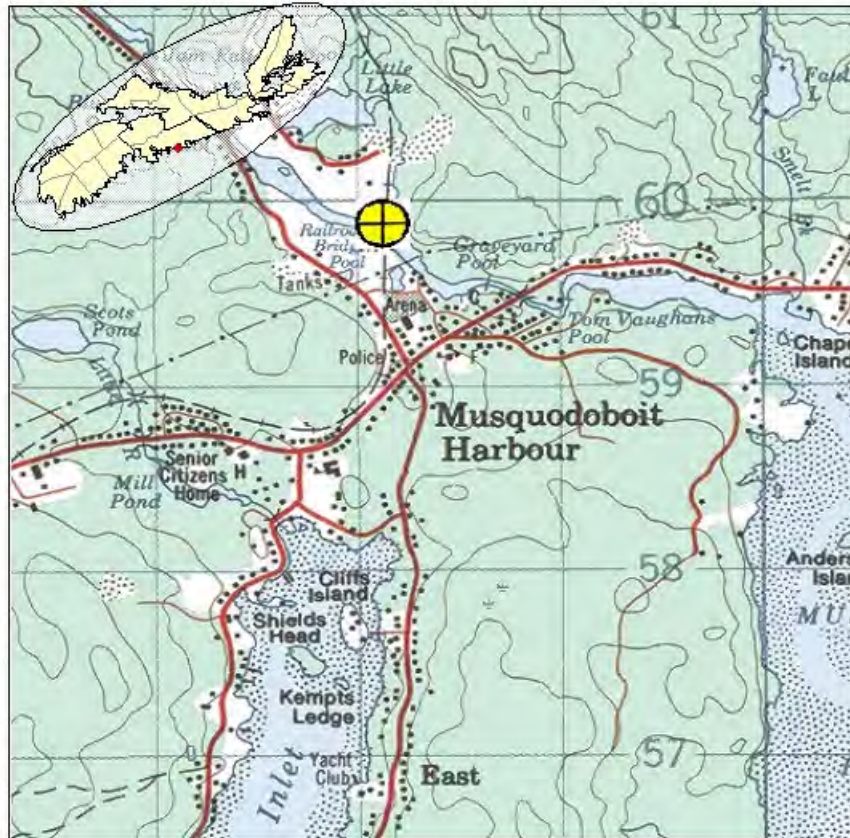


Figure F.30a: Musquodoboit Harbour (078) Well Location



Figure F.30b: Musquodoboit Harbour (078) Site Photograph

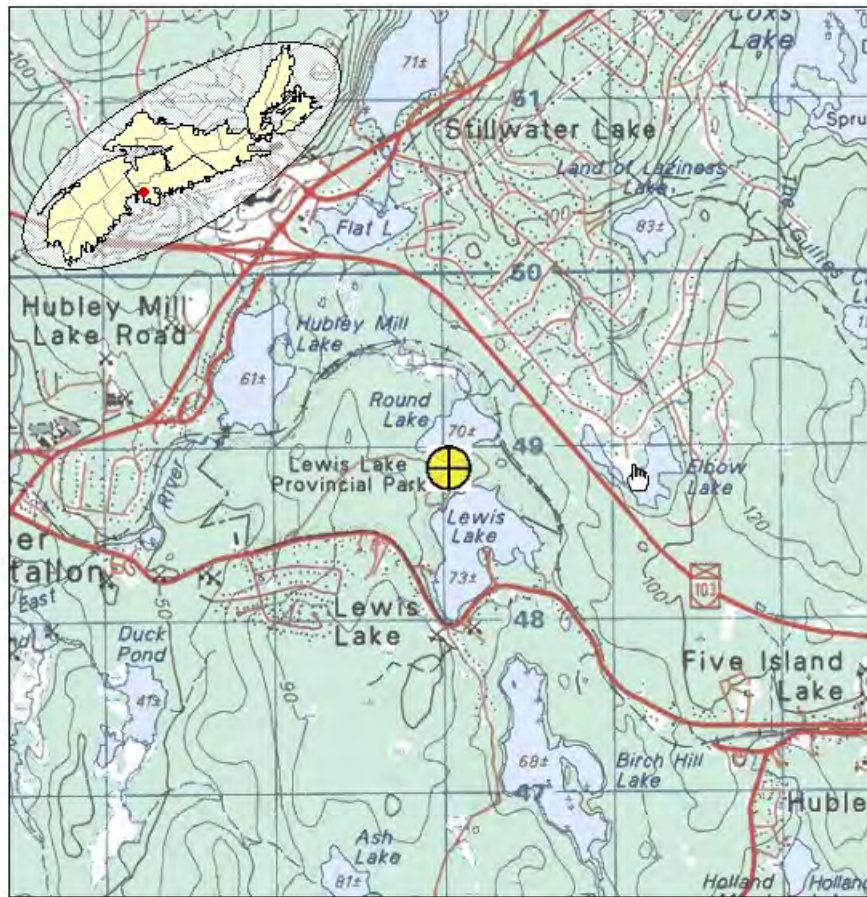


Figure F.31a: Lewis Lake (079) Well Location



Figure F.31b: Lewis Lake (079) Site Photograph

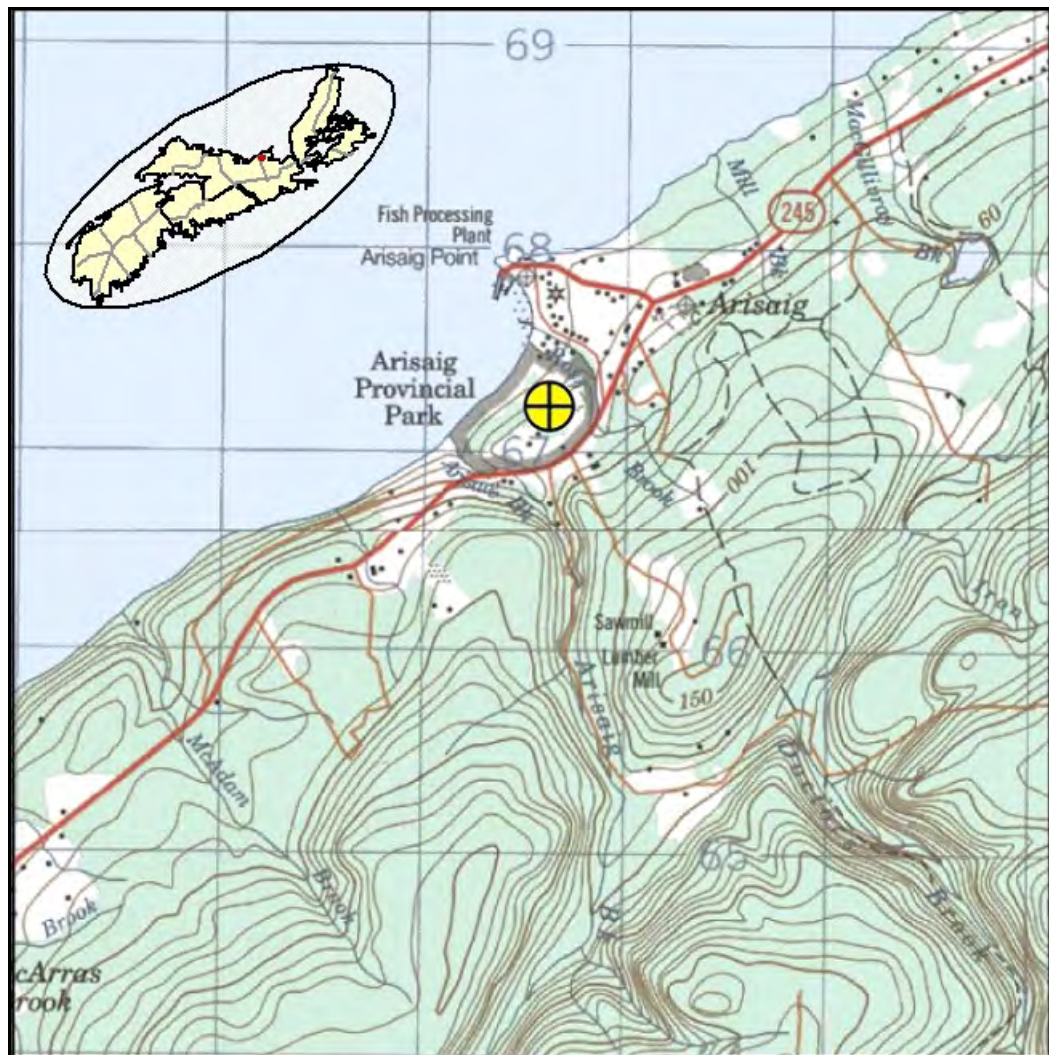


Figure F.32: Arisaig (080) Well Location

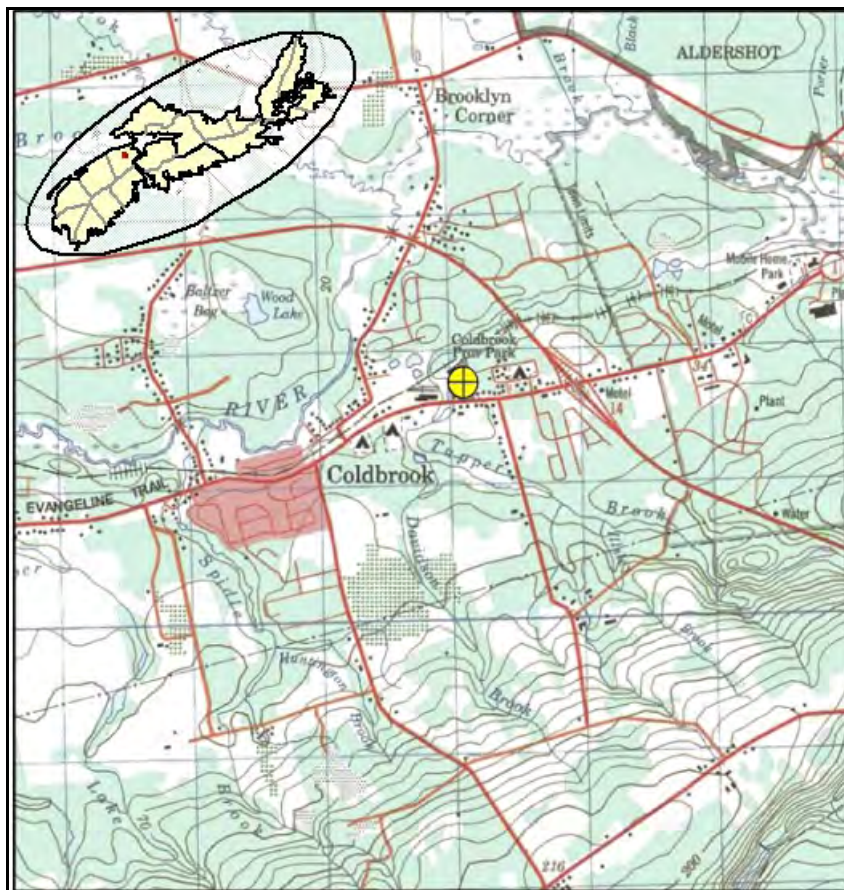


Figure F.33a: Coldbrook (081) Well Location

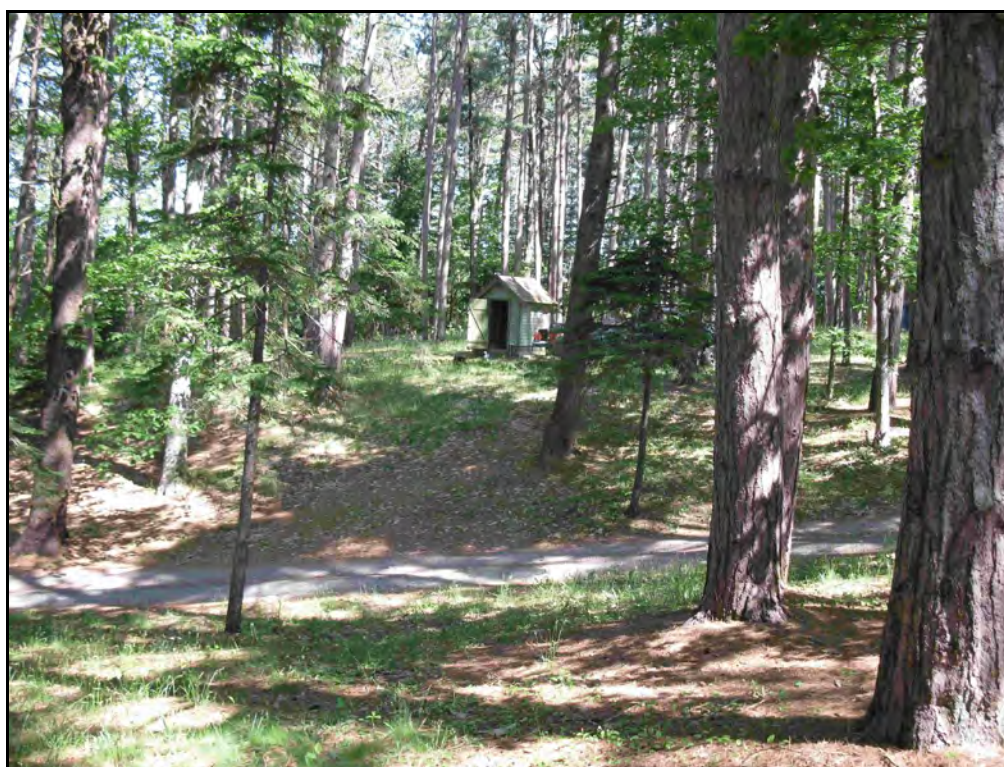


Figure F.33b: Coldbrook (081) Site Photograph



Figure F.34a: Long Point (082) Well Location



Figure F.34b: Long Point (082) Site Photograph



Figure F.35: Tatamagouche (083) Well Location



Figure F.36a: Pugwash (084) Well Location



Figure F.36b: Pugwash (084) Site Photograph

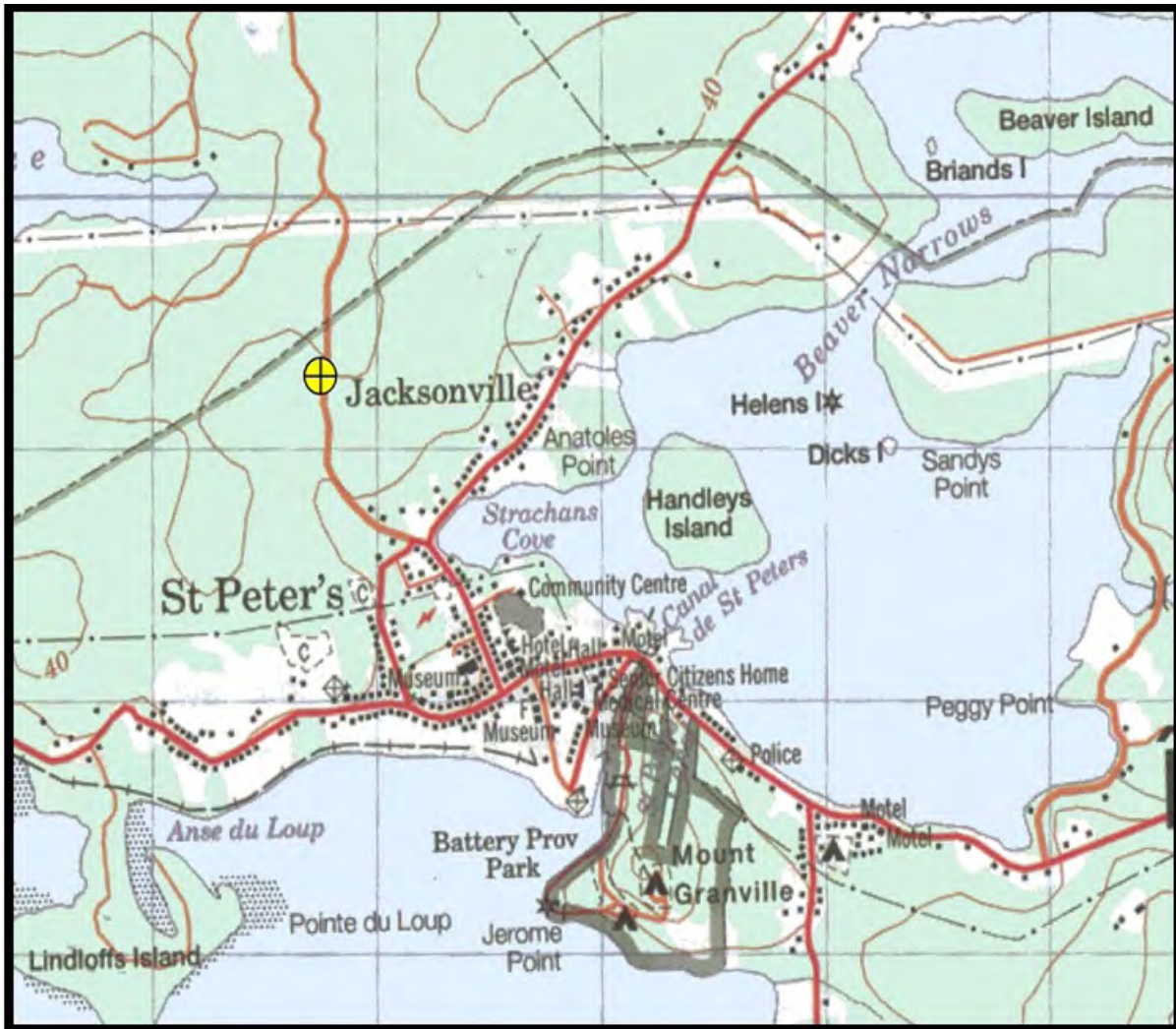


Figure F37: St. Peters (035) Well Location

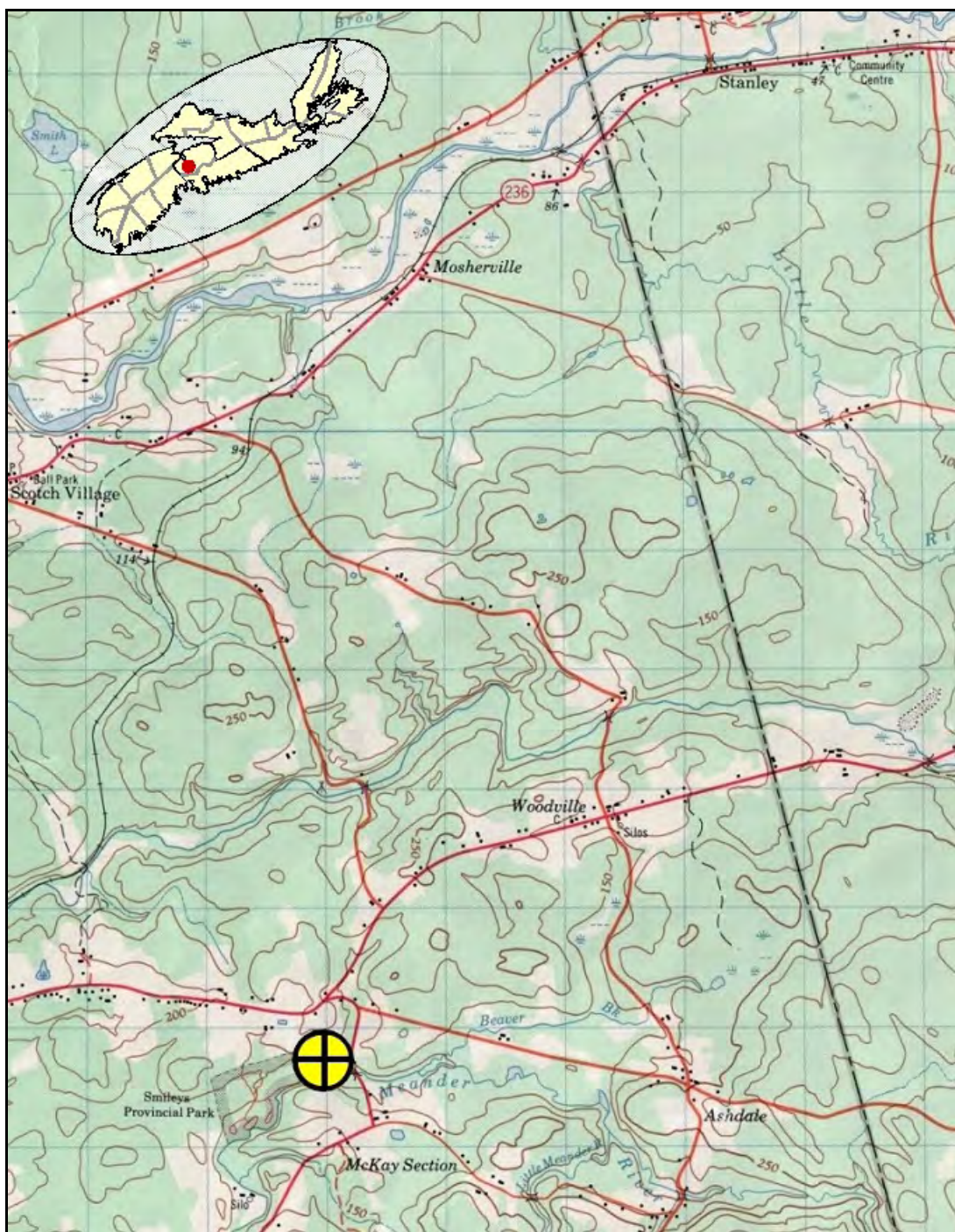


Figure F.38: Smiley's Park (086) Well Location