ENVIRONMENTAL IMPLEMENTATION REPORT / FUNCTIONAL SERVICING STUDY – APPENDICES: VOL.1 (6TH SUBMISSION)

September 2020

14 Mile Creek West and the Lazy Pat Farm Property (3269 Dundas Street West), North Oakville West

PREPARED FOR:

QuadReal

PREPARED BY:

wsp

D14-011-18

Appendix 1.0

1.1 EIR FSS Terms of Reference
1.2 References

Appendix 1.1 – North Oakville Environmental Implementation Report and Functional Servicing Study, Terms of Reference, May 2013

APPENDIX C

TOWN OF OAKVILLE

NORTH OAKVILLE
ENVIRONMENTAL IMPLEMENTATION REPORT and
FUNCTIONAL SERVICING STUDY

TERMS OF REFERENCE

REVISED – MAY 2013

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Background 1
1.2 Purpose 1

2.0 APPROACH 5
2.1 Overview 5
2.2 Agencies 5
2.3 Study Areas 5

3.0 STUDY REQUIREMENTS 7
3.1 Land Use 7
3.2 Cores and Linkages 8
3.2.1 Introduction 8
3.2.2 Cores 8
3.2.3 Linkages 9
3.3 Stream Systems, Fish Habitat and Fish Communities 10
3.3.1 Introduction 10
3.3.2 Existing Conditions and Constraint Mapping 11
3.3.3 Detailed Studies 11
3.3.3.1 Corridor Width Delineation 11
3.3.3.2 Fish and Fish Habitats 14
3.3.3.3 Stream Modification/Rehabilitation Measures 16
3.4 Grading, Drainage, Stormwater Management 17
3.4.1 Introduction 17
3.4.2 Topography and Grading 17
3.4.3 Preliminary Grading and Drainage Plan 17
3.4.4 Water Resources-Related Analyses 18
3.4.5 SWM Plan 23
3.5 Hydrogeology 24
3.5.1 Introduction 24
3.5.2 Technical Requirements 24
3.6 Sanitary, Water, Roads 26
3.7 Trails 27
3.7.1 Trails Exclusively in Buffer Areas 27
3.7.2 Trails in Natural Areas 28
3.7.3 Trail Siting 28

4.0 MONITORING 29

5.0 REPORTING REQUIREMENTS 29

FIGURES:

Figure 1.1.1 EIR Subcatchment Plan 3
Figure 1.1.2 Overview of Subwatershed Planning Implementation Process 4
Figure 3.4.1: A Hypothetical Example Illustrating Relevant Erosion Threshold Procedures in the Context of Subcatchment Areas 22

NORTH OAKVILLE ENVIRONMENTAL IMPLEMENTATION REPORT AND FUNCTIONAL SERVICING STUDY TERMS OF REFERENCE

1.0 INTRODUCTION

1.1 Background

The North Oakville Creeks Subwatershed Study, including addenda (NOCSS) provides the Management Strategy for the North Oakville Secondary Plan area. The limits of this area are illustrated in Figure 1.1.1, and include the lands north of Dundas Street to the Highway 407 corridor and from Tremaine Road east to Ninth Line. The Management Strategy and associated North Oakville Secondary Plan provide direction for land development within the North Oakville lands.

Integral to these documents is the goal of preserving a sustainable Natural Heritage System (NHS) for maintaining landscape diversity within an urban context. In accordance with this goal, the NOCSS was completed, providing recommendations with respect to the management approach for natural heritage/open space and stream systems. There are certain lands, including watercourses, that are restricted from development and others that have specified limitations or constraints. The Management Strategy and associated North Oakville Secondary Plan also outline requirements with regard to stormwater management, land use policies and servicing.

The NOCSS is divided into four sections, which follow the four phases of a subwatershed management approach:

i) Characterization
ii) Analysis
iii) Management Strategy
iv) Implementation

The Management Strategy for North Oakville is outlined in the last two NOCSS sections: Management Report and Implementation. In the Implementation Report, the processes to be followed as well as implementation details are outlined including the need for an Environmental Implementation Report (EIR) and a Functional Servicing Study (FSS) in support of future Draft Plans of subdivision (Draft Plans). A general overview of the planning/implementation framework is illustrated in Figure 1.1.2, which indicates how the EIR/FSS fits within this process.

1.2 Purpose

The purpose of the EIR is to characterize and analyse the natural heritage features and functions and to determine and address the potential impacts of a proposed development application, including servicing requirements, on the NHS. The purpose of the FSS is to identify servicing requirements related to sanitary, water, stormwater, roads and site grading.

Further, the purpose of both the EIR and FSS is to provide a link between the Management Report, Implementation Report, the Secondary Plan, and the Draft Plan submissions for future development applications.

It is recognized that the approach to servicing will, in large part, be guided by conditions within the NHS, including cores, linkages and stream corridors. In addition, the characteristics of these areas may require

the use of measures to protect the function of the NHS from impacts (i.e., prevention of changes to the surface water and groundwater systems to maintain flows to the NHS). As a result, the EIR and FSS must be integrated and may be produced as a joint document.

It is intended that this document provides the Terms of Reference for completion of an EIR and FSS. The EIR/FSS document sets out the study requirements and obligations, including monitoring, for works installed in the secondary plan area, including the NHS. These are the obligation of the landowner proponent who proposes the development or proposes to install the works. In some cases, the Town or the Region may be the proponent of certain works in the secondary plan area or in the NHS. In this latter instance, the study requirements and obligations, including monitoring, are the proponent Town's or the proponent Region's as the case may be and the obligations are not the landowner's obligation.

The preparation of an EIR/FSS is to assist in the development of a Draft Plan. It is to ensure that the requirements of the Subwatershed Strategy and Secondary Plan are met and that the site characteristics are understood in sufficient detail to provide the information necessary for processing of the Draft Plan and to provide conditions of approval. These studies also will support agencies' approvals.

If the Draft Plan does not conform to the Secondary Plan, other planning approvals may be required.

The objectives to be fulfilled by the EIR and FSS are to:

- Demonstrate how the subwatershed requirements set out in the NOCSS Management Report (including targets), the Implementation Report, and Secondary Plan are being fulfilled in all proposed Draft Plans;
- Provide sufficient level of conceptual design to ensure that the various components of NHS and infrastructure can be implemented as envisaged in the NOCSS and Secondary Plan and to ensure that the Draft Plans are consistent with this conceptual design;
- Ensure servicing requirements as determined in the FSS for the areas external to the Draft Plan are adequate;
- Identify details regarding any potential development constraints or conflicts and how they are to be resolved;
- Provide any further implementation details as needed;
- Streamline the Draft Plan approval process; and,
- Facilitate the development of Draft Plan conditions.

The EIR/FSS Terms of Reference are broken down into sections to discuss the overall approach, and details of the studies needed, including monitoring.

NORTH OAKVILLE CREEKS SUBWATERSHED STUDY

August 2006

0 500 1,000

Meters

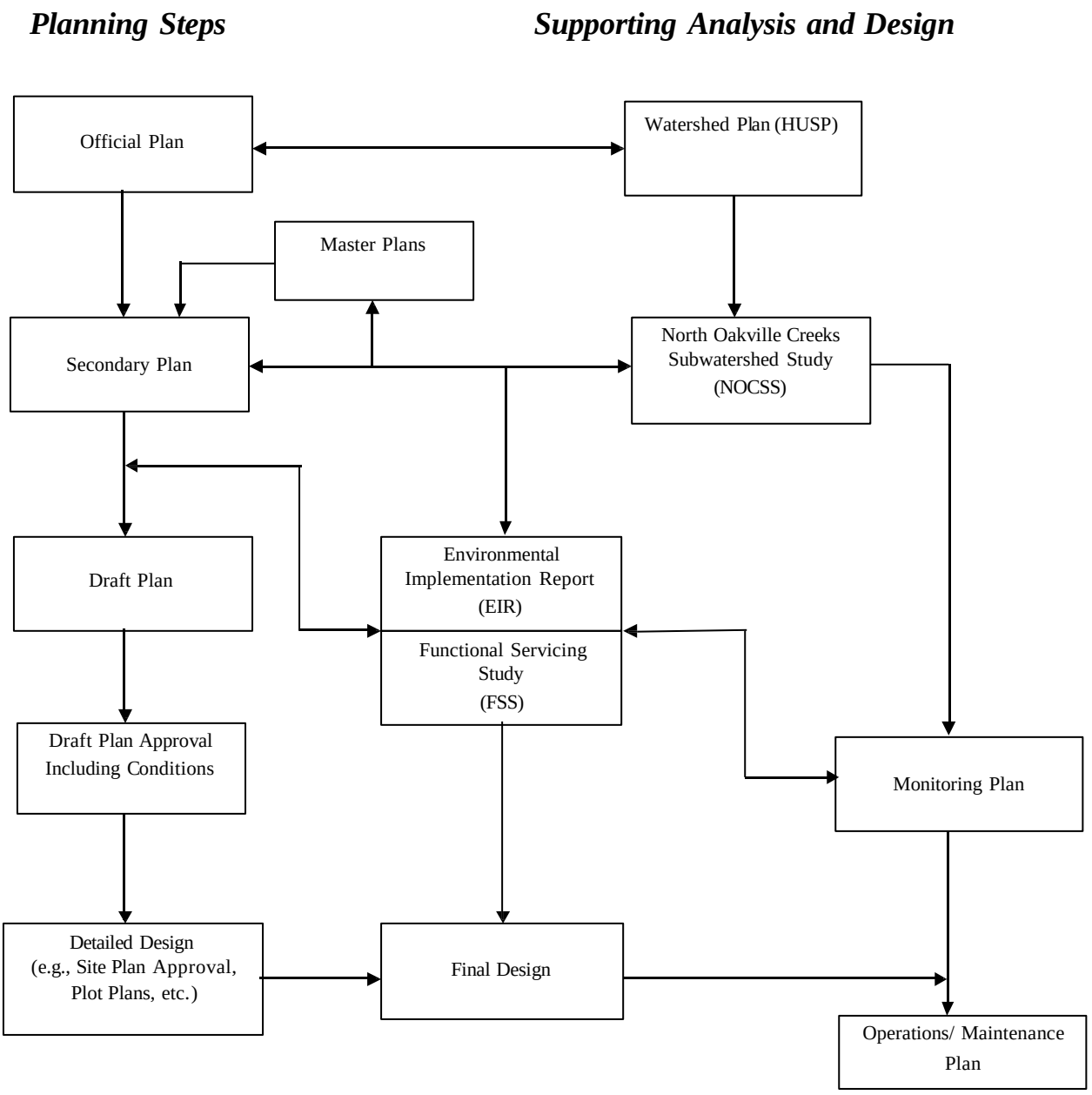
Legend Road
Watercourse
Secondary Plan Boundary
EIR Nodes
EIR Subcatchments

EIR Subcatchment Plan

Figure 1.1.1

Figure 1.1.2

OVERVIEW OF SUBWATERSHED PLANNING IMPLEM ENTATION FRAMEWORK



2.0 APPROACH

2.1 Overview

The EIR/FSS is to demonstrate how the proposed development will meet the requirements set out in the Management Strategy and Secondary Plan. To do this, comprehensive technical analyses and design concepts will be necessary as part of the EIR/FSS. It is the intention of these Terms of Reference to indicate how the analyses, design concepts and related reports are to be prepared.

2.2 Agencies

It is intended that the EIR/FSS, and subsequent Draft Plans, will be reviewed by the following agencies as related to their respective jurisdictions:

Town of Oakville
Region of Halton
Conservation Halton

The above noted agencies will be the primary contact groups for the EIR/FSS submissions. Depending upon the conditions related to the EIR subcatchment area, it may be decided by one or more of the agencies, primarily Conservation Halton and the Town of Oakville, that input and approval will be needed from the Ministry of Natural Resources (MNR) and/or Department of Fisheries and Oceans (DFO). This input will be coordinated by the Town and Conservation Halton. It is understood that proponents can liaise with the agencies as necessary as part of this process. Input from DFO is anticipated in the review of conceptual and final design on any sections of streams where fish habitat compensation is required.

2.3 Study Areas

It is intended that the EIR be carried out on a subcatchment basis, which forms the study area for the EIR. The EIR subcatchments are illustrated on Figure 1.1.1. The study area for the FSS will focus on the proposed development area for the intended Draft Plans (referred to as "proposed development area" in subsequent sections of this document). It is recognized that consideration will likely be required beyond the FSS study area to ensure that servicing can be provided for neighbouring areas.

Each EIR/FSS will be evaluated to ensure that the flows outletting from each area are managed in a manner that will properly protect the receiving stream(s), in accordance with the NOCSS Management Strategy. Carrying out the EIR based on the specified subcatchments will address the following:

Preservation of drainage areas to the various stream branches within the subwatersheds; and,
Provide for meeting target flows, water quality and erosion targets for the various receiving points along the streams.

In some cases, the study area for the NHS system (cores and linkages, and streams) may extend beyond the subcatchment, as discussed in Sections 3.2 and 3.3.

It is recognized that the EIR subcatchment areas do not correspond to land ownership boundaries and that it may be difficult to ensure the cooperation of landowners to carry out an EIR/FSS within the specific

study subcatchment. Every effort should be made to facilitate cooperation between landowners to carry out the EIR/FSS within the EIR subcatchment. If more than one landowner within an EIR subcatchment is active in the EIR/FSS process, only one EIR study will be permitted (i.e., no concurrent EIR studies for the same area). Subsequent development in the EIR subcatchment area will require the preparation of a separate FSS and an update of the EIR, to conform to the findings and recommendations of all previous EIR/FSS studies. In the event that this concurrent joint report cannot be accomplished, it is recognized that consideration will be given to permitting a modified approach. In that event, certain conditions will need to be met to ensure that the requirements of the Management Strategy and Secondary Plan are met and that any proposed development does not place any undue restrictions on other lands within the EIR subcatchment area not included in the study.

Various scenarios could arise where the proposed development (Draft Plan areas of participating owners) does not correspond to the EIR subcatchment area boundary. Anticipated scenarios and the approach that should be used for each are outlined in the following items. These are presented as examples and do not include all potential scenarios:

i) The proposed development is in the upstream portion of the EIR subcatchment.
   EIR/FSS will need to indicate how land will be serviced on an interim and final basis;
   If the existing receiving watercourse is used as an outlet, assumptions as to the final outlet conditions are to be indicated. The submission must demonstrate how drainage from upstream lands including stormwater management systems, will be conveyed to a suitable outlet without placing undue restrictions on the serviceability of adjacent lands;
   If a proposed stormwater management (SWM) facility is downstream of the proposed development, an interim facility may be provided, with a long-term approach indicated, in the event that a permanent facility is not constructed;
   If stream modifications extend beyond the limits of the proposed development area (e.g., lowering or relocations), they also must be addressed conceptually;
   Conceptual design of trunk services within the EIR subcatchment must be prepared, including appropriate allowances for connections to areas external to the Draft Plan and/or EIR subcatchment, demonstrating servicing viability without placing undue restrictions on external areas (e.g., considering sewer depths and grading); and,
   Street and land use patterns outside of the proposed Draft Plan are to be provided as per the Secondary Plan with input from the Town of Oakville.

ii) The proposed development is in the downstream portion of the EIR subcatchment.
   EIR/FSS will need to indicate how land will be serviced/graded on an interim and final basis;
   If SWM facility is located in the proposed development area and is to service the upstream portion of the subcatchment, the facility is to be sized for the entire upper subcatchment, based on the land use from the Secondary Plan with input from the Town of Oakville;
   If stream modifications extend beyond the limits of the proposed development area (e.g., lowering or relocations), they also must be addressed conceptually;
   Conceptual design of trunk services within the EIR subcatchment are to be prepared, including appropriate allowances for connections to areas external to the Draft Plan and/or EIR subcatchment, demonstrating servicing viability without placing undue restrictions on external areas (e.g., considering sewer depths and grading); and,
   Street and land use patterns outside of the proposed Draft Plan are to be provided as per the Secondary Plan, with input from the Town of Oakville.

iii) The proposed development is within the majority of the EIR subcatchment with minor portions outside.

Consideration will be given to minor adjustments in subcatchment boundaries with the conditions that the adjustments would not put undue restrictions on the servicing of adjacent subcatchments and demonstrate no negative impacts to flooding, erosion and the NHS; and,

If no change in subcatchment boundary is proposed, consideration is to be given to how development in the adjacent subcatchment is to be serviced. Conceptual drainage patterns are to be developed and profiles generated to ensure that the area can be serviced.

3.0 STUDY REQUIREMENTS

Studies are required for the EIR/FSS in the areas of:

Land Use
Cores and Linkages
Stream Systems, Fish, and Fish Habitat
Grading, Drainage and SWM
Hydrogeology
Sanitary, Water, Roads
Trails

The specific study requirements are outlined in the following sections.

3.1 Land Use

The proposed land use, road patterns and servicing layout are to be provided through the EIR/FSS submission. The EIR/FSS submission should reflect the Secondary Plan land uses. Further land use details will be provided in the corresponding Draft Plans. If the EIR subcatchment extends beyond a particular Draft Plan, land use details in those areas must reflect the Secondary Plan, with input from the Town of Oakville.

The land use map for the portions of the EIR subcatchment area that are outside the limits of the Draft Plan will include details for the following to demonstrate the Draft Plan context with regard to the rest of the subcatchment:

Land use designations
Natural heritage system (cores, linkages and stream corridors)
Major roads
Major services
SWM Blocks
Trails

Planning input to the EIR/FSS is needed to demonstrate the logical coordination of land uses, road connections and open space linkages and features for the Draft Plan(s), lands extending beyond the limits of the Draft Plan(s), and potentially beyond the limits of EIR subcatchment area.

3.2 Cores and Linkages

3.2.1 Introduction

The following section summarizes the study requirements for cores and linkages in the EIR/FSS. The NOCSS and current approaches to natural heritage planning strongly recommend that certain study components be completed at a larger ecologically based study area than the proposed development area (i.e. the EIR subcatchment boundaries or beyond). On the other hand, certain impact assessments require details that are only available at the Draft Plan level of detail. As such, the following discussion of the Terms of Reference is divided into two components.

Study components that must be completed at the EIR subcatchment area level or beyond: This level of study is required since many ecological processes and features extend beyond the limits of a single Draft Plan and require analysis based on ecological study boundaries in order to understand the factors that drive the sustainability of the ecosystem; and

Study components that require Draft Plan level of detail in order to be completed: This level of study focuses on detailing the potential impacts of proposed land use changes on the natural features and functions. As such, details regarding the proposed undertaking must be available in order to understand the sources of, and potential mitigation of, potential impacts.

In cases where an entire EIR subcatchment area is covered by participating landowners, the two levels of detail can be integrated. In cases where a Draft Plan(s) for only a portion of the lands within a particular EIR subcatchment area is being advanced, it is critical that proponents have regard for the varying levels of detail at each level.

3.2.2 Cores

EIR Subcatchment Area Level of Detail:

Confirm limits of EIR subcatchment and FSS study area based on overlap of Draft Plan(s) with subcatchments, extent of cores, especially those that extend beyond subcatchment boundary (for linkages see below);

Delineate core boundaries based on NOCSS and present the boundaries on recent aerial photographs;

Assemble background information on natural environment features and functions within the core(s) from the NOCSS and other secondary sources, including features, functions and management recommendations;

Conduct preliminary field review of features to confirm limits and character of vegetation communities (e.g. using recent aerial photographs); and,

Identify any effect of other works (i.e. road crossings, servicing, SWM, trails, etc.) and associated requirements related to cores and linkages.

Draft Plan Level of Detail:

Complete appropriate seasonal field surveys of the limits of woodlands, wetlands and other habitats associated with the core(s), generally within 50m of vegetation community boundaries that define the limit of the core;

Apply the buffers to the natural features based on the NOCSS recommendations, to define the boundaries of the core;

Stake and survey the boundaries of core areas including limit of buffers based on guidance provided in NOCSS;

These staked core boundaries are to be confirmed in the field by staff of Conservation Halton, Town of Oakville and Ministry of Natural Resources (at the discretion of Conservation Halton);

Identify limits of grading adjacent to a core, and assess the impacts of any grading adjacent to the core(s), and detail mitigative measures and/or management recommendations, where needed;

Detail the proposed drainage characteristics of lands adjacent to core and assess any impacts associated with drainage to the natural features, functions and management recommendations;

Detail stormwater management facilities proposed adjacent to the core(s) and assess the impacts of construction and operation of the stormwater management facility on core features, functions and management recommendations;

Where a SWM pond is permitted* within a core, stake and survey the limit of stormwater management pond block overlap with the core boundary (as per NOCSS). This is to be reviewed in the field by agencies as noted above, and the impacts of construction and operation of the stormwater management facility on core features, functions and management recommendations assessed;

Identify all services, utilities etc. proposed to be located adjacent to or within cores and assess the potential impacts* of these facilities on core features and functions;

In cases where a core is crossed by a road installed by a proponent, provide information respecting the road characteristics and identify potential impacts to features and functions within the core, (including delineation of features) and protective measures;

Detail location, type and size of crossing structures from a wildlife movement (ecopassage) perspective;

Detail any restoration measures within the core that may be triggered by proponent proposals to encroach into cores (road crossings, SWM);

Detail mitigative measures and assess potential residual impacts of proponent works within the cores and any proponent grading or works adjacent to the cores. Provide evidence that alternative methods and measures for minimizing impacts have been considered; and,

Develop a plan for monitoring the mitigative measures noted above, based on liaison with agency staff (Conservation Halton, Town of Oakville).

** See 'Field Survey Requirements' detailed within 'Trails' section of this document.*

3.2.3 Linkages

EIR Subcatchment Area Level of Detail:

Confirm limits of EIR subcatchment and FSS study area based on the overlap of Draft Plan(s) with subcatchments, and extent of linkages (i.e. identify cases in which linkages extend beyond limits of subcatchment and include these areas within study);

Delineate linkage areas based on NOCSS and present the boundaries on recent aerial photographs;

Assemble background information on natural environment features within linkages from NOCSS and other secondary sources;

Conduct a preliminary field review of features to confirm limits and character of vegetation communities within linkages (e.g. using recent aerial photographs);

Review stream corridor assessment to ensure that any proposed proponent modifications to stream corridors (locations, widths, etc.) that may influence linkages are identified;
Show linkage limits in conjunction with conceptual subcatchment- level stream corridor on plans.

Draft Plan Level of Detail:

Delineate and describe any natural features (e.g., hedgerows, wetlands, etc.) that are to be incorporated into the linkage, and stake and survey as necessary;
Identify means by which these features will be protected during development/construction process;
Identify the boundaries of linkage areas, and confirm them in the field with staff of Conservation Halton, Town of Oakville and Ministry of Natural Resources (at the discretion of Conservation Halton);
Identify limits of grading, and assess any impacts of re-grading within linkage and adjacent to the protected features within linkage;
Detail the drainage characteristics of lands adjacent to natural features within linkages to be retained (if any), and assess any impacts associated with drainage to the natural features;
In cases where a linkage is crossed by a road(s) installed by a proponent, detail the road characteristics and identify potential impacts to features within the linkage (if any) including delineation of features and protective measures, detail location, type and size of crossing structures from a wildlife movement (ecopassage) perspective;
Identify the limit to which a stormwater management pond overlaps with linkage boundary (as per NOCSS), to be reviewed in the field by agencies as noted above;
In linkages which include stream corridors, it may be necessary to stake and survey the linkage (and the SWM pond overlap) at this time;
Detail any restoration/naturalization measures within the linkage whenn proponent intrusion has occurred.
Detail mitigative measures and assess potential residual impacts of proponent works/intrusions; and,
Develop a monitoring plan of the mitigative measures noted above, based on liaison with agency staff (Conservation Halton, Town of Oakville).

3.3 Stream Systems, Fish Habitat and Fish Communities

3.3.1 Introduction

The Natural Heritage System for North Oakville includes protection and enhancement of high and medium constraint streams, which are identified as red and blue streams respectively in the Secondary Plan. This approach identified the "provision of a corridor system for streams that have been identified as having environmental characteristics or watershed functions that require protection and/or enhancement to meet the watershed goals and objectives" (NOCSS, Management Report Section 6.3.2).

The stream corridors identified in the NOCSS and Secondary Plan were developed using the concept of riparian corridor identification. The classification was based upon the stream characteristics and related processes considering the role of adjacent lands. This approach then identified the streams to be protected as well as the width of neighbouring lands, or corridor widths that need to be protected. This classification was developed in conjunction with the Department of Fisheries and Oceans and

Conservation Halton, who conducted field surveys with representatives of the Town of Oakville subwatershed team.

The corridors have been identified in the Management Strategy and Secondary Plan as well as the conceptual width requirements. It is the intent that the corridor widths of the red and blue streams, and the end points of the reach delineations are to be refined as part of the EIR/FSS study. The factors to be considered in the refinement of the stream systems and corridor widths include:

Regulatory floodplain;
Fluvial geomorphologic requirements;
Stable slope top of bank;
Fish and fish habitat protection requirements;
Preservation of hydrogeologic functions;
Edge of any identified terrestrial features;
Hydrologic Features "A"; and
Setback and buffer requirements.

The following sections present a summary of the EIR/FSS study requirements for the development of North Oakville with respect to the streams component of the NHS.

3.3.2 Existing Conditions and Constraint Mapping

The following tasks must be undertaken by the proponent in order to fulfill the requirements of the EIR/FSS:

Describe the proposed land use change and associated servicing issues;
Confirm limits of EIR subcatchment area based on the NOCSS;
Assemble and review all relevant materials pertaining to the stream system of the NHS including the Secondary Plan and NOCSS and other studies;
Compile existing conditions and constraints (from existing data) and display on recent aerial photographs to delineate the stream system of the NHS; and,
Review and summarize factors leading to the identification of the corridor constraint level from a natural heritage perspective.

3.3.3 Detailed Studies

The following sections summarize the detailed study requirements for:

Corridor Width Delineation
Fish and Fish Habitat
Stream Modification and Rehabilitation

3.3.3.1 Corridor Width Delineation

Through the NOCSS, stream corridor widths were developed on a broad scale and, as such, are subject to refinement during the EIR/FSS stage. **Figures 6.3.15a, 6.3.15b** and **6.3.15c** in the Management Report of

NOCSS and an Appendix of the Secondary Plan provide illustrations clarifying the stream corridor delineation process. The corridor is defined considering the factors outlined in Section 3.3.1.

Specifically, the following tasks must be completed by the proponent in order to fulfill the EIR/FSS requirements:

a) Geomorphology:

Confirm delineation and potential refinement of stream reaches as outlined in the NOCSS;

On a reach basis, conduct an historic evaluation of changes in land use and channel configuration over time utilizing a series of historic aerial photographs or mapping that extend from the earliest (i.e., 1930's to 1950's) to most recent coverage available;

Based on the results of the historic evaluation, quantify the 100-year erosion rate on a reach basis;

Delineate meander belt width on a reach basis, following *Belt Width Delineation Procedures* (PARISH Geomorphic Ltd., 2004). It should be noted that factors affecting the ultimate stream corridor width include degree of channel confinement, type of valley system (i.e., major or minor valley), channel position relative to the valley wall and proposed servicing modifications;

As per **Figures 6.3.15a** and **6.3.15b**, apply the 100-year erosion rate to each side of the belt width as a factor of safety (in lieu of an historic evaluation, a factor of safety represents 10% of the meander belt width on each side (total of 20%) or as determined through a 100-year erosion rate of channel bends that define the belt width); and,

Perform field investigations, including rapid geomorphic assessment, to confirm desktop analysis, with respect to the 100-year erosion rate and meander belt width on a reach-by-reach basis.

b) Regulatory Floodplain

The floodplain will be defined for all medium and high constraints streams, which are identified as red and blue streams respectively in the Secondary Plan;

The floodplain calculations shall be based on the applicable Provincial Technical Guidelines (i.e., Technical Guide – River & Stream Systems: Erosion Hazard Limit, Ministry of Natural Resources & Watershed Science Centre, 2002). It is intended that the Regulatory Floodplain would be determined through this process. Further the calculations should include consideration of:

- Flow rates based on Regional Storm (existing or future land use, as appropriate (see Section 3.4.4)) or 100-year flood event, whichever is greater;
- Stream corridor hydraulic properties (i.e. roughness), based on existing and planned ultimate conditions;
- Where alteration of any existing floodplains is proposed, demonstrate the preservation of floodplain stage-storage -discharge in accordance with directions in the NOCSS; and
- Field surveys to provide cross-sections and an invert profile to provide for updated regulatory flood lines to Conservation Halton specifications.

A full range of return period flood levels will be calculated for the purpose of maintenance of riparian storage calculations, SWM facility and outlet design, etc.

c) Geotechnical

As per **Figure 6.3.15a** and in fulfillment of Conservation Halton's *Policies, Procedures and Guidelines for the Administration of Ontario Regulation 162/06 and Land Use Planning Policy Document* (2006), a site specific study must be completed to determine the toe erosion allowance on a reach basis for confined river systems;

As per **Figure 6.3.15a** and in fulfillment of Conservation Halton's *Policies, Procedures and Guidelines for the Administration of Ontario Regulation 162/06 and Land Use Planning Policy Document* (2006), a geotechnical stable slope assessment must be completed to determine the 'stable slope top of bank' in a confined setting. The stable slope line is to be drawn from the limit of the toe allowance;

As per **Figure 6.3.15b**, if a stream within an unconfined corridor will be lowered for servicing such that the valley depth becomes greater than or equal to 2 metres, then geotechnical stable slope design must be incorporated (refer to **Figure 6.3.15a**);

The physical (or geographical) 'top of bank' of valley features greater than or equal to 2 metres in height, will be established in the field in conjunction with Conservation Halton and Town of Oakville staff, and the applicant. The top of bank, as staked in the field, will represent the limit of the physical top of bank. When staking the limit of the physical top of bank, staff of Conservation Halton will require that the applicant's surveyor be in attendance during the site walk; and,

Based on the results of the geotechnical stable slope assessment, identify the greater of the 'stable slope top of bank' and the 'physical top of bank'.

d) Fish Habitat Setback

Identify any relevant fish habitat setbacks, on a reach basis. These setbacks are to be based on the fisheries buffers recommended in the NOCSS Management Report, and as confirmed through the studies outlined in Section 3.3.3.2;

With respect to Species at Risk, fish habitat setbacks will be identified on a reach basis with reference to NOCSS, and through discussions with relevant agencies; and,

As per **Figures 6.3.15a** and **6.3.15b**, these fish habitat setbacks are to be applied to the bankfull channel, or unless otherwise specified in the NOCSS Management Report.

e) Valleylands Setback

Determine the nature of the valley setting (major or minor) on a reach basis. Major valley system refers to the Sixteen Mile Creek valley system, and the balance of the valley systems in North Oakville are minor systems;

In confined river systems, a 15 metre setback must be applied to the stable slope top of bank for major valley systems and a 7.5 metre setback must be applied to the stable slope top of bank for minor valley systems;

In unconfined river systems, a 15 metre setback must be applied on both sides of the meander belt allowance for major valley systems and a 7.5 metre setback must be applied on both sides of the meander belt allowance for minor valley systems; and

In some cases, the Regulatory Floodline may define the corridor width. Floodplain modifications (subject to the approval of Conservation Halton) may alter the location of the floodline in which case the setback would be applied to the altered floodline.

It should be noted that, as per **Figure 6.3.15c**, the final corridor width determined on a reach basis for confined river systems represents the greater of the meander belt width plus factor of safety plus major/minor valley system setback OR the stable slope top of bank plus toe erosion allowance plus major/minor valley system setback. If servicing modifications are proposed within the identified land use change, the proponent must be cognizant of the implications of channel deepening which may result in a reclassification of degree of stream confinement.

f) Forested Stands within Stream Corridors

The presence of forested stands within stream corridors was not used as a factor directly affecting stream corridor widths in the NOCSS. However, preservation of forested stands within stream corridors is generally preferred, and recommendations were provided in the NOCSS for forest preservation within stream corridors. For the purposes of an EIR/FSS, the following tasks must be completed:

Use a combination of aerial photographs, ground-truthing, and ELC mapping to determine the extent of forested cover within potential stream corridor(s) (as defined by other factors discussed in this section of the Terms of Reference);
Identify the characteristics of forested stands and their relationship to the stream corridor (including potential implications, if any, on stream corridor width/location); and,
Identify forested stands within the stream corridor(s) and measures to be used to protect and/or manage them as appropriate.

3.3.3.2 Fish and Fish Habitats

Introduction:

The following section summarizes the study requirements for fish and fish habitats in the EIR/FSS. An assessment of fish habitat throughout the EIR subcatchment area will be required. This will provide the context and ensure that connectivity to fish habitats throughout the subcatchment are understood and addressed as required by DFO. On the other hand, certain impact assessments require details that are only available at the Draft Plan level of detail, especially those associated with proposed stream modifications. As such, the following discussion of the Terms of Reference is divided into three components.

Study components that must be completed at the EIR subcatchment area level or beyond: This level of study is required to assess fish habitats that extend beyond the limits of a single Draft Plan and require analyses based on subcatchment boundaries in order to understand the factors that drive the sustainability of the aquatic ecosystem;
Study components that require Draft Plan level of detail in order to be completed: This level of study focuses on detailing the potential impacts of proposed land use changes on the fish habitats. As such, details regarding the proposed undertaking must be available in order to understand the sources of, and potential mitigation of, potential impacts; and,
Study components that focus on cases of proposed modifications to streams.

EIR Subcatchment Area Level of Detail*:*

Carry out the work necessary to refine, map and describe stream reaches on an EIR subcatchment area basis to compare this mapping to mapping done for the NOCSS Characterization Report, and present findings on recent aerial photographs to determine any changes to channel alignment or location relative to the NOCSS;

Assemble background information on fish and fish habitats from the NOCSS and other secondary sources;

Conduct a preliminary field review (e.g. using recent aerial photographs) of aquatic habitat factors leading to the classification of aquatic habitat (i.e., critical, important, marginal) as defined in the NOCSS and confirm the aquatic habitat designation of each stream on a reach basis;

Identify reaches with critical, important or marginal aquatic habitat targeted for rehabilitation measures (to identify compensation opportunities); and,

Compile aquatic habitat management recommendations on a reach basis as identified in the Management Strategy.

Draft Plan Level of Detail:

Prepare detailed habitat mapping for all streams that contain fish habitat, which potentially may be impacted by the proposed development (e.g., road crossings, SWM outfalls, compensation reaches, trails, etc.). Confirm location and map important habitat structure including in-stream vegetation, boulders, undercut banks, riffles, pools, runs, and woody debris;

Identify any habitat features supporting critical life stages of fish or other aquatic biota and describe potential impacts to this habitat. Indicate how impacts to these critical habitats will be mitigated so as not to affect the form or function of these habitats;

Additional fish sampling may be necessary to fill information gaps, as determined in consultation with Conservation Halton;

Detail the proposed drainage characteristics of lands adjacent to fish habitats and assess any impacts associated with drainage ;

Detail proposed works (e.g., stormwater management facilities, road crossings, grading, trails, etc.) adjacent to the fish habitats and assess/predict the impacts of construction and operation of the works, considering channel length and form, riparian buffers, flow volume and duration, water quality and water temperature;

Detail mitigative measures and assess potential residual impacts of any works in or adjacent to fish habitats. Provide evidence that alternative methods and measures for minimizing impacts have been considered; and,

Identify buffers from stream reaches for use in identifying stream corridor widths (see Section 3.3.3.1 d).

Modified Stream Reaches:

Complete fish and fish habitat studies required for proposed stream modifications (see Section 3.3.3.3 below).

3.3.3.3 Stream Modification/Rehabilitation Measures

Stream rehabilitation opportunities have been identified in the Management Strategy and are illustrated in **Figure 6.3.13 (NOCSS)**. **Section 6.3.4.2 (Table 6.3.4)** of the Management Report identifies enhancement recommendations for stream rehabilitation and **Section 6.3.4.6** (**NOCSS)** outlines considerations for stream relocation.

Stream modification may occur under circumstances such as the following:

Stream reach rehabilitation
Stream reach relocation and/or lowering
Road, trail and infrastructure crossings
Construction of SWM outfalls

It should be noted that authorization by the DFO will be required for any watercourse alteration resulting in a Harmful Alteration, Disruption or Destruction (HADD) of fish habitat and may be required for rehabilitation and for elimination of some low constraint streams. Consultation with DFO, in conjunction with Conservation Halton is required.

Where modifications are proposed by a proponent for medium constraint streams, it will be necessary to demonstrate that the newly constructed stream will maintain and where possible enhance existing channel form, function and aquatic habitat. The established riparian corridor width must also be maintained on a reach basis. Reconstructed channels should incorporate "natural channel design" elements and should transition effectively with downstream receiving waters. Specifically, the following requirements must be fulfilled as part of the EIR/FSS:

Perform 'rapid' field assessments to determine channel sensitivity and identify dominant processes (e.g., aggradation, widening, planform adjustment). During this assessment any existing erosion sites or infrastructure will be mapped and evaluated for rehabilitation or removal;
Conduct a detailed field investigation of the reach requiring modification or an appropriate reference reach (channel relocation) in order to determine existing aquatic habitat features, stream geometry and channel morphology;
Confirm the extent of all fish habitat with DFO during preparation of the EIR/FSS;
Prepare a fish habitat compensation plan that clearly demonstrates how modified reaches will achieve a net gain in fish habitat and meet the 'no net loss in fish habitat productivity' as required by Section 35(2) of the Fisheries Act;
Illustrate the extent of any features supporting critical life stages of fish or other aquatic biota and clearly demonstrate how the proposed compensation will replace the form and function of this habitat;
Quantify existing aquatic habitat features (e.g., number and linear extent of pools, riffles, runs) for use in ensuring that the proposed compensation plan adequately replaces the type and extent of existing habitats;
Use a combination of aerial photographs, ground-truthing, and ELC mapping to determine the extent of wetland cover for each Hydrologic Feature 'A';
Identify the form and function of each Hydrologic Feature 'A' and document its ecological and hydrologic relationship to the watercourse (e.g., does the feature represent an online pond or wetland);
Identify how the ecological and hydrological relationships of the Hydrologic Feature 'A' is considered in the proposed stream modification;
Develop preliminary design concepts based on the principles of "natural channel design";

Review hydraulic modeling to confirm 2-year flow conditions, regulatory flood levels and any potential impacts of modifications on regulatory floodlines;
Based on the foregoing, identify the recommended modification to the watercourse in the form of conceptual drawings;
Clearly demonstrate how the proposed modification measures meet the management recommendations identified in the Management Strategy;
Consider construction approach and timing of conceptual design; and
Identify and detail mitigation requirements related to road crossings.

Design submission requirements will be specified by the review agencies and generally will include the following:

Plans and elevations;
Restoration details including conceptual landscape plans, plan form, profile, cross-sections and typical treatments;
Erosion and sediment control requirements;
Design brief; and
Monitoring Plan for proponent modifications, including any DFO requirements.

3.4 Grading, Drainage, Stormwater Management

3.4.1 Introduction

A major element of the EIR/FSS involves the development of a preliminary grading, stormwater servicing and stormwater management plans. This is to address the overall serviceability of the lands, to determine the grading required to service the lands, and to ensure integration with neighbouring lands, cores, linkages and receiving watercourses.

3.4.2 Topography and Grading

The following additional work will be needed to upgrade existing information and provide the additional details required to develop grading and servicing plans:

Topographic mapping that meets Town of Oakville and Conservation Halton requirements, if any;
Detailed survey information is to be obtained for any proposed watercourse crossings, core or linkage crossings for services, including roadways; and
Collection of field information to further delineate and quantify topographic depressions as identified in the NOCSS study.

3.4.3 Preliminary Grading and Drainage Plan

Use updated topographic mapping and survey work to refine the EIR subcatchment boundaries; Prepare a preliminary grading plan for the proposed development area, and a conceptual grading plan for the EIR subcatchment as necessary, to ensure servicing functionality. It is recognized that the level of detail for the EIR subcatchment will be more conceptual than within the proposed development area;

A drainage and servicing plan for the EIR subcatchment area is to be developed identifying the storm drainage network, including conceptual designs of storm trunk sizes and profiles, SWM facilities (see Section 3.4.5) and the major and minor system;
Potential conflicts with the ability to protect the NHS are to be identified and mitigation proposed. Examples include:

- Any increase or decrease in drainage area to a NHS feature. It is intended that existing drainage characteristics (e.g., flow volumes, form and location) are maintained. Some minor flexibility in this may be possible provided that the feature and its functions are protected;
- Change in grades adjacent to a NHS feature that could impact surface drainage or groundwater conditions;
- Location of underground services adjacent to a NHS feature that would influence groundwater levels and impact the feature (i.e., wetland).
- Details on proposed drainage features with NHS areas designed with the purpose of protecting, maintaining and augmenting the natural hydrological regime of the NHS. All proposed (or required) drainage features must also be shown on the plan(s), including the extent of grading associated with the drainage feature. The location of these works should be considered during the staking process. If this drainage feature is associated with a proposed trail system refer to Section3.7 for further requirements.

Grading and servicing details in support of stream lowering and/or relocation to be undertaken by a proponent are to be provided.
Lowering of existing culverts at Dundas Street may need to be considered. The lowering of red streams is not permitted; however, this may apply to blue streams and any other crossings. If proposed by a proponent, details of any lowering are to be provided, as detailed in Section 3.3.3.3; and,
A conceptual approach to erosion and sediment control is to be provided to the satisfaction of the Town.

3.4.4 Water Resources-Related Analyses

Analysis and/or modeling are required for the following components:

Hydrology and SWM facility analyses:
- Water quantity
- Water quality and water balance
- Erosion control
- Topographic depressions

Development or refinement of floodline mapping (see Section 3.3.3.1 b)
Flow analysis for drainage system design (sewer sizing in accordance with municipal standards)

Guidance to the analysis required to address the hydrology and SWM facility analyses is presented in the following subsections.

a) Water Quantity

Hydrology Modeling

The approach to modeling for hydrology related to SWM sizing for flood and erosion control is to be determined in consultation with the Town of Oakville and Conservation Halton, as an initial step in the EIR/FSS. Consideration of impacts to existing downstream online facilities will need to be addressed in the EIR/FSS. It is intended that flexibility be provided in the selection of a modeling approach; however, the approach is to follow commonly accepted practices.

The modeling of predevelopment conditions to establish unit flow rate targets for quantity (flood) control (2-year through Regional Storm flows) purposes has been completed as part of NOCSS. Further modeling of predevelopment conditions is not required for this purpose. SWM ponds are to be sized to meet unit flow rate targets.

Regional Storm Control

The NOCSS recommends that stormwater management targets include control of the peak flow to predevelopment levels for the 2-year to 100-year return period events and the Regional Storm. With the exception of Joshua's Creek, where control of the Regional Storm event is required, future land use development applicants may carry out an investigation of the potential increase to flood risk to confirm if Regional Storm controls are necessary. Existing stream crossings and online control structures should be field verified by the proponent and reflected in the modeling as part of the Regional storm control analysis. This analysis is to include the increase in risk to life as well as the potential for flood risk to private, Municipal, Regional, Provincial and Federal property under Regional Storm conditions. If the study finds, and the Town and Conservation Halton concur in that finding, that no increase in risk occurs to downstream landowners or public uses, the Town in conjunction with Conservation Halton will conclude, subject to consideration of any other relevant factor within their respective mandates, that control at the Regional Storm level is not required. Evaluation of risk may include, but is not limited to:

All development within North Oakville for the watershed under consideration;
The potential increase in flood risk for the entire downstream watercourse to its outlet at Sixteen Mile Creek;
The examination of potential increase to flood risk related to the:

- Potential increase in flood elevations;
- Potential increase in flood velocities;
- Potential for the foregoing increases to adversely affect all landowners including individuals, municipal agencies, provincial agencies (MTO, MOE, etc.) and federal agencies;
- Potential for the foregoing increases to adversely affect all land uses including road crossings, private access road, parks, storm sewer outlets, etc.; and,
- Potential for the implementation of mitigation measures to address any increase in risk as an alternative to the requirements to control Regional Storm flows.

It is understood that not all increases in flood velocity or flood elevation will necessarily lead to an increase in risk.

The final approach with respect to this issue may have a significant impact on the SWM quantity related results for the EIR/FSS.

If it is determined, by the Town of Oakville, in conjunction with Conservation Halton, that it is not necessary to control peak flow rates, under Regional Storm conditions, to pre-development levels, then post development flow rates for the Regional Storm will need to be calculated through modeling as part of this study. These flow rates will then be used to determine flood elevations and associated flood lines for regulatory purposes. The modeling will be carried out to the satisfaction of the Town of Oakville and Conservation Halton.

b) Water Quality and Water Balance

The NOCSS recommends meeting MOE's Enhanced Level of protection (Level 1) for phosphorus control and fishery protection in sizing stormwater management facilities for water quality control. It is an objective of the Town that there be no-net increase in phosphorus loadings as a result of development. This objective will be met with the use of enhanced Level SWM ponds and as a result, there is no requirement to further analyze phosphorus loadings during development approvals.

The NOCSS also recommends the use of a hierarchy of stormwater controls with preference for source control (site level), then conveyance system control, followed by end-of-pipe control. In addition, where feasible, the use of infiltration measures, including the diversion of drainage to pervious surfaces as well as designed infiltration facilities, surface retention, and storage is encouraged, to help maintain pre-development water balance conditions (see also Section 3.5 Hydrogeology). The implementation of the foregoing would be subject to best efforts to meet water balance objectives, including reduced runoff volumes and maintenance of groundwater levels, and the hierarchy of SWM controls. The examples presented in NOCSS Appendix AA – Test Catchment Design Case and Appendix LL – Analysis of Treatment-Train Design for Water Quality Control reflect both the hierarchy of measures (treatment-train approach) and the use of infiltration measures in the design.

Should the proponent wish to further analyze SWM pond sizing to account for the use of a variety of SWM measures (i.e., potential to reduce pond sizes), the above noted appendices present procedures for the following cases:

In the case where Enhanced Level water quality ponds are to be used, calculations to support a reduced level of imperviousness will be acceptable as a basis for sizing the water quality pond where source or conveyance controls also are used to provide surface storage/retention or infiltration in permanent locations;

In the case where an Enhanced Level water quality SWM pond is not proposed but rather a combination of source, conveyance system, and/or end-of-pipe facilities are proposed, then calculations of the combined efficiencies of the facilities should be carried out to support the design, with a view to achieve a combined performance of 80% TSS removal and/or 65% TP removal, as required by an Enhanced Level of protection; and,

For serviced lands with a drainage area of less than 5ha, where the size of drainage area limits the feasibility of end-of-pipe facilities for SWM, the use of lot and/or conveyance type of SWM measures will be needed to meet SWM requirements. It is recognized that it may be difficult to meet the enhanced level of SWM needed to provide for the water quality control target. In that event, it must be demonstrated that every reasonable effort has been made to provide an approach that would meet the water quality target. If it is agreed by the Town of Oakville and Conservation Halton that enhanced level of control cannot be provided for in the serviced area, it must be demonstrated that the enhanced level of control, as well as other SWM targets are being met within the overall EIR subcatchment area that contains this particular serviced area.

c) Erosion Control SWM Facility Sizing

In order to ensure that the receiving channels will not experience higher than normal rates of erosion, a threshold flow needs to be incorporated into the design of each SWM facility. Analysis in support of SWM facility sizing must include erosion threshold analysis and continuous hydrologic modeling to ensure that appropriate extended detention storage is provided.

Erosion thresholds were broadly characterized in **Section 5.8 (Table 5.8.5)** of the NOCSS Analysis Report. A more detailed determination of erosion thresholds is required at the EIR/FSS stage. These thresholds are meant to be integrated into a stormwater management system design in such a manner that existing channel erosion or aggradation is not exacerbated. Specifically, the following requirements must be fulfilled as part of the EIR/FSS:

Confirm reach delineation work completed for the NOCSS using best available mapping and aerial photography;

Determine if erosion thresholds previously identified in the NOCSS apply to the EIR subcatchment area;

Confirm the location of SWM ponds within and downstream of the identified EIR subcatchment area;

Conduct rapid geomorphic assessments on a reach basis to verify desktop analyses and identify areas most susceptible to erosion;

Perform detailed field investigation(s) along the most geomorphologically sensitive reach(es) to quantify channel geometry and identify active geomorphic processes;

Apply multiple analytical methods (e.g. critical shear, stream power and permissible velocity models) to the field data in order to calculate an erosion threshold in terms of the point at which sustained flows will tend to entrain and transport sediment using data collected during the detailed field investigation(s);

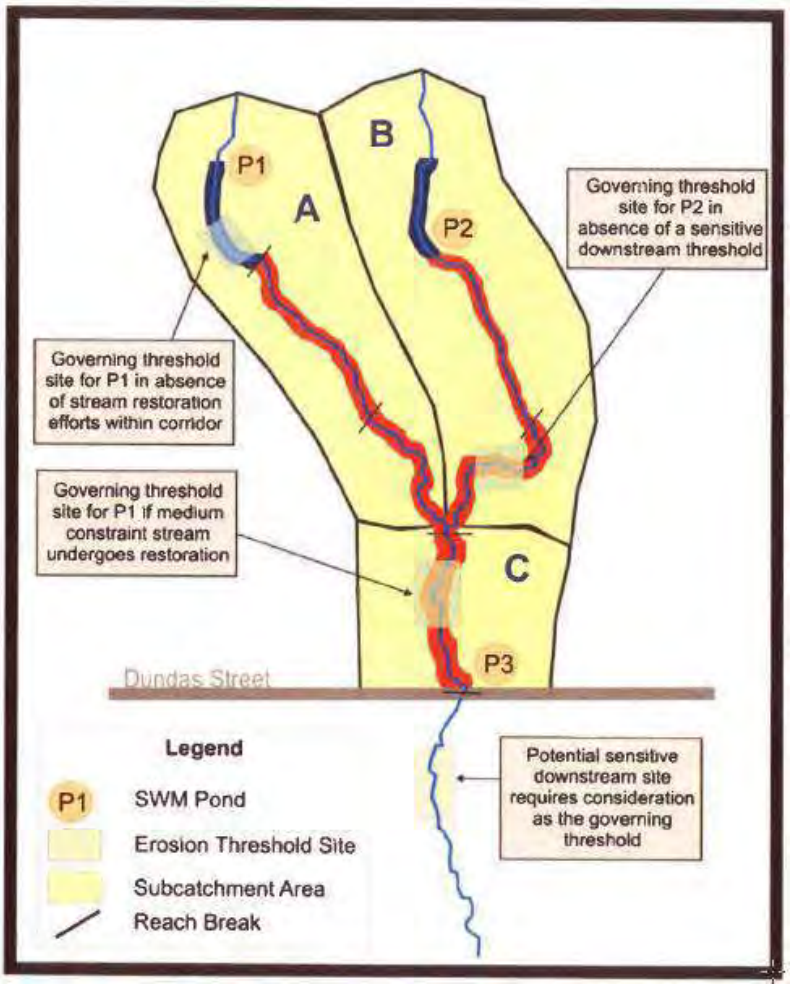
Select an appropriate defining threshold based on model convergence and compatibility with indicators of active processes (e.g., widening and entrenchment) as identified through the field investigation;

Perform an analysis of pre and post development conditions using a continuous hydrologic model on a subcatchment area basis to identify erosion control sizing for SWM facilities. Specifically, the frequency and duration of time (expressed as hours) that the erosive threshold flow is exceeded, in the pre-development condition, is to be matched in the post-development condition (i.e., results are within approximately 5% of the pre-development conditions. Before a 5% increase is accepted, work needs to be completed as to the likely effects and implications of this nominal increase to determine whether further mitigation, modeling refinement or monitoring is warranted); and,

Clearly illustrate how the proposed development scenario meets erosion control criteria as established in the NOCSS.

It should be noted that, while the erosion threshold assessment is conducted on a single subcatchment area basis, the proponent must be aware that areas downstream need to be considered when selecting the most sensitive reach, as depicted in Figure 3.4.1.

Figure 3.4.1: A Hypothetical Example Illustrating Relevant Erosion Threshold Procedures in the Context of Subcatchment Areas



Note: The most sensitive reach for SWM P1 is highlighted in the shaded area downstream of the pond. However, an assessment of downstream reaches beyond the subcatchment boundary is required in order to ensure that no additional impacts are created. Moreover, if restoration of the medium constraint stream is anticipated, then an analysis of downstream reaches would be required to determine the governing threshold for SWM P1. As discussed in the previous text, the governing threshold could be located downstream of Dundas Street (beyond the boundary of the EIR Subcatchments), depending on the relative sensitivity of stream conditions. In this example, the shaded area in Subcatchment A would govern as the most sensitive reach for SWM P1. Also, in the event that the shaded area downstream of SWM P1 was so unstable that erosion threshold targets could not be met, this reach could be restored and enhanced and the threshold for Subcatchment C then would apply.

d) Topographic Depressions

In North Oakville, there are a number of topographic depression areas that are poorly drained. The characteristics of this topography have an impact on the response characteristics of the area during precipitation and runoff events. Consequently, NOCSS requires, as part of the EIR/FSS, that the storage within the topographic depressions be refined and checked against the storage within proposed SWM ponds in the EIR subcatchment area to verify that the SWM pond storage accounts for the depression storage. Thus, the SWM ponds volume must be equal to or greater than the original depression storage volume.

In general, the NOCSS hydrologic model incorporates depression storage to establish unit area target flow rates. The calculation and comparison of depression storage to SWM storage is intended as a check to ensure that the existing condition peak flow rates do not increase as a result of land development. The principle behind this approach is to ensure that the hydrologic analysis and SWM approach reflects the existing site conditions that include a number of topographic depressions, and the natural depression storage is maintained in the SWM system.

This approach is not to include artificially created storage such as that created by embankments or dug facilities. Although the topographic depressions are illustrated in NOCSS, referred to as pits, ponds and depressions, the existing mapping does not provide for accurate delineation of these depressions.

The more detailed mapping and other relevant investigations of the EIR/FSS are to be used to confirm the existence, nature (natural or artificial), and storage volume of these depressions.

To ensure that the storage volume of the depression storage areas is maintained, the calculated depression volume is to be compared to the SWM pond volume of the proposed SWM facility within the same subcatchment drainage area. If the depression storage volume is less than or equal to the SWM facility volume, no additional analysis or change to the SWM facility design is required. In the event that depression storage is greater than the SWM facility volumes, the SWM facility volume (as noted in the following points) is to be adjusted to be equal to the depression storage volume.

Calculations and volume comparisons shall be done as follows:

2-year event: Calculate the 2-year depression storage volume and compare this volume to the water quality (extended detention and permanent pool) volume in the SWM facility.

100-year event or Regional Storm (whichever is applicable): Calculate the 100-year or Regional Storm depression storage volume and compare it to the total storage volume (permanent and active storage) in the SWM facility (up to 100-year or Regional Storm event).

3.4.5 SWM Plan

A SWM plan is to be developed as part of the EIR/FSS to demonstrate how the targets as specified in the Management Strategy are to be met. It is intended that SWM is to be provided through a combination of "Best Management Practices" (BMP), which may range from at-source controls to end-of-pipe solutions. The preliminary location of SWM ponds is illustrated in the Management Strategy; however, flexibility on the final location is anticipated.

In developing the overall SWM Plan, a treatment train approach is to be applied in evaluating the effectiveness of BMPs. Consultation with the Town of Oakville and Conservation Halton will be required in the selection of measures and their effectiveness.

The use of BMP s for stormwater management (in addition to SWM ponds) can reduce the size of the ponds. The measures are to be evaluated in their ability to retain water on-site and thereby maintain existing condition water balance where feasible based on site soil conditions, and protect water quality in relation to the NOCSS recommendations (i.e. phosphorus control, temperature control, suspended solids reduction).

Preliminary design details for the SWM ponds will be required as part of the EIR/FSS including:

SWM pond block sizing, including preliminary grades, design water levels (pond and receiving body outlet), storage volumes and maintenance access provisions;
Cross-section details;
Pond profile including inlet and outlet;
Landscaping provisions as per Conservation Halton guidelines; and
Monitoring plan to the satisfaction of the Town.

3.5 Hydrogeology

3.5.1 Introduction

The NOCSS prepared in support of the Secondary Plan for the North Oakville area included recommendations for more detailed hydrogeological investigations as part of the EIR/FSS in support of proposed Draft Plans.

The purpose of the detailed hydrogeological study is to characterize existing hydrogeological conditions, quantify potential groundwater-related impacts and determine the need for, and nature of, any mitigation measures required to protect the hydrogeological features and functions within the EIR subcatchment area.

3.5.2 Technical Requirements

The EIR must address the entire EIR subcatchment area within which the proposed development area is located. Therefore, in addition to site investigations specific to the proposed development area, it may be necessary to secure access to adjacent properties or road allowances to investigate areas of the EIR subcatchment area outside the proposed development area.

The level of detail must be sufficient to support submission of Draft Plans of subdivision. The methodology to complete the study requirements is at the discretion of the consultant, but must conform to generally accepted groundwater engineering and hydrogeologic practices.

Boreholes and groundwater observation wells must be distributed such that the groundwater conditions are defined for the proposed development area and the EIR subcatchment area. Any specific on-site features are to be investigated.

a) Geology and Hydrogeology

Provide an overview of the regional geological setting;

Drill boreholes to determine the site-specific geology (stratigraphy and depth to bedrock). The number of boreholes will depend upon the sizes of the EIR subcatchment area and the proposed development area, the background data available, and the geological complexity of the area;

Collect soil samples from each borehole and test for grain-size to characterize the soil types and to assist in determining soil hydraulic conductivity;

Relate the local geological data to the regional geological setting;

Establish a network of groundwater observation wells to determine the depth to the water table and vertical and horizontal groundwater gradients;

The number of monitoring wells to be installed will depend upon the EIR subcatchment area and the proposed development area sizes, the complexity of drainage, the number of environmental features, the locations of groundwater divides, and the background data available. Where available, existing observation wells may be used;

Survey all monitoring locations for coordinates and geodetic elevation;

Map the groundwater flow conditions (including vertical and horizontal flow components);

Conduct bail-down, slug, or other appropriate field tests to confirm well function and assess the hydrogeological characteristics of stratigraphic units (e.g. *in situ* hydraulic conductivity);

Provide estimates of groundwater flux;

Monitor groundwater levels in all observation wells (data included in the EIR/FSS should be related to the regional groundwater elevation data and be sufficient to document the response of the shallow groundwater to climatic conditions throughout the year). A minimum of one water table observation well should be equipped with a data-logger to continuously record water levels. The data must be corrected for barometric response;

Monitor surface water baseflows (non-storm event flows; minimum of 3 days post precipitation event) upstream and downstream in all identified watercourses. These data will be used to assist in establishing the groundwater contribution to stream flow and infiltration as part of the water balance assessment;

Collect a sufficient number of groundwater and surface water samples for laboratory analysis of major ion chemistry to establish the background water quality across the area. These data will be used to assist in the assessment of groundwater/surface water interactions and to establish baseline pre-development conditions;

Map groundwater discharge areas and identify any areas along stream corridors for recharge/discharge function protection; and,

Complete a water balance analysis to determine the pre-development (based on existing conditions) and post-development (based on the proposed land use plan) interflow and deep recharge volumes. The water balance should utilize the longest and most continuous local daily climate data and a soil-moisture balance approach (e.g., Thornthwaite and Mather) with daily or monthly calculations reported on an average annual basis. Surface water flow data should be used to validate the existing conditions water balance where possible.

b) Requirements for Proposed Development Plan

Determine the infiltration deficit (pre to post development) for the proposed development area and the EIR subcatchment area;

Identify hydrogeological opportunities and constraints to maintaining the water balance (i.e., to reduce the infiltration deficit);

Identify the type, location and size of infiltration or storage measures that may be feasible for use based on the site specific geological and hydrogeological conditions;

Evaluate opportunities for augmenting groundwater infiltration through appropriate and practical Best Management Practices (e.g., as outlined in the MOE Stormwater Management Planning and Design Manual 2003) to balance, or at least in part, make up the post-development infiltration deficit;

If pre-development infiltration cannot be maintained, predict the impact of this change on the flows in local streams and on the local water table and recommend mitigation measures as required;

Identify areas where hydrogeological conditions may affect construction (e.g., high water table, requirements for dewatering, etc.), and recommend control and mitigation measures, if warranted; and,

Evaluate the potential for impacts from proposed underground services on shallow groundwater conditions adjacent to cores, linkages and stream corridors. If the potential for negative impact exists, mitigative measures are to be recommended.

3.6 Sanitary, Water, Roads

Analyses and details must be provided for the servicing of a specific development application. In addition, it will be necessary to provide conceptual designs of trunk services within the EIR subcatchment (conceptually only in areas not part of the proposed development area; FSS level of detail in the proposed development area) including appropriate connections to external areas, demonstrating servicing viability without placing undue restrictions on external areas (e.g., considering sewer depths and grading). Sufficient analysis is necessary to ensure that external lands can be serviced to meet Town and Region standards.

The FSS will build upon and implement, as applicable, recommendations of the Master Servicing Plan for the North Oakville East area, prepared as background to the Secondary Plan, and any applicable Master Servicing Plans prepared by the Region of Halton. The following tasks are to be undertaken.

Compile information from the NOCSS and the Secondary Plan specific to the proposed development area including design criteria, environmental designations, road locations and design levels, etc. and undertake an information gap analysis to determine additional information needs, if any;

Review detailed information on the proposed land uses of the development application, with respect to population, housing form, road pattern, open space components, and hard surfaces to provide input to engineering analysis;

Complete a sanitary servicing assessment to:

- determine the servicing requirements based on future system wastewater flows;
- recommend a preferred sanitary servicing option considering external and internal Infrastructure, and potential phasing;
- provide interim servicing solutions where feasible;
- assess site specific infrastructure locations and designs for crossings of streams, linkages and cores;
- make recommendations on preferred crossing locations, construction practices, and mitigative measures to minimize impacts to the NHS; and,
- determine consistency with Region of Halton Master Servicing Plan and explain differences;

Complete a water servicing assessment to:

- determine the servicing requirements based on future system demands;
- identify a preferred water servicing option considering external and internal infrastructure, pressure districts and potential phasing;
- assess site specific infrastructure locations and designs for crossings of streams, linkages and cores;
- make recommendations on preferred crossing locations, construction practices, and mitigative measures to minimize impacts to the NHS; and,
- determine consistency with Region of Halton Master Servicing Plan and explain differences.

Complete a road design assessment to:

- compile the road design requirements and road locations as identified in the Master Servicing Plan and the Secondary Plan;
- identify local road system within the proposed development area;
- assess site specific road locations and designs for crossings of streams, linkages and cores; and,
- make recommendations on preferred crossing locations and configurations, road design standards, and mitigative measures to minimize impacts to the NHS (e.g., ecopassages).

3.7 Trails

The following section summarizes the study requirements for Trails in the EIR/FSS. The purpose of these studies is to identify the potential impacts to the NHS and proposed associated mitigation. In general, the level of detail required at the EIR stage will result in a plan that includes the approximate centerline of trail with options in areas where issues have been identified.

Trail types and locations have been generally described in the Master Trails Plan for North Oakville. Through this plan 3 types of trails have been recognized: multi-use, major and minor. Multi-use trails are all located within road right-of-ways (r.o.w.'s). Major trails are 2.4m wide seasonal trails that are generally located in the NHS along the periphery or buffers of core areas, linkages, or are within stream corridors. Minor trails are 1 – 2m wide seasonal trails that are generally found within the core areas. Preference should be given to using existing and proposed road crossings for trails. Where trails will have any footprint impact within the NHS, the following is required.

3.7.1 Trails <u>exclusively</u> in buffer areas that are active agricultural areas at the time of study

Trail sections that are exclusively located within buffers that are active agricultural lands (row crops) must undertake Species at Risk (SAR) screening and complete appropriate seasonal field surveys. This would include the review of all associated species lists from NOCSS, as the status of some species has changed since NOCSS such that they are now species of conservation concern.
For example, Eastern Meadowlark and Bobolink are both listed as Threatened species and Redside Dace as an Endangered species, all of which are regulated including their habitat by the Endangered Species Act (2007).

All hazard trees within striking distance of the proposed trail must be identified and felled as a part of trail construction. These trees should be dropped so that they fall out of the natural area and into the buffer where they can create unique micro-habitats for plants and wildlife while minimizing damage to vegetation within the core natural area. A plan identifying hazard trees will be a condition of draft approval for review and approval prior to any tree removals occurring.

3.7.2 Trails in natural areas or crossing streams

Trail sections in natural areas including cultural thicket and meadow communities or crossing stream corridors must have appropriate field surveys done including the following as applicable:

- Review of all associated species lists from NOCSS, as the status of some species has changed since NOCSS such that they are now species of conservation concern.
- Ecological Land Classification (ELC) – All vegetation communities that are traversed need to be mapped and described according to the ELC. This includes generating a complete vegetation species list for each polygon. In this way appropriate mitigations such as avoidance can be made for any species of conservation concern including regionally significant species.
- SAR risk screening (NHIC database, Aurora District MNR and Conservation Halton data requests)- this screening will identify the need for any species specific field surveys and associated design requirements.Significant Wildlife Habitat (SWH) screening using the Ecoregion 7E Criterion Schedule (OMNR 2012) - this screening will identify the need for any specific field surveys.
- Complete Appropriate seasonal field surveys using approved protocols.
-
- The Draft Guidance for Development Activities in Redside Dace Habitat (OMNR 2011) should be referred to where trail development is to occur within the buffer area of Redside Dace habitat (watercourse meander plus 30 m).
-
- Prior to site walk, a certified arborist will have walked the proposed trail alignment and flagged any significant trees greater than 10 cm diameter-at-breast height (DBH) within 5 m of either side. Each of these trees will be assessed by a Certified Arborist to document species, size, health and general hazard rating. Trees recommended for preservation will then be surveyed and mapped during time of formal site walk (preliminary trail stake-out).
- Significant flora, wildlife habitat or desirable vegetation to be retained and avoided during trail construction should be surveyed and shown on the plan.

Detailed design submission requirements will be specified by the review agencies and Conditions of Draft Plan approval will generally include the following:

- Hydraulic impacts to the flood plain of any culvert crossings must be assessed and shall have no negative impacts to the lot lines.
- Where trails cross red streams only span structures are to be considered.
- Where feasible, crossings of watercourses are generally recommended to span three times the bankfull channel width of the watercourse.
- Blue streams can be crossed using either a span or a culvert (preferably open bottom) in combination with terrestrial eco-passages.

3.7.3 Trail Siting

The final trail location is to be determined in the field with Conservation Halton and Town of Oakville staff. The trail should generally be in the location identified by the Trails Master Plan unless an alternate location is identified as an outcome of site level surveys. For example, a stream crossing could be moved to take advantage of an existing agricultural crossing, or to an alternate location which provides for installation on a straight section of stream.

The field fitting of the final location completed with Town and agency staff must be informed by the ELC and required field surveys for wildlife as described above. This will ensure that any new constraints that are

identified through these surveys are considered in the final trail location and or that appropriate mitigations are identified. As such, the supporting materials should be received and reviewed by Town and Agency staff prior to completing the site visit. Trail siting field visits will be booked between May 1st and October 31st.

During the site walk with Town and agency staff, all natural features that factor into the final location will be identified for pick-up by surveyors to be shown on the plan. This will include all trees, and other vegetation or habitat features that are to be retained and protected during trail construction as per above. During this site walk, the trail centerline will be staked for survey to be shown on the plan.

If new drainage features are proposed within NHS areas, they should be designed with the purpose of protecting, maintaining, and augmenting the natural hydrological regime of the NHS. All proposed (or required) drainage features must also be shown on the plan(s), including the extent of grading associated with the drainage feature. The location of these works should be considered during the site walk and factor into the siting of the trail in terms of minimizing overall impacts to natural area. All trails should be sited as far as possible from the Natural Heritage Feature.

Detailed design submission requirements will be specified by the review agencies and Conditions of Draft Plan approval will generally include the following:

Plans and elevations;
Restoration details including proposed landscape plans, plan-form, profile, cross-sections and typical treatments;
Tree Preservation Plan details for all surveyed trees including existing health and protection measures, including hazard trees proposed for removal
Requirement to adhere to the Town's Trail Construction guidelines and/or
Best management practices for trails installations;
Specific construction timing criteria to minimize impact to natural
environment;
Erosion and sediment control requirements;
Design brief;
Monitoring Plan for planting establishment, and
Permits and associated technical studies as required by Conservation Halton for work within regulated areas

4.0 MONITORING

It will be necessary to detail environmental monitoring requirements as part of the EIR/FSS, in support of Draft Plans of subdivision, in accordance with applicable directions in NOCSS. As prescribed through NOCSS, the landowners are required to undertake operation, maintenance and monitoring in accordance with the Town of Oakville standards and North Oakville Monitoring Guidelines. Baseline monitoring is required prior to any development activity and as such consideration of this component of the monitoring program will coincide with EIR timing.

5.0 REPORTING REQUIREMENTS

A detailed report is to be prepared integrating the analysis, findings and recommendations covered in the study Terms of Reference.

Appendix 1.2 – References

Annable, W.K.,1996, Morphologic Relationships of Rural Watercourses in Southern Ontario and Selected Field Methods in Fluvial Geomorphology.

Axon, Brenda, Conservation Halton. Personal email communication dated August 17, 2010.

Bakowsky, WD. 1996. *Natural Heritage Resources of Southern Ontario: Vegetation Communities of Southern Ontario.* Ontario Ministry of Natural Resources, Natural Heritage Information Centre.

Barrett, Kim, Conservation Halton. *Personal Communication; March 30, 2009.*

Bird Studies Canada, Environment Canada's Canadian Wildlife Service, Ontario Nature, Ontario Field Ornithologists and Ontario Ministry of Natural Resources. 2006. Ontario Breeding Bird Atlas Website. http://www.birdsontario.org/atlas/index.jsp

Chapman, L.J and Putnam, D.F. *Physiography of Southern Ontario: Special Volume 2.* 1984. Ontario Geological Survey. http://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/SV02/SV02.pdf

Chapman, L.J. and D.F. Putnam, 1984, *The Physiography of Southern Ontario*. Ontario Geological Survey Special Volume 2, 270p. Accompanied by Map P.2715, scale 1:600,000.

Chu, Cindy, N.E. Jones, A.R. Piggott and J.M. Buttle. *Evaluation of a Simple Method to Classify the Thermal Characteristics of Streams Using a Nomogram of Daily Maximum Air and Water Temperatures, North American Journal of Fisheries Management 29: 1605-1619, 2009.*

Conservation Halton. 2006. *Policies, Procedures and Guidelines for the Administration of Ontario Regulation 162/06 and Land Use Planning Policy Document.* http://www.hrca.on.ca/uploads/Final_Policy_Document_162-06.pdf

COSEWIC. 2008. *COSEWIC assessment and status report on the Snapping Turtle Chelydra serpentine in Canada.* Committee on the Status of Endangered Wildlife in Canada. http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_snapping_turtle_0809_e.pdf

COSEWIC. 2002. *COSEWIC assessment and status report on the Milksnake Lampropeltis triangulum in Canada.* Committee on the Status of Endangered Wildlife in Canada. http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_milksnake_e.pdf

Credit Valley Conservation, Water Resources Management & Restoration, 2014. *IMAX Parking Lot Retrofit*.

Credit Valley Conservation, Water Resources Management & Restoration, 2014. *Elm Drive*.

Davis Jr., W.E. 2010. Black-crowned Night-Heron ON The Birds of North America Online. Accessed November 2010. http://bna.birds.cornell.edu/bna/species/074/articles/introduction

Davis, Jr., W.E and revised by Hothem, R.L and Brusee, B.E. 2010. *Black-crowned Night-heron* in *The Birds of North America Online* http://bna.birds.cornell.edu/bna/species/074/articles/introduction

Develin, J. Management Biologist. Ministry of Natural Resources and Forestry Aurora District. Personal Communication. December 20, 2013.

Dwyer, J.K. 2006. *The Halton Natural Areas Inventory 2006: Volume 1 Site Summaries.* Conservation Halton and Partners.

Endangered Species Act, 2007; Ontario Regulation 230/08, Species at Risk in Ontario List; Consolidation Period: September 28, 2010 to e-laws currency date.

EXP Services, November 18, 2011. *Slope Stability Analysis Report, 14 Mile Creek, Pigott Farm Land, Oakville, Ontario.*

Gillespie, J.E., Wicklund, R.E. and Miller, M.H. 1971. The Soils of Halton County. Ontario Soil Survey Report No. 43.

Golder Associates Ltd., January 2004. *Report on Hydrogeological Assessment of the Proposed Hanson Brick Tremaine Quarry, Burlington, Ontario.*

Golder Associates Ltd., March 2008. *Report on Initial Monitoring Report and Updated Hydrogeological Assessment of Tansley Quarry – Hanson Brick Ltd., Burlington, Ontario.*

Golder Associates Ltd., March 27, 2009. *Factual Results of Groundwater Level Monitoring at Tansley Quarry Site, Burlington, Ontario.*

Golder Associates Ltd., November 2009. *Report on 2008 Annual Monitoring, Tansley Quarry – Hanson Brick Ltd., Burlington, Ontario.*

Government of Ontario. Endangered Species Act, Ontario Regulation 242/08 General. 2007.

Halton Region and North-South Environmental Inc., 2005. *Halton Region Environmentally Sensitive Areas Consolidation Report*. http://www.halton.ca/common/pages/UserFile.aspx?fileId=19690

Halton Region, 2006. Halton Regional Official Plan (2006). http://www.halton.ca/cms/One.aspx?portalId=8310&pageId=26798#PDF_Version

Halton Water and Wastewater Master Plan Review, KMK Consultants Limited, October 2002 (Master Plan).

Johnstone, K, and Louie, P. Y. T., 1983. *Water Balance Tabulations for Canadian Climate Stations.* Hydrometeorology Division, Canadian Climate Centre, Atmospheric Environment Service, DS#8-83.

Jones, C.; K.M. Somers, B. Craig and T.B. Reynoldson; Ontario Benthos Biomonitoring Network: Protocol Manual. Queen's Printer for Ontario, January 2007

Lee, H.T., W.D. Bakowsky, J.L. Riley, J. Bowles, M. Puddister, P. Uhlig, and S. McMurray. 1998. *Ecological Land Classification for Southern Ontario: First Approximation and its Application.* Ontario Ministry of Natural Resources, Southcentral Region, Science Development and Transfer Branch. Technical Manual ELC-005.

Marshall Macklin Monaghan. 407 West Secondary Area, Master Environmental Servicing Plan, Draft. Town of Oakville. March 2003.

Marshall Macklin Monaghan. 407 West Land Natural Environment Survey 2005; Bentall Capital. December 2005.

MMM Group Limited, Area Servicing Plan - 407 West Employment Area, Oakville, Ontario, Draft, March 2011.

MMM Group Limited, Planning Rationale Report – 3269 Dundas Street West, Oakville, March 2011.

Natural Heritage Information Ontario (NHIC) website. Accessed 2010. http://nhic.mnr.gov.on.ca/nhic_.cfm.

Newmaster, S.G. et al. 1998. *Ontario Plant List*. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario, Forest Research Information Paper No. 123.

Oldham, M. J., W. D. Bakowsky and D. A. Sutherland. 1995. *Floristic Quality Assessment System for Southern Ontario.* Natural Heritage Information Centre, Ministry of Natural Resources. Peterborough, Ontario.

Ontario Department of Mines, 1964. *Bedrock Topography of the Hamilton Area, Southern Ontario, Map 2034 (1:63,360).*

Ontario Geological Survey, 2003. *Surficial Geology of Southern Ontario; Ontario Geological Survey, Miscellaneous Release - Data 128*.

Ontario Ministry of Municipal Affairs and Housing. *Provincial Policy Statement*. 2005. www.mah.gov.on.ca/Page1485.aspx

Ontario Ministry of Natural Resources (MNR). Land Information Ontario (LIO) Online Database using Internet Map Browser System. Accessed 2010. Queen's Printer for Ontario.

Ontario Ministry of Natural Resources Aurora District, 2006 (Revised). *Provincially Significant North Oakville – Milton West Wetland Complex*. http://www.oakville.ca/Media_Files/planning/North_Oakville-Milton_West_Wetland_Complex_Evaluation.pdf

Ontario Ministry of Natural Resources Aurora District, 2006. *Candidate Oakville – Milton Wetlands & Uplands Life Science Area of Natural and Scientific Interest.* http://www.oakville.ca/Media_Files/planning/Candidate_Oakville-Milton_WetlandsUplands_Life_ANSI.pdf

Ontario Ministry of Natural Resources, 2002, River & Systems: Flooding Hazard Limit, Technical Guide.

Ontario Ministry of the Environment, 2003. *Stormwater Planning and Design Manual*.

Ontario Ministry of the Environment, May 1982. *Manual of Policy, Procedures and Guidelines for Onsite Sewage Systems*.

Ontario Municipal Board. North Oakville Subwatershed Management Strategy. Mediation Item: Stormwater Management – Temperature and Dissolved Oxygen Targets. July 12, 2007.

Ontario Municipal Board. North Oakville Subwatershed Management Strategy. Mediation Item: Stream Corridor Components. May 31, 2007.

Ostry, R.C., 1979. *The Hydrogeology of the IFYGL Forty Mile and Oakville Creeks Study Area.* Ontario Ministry of the Environment, Water Resources Branch

PARISH geomorphic, 2004, Belt Width Delineation Procedures.

Redside Dace Recovery Team. 2010. Recovery Strategy for Redside Dace (Clinostomus elongatus) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 29 pp.

Schroeter & Associates, 1996, GAWSER: Guelph All-Weather Sequential-Events Runoff Model, Training Guide and reference Manual.

Singer, S.N., Cheng, C.K., and Scafe, M.G., 2003. *The Hydrogeology of Southern Ontario, 2nd Edition.* Environmental Monitoring and Reporting Branch, Ontario Ministry of the Environment

South Halton Water and Wastewater Master Plan Update, Region of Halton, June 2008 (Master Plan Update).

Stanfield, Les; Ontario Stream Assessment Protocol, Version 7, 2005; Ministry of Natural Resources. Edited May 2007.

Thompson-Black, Melinda, Aurora District MNR. *Personal email communication dated November 22, 2010*

Toronto and Region Conservation Authority, 2010, Low Impact Development Stormwater Management Planning and Design Guide.

Town of Oakville, Development Engineering Procedures & Guidelines Manual May 2007.

Town of Oakville, 2006. *Consolidated 2006 Official Plan*. http://www.oakville.ca/Media_Files/Offical_Plan_2006_consolidation.pdf

Town of Oakville, 2009. *North Oakville West Secondary Plan.* Approved in part by OMB, OPA #289; December 4, 2009.

Town of Oakville, North Oakville Environmental Implementation Report and Functional Servicing Study Terms of Reference, August 2, 2007.

Trow Consulting Engineers Ltd., January 23, 2001. *Preliminary Geotechnical Investigation and Geo-Environmental Investigation, Pigott Farm Land, Oakville, Ontario.*

TSH et al, 2006. *North Oakville Creeks Subwatershed Study: Characterization Report, Analysis Report, Implementation Report, and Management Report.* Prepared by TSH et al for the Town of Oakville.

U.S. Army Corps of Engineers, 2010, HEC-RAS River Analysis System, User's Manual.

U.S. Army Corps of Engineers, 2010, HEC-RAS River Analysis System, Hydraulic Reference Manual.

Varga, S. et al. 2000. *The Vascular Plant Flora of the Greater Toronto Area* (Rough Draft). Ontario Ministry of Natural Resources, Aurora, ON. 82 pp.

Wehrly, Kevin; M.J. Wiley & P.W. Seelbach. A Thermal Habitat Classification for Lower Michigan Rivers. Michigan Department of Natural Resources. Fisheries Research Report No. 2038, 1998.

Young, D, Van Seters, T, Graham, C, February 2013. *Evaluation of Underground Stormwater Infiltration Systems, Final Report*. Sustainable Technologies Evaluation Program, Toronto and Region Conservation Authority. http://sustainabletechnologies.ca/wp/clean-water/stormwater-management/soakaways-infiltration-trenches-and-chambers/evaluation-of-underground-stormwater-infiltration-systems/

Appendix 4.0

4.1 MOE Water Well Records
4.2 Borehole Logs
4.3 Soil Analysis Results
4.4 Hydraulic Conductivity Testing
4.5 Water Level Data
4.6 Groundwater and Surface Water Quality
4.7 Meteorological Information and Water Balance

APPENDIX 4-1
MOE Water Well Records

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (NELSON) DS N 02(001)	17 595726 4810239[W]	1973/04 4005	06					2804146 () BRWN CLAY 0032 GREY CLAY 0087 GREY GRVL SAND 0088 RED SHLE 0125
MILTON TOWN (NELSON) DS N 02(001)	17 594909 4811027[W]	1967/08 5417	06 06	FR 0075	020 / 075 / 2:0	DO		2800089 () BRWN CLAY 0014 GREY CLAY 0038 BRWN CLAY GRVL 0070 RED SHLE 0080
MILTON TOWN (NELSON) DS N 02(001)	17 594813 4811130[W]	1959/11 4602	06	FR 0050	031 / 060 002 / 1:0	DO		2800088 () BRWN CLAY 0005 GREY CLAY 0055 GRVL 0060
MILTON TOWN (NELSON) DS N 02(001)	17 595726 4810225[W]	1957/12 1307	36	FR 0062	025 / 005 / :0	DO		2800087 () BRWN CLAY 0015 GREY CLAY STNS 0060 GREY CSND 0062
MILTON TOWN (NELSON) DS N 02(001)	17 596166 4809710[W]	1974/10 3637	30 32	FR 0055	020 / 007 / 1:0	DO		2804681 () BRWN LOAM 0001 BRWN CLAY STNS 0014 GREY CLAY STNS 0029 RED SAND CLAY 0043 GREY SAND SILT 0061
MILTON TOWN (NELSON) DS N 02(001)	17 595323 4810107[W]	1974/11 3637	21 30	FR 0063 FR 0085	/ / :0	DO		2804679 () BRWN LOAM 0001 BRWN CLAY 0022 GREY CLAY SAND 0063 BRWN SAND STNS 0072 RED SHLE 0090
MILTON TOWN (NELSON) DS N 02(001)	17 596107 4809699[W]	1973/07 4602	06 06	FR 0074 FR 0069	024 / 080 002 / 1:30	DO		2804215 () BRWN CLAY 0012 GREY CLAY SILT 0031 GREY CLAY GRVL 0053 BLUE CLAY SILT 0059 RED CLAY 0067 RED SHLE 0082
MILTON TOWN (NELSON) DS N 02(001)	17 596075 4809603[W]	1972/01 5417	06	FR 0060	025 / 049 011 / 1:30	DO		2803806 () BRWN CLAY 0010 GREY CLAY 0050 RED SHLE 0062
MILTON TOWN (NELSON) DS N 02(002)	17 595114 4809883[W]	1996/03 4005	06 06	UK 0075	/ 079 001 / 1:0	DO		2808421 (166788) BRWN CLAY SAND 0012 BRWN CLAY 0030 GREY CLAY 0057 GREY CLAY 0058 RED SHLE 0080
MILTON TOWN (NELSON) DS N 02(002)	17 595127 4809852[W]	1996/03 4005	06 06		/ / 0:0	DO		2808420 (166789) BRWN CLAY SAND 0012 BRWN CLAY 0030 GREY CLAY 0052 RED SHLE 0075
MILTON TOWN (NELSON) DS N 02(002)	17 595127 4809969[W]	1972/03 3637	30	FR 0041	010 / 002 / 1:0	DO		2803997 () BRWN LOAM 0001 BRWN CLAY 0020 BLUE CLAY 0037 RED CLAY STNS 0040 RED SHLE 0044
MILTON TOWN (NELSON) DS N 02(002)	17 595215 4810143[W]	1972/06 3637	30	UK 0052 FR 0045	020 / / :0	DO		2804005 () BRWN LOAM 0001 BRWN CLAY 0011 GREY CLAY STNS BLDR 0038 GREY CLAY 0040 RED CLAY STNS 0044 RED SHLE 0052
MILTON TOWN (NELSON) DS N 02(002)	17 595125 4809940[W]	1990/10 4005	06	UK 0057	018 / 057 002 / 1:30	DO		2807684 (76418) BRWN CLAY LOOS 0008 BRWN SAND LOOS 0015 BRWN CLAY SAND LOOS 0043 RED CLAY LOOS 0045 RED SHLE HARD 0060
MILTON TOWN (NELSON) DS N 02(003)	17 594848 4809522[W]	1974/11 3637	30 21 18	FR 0071	003 / 030 007 / 1:0	DO		2804680 () BRWN LOAM 0001 BRWN CLAY 0015 BLUE CLAY 0050 BRWN CLAY STNS 0067 RED SHLE 0072

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (NELSON) DS N 02(003)	17 594875 4809768[W]	1971/09 4602	06	FR 0043	021 / / 3:0	NU		2803653 () BRWN CLAY 0018 GREY CLAY 0041 RED CLAY GRVL 0043 RED SHLE 0097
MILTON TOWN (NELSON) NS 01(001)	17 596041 4809003[W]	2007/06 1129	01		/ / :0			7051397 (Z67543) A055515 BRWN SILT TILL 0014 BRWN SILT TILL SAND 0021 BRWN SAND 0027 BRWN SILT 0034 GREY SAND FSND 0038 BRWN SAND SILT FSND 0051 ROCK SHLE SHLE 0059
MILTON TOWN (NELSON) NS 07(001)	17 594395 4811491[W]	1962/04 4838	06 06	FR 0038	016 / 042 002 / 2:0	DO		2800623 () BRWN CLAY 0012 GREY CLAY GRVL 0030 RED CLAY 0033 RED SHLE 0042
MILTON TOWN (NELSON) NS 07(001)	17 594375 4811383[W]	1972/11 4602	06 06	FR 0046	021 / 050 002 / 1:0	DO		2804022 () CLAY 0016 GREY CLAY 0024 RED CLAY 0029 RED SHLE 0053
MILTON TOWN (NELSON) NS 07(001)	17 594304 4811572[W]	1997/06 1660	06 06	MN 0077	019 / 082 / 1:0	DO		2808784 (74944) BRWN LOAM 0001 BRWN CLAY SAND 0029 RED SHLE 0087
MILTON TOWN (NELSON) NS 07(001)	17 594324 4811575[W]	1966/01 4001	06 06	FR 0042	015 / 065 001 / 3:0	DO		2800626 () BRWN CLAY 0004 RED CLAY 0029 RED SHLE 0065
MILTON TOWN (NELSON) NS 07(001)	17 594341 4811280[W]	1997/07 4868	30 42 36	FR 0030 FR 0012	008 / 017 004 / 5:0	ST		2808556 (172095) BRWN LOAM SOFT 0001 BRWN CLAY HARD 0010 BRWN SAND GRVL SOFT 0013 GREY CLAY STNS HARD 0030 GREY CGVL LOOS 0036
MILTON TOWN (NELSON) NS 07(001)	17 594725 4811203[W]	1966/10 4602	06	FR 0035	033 / 058 002 / 4:0	DO		2800625 () BRWN CLAY 0016 GREY CLAY 0042 GREY CLAY GRVL 0058 RED SHLE 0059
MILTON TOWN (NELSON) NS 07(001)	17 594388 4811459[W]	1966/05 4602	06 06	FR 0039	020 / 046 001 / 1:0	DO		2800624 () YLLW CLAY 0014 GREY CLAY 0024 RED CLAY 0039 RED SHLE 0046
MILTON TOWN (NELSON) NS 07(001)	17 594344 4811342[W]	1987/11 4868	18 30	FR 0042 FR 0045	022 / 036 005 / 1:0	ST		2806809 (07750) BRWN CLAY STNS HARD 0023 BRWN CLAY VERY HARD 0027 RED SHLE LMSN HARD 0047
MILTON TOWN (NELSON) NS 07(001)	17 594311 4811590[W]	1966/02 4001	06 06	FR 0042	015 / 045 001 / 3:0	DO		2800627 () BRWN CLAY 0004 RED CLAY 0032 RED SHLE 0045
MILTON TOWN (NELSON) NS 07(001)	17 593995 4810083[W]	1981/03 3637	24 30	FR 0028 FR 0012	010 / 021 / :0	DO		2805845 () BRWN LOAM 0001 BRWN CLAY STNS 0010 RED SHLE 0030
MILTON TOWN (NELSON) NS 07(002)	17 594115 4811723[W]	1969/11 3637	30	FR 0015	011 / 028 / 1:0	DO		2803258 () BLCK LOAM 0002 BRWN CLAY 0012 GREY CLAY STNS 0015 BRWN MSND GRVL 0016 BRWN HPAN STNS 0020 RED SHLE 0028
MILTON TOWN (NELSON) NS 07(003)	17 593370 4812353[W]	1974/07 3030	36 24	FR 0008 FR 0020	/ / :0	DO		2804587 () BRWN LOAM 0001 BRWN CLAY STNS 0004 GREY CLAY 0012 RED SHLE 0030
MILTON TOWN (NELSON) NS 07(004)	17 593036 4812702[W]	2002/10 4005	06	UK 0030 UK 0068	028 / 073 001 / :0	DO ST		2809661 (241383) BRWN CLAY 0025 RED SHLE SOFT 0032 RED SHLE HARD 0075

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (NELSON) NS 07(004)	17 593194 4812603[W]	1977/10 3637	30	FR 0026 FR 0032 FR 0038	007 / 039 014 / 1:0	DO		2805149 () BRWN CLAY HARD PCKD 0014 GREY CLAY SILT SOFT 0020 BRWN CLAY STNS HARD 0026 RED SHLE SOFT 0032 RED SHLE HARD 0039
MILTON TOWN (NELSON) NS 07(005)	17 591854 4812083[W]	1968/12 3637	30	FR 0018	008 / / :0	DO		2802900 () LOAM 0003 GREY CLAY 0005 BRWN CLAY 0032
MILTON TOWN (NELSON) NS 07(005)	17 591938 4812385[W]	1986/06 3637	30 32	FR 0031 FR 0017	015 / 006 / 1:0	DO		2806543 () BRWN LOAM 0002 BRWN CLAY STNS PCKD 0017 GREY MSND FSND LOOS 0021 GREY CLAY FCRD PCKD 0031
MILTON TOWN (NELSON) NS 07(005)	17 591921 4812016[W]	1955/08 1634	06 06	FR 0060	025 / 058 / 0:30	DO		2800629 () MSND CLAY 0045 CLAY GRVL 0056 RED SHLE 0125
MILTON TOWN (NELSON) NS 07(005)	17 591911 4812031[W]	1955/08 1634	06	SA 0075	005 / 075 001 / 0:5	NU		2800628 () MSND CLAY 0040 CLAY GRVL 0056 RED SHLE 0075
MILTON TOWN (NELSON) NS 07(006)	17 591434 4812483[W]	1979/09 4868	30	FR 0032	032 / / :0	DO		2805399 () BRWN CLAY STNS TILL 0012 BRWN CLAY STNS PCKD 0032 BRWN SAND SILT SOFT 0033 BRWN CLAY STNS PCKD 0047 RED SHLE SOFT 0048
MILTON TOWN (NELSON) NS 07(006)	17 591841 4812975[L]	1995/10 1660	06 06	FR 0087	012 / 082 008 / 1:0	DO		2808456 (74919) BLCK LOAM 0001 BRWN CLAY 0022 GREY CLAY 0030 GREY CLAY HARD PCKD 0064 BRWN SAND GRVL CLAY 0079 RED SHLE 0091
MILTON TOWN (NELSON) NS 07(006)	17 591902 4812851[W]	1991/09 3132	06 06	FR 0115	008 / 035 012 / 2:0	DO		2807951 (09083) BRWN CLAY STNS DNSE 0008 GREY CLAY STNS DNSE 0018 BLUE CLAY STNS DNSE 0089 RED CLAY STNS DNSE 0097 RED SHLE HARD 0120
MILTON TOWN (NELSON) NS 07(006)	17 591564 4812323[W]	1965/03 4602	06	FR 0048	006 / 058 015 / 1:0	DO		2800631 () YLLW CLAY 0015 GREY CLAY 0044 GREY CLAY MSND 0048 CLAY GRVL 0060
MILTON TOWN (NELSON) NS 07(006)	17 591790 4812404[W]	1964/07 4602	06	FR 0045 FR 0023	007 / 037 010 / 4:0	DO		2800630 () CLAY 0014 GREY CLAY 0023 QSND CLAY 0025 RED CLAY GRVL 0052 FSND CLAY 0057 GRVL CLAY 0061 GRVL CLAY 0062
MILTON TOWN (NELSON) NS 07(008)	17 591320 4814285[W]	1955/03 1642	06 06	FR 0065	008 / / :0	DO		2800632 () CLAY 0050 RED SHLE 0067
MILTON TOWN (NELSON) 02(002)	17 598462 4805634[W]	2007/02 6988	02	FR 0010			0005 09	7042975 (Z59302) A050021 BRWN SILT CLAY LOOS 0002 BRWN SILT CLAY LOOS 0004 RED SILT CLAY DNSE 0007 RED SILT SAND 0011
MILTON TOWN (NELSON) 07(007)	17 591386 4813397[L]	1984/10 4005	06	FR 0125	003 / 040 036 / 2:0	DO		2806214 () BRWN CLAY SNDY GRVL 0120 BRWN SAND GRVL LOOS 0125

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (NELSON) 6(5)	17 591883 4811592[W]	2007/11 3030	36 36 24	0033 0052 0056				7101403 (Z70322) A054822 BRWN LOAM 0001 BRWN CLAY SNDY 0015 BLUE CLAY SILT HARD 0033 GREY GRVL LYRD 0040 GREY CLAY 0052 GREY SAND 0056 GREY SAND SILT FSND 0067 RED SHLE STNS SOFT 0069
MILTON TOWN (TRAFALG CON 02(002)	17 595358 4813486[L]	1987/02 4005	06	FR 0050	018 / 042 008 / 1:0	DO		2806590 () BRWN CLAY SNDY LOOS 0010 GREY CLAY LOOS 0020 RED CLAY FGVL LOOS 0040 RED CLAY CGVL LOOS 0045 RED SHLE HARD 0051
MILTON TOWN (TRAFALG CON 02(003)	17 594915 4813913[L]	1985/12 4005	06	UK 0061				2806390 () BRWN CLAY LOOS 0005 GREY CLAY LOOS 0016 BRWN CLAY SAND LOOS 0028 BRWN CLAY SAND LOOS 0050 BLGY CLAY SAND LOOS 0058 BRWN SAND CLAY LOOS 0061
MILTON TOWN (TRAFALG CON 02(003)	17 594915 4813913[L]	1985/12 4005	06	FR 0048	016 / 052 / 1:0		0059 04	2806391 () BRWN CLAY LOOS 0004 GREY CLAY LOOS 0016 RED CLAY SAND LOOS 0025 RED CLAY SAND LOOS 0047 BRWN CLAY SAND LOOS 0055 BRWN CLAY SAND LOOS 0060 BRWN SAND CLAY LOOS 0065
MILTON TOWN (TRAFALG CON 02(003)	17 594915 4813913[L]	1986/03 4005	06	FR 0034	001 / 015 012 / 2:0	NU	0032 08	2806440 () BRWN CLAY SAND LOOS 0010 BRWN CLAY SAND LOOS 0018 BRWN CLAY SAND LOOS 0020 BRWN SAND CLAY LOOS 0034 BRWN SAND FGVL LOOS 0038 BRWN SAND CGVL LOOS 0040 BRWN CLAY SAND LOOS 0041
MILTON TOWN (TRAFALG CON 02(003)	17 594915 4813913[L]	1986/03 4005		FR 0035	001 / 015 012 / 2:0	NU		2806441 () BRWN CLAY SNDY LOOS 0010 BRWN CLAY SNDY LOOS 0018 BRWN CLAY SNDY LOOS 0034 BRWN SAND CGVL LOOS 0040
MILTON TOWN (TRAFALG CON 02(006)	17 593586 4815199[L]	1988/06 4868	30 30	FR 0027 FR 0024 FR 0015	004 / 020 004 / 1:0	DO		2806947 () BRWN CLAY BLDR STNS 0015 BRWN GRVL CLAY LOOS 0016 GREY CLAY STNS FSND 0022 GREY GRVL SAND SOFT 0024 GREY CLAY GRVL LOOS 0027 GREY GRVL STNS LOOS 0033
MILTON TOWN (TRAFALG DS N 02(021)	17 599005 4815493[W]	1968/10 1307	30	FR 0023	010 / / :0	DO		2802783 () BRWN LOAM 0008 RED CLAY MSND 0020 RED SHLE 0023
MILTON TOWN (TRAFALG DS N 02(021)	17 599035 4815403[W]	1970/08 3637	30	FR 0035	020 / / :0	DO		2803537 () BRWN LOAM 0001 BRWN CLAY 0017 GREY CLAY 0023 BRWN CLAY SILT 0028 RED CLAY STNS 0032 RED SHLE 0037
MILTON TOWN (TRAFALG DS N 02(022)	17 598263 4815609[W]	1984/07 4005	06	FR 0067	028 / 068 005 / 1:0	DO		2806190 () BRWN CLAY GRVL LOOS 0016 GREY CLAY GRVL LOOS 0032 RED CLAY LOOS 0040 RED SHLE HARD 0070

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG DS N 02(022)	17 598275 4815623[W]	1981/03 3513	06	FR 0034 FR 0055	008 / 045 010 / 2:0	DO		2805805 () BRWN LOAM 0001 BRWN CLAY LYRD 0017 GREY CLAY 0035 RED GRVL SNDY DRTY 0038 RED SHLE 0065
MILTON TOWN (TRAFALG DS N 02(029)	17 596429 4813168[W]	1967/10 1307	30	FR 0046	020 / 001 / :0	DO		2802234 () BRWN LOAM CLAY 0012 GREY CLAY 0045 CSND 0046 RED SHLE 0047
MILTON TOWN (TRAFALG DS N 02(030)	17 596607 4812441[W]	1961/11 5417	06 06	FR 0074	018 / 066 001 / 1:0	DO		2802239 () BRWN CLAY 0008 GREY CLAY 0031 GREY CLAY GRVL 0050 RED CLAY SHLE 0062 RED SHLE 0076
MILTON TOWN (TRAFALG DS N 02(030)	17 596872 4812284[L]	2002/01 4005	06	FR 0030	010 / 055 001 / 1:0	DO		2809530 (227168) BRWN CLAY 0012 GREY CLAY 0025 GREY CLAY SNDY 0030 RED SHLE 0055
MILTON TOWN (TRAFALG DS N 02(030)	17 596762 4812158[W]	1987/04 4919	30 30			DO		2806696 () BRWN LOAM HARD 0001 BRWN CLAY HARD 0020 GREY CLAY HARD 0065
MILTON TOWN (TRAFALG DS N 02(030)	17 596442 4812516[W]	1989/11 4005	06	UK 0070	050 / 093 002 / 2:0	DO		2807519 (65710) BRWN CLAY SNDY LOOS 0030 GREY CLAY LOOS 0054 RED CLAY LOOS 0058 RED SHLE HARD 0095
MILTON TOWN (TRAFALG DS N 02(030)	17 596738 4812168[W]	1961/07 5417	06 06	FR 0093	024 / 084 001 / 1:0	DO		2802238 () BRWN CLAY 0016 GREY CLAY GRVL 0075 RED CLAY SHLE GRVL 0085 RED SHLE 0094
MILTON TOWN (TRAFALG DS N 02(030)	17 596474 4812464[W]	1961/02 4602	06 06	FR 0080	021 / 082 001 / 2:0	DO		2802237 () GREY CLAY 0065 GRVL CLAY 0070 RED SHLE 0082
MILTON TOWN (TRAFALG DS N 02(030)	17 596535 4812583[W]	1976/11 4005	30	FR 0034		DO		2804965 () BRWN CLAY STNS LOOS 0053 RED SHLE STNS HARD 0054
MILTON TOWN (TRAFALG DS N 02(030)	17 596215 4812785[W]	1960/08 4602	06 06	FR 0049	018 / 073 001 / 3:0	DO		2802236 () GREY CLAY 0035 BRWN CLAY 0049 GRVL 0050 RED SHLE 0073
MILTON TOWN (TRAFALG DS N 02(030)	17 596345 4812573[W]	1969/09 3637				NU		2803223 () BRWN LOAM 0001 BRWN CLAY 0005 BRWN CLAY STNS 0014 BLUE CLAY STNS 0022 BLUE CLAY MSND 0028 BLUE CLAY STNS 0049 BRWN HPAN MSND STNS 0063 RED SHLE 0065
MILTON TOWN (TRAFALG DS N 02(030)	17 596260 4812667[W]	1995/09 4005	06 06		/ / :0	NU		2808390 (124567) BRWN CLAY PCKD 0019 BRWN SAND CLAY SOFT 0027 GREY CLAY SOFT 0054 GREY CLAY PCKD 0068 GREY CLAY BLDR HARD 0072 GREY CLAY SILT FGRD 0075 RED SHLE HARD 0115
MILTON TOWN (TRAFALG DS N 02(031)	17 596835 4812013[W]	1968/03 1308	30					2802808 () LOAM 0001 BRWN CLAY 0005 BRWN CLAY MSND 0008 HPAN 0027 BLUE CLAY 0046 BLUE CLAY MSND 0060 SHLE 0061
MILTON TOWN (TRAFALG DS N 02(031)	17 596895 4811903[W]	1969/05 1307	30	FR 0032	032 / / :0	DO		2803079 () BRWN LOAM 0012 RED CLAY 0032 MSND 0033 RED CLAY 0041 RED SHLE 0047

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG DS N 02(031)	17 597375 4811323[W]	1970/02 3637	30	FR 0021 FR 0025	010 / 026 010 / 0:30	DO		2803315 () BRWN FILL CLAY 0005 BRWN CLAY 0012 RED HPAN STNS 0014 RED SHLE 0026
MILTON TOWN (TRAFALG DS N 02(031)	17 595836 4812514[W]	1954/07 1642	06 06	FR 0050	020 / 001 / :0	DO		2802241 () PRDG 0022 CLAY 0033 RED SHLE 0053
MILTON TOWN (TRAFALG DS N 02(031)	17 596808 4812022[W]	1955/03 1642	06 06	FR 0074	015 / 070 002 / :0	DO		2802242 () CLAY STNS 0008 BLUE CLAY 0060 RED SHLE 0076
MILTON TOWN (TRAFALG DS N 02(031)	17 596813 4812042[W]	1955/08 1642	06 06	FR 0090	028 / 088 001 / :0	DO		2802243 () BLUE CLAY 0071 RED SHLE 0091
MILTON TOWN (TRAFALG DS N 02(031)	17 596867 4811920[W]	1956/07 1642	06 06	FR 0061	008 / 060 002 / 0:30	DO		2802244 () CLAY 0026 RED SHLE 0064
MILTON TOWN (TRAFALG DS N 02(031)	17 596711 4812145[W]	1956/10 2314	04 04	FR 0090	040 / 090 003 / 4:0	DO		2802245 () MSND CLAY 0040 GRVL CLAY 0050 CLAY 0065 GREN SHLE 0092
MILTON TOWN (TRAFALG DS N 02(031)	17 595814 4812502[W]	1957/02 1642	06 06	FR 0048	010 / 045 / 1:0	DO		2802246 () CLAY 0036 RED SHLE 0055
MILTON TOWN (TRAFALG DS N 02(031)	17 595880 4812600[W]	1958/11 1642	06 06	FR 0057	009 / 050 005 / 0:15	DO		2802247 () BLUE CLAY 0035 CLAY STNS 0048 RED SHLE 0059
MILTON TOWN (TRAFALG DS N 02(031)	17 595836 4812549[W]	1958/11 1642	06 06	FR 0059	012 / 050 001 / 0:30	DO		2802248 () BLUE CLAY 0035 RED CLAY 0048 RED SHLE 0062
MILTON TOWN (TRAFALG DS N 02(031)	17 597467 4811407[W]	1958/06 4002	06 06	FR 0040	015 / 040 006 / :0	DO		2802249 () CLAY 0020 RED SHLE 0040
MILTON TOWN (TRAFALG DS N 02(031)	17 596311 4812526[W]	1959/05 4602	06 06	FR 0059	018 / 096 / 72:0	DO		2802250 () BRWN CLAY 0059 RED SHLE 0096
MILTON TOWN (TRAFALG DS N 02(031)	17 595927 4812658[W]	1959/06 1642	06 06	FR 0050	016 / 049 001 / 1:0	DO		2802251 () BLUE CLAY 0045 RED SHLE 0060
MILTON TOWN (TRAFALG DS N 02(031)	17 596742 4812101[W]	1963/10 4602	06 06	FR 0081	042 / 094 001 / 5:0	DO		2802252 () YLLW CLAY 0016 GREY CLAY 0061 RED CLAY GRVL 0074 RED SHLE 0094
MILTON TOWN (TRAFALG DS N 02(031)	17 596106 4812693[W]	1963/12 1612	05 05	FR 0064	009 / 014 001 / 2:0	DO		2802253 () LOAM 0002 BRWN CLAY STNS 0040 RED SHLE 0065
MILTON TOWN (TRAFALG DS N 02(031)	17 596106 4812693[W]	1964/03 1612	05 05	FR 0051	018 / 023 002 / 0:30	DO		2802254 () LOAM 0002 BLUE CLAY 0043 MSND 0046 RED SHLE 0053
MILTON TOWN (TRAFALG DS N 02(031)	17 596925 4811896[W]	1965/06 1612	05 05	FR 0079	032 / 037 001 / 3:0	DO		2802255 () LOAM 0002 BRWN CLAY 0035 RED SHLE 0084
MILTON TOWN (TRAFALG DS N 02(031)	17 596802 4812059[W]	1967/08 1612	05 05	FR 0106	045 / 055 002 / 24:0	DO		2802256 () LOAM 0001 BLUE CLAY 0071 RED SHLE 0112

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG DS N 02(031)	17 596713 4812109[W]	1988/06 5417	06	FR 0102	065 / 102 002 / 1:30	DO		2807005 (20151) BRWN CLAY 0012 GREY CLAY 0073 RED CLAY SHLE 0084 RED SHLE 0107
MILTON TOWN (TRAFALG DS N 02(031)	17 597441 4811402[W]	1996/04 1660	06 06	FR 0040	011 / 067 003 / 1:0	DO		2808538 (74929) BLCK LOAM 0002 BRWN CLAY 0021 RED SHLE 0070
MILTON TOWN (TRAFALG DS N 02(031)	17 597295 4811433[W]	1971/05 3637	30	FR 0020 FR 0034	010 / 030 / :0	PS		2803739 () BRWN LOAM 0001 BRWN CLAY STNS 0014 RED SHLE 0036
MILTON TOWN (TRAFALG DS N 02(031)	17 596155 4812683[W]	1980/07 3637	30 24	FR 0050	020 / 034 014 / 1:0	DO		2805657 () BRWN LOAM 0001 BRWN CLAY 0012 BLUE CLAY SOFT 0025 BRWN CLAY STNS 0046 RED SHLE 0051
MILTON TOWN (TRAFALG DS N 02(031)	17 596275 4812523[W]	1980/07 3637	30 24	FR 0054	020 / 001 / 24:0	DO		2805658 () BRWN LOAM 0001 BRWN CLAY 0015 BLUE CLAY STNS 0040 BRWN CLAY SILT BLDR 0050 RED SHLE 0061
MILTON TOWN (TRAFALG DS N 02(031)	17 596255 4812563[W]	1980/08 3637	24 30	FR 0069	030 / 001 / 24:0	DO		2805661 () BRWN LOAM 0001 BRWN CLAY 0016 BLUE CLAY 0059 RED SHLE 0071
MILTON TOWN (TRAFALG DS N 02(031)	17 596933 4811862[W]	1984/10 5417	06	FR 0062	020 / 060 005 / 1:0	DO		2806228 () BRWN CLAY 0018 GREY CLAY 0024 RED SHLE 0031 RED SHLE 0065
MILTON TOWN (TRAFALG DS N 02(031)	17 596279 4812522[W]	1984/02 3344	06 06	FR 0083	028 / 086 007 / 1:0	DO		2806417 () BRWN LOAM 0002 BRWN CLAY STNS 0021 GREY CLAY 0043 RED SHLE 0086
MILTON TOWN (TRAFALG DS N 02(031)	17 597159 4811510[W]	1986/02 3637	30 24	FR 0042 FR 0020	016 / 040 / 2:0	DO		2806546 () BRWN LOAM 0001 BRWN CLAY PCKD 0020 RED SHLE HARD 0047
MILTON TOWN (TRAFALG DS N 02(032)	17 596996 4810801[W]	1960/04 4602	06	FR				2802258 () PRDR 0051 RED SHLE 0077
MILTON TOWN (TRAFALG DS N 02(032)	17 595924 4812303[W]	1956/10 5417	06 06	SA 0040 SA 0082 SA 0070	014 / 075 002 / 0:30	DO		2802257 () BLCK LOAM 0005 BRWN CLAY 0018 GREY CLAY 0027 RED SHLE 0083
MILTON TOWN (TRAFALG DS N 02(032)	17 595725 4812373[W]	1993/10 4005	06	UK 0054 UK 0069	023 / 068 002 / 0:20	DO		2808194 (124431) BRWN CLAY 0016 GREY CLAY 0032 BRWN GRVL SAND 0033 RED CLAY 0042 RED SHLE HARD 0070
MILTON TOWN (TRAFALG DS N 02(032)	17 597016 4810788[W]	1960/04 4602	06	FR 0082 FR 0080	066 / 072 005 / 1:0	DO		2802259 () BRWN CLAY 0018 GREY CLAY 0035 CLAY FSND 0045 GRVL CLAY 0082 RED CLAY 0083 RED SHLE 0085
MILTON TOWN (TRAFALG DS N 02(033)	17 596915 4810723[W]	1969/05 3637	30 30	FR 0039	039 / / :0	DO		2803309 () BRWN LOAM 0001 BRWN CLAY STNS 0023 BRWN MSND 0040 RED SHLE 0048
MILTON TOWN (TRAFALG DS N 02(033)	17 596895 4810703[W]	1969/05 3637						2803310 () BRWN LOAM 0001 BRWN CLAY 0030 BRWN MSND 0036 RED SHLE 0040

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG DS N 02(033)	17 596974 4810775[W]	1955/10 1642	06	FR 0082	067 / 072 003 / 2:0	DO		2802260 () BLUE CLAY 0065 MSND GRVL 0082
MILTON TOWN (TRAFALG DS N 02(033)	17 595620 4811789[W]	1961/11 1307	30	FR 0052	020 / 001 / :0	DO		2802261 () BRWN LOAM CLAY 0012 GREY CLAY 0024 RED CLAY 0030 RED SHLE 0052
MILTON TOWN (TRAFALG DS N 02(033)	17 595376 4811925[W]	1967/09 4602	06 06	FR 0050	009 / 057 001 / 2:0	DO		2802262 () YLLW CLAY 0016 GREY CLAY GRVL 0040 RED CLAY GRVL 0048 RED SHLE 0057
MILTON TOWN (TRAFALG DS N 02(033)	17 596935 4810713[W]	1969/07 3637						2803308 () BRWN LOAM 0001 BRWN CLAY 0026 BRWN MSND 0042
MILTON TOWN (TRAFALG DS N 02(033)	17 596885 4810653[W]	1969/07 3637						2803307 () BRWN LOAM 0001 BRWN CLAY 0041
MILTON TOWN (TRAFALG DS N 02(033)	17 595585 4811823[W]	1969/10 3637	30	FR 0036	016 / 040 / 1:0	ST		2803250 () BRWN LOAM 0001 BRWN CLAY 0014 BLUE CLAY 0030 BRWN HPAN STNS 0036 BRWN GRVL 0041
MILTON TOWN (TRAFALG DS N 02(033)	17 596915 4810723[W]	1969/05 2309						2803036 () RED CLAY 0038 RED SHLE 0110
MILTON TOWN (TRAFALG DS N 02(033)	17 596895 4810703[W]	1969/09 2309						2803174 () PRDG 0046 RED SHLE 0158
MILTON TOWN (TRAFALG DS N 02(033)	17 595420 4812002[W]	1992/07 3030	36	FR 0020 FR 0046	020 / / :0	DO		2808011 (093779) LOAM 0001 BRWN CLAY 0020 BLUE CLAY STNS WBRG 0032 RED CLAY STNS 0046 RED CLAY GRVL LYRD 0050
MILTON TOWN (TRAFALG DS N 02(034)	17 595120 4811622[W]	1964/01 4001	06	FR 0030	020 / 032 005 / 2:0	DO		2802265 () BLUE CLAY 0030 GRVL 0038
MILTON TOWN (TRAFALG DS N 02(034)	17 596725 4810448[W]	1967/07 1307	30	FR 0056	025 / 002 / :0	IR		2802266 () BRWN LOAM CLAY 0008 GREY CLAY 0048 RED CLAY 0055 RED SHLE 0056
MILTON TOWN (TRAFALG DS N 02(034)	17 596457 4810200[W]	1984/03 3637	30	FR 0053	014 / 004 / 1:0	DO		2806376 () BRWN LOAM 0001 BRWN CLAY PCKD 0053 RED SHLE HARD 0055
MILTON TOWN (TRAFALG DS N 02(034)	17 595279 4811792[W]	1986/03 3637	30 24	FR 0050	007 / 050 010 / 1:0	DO		2806549 () BRWN LOAM 0001 BLCK CLAY PCKD 0014 GREY CLAY STNS BLDR 0024 BRWN CLAY PCKD 0049 RED SHLE 0051
MILTON TOWN (TRAFALG DS N 02(034)	17 596471 4810214[W]	1996/09 1660	06 06			DO		2808528 (74943) BLCK LOAM 0002 BRWN CLAY 0018 GREY CLAY STNS 0044 RED CLAY 0052 RED SHLE 0140
MILTON TOWN (TRAFALG DS N 02(034)	17 595067 4811524[W]	1960/10 4602	06	FR 0063 FR 0058	015 / 063 004 / 1:0	DO		2802264 () BRWN CLAY 0045 RED CLAY 0058 GRVL 0063
MILTON TOWN (TRAFALG DS N 02(034)	17 595137 4811645[W]	1960/06 4602	06 06	FR 0040	015 / 059 001 / 72:0	DO		2802263 () BRWN CLAY 0040 GRVL CLAY 0057 GRVL 0059 RED SHLE 0060

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG DS N 02(035)	17 594872 4811166[W]	1961/10 4001	06 06	FR 0070	030 / 070 / 4:0	DO		2802267 () RED CLAY 0060 RED SHLE 0070
MILTON TOWN (TRAFALG DS N 02(035)	17 594917 4811342[W]	1962/04 4602	06	FR 0048	023 / 056 002 / 4:0	DO		2802268 () BRWN CLAY 0012 GREY CLAY 0048 RED CLAY GRVL 0056 RED SHLE 0057
MILTON TOWN (TRAFALG DS N 02(035)	17 595344 4810876[W]	1963/07 1307	30	FR 0083	075 / / :0	DO		2802269 () BRWN LOAM CLAY 0012 GREY CLAY 0065 RED CLAY 0075 RED SHLE 0083 QSND 0089 RED SHLE 0090
MILTON TOWN (TRAFALG DS N 02(035)	17 595226 4810889[W]	1963/11 4610	07	FR 0115	060 / 120 / 4:0	ST DO		2802270 () PRDG 0085 RED SHLE 0120
MILTON TOWN (TRAFALG DS N 02(035)	17 594862 4811156[W]	1964/11 1307	30	FR 0074	040 / 001 / :0	DO		2802271 () BRWN LOAM CLAY 0018 GREY CLAY 0065 RED CLAY 0072 MSND GRVL 0074 RED SHLE 0075
MILTON TOWN (TRAFALG DS N 02(035)	17 596176 4809996[W]	1967/03 1308	30	FR 0034	016 / 032 001 / 1:0	PS		2802272 () LOAM 0002 BRWN CLAY 0016 HPAN 0022 BLUE CLAY MSND 0034 MSND 0036
MILTON TOWN (TRAFALG DS N 02(035)	17 596324 4809974[W]	1967/03 1308	30	FR 0039	020 / 038 / 0:30	DO		2802273 () LOAM 0002 BRWN CLAY 0015 HPAN 0020 BLUE CLAY 0039 MSND 0040
MILTON TOWN (TRAFALG DS N 02(035)	17 596291 4810017[W]	2003/05 2663	06 06 06		044 / 079 001 / 1:0	DO		2809736 (257911) UNKN 0275
MILTON TOWN (TRAFALG DS N 02(035)	17 595925 4810187[W]	1974/08 3637	30	FR 0020	017 / / :0	DO		2804684 () BRWN LOAM 0001 BRWN CLAY 0016 GREY CLAY 0019 BLCK MSND 0020 BLUE CLAY 0035
MILTON TOWN (TRAFALG DS N 02(035)	17 595977 4810059[W]	1984/10 5417	06	FR 0083	055 / 145 / 2:0	DO		2806227 () BRWN CLAY 0018 GREN CLAY 0060 RED CLAY 0083 RED SHLE 0151
MILTON TOWN (TRAFALG NS 01(001)	17 594957 4811952[L]	1998/10 1660	06 06	FR 0105	046 / 105 005 / 1:0	DO		2808915 (192156) BLCK LOAM 0002 BRWN CLAY 0013 BRWN CLAY STNS 0019 GREY CLAY GRVL 0038 RED CLAY 0044 RED SHLE 0111
MILTON TOWN (TRAFALG NS 01(001)	17 595045 4812333[W]	1970/05 3637	30	FR 0054	/ 060 / :0	DO		2803468 () BRWN LOAM 0001 BRWN CLAY 0014 BLUE CLAY 0030 BRWN CLAY STNS 0038 RED SHLE 0060
MILTON TOWN (TRAFALG NS 01(001)	17 595375 4812513[W]	1970/08 3637	30	UK 0044	020 / 046 / :0	DO		2803535 () BRWN LOAM 0001 BRWN CLAY STNS 0014 BLUE CLAY STNS 0032 BRWN CLAY 0041 RED SHLE 0046
MILTON TOWN (TRAFALG NS 01(001)	17 594852 4811615[W]	1986/06 3637	30 32	FR 0035 FR 0058	020 / 010 / 1:0	DO		2806544 () BRWN LOAM 0001 BLUE CLAY PCKD 0012 BLUE CLAY SAND 0058 RED SHLE 0060
MILTON TOWN (TRAFALG NS 01(001)	17 595400 4812367[W]	1972/03 3637	30	FR 0038 FR 0050	012 / 036 014 / 1:0	DO		2804123 () BRWN LOAM 0001 BRWN CLAY 0015 BLUE CLAY 0031 RED CLAY STNS 0038 RED SHLE 0053

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 01(001)	17 594440 4811563[W]	1962/06 4602	06	FR 0035	018 / 041 008 / 1:30	DO		2802453 () BRWN CLAY 0018 GREY CLAY 0035 CLAY GRVL 0038 GRVL 0041
MILTON TOWN (TRAFALG NS 01(001)	17 595014 4811548[W]	1963/06 1307	30	FR 0054	030 / 006 / :0	ST DO		2802454 () BRWN LOAM CLAY 0012 RED CLAY 0052 GRVL 0054
MILTON TOWN (TRAFALG NS 01(001)	17 595367 4812507[W]	1967/02 2519	05 05	FR 0088 FR 0065	020 / 090 002 / 2:0	DO		2802455 () BRWN CLAY 0016 BLUE CLAY 0028 RED CLAY 0045 RED SHLE 0095
MILTON TOWN (TRAFALG NS 01(001)	17 595075 4812313[W]	1970/06 3637	30	FR 0055	/ 056 / :0	DO		2803467 () BRWN LOAM 0001 BRWN CLAY 0015 BLUE CLAY 0025 BRWN CLAY STNS 0044 RED SHLE 0056
MILTON TOWN (TRAFALG NS 01(002)	17 594825 4813004[W]	1966/07 1307	30	FR 0054	025 / 002 / :0	DO		2802459 () BRWN LOAM CLAY 0018 RED CLAY 0038 RED SHLE 0054
MILTON TOWN (TRAFALG NS 01(002)	17 594792 4813051[W]	1965/06 2803	06 06	FR 0070	009 / 075 001 / 1:0	DO		2802458 () BRWN CLAY 0006 BLUE CLAY 0030 RED SHLE 0075
MILTON TOWN (TRAFALG NS 01(002)	17 595007 4812837[W]	1965/04 1307	30	FR 0050	035 / / :0	DO		2802457 () BRWN LOAM CLAY 0020 RED CLAY 0035 RED SHLE 0059
MILTON TOWN (TRAFALG NS 01(002)	17 594140 4811835[W]	1959/08 4602	06 06	FR 0038	012 / 038 004 / 1:30	DO		2802456 () BRWN CLAY 0018 RED SHLE 0043
MILTON TOWN (TRAFALG NS 01(002)	17 594025 4811930[W]	1987/11 4868	30 08	FR 0028 FR 0044	023 / 038 004 / 1:0	DO		2806808 (07729) BRWN LOAM SOFT 0002 GREY CLAY STNS FSND 0024 RED CLAY SAND HARD 0027 GREY LMSN HARD 0028 RED SHLE LMSN FSND 0038 GREN CHRT VERY HARD 0039 RED SHLE LMSN FSND 0045 RED CLAY SOFT 0046
MILTON TOWN (TRAFALG NS 01(002)	17 595068 4812762[W]	1973/08 3637	30	FR 0051	003 / 018 006 / 1:0	DO		2804458 () BRWN LOAM 0001 BRWN CLAY 0014 GREY CLAY 0020 RED CLAY SAND 0036 RED CLAY 0048 RED SHLE 0055
MILTON TOWN (TRAFALG NS 01(002)	17 594512 4812385[L]	1999/08 4868	36 30 42	FR 0021	021 / 028 007 / 2:0	DO		2809051 (207013) BRWN LOAM SOFT 0002 GREY CLAY STNS HARD 0021 BRWN GRVL LOOS 0023 BRWN CSND STNS 0037
MILTON TOWN (TRAFALG NS 01(003)	17 594392 4813347[W]	1973/02 3637	30	FR 0044	006 / 046 004 / 2:0	DO		2804074 () BRWN LOAM 0001 BRWN CLAY STNS 0012 GREY CLAY STNS 0016 BRWN CLAY SAND 0025 GREY CLAY 0031 BRWN CLAY STNS 0040 BLUE CLAY 0044 GREY GRVL CSND 0045 BRWN CLAY STNS 0046
MILTON TOWN (TRAFALG NS 01(003)	17 594435 4813363[W]	1980/06 3637	30	FR 0035	004 / 015 010 / 1:0	DO		2805663 () BRWN LOAM 0001 BRWN CLAY PCKD 0018 BLUE CLAY SOFT 0020 RED CLAY PCKD 0035 BRWN SAND STNS LOOS 0038

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 01(003)	17 593702 4812245[W]	1951/08 1642	06 06	FR 0062	020 / / :0	ST DO		2802460 () BLUE CLAY 0040 RED SHLE 0062
MILTON TOWN (TRAFALG NS 01(003)	17 593755 4812283[W]	1970/06 3637	30	FR 0037	032 / 052 / :0	ST		2803463 () BLCK LOAM 0001 BRWN CLAY 0016 GREY CLAY STNS 0022 BRWN CLAY STNS 0038 RED SHLE 0052
MILTON TOWN (TRAFALG NS 01(004)	17 593616 4813230[L]	1990/07 1660	06 06	FR 0052	016 / 023 010 / 1:0	DO		2807804 (43789) BLCK LOAM 0002 BRWN CLAY 0018 BRWN CLAY SAND 0024 RED SHLE HARD 0060
MILTON TOWN (TRAFALG NS 01(004)	17 593616 4813230[L]	1999/06 4005				NU		2808994 (204368) BRWN SAND SNDY 0022 RED SHLE 0060
MILTON TOWN (TRAFALG NS 01(004)	17 593616 4813230[L]	1999/06 4005				NU		2808995 (204369) BRWN CLAY SNDY 0022 RED SHLE 0080
MILTON TOWN (TRAFALG NS 01(005)	17 592873 4813030[W]	1960/03 1307	30	FR 0050	/ / :0	DO		2802461 () BRWN CLAY 0012 GREY CLAY 0050 GRVL 0052
MILTON TOWN (TRAFALG NS 01(006)	17 592975 4814823[W]	1977/07 3637	24 30	FR 0034	011 / 034 014 / 1:0	DO		2805825 () BRWN LOAM 0001 BRWN CLAY SAND BLDR 0030 RED SHLE HARD VERY 0034
MILTON TOWN (TRAFALG NS 01(006)	17 593288 4814397[W]	1955/01 1642	06 06	MN 0084	018 / / :0	NU		2802462 () BLUE CLAY 0022 CLAY MSND GRVL 0060 RED SHLE 0085
MILTON TOWN (TRAFALG NS 01(006)	17 593181 4814511[W]	1955/01 1642	06 06	MN 0072	018 / 001 / :0	DO		2802463 () BLUE CLAY 0024 CLAY MSND STNS 0062 RED SHLE 0073
MILTON TOWN (TRAFALG NS 01(006)	17 593017 4814720[W]	1988/08 1660	06 06	MN 0075 FR 0062	018 / 071 004 / 1:0	DO		2807195 (16480) BRWN LOAM 0001 BRWN CLAY MGRD HARD 0044 BRWN GRVL SAND DRY 0057 RED SHLE ROCK HARD 0081
MILTON TOWN (TRAFALG NS 01(006)	17 593155 4814473[W]	1970/02 3637	30	FR 0025 FR 0016	010 / 040 / :0	DO		2803312 () BRWN LOAM 0001 BRWN CLAY 0016 GREY CLAY STNS 0021 BRWN MSND GRVL SILT 0041
MILTON TOWN (TRAFALG NS 01(007)	17 592555 4815223[W]	1975/10 3637	30 24	FR 0016 FR 0010	010 / 020 014 / 1:0	DO		2805823 () BRWN LOAM 0001 BRWN CLAY STNS PCKD 0006 RED SHLE HARD VERY 0020
MILTON TOWN (TRAFALG NS 01(008)	17 592384 4815343[W]	1975/04 1660	07 07	FR 0046	008 / 034 012 / 1:0	DO		2805013 () BRWN LOAM 0001 BRWN CLAY 0012 GREY CLAY STNS 0020 RED SHLE 0051
MILTON TOWN (TRAFALG NS 01(008)	17 592391 4815376[W]	1962/07 4805	06 06	FR 0025 FR 0042 FR 0045	012 / 022 006 / 1:0	DO		2802464 () CLAY 0005 CLAY STNS 0009 RED SHLE 0052
MILTON TOWN (TRAFALG NS 02(001)	17 595357 4812613[W]	1972/10 3637	30	FR 0053	020 / / :0	DO		2804113 () BRWN LOAM 0001 BLUE CLAY 0029 BRWN CSND 0030 RED CLAY STNS 0037 RED CLAY BLDR 0047 RED SHLE 0057

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 02(001)	17 595974 4812875[W]	2006/01 7230	02	FR 0001		NU	0010 05	2810517 (Z44357) A035781 BRWN LOAM 0001 BRWN CLAY 0005 RED CLAY 0015
MILTON TOWN (TRAFALG NS 02(001)	17 595465 4812483[W]	1969/12 3637	30	FR 0043	012 / 045 / 1:0	DO		2803314 () BLCK LOAM 0001 BRWN CLAY STNS 0014 BLUE CLAY STNS 0029 BRWN HPAN STNS 0038 RED SHLE 0045
MILTON TOWN (TRAFALG NS 02(001)	17 595795 4812573[W]	1969/07 3637	30	FR 0050	020 / 050 / 1:0	DO		2803224 () BRWN LOAM 0002 BRWN CLAY 0015 BLUE CLAY 0031 BRWN CLAY STNS 0037 RED SHLE 0051
MILTON TOWN (TRAFALG NS 02(001)	17 595695 4812443[W]	1968/04 1308	30	SA 0048	047 / / :0	DO		2802809 () LOAM 0001 BRWN CLAY 0012 BLUE CLAY 0024 RED SHLE 0049
MILTON TOWN (TRAFALG NS 02(001)	17 595265 4812703[W]	1969/06 3637	30	FR 0041	010 / / :0	DO		2803181 () BRWN LOAM 0001 BRWN CLAY 0012 GREY CLAY 0029 BRWN CLAY STNS 0038 RED SHLE 0042
MILTON TOWN (TRAFALG NS 02(001)	17 595246 4812705[W]	1966/04 1307	30	FR 0046	020 / 002 / :0	DO		2802474 () BRWN LOAM CLAY 0015 RED CLAY 0036 RED SHLE 0046
MILTON TOWN (TRAFALG NS 02(001)	17 595844 4812642[W]	1957/07 1642	06	SA 0058	008 / 058 / 1:0	NU		2802470 () CLAY 0005 MSND CLAY 0020 BLUE CLAY 0033 MSND GRVL CLAY 0045 RED SHLE 0060
MILTON TOWN (TRAFALG NS 02(001)	17 595859 4812650[W]	1957/08 1642	06 06	FR 0054	008 / 050 / 1:0	DO		2802471 () CLAY 0005 MSND CLAY 0020 BLUE CLAY 0033 MSND GRVL CLAY 0045 RED SHLE 0057
MILTON TOWN (TRAFALG NS 02(001)	17 595850 4812624[W]	1961/02 1612	06 06	FR 0055	020 / 028 001 / 3:0	DO		2802472 () BLUE CLAY 0038 RED SHLE 0060
MILTON TOWN (TRAFALG NS 02(001)	17 595822 4812624[W]	1961/03 1612	06 06	FR 0055	020 / 028 001 / 3:0	DO		2802473 () BLUE CLAY 0037 RED SHLE 0059
MILTON TOWN (TRAFALG NS 02(002)	17 595800 4813835[W]	1988/05 4868	30 30	FR 0032	011 / 013 005 / 1:0	DO ST		2806910 (07764) BRWN LOAM SOFT 0002 BRWN CLAY STNS FSND 0015 RED CLAY STNS FSND 0023 RED CLAY SILT FSND 0032 RED SAND GRVL LOOS 0036
MILTON TOWN (TRAFALG NS 02(003)	17 595455 4814290[W]	1963/10 1307	30	FR 0056	030 / 001 / :0	DO		2802475 () BRWN LOAM CLAY 0012 RED CLAY 0054 MSND 0056 RED SHLE 0057
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1990/06 4005	05 06		005 / / :0	NU	0034 03	2807622 (76658) BRWN CLAY SAND LOOS 0008 BRWN CLAY SAND GRVL 0012 BRWN CLAY SAND LOOS 0024 GREY CLAY SAND LOOS 0034 GREY GRVL FSND LOOS 0037

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1990/06 4005	06 05		005 / / :0	NU	0032 03	2807623 (76659) BRWN CLAY SAND LOOS 0012 BRWN CLAY GRVL LOOS 0016 BRWN CLAY SAND LOOS 0021 GREY CLAY SAND LOOS 0034 GREY GRVL SAND LOOS 0035
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1990/07 4005	05 06	UK 0034	005 / 020 008 / 2:0	NU	0033 03	2807624 (76661) BRWN CLAY SAND LOOS 0018 GREY CLAY SAND LOOS 0034 GREY GRVL SAND LOOS 0036
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1990/06 4005	06 05	UK 0027	006 / 027 001 / 2:0	NU	0027 03	2807625 (76660) BRWN CLAY SAND LOOS 0024 GREY CLAY SAND LOOS 0027 GREY GRVL SAND LOOS 0030
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1990/09 4005	06 05	UK 0039	011 / 001 / 0:0	NU	0039 03	2807666 (76378) BRWN CLAY SAND LOOS 0010 BRWN SAND CLAY LOOS 0015 BRWN CLAY LOOS 0022 GREY CLAY LOOS 0026 BRWN CLAY LOOS 0039 BRWN GRVL SAND PCKD 0042
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1990/09 4005	10			NU		2807668 (76376) BRWN CLAY SAND LOOS 0010 BRWN SAND CLAY LOOS 0017 BRWN CLAY LOOS 0023 GREY CLAY LOOS 0027 BRWN CLAY LOOS 0037 BRWN CLAY GRVL LOOS 0040
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1991/10 4005	06 05			NU	0032 03	2807869 (76548) BRWN CLAY SAND 0033 BRWN SAND GRVL 0034 BRWN CLAY 0043
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1991/10 4005	05 06			NU	0032 03	2807870 (76546) BRWN CLAY SAND LOOS 0028 BRWN CLAY SAND LOOS 0029 BRWN CLAY 0034 BRWN SAND GRVL 0034 BRWN CLAY 0043
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1991/11 4005	06 05		/ / 1:30	NU	0039 03	2807910 (76564) BRWN CLAY 0008 BRWN CLAY SAND 0040 BRWN SAND 0041 BRWN CLAY 0044
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1991/11 4005	06 05		/ / 1:30	NU	0032 03	2807911 (76563) BRWN CLAY 0015 BRWN CLAY SAND 0033 BRWN SAND 0034 GREY CLAY 0043
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1991/11 4005	06 05		/ / 1:30	NU	0038 03	2807912 (76562) BRWN CLAY 0010 BRWN CLAY SAND BLDR 0014 BRWN CLAY SAND 0023 BRWN SAND BLDR 0026 BRWN CLAY 0036 BRWN SAND BLDR 0040 BRWN SAND GRVL 0040 BRWN CLAY 0049
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1991/11 4005	06 05		/ / 1:30	NU	0028 03	2807913 (76561) BRWN CLAY 0012 BRWN CLAY BLDR 0014 BRWN CLAY 0029 BRWN SAND GRVL 0030 GREY CLAY 0039
MILTON TOWN (TRAFALG NS 02(004)	17 594475 4814340[L]	1991/10 4005	06 05		/ / 1:30	NU	0028 03	2807914 (76560) BRWN CLAY 0023 BRWN CLAY BLDR 0026 BRWN CLAY 0030 BRWN SAND GRVL 0031 GREY CLAY 0039

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 02(004)	17 594052 4814226[W]	1964/08 4602	06	FR 0071	027 / 045 010 / 2:0	DO		2802476 () GREY CLAY 0007 RED CLAY 0056 GREY CLAY 0068 GREY CLAY GRVL 0075
MILTON TOWN (TRAFALG NS 02(004)	17 594756 4814801[W]	1964/07 4101	06	FR 0060	010 / 058 010 / 10:0	DO		2802477 () BRWN CLAY 0028 RED CLAY MSND 0062 RED SHLE 0063
MILTON TOWN (TRAFALG NS 02(005)	17 594565 4815153[W]	1955/10 4838	07 07	FR 0063 FR 0061	012 / 025 005 / 2:0	DO		2802478 () CLAY 0020 GRVL CLAY 0050 RED SHLE 0065
MILTON TOWN (TRAFALG NS 02(005)	17 593670 4814263[W]	1962/08 1307	30	FR 0042	040 / 001 / 1:0	ST DO		2802479 () BRWN CLAY MSND 0020 BLUE CLAY 0042 BLUE CLAY MSND 0045 BLUE CLAY BLDR 0057
MILTON TOWN (TRAFALG NS 02(006)	17 593915 4815723[W]	1970/08 5417	06	FR 0064	030 / 051 015 / 1:0	DO		2803422 () BRWN CLAY 0016 GREY CLAY 0024 GREY CLAY GRVL 0040 BRWN CLAY GRVL 0055 RED SHLE 0065
MILTON TOWN (TRAFALG NS 02(006)	17 593909 4815813[W]	1967/10 1620	06	FR 0044	012 / 038 006 / 2:0	DO		2802480 () BRWN CLAY 0042 GRVL 0044
MILTON TOWN (TRAFALG NS 02(007)	17 593488 4816177[W]	2003/12 4868	08	FR 0033	020 / 026 005 / 7:30	DO		2809874 (Z03976) A003888 BRWN LOAM SOFT 0002 BRWN CLAY GRVL STNS 0031 BRWN CLAY SAND 0035
MILTON TOWN (TRAFALG NS 02(007)	17 593144 4815629[L]	1999/08 4868	30 28	UK 0020 UK 0032	022 / 035 004 / 3:0	DO		2809052 (207012) SHLE 0023 RED SHLE LMSN HARD 0036
MILTON TOWN (TRAFALG NS 02(007)	17 593141 4815628[L]	2000/12 4005	06	FR 0045	027 / 037 009 / 1:0	DO		2809275 (212336) BRWN CLAY LOOS 0019 BRWN SAND GRVL LOOS 0025 BRWN CLAY GRVL LOOS 0035 GREY SAND GRVL LOOS 0042 BRWN SAND GRVL LOOS 0045
MILTON TOWN (TRAFALG NS 02(007)	17 593141 4815628[L]	2000/11 4005	06	FR 0040	024 / 026 010 / 1:0	DO		2809276 (212337) BRWN CLAY LOOS 0018 BRWN GRVL LOOS 0029 BRWN GRVL STNS LOOS 0030 BRWN SAND GRVL LOOS 0034 BRWN GRVL SAND LOOS 0040
MILTON TOWN (TRAFALG NS 02(007)	17 593141 4815628[L]	2000/11 4005	06	FR 0042	024 / 036 006 / 1:0	DO		2809277 (212338) BRWN CLAY LOOS 0018 BRWN SAND STNS LOOS 0026 BRWN SAND GRVL LOOS 0038 BRWN GRVL PCKD 0042
MILTON TOWN (TRAFALG NS 02(007)	17 593141 4815628[L]	2000/12 4005	06					2809278 (212339) BRWN CLAY LOOS 0018 BRWN SAND GRVL LOOS 0034 GREY GRVL SNDY CLAY 0058 GREY FGVL SAND LOOS 0059 RED SHLE HARD 0062
MILTON TOWN (TRAFALG NS 02(007)	17 593141 4815628[L]	2001/06 4005		FR 0070	023 / 041 020 / 1:0	DO		2809409 (227022) BRWN CLAY SNDY LOOS 0037 GREY GRVL SAND PCKD 0050 RED CLAY HARD 0055 RED SHLE HARD 0073
MILTON TOWN (TRAFALG NS 02(007)	17 593490 4816169[W]	2003/09 4868				NU		2809813 (261619)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 02(007)	17 593141 4815628[L]	2003/10 4868	08 08	FR 0051	019 / 042 005 / 1:30	DO		2809829 (261626) BRWN LOAM SOFT 0002 GREY CLAY STNS 0017 BRWN CLAY SAND 0042 RED SHLE LMSN 0055
MILTON TOWN (TRAFALG NS 02(007)	17 593505 4816132[W]	3637	30 32	FR 0025 FR 0015	001 / 014 / 1:0	DO		2806271 () BRWN LOAM 0001 BRWN CLAY PCKD 0014 BRWN SAND GRVL STNS 0015 BLUE CLAY SOFT 0025 GREY GRVL SNDS LOOS 0026
MILTON TOWN (TRAFALG NS 02(007)	17 593141 4815628[L]	2003/10 4868				DO		2809825 (261624)
MILTON TOWN (TRAFALG NS 02(007)	17 592582 4815276[W]	1986/02 3637	30 26	FR 0012 FR 0020	004 / 005 / 1:0	DO		2806547 () BRWN LOAM 0001 BRWN CLAY STNS PCKD 0005 RED SHLE SOFT 0022
MILTON TOWN (TRAFALG NS 02(007)	17 593454 4816196[W]	1984/05 3637	30 32	FR 0025 FR 0014	001 / 016 014 / 1:0	DO		2806272 () BRWN LOAM 0001 BRWN CLAY PCKD 0014 BRWN SAND GRVL BLDR 0015 BLUE CLAY SOFT 0025 GREY GRVL SNDS LOOS 0026
MILTON TOWN (TRAFALG NS 02(008)	17 592395 4815483[W]	1980/07 3637	24 30	FR 0013 FR 0025	010 / 008 / 1:0	DO		2805687 () BRWN LOAM 0001 BRWN CLAY 0010 RED SHLE HARD 0032
MILTON TOWN (TRAFALG NS 02(008)	17 592702 4816055[L]	2001/09 4868				DO		2809461 (207037)
MILTON TOWN (TRAFALG NS 02(008)	17 592702 4816055[L]	2001/09 4868				DO		2809460 (207036)
MILTON TOWN (TRAFALG NS 02(008)	17 593170 4816460[W]	1994/12 3030	36 36	FR 0022 FR 0024 FR 0032	022 / / :0	DO		2808303 (131956) BRWN LOAM 0001 BRWN CLAY 0014 GREY CLAY 0020 BRWN SAND 0022 BRWN CLAY 0024 BRWN SAND FGVL 0026 BRWN CLAY STNS 0032 BRWN CLAY SAND GRVL 0038
MILTON TOWN (TRAFALG NS 02(008)	17 592702 4816055[L]	2001/09 4868				ST		2809462 (207039)
MILTON TOWN (TRAFALG NS 02(008)	17 592702 4816055[L]	2001/09 4868				DO		2809463 (207038)
MILTON TOWN (TRAFALG NS 02(008)	17 592100 4815733[W]	1964/05 1307	30	FR 0055	015 / 004 / :0	DO		2802482 () BRWN LOAM CLAY 0015 RED SHLE 0055
MILTON TOWN (TRAFALG NS 02(008)	17 593108 4816568[W]	1962/10 3715	30	FR 0030	025 / 030 002 / 24:0	DO		2802481 () BRWN CLAY 0005 BLUE CLAY 0035
MILTON TOWN (TRAFALG NS 02(009)	17 592267 4816485[L]	1989/08 4005	06	UK 0132 UK 0136	054 / 131 005 / 2:30	DO	0132 04	2807419 (55642) BRWN SAND LOOS 0032 GREY CLAY GRVL LOOS 0065 BRWN CLAY SNDY LOOS 0105 GREY FSND LOOS 0118 BRWN FSND GRVL LOOS 0138 RED SHLE HARD 0138

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 02(009)	17 592267 4816485[L]	1989/08 4005	06					2807420 (55649) BRWN CLAY SNDY LOOS 0011 BRWN FSND LOOS 0024 GREY FSND FGVL LOOS 0034 GREY CLAY GRVL LOOS 0035
MILTON TOWN (TRAFALG NS 03(001)	17 596330 4813596[W]	1954/05 1642	06 06	FR 0057	010 / 002 / :0	DO		2802489 () CLAY 0047 RED SHLE 0059
MILTON TOWN (TRAFALG NS 03(002)	17 596008 4814268[W]	1958/12 4602	06 06	FR 0051	013 / 075 001 / 2:0	DO		2802490 () LOAM 0002 BRWN CLAY 0031 BLUE CLAY 0041 RED SHLE 0075
MILTON TOWN (TRAFALG NS 03(002)	17 595715 4814153[W]	1968/10 1307	30	FR 0047	015 / / :0	DO		2802782 () BRWN LOAM 0010 GREY CLAY 0045 MSND 0047
MILTON TOWN (TRAFALG NS 03(002)	17 595995 4814160[W]	2004/08 6061						2810049 (Z02125)
MILTON TOWN (TRAFALG NS 03(002)	17 595956 4814161[W]	1986/11 3637	30	FR 0049 FR 0039	044 / 005 / 1:0	DO		2806790 () BRWN LOAM 0001 BRWN CLAY PCKD 0015 GREY CLAY 0030 BRWN CLAY SAND 0039 GREY CLAY STNS 0055
MILTON TOWN (TRAFALG NS 03(003)	17 595320 4814632[W]	1998/03 2336	06 06	FR 0047	002 / 008 012 / 2:15	CO		2808708 (186187) BRWN CLAY 0010 BRWN CLAY BLDR 0020 BRWN CLAY 0025 GREY CLAY 0040 RED SHLE LOOS 0047 RED SHLE 0060
MILTON TOWN (TRAFALG NS 03(003)	17 595742 4814994[W]	1998/02 2336	08 08	FR 0060	006 / 009 004 / 1:0	CO		2808709 (186185) BRWN CLAY 0014 GREY CLAY 0019 RED SHLE LOOS 0025 RED SHLE 0080
MILTON TOWN (TRAFALG NS 03(003)	17 595871 4814833[W]	1998/04 2336	06 06	FR 0035	013 / 095 001 / 0:30	CO		2808711 (187616) BRWN CLAY STNS 0015 RED SHLE 0100
MILTON TOWN (TRAFALG NS 03(003)	17 595620 4815010[W]	1998/04 2336	08 08	FR 0040	011 / 095 001 / 0:30	CO		2808712 (187612) BRWN CLAY 0012 BRWN CLAY BLDR 0019 RED SHLE 0100
MILTON TOWN (TRAFALG NS 03(003)	17 595655 4814972[W]	1998/04 2336	06 06	FR 0040	018 / 090 001 / 0:30			2808757 (187619) BRWN CLAY STNS 0017 RED SHLE 0250
MILTON TOWN (TRAFALG NS 03(003)	17 595479 4814348[W]	1960/05 4602	06 06	FR 0064	017 / 092 001 / 4:0	DO		2802491 () BRWN CLAY 0062 RED SHLE 0092
MILTON TOWN (TRAFALG NS 03(003)	17 595809 4815032[W]	1998/03 2336	06 08	FR 0065	007 / 021 004 / 2:30	CO		2808707 (186186) BRWN CLAY 0010 GREY CLAY 0015 RED SHLE 0080
MILTON TOWN (TRAFALG NS 03(004)	17 594926 4815071[W]	1953/04 1642	06 06	FR 0070	020 / 020 005 / 4:0	ST DO		2802493 () CLAY MSND 0050 RED SHLE 0073
MILTON TOWN (TRAFALG NS 03(004)	17 594952 4814877[W]	1954/06 1642	06 06	FR 0060	010 / 010 / :0	DO		2802494 () CLAY 0055 RED SHLE 0061
MILTON TOWN (TRAFALG NS 03(004)	17 595104 4814714[W]	1955/08 1642	06 06	FR 0064	012 / 062 005 / 0:30	DO		2802495 () CLAY 0015 MSND GRVL 0040 BLUE CLAY 0060 RED SHLE 0066

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 03(004)	17 595439 4815853[W]	1952/07 1642	06 06	FR 0064	020 / 064 004 / :0	ST DO		2802492 () CLAY 0040 RED SHLE 0064
MILTON TOWN (TRAFALG NS 03(004)	17 595456 4815883[W]	1967/06 1308	30	FR 0036	024 / 034 001 / 1:0	CO		2802497 () LOAM 0001 BRWN CLAY 0009 HPAN 0019 BLDR 0021 BLUE CLAY 0035 GREY SHLE 0036
MILTON TOWN (TRAFALG NS 03(004)	17 594992 4814842[W]	1959/04 4208	07 07	FR 0062	022 / 050 007 / 1:0	DO		2802496 () CLAY 0047 RED SHLE 0065
MILTON TOWN (TRAFALG NS 03(004)	17 594925 4814907[W]	1997/07 4005	06 06	UK 0056	012 / 050 010 / 0:30	DO		2808548 (181746) BRWN CLAY 0015 BRWN CLAY SAND 0040 BRWN GRVL SAND 0055 RED SHLE LOOS 0056 RED SHLE HARD 0062
MILTON TOWN (TRAFALG NS 03(004)	17 595796 4815818[W]	1989/07 3030	36	FR 0027 FR 0020 FR 0008	008 / / :0	DO		2807356 (42735) BRWN LOAM 0001 BRWN CLAY SNDY 0010 GREY SILT SAND GRVL 0030 GREY CLAY 0033
MILTON TOWN (TRAFALG NS 03(004)	17 595425 4815763[W]	1970/07 3637	30	FR 0021	024 / 041 / :0	PS		2803525 () BRWN LOAM 0001 BRWN CLAY STNS 0019 GREY CLAY SILT 0021 GREY MSND GRVL 0030 RED CLAY STNS 0035 RED SHLE 0041
MILTON TOWN (TRAFALG NS 03(004)	17 595432 4815791[W]	1985/05 1660	06 06	FR 0070	028 / 095 008 / 2:0	DO		2806529 () BRWN LOAM 0001 BRWN CLAY BLDR 0022 BRWN CLAY HARD PCKD 0040 RED SHLE ROCK 0105
MILTON TOWN (TRAFALG NS 03(004)	17 595095 4814763[W]	1977/10 3637	30 32	FR 0060 FR 0048	009 / 053 014 / 6:0	ST		2805151 () BRWN LOAM 0001 BRWN CLAY PCKD 0012 GREY CLAY BLDR PCKD 0017 BRWN CLAY SILT SAND 0021 GREY CLAY STNS 0044 BRWN SAND CLAY SOFT 0048 BRWN CLAY STNS BLDR 0059 RED SHLE 0061
MILTON TOWN (TRAFALG NS 03(006)	17 594414 4815788[W]	1967/11 2519	30	FR 0021	020 / 029 002 / :0	DO		2802502 () LOAM 0001 BRWN CLAY MSND 0006 GREY CLAY 0022 GREY MSND 0030
MILTON TOWN (TRAFALG NS 03(006)	17 594177 4815607[W]	1964/07 4101	05 05	FR 0045	015 / 040 008 / 2:0	DO		2802501 () BRWN CLAY 0018 CLAY MSND 0036 RED SHLE 0045
MILTON TOWN (TRAFALG NS 03(006)	17 594391 4815992[W]	1964/05 1307	30	FR 0046	025 / 001 / :0	DO		2802500 () BRWN LOAM CLAY 0010 RED CLAY 0042 RED SHLE 0046
MILTON TOWN (TRAFALG NS 03(006)	17 594854 4816382[W]	1959/04 4602	06 06	FR 0050	024 / 035 004 / 4:0	DO		2802499 () LOAM 0002 CLAY 0042 GREN SHLE 0043 RED SHLE 0050
MILTON TOWN (TRAFALG NS 03(006)	17 594441 4815943[W]	1954/01 1642	06	FR 0060	024 / 003 / :0	PS		2802498 () CLAY 0060

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 03(006)	17 594385 4815763[W]	1969/11 3637	30	FR 0030	020 / 038 / 1:0	PS		2803260 () BLCK LOAM 0002 BRWN CLAY STNS 0016 GREY CLAY STNS 0022 BRWN CLAY MSND STNS 0030 BRWN MSND GRVL 0032 BRWN CLAY STNS 0038
MILTON TOWN (TRAFALG NS 03(006)	17 594357 4815820[W]	1989/01 4005	06	UK 0043	015 / 065 010 / 2:0	CO		2807119 (42498) BRWN CLAY SAND LOOS 0008 BRWN SAND FGVL LOOS 0022 BRWN CLAY SAND LOOS 0040 BRWN SAND FGVL LOOS 0043 RED SHLE HARD 0075
MILTON TOWN (TRAFALG NS 03(007)	17 593655 4816403[W]	1970/04 3637	30	FR 0044	010 / 046 / :0	DO		2803361 () BLCK LOAM 0001 BRWN CLAY 0016 GREY CLAY STNS 0021 BRWN CLAY STNS 0042 RED SHLE 0046
MILTON TOWN (TRAFALG NS 03(007)	17 593645 4816363[W]	1968/11 3637	30	FR 0025	004 / / :0	DO		2802792 () LOAM 0002 GREY CLAY 0024 BRWN CLAY BLDR 0036
MILTON TOWN (TRAFALG NS 03(007)	17 593505 4816263[W]	1970/04 3903	02 06	FR 0040	011 / 056 014 / 0:22	NU	0070 02	2803410 () BRWN LOAM 0004 RED CLAY STNS 0030 GREY GRVL STNS MSND 0035 GREY GRVL STNS CLAY 0040 RED SHLE 0075
MILTON TOWN (TRAFALG NS 03(008)	17 593398 4816387[W]	1956/04 1642	06	FR 0045	012 / 043 002 / 0:30	CO		2802504 () CLAY 0025 MSND GRVL 0045
MILTON TOWN (TRAFALG NS 03(008)	17 593630 4816472[W]	1989/11 4005	06	UK 0034	030 / 055 / 3:0	DO		2807518 (55716) BRWN CLAY SNDY LOOS 0030 RED CLAY GRVL LOOS 0034 RED SHLE HARD 0055
MILTON TOWN (TRAFALG NS 04(001)	17 597455 4814723[W]	1968/06 1307	30	FR 0028	010 / / :0	DO		2802781 () BRWN LOAM 0012 RED SHLE 0028
MILTON TOWN (TRAFALG NS 04(001)	17 597329 4814750[W]	1954/07 1642	06	FR 0068	030 / 001 / :0	PS		2802522 () PRDG 0018 RED SHLE 0073
MILTON TOWN (TRAFALG NS 04(001)	17 597756 4815143[W]	1966/09 1307	30	FR 0031	014 / 002 / :0	DO		2802524 () BRWN LOAM CLAY 0015 RED CLAY 0027 RED SHLE 0031
MILTON TOWN (TRAFALG NS 04(001)	17 597459 4814764[W]	1959/08 1718	07 07	FR 0031 MN 0060 MN 0084	019 / 084 002 / 1:0	ST DO		2802523 () LOAM 0001 RED CLAY 0006 RED SHLE 0084
MILTON TOWN (TRAFALG NS 04(002)	17 597294 4816251[W]	1961/11 1307	30	FR 0050	020 / 001 / :0	DO		2802525 () BRWN LOAM CLAY 0012 RED CLAY 0040 RED SHLE 0050
MILTON TOWN (TRAFALG NS 04(002)	17 597643 4816001[W]	1964/05 1307	30	FR 0031	015 / 001 / :0	DO		2802526 () BRWN LOAM CLAY 0020 RED SHLE 0031
MILTON TOWN (TRAFALG NS 04(002)	17 597044 4815679[L]	2003/09 4005	06	UK 0045	028 / 040 002 / 1:0	DO		2809796 (258699) BRWN CLAY SNDY 0018 GREY CLAY GRVL 0032 GREY CLAY 0044 RED SHLE UNKN 0045 RED SHLE 0057

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 04(002)	17 597372 4816272[W]	1965/10 1307	30	FR 0030	015 / 001 / :0	DO		2802527 () BRWN LOAM CLAY 0018 RED SHLE 0032
MILTON TOWN (TRAFALG NS 04(003)	17 596215 4815643[W]	1980/12 3637	30 24	FR 0030 FR 0044	025 / / :0	ST DO		2805689 () BRWN LOAM 0001 BRWN CLAY 0015 BRWN SAND CLAY STNS 0020 RED CLAY STNS HARD 0027 GREY CLAY SAND STNS 0042 RED SHLE 0047
MILTON TOWN (TRAFALG NS 04(004)	17 595680 4816102[W]	1989/07 3030	26 36	FR 0025 FR 0043 FR 0012	012 / / :0	DO		2807355 (42736) BRWN LOAM 0001 BRWN CLAY SNDY 0012 GREY SILT STNS 0040 RED SHLE 0045
MILTON TOWN (TRAFALG NS 04(004)	17 596166 4816531[L]	2002/01 4005						2809548 (227172)
MILTON TOWN (TRAFALG NS 04(004)	17 595622 4816169[W]	1990/08 3030	36	FR 0017 FR 0028 FR	008 / / :0	DO		2807669 (61624) LOAM 0001 BRWN CLAY 0008 BRWN CLAY STNS 0017 BLUE CLAY STNS 0025 RED CLAY STNS 0028 RED SAND GRVL 0031 RED CLAY STNS 0033
MILTON TOWN (TRAFALG NS 04(004)	17 595591 4816181[W]	1989/07 3030	36 26	FR 0043 FR 0025 FR 0012	012 / / :0	DO		2807524 (61384) BRWN LOAM 0001 BRWN CLAY SNDY 0012 GREY SILT 0040 RED SHLE 0045
MILTON TOWN (TRAFALG NS 04(005)	17 595175 4816593[W]	1959/07 1642	06 06	FR 0055	013 / 053 002 / 1:30	DO		2802531 () PRDG 0018 GREY CLAY 0040 BLUE CLAY 0048 RED SHLE 0057
MILTON TOWN (TRAFALG NS 05(001)	17 598163 4815657[W]	1964/05 1308	30	FR 0034	024 / 035 / 1:0	DO		2802549 () BRWN CLAY 0004 RED CLAY MSND BLDR 0033 RED SHLE 0035
MILTON TOWN (TRAFALG NS 05(001)	17 597771 4816018[W]	1974/12 4602		FR 0033	016 / 057 001 / 4:0			2804656 () BRWN CLAY 0015 BRWN CLAY SAND 0021 GREY CLAY 0033 GREY CLAY SAND 0040 RED SHLE 0061
MILTON TOWN (TRAFALG NS 05(001)	17 598195 4816603[W]	1978/03 2519	30	FR 0032	026 / / :0	DO		2805197 () BRWN CLAY SNDY HARD 0018 BRWN CLAY STNS HARD 0028 RED SHLE BLDR 0030 BLUE SHLE HARD SOFT 0039 BLCK SHLE HARD 0040
MILTON TOWN (TRAFALG NS 05(001)	17 597854 4816008[W]	1974/10 2336	06 06	FR 0034	015 / 060 001 / 3:0	DO		2804615 () LOAM 0001 BRWN CLAY STNS 0030 RED SHLE 0070
MILTON TOWN (TRAFALG NS 05(002)	17 597600 4816173[W]	1957/12 1642	06 06	SA 0076	028 / 030 004 / 0:30	ST		2802550 () CLAY GRVL 0046 RED SHLE 0078
MILTON TOWN (TRAFALG NS 05(002)	17 598200 4816701[W]	1987/11 4868	30	FR 0030	012 / 015 004 / 1:0	DO		2806795 (07745) BRWN CLAY LOAM SOFT 0001 BRWN CLAY STNS HARD 0018 GREY SAND STNS HARD 0022 RED CLAY STNS HARD 0025 RED SHLE LMSN HARD 0031

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (TRAFALG NS 05(002)	17 597585 4816160[W]	1965/03 3512	07 07	FR 0062	030 / 058 002 / 4:0	DO		2802552 () FILL 0003 HPAN 0035 RED SHLE 0066
MILTON TOWN (TRAFALG ()	17 597281 4814483[W]	2004/11 6607	01			NU	0031 05	2810471 (Z21613) A016975 BRWN LOAM 0000 BRWN CLAY SILT FILL 0002 BRWN CLAY SILT TILL 0017 RED SILT SAND GRVL 0025 RED SILT CLAY TILL 0026 RED SHLE CLAY ROCK 0036
MILTON TOWN (TRAFALG 01(003)	17 594061 4812809[L]	1984/03 3637	30 24	FR 0050	006 / 022 014 / 1:0	DO		2806273 () BRWN LOAM 0001 BRWN CLAY 0012 BLCK CLAY STNS 0015 RED CLAY STNS PCKD 0045 RED SHLE HARD 0052
MILTON TOWN (TRAFALG 02(001)	17 595617 4812842[W]	2005/08 4005	05					2810332 (Z22342) A022082 BRWN CLAY 0021 GREY CLAY 0043 RED CLAY 0045 RED SHLE 0065
MILTON TOWN (TRAFALG 02(001)	17 596076 4813441[W]	2005/06 4005	06	0051 0067	/ / :0	CO		2810277 (Z22302) A022044 BRWN CLAY 0014 GREY CLAY 0040 BRWN CLAY 0045 RED CLAY 0047 RED CLAY GRVL 0048 RED SHLE 0070
MILTON TOWN (TRAFALG ()	17 595358 4812502[W]	2005/03 1660						2810352 (Z00797)
MILTON TOWN (TRAFALG ()	17 597238 4811362[W]	2005/06 7215	01				0020 33	2810347 (Z28573) A025569
MILTON TOWN (TRAFALG ()	17 594696 4813906[W]	2005/01 6809	02				0058 -05	2810163 (Z11224) A011105 RED TILL SILT SAND 0058
MILTON TOWN (TRAFALG ()	17 595239 4816511[W]	2004/11 3030	36	0012 0025	/ / :0	DO		2810135 (Z23400) A017309 BRWN LOAM 0001 BRWN CLAY 0012 BRWN SAND 0015 GREY CLAY 0025 RED SHLE 0028
MILTON TOWN (TRAFALG ()	17 594051 4814032[W]	2008/12 7241						7117475 (M03302) A081917
MILTON TOWN (ESQUESI ()	17 595871 4808948[W]	2007/07 1129	01		/ / :0			7051396 (Z67542) A055514 BRWN SILT TILL 0022 BRWN SAND SILT TILL 0029 GREY SAND TILL 0049 ROCK SHLE 0151
HALTON HILLS TOWN (T NS 02(002)	17 595771 4813800[W]	2007/07 3349						7050134 (Z66978)
HALTON HILLS TOWN (T NS 02(002)	17 595812 4813855[W]	2007/07 3349						7050135 (Z66979)
HALTON HILLS TOWN (T 01(024)	17 600440 4812464[W]	2008/10 7147	06	FR		NU		7114228 (Z88586)
HALTON HILLS TOWN (T 01(024)	17 600589 4812150[W]	2008/10 7147		FR		NU		7114226 (Z88583)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
HALTON HILLS TOWN (T 01(024)	17 600444 4812469[W]	2008/10 7147		FR		NU		7114227 (Z88582)
HALTON HILLS TOWN (T (024)	17 600598 4812147[W]	2008/10 7147		FR 0011		NU		7114225 (Z88581)
HALTON HILLS TOWN (A ()	17 594260 4815545[W]	2008/08 6032						7113170 (Z82199) A062201 ---- 0017 ---- 0020
BURLINGTON CITY DS N 01(001)	17 597012 4808992[W]	1973/08 3637	30 24	FR 0023	010 / 018 007 / 1:0	DO		2804460 () BRWN LOAM 0001 BRWN CLAY STNS 0015 RED SHLE 0024
BURLINGTON CITY DS N 01(001)	17 597035 4808993[W]	1972/09 1815	06 06	FR 0030 MN 0051	044 / 048 002 / 2:0	DO		2803908 () LOAM 0003 BRWN CLAY 0015 RED CLAY 0021 RED SHLE 0052
BURLINGTON CITY DS N 01(001)	17 597575 4808043[W]	1972/10 3030	36 24	FR 0035 FR 0020	025 / / :0	DO		2803936 () BRWN LOAM 0001 BRWN CLAY 0012 GREY CLAY SILT STNS 0032 RED SHLE 0042
BURLINGTON CITY DS N 01(001)	17 596878 4808870[L]	1989/06 4868	30 30 28	FR 0046	018 / 045 003 / 6:0	DO		2807312 (7765) BRWN LOAM FSND 0003 BRWN CLAY ROCK FSND 0012 GREY CLAY STNS HARD 0034 RED CLAY STNS HARD 0038 RED SHLE FSND 0043 RED SHLE LMSN HARD 0052
BURLINGTON CITY DS N 01(001)	17 597775 4808283[W]	1978/09 3637	30 24	FR 0012 FR 0016	/ 015 / 4:0	DO		2805427 () BRWN LOAM 0001 BRWN CLAY STNS HARD 0004 RED SHLE HARD 0013 RED SHLE HARD VERY 0018
BURLINGTON CITY DS N 01(001)	17 596275 4809743[W]	1972/09 1815	06 06	FR 0052	050 / 053 001 / 2:0	DO		2803911 () LOAM 0003 BRWN CLAY 0017 BRWN CLAY STNS 0022 GRVL 0042 BLUE CLAY 0048 SILT 0052 RED SHLE 0055
BURLINGTON CITY DS N 01(001)	17 596878 4808870[L]	1989/06 4868	30 28	FR 0031 FR 0035	011 / 019 004 / 1:0	DO		2807311 (41646) GREY CLAY FSND 0005 RED CLAY STNS 0015 RED SHLE LMSN HARD 0035
BURLINGTON CITY DS N 01(001)	17 596380 4809590[W]	1964/06 1308	30	FR 0056	036 / 057 001 / 1:0	DO		2800013 () BRWN CLAY 0009 RED CLAY BLDR 0040 RED SHLE 0058
BURLINGTON CITY DS N 01(001)	17 597635 4808182[W]	1953/11 1634	06 30	FR 0073	032 / 032 003 / :0	DO		2800012 () PRDG 0027 RED SHLE 0073
BURLINGTON CITY DS N 01(001)	17 596455 4809563[W]	1972/09 1815	06 06	FR 0048	044 / 045 001 / 1:45	DO		2803931 () LOAM 0003 BRWN CLAY 0017 BRWN CLAY STNS 0032 RED SHLE 0048
BURLINGTON CITY DS N 01(002)	17 597691 4808278[W]	1955/12 1634	06 06	FR 0065	035 / 063 001 / 0:10	DO		2800014 () CLAY MSND 0015 FSND STNS 0038 RED SHLE 0174
BURLINGTON CITY DS N 01(002)	17 597395 4808003[W]	1976/05 3030	36	FR 0022 FR 0015 FR 0028	010 / / :0	DO		2804885 () BRWN LOAM 0001 BRWN SAND 0015 BRWN CGVL CSND 0023 BRWN SAND PCKD 0033

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 01(002)	17 597333 4807896[W]	1973/03 3030	36	FR 0005	015 / 022 010 / 1:0	DO		2804096 () BRWN LOAM 0001 BRWN LOAM SAND 0005 GREY SILT SHLE SAND 0033 RED SHLE 0034
BURLINGTON CITY DS N 01(002)	17 597315 4807843[W]	1972/08 3030	36	FR 0005 FR 0015	007 / 013 010 / 0:45	DO		2803897 () BRWN SAND 0005 BRWN CLAY SAND GRVL 0020 RED CLAY SILT 0030
BURLINGTON CITY DS N 01(002)	17 597355 4807983[W]	1976/05 3030	36 30	FR 0010	008 / / :0	DO		2804884 () BLCK LOAM 0001 BRWN SAND 0010 BRWN CGVL CSND 0013 BRWN SAND PCKD 0030
BURLINGTON CITY DS N 01(003)	17 595635 4808853[W]	1968/11 3637	30	FR 0021	008 / / :0	DO		2802793 () LOAM 0001 BRWN CLAY 0012 HPAN 0021 MSND GRVL 0027
BURLINGTON CITY DS N 01(003)	17 595748 4809052[W]	1992/01 4005	06	UK 0039	019 / 050 005 / 1:0	DO		2807948 (76576) BRWN CLAY SAND LOOS 0032 BRWN CLAY SAND LOOS 0034 RED CLAY SAND LOOS 0039 RED SHLE HARD 0055
BURLINGTON CITY DS N 01(003)	17 595680 4808791[W]	1996/07 1660	06 06	FR 0095	039 / 082 012 / 2:0	DO		2808537 (74931) BRWN CLAY 0014 GREY CLAY 0043 RED SHLE 0100
BURLINGTON CITY DS N 01(003)	17 596981 4807528[W]	2002/09 4005						2809640 (241352)
BURLINGTON CITY DS N 01(003)	17 597080 4807512[W]	1948/11 1532	06 06	FR 0020	/ 005 / :0	DO		2800016 () CLAY 0023 RED SHLE 0055
BURLINGTON CITY DS N 01(003)	17 597075 4807523[W]	1970/04 3637	30	FR 0033	022 / 035 / :0	DO		2803341 () BRWN LOAM 0001 BRWN CLAY 0010 RED SHLE 0035
BURLINGTON CITY DS N 01(003)	17 596621 4807827[W]	1964/09 4602	06 06	FR 0071 FR 0052	053 / 082 001 / 1:0	DO		2800018 () GREY CLAY 0044 RED SHLE 0082
BURLINGTON CITY DS N 01(003)	17 597080 4807509[W]	1962/08 1308	30	FR 0022	010 / 002 / 1:0	CO		2800017 () CLAY MSND 0020 RED SHLE 0027
BURLINGTON CITY DS N 01(003)	17 595634 4808819[W]	1997/04 1660	06 06	FR 0050	016 / 047 007 / 1:0	DO		2808781 (74949) BRWN CLAY 0004 BRWN CLAY STNS 0018 RED CLAY 0022 RED SHLE 0054
BURLINGTON CITY DS N 01(003)	17 595671 4808759[W]	1996/08 1660	06 06	SA 0103	044 / 095 008 / 1:0	DO		2808540 (74934) BRWN CLAY 0012 GREN CLAY 0040 RED SHLE 0106
BURLINGTON CITY DS N 01(004)	17 596581 4807528[W]	1986/07 5417	06	FR 0072 FR 0085	013 / 085 001 / 1:0	DO		2806507 () BRWN CLAY 0014 GREY CLAY 0030 RED SHLE 0091
BURLINGTON CITY DS N 01(004)	17 596786 4807087[W]	1975/03 3903	06	FR 0040 SA 0061	012 / 058 001 / 2:0	CO		2804843 () BLCK FILL 0001 SHLE CLAY 0036 RED SHLE 0040 RED SHLE 0076
BURLINGTON CITY DS N 01(004)	17 596535 4807723[W]	1969/08 5417	06	FR 0052 FR 0078	033 / 070 004 / 1:0	IN		2803176 () GREY CLAY GRVL 0044 RED SHLE 0082

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 01(004)	17 596799 4807105[W]	1975/03 3903	06	FR 0024	015 / 058 003 / 2:0	CO		2804842 () BLCK FILL 0001 ROCK SHLE CLAY 0024 RED SHLE 0061
BURLINGTON CITY DS N 01(004)	17 596885 4807194[W]	1954/07 3609	06 05 05	FR 0048	012 / 030 013 / :0	DO		2800019 () FSND 0016 RED SHLE 0051
BURLINGTON CITY DS N 01(005)	17 596389 4807214[W]	1989/03 3030	24 36	FR 0016	016 / / :0	DO		2807251 (42393) BRWN LOAM 0001 BRWN CLAY SNDY STNS 0016 BRWN SAND 0022 GREY SILT 0027 RED SHLE 0034
BURLINGTON CITY DS N 01(005)	17 596520 4806957[W]	1989/01 4005	06	FR 0039	011 / 045 009 / 2:30	DO		2807216 (55505) BRWN CLAY SNDY LOOS 0009 BRWN SAND GRVL LOOS 0016 BRWN GRVL LOOS 0038 GREY GRVL PCKD 0039 RED SHLE HARD 0050
BURLINGTON CITY DS N 01(005)	17 595867 4807566[L]	2000/03 1663						2809199 (213480)
BURLINGTON CITY DS N 01(006)	17 595621 4807228[L]	2000/04 1660						2809363 (202579)
BURLINGTON CITY DS N 01(006)	17 594808 4807803[W]	1973/03 3030	36 24	FR 0087 FR 0018 FR 0070	018 / / :0	DO		2804094 () BRWN LOAM 0008 BRWN CLAY STNS 0018 GREY CLAY STNS 0041 BLUE CLAY SILT STNS 0070 BRWN CLAY STNS 0083 BRWN SAND CLAY STNS 0101
BURLINGTON CITY DS N 01(006)	17 594835 4807833[W]	1973/03 3030	36 24	FR 0017 FR 0090	017 / / :0	DO		2804095 () BRWN LOAM 0008 BRWN CLAY 0017 GREY CLAY STNS 0035 BLUE CLAY SILT 0065 BRWN CLAY STNS 0080 BRWN SAND CLAY STNS 0100
BURLINGTON CITY DS N 01(006)	17 596422 4806659[W]	1984/08 4005	06	FR 0041	022 / 047 005 / 1:0	CO		2806187 () BRWN SAND CLAY LOOS 0021 BRWN SAND GRVL LOOS 0040 RED SHLE HARD 0050
BURLINGTON CITY DS N 01(007)	17 595997 4806281[W]	2004/11 3366	06		008 / / :0			2810085 (Z13305) A013217
BURLINGTON CITY DS N 01(007)	17 595990 4806263[W]	2004/11 3366	04		008 / / :0			2810086 (Z13306) A013218
BURLINGTON CITY DS N 01(007)	17 596020 4806085[W]	1949/09 1532	06 06	FR 0037	007 / / 1:0	DO		2800020 () CLAY 0030 RED SHLE 0042
BURLINGTON CITY DS N 01(007)	17 596040 4806250[W]	1955/06 1634	06 06	FR 0045	007 / 043 002 / :0	DO		2800021 () MSND STNS 0028 RED SHLE 0049
BURLINGTON CITY DS N 01(007)	17 594583 4807523[W]	1973/03 3030	36 24	FR 0016 FR 0055 FR 0084	/ / :0	DO		2804093 () BRWN LOAM 0006 BRWN CLAY STNS 0016 BLUE CLAY 0055 BRWN CLAY STNS 0085 BRWN SAND STNS CLAY 0100

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 01(007)	17 594603 4807543[W]	1973/03 3030	24 36	FR 0015 FR 0059 FR 0087	015 / / :0	DO		2804097 () BRWN LOAM 0007 BRWN CLAY STNS 0015 GREY CLAY 0031 BLUE CLAY STNS SILT 0059 BRWN CLAY STNS 0085 BRWN SAND STNS CLAY 0105
BURLINGTON CITY DS N 01(008)	17 594533 4807473[W]	1972/07 3030	30 30	FR 0020 FR 0045 FR 0090	048 / 057 010 / 1:0	DO		2803898 () BRWN LOAM 0001 BRWN CLAY 0020 GREY CLAY STNS 0045 GREY SAND 0046 GREY CLAY STNS BLDR 0090 GREY CLAY SAND 0105
BURLINGTON CITY DS N 01(009)	17 594275 4807138[W]	1971/06 4602	06	FR 0127	051 / 128 001 / 3:0	DO		2803565 () BRWN CLAY 0018 GREY CLAY 0102 RED CLAY GRVL 0130
BURLINGTON CITY DS N 01(009)	17 595523 4805543[W]	1956/03 1634	06	FR 0049	010 / 048 001 / 0:5	NU		2800022 () MSND CLAY 0033 SHLE 0060
BURLINGTON CITY DS N 01(009)	17 594175 4807013[W]	1969/09 4602	06	FR 0124	051 / 121 007 / 1:0	DO		2803232 () PRDG 0106 GREY CLAY 0120 RED CLAY GRVL CLAY 0124 GREY MSND 0125 GREY GRVL MSND CLAY 0129 RED SHLE 0130
BURLINGTON CITY DS N 01(009)	17 594275 4807138[W]	1971/06 4602	06	FR 0127	051 / 128 001 / 3:0	DO		2803663 () CLAY 0018 GREY CLAY 0102 RED CLAY GRVL 0130
BURLINGTON CITY DS N 01(009)	17 594175 4807013[W]	1969/08 3637				NU		2803218 () BRWN LOAM 0001 BRWN CLAY 0019 BLUE CLAY 0105 BRWN CLAY STNS 0112
BURLINGTON CITY DS N 01(009)	17 595526 4805518[W]	1956/04 1634	06 06	FR 0056	014 / 055 002 / 0:15	NU		2800023 () MSND CLAY 0034 RED SHLE 0060
BURLINGTON CITY DS N 01(010)	17 595092 4805501[W]	1966/12 1308	30	FR 0024	010 / 002 / :0	DO		2800028 () LOAM 0002 BRWN CLAY BLDR 0009 CLAY MSND 0024 CSND 0025
BURLINGTON CITY DS N 01(010)	17 593895 4806433[W]	1973/06 3030	36	FR 0015	043 / 053 / :0	DO		2804175 () BRWN LOAM 0001 BRWN CLAY STNS 0015 GREY CLAY STNS 0053
BURLINGTON CITY DS N 01(010)	17 593827 4806557[W]	1964/08 1307	36					2800026 () BRWN LOAM 0012 GREY CLAY 0068 RED CLAY 0070 RED SHLE 0072
BURLINGTON CITY DS N 01(010)	17 594132 4806207[W]	1963/11 5417	06 06	FR 0089	033 / 083 001 / 0:45	DO		2800025 () BRWN CLAY 0017 BLUE CLAY 0040 BLUE CLAY GRVL 0078 RED SHLE CLAY 0080 RED SHLE 0093
BURLINGTON CITY DS N 01(010)	17 593975 4806359[W]	1958/06 4208	06 06	FR 0060	002 / 070 / 0:30	DO		2800024 () CLAY 0052 RED SHLE 0075
BURLINGTON CITY DS N 01(010)	17 594175 4806183[W]	1980/05 3637	30	FR 0084	040 / 014 / 1:0	DO		2805645 () BRWN LOAM 0001 BRWN CLAY 0013 GREY CLAY STNS HARD 0084 GREY CSND LOOS 0086
BURLINGTON CITY DS N 01(010)	17 594116 4806244[W]	1965/11 4602	06 06	FR 0086	038 / 092 001 / 3:0	DO		2800027 () GREY CLAY 0082 GREY CLAY GRVL 0086 RED SHLE 0092

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 01(010)	17 593875 4806463[W]	1973/06 3030	36	FR 0018	056 / 073 / :0	DO		2804174 () BRWN LOAM 0001 BRWN CLAY STNS 0018 GREY CLAY STNS 0071 RED SHLE 0072
BURLINGTON CITY DS N 01(011)	17 593551 4806202[W]	1984/12 5417	06	FR 0035 UK 0066	009 / 066 001 / 1:30	DO		2806229 () BRWN CLAY 0009 GREY CLAY 0031 RED SHLE 0071
BURLINGTON CITY DS N 01(011)	17 593580 4806193[W]	1971/10 4602	06	FR 0042	012 / 050 001 / 1:30	DO		2803666 () GREY CLAY SILT 0012 GREY CLAY 0035 RED SHLE 0054
BURLINGTON CITY DS N 01(011)	17 593835 4806423[W]	1969/07 3637	30	FR 0061	026 / 060 / 1:0	DO		2803186 () BRWN LOAM 0001 BRWN CLAY 0019 GREY CLAY SILT STNS 0059 RED SHLE 0063
BURLINGTON CITY DS N 01(011)	17 593775 4806463[W]	1969/07 3637	30	FR 0061	019 / 061 / 1:0	DO		2803184 () BRWN LOAM 0001 BRWN CLAY 0020 GREY CLAY SILT STNS 0061 RED SHLE 0064
BURLINGTON CITY DS N 01(011)	17 593562 4806240[W]	1960/07 4602	06					2800029 () PRDG 0031 BRWN CLAY 0042 RED SHLE 0085
BURLINGTON CITY DS N 01(011)	17 593557 4806223[W]	1960/07 4602	06 06	FR 0061	015 / 072 001 / 2:0	DO		2800030 () BLCK LOAM 0001 BRWN CLAY 0041 RED SHLE 0072
BURLINGTON CITY DS N 01(012)	17 594110 4805301[L]	2002/03 4868				DO		2809564 (207059)
BURLINGTON CITY DS N 01(012)	17 593375 4805923[W]	1972/08 1815	06	FR 0066	024 / 062 001 / 3:30	DO		2803891 () PRDR 0035 RED SHLE 0067
BURLINGTON CITY DS N 01(012)	17 593395 4805923[W]	1972/07 3030	36	FR 0029 FR 0011	011 / / :0	DO		2803888 () BRWN LOAM 0001 BRWN CLAY STNS 0011 BLUE CLAY STNS 0029 GREY GRVL 0030 RED SHLE 0035
BURLINGTON CITY DS N 01(013)	17 593865 4804976[L]	2000/04 1663				NU		2809198 (213504)
BURLINGTON CITY DS N 01(016)	17 592570 4804764[W]	1961/05 4602	06					2800031 () BRWN CLAY 0035 GREY CLAY 0062 RED SHLE 0100
BURLINGTON CITY DS N 01(016)	17 592475 4804823[W]	1980/09 3637	30	FR 0040 FR 0060	/ / :0	DO		2805815 () BRWN LOAM 0001 BRWN CLAY STNS SOFT 0018 GREY CLAY STNS PCKD 0040 BRWN CLAY SILT PCKD 0045 GREY CLAY STNS BLDR 0060 BRWN SAND CLAY 0070 STNS 0070
BURLINGTON CITY DS N 01(016)	17 592216 4804969[W]	1961/10 4602	06 06	FR 0062	046 / 062 008 / 1:0	DO		2800116 () BRWN CLAY 0008 GREY LMSN 0062 BLUE SHLE 0070
BURLINGTON CITY DS N 01(016)	17 592437 4804811[W]	1993/11 1660	06 06	FR 0120	041 / 149 001 / 1:0	DO		2808258 (74892) BLCK LOAM 0001 BRWN CLAY 0009 BRWN CLAY STNS 0032 BRWN CLAY SAND GRVL 0068 BLUE LMSN SHLE 0086 RED SHLE 0151

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 01(016)	17 592468 4804730[W]	1948/11 1907	06 06	FR 0097	036 / / 12:0	DO		2800035 () BLUE CLAY 0030 CLAY STNS GRVL 0087 BLUE CLAY 0089 LMSN 0100 RED SHLE 0102
BURLINGTON CITY DS N 01(016)	17 592255 4804855[W]	1954/06 4002	06 06		014 / 042 002 / 1:0	DO		2800037 () BLDR GRVL 0003 LMSN 0040 WHIT CSND 0042
BURLINGTON CITY DS N 01(016)	17 592567 4804789[W]	1961/06 1307	30	FR 0067	020 / 001 / :0	DO		2800032 () BRWN LOAM 0012 RED CLAY 0055 RED SHLE 0067
BURLINGTON CITY DS N 01(016)	17 592439 4804810[W]	1992/04 4005	06		/ / :0	DO		2807980 (118133) BRWN CLAY LOOS 0024 GREY CLAY LOOS 0036 BRWN SAND SILT LOOS 0038 GREY CLAY LOOS 0060 GREY CLAY BLDR LYRD 0068 GREY LMSN CLAY LYRD 0075 BLUE SHLE HARD 0084 RED SHLE HARD 0120
BURLINGTON CITY DS N 02(004)	17 594590 4809219[W]	1994/10 4005	06 06	UK 0145	057 / 148 001 / 1:0	DO		2808273 (124518) BRWN CLAY 0018 GREY CLAY SAND SOFT 0065 BRWN CLAY PCKD 0085 BRWN SAND GRVL 0096 GREY CLAY 0098 RED SHLE HARD 0150
BURLINGTON CITY DS N 02(005)	17 594996 4808210[W]	1965/08 4602	06 06	FR 0073	035 / 088 001 / 2:0	DO		2800091 () BRWN CLAY 0017 GREY CLAY 0047 RED CLAY 0067 RED CLAY GRVL 0071 RED SHLE 0088
BURLINGTON CITY DS N 02(005)	17 593569 4809643[W]	1972/08 3637	21	FR 0045	-043 / 049 003 / :0	DO		2804134 () PRDG 0045 BLCK GRVL 0052
BURLINGTON CITY DS N 02(005)	17 593955 4809223[W]	1973/10 4602		SA 0107	/ 002 / 1:0			2804327 () BRWN CLAY 0018 GREY CLAY GRVL 0060 RED CLAY GRVL 0064 RED SHLE 0108
BURLINGTON CITY DS N 02(005)	17 594435 4808863[W]	1976/08 3637	30 24	FR 0079	034 / / :0	DO		2804993 () BRWN LOAM 0001 BRWN CLAY STNS PCKD 0074 RED SHLE 0081
BURLINGTON CITY DS N 02(005)	17 594475 4809183[W]	1968/09 2613	07 07	FR 0100	018 / 060 030 / 4:0	ST DO		2802851 () RED CLAY STNS 0090 RED SHLE 0167
BURLINGTON CITY DS N 02(005)	17 594735 4808458[W]	2003/02 6865	06 05	FR 0063 FR 0065	040 / 082 001 / 1:0	DO		2809717 (253316) BRWN LOAM 0001 GREY CLAY GRVL 0065 RED SHLE LYRD 0097
BURLINGTON CITY DS N 02(005)	17 594482 4808882[W]	1987/06 5417	06	FR 0077	044 / 095 / 3:0	DO		2806704 () BRWN CLAY 0014 GREY CLAY 0065 GREY CLAY GVLY 0073 RED SHLE 0100
BURLINGTON CITY DS N 02(005)	17 595015 4808223[W]	1972/09 4602	06	FR 0071 FR 0078	079 / 079 001 / 3:0	DO		2803945 () BRWN CLAY 0020 GREY CLAY 0051 GREY CLAY GRVL 0063 RED SHLE 0093
BURLINGTON CITY DS N 02(005)	17 594684 4808616[W]	2003/02 6865						2809715 (253314)
BURLINGTON CITY DS N 02(005)	17 594685 4808619[W]	2003/02 6865						2809716 (253315)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(005)	17 594370 4809030[W]	1954/08 1634	06 06	FR 0075	055 / / :0	DO		2800090 () CLAY 0005 BLUE CLAY 0045 CLAY STNS 0051 RED SHLE 0077
BURLINGTON CITY DS N 02(005)	17 593715 4809623[W]	1970/08 4602	06	FR 0057 FR 0083	042 / 092 / 1:30	DO		2803443 () CLAY 0016 GREY CLAY 0057 GREY MSND CLAY 0059 GREY CLAY GRVL 0078 RED SHLE 0098
BURLINGTON CITY DS N 02(006)	17 593762 4809054[W]	1954/11 1613	06 06	FR 0093	057 / 001 / :0	DO		2800092 () CLAY 0018 RED CLAY 0095
BURLINGTON CITY DS N 02(006)	17 594844 4808213[W]	1966/04 1307	30	FR 0085	030 / 001 / :0	DO		2800093 () BRWN LOAM 0018 GREY CLAY 0060 GREY MSND 0063 RED CLAY 0083 RED MSND 0085
BURLINGTON CITY DS N 02(006)	17 594835 4807963[W]	1973/04 3637	30	FR 0092	020 / 010 / 1:1	DO		2804108 () BRWN LOAM 0001 BRWN CLAY 0014 GREY CLAY SAND SILT 0070 BRWN CLAY SAND 0074 GREY CLAY STNS 0092 GREY SAND 0096
BURLINGTON CITY DS N 02(006)	17 594475 4808323[W]	1976/10 3637	32 30	FR 0086 FR 0091 FR 0045	061 / / :0	DO		2804998 () BRWN LOAM 0001 BRWN CLAY PCKD 0011 BLUE CLAY BLDR 0045 BLCK SAND LOOS LYRD 0046 GREY CLAY SAND STNS 0079 BRWN CLAY STNS 0085 BRWN SAND BLDR 0086 BRWN CLAY BLDR PCKD 0090 BRWN SAND SLTY SOFT 0096 RED CLAY HARD 0099
BURLINGTON CITY DS N 02(006)	17 594435 4808683[W]	1977/05 4005	06	FR 0025	010 / 035 003 / 2:0	DO		2805044 () RED CLAY LOOS 0006 RED SHLE HARD 0035
BURLINGTON CITY DS N 02(006)	17 594395 4808703[W]	1977/08 4005	06	FR 0042 FR 0040 FR 0045	019 / 036 010 / 2:0	DO		2805093 () RED SHLE 0045
BURLINGTON CITY DS N 02(006)	17 594255 4808423[W]	1978/01 3637	30 32 21	FR 0026	/ / :0	DO		2805266 () BRWN LOAM 0001 BRWN CLAY PCKD 0024 GREY FSND SOFT 0028 BLUE CLAY STNS SOFT 0074 GREY CSND MSND GRVL 0076 GREY CLAY BLDR SHLE 0095
BURLINGTON CITY DS N 02(006)	17 594641 4808322[W]	1987/03 1660	06 06	FR 0108	080 / 124 001 / 2:0	DO		2806657 () BRWN LOAM 0001 BRWN CLAY 0080 RED SHLE ROCK HARD 0099 RED SHLE ROCK HARD 0129
BURLINGTON CITY DS N 02(006)	17 594932 4808139[W]	1987/03 3637	21 30 32	FR 0020 FR 0065	010 / 024 007 / 1:0	DO		2806748 () BRWN LOAM 0001 BRWN CLAY CLAY SAND 0026 GREY CLAY GRVL 0074 BRWN CLAY STNS PCKD 0082
BURLINGTON CITY DS N 02(006)	17 594610 4808326[W]	1988/05 1660	06 06	MN 0129	102 / 148 001 / 1:0	DO		2807162 (16470) BRWN LOAM 0001 GREY CLAY 0084 RED SHLE MGRD HARD 0096 RED SHLE HARD 0152

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(006)	17 594124 4808699[L]	1989/03 3030	36	FR 0022 FR 0040 FR 0014	014 / / :0	DO		2807252 (42386) BRWN LOAM 0001 BRWN CLAY SNDY 0014 BLUE CLAY 0045 BLUE SILT STNS 0050
BURLINGTON CITY DS N 02(006)	17 594129 4808492[W]	1989/10 5417	06	FR 0085	/ / 2:0			2807525 (58096) BRWN CLAY 0008 GREY CLAY 0059 RED SHLE 0123
BURLINGTON CITY DS N 02(006)	17 594180 4808502[W]	1989/11 5417	06	FR 0095	/ / 4:0			2807526 (58102) BRWN CLAY 0007 GREY CLAY 0068 RED SHLE 0120
BURLINGTON CITY DS N 02(006)	17 593669 4808911[W]	1997/08 4005	06 06	UK 0072	055 / 070 008 / 1:0	DO		2808560 (181761) BRWN CLAY 0012 RED CLAY 0018 RED SHLE LOOS 0025 RED SHLE HARD 0080
BURLINGTON CITY DS N 02(006)	17 594164 4808510[W]	1997/11 4005				NU		2808668 (181813)
BURLINGTON CITY DS N 02(006)	17 594855 4808003[W]	1972/05 3637	30	FR 0092	025 / 096 / 2:0	DO		2804002 () BRWN LOAM 0001 BRWN CLAY 0012 GREY CLAY 0023 GREY SAND 0024 GREY CLAY STNS 0092 GREY GRVL CSND 0096
BURLINGTON CITY DS N 02(006)	17 593495 4809123[W]	1981/09 4005	06	FR 0086	065 / 090 001 / 1:0	DO		2805715 () BRWN CLAY LOOS 0015 GREY CLAY LOOS 0053 BRWN CLAY SNDY LOOS 0062 RED CLAY LOOS 0072 RED SHLE HARD 0090
BURLINGTON CITY DS N 02(006)	17 593675 4808903[W]	1981/10 3637	30	FR 0036 SA 0070	048 / 065 002 / 1:0	DO		2805769 () BRWN LOAM 0001 BRWN CLAY STNS PCKD 0017 RED SHLE HARD VERY 0070
BURLINGTON CITY DS N 02(006)	17 593495 4809123[W]	1982/10 4005	06	FR 0103	072 / 100 001 / 1:0	DO		2805875 () PRDR 0090 RED SHLE HARD 0105
BURLINGTON CITY DS N 02(006)	17 593424 4809115[W]	1984/04 4005	06	FR 0065 FR 0092	057 / 092 002 / 2:0	DO		2806165 () BRWN CLAY LOOS 0006 GREY CLAY LOOS 0042 BRWN CLAY SNDY LOOS 0051 RED CLAY LOOS 0062 RED SHLE HARD 0095
BURLINGTON CITY DS N 02(006)	17 594883 4808114[W]	1986/04 3030	36	FR 0015 FR 0050 FR 0072 FR 0035	042 / / :0	DO		2806454 () BRWN LOAM 0001 BRWN CLAY SNDY 0015 BLUE CLAY SILT LYRD 0070 BLUE CLAY STNS 0078
BURLINGTON CITY DS N 02(006)	17 594901 4808109[W]	1986/04 3030	36 30	FR 0055 FR 0014 FR 0030	-014 / / :0	DO		2806501 () BRWN LOAM 0001 BRWN CLAY SNDY 0014 BLUE CLAY SILT LYRD 0060 BLUE CLAY 0070
BURLINGTON CITY DS N 02(007)	17 594675 4807798[W]	1973/12 3637	30 32	FR 0072	025 / 041 006 / 2:0	DO		2804365 () BRWN LOAM 0001 BRWN CLAY 0014 GREY CLAY SILT CLAY 0046 BLUE CLAY 0055 GREY CLAY 0079 BRWN CLAY STNS 0092 BRWN SAND 0095 BRWN SAND 0097

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(007)	17 594713 4807798[W]	1973/12 3030	36 30	FR 0085 FR 0016	090 / / :0	DO		2804328 () BRWN LOAM 0001 BRWN CLAY STNS 0016 BLUE CLAY STNS 0060 RED SHLE CLAY BLDR 0072 BRWN CLAY STNS 0085 BRWN CLAY SAND STNS 0095
BURLINGTON CITY DS N 02(007)	17 594637 4807696[W]	1974/01 3637	30 32	FR 0080	035 / 005 / 1:0	DO		2804483 () BRWN LOAM 0001 BRWN CLAY SAND 0026 GREY CLAY 0040 BLUE CLAY 0065 GREY CLAY STNS 0080 GREY GRVL CSND 0082 BLUE CLAY STNS 0088 BRWN CLAY SAND STNS 0097
BURLINGTON CITY DS N 02(008)	17 592985 4808693[W]	1972/07 4602	06	FR 0085	024 / 110 001 / 3:0	DO		2803876 () BRWN CLAY 0017 GREY CLAY 0061 GREY CLAY GRVL 0102 RED SHLE 0114
BURLINGTON CITY DS N 02(008)	17 592942 4808792[W]	1952/09 1642	06 06	FR 0054	020 / 004 / :0	DO		2800094 () CLAY 0015 RED SHLE 0054
BURLINGTON CITY DS N 02(008)	17 593000 4808832[W]	1997/12 4005	06 06	UK 0081	043 / 097 002 / 3:0	DO		2808640 (181802) BRWN CLAY 0079 RED SHLE 0100
BURLINGTON CITY DS N 02(009)	17 593392 4807752[L]	1998/12 4005	06	UK 0046	034 / 038 010 / 0:30	DO		2808872 (198339) BRWN SAND CLAY GRVL 0018 BRWN SAND 0029 GRVL PCKD 0044 BRWN SAND GRVL 0046
BURLINGTON CITY DS N 02(009)	17 594184 4807182[W]	1974/01 3637	30 32 21	FR 0102	050 / 007 / 1:0	DO		2804485 () BRWN LOAM 0001 BRWN CLAY 0013 GREY CLAY 0033 BRWN CLAY 0038 GREY CLAY STNS 0082 BRWN CLAY 0102 GREY SILT SAND 0104 BRWN CLAY 0112
BURLINGTON CITY DS N 02(009)	17 594222 4807202[W]	1967/07 5417	06 06	FR 0029	004 / 026 001 / 1:0	DO		2800095 () BRWN CLAY 0003 RED SHLE CLAY 0008 RED SHLE 0031
BURLINGTON CITY DS N 02(010)	17 592655 4807703[W]	1981/01 3637	24 30	FR 0034	020 / 010 / 1:0	ST DO		2805847 () BRWN LOAM 0001 BRWN CLAY STNS PCKD 0016 RED SHLE HARD VERY 0036
BURLINGTON CITY DS N 02(010)	17 593505 4806845[W]	1973/12 3637	30	FR 0024 FR 0055	005 / 013 006 / 1:0	DO		2804446 () BRWN LOAM 0001 BRWN CLAY 0009 BRWN MSND 0011 GREY CLAY 0017 GREY CLAY SAND 0047 GREY CLAY STNS 0053 RED SHLE 0059
BURLINGTON CITY DS N 02(010)	17 593136 4807434[L]	2002/06 4005	06 06	SA 0150 SA 0160	053 / 163 001 / 1:0	DO		2809625 (241273) BRWN CLAY 0015 GREY CLAY 0129 BRWN FSND FGVL 0130 RED SHLE LOOS 0134 RED SHLE HARD 0165
BURLINGTON CITY DS N 02(010)	17 593335 4807463[W]	1976/07 3637	30	FR 0045	027 / / :0	DO		2804990 () BRWN LOAM 0001 BRWN CLAY 0012 GREY CLAY SAND LYRD 0047 RED CLAY SHLE LYRD 0053
BURLINGTON CITY DS N 02(010)	17 592626 4807698[W]	1967/04 5417	06 06	FR 0032	012 / 040 / 1:0	DO		2800096 () BRWN CLAY 0010 RED CLAY SHLE 0027 RED SHLE 0047

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(010)	17 593155 4807238[W]	1973/06 3637	30	FR 0040	005 / 017 007 / 1:1	DO		2804382 () BRWN LOAM 0001 BRWN CLAY 0013 BLUE CLAY STNS 0025 GREY CLAY 0032 RED STNS CLAY 0041
BURLINGTON CITY DS N 02(010)	17 593435 4806923[W]	1980/08 3637	30	FR 0035	/ / :0	DO		2805665 () BRWN LOAM 0001 BRWN CLAY SAND LYRD 0035
BURLINGTON CITY DS N 02(011)	17 592877 4807123[W]	1975/08 1702	08	FR 0045	040 / 100 / :0	DO		2804828 () BRWN CLAY 0002 RED CLAY 0013 RED SHLE 0100
BURLINGTON CITY DS N 02(011)	17 592398 4807031[W]	1984/05 3637	24 30	FR FR	005 / / 1:10	DO		2806246 () BRWN LOAM 0001 BRWN CLAY PCKD 0010 BLUE CLAY SOFT 0020 RED CLAY SHLE HARD 0042 RED SHLE VERY HARD 0048
BURLINGTON CITY DS N 02(011)	17 592681 4807381[W]	1959/09 4602	06 06	FR 0033	032 / 054 001 / 2:0	DO		2800097 () BRWN CLAY 0006 RED CLAY 0016 RED SHLE 0054
BURLINGTON CITY DS N 02(011)	17 593375 4806703[W]	1972/07 2519	30	FR 0030	020 / / :0	DO		2803934 () BLCK LOAM 0001 BRWN CLAY 0009 GREY CLAY 0050
BURLINGTON CITY DS N 02(011)	17 592370 4807838[W]	1973/04 3030	30 36 24	FR 0033	019 / 033 / :0	DO		2804098 () BRWN LOAM STNS 0001 BRWN CLAY STNS 0004 RED CLAY SHLE 0015 WHIT CLAY 0016 RED CLAY SHLE 0033
BURLINGTON CITY DS N 02(011)	17 592955 4807003[W]	1969/06 2519	30	FR 0014	014 / 027 003 / 1:0	DO		2803062 () LOAM 0001 BRWN CLAY 0003 RED SHLE 0014 RED GRVL MSND 0015 GREN SHLE 0038
BURLINGTON CITY DS N 02(011)	17 592895 4807093[W]	1971/06 2519						2803566 () RED SHLE 0040
BURLINGTON CITY DS N 02(011)	17 592895 4807093[W]	1971/06 2519	30	FR 0050	008 / / :0	DO		2803567 () PRDR 0040 RED SHLE 0050
BURLINGTON CITY DS N 02(011)	17 592875 4807093[W]	1971/06 2519	30	FR 0010	008 / / :0	DO		2803568 () RED SHLE 0050
BURLINGTON CITY DS N 02(011)	17 592060 4807650[W]	1998/09 3030	36	FR 0022 FR 0007	008 / 015 015 / 1:0	DO		2808822 (194445) BRWN LOAM 0001 BRWN CLAY SNDY 0008 RED CLAY SOFT SHLE 0020 RED SHLE HARD 0025
BURLINGTON CITY DS N 02(011)	17 592885 4807107[L]	1991/04 4005	06	UK 0016 UK 0025	005 / 025 005 / 1:0	DO		2807782 (76455) BRWN CLAY SAND SOFT 0008 RED SHLE SOFT 0015 RED SHLE HARD 0030
BURLINGTON CITY DS N 02(011)	17 592213 4807743[W]	1971/10 3637	30	FR 0045 FR 0053	020 / 052 / :0	DO		2803778 () BRWN FILL 0001 BRWN CLAY 0006 BRWN CLAY STNS 0009 BRWN MSND 0010 RED MSND STNS 0012 RED CLAY STNS 0018 RED SHLE 0056

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(011)	17 593114 4807064[W]	1993/06 4868	24 36 30	FR 0066	045 / / 24:0	DO		2808183 (133867) BRWN LOAM SOFT 0001 BRWN CLAY STNS HARD 0031 GREY CLAY HARD 0045 RED SHLE LMSN HARD 0068 RED SLTE SOFT 0071
BURLINGTON CITY DS N 02(011)	17 592885 4807107[L]	1992/10 3030	36	FR 0015 FR 0025 FR 0034	015 / / :0	DO		2808066 (093951) BRWN LOAM 0001 BRWN CLAY 0008 RED CLAY 0015 RED SHLE 0043
BURLINGTON CITY DS N 02(011)	17 593380 4806764[W]	1993/06 1660	06 06	FR 0079	021 / 064 010 / 1:0	DO		2808256 (74882) BLCK LOAM 0001 GREY CLAY 0012 GREY CLAY STNS 0050 RED SHLE SOFT 0053 RED SHLE HARD 0083
BURLINGTON CITY DS N 02(013)	17 592840 4805808[W]	1974/01 2406	06					2804354 () LOAM 0001 BRWN CLAY STNS 0015 BRWN CLAY GRVL 0043 BLUE CLAY GRVL ROCK 0047 RED CLAY ROCK 0053
BURLINGTON CITY DS N 02(013)	17 592925 4805723[W]	1973/12 2406	06 06	FR 0049	030 / 053 001 / 1:30	DO		2804337 () LOAM 0001 BRWN CLAY STNS 0015 BRWN CLAY GRVL SAND 0030 BRWN CLAY GRVL 0039 RED ROCK CLAY 0050 RED CLAY 0055
BURLINGTON CITY DS N 02(014)	17 591725 4806461[W]	1998/06 4005	06 06	UK 0039 UK 0072 UK 0048	004 / 018 003 / 6:0	DO		2808723 (190943) BRWN CLAY 0006 GREY LMSN 0095 GREN SHLE LMSN LYRD 0103 RED SHLE 0104
BURLINGTON CITY DS N 02(014)	17 591723 4806536[W]	1998/06 4005	06 06	UK 0038 UK 0062 UK 0085	001 / 039 004 / 6:0	DO		2808722 (190942) BLCK LOAM 0005 BRWN CLAY SAND 0009 GREY LMSN 0083 GREN SHLE 0094 RED SHLE 0094
BURLINGTON CITY DS N 02(014)	17 591652 4806605[W]	1998/06 4005	06 06	UK 0045 UK 0075 UK 0032	003 / 035 003 / 6:0	DO		2808721 (190941) BRWN CLAY 0008 GREY LMSN 0083 BLUE SHLE LMSN LYRD 0093 RED SHLE 0094
BURLINGTON CITY DS N 02(014)	17 591899 4806378[W]	1998/06 4005	06 06	UK 0085 UK 0045 UK 0050 UK 0032	012 / 015 006 / 6:0	DO		2808720 (190926) BRWN CLAY 0009 GREY LMSN 0094 BLUE SHLE LMSN LYRD 0104
BURLINGTON CITY DS N 02(014)	17 591483 4806792[W]	1990/05 4005	06	UK 0043 UK 0082 UK 0062	021 / 095 006 / 1:0	NU		2807606 (76628) BRWN CLAY SAND LOOS 0001 GREY LMSN HARD 0083 BLUE SHLE LMSN LYRD 0092 RED SHLE HARD 0100
BURLINGTON CITY DS N 02(014)	17 591340 4806712[W]	1990/04 4005	06	UK 0044	006 / 092 002 / 1:0	DO		2807566 (76621) BRWN CLAY SNDY LOOS 0004 GREY LMSN HARD 0082 BLUE SHLE LMSN LYRD 0092 RED SHLE HARD 0100
BURLINGTON CITY DS N 02(014)	17 592555 4805863[W]	1977/05 4005	06	FR 0045 FR 0071	041 / 065 011 / 2:0	DO		2805060 () LOAM LOOS 0001 BRWN CLAY LOOS 0012 GREY CLAY LOOS 0018 GREY LMSN HARD 0080

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(014)	17 592555 4805863[W]	1977/05 4005						2805059 () BRWN CLAY STNS LOOS 0024 GREY CLAY LOOS 0076
BURLINGTON CITY DS N 02(014)	17 591334 4806723[W]	1979/11 4208		FR 0085 FR 0040	025 / 090 003 / 1:0	DO		2805462 () PRDG 0035 GREY LMSN 0090 GREY SHLE 0095
BURLINGTON CITY DS N 02(014)	17 592136 4806156[L]	2001/10 4005	06	FR 0048 FR 0066	033 / 070 007 / 1:0	IR		2809481 (227133) BRWN CLAY SNDY 0010 BRWN SAND GRVL 0012 GREY LMSN 0070 BLUE CLAY LMSN LYRD 0081 RED SHLE 0082
BURLINGTON CITY DS N 02(014)	17 591860 4806407[W]	1998/06 4005	06 06	UK 0029 UK 0055 UK 0068	009 / 011 005 / 6:15	DO		2808752 (190913) BRWN CLAY 0012 GREY LMSN 0090 GREY LMSN SHLE LYRD 0098 RED SHLE 0099
BURLINGTON CITY DS N 02(014)	17 591823 4806374[W]	1998/06 4005	06 06	UK 0027 UK 0036 UK 0063	019 / 024 006 / 6:0	DO		2808747 (190918) BRWN CLAY SAND 0022 GREY LMSN 0093 GREY LMSN SHLE 0104
BURLINGTON CITY DS N 02(014)	17 591922 4806290[W]	1998/06 4005	06 06	UK 0035 UK 0056 UK 0090 UK 0081	013 / 030 005 / 6:15	DO		2808740 (190917) BRWN CLAY 0013 GREY LMSN 0094 GREY LMSN SHLE LYRD 0104
BURLINGTON CITY DS N 02(014)	17 591961 4806335[W]	1998/06 4005	06 06	UK 0045 UK 0056 UK 0096 UK 0080	013 / 043 003 / 6:30	DO		2808738 (190916) BRWN CLAY 0010 GREY LMSN 0086 BLUE SHLE LMSN LYRD 0103 RED SHLE 0104
BURLINGTON CITY DS N 02(014)	17 591432 4806824[W]	1998/06 4005	06 06	UK 0038 UK 0029 UK 0075	003 / 006 004 / 6:0	DO		2808736 (190923) BRWN CLAY 0007 BRWN SAND GRVL 0011 GREY LMSN 0075 BLUE SHLE LMSN LYRD 0085 RED SHLE 0086
BURLINGTON CITY DS N 02(014)	17 591764 4806490[W]	1998/06 4005	06 06	UK 0046 UK 0082 UK 0044	006 / 023 005 / 6:0	DO		2808735 (190924) BRWN CLAY 0013 GREY LMSN 0086 BLUE SHLE 0095 RED SHLE 0096
BURLINGTON CITY DS N 02(014)	17 591813 4806454[W]	1998/06 4005	06 06	UK 0056 UK 0070 UK 0035	011 / 012 004 / 6:0	DO		2808734 (190925) BRWN CLAY 0018 GREY LMSN 0092 GREN SHLE 0100 RED SHLE 0100
BURLINGTON CITY DS N 02(014)	17 591878 4806240[W]	2004/11 4005	06	0062 0071 0062	028 / 030 002 / 1:0	DO		2810121 (Z22255) A007801 BRWN CLAY 0021 GREY LMSN 0095 GREY LMSN SHLE LYRD 0104
BURLINGTON CITY DS N 02(014)	17 591623 4806562[W]	1998/06 4005	06 06	UK 0032 UK 0090 UK 0056	011 / 051 002 / 6:15	DO		2808730 (190930) BRWN CLAY SAND 0005 GREY LMSN 0082 BLUE SHLE 0093 RED SHLE 0094

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(014)	17 591679 4806503[W]	1998/06 4005	06 06	UK 0030 UK 0042 UK 0075 UK 0058	010 / 015 003 / 6:0	DO		2808729 (190929) BRWN CLAY SAND 0009 GREY LMSN 0095 BLUE SHLE LMSN 0098 GREN SHLE 0104
BURLINGTON CITY DS N 02(014)	17 591500 4806771[W]	1998/06 4005	06 06	UK 0077 UK 0046 UK 0055 UK 0035	006 / 010 005 / 6:0	DO		2808725 (190940) BRWN CLAY SAND 0004 GREY LMSN 0072 BLUE SHLE LMSN LYRD 0078 GREN SHLE LMSN LYRD 0089 RED SHLE 0090
BURLINGTON CITY DS N 02(014)	17 591866 4806338[W]	1998/06 4005	06 06	UK 0034 UK 0075 UK 0056 UK 0091 UK 0043	013 / 021 006 / 6:0	DO		2808727 (190927) BRWN CLAY SAND STNS 0009 GREY LMSN 0095 GREY LMSN SHLE LYRD 0104
BURLINGTON CITY DS N 02(014)	17 591777 4806422[W]	1998/06 4005	06 06	UK 0032 UK 0055 UK 0072 UK 0080	012 / 059 004 / 6:0	DO		2808728 (190928) BRWN CLAY SAND 0014 GREY LMSN 0094 BLUE SHLE LMSN 0104
BURLINGTON CITY DS N 02(015)	17 591447 4806350[W]	1998/06 4005	06 06	UK 0032 UK 0091 UK 0062	012 / 030 003 / 6:0	DO		2808731 (190931) BRWN CLAY 0013 GREY LMSN 0096 GREN SHLE LMSN LYRD 0104
BURLINGTON CITY DS N 02(015)	17 591711 4806016[W]	2006/05 4005	06	0060 0090 0040	022 / 040 006 / 1:0	IR		2810559 (Z37866) A034300 BRWN CLAY 0022 GREY LMSN 0100
BURLINGTON CITY DS N 02(015)	17 591584 4806432[W]	2004/11 4005	06	0096 0059 0086	018 / 047 004 / 1:0	DO		6814153 (Z22256) A007802 BRWN CLAY 0006 GREY LMSN 0095 GREY LMSN SHLE 0104
BURLINGTON CITY DS N 02(015)	17 591408 4806311[W]	1998/06 4005	06 06	UK 0035 UK 0072 UK 0064	013 / 018 005 / 6:15	DO		2808732 (190932) BRWN CLAY SAND 0005 GREY LMSN 0092 GREN SHLE LMSN 0103
BURLINGTON CITY DS N 02(015)	17 591750 4805890[W]	1998/06 4005	06 06	UK 0027 UK 0042	003 / 037 003 / 6:15	DO		2808733 (190933) BRWN CLAY 0014 GREY LMSN 0066 GREY LMSN SHLE LYRD 0082
BURLINGTON CITY DS N 02(015)	17 591634 4805931[W]	1998/05 4005	06 06	UK 0034 UK 0066 UK 0087	026 / 053 006 / 6:15	DO		2808739 (190907) BRWN CLAY 0025 GREY LMSN 0105 GREY LMSN SHLE LYRD 0115 RED SHLE 0116
BURLINGTON CITY DS N 02(015)	17 591664 4805904[W]	1998/05 4005	06 06	UK 0041 UK 0035 UK 0062	009 / 022 004 / 6:30	DO		2808741 (190908) BRWN CLAY 0024 GREY LMSN 0073 GREY LMSN SHLE LYRD 0082
BURLINGTON CITY DS N 02(015)	17 591715 4805801[W]	1998/05 4005	06 06	UK 0055 UK 0035	001 / 014 006 / 7:0	DO		2808742 (190909) BRWN CLAY 0020 GREY LMSN 0068 GREY LMSN SHLE LYRD 0082

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(015)	17 591657 4805992[W]	1998/06 4005	06 06	UK 0037 UK 0053 UK 0090	022 / 040 006 / 8:30	DO		2808743 (190921) BRWN CLAY 0025 GREY LMSN 0099 GREY LMSN SHLE 0104
BURLINGTON CITY DS N 02(015)	17 591696 4805859[W]	1998/06 4005	06 06	UK 0044 UK 0061 UK 0035	001 / 011 006 / 6:45	DO		2808744 (190914) BRWN CLAY 0017 GREY LMSN 0071 GREY LMSN SHLE 0082
BURLINGTON CITY DS N 02(015)	17 591576 4805980[W]	1998/06 4005	06 06	UK 0073 UK 0077 UK 0053 UK 0034	020 / 065 003 / 7:15	DO		2808745 (190920) BRWN CLAY 0019 GREY LMSN 0097 GREY LMSN SHLE 0103
BURLINGTON CITY DS N 02(015)	17 591550 4807020[W]	1998/06 4005	06 06	UK 0035 UK 0055	005 / 008 006 / 6:0	DO		2808746 (190919) BRWN CLAY 0012 GREY LMSN 0072 GREY LMSN SHLE 0082
BURLINGTON CITY DS N 02(015)	17 591681 4805940[W]	1998/05 4005	06 06	UK 0031 UK 0055	011 / 024 003 / 7:30	DO		2808748 (190911) BRWN CLAY 0024 GREY LMSN 0075 GREY LMSN SHLE 0082
BURLINGTON CITY DS N 02(015)	17 591760 4805840[W]	1998/05 4005	06 06	UK 0035 UK 0062	001 / 010 006 / 6:30	DO		2808749 (190910) BRWN CLAY 0015 GREY CLAY GRVL 0020 GREY LMSN 0060 GREY LMSN SHLE LYRD 0081 RED SHLE 0082
BURLINGTON CITY DS N 02(015)	17 591601 4806022[W]	1998/05 4005	06 06	UK 0045 UK 0092 UK 0029	023 / 039 006 / 6:30	DO		2808750 (190912) BRWN CLAY 0025 GREY LMSN 0102 GREY LMSN SHLE LYRD 0104
BURLINGTON CITY DS N 02(015)	17 591717 4805919[W]	1998/06 4005	06 06	UK 0056 UK 0038	006 / 020 004 / 6:45	DO		2808751 (190915) BRWN CLAY 0020 GREY LMSN 0069 GREY LMSN SHLE 0082
BURLINGTON CITY DS N 02(015)	17 591876 4805822[L]	2003/11 4005	06	UK 0046 UK 0094 UK 0062	/ 095 004 / 1:0	DO		2809832 (258728) BRWN CLAY SNDY 0005 GREY LMSN 0095 BLUE SHLE CLAY 0102
BURLINGTON CITY DS N 02(015)	17 591876 4805822[L]	 4005	06		015 / / 1:0	DO		2809836 (Z03422) BRWN CLAY SNDY 0016 GREY LMSN 0308 BLUE SHLE HARD 0335
BURLINGTON CITY DS N 02(015)	17 591876 4805822[L]	 4005	06	FR	014 / 034 006 / 1:0	DO		2809837 (Z03421) BRWN CLAY SNDY 0005 GREY LMSN 0094 BLUE SHLE HARD 0102
BURLINGTON CITY DS N 02(015)	17 591254 4806583[W]	1979/11 4208		FR 0090	042 / 100 001 / 1:0	DO		2805459 () PRDG 0062 GREY LMSN 0095 GREY SHLE 0100
BURLINGTON CITY DS N 02(015)	17 591254 4806683[W]	1980/07 4005	06	FR 0063 FR 0021	011 / 061 010 / 1:0	DO		2805545 () BRWN CLAY LOOS 0006 GREY LMSN HARD 0070
BURLINGTON CITY DS N 02(015)	17 592498 4805063[W]	1948/11 1907	06 06	FR 0035	018 / 018 003 / :0	DO		2800098 () CLAY STNS LMSN 0018 LMSN 0035
BURLINGTON CITY DS N 02(015)	17 591663 4805895[W]	1964/09 4602	06 06	FR 0021 FR 0028	017 / 048 004 / 1:0	ST		2800104 () BRWN CLAY 0016 GREY LMSN 0048

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(015)	17 592283 4805362[W]	1974/06 4005	06	FR 0023	-001 / 010 012 / 1:30	DO		2804528 () BRWN CLAY 0010 GREY CLAY 0021 RED CLAY GRVL 0023
BURLINGTON CITY DS N 02(015)	17 592202 4805338[W]	1973/12 3030	36 30	FR 0016 FR 0075	081 / / :0	DO		2804568 () BRWN CLAY STNS 0016 BLUE CLAY STNS 0040 RED CLAY SAND STNS 0073 BRWN FSND ROCK 0085
BURLINGTON CITY DS N 02(015)	17 592239 4805246[W]	1976/04 4005	06	FR 0024	-001 / 024 012 / 2:0	DO		2804850 () BRWN CLAY STNS 0013 RED SHLE 0029 GREY SHLE 0030
BURLINGTON CITY DS N 02(015)	17 592054 4805723[W]	1978/11 4005	06	FR 0042 FR 0087	035 / 081 008 / 2:0	DO		2805290 () BRWN CLAY SNDY LOOS 0016 BRWN SAND LOOS 0023 BRWN SAND GRVL LOOS 0024 GREY LMSN HARD 0090
BURLINGTON CITY DS N 02(015)	17 591254 4806193[W]	1968/11 5417	06 06	FR 0040 FR 0058	004 / 057 003 / 1:0	DO		2803015 () BRWN CLAY STNS 0020 WHIT LMSN 0061
BURLINGTON CITY DS N 02(015)	17 591531 4806046[W]	1990/05 4005	06	UK 0039 UK 0061 UK 0083 UK 0076	013 / 062 025 / 1:0	DO		2807605 (76627) BRWN CLAY SAND LOOS 0005 GREY LMSN HARD 0095 GREY LMSN SHLE LYRD 0103
BURLINGTON CITY DS N 02(015)	17 591713 4806048[W]	1993/12 4005	06 06	UK 0056 UK 0100	055 / 095 015 / 1:30	DO		2808202 (124452) BRWN CLAY SNDY LOOS 0009 GREY CLAY SNDY LOOS 0024 GREY LMSN HARD 0105 GREY LMSN SHLE LYRD 0109 RED SHLE HARD 0110
BURLINGTON CITY DS N 02(015)	17 591509 4806457[W]	1998/06 4005	06 06	UK 0032 UK 0048 UK 0087	014 / 051 002 / 6:15	DO		2808724 (190944) BRWN CLAY SAND 0002 GREY LMSN 0092 BLUE SHLE LMSN LYRD 0097 GREN SHLE LMSN LYRD 0104
BURLINGTON CITY DS N 02(015)	17 591484 4806402[W]	1998/06 4005	06 06	UK 0056 UK 0084 UK 0037 UK 0092	009 / 027 005 / 6:0	DO		2808726 (190945) BRWN CLAY SAND 0008 GREY LMSN 0094 GREN SHLE LMSN LYRD 0104
BURLINGTON CITY DS N 02(016)	17 591618 4805496[L]	1998/12 4005	06 06	UK 0039 UK 0071	028 / 065 010 / 0:30	DO		2808870 (198331) BRWN CLAY SAND 0022 BRWN SAND GRVL 0028 GREY LMSN 0077 RED SHLE 0077
BURLINGTON CITY DS N 02(016)	17 592005 4805293[W]	1997/12 4005	06 06	UK 0052 UK 0064 UK 0037 UK 0070	024 / 070 010 / 0:30	DO		2808641 (181806) BRWN CLAY 0017 GREY CLAY 0027 GREY LMSN 0065 GREY LMSN SHLE 0075
BURLINGTON CITY DS N 02(016)	17 592174 4805083[W]	1981/06 4602	06	FR 0043 FR 0025	017 / 019 025 / 1:0	DO		2805710 () BRWN CLAY 0006 GREY CLAY 0017 GREY LMSN 0059
BURLINGTON CITY DS N 02(016)	17 592394 4804844[W]	1950/07 4002	06 06	FR 0065	040 / 045 003 / 2:0	DO		2800106 () BLUE CLAY LMSN 0007 LMSN 0068 RED SHLE 0070

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(016)	17 591338 4806045[W]	1953/10 2415	06	FR 0039 FR 0047	011 / 018 010 / 0:30	DO		2800107 () CLAY 0008 LMSN 0051
BURLINGTON CITY DS N 02(016)	17 592261 4805104[W]	1954/06 4002	06 06	FR 0042	027 / 040 002 / 2:0	DO		2800108 () BLDR 0003 LMSN 0040 WHIT MSND 0042
BURLINGTON CITY DS N 02(016)	17 591916 4805479[W]	1956/07 4002	06 06	FR 0033	008 / 035 005 / 3:0	DO		2800109 () BLDR CLAY 0014 SNDS 0016 LMSN 0035
BURLINGTON CITY DS N 02(016)	17 592332 4805056[W]	1957/06 4602	06 06	FR 0026	016 / 017 012 / 1:0	DO		2800111 () CLAY 0018 GREY LMSN 0039
BURLINGTON CITY DS N 02(016)	17 592177 4804908[W]	1958/08 4602	06 06	FR 0046	041 / 046 012 / 1:30	DO		2800113 () CLAY 0006 GREY LMSN 0024 BLUE LMSN 0065
BURLINGTON CITY DS N 02(016)	17 592202 4804909[W]	1961/08 4602	06 06	FR 0050	032 / 050 007 / 2:0	DO		2800114 () BRWN CLAY 0005 GREY LMSN 0050 BLUE DLMT 0058
BURLINGTON CITY DS N 02(016)	17 592117 4805257[W]	1963/04 4208	06 06	FR 0060	029 / 050 025 / 1:0	DO		2800117 () CLAY 0018 LMSN 0065 SHLE 0067
BURLINGTON CITY DS N 02(016)	17 592154 4805138[W]	1964/03 4602	06 06	FR 0048	025 / 028 020 / 2:30	DO		2800118 () LOAM CLAY 0009 GREY LMSN 0049 BLUE DLMT 0053
BURLINGTON CITY DS N 02(016)	17 592116 4805277[W]	1964/06 4602	06 06	FR 0033	022 / 041 008 / 1:0	DO		2800119 () BRWN CLAY 0016 GREY CLAY 0022 BLDR CLAY 0029 LMSN 0048
BURLINGTON CITY DS N 02(016)	17 592369 4804799[W]	1964/08 4208	06 06	FR 0057	030 / 040 020 / 1:0	DO		2800120 () CLAY 0014 LMSN 0060
BURLINGTON CITY DS N 02(016)	17 591616 4805495[L]	2000/12 4005				DO		2809312 (212341) BRWN CLAY SNDY LOOS 0022 GREY LMSN HARD 0065 BLUE CLAY LMSN LYRD 0075 RED SHLE HARD 0076
BURLINGTON CITY DS N 02(016)	17 592255 4804743[W]	1972/03 4602	06 06	FR 0055	030 / 052 012 / 1:30	DO		2803727 () BRWN SILT 0001 GREY LMSN 0061
BURLINGTON CITY DS N 02(016)	17 592253 4804723[W]	1973/07 4602	06	FR 0069	050 / 060 009 / 1:0	DO		2804239 () BRWN CLAY SILT 0006 GREY LMSN 0069 GREN LMSN 0078
BURLINGTON CITY DS N 02(016)	17 592254 4804828[W]	1974/01 4602	06 06	FR 0049 FR 0034	036 / 041 020 / 2:0	DO		2804418 () FILL 0002 BRWN CLAY SILT 0007 BRWN LMSN 0067 BLUE SHLE 0069
BURLINGTON CITY DS N 02(016)	17 591454 4805903[W]	1976/10 4607	06	FR 0046 FR 0025	004 / 029 010 / 2:0	DO		2804964 () BRWN CLAY 0007 GREY CLAY 0009 GREY LMSN 0052
BURLINGTON CITY DS N 02(016)	17 592204 4804913[W]	1968/06 4602	06 06	FR 0066	035 / 055 020 / 2:0	DO		2802829 () BRWN CLAY 0007 GREY LMSN 0061 BLUE DLMT 0066 GREN LMSN 0069 BLUE SHLE 0070

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS N 02(016)	17 592214 4804993[W]	1968/06 4602	06 06	FR 0049	025 / 056 008 / 1:0	DO		2802838 () BRWN CLAY 0012 LMSN 0023 GREY LMSN 0049 YLLW LMSN 0050 GREN LMSN 0055 BLUE SHLE 0056
BURLINGTON CITY DS N 02(016)	17 592174 4805033[W]	1969/07 4602	06	FR 0046	034 / 036 014 / 1:0	DO		2803119 () BRWN FILL SILT 0010 BRWN CLAY 0015 GREY LMSN 0046 BLUE DLMT 0062
BURLINGTON CITY DS N 02(017)	17 591914 4804723[W]	1968/09 5417	06 06	FR 0054	028 / 046 010 / 1:0	DO		2802828 () BRWN CLAY 0015 GREY CLAY 0030 WHIT LMSN 0060
BURLINGTON CITY DS N 02(017)	17 591960 4804718[W]	1959/01 4602	06 06	FR 0045	032 / 049 005 / 2:0	DO		2800123 () LOAM 0001 BRWN CLAY 0018 BLUE CLAY 0037 GREY LMSN 0057
BURLINGTON CITY DS S 01(001)	17 598368 4807424[L]	2002/03 4005				DO		2809546 (227175)
BURLINGTON CITY DS S 01(001)	17 597563 4807959[W]	1952/05 1634	06 06	FR 0045	010 / 003 / :0	DO		2800165 () CLAY 0015 RED SHLE 0046
BURLINGTON CITY DS S 01(002)	17 598353 4806889[W]	1965/08 5417	06 06	FR 0076	028 / 067 / 1:30	DO		2800167 () BRWN CLAY MSND 0009 RED CLAY SHLE 0018 RED SHLE 0081
BURLINGTON CITY DS S 01(002)	17 598308 4806896[W]	1965/08 5417	06 06	FR 0062	014 / 050 / 2:0	DO		2800168 () BRWN MSND CLAY 0009 RED CLAY SHLE 0017 RED SHLE 0064
BURLINGTON CITY DS S 01(002)	17 598015 4807063[W]	1968/04 5417	06 06	FR 0055 FR 0078	026 / 067 002 / 1:0	DO		2802825 () BRWN CLAY 0016 RED SHLE 0081
BURLINGTON CITY DS S 01(002)	17 598235 4806913[W]	1968/01 5417	06 06	FR 0080 FR 0050	020 / 076 002 / 1:0	DO		2802832 () BRWN CLAY 0015 RED SHLE 0090
BURLINGTON CITY DS S 01(002)	17 597346 4807628[W]	1951/09 1634	06 06	FR 0047	021 / 001 / :0	DO		2800166 () CLAY 0015 RED SHLE 0050
BURLINGTON CITY DS S 01(002)	17 598137 4807006[W]	1967/06 5417	06 06	FR 0052	024 / 057 001 / 1:30	DO		2800015 () BRWN CLAY MSND 0016 RED SHLE 0062
BURLINGTON CITY DS S 01(002)	17 598255 4806903[W]	1968/01 5417	06 06	FR 0072	024 / 076 / 2:0	DO		2802833 () BRWN CLAY 0014 RED SHLE 0090
BURLINGTON CITY DS S 01(002)	17 598116 4807096[L]	2001/05 4005						2809374 (227006)
BURLINGTON CITY DS S 01(002)	17 598053 4807103[W]	1971/06 3637	24 30	FR 0034 FR 0013 FR 0021	020 / 041 / :0	DO		2803741 () BRWN CLAY LOAM 0001 BRWN CLAY 0006 BRWN MSND 0010 RED CLAY 0013 RED SHLE 0042
BURLINGTON CITY DS S 01(002)	17 598195 4806943[W]	1968/01 5417	06 06	FR 0040 FR 0085	020 / 076 002 / 1:0	DO		2802834 () BRWN CLAY 0015 RED SHLE 0090

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS S 01(002)	17 598037 4807113[W]	1971/11 4602	06	FR 0085	038 / 108 / 1:0	DO		2803692 () CLAY 0021 RED SHLE 0042 RED SHLE 0110
BURLINGTON CITY DS S 01(002)	17 597860 4807084[W]	1987/03 5417	06	FR 0045	029 / 085 001 / 1:0	DO		2806647 () BRWN CLAY 0015 RED SHLE 0090
BURLINGTON CITY DS S 01(002)	17 597971 4807059[W]	1989/10 5417	06	FR 0049	030 / 087 002 / 1:0	DO		2807527 (58097) BRWN CLAY 0006 RED CLAY 0012 RED SHLE 0095
BURLINGTON CITY DS S 01(003)	17 597871 4806774[L]	2000/03 4005	06 06	FR 0058 FR 0087	037 / 095 002 / 1:0	DO		2809111 (212179) BRWN CLAY SNDY 0012 RED CLAY GRVL 0016 RED SHLE 0095
BURLINGTON CITY DS S 01(003)	17 597868 4806773[L]	2001/06 4005						2809410 (227024)
BURLINGTON CITY DS S 01(003)	17 598251 4806233[W]	1956/02 2309	06 06	FR 0053	012 / 043 003 / 0:25	DO		2800169 () CLAY 0019 RED SHLE 0055
BURLINGTON CITY DS S 01(004)	17 597923 4806145[W]	2005/10 1660						2810461 (Z33705) PRDG
BURLINGTON CITY DS S 01(004)	17 597620 4806445[L]	2001/05 4005						2809376 (227008)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/06 4005						2809419 (227043)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/06 4005						2809420 (227042)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/06 4005						2809421 (227044)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/08 4005						2809429 (227069)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/08 3656						2809430 (214464)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/03 1660						2809486 (202594)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/03 1660						2809507 (202595)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/11 3030						2809528 (229594)
BURLINGTON CITY DS S 01(004)	17 597620 4806446[L]	2001/11 3030						2809529 (229593)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS S 01(004)	17 597609 4806235[W]	2002/08 4005						2809616 (241313)
BURLINGTON CITY DS S 01(004)	17 598362 4805957[W]	2002/07 1663				NU		2809655 (240106)
BURLINGTON CITY DS S 01(004)	17 598262 4805981[W]	2002/07 1663				NU		2809656 (240105)
BURLINGTON CITY DS S 01(004)	17 597620 4806445[L]	2002/11 4005						2809665 (241384)
BURLINGTON CITY DS S 01(004)	17 597620 4806445[L]	2002/10 4005						2809666 (241382)
BURLINGTON CITY DS S 01(004)	17 597620 4806445[L]	2002/11 4005						2809667 (241385)
BURLINGTON CITY DS S 01(004)	17 597622 4806452[W]	2002/04 1660						2809714 (242182)
BURLINGTON CITY DS S 01(004)	17 597620 4806445[L]	2003/05 4005				NU		2809768 (258623)
BURLINGTON CITY DS S 01(004)	17 597815 4806343[W]	1979/10 4005	06	FR 0036	015 / 036 001 / 1:0	DO		2805431 () BRWN CLAY LOOS 0010 RED CLAY LOOS 0019 RED SHLE HARD 0038
BURLINGTON CITY DS S 01(004)	17 598015 4806063[W]	1982/07 4005	06	FR 0017 FR 0022	010 / 026 004 / 1:0	DO		2805838 () BRWN CLAY LOOS 0011 RED CLAY LOOS 0016 RED SHLE HARD 0030
BURLINGTON CITY DS S 01(004)	17 597965 4806963[W]	1971/08 3637	30	FR 0024 FR 0034	012 / 034 / :0	DO		2803750 () BLCK LOAM 0001 BRWN CLAY STNS 0008 BRWN SAND CLAY 0012 GREY SAND 0018 RED CLAY STNS 0026 RED SHLE 0034
BURLINGTON CITY DS S 01(004)	17 598015 4806083[W]	1972/06 4005	08	FR 0022	006 / 025 / 1:0	DO		2803850 () BRWN CLAY 0002 RED CLAY 0012 RED SHLE 0025
BURLINGTON CITY DS S 01(004)	17 597775 4806303[W]	1972/07 4602	06	FR 0033	012 / 043 001 / 1:30	DO		2803878 () BRWN CLAY SILT 0005 RED CLAY 0012 RED SHLE 0045
BURLINGTON CITY DS S 01(004)	17 597835 4806303[W]	1972/10 3030	24 36	UK 0019	019 / / :0	DO		2803942 () BRWN LOAM 0001 BRWN CLAY BLDR 0015 RED CLAY BLDR 0018 WHIT CLAY 0020 RED SHLE 0027
BURLINGTON CITY DS S 01(004)	17 597362 4806772[W]	1973/04 3030	30 36	FR 0006 FR 0012	016 / 028 / :0	DO		2804099 () BRWN LOAM 0001 BRWN CLAY 0003 YLLW CLAY SAND 0009 GREY CLAY SILT 0020 RED CLAY SHLE 0028
BURLINGTON CITY DS S 01(004)	17 598175 4805923[W]	1976/05 3637	30	FR 0016 FR 0018 FR 0022	002 / 021 014 / 1:0	DO		2804984 () BRWN LOAM 0001 BRWN CLAY SAND SOFT 0016 BRWN CSND 0018 GREY MSND 0026

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS S 01(004)	17 597155 4807043[W]	1976/06 3637	30 24	FR 0016	012 / / :0	DO		2804986 () BRWN LOAM 0001 BRWN CLAY STNS 0016 RED SHLE HARD 0037
BURLINGTON CITY DS S 01(004)	17 597775 4806383[W]	1979/10 4005	06	FR 0034	016 / 036 001 / 1:0	DO		2805430 () BRWN CLAY LOOS 0009 RED CLAY LOOS 0018 RED SHLE HARD 0036
BURLINGTON CITY DS S 01(004)	17 597668 4806414[W]	1963/07 5417	06 06	FR 0045	010 / 044 001 / 1:0	DO		2800183 () BRWN CLAY 0007 RED SHLE 0048
BURLINGTON CITY DS S 01(004)	17 597965 4806119[W]	1964/12 4602	06 06	FR 0011	008 / 026 012 / 1:0	DO		2800184 () BRWN CLAY 0008 RED SHLE 0030
BURLINGTON CITY DS S 01(004)	17 597378 4806777[W]	1965/11 1307	30	FR 0030	/ 001 / :0	DO		2800185 () BRWN LOAM MSND 0012 RED CLAY MSND 0029 MSND 0030 RED SHLE 0031
BURLINGTON CITY DS S 01(004)	17 597746 4806420[W]	1966/02 4602	08	FR 0019	006 / / :0			2800186 () BRWN CLAY 0011 RED CLAY 0014 RED SHLE 0047
BURLINGTON CITY DS S 01(004)	17 597338 4806622[W]	1966/09 5417	06 06	FR 0045	014 / 034 / 0:45	DO		2800187 () BRWN CLAY 0019 RED CLAY 0022 RED SHLE 0048
BURLINGTON CITY DS S 01(004)	17 597768 4806408[W]	1966/03 2519	30 30	FR 0020 FR 0024	016 / 028 / 1:0	DO		2800188 () LOAM 0001 BRWN CLAY 0005 RED SHLE 0020 RED LMSN 0028
BURLINGTON CITY DS S 01(004)	17 597797 4806351[W]	1967/10 2309	06	FR 0042	009 / 030 003 / 1:0	DO		2800189 () BRWN MSND 0007 RED CLAY 0014 RED SHLE 0042
BURLINGTON CITY DS S 01(004)	17 597025 4806943[W]	1968/04 1307	30	FR 0031	010 / / :0	DO		2802778 () BRWN CLAY 0025 RED SHLE 0031
BURLINGTON CITY DS S 01(004)	17 597155 4806843[W]	1969/02 2214	30	FR 0010	010 / 024 002 / :0	DO		2803012 () LOAM 0001 RED CLAY 0010 CLAY 0015 RED CLAY 0020 SHLE 0025
BURLINGTON CITY DS S 01(004)	17 597485 4806563[W]	1969/07 5417	06 06	FR 0046	010 / 045 / 10:0	DO		2803128 () BRWN CLAY 0018 RED CLAY SHLE 0026 RED SHLE 0046
BURLINGTON CITY DS S 01(004)	17 597235 4806783[W]	1969/08 3637	30	FR 0022 FR 0031	010 / 033 / 1:0	DO		2803187 () BRWN LOAM 0001 BRWN CLAY STNS 0008 BRWN MSND GRVL 0033 RED SHLE 0034
BURLINGTON CITY DS S 01(004)	17 597935 4806103[W]	1970/03 4602	06	FR 0022	009 / 033 007 / 1:0	DO		2803318 () BRWN CLAY 0008 RED SHLE 0037
BURLINGTON CITY DS S 01(004)	17 597235 4806673[W]	1970/06 3637	30	FR 0028	/ 030 / 3:0	ST		2803466 () BLCK LOAM 0001 BRWN MSND CLAY 0008 BRWN CLAY STNS 0015 RED SHLE 0030
BURLINGTON CITY DS S 01(004)	17 597955 4806143[W]	1970/12 4602	06	FR 0009	006 / 024 002 / 1:0	DO		2803491 () RED CLAY 0007 RED SHLE 0029
BURLINGTON CITY DS S 01(004)	17 597735 4806413[W]	1971/06 2309	06	SA 0040	012 / 056 002 / 1:0	DO		2803593 () BLCK LOAM 0002 BRWN CLAY 0008 CLAY MSND STNS 0014 RED SHLE 0056

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS S 01(004)	17 597505 4806518[W]	1971/07 5417	06	FR 0043	010 / 045 001 / 4:0	DO		2803619 () BRWN CLAY 0007 RED SHLE 0050
BURLINGTON CITY DS S 01(004)	17 597975 4806123[W]	1971/11 4602	06	FR 0019 FR 0026	008 / 034 004 / 1:0	DO		2803665 () BRWN CLAY 0008 RED SHLE 0037
BURLINGTON CITY DS S 01(004)	17 597238 4806785[W]	1954/07 3609	06 06	SA 0045	009 / 046 005 / :0	DO		2800170 () MSND 0014 RED SHLE 0046
BURLINGTON CITY DS S 01(004)	17 597614 4806563[W]	1954/07 3609	06 06	FR 0026	012 / 040 003 / :0	DO		2800171 () BLDR CLAY 0008 RED SHLE 0050
BURLINGTON CITY DS S 01(004)	17 597616 4806443[W]	1954/10 1634	06 06	FR 0042	014 / 002 / :0	DO		2800172 () CLAY 0017 RED SHLE 0044
BURLINGTON CITY DS S 01(004)	17 597486 4806564[W]	1954/10 1634	06 06	FR 0048	016 / 020 001 / :0	DO		2800173 () CLAY 0003 MSND 0025 RED SHLE 0051
BURLINGTON CITY DS S 01(004)	17 597920 4806268[W]	1955/08 2415	06 06	FR 0026	012 / 018 005 / 0:30	DO		2800174 () CLAY 0008 RED SHLE 0031 GREN SHLE 0032
BURLINGTON CITY DS S 01(004)	17 598071 4806025[W]	1956/05 1642	06 06	FR 0020	005 / / :0	DO		2800175 () CLAY 0013 RED SHLE 0030
BURLINGTON CITY DS S 01(004)	17 598088 4805936[W]	1956/07 4002	06 06	FR 0028	020 / 028 / :0	DO		2800176 () CLAY 0011 RED SHLE 0028
BURLINGTON CITY DS S 01(004)	17 597625 4806501[W]	1958/06 4602	06 06	FR 0032	016 / 035 / 1:0	DO		2800177 () CLAY 0013 RED SHLE 0035
BURLINGTON CITY DS S 01(004)	17 597104 4806895[W]	1958/10 4602	06	FR 0014	011 / 030 / 5:0	DO		2800178 () CLAY 0014 BRWN SHLE 0018 QSND 0028 RED SHLE 0030
BURLINGTON CITY DS S 01(004)	17 597057 4806912[W]	1960/02 1308	30	FR 0017	017 / / 8:0	DO		2800179 () BRWN CLAY MSND BLDR 0017 MSND BLDR 0019 RED CLAY MSND 0032
BURLINGTON CITY DS S 01(004)	17 596962 4807188[W]	1960/05 1308	30	FR 0015	011 / 001 / 8:0	DO		2800180 () RED CLAY BLDR 0018
BURLINGTON CITY DS S 01(004)	17 597661 4806402[W]	1962/10 5417	06 06	FR 0037	011 / 030 008 / 0:40	DO		2800181 () BRWN LOAM 0003 BRWN CLAY 0007 RED SHLE 0040
BURLINGTON CITY DS S 01(004)	17 597097 4807365[W]	1963/06 1308	30	FR 0037	024 / 037 001 / 1:0	DO		2800182 () RED CLAY MSND BLDR 0023 RED SHLE 0036 BLUE SHLE 0038
BURLINGTON CITY DS S 01(005)	17 598261 4805831[W]	2002/06 3030						2809604 (229645)
BURLINGTON CITY DS S 01(005)	17 596852 4806399[W]	1959/11 1307	30	FR 0030	027 / / :0	DO		2800190 () RED CLAY 0027 RED SHLE 0040

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS S 01(005)	17 597369 4806112[L]	2003/08 3030				NU		2809810 (257626)
BURLINGTON CITY DS S 01(005)	17 597085 4806183[W]	1969/09 1620	06	UK 0050	014 / 070 002 / 1:0	DO		2803191 () BRWN CLAY 0018 RED SHLE 0070
BURLINGTON CITY DS S 01(006)	17 597755 4805023[W]	1968/06 5417	06 06	FR 0045	008 / 033 001 / 1:15	DO		2802826 () RED CLAY 0007 RED SHLE 0047
BURLINGTON CITY DS S 01(006)	17 597735 4805433[W]	1970/06 5417	06	FR 0048 FR 0015	006 / 036 005 / 1:0	DO		2803426 () BRWN CLAY 0008 RED SHLE 0049
BURLINGTON CITY DS S 01(006)	17 597180 4805970[W]	2004/03 6607				NU		2809948 (Z10782)
BURLINGTON CITY DS S 01(006)	17 596414 4806470[W]	1960/03 1308						2800195 () BRWN CLAY 0002 RED CLAY 0022 MSND 0024 BLUE CLAY BLDR 0031 SHLE 0046
BURLINGTON CITY DS S 01(006)	17 596389 4806453[W]	1960/12 1308	30	FR 0026	017 / / 8:0	ST		2800197 () BRWN CLAY MSND 0011 RED CLAY MSND BLDR 0023 SHLE 0026
BURLINGTON CITY DS S 01(006)	17 596404 4806475[W]	1960/12 1308	30	FR 0017	017 / / 8:0	ST		2800196 () BRWN CLAY MSND 0010 RED CLAY BLDR 0017 MSND CLAY 0024 SHLE 0025
BURLINGTON CITY DS S 01(006)	17 596368 4806382[W]	1959/11 1307	30	FR 0022	022 / / :0	DO		2800194 () RED CLAY 0020 RED SHLE 0040
BURLINGTON CITY DS S 01(006)	17 596732 4806425[W]	1960/02 1308	30	FR 0026	022 / / 8:0	DO		2800193 () BRWN CLAY MSND BLDR 0019 RED CLAY MSND 0026 SHLE 0031
BURLINGTON CITY DS S 01(006)	17 596698 4806467[W]	1960/02 1308	30	FR 0033	006 / / 8:0	DO		2800192 () BRWN CLAY MSND BLDR 0018 MSND 0019 RED CLAY BLDR MSND 0034
BURLINGTON CITY DS S 01(006)	17 596342 4806399[W]	1961/07 1308	30	FR 0027	014 / 002 / 8:0	ST		2800198 () PRDG 0026 RED SHLE 0036
BURLINGTON CITY DS S 01(007)	17 596255 4806243[W]	1968/07 1307	30	FR 0036	020 / / :0	DO		2802780 () BRWN CLAY 0018 RED SHLE 0036
BURLINGTON CITY DS S 01(007)	17 596396 4805995[W]	1959/11 1307	30	FR 0015	015 / / :0	DO		2800199 () RED LOAM 0012 RED SHLE 0040
BURLINGTON CITY DS S 01(007)	17 596865 4805455[L]	2003/09 4005				NU		2809797 (258694)
BURLINGTON CITY DS S 01(007)	17 596854 4805440[W]	2003/01 4005						2809694 (241420)
BURLINGTON CITY DS S 01(008)	17 595835 4805723[W]	1969/08 3637	30	FR 0025	008 / 030 / :0	DO		2803185 () BRWN LOAM 0001 BRWN CLAY SILT 0029 RED SHLE 0030

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY DS S 01(008)	17 596143 4805491[W]	2004/09 6875	06					2810071 (Z16921)
BURLINGTON CITY DS S 01(010)	17 595522 4805260[W]	2004/05 6607	02	FR			0009 10	2809984 (Z11849) A011792 BRWN SILT TILL 0007 BRWN CLAY TILL STNS 0019 GREY SILT TILL STNS 0020
BURLINGTON CITY DS S 01(010)	17 597786 4807546[W]	2004/03 6032	02			NU	0017 05	2809975 (Z05514) A005467 RED SILT CLAY SOFT 0005 RED SHLE WTHD 0022
BURLINGTON CITY DS S 01(010)	17 595434 4805168[W]	1990/01 4005	06	UK 0045	011 / 040 015 / 2:0	CO		2807530 (55728) BRWN CLAY LOOS 0011 GREY CLAY LOOS 0016 GREY CLAY GRVL LOOS 0038 RED SHLE HARD 0048
BURLINGTON CITY DS S 01(010)	17 595478 4804878[W]	1963/06 4602	06 06	FR 0036	016 / 066 / 2:0	DO		2800206 () BRWN CLAY 0018 GREY CLAY 0029 RED CLAY 0032 RED SHLE 0066
BURLINGTON CITY DS S 01(011)	17 595592 4805304[W]	1949/04 1907	06 06	FR 0046	015 / 049 001 / :0	DO		2800208 () RED CLAY 0014 RED SHLE 0049
BURLINGTON CITY DS S 02(001)	17 599262 4806600[W]	1963/10 1612	06 06	FR 0051	012 / 048 001 / 1:0	DO		2800246 () LOAM 0001 BRWN CLAY 0012 RED SHLE 0052
BURLINGTON CITY DS S 02(001)	17 599955 4806133[W]	1977/08 4005	06	FR 0036	015 / 020 024 / 2:0	DO		2805095 () RED CLAY GRVL LOOS 0010 RED SHLE HARD 0040
BURLINGTON CITY DS S 02(002)	17 600234 4805036[W]	1962/12 4602	06 06	FR 0025	005 / 033 002 / 2:0	CO		2800247 () BRWN CLAY 0005 RED SHLE 0015 SHLE 0033
BURLINGTON CITY DS S 02(002)	17 599835 4805317[W]	2004/06 6607	01	FR 0024			0020 20	2809987 (Z11904) A011836 BRWN LOAM SAND SLTY 0000 BRWN SILT CLAY ROCK 0006 BRWN SHLE LMSN 0039
BURLINGTON CITY DS S 02(002)	17 599592 4805682[L]	2004/04 6607				NU		2809887 (Z10255)
BURLINGTON CITY DS S 02(002)	17 600315 4805073[W]	1969/10 4602	06	FR 0031 FR 0029	021 / 025 004 / 1:0	DO		2803238 () PRDG 0021 RED SHLE 0045
BURLINGTON CITY DS S 02(002)	17 600395 4805183[W]	1968/11 5417	06 06	FR 0036	003 / 025 030 / 1:0	CO		2803014 () RED CLAY 0010 RED SHLE 0040
BURLINGTON CITY DS S 02()	17 598108 4806894[W]	2004/01 3030						2809864 (Z07651)
BURLINGTON CITY DSS 01(005)	17 596934 4806546[W]	2004/08 4868	30		008 / / :0	DO ST		2810046 (Z05834)
BURLINGTON CITY DSS 01(005)	17 596778 4806681[W]	2004/08 4868	30		004 / / :0	DO		2810047 (Z05833)
BURLINGTON CITY NDS 02(011)	17 592543 4807404[W]	2008/02 3030						7121267 (Z93592) A081465

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY NS 04(001)	17 591838 4808142[W]	1987/08 1660	06 06	FR 0160	085 / 185 004 / 1:0	DO		2806742 () BLCK UNKN 0001 BRWN CLAY 0009 RED SHLE ROCK 0200
BURLINGTON CITY NS 04(001)	17 591809 4808238[W]	1997/09 3030	36	FR 0015 FR 0012 FR 0017	012 / / 0:0	DO		2808613 (179069) GREY GRVL 0001 BRWN CLAY SNDY 0012 RED SHLE SOFT 0017 RED SHLE 0020
BURLINGTON CITY NS 04(001)	17 591254 4806806[W]	2006/04 6170				NU		2810540 (Z47738)
BURLINGTON CITY NS 04(001)	17 591797 4808292[W]	1967/07 3316	05 05	FR 0035 FR 0065	009 / 020 002 / 2:0	DO		2800544 () CLAY 0004 LMSN 0075
BURLINGTON CITY NS 04(001)	17 591254 4807263[W]	1974/03 3637	30 24	FR 0019 FR 0041	010 / / :0	DO		2804482 () BRWN CLAY SAND STNS 0005 RED SHLE 0022 RED SHLE 0042
BURLINGTON CITY NS 04(001)	17 591905 4808034[W]	1965/02 4602	06 06	FR 0026 FR 0032	014 / 036 002 / 1:0	DO		2800542 () BRWN CLAY 0006 RED CLAY 0015 RED SHLE 0036
BURLINGTON CITY NS 04(001)	17 591900 4808034[W]	1964/08 4602	06 06	FR 0035	022 / 054 / 2:0	DO		2800541 () BRWN CLAY 0002 RED CLAY 0025 RED SHLE 0054
BURLINGTON CITY NS 04(001)	17 592061 4808039[W]	1948/10 1907	06 06	FR 0053	017 / 017 006 / :0	ST DO		2800539 () PRDR 0017 LMSN 0053
BURLINGTON CITY NS 04(001)	17 591826 4808188[W]	1966/10 2803	06 06	FR 0060	025 / 074 / 2:0	DO		2800543 () BRWN CLAY 0040 RED SHLE 0074
BURLINGTON CITY NS 04(002)	17 591605 4808414[W]	1965/05 4602	06 06	FR 0039	014 / 048 001 / 3:0	DO		2800548 () BRWN CLAY 0017 RED CLAY SHLE 0026 RED SHLE 0048
BURLINGTON CITY NS 04(002)	17 591582 4808429[W]	1973/04 2519	30					2804109 () BLCK FILL 0003 RED CLAY SHLE 0015 RED SHLE 0029 GREN ROCK 0030
BURLINGTON CITY NS 04(002)	17 591494 4808523[W]	1981/02 5417	06	FR 0031	014 / 002 / 1:0	DO		2805623 () BRWN CLAY 0004 RED CLAY SHLE SOFT 0012 RED SHLE MGRD 0040 RED SHLE HARD 0056
BURLINGTON CITY NS 04(002)	17 591600 4808398[W]	1995/06 3030	36 24	FR 0015 FR 0040	005 / / :0	DO		2808379 (158423) BRWN LOAM 0001 BRWN CLAY SNDY 0010 GREY CLAY STNS 0015 GREY SAND GRVL 0017 RED SAND 0020 RED SHLE 0041
BURLINGTON CITY NS 04(002)	17 591621 4808377[W]	1965/05 4602	06 06	FR 0030	/ 027 005 / 1:0	DO		2800547 () BRWN CLAY 0011 RED CLAY 0021 RED SHLE 0034
BURLINGTON CITY NS 04(002)	17 591434 4808583[W]	1969/03 5417	06 06	FR 0067	021 / 066 001 / 1:0	DO		2803102 () BRWN CLAY STNS 0014 RED SHLE 0071
BURLINGTON CITY NS 04(002)	17 591418 4808480[W]	1975/11 4005	06	FR 0035 FR 0060	035 / 068 / :0	DO		2804814 () BRWN CLAY 0002 RED CLAY 0025 RED SHLE 0070

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY NS 04(002)	17 591577 4808435[W]	1974/12 1620	06	FR 0060	025 / 068 001 / 1:0	DO		2804695 () BRWN CLAY 0003 RED SHLE 0068
BURLINGTON CITY NS 04(002)	17 591331 4808675[W]	1974/08 5417	06	FR 0021 FR 0012	006 / 045 001 / 1:0	DO		2804559 () RED SHLE 0050
BURLINGTON CITY NS 04(002)	17 591614 4808423[W]	1980/09 3637	30	FR 0028 FR 0020	006 / 014 / 1:0	DO		2805667 () BRWN LOAM 0001 BRWN CLAY STNS PCKD 0015 RED SHLE 0033
BURLINGTON CITY NS 05(001)	17 592855 4808903[W]	1972/11 2519	30	FR 0074	061 / 078 / :0	PS		2803956 () BLCK LOAM 0001 BRWN CLAY 0022 GREY CLAY STNS 0062 RED SHLE CLAY LYRD 0074 GREY CLAY 0078
BURLINGTON CITY NS 05(001)	17 592120 4808188[W]	1958/08 4002	06 06	FR 0040	015 / 040 001 / 1:0	DO		2800574 () CLAY 0008 RED SHLE 0040
BURLINGTON CITY NS 05(001)	17 592147 4808138[W]	1956/10 1634	06 06	FR 0060	020 / 060 002 / 0:15	DO		2800573 () CLAY 0015 RED SHLE 0064
BURLINGTON CITY NS 05(001)	17 592805 4808730[W]	1966/09 4602	06 06	FR 0108	042 / 120 001 / 4:0	DO		2800576 () BRWN CLAY 0016 GREY CLAY 0105 RED CLAY GRVL 0109 RED SHLE 0120
BURLINGTON CITY NS 05(001)	17 591884 4808286[W]	1964/10 4602	06 06	FR 0033 FR 0036	007 / 029 010 / 1:0	DO		2800575 () BRWN CLAY 0009 RED CLAY 0016 RED SHLE 0036
BURLINGTON CITY NS 05(001)	17 591890 4808282[W]	1990/07 4868	24 36 30	FR 0033 FR 0015 FR 0023 FR 0029	015 / 021 004 / 1:0	DO		2807636 (74509) BRWN LOAM LOOS 0002 RED CLAY STNS HARD 0016 RED SHLE LMSN HARD 0035
BURLINGTON CITY NS 05(001)	17 591974 4808223[W]	1973/10 3637	30	FR 0012	008 / 016 007 / 1:1	DO		2804369 () BRWN LOAM 0001 BRWN CLAY 0003 RED SHLE 0018
BURLINGTON CITY NS 05(002)	17 592048 4809323[W]	1975/08 5417	06	FR 0081	028 / 070 004 / 1:30	DO		2804795 () GREY CLAY GRVL 0072 RED CLAY GRVL 0080 RED SHLE 0082
BURLINGTON CITY NS 05(002)	17 591944 4809183[W]	1969/12 3637	30 32	FR 0076	018 / 040 030 / 2:0	DO		2803302 () BRWN CLAY STNS 0015 BLUE CLAY STNS 0058 BRWN HPAN STNS 0071 BRWN CLAY SILT MSND 0076
BURLINGTON CITY NS 05(002)	17 592190 4809441[W]	1986/05 5417	06	FR 0091	035 / 085 001 / 2:0	DO		2806451 () BRWN CLAY 0016 GREY CLAY 0090 RED CLAY GRVL 0091 RED SHLE 0092
BURLINGTON CITY NS 05(002)	17 592221 4809469[W]	1986/03 5417	06	FR 0083	030 / 054 015 / 1:0	DO		2806452 () BRWN CLAY 0015 GREY CLAY 0083 GREY SAND GRVL 0084 GREY CLAY 0084
BURLINGTON CITY NS 05(003)	17 591754 4809623[W]	1970/02 4602	06	FR 0047	-002 / 062 002 / 5:0	DO		2803317 () BRWN CLAY 0012 GREY CLAY 0047 BRWN MSND CLAY 0049 BLUE CLAY GRVL 0055 RED CLAY 0059 RED CLAY GRVL 0063

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY NS 05(003)	17 591573 4810183[W]	1972/12 3637	30 25	FR 0020 FR 0026	003 / / :0	DO		2804070 () BRWN LOAM 0001 RED CLAY STNS 0005 RED SHLE 0028
BURLINGTON CITY NS 05(003)	17 591804 4810193[W]	1968/05 1307	30	FR 0044	025 / / :0	DO		2802776 () BRWN LOAM 0008 RED CLAY 0028 RED SHLE 0044
BURLINGTON CITY NS 05(003)	17 591859 4809973[W]	1971/05 3637	30	FR 0025	012 / 025 / :0	DO		2803780 () BRWN CLAY CSND STNS 0003 BRWN CLAY 0008 GREY CLAY SILT 0017 BRWN MSND STNS 0025
BURLINGTON CITY NS 05(004)	17 591507 4810439[W]	1962/05 1307	30	FR 0052	025 / 001 / :0	DO		2800577 () BRWN LOAM 0012 RED CLAY 0045 RED SHLE 0052
BURLINGTON CITY NS 05(004)	17 591394 4810323[W]	1978/10 3637	30 24	FR 0014 FR 0029 FR 0038	024 / / :0	ST DO		2805428 () BRWN LOAM 0001 BRWN CLAY SILT STNS 0013 RED SHLE HARD 0015 RED SHLE HARD VERY 0040
BURLINGTON CITY NS 05(004)	17 591546 4810360[W]	1974/06 3637	30	FR 0023 FR 0044	021 / 033 007 / 1:0	DO		2804491 () BRWN LOAM 0001 GREY CLAY 0004 BRWN CLAY STNS 0017 GREY CLAY 0018 BRWN CSND 0019 BRWN CLAY 0021 BRWN SAND 0022 BRWN CLAY 0023 GREY CLAY STNS SILT 0028 GREY STNS BLDR CLAY 0032 RED SHLE 0046
BURLINGTON CITY NS 05(004)	17 591482 4810299[W]	1962/05 1307	30	FR 0032	015 / 001 / :0	DO		2800578 () BRWN LOAM 0012 RED CLAY 0025 RED SHLE 0032
BURLINGTON CITY NS 05(005)	17 591255 4810693[W]	1972/05 3030	36 24	FR 0017 FR 0051	031 / 050 009 / 1:30	DO		2803912 () BRWN LOAM 0001 BRWN OBDN 0004 BRWN CLAY 0017 GREY GRVL 0018 GREY CLAY STNS 0032 BRWN CLAY STNS 0051 GREY SAND SILT 0055 GREY CLAY STNS 0060
BURLINGTON CITY NS 06(001)	17 592880 4809887[W]	1967/09 5417	06 06	FR 0072	036 / 070 001 / 1:30	DO		2800600 () BRWN CLAY 0010 GREY CLAY 0035 GREY CLAY GRVL 0062 RED CLAY GRVL 0072 RED SHLE 0076
BURLINGTON CITY NS 06(001)	17 592995 4810063[W]	1982/04 4005	06	FR 0045	012 / 045 001 / 1:0	DO		2805863 () BRWN CLAY LOOS 0012 GREY CLAY GRVL LOOS 0025 RED CLAY LOOS 0030 RED SHLE HARD 0050
BURLINGTON CITY NS 06(001)	17 592975 4809783[W]	1982/09 4005	06					2805864 () BRWN CLAY LOOS 0006 BRWN CLAY GRVL SNDY 0017 RED SHLE HARD 0057
BURLINGTON CITY NS 06(001)	17 592975 4809783[W]	1982/09 4005	06	FR 0023	012 / 032 004 / 1:0	DO		2805865 () BRWN CLAY LOOS 0007 BRWN CLAY GRVL SNDY 0018 RED SHLE HARD 0035
BURLINGTON CITY NS 06(001)	17 593041 4809830[W]	1962/09 4602	06	FR 0039 FR 0057	039 / 062 003 / 2:0	DO		2800598 () BRWN CLAY 0028 GREY CLAY 0039 YLLW MSND 0045 GREY CLAY GRVL 0062
BURLINGTON CITY NS 06(001)	17 592960 4809818[W]	1953/07 4623	06 06	FR 0040	012 / / :0	PS		2800596 () PRDG 0005 RED SHLE 0046

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY NS 06(001)	17 593015 4809883[W]	1970/07 5417	06	FR 0080	040 / 080 001 / 1:0	DO		2803424 () BRWN CLAY 0021 GREY CLAY GRVL 0063 RED SHLE 0087
BURLINGTON CITY NS 06(001)	17 593015 4809423[W]	1980/08 4602	06	FR 0014	007 / 022 005 / 1:0	DO		2805571 () BRWN SILT 0006 BRWN CLAY 0008 RED CLAY 0010 RED SHLE 0025
BURLINGTON CITY NS 06(001)	17 592875 4809585[W]	1958/06 1634	06 06	FR 0063	035 / 060 002 / 1:0	PS		2800597 () CLAY 0032 CLAY GRVL 0048 RED SHLE 0065
BURLINGTON CITY NS 06(001)	17 592915 4809223[W]	1980/07 4602	06	FR 0012	006 / 019 002 / 1:0	DO		2805548 () BRWN CLAY SLTY 0006 RED SHLE 0021
BURLINGTON CITY NS 06(001)	17 593839 4810096[W]	1966/02 4602	06 06	FR 0040	040 / 069 001 / 10:0	DO		2800599 () BRWN CLAY 0016 GREY CLAY 0040 BRWN MSND 0042 GREY CLAY GRVL 0059 RED CLAY 0063 RED SHLE 0069
BURLINGTON CITY NS 06(001)	17 593355 4809633[W]	1971/09 3637	30	FR 0022 FR 0010	010 / 020 / :0	DO		2803775 () BLCK LOAM 0001 BRWN CLAY STNS 0004 BRWN CLAY 0007 BLUE CLAY SILT SAND 0015 BRWN CLAY GRVL 0020 RED SHLE 0025
BURLINGTON CITY NS 06(001)	17 592895 4809523[W]	1971/06 3637	30 24	FR 0017 FR 0012	006 / 017 012 / 3:0	PS		2803777 () BRWN LOAM 0001 BRWN CLAY 0003 RED SHLE 0022
BURLINGTON CITY NS 06(002)	17 592836 4809872[W]	1957/06 1634	06 06	FR 0051	028 / 048 002 / 1:0	PS		2800601 () CLAY STNS 0022 RED SHLE 0053
BURLINGTON CITY NS 06(002)	17 592912 4809955[W]	1960/04 4602	06 06	MN 0062	023 / 062 001 / 2:0	DO		2800602 () BRWN CLAY 0018 GREY CLAY 0058 RED SHLE 0065
BURLINGTON CITY NS 06(002)	17 592817 4810218[L]	1988/10 5417	06	FR 0032 FR 0061	020 / 058 003 / 1:30	DO		2807049 (20161) BRWN CLAY 0018 RED CLAY SHLE 0025 RED SHLE 0064
BURLINGTON CITY NS 06(002)	17 592675 4810013[W]	1968/12 1307	30	FR 0059	/ / :0	DO		2802769 () BRWN LOAM 0010 RED CLAY 0058 RED SHLE 0059
BURLINGTON CITY NS 06(002)	17 592935 4809933[W]	1968/12 1307	30	FR 0042	020 / / :0	DO		2802770 () BRWN LOAM 0008 RED CLAY 0032 CSND 0035 RED CLAY 0040 MSND 0042
BURLINGTON CITY NS 06(002)	17 592435 4809883[W]	1970/02 4602	06	FR 0068	018 / 067 001 / 5:0	DO		2803316 () BRWN SILT 0004 BRWN MSND 0016 GREY CLAY 0030 GREY CLAY GRVL 0053 RED CLAY MSND 0057 RED CLAY 0061 RED CLAY GRVL 0068 RED SHLE 0070
BURLINGTON CITY NS 06(002)	17 593155 4810823[W]	1980/06 3637	30 24	FR 0032 FR 0024	011 / / 1:0	DO		2805642 () BRWN LOAM 0001 BRWN CLAY 0027 RED SHLE 0036
BURLINGTON CITY NS 06(002)	17 593095 4810643[W]	1980/12 3637	30 24	FR 0033 FR 0018	008 / 017 008 / :0	DO		2805647 () BRWN LOAM 0001 BRWN CLAY 0005 GREY CLAY STNS HARD 0010 BRWN SILT SAND STNS 0018 RED SHLE 0036

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY NS 06(002)	17 592955 4810123[W]	1980/10 3637	30	FR 0033 FR 0022	020 / 001 / 24:0	DO		2805669 () BRWN LOAM 0001 BRWN CLAY STNS HARD 0017 RED SHLE HARD 0035
BURLINGTON CITY NS 06(003)	17 592035 4810053[W]	1971/12 3637	30	SA 0073		NU		2803801 () BRWN LOAM 0001 BRWN GRVL 0005 BRWN CLAY 0016 GREY CLAY STNS SILT 0069 RED SHLE 0076
BURLINGTON CITY NS 06(003)	17 592889 4810852[W]	1987/03 5417	06	FR 0045	008 / 063 001 / 1:30	CO		2806646 () UNKN 0036 RED SHLE 0068
BURLINGTON CITY NS 06(003)	17 592660 4811237[W]	1987/03 4005		FR 0048	/ / 0:0	DO		2806572 (10200) BRWN CLAY SNDY LOOS 0008 BRWN CLAY LOOS 0019 BRWN CLAY SNDY GRVL 0025 BRWN CLAY SAND LOOS 0027 BRWN CLAY FGVL LOOS 0035 BRWN CLAY SAND LOOS 0037 BRWN CLAY SAND LOOS 0041 RED CLAY LOOS 0046 RED SHLE HARD 0076
BURLINGTON CITY NS 06(003)	17 592800 4810472[W]	2004/04 4005	06	UK 0058 UK 0012	003 / 065 002 / 1:0	DO		2809944 (Z07809) A007717 BRWN CLAY SNDY 0012 GREY CLAY SNDY FGVL 0022 BRWN CLAY 0032 RED CLAY 0037 RED SHLE 0080
BURLINGTON CITY NS 06(003)	17 592914 4810889[W]	1986/03 5417	06	FR 0046 UK 0056	006 / 046 005 / 1:0	CO		2806449 () BRWN CLAY GVLY 0033 RED SHLE 0060
BURLINGTON CITY NS 06(003)	17 592795 4811163[W]	1973/04 3637	30	FR 0021	001 / 021 014 / 1:0	DO		2805812 () BRWN LOAM 0001 BRWN CLAY STNS SOFT 0014 GREY CLAY SOFT 0015 BRWN CLAY HARD 0017 GREY GRVL STNS SAND 0031
BURLINGTON CITY NS 06(003)	17 592255 4810063[W]	1972/07 3637	30	FR 0038	012 / 038 / 1:0	DO		2804133 () BRWN LOAM 0001 BRWN CLAY SOFT 0016 GREY CLAY PCKD 0038 SAND 0038
BURLINGTON CITY NS 06(003)	17 592365 4810629[L]	1991/02 4868	30 30	FR 0021	007 / 017 010 / 1:0	DO		2807774 (103891) BRWN LOAM 0001 BRWN CLAY 0009 RED CLAY SHLE HARD 0019 GREY CLAY FILL 0021 BRWN GRVL SAND LOOS 0025
BURLINGTON CITY NS 06(003)	17 591879 4810283[W]	1971/12 3637	30	FR 0046	020 / 054 / :0	DO		2803742 () BRWN LOAM 0001 BRWN CLAY 0014 GREY CLAY 0024 BRWN CLAY STNS 0030 RED SHLE 0054
BURLINGTON CITY NS 06(003)	17 592864 4811040[W]	1987/05 5417	06	FR 0068	009 / 076 003 / 1:0	DO		2806703 () BRWN CLAY 0018 GREY CLAY GVLY 0045 RED SHLE 0080
BURLINGTON CITY NS 06(003)	17 592365 4810629[L]	1998/08 4207	06 06	FR 0060	028 / 299 001 / 1:0	DO		2808935 (174423) BRWN CLAY 0035 RED CLAY 0050 RED SHLE 0299
BURLINGTON CITY NS 06(004)	17 592534 4811383[W]	1969/09 3637	30	FR 0040	008 / 042 / 1:0	DO		2803198 () BRWN LOAM 0001 BRWN CLAY 0013 BLUE CLAY 0026 GREY CLAY STNS BLDR 0038 BRWN MSND GRVL 0042 RED SHLE 0043

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY NS 06(004)	17 591316 4810752[W]	1987/10 4005	06	FR 0047 FR 0063	033 / 085 003 / 2:0	DO		2806740 (15545) BRWN CLAY GRVL LOOS 0013 GREY CLAY FGVL LOOS 0030 BRWN CLAY GRVL LOOS 0058 RED CLAY GRVL LOOS 0061 RED SHLE HARD 0086
BURLINGTON CITY NS 06(004)	17 591918 4811038[L]	1999/08 4005	06 06			DO		2809048 (204420) GREY CLAY 0060 RED CLAY 0080 RED SHLE 0110
BURLINGTON CITY NS 06(004)	17 592089 4811643[W]	1972/07 3030	36	FR 0052 FR 0029	024 / 034 012 / 1:0	ST DO		2804273 () BRWN LOAM 0006 BRWN CLAY STNS 0019 GREY CLAY STNS SAND 0053
BURLINGTON CITY NS 06(004)	17 591690 4810534[W]	1997/12 2663	06 06	FR 0130 FR 0045	015 / 048 001 / 1:0	DO		2808665 (184685) LOAM 0001 BRWN CLAY GRVL 0037 RED SHLE 0042 BLUE SHLE 0130
BURLINGTON CITY NS 06(004)	17 591664 4810512[W]	1997/12 2663	06 06	FR 0075 FR 0120 FR 0040	024 / 052 004 / 1:0	DO		2808664 (184684) LOAM 0001 BRWN CLAY GRVL 0022 BRWN CLAY BLDR HPAN 0025 RED SHLE 0040 BLUE SHLE 0120
BURLINGTON CITY NS 06(005)	17 591465 4811467[L]	2004/02 3030	36 24	FR 0047 FR 0054	/ / :0	DO ST		2809877 (Z07677) A007597 BRWN LOAM 0001 BRWN CLAY 0014 GREY CLAY STNS HARD 0047 GREY SILT 0053 GREY SAND GRVL 0054 GREY SAND 0055 GREY CLAY 0061
BURLINGTON CITY NS 06(005)	17 592084 4811773[W]	1969/07 3637	30	FR 0023 FR 0034	004 / 035 / 1:0	DO		2803195 () BLCK LOAM 0002 BRWN CLAY STNS 0022 BRWN MSND GRVL 0035
BURLINGTON CITY NS 06(005)	17 591464 4811467[L]	2003/08 4005	06	UK 0067	014 / 080 006 / 1:30	CO		2809798 (258686) BRWN CLAY SNDY 0015 GREY CLAY GRVL 0056 RED CLAY GRVL 0066 RED GRVL SAND 0067 RED SHLE 0085
BURLINGTON CITY NS 06(005)	17 591546 4812011[W]	1958/06 5417	06 06	FR 0035	004 / 026 004 / 0:45	DO		2800603 () BRWN LOAM 0002 BRWN CLAY 0012 BLUE CLAY 0028 BLUE CLAY GRVL 0035 GRVL CSND 0036 RED SHLE 0040
BURLINGTON CITY NS 06(005)	17 594297 4806276[W]	2004/11 4005			/ / :0	CO		2810122 (Z22254) A007804 BRWN CLAY 0020 GREY CLAY 0038 GREY GRVL SLTY 0039 GREY CLAY 0068 RED SHLE 0075
BURLINGTON CITY NS 06(005)	17 591275 4810824[W]	1989/05 2663	06 06	FR 0086 FR 0106	043 / 003 / 1:0	DO		2807290 (57709) LOAM 0001 BRWN CLAY GRVL 0077 RED SHLE 0106
BURLINGTON CITY NS 06(005)	17 591614 4812083[W]	1979/07 4868	30	FR 0018	/ / :0	DO		2805377 () BRWN CLAY SAND SOFT 0004 GREY CLAY STNS HARD 0018 GREY SILT SOFT 0019 GREY CLAY STNS HARD 0027 GREY CLAY CSND SOFT 0029 GREY CLAY STNS HARD 0040 RED SHLE CLAY LYRD 0045
BURLINGTON CITY NS 06(005)	17 591614 4812083[W]	1979/07 4868		FR 0038	004 / 024 004 / 2:0	DO		2805376 () PRDG 0035 BLCK SILT FSND 0039

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY NS 06(006)	17 591584 4812203[W]	1969/06 1906	04 04	FR 0069	/ 010 / 1:0	DO		2803253 () RED CLAY 0050 RED SHLE 0060 BLUE SHLE 0069
BURLINGTON CITY NS 06(006)	17 591234 4811813[W]	1969/06 3637	30	FR 0058	004 / / :0	DO		2803183 () LOAM 0002 BRWN CLAY STNS 0057 GREY MSND GRVL 0058
BURLINGTON CITY NS 06(006)	17 591332 4811752[W]	1973/08 3637	30	FR 0055	025 / 035 007 / 1:0	DO		2804459 () BRWN LOAM 0001 GREY CLAY 0004 BRWN CLAY STNS 0040 BRWN CLAY SAND 0051 BRWN SAND 0055 GREY CLAY 0056
BURLINGTON CITY NS 06(006)	17 591567 4812148[W]	1974/04 4602	06	FR 0057 FR 0053	/ 058 010 / 1:0	DO		2804409 () BRWN CLAY 0018 GREY CLAY 0053 GREY SAND GRVL 0057 GREY CLAY GRVL STNS 0061 RED CLAY GRVL 0066
BURLINGTON CITY NS 06(006)	17 591375 4812305[W]	1989/01 5417	05	FR 0092	003 / 060 006 / 1:30	DO		2807240 (20155) PRDR 0061 GREY CLAY 0092 GREY CLAY FGVL 0093
BURLINGTON CITY NS 06(006)	17 591375 4812305[W]	1987/11 5417	06	FR 0059	001 / 047 003 / 1:0	DO		2806815 () BLCK LOAM 0002 GREY CLAY 0059 GREY GRVL CLAY 0062
BURLINGTON CITY NS 06(006)	17 591243 4812563[W]	1954/10 1634	06	FR 0069	002 / 030 / :0	DO		2800604 () CLAY 0008 BLUE CLAY 0050 MSND GRVL 0069
BURLINGTON CITY NS 07(008)	17 591334 4814323[W]	1979/02 4602	06	UK 0083	057 / 067 012 / 1:0	DO		2805395 () BRWN CLAY 0028 GREY CLAY 0038 GREY SAND 0040 BLUE CLAY 0083 RED CLAY GRVL 0088 RED CLAY SAND 0108 RED SAND 0132 GREY SAND GRVL CLAY 0153 BRWN SAND FGVL 0175 GREY SAND CLAY LTCL 0190 RED CLAY GRVL 0191 RED SHLE 0192
BURLINGTON CITY ()	17 599998 4806080[W]	2005/11 6607	02	FR 0023			0007 25	2810465 (Z40276) A034594 BRWN SILT STNS 0010 BRWN SHLE 0021 GREY
BURLINGTON CITY 01(008)	17 595708 4805396[W]	2005/07 6875	08					2810379 (Z22828)
BURLINGTON CITY 01(008)	17 595737 4805978[W]	2005/09 7219	84		003 / / :0	NU		2810444 (Z36256) A033069
BURLINGTON CITY 01(008)	17 595662 4805994[W]	2005/06 1660						2810349 (Z00800)
BURLINGTON CITY 01(009)	17 595427 4805737[W]	2007/07 7219			009 / / :0	NU		7049653 (Z67248) A060734 GRVL 0041
BURLINGTON CITY 01(010)	17 595057 4805537[W]	2007/08 3349	36					7050132 (Z66976)
BURLINGTON CITY 01(010)	17 595105 4805506[W]	2007/08 3349	36					7050138 (Z66982)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY 02(001)	17 595617 4810362[W]	2007/09 4207	06					7101614 (Z64115) A050333 BRWN TILL CLYY 0060 RED TILL GVLY 0105
BURLINGTON CITY 02(003)	17 595581 4808946[W]	2007/08 4207	06					7101615 (Z64114) A050331 BRWN TILL 0020 BRWN GRVL HPAN 0052 CLAY RED SHLE 0061
BURLINGTON CITY 02(005)	17 598110 4805290[W]	2006/11 6607	02				0004 10	7039196 (Z56655) A051087 BRWN CLAY TILL 0012 BRWN SHLE 0014
BURLINGTON CITY 02(012)	17 592580 4806136[W]	2007/08 6607	02				0048 12	7050104 (Z72432) A048414 BRWN SILT CLAY TILL 0043 BRWN SHLE 0060 RED
BURLINGTON CITY 02(016)	17 592026 4805336[W]	2005/04 4005				DO		2810230 (Z22284) A022027
BURLINGTON CITY 04(001)	17 591289 4806881[W]	2005/07 4005	06	FR 0055	008 / 027 020 / 1:0	DO		2810315 (Z22317) A022058 BRWN CLAY SNDY 0008 BRWN SAND GRVL 0012 GREY LMSN 0060
BURLINGTON CITY 04(001)	17 591380 4806921[W]	2005/05 1660	06	0085	008 / 012 002 / 1:0	DO		2810351 (Z00798) A000709 BRWN CLAY 0005 WHIT LMSN HARD 0020 GREY LMSN HARD 0025 BRWN LMSN HARD 0028
BURLINGTON CITY 04(001)	17 591249 4806812[W]	2005/06 1660	72	FR 0040 FR 0027 FR 0055	003 / 033 001 / 1:0	DO		2810350 (Z00799) A000710 BRWN CLAY 0005 WHIT LMSN HARD 0027 BRWN LMSN HARD 0035 WHIT LMSN 0065
BURLINGTON CITY 05(001)	17 596094 4807496[W]	6607	01				0024 02	7120581 (Z095073) A067350 BRWN TILL DRY 0021 BRWN SHLE DRY 0026
BURLINGTON CITY 05(005)	17 591414 4806780[W]	2005/05 4005	06	0066 0035 0024	008 / 014 025 / 1:0	DO		2810264 (Z22293) A022035 BRWN CLAY 0012 BRWN CLAY STNS SNDY 0020 BRWN GRVL SNDY 0022 GREY LMSN HARD 0024 GREY LMSN LOOS FCRD 0066 GREY LMSN HARD 0070
BURLINGTON CITY (001)	17 599271 4806835[W]	2008/03 6607	01	FR 0010				7108932 (Z60564) A062378 BRWN SILT 0005 RED SHLE LMSN 0035
BURLINGTON CITY (002)	17 592548 4809658[W]	2008/05 2663	06	FR 0081	038 / 058 001 / 1:0	DO		7107262 (Z79518) A064466 LOAM FGRD 0002 BRWN CLAY HARD 0035 RED CLAY STNS GRVL 0044 RED SHLE 0081
BURLINGTON CITY (002)	17 592546 4809649[W]	2008/05 2663	###	FR 0025	047 / 066 001 / 1:0	DO		7107261 (Z79517) A064464 LOAM FGRD 0003 BRWN CLAY 0038 RED CLAY 0045 RED SHLE 0081
BURLINGTON CITY (3-4)	17 598462 4805634[W]	2007/10 6988						7100721 (M00226) A064001 PRDR 0011
BURLINGTON CITY ()	17 599835 4805317[W]	2005/04 7295	01				0020 20	2810216 (Z23651) A011836 BRWN LOAM SILT SAND 0000 RED SILT CLAY FILL 0005 RED SHLE LMSN 0039

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY ()	17 591630 4811359[W]	2005/07 3030	24 24	0035 0045	014 / 001 009 / 2:15	IN DO		2810297 (Z31910) A023153 BRWN LOAM 0001 BRWN CLAY 0015 BLUE CLAY HARD 0035 GREY CLAY SILT 0045 GREY SAND GRVL CSND 0050
BURLINGTON CITY ()	17 595520 4805260[W]	2005/10 6607						2810393 (Z38229) A011792
BURLINGTON CITY ()	17 599990 4806100[W]	2005/11 6607		FR 0010				2810452 (Z38268) A034264
BURLINGTON CITY ()	17 601719 4805851[W]	2006/09 7241	02				0019 12	7038487 (Z54885) A044816 RED SHLE 0026 RED SHLE 0029 RED SHLE 0031
BURLINGTON CITY ()	17 601637 4806168[W]	2006/12 6607	02	FR			0015 10	7041859 (Z59626) A053564 BRWN SAND GRVL 0003 BRWN SAND SILT 0010 RED SILT SHLE 0025
BURLINGTON CITY ()	17 595427 4805195[W]	2007/11 6607						7100449 (M00693) A049167
BURLINGTON CITY ()	17 597009 4807060[W]	2004/11 6607	02				0005 15	2810161 (Z24175) AA21345 BLCK 0000 GREY GRVL 0001 RED SILT GRVL 0005 RED SHLE 0020
BURLINGTON CITY ()	17 597558 4804816[W]	2008/09 1129	07 02					7120703 (Z80400) A081524 LOAM 0000 BRWN CLAY SAND GRVL 0003 BRWN SHLE WTHD 0011 BRWN SHLE 0013 SHLE WBRG 0022
BURLINGTON CITY ()	17 596403 4806831[W]	2008/07 6607						7119840 (M03002) A067370
BURLINGTON CITY ()	17 600659 4805101[W]	2008/11 7215					0015 10	7117829 (Z93487) A079254 BRWN FILL WBRG 0004 RED SHLE DRY 0025
BURLINGTON CITY ()	17 592318 4805147[W]	 7241	01				0006 06	7115668 (Z89582) A072882 GREN LOAM 0001 BRWN LOAM ROCK 0006 BRWN CLAY ROCK 0012
BURLINGTON CITY ()	17 599239 4806567[W]	2008/04 6607						7114329 (Z60571) A062339
BURLINGTON CITY ()	17 599245 4806598[W]	2008/04 6607	03	FR 0007			0009 02	7114257 (Z86825) A069629 BRWN SILT SAND 0003 BRWN SHLE LMSN 0011
BURLINGTON CITY ()	17 599211 4806905[W]	2008/04 6607						7114256 (Z60560) A062484
BURLINGTON CITY ()	17 599206 4806882[W]	2008/04 6607						7114255 (Z60562) A062507
BURLINGTON CITY ()	17 599218 4806582[W]	2008/04 6607						7114254 (Z60570) A062338

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
BURLINGTON CITY ()	17 599207 4806657[W]	2008/04 6607						7114253 (Z60559) A059198
BURLINGTON CITY ()	17 599205 4806654[W]	2008/04 6607						7114252 (Z60558) A054649
BURLINGTON CITY ()	17 599260 4806855[W]	2008/04 6607						7114250 (Z60572) A062502
BURLINGTON CITY ()	17 599243 4806598[W]	2008/04 6607						7114249 (M01258) A062357
BURLINGTON CITY ()	17 596461 4806675[W]	2008/05 7215	01				0003 03	7108123 (Z92272) A068082 BRWN SILT TILL 0005 BRWN SILT HARD 0006
BURLINGTON CITY ()	17 599213 4806836[W]	2008/03 6607	01	FR 0009				7105631 (Z60545) A062359 RED SILT SAND 0004 BRWN RED SHLE LMSN 0035 BRWN
BURLINGTON CITY ()	17 599282 4806797[W]	2008/03 6607	01	FR 0010				7105627 (Z60548) A062355 BRWN SILT SAND 0003 RED SHLE 0026 BRWN GREY LMSN SHLE 0035
BURLINGTON CITY ()	17 599260 4806820[W]	2008/03 6607	01	FR				7105625 (Z60546) A062519 BRWN SILT 0005 RED SHLE 0010 BRWN
BURLINGTON CITY ()	17 599219 4806874[W]	2008/03 6607	01	FR				7105624 (Z60547) A062488 BRWN SILT SAND 0003 RED SHLE 0010
BURLINGTON CITY ()	17 595904 4805867[W]	2007/07 6607						7050862 (Z72478)
BURLINGTON CITY ()	17 595427 4805195[W]	2007/06 6607	02	FR 0010		NU	0005 10	7047134 (Z70594) A049167 BRWN SAND SILT CLAY 0015
BURLINGTON CITY ()	17 599188 4806633[W]	2008/04 6607	03 03 36				0002 02 0004 04 0004 07	7114258 (Z86826) A069630 BRWN SILT SAND 0003 BRWN SHLE LMSN 0011
MILTON TOWN (MILTON) 01()	17 591710 4814675[W]	2008/07 1660						7112354 (Z67597)
MILTON TOWN (MILTON) 02(030)	17 596764 4812141[W]	2007/05 1660						7047690 (Z52749)
MILTON TOWN (MILTON) 07(008)	17 591325 4814326[W]	2007/03 7219	06		005 / / :0			7042472 (Z73219) A053263
MILTON TOWN (MILTON) 07(008)	17 591310 4814289[W]	2007/03 7219	36		006 / / :0	NU		7042473 (Z73241) A053262 0024

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
MILTON TOWN (MILTON) 07(008)	17 591317 4814301[W]	2007/03 7219	06		005 / / :0			7042471 (Z73220) A053261
MILTON TOWN (MILTON) 08(008)	17 592113 4815745[W]	2009/02 7219			004 / / :0	NU		7120588 (Z94238) A082064
MILTON TOWN (MILTON) (001)	17 596248 4813325[W]	2007/05 3030	36	0012 0032 0040	004 / / 3:0	DO		7045972 (Z70779) A056284 BRWN LOAM 0001 BRWN CLAY SNDY 0012 GREY CLAY STNS HARD 0032 GREY SAND GRVL CLAY 0038 GREY CLAY 0040 RED SHLE 0042
MILTON TOWN (MILTON) ()	17 591990 4816331[W]	2007/10 7247	02		/ / :0	NU		7103747 (Z69501) A060134 BRWN SILT SNDY GRVL 0002 BRWN SILT TILL SAND 0006 RED SHLE LMSN HARD 0020
MILTON TOWN (MILTON) ()	17 594440 4813922[W]	2007/04 6809						7044093 (Z70840) A053009
MILTON TOWN (MILTON) ()	17 594400 4813764[W]	2007/04 6809						7044094 (Z70839) A053008
MILTON TOWN (MILTON) ()	17 591738 4813875[W]	2007/05 6607	02	FR 0020			0010 10	7044742 (Z70540) A049123 BRWN SAND GRVL FILL 0005 GREY CLAY SILT 0020
MILTON TOWN (MILTON) ()	17 594271 4815550[W]	2008/04 6032				NU		7104308 (Z66391) A062201 BRWN SILT 0020 GREY SILT TILL 0017
OAKVILLE TOWN CON 01(006)	17 592713 4814081[L]	1985/06 4005	06	FR 0060	/ 064 001 / 1:0	CO		2806309 () BRWN CLAY LOOS 0010 BRWN CLAY SNDY GRVL 0028 GREY CLAY LOOS 0036 RED CLAY LOOS 0040 RED SHLE HARD 0065
OAKVILLE TOWN DS N 01(012)	17 602684 4816675[W]	1962/06 1308	30	FR 0020	008 / 018 005 / 1:0	DO		2802105 () BRWN CLAY 0008 RED CLAY BLDR 0019 RED SHLE 0020
OAKVILLE TOWN DS N 01(012)	17 602670 4816688[W]	1988/07 4005	06	UK 0048 UK 0061	009 / 053 006 / 1:0	DO		2806985 (31051) BRWN CLAY LOOS 0016 RED SHLE HARD 0065
OAKVILLE TOWN DS N 01(013)	17 603191 4815941[W]	1952/09 1642	06	FR 0055	025 / 001 / :0			2802111 () CLAY 0017 RED SHLE 0070
OAKVILLE TOWN DS N 01(013)	17 602642 4816383[L]	1998/07 1660	06 06	FR 0028	017 / 026 008 / 1:0	DO		2808922 (192137) GRVL 0001 BRWN CLAY 0008 RED SHLE 0031 RED SHLE 0065
OAKVILLE TOWN DS N 01(013)	17 602937 4816363[W]	1951/05 1642	06 06	FR 0065	015 / 001 / :0	PS		2802108 () CLAY 0023 RED SHLE 0087
OAKVILLE TOWN DS N 01(013)	17 602937 4816358[W]	1951/04 1642	06 06	FR 0063	018 / 002 / :0	PS		2802107 () CLAY 0022 RED SHLE 0099
OAKVILLE TOWN DS N 01(013)	17 602565 4816547[W]	1953/10 4623	05 05	FR 0040	008 / 004 / :0	PS		2802112 () LOAM 0002 CLAY BLDR 0008 RED SHLE 0050

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(014)	17 603222 4815454[W]	1961/11 3414	04	FR 0067 FR 0100	015 / 060 003 / 2:0	ST DO		2802117 () PRDG 0021 RED SHLE 0100
OAKVILLE TOWN DS N 01(015)	17 601447 4816200[W]	1967/10 1307	30	FR 0026	012 / 002 / :0	DO		2802122 () BRWN LOAM MSND 0020 RED SHLE 0026
OAKVILLE TOWN DS N 01(015)	17 602755 4814863[W]	1978/10 4005	06	FR 0036	010 / 033 004 / 2:0	CO DO		2805288 () BRWN CLAY LOOS 0005 RED CLAY LOOS 0007 RED SHLE HARD 0038
OAKVILLE TOWN DS N 01(015)	17 601439 4816379[W]	1967/01 1308	30	FR 0037	020 / 035 001 / 1:0	DO		2802121 () LOAM 0002 BRWN CLAY 0019 BLUE CLAY 0029 RED HPAN 0035 RED SHLE 0037
OAKVILLE TOWN DS N 01(015)	17 601430 4816524[W]	1965/01 4602	06 06	FR 0043	021 / 056 001 / 2:0	DO		2802120 () YLLW CLAY 0013 GREY CLAY 0038 GREY CLAY GRVL 0040 RED SHLE 0056
OAKVILLE TOWN DS N 01(015)	17 602648 4814989[W]	1954/08 1642	06	FR 0038	016 / 016 003 / 1:0	DO		2802118 () PRDG 0020 RED SHLE 0040
OAKVILLE TOWN DS N 01(015)	17 601475 4816577[W]	1963/10 4602	06 06	FR 0049	018 / 049 005 / 1:0	DO		2802119 () BRWN CLAY 0016 GREY CLAY 0045 RED SHLE 0052
OAKVILLE TOWN DS N 01(016)	17 601229 4816259[W]	1961/09 5417	06 06	FR 0060	012 / 053 002 / 0:45	DO		2802130 () BRWN CLAY 0014 GREY CLAY 0033 GREY CLAY GRVL 0039 RED SHLE 0063
OAKVILLE TOWN DS N 01(016)	17 602413 4815155[W]	1959/01 5417	06 06	FR 0034	016 / 026 008 / 0:30	DO		2802129 () PRDG 0015 RED SHLE 0036
OAKVILLE TOWN DS N 01(016)	17 602289 4815257[W]	1959/01 5417	06 06	FR 0035	018 / 036 006 / 0:40	DO		2802128 () BRWN CLAY 0004 RED CLAY SHLE 0007 RED SHLE 0046
OAKVILLE TOWN DS N 01(016)	17 601074 4816067[W]	1957/06 4838	06 06	FR 0060 FR 0039 FR 0061	007 / 050 004 / 2:0	DO		2802127 () LOAM 0004 CLAY 0020 CLAY GRVL 0034 RED SHLE 0063
OAKVILLE TOWN DS N 01(016)	17 601146 4816171[W]	1956/11 1642	06 06	FR 0055	009 / 050 / 0:30	DO		2802126 () CLAY 0010 MSND CLAY 0035 RED SHLE 0058
OAKVILLE TOWN DS N 01(016)	17 602724 4814866[W]	1955/08 1642	06 06	FR 0060	010 / 005 / :0	DO		2802125 () CLAY 0011 RED SHLE 0062
OAKVILLE TOWN DS N 01(016)	17 602643 4814948[W]	1955/07 1642	06 06	FR 0058	012 / 003 / :0	DO		2802124 () CLAY 0015 RED SHLE 0061
OAKVILLE TOWN DS N 01(016)	17 602729 4814826[W]	1952/11 1642	06 06	FR 0045	015 / / :0	DO		2802123 () CLAY 0010 RED SHLE 0045
OAKVILLE TOWN DS N 01(016)	17 601617 4815825[W]	1993/09 1660	06 06	FR 0056	016 / 049 010 / 1:0	DO		2808261 (74890) BRWN CLAY 0014 RED CLAY 0017 RED SHLE 0060
OAKVILLE TOWN DS N 01(016)	17 602694 4814813[W]	1965/12 4602	06 06	FR 0025	004 / 037 004 / 1:0	DO		2802133 () BRWN CLAY 0005 RED SHLE 0037

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(016)	17 602005 4815533[W]	1970/09 4602	06	SA 0044	012 / 040 004 / 1:0	ST DO		2803433 () BRWN CLAY 0011 RED SHLE 0045
OAKVILLE TOWN DS N 01(016)	17 601215 4816203[W]	1970/02 4602	06	FR 0051 FR 0063	021 / 071 001 / 3:0	DO		2803321 () BRWN CLAY 0017 GREY CLAY 0037 RED CLAY GRVL 0041 RED SHLE 0074
OAKVILLE TOWN DS N 01(016)	17 601215 4816243[W]	1969/11 1307	30	FR 0052	025 / 050 001 / 1:0	DO		2803265 () BRWN CLAY 0011 RED CLAY 0038 RED SHLE 0052
OAKVILLE TOWN DS N 01(017)	17 600806 4815641[W]	1967/03 1612	06 06	FR 0053	013 / 056 001 / 2:0	DO		2802135 () LOAM 0001 BRWN CLAY 0031 RED SHLE 0056
OAKVILLE TOWN DS N 01(017)	17 602460 4814481[W]	1990/02 4868	30 28	FR 0030 FR 0021 FR 0012	004 / 012 015 / 1:0	CO		2807602 (41685) BRWN LOAM SOFT 0001 BRWN CLAY 0008 RED SHLE LMSN HARD 0032
OAKVILLE TOWN DS N 01(017)	17 600805 4815693[W]	1968/11 3637	30	FR 0017 FR 0030	004 / / :0	DO		2802898 () LOAM 0002 BRWN CLAY 0026 RED SHLE 0033
OAKVILLE TOWN DS N 01(017)	17 602432 4814511[W]	1990/01 4868	48 06		006 / 010 / 2:0			2807601 (41686)
OAKVILLE TOWN DS N 01(017)	17 600810 4815696[W]	1960/06 5417	06 06	FR 0058	007 / 051 002 / 1:0	DO		2802134 () BRWN LOAM 0001 BRWN CLAY 0014 GREY CLAY 0019 GREY CLAY GRVL STNS 0025 GREY CLAY 0029 RED SHLE 0061
OAKVILLE TOWN DS N 01(017)	17 600810 4815679[W]	1965/11 4602	06 06	FR 0035 FR 0049	014 / 052 002 / 1:0	DO		2802131 () YLLW CLAY 0017 GREY CLAY 0027 RED SHLE 0052
OAKVILLE TOWN DS N 01(018)	17 602055 4814243[W]	1977/08 3349	06 06	FR 0085	026 / 026 007 / 1:0	DO		2805199 () BRWN CLAY STNS SOFT 0003 RED SHLE 0090
OAKVILLE TOWN DS N 01(019)	17 601922 4813834[W]	1953/11 1642	06 06	FR 0034	012 / 008 / :0	DO		2802137 () CLAY MSND STNS 0009 RED SHLE 0036
OAKVILLE TOWN DS N 01(019)	17 601863 4813759[W]	1953/10 1642	06 06	FR 0043	009 / 009 003 / :0	CO		2802136 () MSND CLAY SILT 0008 RED SHLE 0045
OAKVILLE TOWN DS N 01(020)	17 600881 4814100[L]	2001/05 1663				NU		2809391 (227407)
OAKVILLE TOWN DS N 01(020)	17 600881 4814100[L]	2001/05 1663				NU		2809392 (227408)
OAKVILLE TOWN DS N 01(020)	17 600880 4814100[L]	2001/09 1663				NU		2809468 (227441) YLLW UNKN 0041
OAKVILLE TOWN DS N 01(020)	17 601375 4813523[W]	1978/05 1458	06	FR 0065	005 / 080 004 / 1:0	DO		2805340 () LOAM 0002 RED CLAY 0020 RED SHLE 0086

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(020)	17 601549 4813347[W]	1955/08 2415	06 06	FR 0021	005 / 015 005 / :0	DO		2802138 () LOAM CLAY 0008 RED SHLE 0025
OAKVILLE TOWN DS N 01(020)	17 600065 4814686[W]	1959/05 4602	06 06	FR 0046	008 / 050 001 / 1:0	DO		2802139 () CLAY 0032 RED SHLE 0050
OAKVILLE TOWN DS N 01(020)	17 600881 4814100[L]	2000/11 4005	06 06	FR 0039	023 / 060 005 / 1:0	PS		2809273 (212307) BRWN CLAY LOOS 0034 RED CLAY LOOS 0038 RED SHLE HARD 0065
OAKVILLE TOWN DS N 01(020)	17 600881 4814100[L]	2000/10 4005	06	FR 0055	025 / 073 001 / 0:30	PS		2809274 (212303) BRWN CLAY SNDY LOOS 0038 RED CLAY GRVL LOOS 0042 RED SHLE HARD 0075
OAKVILLE TOWN DS N 01(020)	17 600881 4814100[L]	2001/05 1663				NU		2809390 (227406)
OAKVILLE TOWN DS N 01(021)	17 601355 4813223[W]	1981/12 2803	06	FR 0018	006 / 035 015 / 1:0	DO		2805810 () LOAM 0003 BRWN CLAY 0006 RED SHLE 0045
OAKVILLE TOWN DS N 01(021)	17 599864 4814463[W]	1966/08 1612	05 05	FR 0045	012 / 017 003 / 1:0	DO		2802141 () BLCK LOAM 0001 BRWN CLAY 0031 RED SHLE 0049
OAKVILLE TOWN DS N 01(021)	17 599972 4814572[W]	1967/09 1612	05 05	FR 0047	015 / 031 004 / 2:0	DO		2802142 () LOAM 0001 BRWN CLAY 0018 BLUE CLAY STNS 0034 RED SHLE 0050
OAKVILLE TOWN DS N 01(021)	17 601494 4813205[W]	1974/09 1660	06 06	FR 0030	012 / 030 004 / 1:0	DO		2804667 () BRWN CLAY LOAM 0009 RED SHLE 0040
OAKVILLE TOWN DS N 01(021)	17 601375 4813123[W]	1981/12 2803	06	FR 0012	007 / 050 006 / 2:0	DO		2805811 () LOAM 0003 BRWN CLAY 0005 RED SHLE 0053
OAKVILLE TOWN DS N 01(021)	17 600610 4814009[W]	1959/06 2613	06 06	FR 0058	008 / 008 020 / 1:0	DO		2802140 () RED CLAY 0010 RED SHLE 0060
OAKVILLE TOWN DS N 01(022)	17 599665 4814223[W]	1964/07 4602	06					2802145 () BRWN LOAM CLAY 0014 GREY CLAY 0019 RED SHLE 0044
OAKVILLE TOWN DS N 01(022)	17 599673 4814213[W]	1964/07 4602	06 06	FR 0022	009 / 042 001 / 1:0	DO		2802144 () BRWN LOAM 0005 RED CLAY 0015 GREY CLAY 0019 RED SHLE 0042
OAKVILLE TOWN DS N 01(022)	17 599688 4814198[W]	1964/07 4602	06	SA 0020 SA 0046	007 / 001 / :0	NU		2802143 () BRWN CLAY 0005 RED CLAY 0012 BLUE CLAY 0020 RED SHLE 0049
OAKVILLE TOWN DS N 01(022)	17 599695 4814083[W]	1981/12 2803	06	FR 0035	006 / 055 002 / 2:0	DO		2805809 () LOAM 0003 BRWN CLAY 0008 RED SHLE 0055
OAKVILLE TOWN DS N 01(022)	17 599635 4814023[W]	1981/12 2803	06	FR 0030	/ 050 002 / 2:0	DO		2805808 () LOAM 0003 RED SHLE 0050
OAKVILLE TOWN DS N 01(022)	17 599695 4814243[W]	1969/06 2519	30	FR 0017	016 / 025 / :0	DO		2803112 () LOAM 0001 BRWN SHLE 0016 RED SHLE 0024 GREY SHLE 0025

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(022)	17 599745 4814111[W]	1974/09 1660	06	FR 0050	024 / 070 001 / 1:0	DO		2804662 () BRWN CLAY 0020 RED SHLE 0070
OAKVILLE TOWN DS N 01(022)	17 599751 4814174[W]	1973/05 1660	06	FR 0047	012 / 032 008 / 1:0	DO		2804263 () BLCK LOAM 0001 BRWN CLAY 0021 RED SHLE 0050
OAKVILLE TOWN DS N 01(022)	17 599693 4814078[W]	1973/06 1660	06 06	FR 0025	014 / 034 006 / 1:0	DO		2804262 () PRDG 0025 RED SHLE 0050
OAKVILLE TOWN DS N 01(023)	17 600737 4812722[W]	1955/08 1642	06 06	FR 0065	012 / / :0	PS		2802147 () CLAY 0018 RED SHLE 0067
OAKVILLE TOWN DS N 01(023)	17 600533 4812639[W]	1953/03 1642	06 06	FR 0073	018 / 075 / :0	PS		2802146 () PRDG 0020 RED SHLE 0075
OAKVILLE TOWN DS N 01(023)	17 601033 4812653[W]	1971/08 9999	02 01		017 / / :0	NU	0048 02	2803730 () BRWN CLAY STNS 0002 RED CLAY 0010 RED SHLE 0051
OAKVILLE TOWN DS N 01(023)	17 599413 4813776[W]	1988/10 5417	06	FR 0017	014 / 043 001 / 2:0	DO		2807064 (20160) BRWN CLAY 0010 RED SHLE 0012 RED SHLE 0048
OAKVILLE TOWN DS N 01(023)	17 600725 4812733[W]	1971/07 4602	06	MN 0023	007 / 018 015 / 1:0	DO		2803657 () RED CLAY 0005 RED SHLE 0023
OAKVILLE TOWN DS N 01(023)	17 601025 4812663[W]	1970/02 3903	02 01	FR 0017	012 / 039 021 / 0:4	NU	0046 02	2803413 () BRWN CLAY STNS 0002 RED CLAY 0012 RED SHLE 0050
OAKVILLE TOWN DS N 01(024)	17 599215 4813263[W]	1969/09 1307	30	FR 0051	020 / 050 002 / 1:0	DO		2803266 () BRWN CLAY MSND 0040 RED SHLE 0051
OAKVILLE TOWN DS N 01(024)	17 600633 4812149[W]	1959/11 5417	06	FR 0070	016 / 100 / 1:30	CO		2802149 () LOAM 0001 RED CLAY 0004 RED CLAY SHLE 0012 RED SHLE 0110
OAKVILLE TOWN DS N 01(024)	17 600569 4812253[W]	1951/05 1642	06 06	FR 0055	008 / / :0	PS		2802148 () CLAY 0006 RED SHLE 0055
OAKVILLE TOWN DS N 01(024)	17 600314 4812424[W]	1967/10 4602	06 06	FR 0022	010 / 068 002 / 1:30	PS		2802150 () YLLW CLAY 0012 RED SHLE 0068
OAKVILLE TOWN DS N 01(024)	17 600605 4812253[W]	1971/11 1815	07	FR 0050	048 / 060 / :0	DO		2803683 () BRWN LOAM 0001 BRWN CLAY 0010 RED SHLE 0060
OAKVILLE TOWN DS N 01(025)	17 599626 4812468[L]	2003/09 6418				NU		2809801 (265286)
OAKVILLE TOWN DS N 01(025)	17 598885 4812952[W]	1958/10 4602	06 06	FR 0026	020 / 033 001 / 2:0	DO		2802151 () CLAY 0023 RED SHLE 0033
OAKVILLE TOWN DS N 01(025)	17 600315 4811563[W]	1978/01 4005	30	FR 0013	/ / :0	DO		2805209 () BRWN CLAY LOOS 0011 RED CLAY LOOS 0013 RED SHLE HARD 0014

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(026)	17 598613 4812786[W]	1965/10 4602	06					2802153 () LOAM CLAY 0002 YLLW CLAY 0014 RED SHLE 0091
OAKVILLE TOWN DS N 01(026)	17 598655 4812816[W]	1965/10 4602	06 06	FR 0021	012 / 049 001 / 1:0	DO		2802152 () LOAM CLAY 0002 YLLW CLAY 0013 RED SHLE 0049
OAKVILLE TOWN DS N 01(027)	17 599908 4811194[W]	1958/10 2906	06	FR 0065	016 / 068 002 / 2:0	DO		2802154 () PRDG 0018 RED SHLE 0068
OAKVILLE TOWN DS N 01(029)	17 598621 4811163[L]	2001/02 1737	06 06	FR 0031 FR 0038	007 / 015 012 / 2:0	DO		2809389 (218062) BRWN SAND SILT SOFT 0004 RED SHLE SOFT 0080
OAKVILLE TOWN DS N 01(029)	17 598621 4811163[L]	2001/07 1737						2809536 (233987)
OAKVILLE TOWN DS N 01(029)	17 599335 4810413[W]	1971/09 3637	30	FR 0011	010 / 019 005 / 3:0	CO		2803748 () BRWN LOAM 0001 BRWN CLAY STNS 0007 BRWN SHLE 0020
OAKVILLE TOWN DS N 01(029)	17 600355 4810383[W]	1972/05 1815	06	FR 0047 FR 0028	038 / 038 030 / 2:0	CO		2803841 () BRWN LOAM 0002 BRWN CLAY 0012 RED SHLE 0050
OAKVILLE TOWN DS N 01(030)	17 598765 4810273[W]	1954/07 1642	06 06	FR 0033	007 / 010 003 / 1:0	DO		2802235 () CLAY 0014 RED SHLE 0035
OAKVILLE TOWN DS N 01(030)	17 598793 4810220[W]	1958/05 1642	06 06	FR 0028	015 / 025 003 / 0:15	DO		2802164 () CLAY 0016 RED SHLE 0030
OAKVILLE TOWN DS N 01(030)	17 598445 4810543[W]	1969/05 2309	06 06	FR 0040	009 / 035 005 / 1:0	DO		2803037 () RED CLAY 0016 GRVL SILT 0018 RED SHLE 0040
OAKVILLE TOWN DS N 01(030)	17 598695 4810363[W]	1978/07 3349	06 06	FR 0043 FR 0057	024 / 046 007 / 1:0	DO		2805424 () BLCK LOAM 0001 BRWN CLAY 0006 RED SHLE 0059
OAKVILLE TOWN DS N 01(030)	17 598730 4810289[W]	1967/11 4001	06 06	FR 0032	010 / 040 002 / 3:0	DO		2802172 () BRWN CLAY 0005 RED CLAY 0020 RED SHLE 0045
OAKVILLE TOWN DS N 01(030)	17 598946 4810058[W]	1966/03 4602	06 06	FR 0044	006 / 046 006 / 1:0	DO		2802171 () GREY CLAY 0016 RED SHLE 0046
OAKVILLE TOWN DS N 01(030)	17 598525 4810444[W]	1966/01 1308	30 30	FR 0021	012 / 019 001 / 0:30	DO		2802170 () LOAM 0001 BRWN CLAY 0009 RED CLAY 0014 RED SHLE 0021
OAKVILLE TOWN DS N 01(030)	17 598725 4810289[W]	1963/12 4001	06 06	FR 0040	020 / 045 001 / 2:0	DO		2802169 () BLUE CLAY 0014 RED SHLE 0045
OAKVILLE TOWN DS N 01(030)	17 599117 4810293[W]	1963/11 4602	06	FR 0034	008 / 036 006 / 1:0	ST DO		2802168 () PRDG 0014 RED SHLE 0036
OAKVILLE TOWN DS N 01(030)	17 598608 4810407[W]	1961/11 4001	06 06	FR 0048	013 / 048 001 / 2:0	DO		2802167 () GREY CLAY 0020 RED SHLE 0050

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(030)	17 598811 4810173[W]	1961/10 4001	06 06	FR 0038	011 / 037 003 / 2:0	DO		2802166 () GREY CLAY 0008 RED SHLE 0040
OAKVILLE TOWN DS N 01(030)	17 599115 4810093[W]	1960/07 4602	06 06	FR 0034	010 / 036 002 / 1:0	DO		2802165 () BRWN CLAY 0016 RED SHLE 0036
OAKVILLE TOWN DS N 01(030)	17 598421 4810547[W]	1956/11 1642	06 06	FR 0038	012 / 037 / 1:0	DO		2802163 () CLAY 0015 RED SHLE 0040
OAKVILLE TOWN DS N 01(030)	17 597608 4811334[W]	1955/11 1642	06 06	FR 0047	010 / 045 003 / 0:10	DO		2802162 () CLAY 0017 RED SHLE 0049
OAKVILLE TOWN DS N 01(030)	17 598908 4810090[W]	1955/09 1642	06 06	FR 0050	015 / 048 001 / :0	DO		2802161 () CLAY 0013 RED SHLE 0055
OAKVILLE TOWN DS N 01(030)	17 599001 4809991[W]	1955/09 1642	06 06	FR 0042	010 / 040 008 / :0	DO		2802160 () CLAY 0016 RED SHLE 0044
OAKVILLE TOWN DS N 01(030)	17 598877 4810122[W]	1954/10 1642	06 06	FR 0048	020 / 003 / :0	DO		2802159 () CLAY 0019 RED SHLE 0050
OAKVILLE TOWN DS N 01(030)	17 598821 4810168[W]	1953/10 1429	06 06	FR 0023 FR 0040	004 / 040 002 / 1:0	DO		2802158 () CLAY 0005 SHLE 0040
OAKVILLE TOWN DS N 01(030)	17 598768 4810227[W]	1953/10 1429	06 06	FR 0024 FR 0080	008 / 080 001 / 1:0	DO		2802157 () CLAY 0005 SHLE 0081
OAKVILLE TOWN DS N 01(030)	17 598998 4810034[W]	1951/06 1642	06 06	FR 0044	012 / 001 / :0	DO		2802156 () CLAY 0017 RED SHLE 0046
OAKVILLE TOWN DS N 01(030)	17 599160 4810201[W]	1989/09 4005	06	UK 0050	008 / 052 003 / 1:0	DO		2807384 (55635) RED SHLE HARD 0054
OAKVILLE TOWN DS N 01(030)	17 598920 4810058[W]	1986/01 4005	06	FR 0044 FR 0050	009 / 030 024 / 1:0	DO		2806416 () BRWN CLAY SNDY LOOS 0012 RED CLAY LOOS 0020 RED SHLE HARD 0054
OAKVILLE TOWN DS N 01(030)	17 599006 4809961[W]	1985/11 4005	06	UK 0039 FR 0048	006 / 050 004 / 1:0	DO		2806373 () BRWN CLAY SNDY GRVL 0020 RED SHLE HARD 0051
OAKVILLE TOWN DS N 01(030)	17 598924 4810044[W]	1985/09 4005	06	FR 0032 UK 0052	011 / 040 010 / 1:0	DO		2806344 () BRWN CLAY LOOS 0005 BRWN CLAY SAND GRVL 0018 RED CLAY LOOS 0023 RED SHLE HARD 0053
OAKVILLE TOWN DS N 01(030)	17 599037 4810023[W]	1981/05 4602	06	FR 0046	012 / 042 006 / 1:0	DO		2805737 () BRWN CLAY 0010 GREY CLAY 0017 RED SHLE 0048
OAKVILLE TOWN DS N 01(030)	17 598372 4810830[L]	2001/09 1660	06 06	FR 0064	027 / 064 004 / 1:0	DO		2809503 (234054) BRWN CLAY 0013 RED CLAY 0019 RED SHLE 0070
OAKVILLE TOWN DS N 01(030)	17 598278 4810697[W]	1991/07 1660	06 06	FR 0071	014 / 073 010 / 2:0	PS		2808038 (43805) BRWN CLAY SOFT 0016 RED CLAY SOFT 0021 RED SHLE HARD 0101

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(030)	17 599102 4810148[W]	1992/10 4005	06		/ / :30			2808052 (118164)
OAKVILLE TOWN DS N 01(030)	17 598333 4810695[W]	1993/06 1737	06 06	FR 0021	013 / 060 001 / 8:0	PS		2808185 (122499) BLCK FILL SOFT 0001 BRWN CLAY SILT SOFT 0006 TILL HARD 0014 RED SHLE SOFT 0085
OAKVILLE TOWN DS N 01(030)	17 598246 4810773[W]	1993/06 1737	06 06	FR 0021	/ 001 / :0			2808186 (122500) BLCK LOAM SOFT 0001 BRWN CLAY SILT SOFT 0006 BRWN TILL HARD 0016 RED SHLE SOFT 0085
OAKVILLE TOWN DS N 01(030)	17 598329 4810692[W]	1993/06 1737		UK 0021		NU		2808187 (122498) LOAM 0001 BRWN CLAY SILT SOFT 0006 BRWN TILL HARD 0014 RED SHLE SOFT 0030
OAKVILLE TOWN DS N 01(030)	17 598372 4810830[L]	2000/10 4005	06 06	FR 0030	022 / 026 006 / 1:0	DO		2809279 (212335) BRWN SAND CLAY LOOS 0018 BRWN CLAY GRVL LOOS 0020 BRWN CLAY HARD 0025 RED CLAY GRVL LOOS 0029 BRWN FGVL SAND LOOS 0030 RED SHLE HARD 0040
OAKVILLE TOWN DS N 01(031)	17 598995 4809963[W]	1978/05 4005	06	FR 0028 FR 0037	009 / 035 005 / 1:0	CO		2805218 () BRWN CLAY SNDY LOOS 0015 BRWN CLAY GRVL SNDY 0020 RED SHLE HARD 0040
OAKVILLE TOWN DS N 01(031)	17 598981 4809878[W]	1959/05 5417	06 06	FR 0032 FR 0048	012 / 040 011 / 0:45	DO		2802173 () BRWN LOAM 0001 BRWN CLAY 0016 RED CLAY SHLE 0020 RED SHLE 0050
OAKVILLE TOWN DS N 01(031)	17 598995 4809923[W]	1978/05 4005	06					2805217 () PRDR 0018 RED SHLE HARD 0050
OAKVILLE TOWN DS N 01(031)	17 599011 4809916[W]	1976/03 2519	30	FR 0018	012 / 003 / 1:0	PS		2804851 () FILL 0003 BRWN CLAY 0014 RED SHLE CLAY 0020
OAKVILLE TOWN DS N 01(031)	17 597781 4811102[W]	1967/04 4001	06	SA 0037	010 / 040 001 / 1:0	NU		2802175 () LOAM 0002 RED CLAY 0020 RED SHLE 0040
OAKVILLE TOWN DS N 01(031)	17 598975 4809956[W]	1953/10 1429	06 06	FR 0048 FR 0024	011 / 016 006 / 2:30	CO		2802174 () CLAY 0009 SHLE 0051
OAKVILLE TOWN DS N 01(032)	17 597185 4810863[W]	1956/01 1642	06	SA 0063	015 / 062 / 0:15	NU		2802176 () CLAY 0030 MSND GRVL 0035 RED SHLE 0065
OAKVILLE TOWN DS N 01(032)	17 597193 4810853[W]	1956/02 1642	06	SA 0063	012 / 062 001 / :0	NU		2802177 () CLAY 0027 MSND STNS 0035 RED SHLE 0065
OAKVILLE TOWN DS N 01(032)	17 597154 4810905[W]	1956/04 1642	06 06	FR 0040	025 / 038 / 1:0	DO		2802179 () CLAY 0028 RED SHLE 0054
OAKVILLE TOWN DS N 01(032)	17 597132 4810910[W]	1956/03 1642	06	SA 0062	020 / 061 / 0:15	NU		2802178 () CLAY 0032 RED SHLE 0063

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(032)	17 597223 4810796[W]	1966/09 1308	30	FR 0034	022 / 038 / 0:30	ST DO		2802180 () LOAM 0002 BRWN HPAN 0022 RED SHLE 0040
OAKVILLE TOWN DS N 01(032)	17 597270 4811004[W]	1967/05 1308	30	FR 0025	010 / 024 / 0:30	DO		2802181 () LOAM 0002 BRWN CLAY 0009 RED CLAY 0019 HPAN 0025 SHLE 0026
OAKVILLE TOWN DS N 01(032)	17 597994 4809817[W]	1998/09 1663	06	FR 0101	101 / 103 014 / 6:0	IN	0106 05	2808802 (190450) BRWN CLAY 0008 BLUE CLAY GRVL 0033 RED CLAY GRVL 0038 BLUE CLAY GRVL 0042 RED CLAY 0047 GREY GRVL SAND 0111 RED SHLE 0111
OAKVILLE TOWN DS N 01(032)	17 597875 4810170[L]	1998/11 1663	02		108 / / :0	NU	0113 03	2808924 (198167) BRWN LOAM 0001 BRWN CLAY 0016 BLUE CLAY GRVL 0034 RED CLAY GRVL 0049 GREY GRVL 0115 RED SHLE 0117
OAKVILLE TOWN DS N 01(032)	17 597875 4810170[L]	1998/11 1663	02		112 / / :0	NU	0135 03	2808925 (198168) BRWN LOAM 0001 BRWN CLAY 0012 BLUE CLAY GRVL 0038 BLCK BLDR 0040 RED CLAY GRVL 0058 GREY GRVL SAND 0142 RED SHLE 0144
OAKVILLE TOWN DS N 01(032)	17 598553 4809449[W]	1984/01 4005	06	SU 0095	082 / 086 010 / 1:0	DO CO		2806106 () BRWN CLAY LOOS 0043 GREY SAND GRVL LOOS 0086 GREY SAND GRVL LOOS 0095
OAKVILLE TOWN DS N 01(033)	17 598469 4809283[W]	1972/11 4005	06	FR 0034	009 / 020 012 / 1:30	DO		2804021 () BRWN CLAY 0012 RED SHLE 0040
OAKVILLE TOWN DS N 01(033)	17 597706 4809562[W]	1998/08 1663	06 06		133 / / :0	NU		2808801 (190451) BRWN LOAM 0001 BRWN CLAY 0011 GREY CLAY 0034 RED CLAY GRVL 0037 BLUE CLAY GRVL 0051 GREY MSND GRVL 0057 GREY CSND SAND 0072 BLUE CLAY SILT 0094 GREY SILT CLAY 0102 RED SHLE LYRD 0158
OAKVILLE TOWN DS N 01(034)	17 596566 4810157[W]	1963/05 1308	30	FR 0035	012 / 036 001 / 1:0	DO		2802183 () BRWN CLAY MSND 0018 BLUE CLAY BLDR 0038
OAKVILLE TOWN DS N 01(034)	17 596519 4810104[W]	1963/01 4602	06					2802184 () YLLW CLAY 0016 GREY CLAY 0049 RED CLAY GRVL 0058 GREY CLAY GRVL 0129
OAKVILLE TOWN DS N 01(034)	17 596775 4810193[W]	1969/08 5417	06	FR 0111		NU		2803175 () BRWN CLAY 0015 GREY CLAY GRVL 0070 BRWN CLAY GRVL 0090 GREY CLAY GRVL 0099 RED SHLE 0111
OAKVILLE TOWN DS N 01(034)	17 596669 4810291[W]	1955/11 2415	06	FR	020 / / 48:0			2802182 () LOAM 0001 RED CLAY 0079 RED SHLE 0191
OAKVILLE TOWN DS N 01(034)	17 598172 4808832[W]	1963/11 4602	06 06	FR 0028	019 / 045 001 / 1:0	DO		2802185 () YLLW CLAY 0016 GREY CLAY 0018 RED SHLE 0045

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 01(035)	17 596446 4809920[W]	2006/03 3030	36	0070 0017 0045	/ / :0	DO		2810528 (Z40625) A036659 BRWN LOAM 0001 BRWN CLAY 0017 GREY CLAY SILT 0045 GREY CLAY SAND 0055 GREY CLAY STNS 0070 RED SHLE 0075
OAKVILLE TOWN DS N 01(035)	17 597185 4808897[W]	1990/08 4005	06	SA 0048	017 / 046 002 / 1:0	DO		2807647 (76398) BRWN CLAY LOOS 0012 RED CLAY LOOS 0018 RED SHLE HARD 0050
OAKVILLE TOWN DS N 02(015)	17 600993 4816672[W]	1996/01 1737				NU		2808465 (146321) PRDG 0027
OAKVILLE TOWN DS N 02(016)	17 600666 4816643[W]	1959/09 2904	06 06	FR 0072	032 / 074 001 / 2:0	ST DO		2802210 () PRDG 0038 GREY CLAY MSND 0050 RED SHLE 0074
OAKVILLE TOWN DS N 02(016)	17 600936 4816072[W]	1988/06 1660	06 06	FR 0068	021 / 065 008 / 1:0	DO		2807205 (16473) BRWN CLAY SOFT 0020 GREY CLAY SAND MSND 0037 RED SHLE HARD 0076
OAKVILLE TOWN DS N 02(016)	17 600695 4816663[W]	1970/07 3637	30	FR 0040 FR 0062	017 / / :0	ST		2803462 () BRWN CLAY LOAM 0001 BRWN CLAY 0014 GREY CLAY GRVL 0016 BLUE CLAY MSND 0030 BRWN CLAY 0034 GREY CLAY 0036 BRWN MSND 0055 RED SHLE 0064
OAKVILLE TOWN DS N 02(017)	17 600748 4815685[W]	1960/10 5417	06 06	FR 0043 FR 0056	018 / 050 005 / 0:30	DO		2802211 () BRWN CLAY 0016 GREY CLAY 0039 RED SHLE 0060
OAKVILLE TOWN DS N 02(017)	17 600710 4815829[W]	1962/09 5417	06 06	FR 0054	019 / 050 002 / 0:45	DO		2802212 () BRWN CLAY 0019 GREY CLAY 0039 RED SHLE 0060
OAKVILLE TOWN DS N 02(017)	17 600619 4815919[W]	1988/09 1660	06 06	FR 0044	021 / 063 004 / 1:0	DO		2807204 (43007) BLCK LOAM 0001 BRWN CLAY 0027 GREY CLAY SAND 0035 GRVL HARD 0042 RED SHLE SOFT 0048 RED SHLE HARD 0068
OAKVILLE TOWN DS N 02(018)	17 600515 4815583[W]	1981/04 3108	06	FR 0048	016 / 119 002 / 1:0	DO		2805697 () BRWN CLAY GVLY 0017 BLUE CLAY GVLY 0044 RED SHLE 0102 BLUE SHLE 0120
OAKVILLE TOWN DS N 02(020)	17 599252 4815448[W]	1955/10 1642	06 06	FR 0092	045 / / :0	DO		2802213 () CLAY 0032 RED SHLE 0095
OAKVILLE TOWN DS N 02(020)	17 599236 4815470[W]	1988/06 4005	06	UK 0057	038 / 070 003 / 3:0	DO		2806962 (31058) BRWN CLAY LOOS 0023 BRWN CLAY SNDY LOOS 0035 GREY CLAY SNDY FGVL 0038 GREY GRVL SAND LOOS 0043 RED CLAY LOOS 0057 RED SHLE HARD 0075
OAKVILLE TOWN DS N 02(020)	17 599681 4815037[W]	1961/09 4602	06 06	FR 0066	020 / 101 001 / 3:0	DO		2802215 () GREY CLAY 0056 RED CLAY 0065 RED SHLE 0101
OAKVILLE TOWN DS N 02(020)	17 600076 4814831[W]	1956/10 1642	06 06	FR 0053	015 / / :0	DO		2802214 () CLAY 0034 SHLE 0055

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 02(021)	17 598819 4815431[W]	2002/08 2662	06 06	UK 0058	041 / 088 001 / 7:0	DO		2809696 (243870) GREY GRVL FILL 0001 RED CLAY SNDY GRVL 0004 BRWN CLAY SLTY GRVL 0005 RED CLAY SLTY GRVL 0006 BRWN CLAY SLTY GRVL 0010 GREY CLAY SLTY GRVL 0020 RED CLAY SLTY 0032 GREY CLAY SNDY CLAY 0040 RED CLAY SNDY GRVL 0046 RED SHLE 0100
OAKVILLE TOWN DS N 02(021)	17 599775 4814803[W]	1971/12 4005	06	FR 0058	017 / 055 003 / 2:0	ST		2803682 () BRWN CLAY 0011 RED CLAY 0040 RED SHLE GRVL 0061
OAKVILLE TOWN DS N 02(021)	17 599971 4814693[W]	1975/08 4005	06	FR 0062	028 / 070 001 / 2:0	DO		2804788 () BRWN CLAY 0023 RED CLAY 0044 RED SHLE 0070
OAKVILLE TOWN DS N 02(021)	17 598795 4815323[W]	1972/07 3637	24 30	FR 0026 FR 0017	007 / / :0	DO		2804009 () BRWN LOAM 0001 BRWN CLAY 0012 GREY CLAY STNS 0013 GREY SILT MSND 0019 BRWN SHLE 0031
OAKVILLE TOWN DS N 02(021)	17 599740 4814389[W]	1958/10 1718	06 06	FR 0050	012 / 024 004 / 2:0	DO		2802216 () LOAM 0001 YLLW CLAY 0005 BLUE CLAY 0011 RED CLAY 0015 SHLE 0050
OAKVILLE TOWN DS N 02(021)	17 599760 4814404[W]	1958/10 1718	06 06	FR 0050	010 / 024 008 / 2:0	DO		2802217 () LOAM 0001 YLLW CLAY 0005 BLUE CLAY 0011 RED CLAY 0015 SHLE 0050
OAKVILLE TOWN DS N 02(021)	17 599846 4814513[W]	1961/06 4602	06 06	FR 0027	007 / 051 002 / 1:0	DO		2802218 () GREY CLAY 0022 RED SHLE 0051
OAKVILLE TOWN DS N 02(021)	17 599703 4814863[W]	1966/03 4602	06 06	FR 0070	016 / 083 001 / 3:0	DO		2802219 () YLLW CLAY 0016 GREY CLAY 0051 BLUE CLAY 0057 RED CLAY 0068 RED SHLE 0083
OAKVILLE TOWN DS N 02(021)	17 599809 4814802[W]	1966/09 4602	06 06	FR 0061	014 / 074 001 / 1:0	DO		2802220 () YLLW CLAY 0015 GREY CLAY 0045 RED SHLE 0074
OAKVILLE TOWN DS N 02(022)	17 599315 4814283[W]	1968/04 4602	06 06	FR 0058	020 / 101 001 / 3:0	DO		2802806 () BRWN CLAY 0019 GREY CLAY 0035 GREY CLAY GRVL 0043 RED CLAY 0046 RED SHLE 0101
OAKVILLE TOWN DS N 02(022)	17 599706 4814318[W]	1956/10 1642	06	FR 0049	009 / / :0	DO		2802221 () PRDG 0020 RED SHLE 0050
OAKVILLE TOWN DS N 02(022)	17 598590 4815436[W]	1990/04 4868	36 36 30	FR 0044 FR 0049 FR 0030	022 / 026 004 / 1:0	PS IR		2807572 (41637) BRWN LOAM LOOS 0001 BRWN CLAY 0013 GREY CLAY STNS 0026 BRWN CLAY SAND BLDR 0030 BRWN SAND GRVL LOOS 0040 RED SHLE LMSN HARD 0053
OAKVILLE TOWN DS N 02(023)	17 597821 4815111[W]	1984/04 3349	06 06	FR 0064	028 / 049 007 / 1:0	DO		2806418 () BLCK LOAM 0001 GREY CLAY 0022 RED CLAY SAND 0054 RED SHLE 0068
OAKVILLE TOWN DS N 02(023)	17 599304 4814000[W]	1965/06 4838	05 05	FR 0054 FR 0066	006 / 050 004 / 3:0	DO		2802224 () CLAY 0030 BLDR 0040 GRVL CLAY 0047 RED SHLE 0072

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 02(023)	17 599231 4813860[W]	1966/04 4602	06 06	FR 0016 FR 0035	004 / 050 004 / 1:0	DO		2802225 () BRWN CLAY 0012 RED CLAY GRVL 0016 RED SHLE 0050
OAKVILLE TOWN DS N 02(023)	17 597851 4815137[W]	1956/12 1642	06 06	FR 0052	008 / / :0	DO		2802222 () CLAY 0025 RED SHLE 0055
OAKVILLE TOWN DS N 02(023)	17 597840 4815035[W]	1959/09 1718	07 07	FR 0059	018 / 059 002 / 1:30	ST DO		2802223 () LOAM 0001 YLLW CLAY 0035 RED CLAY 0037 RED SHLE 0062
OAKVILLE TOWN DS N 02(024)	17 597698 4814934[W]	1991/11 1660	06 06	FR 0092	036 / 093 002 / 1:0	DO		2808039 (43773) BLCK LOAM 0001 BRWN CLAY 0014 BRWN CLAY GRVL 0019 RED SHLE 0096
OAKVILLE TOWN DS N 02(024)	17 597705 4814948[W]	1991/10 1660	06 06	FR 0089	033 / 090 004 / 1:0	DO		2808040 (43772) BRWN CLAY 0011 BRWN CLAY GRVL 0024 RED CLAY 0029 RED SHLE 0095
OAKVILLE TOWN DS N 02(025)	17 597415 4814523[W]	1979/11 4868	30	FR 0018 FR 0072	010 / 014 002 / 1:0	DO		2805457 () BRWN CLAY STNS HARD 0012 GREY LMSN SHLE HARD 0019 RED SHLE LMSN SOFT 0080
OAKVILLE TOWN DS N 02(025)	17 598750 4813163[W]	1958/11 4602	06 06	FR 0060	030 / 069 001 / 2:0	DO		2802226 () BRWN CLAY 0014 GREY CLAY 0041 GREY HPAN 0046 BLUE SHLE 0069
OAKVILLE TOWN DS N 02(026)	17 597235 4814264[W]	1960/04 5417	06 06	FR 0023 FR 0007 FR 0005 FR 0012	003 / 014 035 / 0:40	PS		2802228 () BRWN LOAM 0002 BRWN CLAY STNS 0005 RED SHLE 0024
OAKVILLE TOWN DS N 02(026)	17 597343 4814355[W]	1957/05 1642	06 06	FR 0055	030 / 050 / 1:0	CO		2802227 () CLAY 0033 RED SHLE 0100
OAKVILLE TOWN DS N 02(026)	17 598464 4812721[W]	1962/08 4602	06 06	FR 0064	032 / 066 / 1:0	DO		2802229 () BRWN CLAY 0012 RED SHLE 0066
OAKVILLE TOWN DS N 02(027)	17 597630 4813272[L]	2001/06 6607						2809422 (179187)
OAKVILLE TOWN DS N 02(027)	17 596966 4813783[W]	1973/07 1660	06 06	FR 0052	012 / 045 002 / 2:0	DO		2804261 () BRWN CLAY 0013 BLUE CLAY 0022 RED SHLE 0055
OAKVILLE TOWN DS N 02(027)	17 596995 4813893[W]	1972/02 4602						2803729 () PRDR 0045 RED SHLE 0107
OAKVILLE TOWN DS N 02(027)	17 597084 4814104[W]	1962/05 4602	06 06	FR 0054	045 / 094 001 / 5:0	DO		2802230 () BRWN CLAY 0018 GREY CLAY 0047 RED CLAY GRVL 0050 RED SHLE 0094
OAKVILLE TOWN DS N 02(027)	17 596965 4813913[W]	1971/10 3030	36	UK 0012 UK 0035 UK 0021	021 / / :0	DO		2803634 () BRWN CLAY BLDR 0012 BRWN MSND 0013 RED SHLE CLAY 0021 GREY MSND 0022 RED SHLE CLAY BLDR 0035 GREY GRVL 0036 RED CLAY BLDR 0045

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS N 02(027)	17 598020 4812855[W]	2004/09 6607		0023				2810063 (Z17114)
OAKVILLE TOWN DS N 02(027)	17 596929 4813964[W]	1966/06 4602	06 06	FR 0063	049 / 096 001 / 2:0	DO		2802231 () YLLW CLAY 0017 BLUE CLAY 0024 RED CLAY 0059 RED SHLE 0096
OAKVILLE TOWN DS N 02(029)	17 597128 4812620[L]	1998/10 1660	06 06	FR 0052	007 / 056 003 / 1:0	DO		2808923 (192144) BRWN CLAY 0017 GREY CLAY 0030 RED CLAY 0037 RED SHLE 0060
OAKVILLE TOWN DS N 02(029)	17 597760 4811821[W]	1959/03 1642	06 06	FR 0051	018 / 050 002 / 1:0	ST DO		2802232 () BLUE CLAY 0046 RED SHLE 0053
OAKVILLE TOWN DS N 02(029)	17 596585 4813213[W]	1969/06 2613	04	FR 0143	015 / 070 015 / 2:0	ST DO		2803116 () BRWN CLAY 0046 RED SHLE 0157
OAKVILLE TOWN DS N 02(029)	17 597760 4811821[W]	1963/08 4602	06 06	FR 0030	011 / 015 003 / 1:30	DO		2802233 () YLLW CLAY 0014 BLUE CLAY 0019 BRWN CLAY GRVL 0028 RED SHLE 0031
OAKVILLE TOWN DS N 02(030)	17 596777 4812502[W]	1988/08 1130	06	FR 0095	050 / 110 010 / 1:30	ST		2806978 (05575) SAND CLAY LOOS 0017 CLAY FGVL LOOS 0055 CLAY FGVL LOOS 0080 SLTE HARD 0110
OAKVILLE TOWN DS N 02(030)	17 596800 4812522[W]	1988/02 3030	36	FR 0025 FR 0050 FR 0015	015 / / :0	DO		2806883 (24226) BRWN LOAM 0001 BRWN CLAY SNDY 0015 BLUE CLAY STNS LYRD 0068
OAKVILLE TOWN DS N 02(030)	17 596831 4812524[W]	1987/06 4005	06	FR 0085	055 / 100 001 / 2:0	DO		2806656 (10145) BRWN CLAY SNDY LOOS 0012 GREY CLAY FGVL LOOS 0055 RED CLAY FGVL LOOS 0070 RED SHLE HARD 0100
OAKVILLE TOWN DS N 02(030)	17 597665 4811697[W]	1963/08 4602	06 06	FR 0030	010 / 030 006 / 1:30	DO		2802240 () BRWN CLAY 0017 BLUE CLAY 0020 BRWN CLAY GRVL 0024 RED SHLE 0031
OAKVILLE TOWN DS N 02(030)	17 597135 4811943[W]	1972/02 1315	08	FR 0062	015 / 050 002 / 8:0	CO		2803703 () LOAM 0002 CLAY STNS 0010 CLAY STNS BLDR 0038 BLUE CLAY 0045 RED CLAY STNS 0051 LMSN SHLE 0062
OAKVILLE TOWN DS N 02(030)	17 597175 4812003[W]	1972/02 1315	08	SA				2803704 () LOAM 0002 CLAY STNS 0010 CLAY STNS BLDR 0038 BLUE CLAY 0045 RED CLAY STNS 0067 RED SHLE 0110
OAKVILLE TOWN DS N 02(035)	17 596319 4809996[W]	2002/11 2663	06 06	FR 0275	044 / 079 001 / 1:0	DO		2809677 (247528) BLCK LOAM 0002 GREY CLAY STNS 0071 RED SHLE 0275
OAKVILLE TOWN DS S 01(014)	17 603162 4815250[W]	1974/05 1620	06	FR 0070	012 / 080 003 / 2:0			2804558 () PRDG 0016 RED SHLE 0080
OAKVILLE TOWN DS S 01(015)	17 602871 4814666[W]	2003/12 3108				NU		2809850 (Z02635)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 01(016)	17 602843 4814631[W]	1963/12 4602	06	SA 0049		NU		2802307 () BRWN CLAY 0015 RED SHLE 0054
OAKVILLE TOWN DS S 01(016)	17 602708 4814635[W]	1960/09 4602	06 06	FR 0045	019 / 068 001 / 1:0	DO		2802306 () BRWN CLAY 0039 RED SHLE 0068
OAKVILLE TOWN DS S 01(016)	17 602715 4814640[W]	1963/12 4602	06 06	SA 0047	015 / 053 / 2:0	DO		2802308 () BRWN CLAY 0015 RED SHLE 0053
OAKVILLE TOWN DS S 01(020)	17 602362 4812639[L]	2000/12 3030				DO		2809316 (214046)
OAKVILLE TOWN DS S 01(020)	17 602362 4812639[L]	2000/12 3030				DO		2809317 (214045)
OAKVILLE TOWN DS S 01(020)	17 602992 4811894[W]	1967/06 4713	06 06	FR 0025	007 / 060 007 / 1:0	DO		2802312 () LOAM 0002 CLAY SHLE 0025 SHLE 0066
OAKVILLE TOWN DS S 01(021)	17 602103 4812321[L]	2001/12 1660						2809499 (234064)
OAKVILLE TOWN DS S 01(021)	17 602103 4812321[L]	2001/11 1660						2809500 (234060)
OAKVILLE TOWN DS S 01(021)	17 602103 4812321[L]	2001/10 1660						2809502 (234066)
OAKVILLE TOWN DS S 01(021)	17 601349 4812922[W]	1965/11 1307	30	FR 0015	005 / 010 / :0	IR		2802313 () BRWN LOAM 0002 RED SHLE 0015
OAKVILLE TOWN DS S 01(022)	17 601862 4811989[L]	2000/06 9999				DO		2809187 (220673) RED CLAY DNSE 0019
OAKVILLE TOWN DS S 01(023)	17 600979 4812202[W]	1987/11 3349	06 06	FR 0056	021 / 049 005 / 1:0	PS		2806856 (17581) BLCK LOAM 0001 BRWN CLAY 0016 RED SHLE 0080
OAKVILLE TOWN DS S 01(023)	17 601000 4812259[W]	1987/11 3349	06 06	SA 0078 FR 0060	023 / 065 005 / 1:0			2806857 (17582) BLCK LOAM 0001 BRWN CLAY 0018 RED SHLE 0079
OAKVILLE TOWN DS S 01(023)	17 601015 4812178[W]	1987/12 3349	06 06	FR 0058	025 / 062 005 / 2:0	PS		2806858 (17584) BLCK LOAM 0001 BRWN CLAY 0022 RED SHLE 0070
OAKVILLE TOWN DS S 01(023)	17 601753 4811793[W]	1967/07 4602	06 06	FR 0014	003 / 032 010 / 1:0	DO		2802314 () RED CLAY 0011 RED SHLE 0032
OAKVILLE TOWN DS S 01(023)	17 601245 4812313[W]	1976/08 1660	06 06	SA 0140	080 / 003 / 2:0	DO		2805007 () BRWN CLAY 0008 RED SHLE 0150
OAKVILLE TOWN DS S 01(023)	17 600960 4812211[W]	1987/10 3349	06 06	FR 0062	023 / 105 005 / :0	PS DO		2806859 (17583) BLCK LOAM 0001 BRWN CLAY 0018 RED SHLE 0105

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 01(023)	17 602075 4811350[W]	1997/12 1660						2808788 (187554)
OAKVILLE TOWN DS S 01(023)	17 600945 4812393[W]	1969/07 4602	06	FR 0016 FR 0024	042 / 048 006 / 2:0	PS		2803144 () BRWN CLAY 0006 RED SHLE 0054
OAKVILLE TOWN DS S 01(026)	17 600281 4811447[W]	1967/10 1620	08 08	SA 0040	015 / 048 001 / 1:0	ST		2802317 () BRWN CLAY 0010 RED SHLE 0048
OAKVILLE TOWN DS S 01(026)	17 600328 4811480[W]	1967/10 1620	08 08	SA 0040	015 / 048 001 / 2:0	ST		2802316 () BRWN CLAY 0010 RED SHLE 0050
OAKVILLE TOWN DS S 01(026)	17 600268 4811524[W]	1953/06 1642	06 06	FR 0037	009 / 001 / :0	DO		2802315 () CLAY 0010 RED SHLE 0039
OAKVILLE TOWN DS S 01(026)	17 600875 4810983[W]	1978/08 4005	06	FR	011 / 025 / :0	DO		2805280 () PRDG 0014 RED SHLE HARD 0045
OAKVILLE TOWN DS S 01(026)	17 600315 4811483[W]	1982/07 4005	06	FR 0010	010 / 020 012 / 1:0	DO ST		2805844 () BRWN CLAY LOOS 0015 RED CLAY LOOS 0018 RED SAND HARD 0028
OAKVILLE TOWN DS S 01(026)	17 600560 4811170[W]	2004/03 6607	01	0023		NU	0015	2810053 (Z10832) A010201 GRVL SAND FILL 0001 RED SILT FILL LMSN 0010 RED SHLE LMSN 0039
OAKVILLE TOWN DS S 01(027)	17 600017 4811215[W]	1964/10 4602	06	FR 0024	010 / 039 002 / 1:0	DO		2802318 () BRWN CLAY 0013 RED SHLE 0039
OAKVILLE TOWN DS S 01(028)	17 599868 4810818[W]	1949/11 1532	06 06	FR 0055	020 / / 1:0	ST		2802319 () CLAY 0020 RED SHLE 0060
OAKVILLE TOWN DS S 01(029)	17 600121 4809726[L]	2000/08 4005						2809248 (212260)
OAKVILLE TOWN DS S 01(029)	17 600121 4809726[L]	2000/08 4005						2809249 (212261)
OAKVILLE TOWN DS S 01(029)	17 600875 4809103[W]	1968/10 4602	06 06	FR 0035 FR 0021	006 / 030 012 / 1:0	DO		2802789 () RED CLAY 0013 RED SHLE 0038
OAKVILLE TOWN DS S 01(029)	17 599389 4810439[W]	1952/05 1642	06 06	FR 0035	008 / 025 / :0	CO		2802155 () CLAY 0012 RED SHLE 0036
OAKVILLE TOWN DS S 01(029)	17 599455 4810380[W]	1951/12 2415	06 06	FR 0050	012 / 020 020 / 1:0	DO		2802320 () RED MSND 0022 SHLE 0058
OAKVILLE TOWN DS S 01(029)	17 600837 4809110[W]	2004/11 4868	15			DO		2810124 (Z05848)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 01(030)	17 600363 4808667[W]	1988/12 4005	06	SU 0054	029 / 032 024 / 1:30	DO	0053 04	2807139 (31088) BRWN CLAY SAND GRVL 0005 BRWN CLAY SAND LOOS 0017 BRWN CLAY SAND GRVL 0023 BRWN SAND FSND 0025 BRWN SAND CSND 0049 BRWN GRVL FSND 0057
OAKVILLE TOWN DS S 01(030)	17 600467 4808609[W]	1988/12 5417	06	SU 0084	030 / 060 015 / 2:0	DO	0086 03	2807144 (20156) BRWN CLAY GVLY 0018 GREY SAND GVLY CMTD 0091
OAKVILLE TOWN DS S 01(030)	17 599095 4809983[W]	1972/03 1663	05 05	FR 0033	005 / 040 003 / 6:0	DO		2803929 () LOAM 0004 RED CLAY 0013 RED SHLE CLAY 0040 RED CLAY SHLE 0043
OAKVILLE TOWN DS S 01(030)	17 600655 4808813[W]	1969/02 5417	06	FR 0045	031 / 036 014 / 1:0	DO	0043 03	2803104 () BRWN CLAY GRVL 0044 GRVL 0045 RED SHLE 0046
OAKVILLE TOWN DS S 01(030)	17 599825 4809233[W]	1969/05 3637	30	FR 0023	012 / / :0	DO		2803182 () LOAM 0001 BRWN CLAY 0011 GREY HPAN 0019 RED SHLE 0030
OAKVILLE TOWN DS S 01(030)	17 599315 4809801[W]	1971/07 5417	06	FR 0021 FR 0041	009 / 031 002 / 1:0	PS		2803613 () GREY CLAY 0015 RED SHLE 0043
OAKVILLE TOWN DS S 01(030)	17 599393 4809720[W]	1954/02 1642	06					2802321 () CLAY 0017 RED SHLE 0065
OAKVILLE TOWN DS S 01(030)	17 599405 4809705[W]	1954/02 1642	06	SA 0065	012 / / :0	NU		2802322 () CLAY 0016 RED SHLE 0065
OAKVILLE TOWN DS S 01(030)	17 599376 4809692[W]	1954/03 1642	06	SA 0060	010 / / :0	NU		2802323 () CLAY 0015 RED SHLE 0060
OAKVILLE TOWN DS S 01(030)	17 599424 4809825[W]	1954/03 1642	06	SA 0065	015 / 001 / :0	NU		2802324 () CLAY 0015 RED SHLE 0065
OAKVILLE TOWN DS S 01(030)	17 599410 4809705[W]	1954/04 1642	06 06	FR 0017	007 / 001 / :0	PS		2802325 () CLAY 0017 RED SHLE 0048
OAKVILLE TOWN DS S 01(030)	17 599654 4809461[W]	1954/09 1642	06 06	FR 0035	022 / 004 / :0	DO		2802326 () CLAY 0012 RED SHLE 0038
OAKVILLE TOWN DS S 01(030)	17 599412 4809603[W]	1954/09 1642	06		020 / / :0	NU		2802327 () CLAY 0015 SHLE 0028
OAKVILLE TOWN DS S 01(030)	17 600243 4808811[W]	1954/09 1642	06	SU 0051	037 / 010 / :0	DO		2802328 () CLAY 0015 MSND STNS 0048 GRVL 0051
OAKVILLE TOWN DS S 01(030)	17 599072 4809932[W]	1955/03 2909	06 06	FR 0025	009 / 012 014 / 11:0	CO		2802329 () FILL 0005 BRWN CLAY STNS 0017 RED SHLE 0064
OAKVILLE TOWN DS S 01(030)	17 599126 4809871[W]	1955/09 1642	06 06	FR 0048	016 / 045 004 / 2:0	IN		2802330 () CLAY 0016 RED SHLE 0053

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 01(030)	17 599166 4809851[W]	1955/10 1642	06	FR 0038	010 / 018 020 / 0:30	CO DO		2802331 () PRDG 0016 PRDR 0033 SHLE 0039
OAKVILLE TOWN DS S 01(030)	17 599240 4809772[W]	1955/11 1642	06 06	FR 0043	016 / 026 004 / 0:15	DO		2802332 () PRDG 0020 RED SHLE 0046
OAKVILLE TOWN DS S 01(030)	17 599936 4809118[W]	1955/12 2309	06	MN 0054	044 / 050 003 / 2:0	DO		2802333 () BRWN CLAY STNS 0024 GRVL MSND 0054
OAKVILLE TOWN DS S 01(030)	17 599411 4809640[W]	1966/09 2309	06 06	FR 0028 FR 0044	018 / 042 002 / 1:0	DO		2802337 () BRWN CLAY 0014 RED SHLE 0045
OAKVILLE TOWN DS S 01(030)	17 600640 4808844[W]	1968/01 1612	06 06	FR 0073	037 / 040 004 / 2:0	DO		2802338 () LOAM 0001 BRWN CLAY 0012 GRVL 0046 RED SHLE 0078
OAKVILLE TOWN DS S 01(030)	17 599247 4809759[W]	1993/07 1660	06 06	SA 0065	013 / 092 002 / 1:0	PS		2808262 () BRWN LOAM 0001 BRWN CLAY STNS 0017 RED CLAY 0020 RED SHLE 0095
OAKVILLE TOWN DS S 01(030)	17 599874 4809396[L]	 2576				NU		2809876 (Z09145)
OAKVILLE TOWN DS S 01(030)	17 599874 4809396[L]	2003/03 1660				NU		2809927 (242191)
OAKVILLE TOWN DS S 01(030)	17 600361 4808670[W]	1988/10 4005	06	UK 0083	030 / 036 015 / 1:0	DO		2807062 (31134) BRWN CLAY SAND GRVL 0005 BRWN CLAY SAND LOOS 0017 BRWN CLAY SAND GRVL 0023 BRWN SAND LOOS 0025 BRWN GRVL SAND LOOS 0049 BRWN GRVL FGVL 0053 GREY CLAY GRVL LOOS 0078 GREY GRVL PCKD 0084 RED SHLE HARD 0100
OAKVILLE TOWN DS S 01(031)	17 598995 4809843[W]	1972/05 1663	05 05	FR 0034	007 / 010 020 / 4:0	DO		2803928 () RED CLAY 0015 RED SHLE 0034
OAKVILLE TOWN DS S 01(031)	17 599016 4809840[W]	 4552						2807864 (104455)
OAKVILLE TOWN DS S 01(031)	17 599018 4809842[W]	1991/09 4552	06	FR 0035	020 / 020 006 / 2:0	CO		2807863 (104462) WHIT FILL LOOS 0003 BLGY CLAY DNSE 0018 RED SHLE LMSN HARD 0036
OAKVILLE TOWN DS S 01(031)	17 599132 4809754[W]	1990/03 1660	06 06	SA 0068	011 / 066 003 / 1:30	DO		2807805 (43826) BRWN LOAM 0001 BRWN CLAY 0023 RED SHLE 0073
OAKVILLE TOWN DS S 01(031)	17 599780 4808591[W]	2005/09 7091	02	0025		NU	0025 10	2810531 (Z09237) A009217 BRWN FILL SILT SAND 0008 RED SILT TILL CLAY 0025 BRWN SAND CLAY 0035
OAKVILLE TOWN DS S 01(031)	17 600416 4808586[W]	1962/08 1308	30	FR 0028	028 / 001 / 1:0	DO		2802350 () BRWN CLAY 0028 GRVL 0039
OAKVILLE TOWN DS S 01(031)	17 598880 4809701[W]	2004/03 4868				DO		2809880 (Z03984)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 01(031)	17 600233 4808253[W]	1973/09 4602		FR 0038	011 / 089 001 / 1:0	DO		2804290 () BRWN CLAY 0014 RED CLAY 0018 RED SHLE 0093
OAKVILLE TOWN DS S 01(031)	17 599214 4809735[W]	1974/10 4602						2804639 () BRWN CLAY 0010 RED CLAY 0017 RED SHLE 0075
OAKVILLE TOWN DS S 01(031)	17 599055 4809863[W]	1978/05 4005		FR 0025 FR 0035 FR 0032	006 / 033 003 / 1:0	CO		2805219 () BRWN CLAY LOOS 0018 RED SHLE HARD 0038
OAKVILLE TOWN DS S 01(031)	17 598820 4809596[W]	1953/10 1642	06	FR 0111	098 / 010 / :0	DO		2802339 () CLAY MSND STNS 0111
OAKVILLE TOWN DS S 01(031)	17 599159 4809786[W]	1953/11 1429	06 06	SU 0040	004 / 040 002 / 1:0	DO		2802340 () CLAY 0006 SHLE 0040
OAKVILLE TOWN DS S 01(031)	17 598942 4809765[W]	1955/06 1642	06 06	FR 0033	007 / 012 004 / 0:30	DO		2802341 () CLAY MSND 0008 CLAY GRVL 0021 RED SHLE 0037
OAKVILLE TOWN DS S 01(031)	17 599170 4809769[W]	1956/07 1642	06 06	FR 0027	012 / 026 002 / 0:15	DO		2802342 () CLAY 0020 RED SHLE 0029
OAKVILLE TOWN DS S 01(031)	17 599284 4809466[W]	1958/05 1642	06	SA 0055	025 / 050 / 0:10	NU		2802343 () CLAY 0019 RED SHLE 0056
OAKVILLE TOWN DS S 01(031)	17 599904 4809080[W]	1961/06 1308	30	SA 0045		NU		2802344 () PRDG 0018 CLAY MSND BLDR 0021 RED CSND 0030 RED CLAY MSND BLDR 0035 RED SHLE 0048
OAKVILLE TOWN DS S 01(031)	17 599429 4809483[W]	1958/05 1642	06 06	FR 0046	015 / 045 001 / 1:0	PS		2802345 () CLAY 0019 RED SHLE 0050
OAKVILLE TOWN DS S 01(031)	17 599114 4809813[W]	1960/07 4602	06	FR 0042	012 / 052 002 / 1:0	DO		2802346 () PRDR 0029 RED SHLE 0052
OAKVILLE TOWN DS S 01(031)	17 599955 4809024[W]	1961/05 4602	06					2802347 () CLAY 0006 CLAY GRVL 0042 RED CLAY 0047 RED SHLE 0048
OAKVILLE TOWN DS S 01(031)	17 599781 4808799[W]	1961/05 4602	06	FR 0036	006 / / :0	NU		2802348 () BRWN CLAY MSND 0008 GREY MSND GRVL CLAY 0036 GRVL MSND 0065
OAKVILLE TOWN DS S 01(031)	17 599236 4809178[W]	1962/01 5417	06	SU 0098 SU 0073	044 / 070 012 / 1:30	DO ST		2802349 () RED MSND CLAY 0037 GREY CLAY MSND 0043 BLUE CLAY MSND GRVL 0072 MSND GRVL 0088 GREY CLAY MSND GRVL 0098 FSND 0121 MSND GRVL 0130
OAKVILLE TOWN DS S 01(032)	17 599368 4808732[L]	2002/10 3349	06 06	FR 0051	002 / 042 005 / 4:0	DO		2809770 (228758) BLCK LOAM 0002 GREY CLAY STNS 0024 BRWN MSND GRVL 0035 RED SHLE 0056
OAKVILLE TOWN DS S 01(032)	17 598798 4809568[W]	1964/08 1308	30					2802351 () BRWN CLAY MSND 0007 BRWN CLAY BLDR 0030 BLUE CLAY 0040

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 01(033)	17 598502 4809015[W]	1975/08 4005	06	FR 0040	015 / 040 006 / 2:0	ST		2804789 () RED CLAY 0011 RED SHLE 0044
OAKVILLE TOWN DS S 01(033)	17 598524 4809167[W]	1952/09 1642	06 06	FR 0044	015 / 001 / :0	DO		2802352 () CLAY 0013 RED SHLE 0047
OAKVILLE TOWN DS S 01(034)	17 598301 4808889[W]	1952/06 1642	06 06	FR 0054	010 / 005 / :0	DO		2802353 () CLAY 0015 RED SHLE 0054
OAKVILLE TOWN DS S 01(035)	17 599195 4806983[W]	1972/01 4602	06 06	FR 0042 FR 0021	010 / 041 008 / 1:0	DO		2803728 () BRWN CLAY 0004 RED CLAY 0008 RED SHLE 0049
OAKVILLE TOWN DS S 02(024)	17 602855 4809932[L]	1956/05 4623	08 08	FR 0022 FR 0030 FR 0032	010 / 030 005 / 5:0	CO		2803113 () RED SHLE 0036
OAKVILLE TOWN DS S 02(024)	17 602253 4810574[W]	1966/11 1612	07 07	FR 0042	008 / 034 003 / 2:0	DO		2802393 () PRDG 0010 RED SHLE 0044
OAKVILLE TOWN DS S 02(025)	17 602462 4809636[W]	1959/07 4838	07	MN 0027	025 / 050 / 2:0	DO		2802394 () PRDG 0020 RED SHLE 0050
OAKVILLE TOWN DS S 02(025)	17 602086 4810062[W]	2004/08 6607	02	FR 0020			0010 10	2810030 (Z17071) A014508 RED SHLE FILL 0020
OAKVILLE TOWN DS S 02(027)	17 602905 4808523[W]	1971/07 4602						2803690 () RED CLAY 0021 RED SHLE 0059
OAKVILLE TOWN DS S 02(027)	17 602767 4808283[W]	1960/10 4610	06	FR 0030	022 / 056 005 / 2:0	DO		2802395 () PRDG 0030 RED SHLE 0050
OAKVILLE TOWN DS S 02(028)	17 602415 4807963[W]	1976/06 2402	06 06	FR 0020 SU 0240 UK 0045	008 / 050 030 / 1:30	IR		2804899 () CLAY 0004 LMSN 0265
OAKVILLE TOWN DS S 02(028)	17 602543 4807998[W]	1951/04 1642	06 06	FR 0030	010 / / :0	DO		2802396 () CLAY 0006 RED SHLE 0030
OAKVILLE TOWN DS S 02(028)	17 602395 4807983[W]	1976/06 2402	06 06	SU 0265	010 / 110 020 / 4:30	IR		2804900 () CLAY 0004 LMSN 0290
OAKVILLE TOWN DS S 02(028)	17 602415 4807963[W]	1976/06 2402	06 06	FR 0175 UK 0012	002 / 180 012 / 5:30	IR		2804898 () CLAY 0004 LMSN 0250
OAKVILLE TOWN DS S 02(029)	17 600975 4809123[W]	1978/10 4640	30	FR 0016 FR 0019	016 / 028 / :0	DO		2805327 () BRWN CLAY SAND 0001 RED CLAY SAND 0006 RED SHLE 0028
OAKVILLE TOWN DS S 02(029)	17 600975 4809103[W]	1978/10 4640	30	FR 0014 FR 0018	014 / 025 / :0	DO		2805326 () BRWN CLAY SAND 0002 RED CLAY SAND 0005 RED SHLE 0025

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 02(029)	17 601058 4809113[W]	1955/03 1642	06 06	FR 0037	021 / 035 002 / :0	DO		2802397 () CLAY 0004 RED SHLE 0039
OAKVILLE TOWN DS S 02(029)	17 600975 4809083[W]	1968/08 2309	06 06	FR 0022 FR 0039	012 / 038 002 / 2:0	DO		2802804 () BRWN CLAY 0002 RED SHLE 0041
OAKVILLE TOWN DS S 02(030)	17 601491 4807726[W]	1975/06 1307	30	FR 0011	005 / 006 / 1:0	DO		2804749 () BRWN LOAM SAND 0011 SAND GRVL 0015
OAKVILLE TOWN DS S 02(030)	17 601465 4807662[W]	1975/05 1307	30	FR 0034	024 / 004 / 1:0	DO ST		2804748 () BRWN LOAM SAND 0020 RED CLAY SAND GRVL 0032 GRVL 0034
OAKVILLE TOWN DS S 02(030)	17 601520 4807772[W]	1975/05 1307	30	FR 0034	020 / 001 / 1:0	DO		2804747 () BRWN LOAM 0022 RED SHLE 0034
OAKVILLE TOWN DS S 02(031)	17 600954 4808064[W]	1963/10 4602	06	FR 0037	027 / 037 014 / 1:0	DO		2802400 () LOAM MSND 0004 BRWN CLAY 0015 GREY CLAY 0033 GRVL CLAY 0043
OAKVILLE TOWN DS S 02(031)	17 601578 4807450[W]	1965/11 4610	06 06	FR 0026	025 / 062 / 1:30	DO		2802401 () PRDG 0026 RED SHLE 0062
OAKVILLE TOWN DS S 02(031)	17 601606 4807442[W]	1966/11 1612	06 06	FR 0064	026 / 054 / 2:0	DO		2802402 () PRDG 0012 BLUE CLAY 0020 RED SHLE 0064
OAKVILLE TOWN DS S 02(031)	17 601573 4807467[W]	1966/12 1612	07 07	FR 0058	032 / 070 001 / 2:0	DO		2802403 () LOAM 0001 BRWN CLAY 0023 RED SHLE 0070
OAKVILLE TOWN DS S 02(031)	17 601573 4807470[W]	1966/12 1612	07 07	FR 0070	024 / 074 001 / 24:0	DO		2802404 () LOAM 0001 BRWN CLAY 0023 RED SHLE 0074
OAKVILLE TOWN DS S 02(031)	17 601093 4807947[W]	1955/12 2309	06	SA 0050	050 / / :0	NU		2802399 () CLAY 0035 GRVL 0060
OAKVILLE TOWN DS S 02(031)	17 601018 4807937[W]	1989/03 4005	06	UK 0042	029 / 030 024 / 2:0	DO IR	0042 03	2807236 (37246) BRWN CSND LOOS 0009 BRWN CSND GRVL LOOS 0016 GREY CLAY GRVL LOOS 0019 BRWN SAND CLAY GRVL 0033 GREY CLAY GRVL LOOS 0039 GREY GRVL SAND PCKD 0047 BRWN GRVL SAND PCKD 0055 GREY CLAY GRVL PCKD 0063 BRWN CLAY GRVL PCKD 0071 RED SHLE HARD 0083
OAKVILLE TOWN DS S 02(031)	17 601287 4807754[W]	1952/05 1642	06	FR 0041	030 / 008 / :0	DO		2802398 () CLAY 0041
OAKVILLE TOWN DS S 02(031)	17 601035 4807803[W]	1971/11 3637	27 30	FR 0027 FR 0011	008 / 027 / 1:0	DO		2803804 () PRDR 0010 GREY CLAY 0013 GREY SAND 0016 BLUE CLAY 0027 GREY GRVL 0029
OAKVILLE TOWN DS S 02(034)	17 601118 4806228[W]	1951/07 1642	06 06	FR 0046	010 / / :0	DO		2802405 () RED CLAY 0008 RED SHLE 0046

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 02(034)	17 600532 4806512[W]	1973/02 2402	06 06	FR 0109 FR 0045	011 / 095 030 / 48:0	PS		2804106 () CLAY 0007 SHLE 0122
OAKVILLE TOWN DS S 02(035)	17 599247 4806869[W]	2004/04 7201	01			NU	0003 10	2809963 (Z09769) A009749 BRWN SAND GRVL FILL 0003 RED TILL GRVL 0010 RED SHLE WTHD 0013
OAKVILLE TOWN DS S 02(035)	17 599387 4806777[W]	1961/10 4602	06 06	FR 0040	020 / 042 003 / 1:0	DO		2802409 () BRWN CLAY 0004 RED CLAY 0011 RED SHLE 0042
OAKVILLE TOWN DS S 02(035)	17 599384 4806807[W]	1961/03 4602	06 06	FR 0043	026 / 043 003 / 1:0	DO		2802408 () BRWN CLAY 0005 RED SHLE 0044
OAKVILLE TOWN DS S 02(035)	17 599343 4806829[W]	1957/10 1642	06	FR 0045	015 / 035 005 / 0:15	DO		2802407 () PRDG 0019 RED SHLE 0048
OAKVILLE TOWN DS S 02(035)	17 599515 4806684[W]	1950/10 1642	06 06	FR	010 / / :0	DO		2802406 () RED CLAY 0005 RED SHLE 0049
OAKVILLE TOWN DS S 03(028)	17 603200 4806930[W]	2004/04 6607	02	FR 0015			0010 10	2809950 (Z10850) A010209 GREY GRVL FILL 0002 RED SHLE ROCK 0020
OAKVILLE TOWN DS S 03(029)	17 603115 4806877[W]	1961/06 4602	08 08	FR 0018 FR 0031 FR 0024	006 / 070 012 / 1:0	IR		2802424 () FILL 0005 BRWN CLAY 0009 RED SHLE 0070
OAKVILLE TOWN DS S 03(030)	17 602277 4806862[W]	1950/08 1642	06 06	FR 0057	025 / / :0	DO		2802425 () RED CLAY 0005 RED SHLE 0057
OAKVILLE TOWN DS S 03(030)	17 602215 4807392[W]	2006/11 6607	01				0014 05	7042534 (Z56690) A051202 BRWN SAND GRVL 0004 BRWN CLAY SILT SHLE 0009 RED SHLE 0019
OAKVILLE TOWN DS S 03(030)	17 602353 4806692[W]	1953/06 1642	06 06	FR 0068	050 / 001 / :0	DO		2802427 () CLAY GRVL 0053 GREY SHLE 0069
OAKVILLE TOWN DS S 03(030)	17 602499 4806620[W]	1953/08 2309	06 06	FR 0030	005 / 030 005 / 0:30	CO		2802428 () RED CLAY 0008 RED SHLE 0030
OAKVILLE TOWN DS S 03(030)	17 602434 4806697[W]	1962/05 4602	06 06	FR 0023 FR 0038	008 / 036 006 / 8:0	DO		2802429 () RED CLAY 0010 RED SHLE 0045
OAKVILLE TOWN DS S 03(030)	17 602691 4806438[W]	1962/07 2309	06 06	SA 0120 SA 0020	008 / 011 002 / 2:0	CO		2802430 () BRWN CLAY 0005 RED SHLE 0090 BLUE SHLE 0150
OAKVILLE TOWN DS S 03(030)	17 602494 4806705[W]	1950/08 1642	06 06	FR 0075	025 / / :0	DO		2802426 () RED CLAY 0005 RED SHLE 0075
OAKVILLE TOWN DS S 03(031)	17 602267 4806784[W]	1957/07 2309	06 06	FR 0045	010 / 018 001 / 0:30	DO		2802433 () CLAY 0009 RED SHLE 0050
OAKVILLE TOWN DS S 03(031)	17 602285 4806744[W]	1959/07 2613	07 07	FR 0100	030 / 100 001 / 1:0	DO		2802434 () RED CLAY 0007 RED SHLE 0107 BLUE SHLE 0110

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN DS S 03(031)	17 602695 4805966[W]	1961/09 4602	06	FR 0034	020 / 037 005 / 1:0	DO		2802435 () MSND GRVL 0034 GRVL 0040
OAKVILLE TOWN DS S 03(031)	17 602056 4806537[W]	1966/05 2406	06 05	SA 0086	055 / 060 012 / :0	PS	0083 04	2802436 () LOAM 0002 BRWN CLAY STNS 0018 BRWN CLAY GRVL 0080 RED CLAY GRVL 0095
OAKVILLE TOWN DS S 03(031)	17 602240 4806806[W]	1956/06 2613	04 04	FR 0075	018 / 100 001 / 4:0	DO		2802432 () RED CLAY 0007 RED SHLE 0100
OAKVILLE TOWN DS S 03(032)	17 601769 4806700[W]	1954/05 1642	06 06	FR 0110	080 / 080 001 / :0	DO		2802437 () YLLW CLAY STNS 0010 BLUE CLAY 0060 RED SHLE 0110
OAKVILLE TOWN DS S 03(032)	17 601635 4806469[W]	1956/09 5417	06 06	FR 0029 FR 0032	006 / 023 008 / 0:25	DO		2802438 () LOAM 0001 RED CLAY 0005 RED CLAY SHLE 0012 RED SHLE 0033
OAKVILLE TOWN DS S 03(033)	17 601135 4806243[W]	1981/03 4005	06	FR 0034	020 / 025 015 / 1:0	CO		2805641 () BRWN SAND CGVL LOOS 0018 RED CLAY LOOS 0033 RED SHLE HARD 0050
OAKVILLE TOWN DS S 03(033)	17 602771 4805040[W]	1951/05 1642	06 06	FR 0049	012 / / :0	ST		2802439 () CLAY 0006 RED SHLE 0049
OAKVILLE TOWN DS S 03(033)	17 602855 4804843[W]	1978/10 3349	06 06	FR 0028	008 / 036 010 / 1:0	CO		2805419 () BLCK LOAM 0001 BRWN CLAY 0009 RED SHLE 0052
OAKVILLE TOWN DS S 03(033)	17 602575 4806243[W]	1981/03 4005	06	FR 0029	015 / 040 004 / 1:0	CO		2805640 () BRWN SAND CGVL LOOS 0014 RED CLAY LOOS 0028 RED SHLE HARD 0045
OAKVILLE TOWN DS S 03(033)	17 601535 4806323[W]	1981/04 4005	06	FR 0034	025 / 047 002 / 1:0	DO		2805698 () BRWN SAND CGVL LOOS 0014 RED CLAY LOOS 0033 RED SHLE HARD 0050
OAKVILLE TOWN DS S 03(034)	17 601689 4805372[W]	1986/08 4005	06	FR 0035	013 / 030 006 / 1:0	DO IN		2806499 () GREY GRVL LOOS 0002 RED CLAY LOOS 0019 RED SHLE HARD 0040
OAKVILLE TOWN DS S 03(034)	17 601208 4806006[W]	1958/04 4002	06 06	FR 0035	005 / 035 005 / 1:30	DO		2802440 () CLAY 0010 RED SHLE 0035
OAKVILLE TOWN DSS 01(026)	17 600290 4811338[W]	2004/10 4868						2810090 (Z05840)
OAKVILLE TOWN ()	17 600294 4813705[W]	2006/04 6809	02				0012 20	2810544 (Z11137) A031415 BLCK LOAM 0000 GREY CLAY 0005 BLCK 0032 RED SHLE 0033
OAKVILLE TOWN ()	17 600640 4812150[W]	2006/08 6607	02	FR 0013			0005 26	2810615 (Z52247) A046448 RED SHLE CLAY 0020 RED SHLE 0031
OAKVILLE TOWN 01(001)	17 597300 4808611[W]	2007/10 7219			009 / / :0	NU		7052678 (Z67269) A060739 BRWN CLAY SAND FILL 0029 0030
OAKVILLE TOWN 01(001)	17 597728 4808266[W]	2007/10 7219			002 / / :0	NU		7052679 (Z67273) A060708 GRVL 0017

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN 01(001)	17 596661 4808852[W]	2007/10 7219			/ / :0	NU		7052677 (Z67275) A060744
OAKVILLE TOWN 01(001)	17 596684 4808873[W]	2007/10 7219			/ / :0			7052676 (Z67272) A060741 BRWN CLAY SAND FILL 0010
OAKVILLE TOWN 01(001)	17 597587 4808111[W]	2007/10 7219			018 / / :0	NU		7052675 (Z67270) A060740 BRWN CLAY SAND FILL 0058 0059 GRVL 0060
OAKVILLE TOWN 01(002)	17 594726 4812928[W]	2009/01 2663						7120126 (Z85106)
OAKVILLE TOWN 01(002)	17 594867 4812936[W]	2009/01 2663						7120125 (Z85103)
OAKVILLE TOWN 01(003)	17 594689 4813161[W]	2009/01 2663						7120127 (Z85107)
OAKVILLE TOWN 01(016)	17 602660 4814701[W]	2007/08 3349	06			NU		7050130 (Z66974)
OAKVILLE TOWN 01(017)	17 600923 4815793[W]	2008/05 7219	36		002 / / :0	NU		7105448 (Z92424) A071864
OAKVILLE TOWN 01(017)	17 600985 4815798[W]	2008/05 7219	36			NU		7105450 (Z92426) A071845
OAKVILLE TOWN 01(017)	17 600967 4815752[W]	2008/05 7219	44		002 / / :0	NU		7105449 (Z92425) A071865
OAKVILLE TOWN 01(020)	17 601605 4813392[W]	2005/02 1663	03		010 / / :0	NU		2810323 (Z23996) 0027
OAKVILLE TOWN 01(025)	17 596410 4810005[W]	2007/09 4207	06					7101613 (Z64116) A050332 BRWN TILL 0020 BRWN TILL GRVL 0039 RED SHLE GRVL SLTY 0078
OAKVILLE TOWN 01(026)	17 600153 4811337[W]	2007/10 1660			/ / :0			7101491 (Z67589)
OAKVILLE TOWN 01(026)	17 600049 4811234[W]	2006/04 1660						2810590 (Z33710) PRDR 0028
OAKVILLE TOWN 01(026)	17 600008 4811201[W]	2006/04 1660						2810589 (Z33709) PRDR 0038
OAKVILLE TOWN 01(026)	17 599972 4811129[W]	2006/03 1660						2810595 (Z33720)
OAKVILLE TOWN 01(029)	17 599648 4810540[W]	2006/10 1660						7039370 (Z33718)

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN 01(030)	17 598681 4810374[W]	2005/03 4005	60		023 / 030 001 / 1:0	DO		2810188 (Z22278) A022021 BRWN CLAY 0012 BRWN CLAY GRVL 0014 RED CLAY 0026 RED SHLE 0055
OAKVILLE TOWN 01(030)	17 599759 4809246[W]	2007/07 1660						7047698 (Z52758)
OAKVILLE TOWN 01(030)	17 599740 4809264[W]	2007/07 1660						7047697 (Z52757)
OAKVILLE TOWN 01(030)	17 598845 4810126[W]	2007/07 1660						7047696 (Z52756)
OAKVILLE TOWN 01(030)	17 599618 4809640[W]	2005/03 6607	02				0022 05	2810408 (Z26561) A021400 LOAM 0001 BRWN CLAY TILL SLTY 0014 RED SHLE DRY 0027
OAKVILLE TOWN 01(031)	17 599049 4809826[W]	2006/10 3349				NU		2810673 (Z71807)
OAKVILLE TOWN 01(032)	17 599127 4809333[W]	2005/04 7201		FR 0069			0075 05	2810255 (Z28620) A022270 BRWN SILT CLAY FILL 0005 BRWN SILT CLAY TILL 0045 BRWN SAND SILT 0071 GREY SAND GRVL 0085
OAKVILLE TOWN 02(029)	17 601010 4809148[W]	2008/05 7329						7105542 (Z76868)
OAKVILLE TOWN 02(029)	17 600975 4809002[W]	2008/05 7329						7105540 (Z76866)
OAKVILLE TOWN 02(029)	17 600975 4809002[W]	2008/05 7329						7105539 (Z76867)
OAKVILLE TOWN 02(029)	17 601010 4809148[W]	2008/05 7329	00					7105541 (Z76869)
OAKVILLE TOWN 03(033)	17 601337 4805381[W]	2004/12 7230	01	0008		NU	0006 05	2810180 (Z25172) A022243 RED SILT CLAY LOOS 0003 RED SHLE HARD 0011
OAKVILLE TOWN 03(034)	17 601190 4805878[W]	7238	02			NU	0010 10	2810402 (Z34402) A031838 SHLE 0020
OAKVILLE TOWN 15(031)	17 599524 4808581[W]	2005/04 7201					0022 05	2810254 (Z28619) A022269 BRWN SILT CLAY FILL 0005 BRWN SILT CLAY TILL 0019 GREY FSND SILT 0020 RED SHLE WTHD 0027
OAKVILLE TOWN (013)	17 603220 4815721[W]	2007/06 3108				NU		7046328 (Z08356) 0036 SAND
OAKVILLE TOWN (013)	17 603114 4815705[W]	2007/06 3108				NU		7046326 (Z08355) 0102 0026

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN (017)	17 600666 4815888[W]	2006/09 3349	06					2810671 (Z71494)
OAKVILLE TOWN ()	17 600276 4811492[W]	2006/11 1660						7039371 (Z52741)
OAKVILLE TOWN ()	17 600304 4811473[W]	2006/11 1660						7039372 (Z52742)
OAKVILLE TOWN ()	17 603223 4815241[W]	2007/03 7215						7043534 (Z56066)
OAKVILLE TOWN ()	17 600282 4814637[W]	2007/11 7241						7100722 (M00406) A013306
OAKVILLE TOWN ()	17 602960 4815849[W]	2007/11 6809	02		/ / :0			7054129 (Z69296) A062230 BRWN SILT TILL 0005 RED SHLE 0050
OAKVILLE TOWN ()	17 601694 4816130[W]	2007/11 6809	02		/ / :0			7054130 (Z69295) A062231 BRWN SILT TILL HARD 0011 RED SHLE 0035
OAKVILLE TOWN ()	17 603158 4806970[W]	2007/12 7305	02					7054436 (Z74836) A057186 BRWN SILT TILL 0005 RED SHLE 0022
OAKVILLE TOWN ()	17 599210 4810259[W]	2007/08 1660			/ / :0			7101500 (Z67951)
OAKVILLE TOWN ()	17 600245 4814472[W]	2008/02 7241	00		/ / :0			7102652 (Z62483) A056727 BLCK LOAM 0003 GREY SILT CLAY DRY 0010 RED SILT CLAY DNSE 0015
OAKVILLE TOWN ()	17 602717 4815332[W]	2007/12 7230	02			NU	0011 06	7103429 (Z70161) A054845 BLCK LOAM LOOS 0001 BRWN BRWN CLAY SILT DNSE 0010 RED SHLE DNSE 0016
OAKVILLE TOWN ()	17 601351 4813447[W]	2007/12 7230	02	UK 0010		NU	0011 06	7103430 (Z70162) A054855 BRWN LOAM LOOS 0001 BRWN CLAY SILT DNSE 0013 RED SHLE DNSE 0016
OAKVILLE TOWN ()	17 600580 4811323[W]	2008/04 7238	00					7105005 (Z75189) A059419 BRWN LOAM 0002 RED SILT CLAY 0010
OAKVILLE TOWN ()	17 600669 4811386[W]	2008/04 7238	00	FR 0013				7105011 (Z75190) A059387 BRWN LOAM 0002 RED SILT CLAY 0010 RED SHLE 0015
OAKVILLE TOWN ()	17 598956 4809931[W]	2008/04 6607						7105545 (M01729) A054647
OAKVILLE TOWN ()	17 598956 4809907[W]	2008/04 6607						7105546 (M01728) A067319
OAKVILLE TOWN ()	17 602761 4807218[W]	2008/05 6032	02			NU		7106141 (Z66368) A062190 BRWN SAND 0003 RED SHLE 0015

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN ()	17 598987 4809947[W]	2008/04 6607						7107062 (M01748) A067329
OAKVILLE TOWN ()	17 600669 4811386[W]	2008/06 7238						7107592 (Z80524) A059387
OAKVILLE TOWN ()	17 600580 4811323[W]	2008/06 7238						7107598 (Z80523)
OAKVILLE TOWN ()	17 602648 4807860[W]	2008/10 7241	01					7113725 (Z77908) A079095
OAKVILLE TOWN ()	17 602691 4807835[W]	2008/10 7241						7113726 (Z77909) A079091
OAKVILLE TOWN ()	17 602703 4807853[W]	2008/10 7241	00				0015 15	7113727 (Z89502) A079089 BRWN TILL DNSE 0008 RED SHLE 0030
OAKVILLE TOWN ()	17 602708 4807873[W]	2008/10 7241	01					7113728 (Z89501) A079090
OAKVILLE TOWN ()	17 598952 4809720[W]	2008/09 6607	06	0011				7113789 (Z60598)
OAKVILLE TOWN ()	17 598979 4809944[W]	2008/09 6607						7113891 (M03919) A062514
OAKVILLE TOWN ()	17 598971 4809649[W]	2008/09 6607						7113894 (M03093) A078554
OAKVILLE TOWN ()	17 598948 4809931[W]	2008/09 6607						7113897 (M03068) A054647
OAKVILLE TOWN ()	17 601252 4816350[W]	2008/09 6809						7114832 (M02966) A075394
OAKVILLE TOWN ()	17 601604 4815794[W]	2008/09 6809						7114870 (Z82815) A073764 BRWN LOAM 0001 RED CLAY SILT TILL 0017 RED SHLE 0022
OAKVILLE TOWN ()	17 602990 4807633[W]	 6607						7116448 (M03991)
OAKVILLE TOWN ()	17 598972 4809935[W]	2008/12 1660						7120486 (Z89724)
OAKVILLE TOWN ()	17 598660 4810361[W]	2005/03 4005						2810187 (Z22279) A022022 PRDR 0045
OAKVILLE TOWN ()	17 600759 4812159[W]	2005/03 6809						2810195 (Z11243) A011177 PRDG

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
OAKVILLE TOWN ()	17 600231 4808631[W]	2004/11 6607	02				0014 11	2810226 (Z19563) A016906 BRWN FILL SAND WBRG 0005 BRWN CLAY SILT SAND 0016 BRWN CSND GRVL WBRG 0025
OAKVILLE TOWN ()	17 600660 4812114[W]	2005/05 7230	01	FR 0007		NU	0022 05	2810265 (Z27431) A026358 BRWN FILL 0005 RED SILT CLAY GRVL 0007 RED SHLE LMSN HARD 0027
OAKVILLE TOWN ()	17 601280 4805808[W]	2005/03 6032	00			NU	0008 15	2810284 (Z05335) A005128 SAND SILT FILL 0023
OAKVILLE TOWN ()	17 600047 4812357[W]	2005/08 6809	02				0010 05	2810338 (Z33985) A023184 BLCK LOAM 0001 BRWN TILL 0003 RED SHLE 0015
OAKVILLE TOWN ()	17 600880 4815855[W]	2005/08 6809	02				0020 10	2810342 (Z33984) A023191 BLCK LOAM 0001 BRWN TILL 0025 RED SHLE 0030
OAKVILLE TOWN ()	17 601777 4814650[W]	2005/08 6809	02				0010 05	2810343 (Z23514) A023185 BLCK LOAM 0001 BRWN TILL 0003 RED SHLE 0015
OAKVILLE TOWN ()	17 601988 4814624[W]	2005/08 6809	02				0010 05	2810344 (Z23512) A023190 BLCK LOAM 0001 BRWN TILL 0003 RED SHLE 0015
OAKVILLE TOWN ()	17 603123 4815332[W]	2005/08 6809	02				0010 05	2810345 (Z23511) A023183 BLCK LOAM 0001 BRWN TILL 0003 RED SHLE 0015
OAKVILLE TOWN ()	17 601238 4806065[W]	2006/11 7238						2810664 (Z50689)
OAKVILLE TOWN ()	17 602483 4807735[W]	2006/10 7241	02				0008 10	7038443 (Z34316) A053787 BRWN GRVL SAND 0002 RED SILT CLAY 0017 RED SHLE 0018
OAKVILLE TOWN ()	17 600372 4811334[W]	2006/08 6607	02				0010 20	7039207 (Z52340) A046479 BRWN FILL 0005 RED SHLE 0030
OAKVILLE TOWN ()	17 600299 4811465[W]	2006/08 1660						7039368 (Z33716)
TBD 01(028)	17 598091 4812145[W]	2005/06 4868	36			DO		4909858 (Z28864)
BRAMPTON CITY (TORON ()	17 592581 4806136[W]	2007/08 6607	02		/ / :0			7050487 (Z60433) A059259 BRWN GRVL SAND FILL 0016 BRWN GRVL SAND FILL 0007 BRWN CLAY SILT 0011 GREY SAND SILT 0017 GREY SILT SAND 0037
BRAMPTON CITY ()	17 599151 4807270[W]	2007/07 6032	02			NU	0010 10	7048068 (Z66492) A041651 SAND SILT CLAY 0020 SAND SILT CLAY 0022 SAND SILT CLAY 0025 GREY SAND SILT CLAY 0025
MISSISSAUGA CITY ()	17 602531 4808834[W]	2008/02 7241	00		/ / :0			7102381 (Z77975) A070251 BLCK HARD 0000 BRWN SAND GRVL SOFT 0008 BRWN SAND LOOS 0012

TOWNSHIP CONCESSION (LOT)	UTM[1]	DATE[2] CNTR[3]	CASING DIA[4]	WATER[5,6] DETAIL	STAT LVL/PUMP LVL[7] RATE[8]/TIME HR:MIN	WATER USE[9]	SCREEN INFO[10]	WELL # (AUDIT#) WELL TAG # DEPTHS TO WHICH FORMATIONS EXTEND[5,11]
ESSA TOWNSHIP 07(023)	17 596176 4805215[W]	2006/12 1663	02 04	FR 0056	012 / 013 017 / 1:0	DO	0056 05	7040181 (Z64002) A042105 BRWN CLAY FILL 0004 BRWN CLAY 0006 GREY CLAY GRVL 0013 BRWN SAND GRVL STNS 0020 GREY CLAY SAND GRVL 0039 BRWN SAND GRVL CLAY 0053 GREY CLAY GRVL 0056 GREY MSND 0060 GREY CLAY GRVL 0061
ELDON TOWNSHIP ()	17 600670 4811386[W]	2008/01 7238						7105002 (Z80541)
KITCHENER CITY (002)	17 591387 4810753[W]	2008/09 7320	02	FR 0024			0020 10	7112414 (Z83308) A075758 BRWN SAND STNS 0003 BRWN SAND 0024 BRWN SAND SILT WBRG 0030
KITCHENER CITY ()	17 591470 4807570[W]	2008/02 1737						7121126 (Z75526) A062983
KITCHENER CITY ()	17 591470 4807570[W]	2008/02 1737						7121129 (Z75528) A062983
KITCHENER CITY ()	17 591470 4807570[W]	2008/02 1737						7121128 (Z75530) A062983
KITCHENER CITY ()	17 591470 4807570[W]	2008/02 1737						7121130 (Z75529) A062983
KITCHENER CITY ()	17 594256 4807495[W]	2004/08 7190	02	0009			0066 33	6509819 (Z06425) A006331 BRWN SAND 0030
KITCHENER CITY ()	17 591470 4807570[W]	2008/02 1737						7121127 (Z75527) A062983
WEST FLAMBOROUGH TOW 10(002)	17 594982 4806791[W]	2007/09 4005						7107601 (Z65957) A064521
TORONTO CITY ()	17 601663 4806610[W]	2007/08 6032	02			NU		7051310 (Z66306) A041654 GREY SAND SILT TILL 0075
TORONTO CITY ()	17 595522 4805260[W]	2004/05 6607	02	FR 0020			0015 10	6928440 (Z11872) A007502 BRWN CLAY SILT FILL 0008 BRWN CLAY SILT FILL 0025

Notes:
1. UTM in Zone, Easting, Northing and Datum is NAD83; L: UTM estimated from Centroid of Lot; W: UTM not from Lot Centroid
2. Date Work Completed
3. Well Contractor Licence Number
4. Casing diameter in inches
5. Unit of Depth in Feet
6. See Table 4 for Meaning of Code
7. STAT LVL: Static Water Level in Feet ; PUMP LVL: Water Level After Pumping in Feet
8. Pump Test Rate in GPM, Pump Test Duration in Hour : Minutes
9. See Table 3 for Meaning of Code
10. Screen Depth and Length in feet
11. See Table 1 and 2 for Meaning of Code

1. Core Material and Descriptive terms

Code	Description	…	Code	Description	…	Code	Description	…	Code	Description	…	Code	Description
BLDR	BOULDERS		FCRD	FRACTURED		IRFM	IRON FORMATION		PORS	POROUS		SOFT	SOFT
BSLT	BASALT		FGRD	FINE-GRAINED		LIMY	LIMY		PRDG	PREVIOUSLY DUG		SPST	SOAPSTONE
CGRD	COARSE-GRAINED		FGVL	FINE GRAVEL		LMSN	LIMESTONE		PRDR	PREV. DRILLED		STKY	STICKY
CGVL	COARSE GRAVEL		FILL	FILL		LOAM	TOPSOIL		QRTZ	QUARTZITE		STNS	STONES
CHRT	CHERT		FLDS	FELDSPAR		LOOS	LOOSE		QSND	QUICKSAND		STNY	STONEY
CLAY	CLAY		FLNT	FLINT		LTCL	LIGHT-COLOURED		QTZ	QUARTZ		THIK	THICK
CLN	CLEAN		FOSS	FOSILIFEROUS		LYRD	LAYERED		ROCK	ROCK		THIN	THIN
CLYY	CLAYEY		FSND	FINE SAND		MARL	MARL		SAND	SAND		TILL	TILL
CMTD	CEMENTED		GNIS	GNEISS		MGRD	MEDIUM-GRAINED		SHLE	SHALE		UNKN	UNKNOWN TYPE
CONG	CONGLOMERATE		GRNT	GRANITE		MGVL	MEDIUM GRAVEL		SHLY	SHALY		VERY	VERY
CRYS	CRYSTALLINE		GRSN	GREENSTONE		MRBL	MARBLE		SHRP	SHARP		WBRG	WATER-BEARING
CSND	COARSE SAND		GRVL	GRAVEL		MSND	MEDIUM SAND		SHST	SCHIST		WDFR	WOOD FRAGMENTS
DKCL	DARK-COLOURED		GRWK	GREYWACKE		MUCK	MUCK		SILT	SILT		WTHD	WEATHERED
DLMT	DOLOMITE		GVLY	GRAVELLY		OBDN	OVERBURDEN		SLTE	SLATE			
DNSE	DENSE		GYPS	GYPSUM		PCKD	PACKED		SLTY	SILTY			
DRTY	DIRTY		HARD	HARD		PEAT	PEAT		SNDS	SANDSTONE			
DRY	DRY		HPAN	HARDPAN		PGVL	PEA GRAVEL		SNDY	SANDY			

2. Core Color

Code	Description
WHIT	WHITE
GREY	GREY
BLUE	BLUE
GREN	GREEN
YLLW	YELLOW
BRWN	BROWN
RED	RED
BLCK	BLACK
BLGY	BLUE-GREY

3. Water Use

Code	Description	Code	Description
DO	Domestic	OT	Other
ST	Livestock	TH	Test Hole
IR	Irrigation	DE	Dewatering
IN	Industrial	MO	Monitoring
CO	Commercial		
MN	Municipal		
PS	Public		
AC	Cooling And A/C		
NU	Not Used		

4. Water Detail

Code	Description	Code	Description
FR	Fresh	GS	Gas
SA	Salty	IR	Iron
SU	Sulphur		
MN	Mineral		
UK	Unknown		

APPENDIX 4-2
Borehole Logs

Log of Borehole: MMM09-1D

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 598297 **Zone** 17T

Northing: 4809028 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD	Remarks
			Ground Surface	148.27						
0	0		***TOPSOIL***	0.00						
1			***CLAYEY SILT (TILL)*** Brown, trace gravel, moist			1	CS	100		- SS = Split Spoon - CS = Continuous Sampler - HQ = HQ Rock Core
2			-Fractures observed, greyish-white infilling observed on vertical fractures							
3	1						SS	88	56	- Overburden was sampled using continuous sampling techniques. Split spoon samples were collected from the upper portion of the continuous sample interval.
4						2	CS	100		
5										
6										
7	2									
8				145.68						
9			-Colour changing to red. - Weathered shale content increasing with depth	2.59 145.32						
10	3			2.95			SS	33	>50	- Spoon bouncing at 2.95 metre depth
11			***WEATHERED SHALE*** Red, fissile, moist			3	CS	100		
12										
13	4									
14				143.85		Run 1	HQ	98		- Sampler refusal at 3.89 metres - Switch to HQ core
15			***SHALE*** Red with green banding	4.42						
16										
17	5									- Water level measured at 4.60 m below ground surface on June 19, 2009
18			- Five thin weathered zones, 2-8 cm thickness logged between 5.3 and 6.2 m depth			Run 2	HQ	100		
19										
20	6									**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 7.5 to 8.9 mbgs. - 3/8" holeplug from 0.3 to 6.4 mbgs - #2 sand pack from 6.4 to 8.89 mbgs
21										
22										
23	7					Run 3	HQ	97		
24										
25										
26	8									
27			- Rust-coloured staining observed at 8.6 m depth			Run 4	HQ	100		
28										
29				139.38						
			End of Borehole	8.89						

N-Value: 10 30 50 70 90

RQD %: 10 30 50 70 90

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 9, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 100 mm

Sheet: 1 of 1

Log of Borehole: MMM09-1S

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 598297 **Zone** 17T
Northing: 4809028 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft / m)	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
	Ground Surface	148.48						
0 / 0	***TOPSOIL***	0.00						
1 /	***CLAYEY SILT (TILL)*** Brown, trace gravel, moist							- Shallow well not sampled
2 /	-Fractures observed, greyish-white infilling observed on vertical fractures							
3 / 1	- Colour change to red at 2.59 mbgs - Weathered shale content increasing with depth	145.53						
10 / 3	***WEATHERED SHALE*** Red, fissile, moist	2.95						
13 / 4								- Water level measured at 4.77 m below ground surface on June 19, 2009
14		144.06						
15 / 5	***SHALE*** Red with green banding	4.42						
17	End of Borehole	143.30 5.18						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 2.1 to 5.1 mbgs. - 3/8" holeplug from 0.3 to 1.8 mbgs - #2 sand pack from 1.8 to 5.18 mbgs
20 / 6								
23 / 7								
26 / 8								
29								

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: June 9, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 100 mm
Sheet: 1 of 1

Log of Borehole: MMM09-2

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 598137 **Zone** 17T
Northing: 4809241 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft / m)	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD %	Remarks
0 / 0	Ground Surface	151.16						
0 / 0	***TOPSOIL***	0.00						
1 / 0	***CLAYEY SILT*** Brown, trace gravel, moist, fractured (blocky) - becoming till-like with depth	149.81		1	CS	96		- CS = Continuous Sampler
4 / 1	***CLAYEY SILT (TILL)*** Brown, trace gravel, moist, fractured - greyish white infilling along vertical fractures - darkoxidation on fractures -fracture frequency decreases with depth	1.35 148.32		2	CS	100		
9 / 2	Greyish Brown - reddish brown - shale fragments observed	2.84 146.94		3	CS	100		- Water level measured at 4.82 metres below ground surface on June 19, 2009
14 / 4	***WEATHERED SHALE*** Red, moist, fissile	4.22 145.95		4	CS	-		- Auger refusal at 5.21 m
17 / 5	End of Borehole	5.21						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 2.1 to 5.2 mbgs. - 3/8" holeplug from 0.3 to 1.63 mbgs - #2 sand pack from 1.63 to 5.21 mbgs
29 / 8								

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: June 1, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-3

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 598134 **Zone** 17T

Northing: 4809239 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD	Remarks
			Ground Surface	151.40						
0	0		***TOPSOIL***	0.00 151.12						
1			***SILT*** Brown, some sand, brown, moist to wet	0.28 150.82 0.58		1	CS	97		- CS = Continuous Sampler
2	1		***CLAYEY SILT (TILL)*** Brown, trace gravel, moist, fractured - greyish infillling along vertical fractures - brownish-grey colour shift - large shale pieces			2	CS	100		- Water level measured at 1.55 metres below ground surface on June 19, 2009
8			- brownish red, moist	148.78						
9	2		***WEATHERED SHALE/TILL*** -red with green inclusions -fractured, blocky	2.62 148.33		3	CS	85		- Auger refusal at 3.07 m
10	3		End of Borehole	3.07						

N-Value: 10 30 50 70 90

RQD %: 10 30 50 70 90

WELL CONSTRUCTION

- well constructed with 50 mm Sch.40 PVC riser and screen
- #10 slot screen from 1.5 to 3.0 mbgs.
- 3/8" holeplug from 0.15 to 1.25 mbgs
- #2 sand pack from 1.25 to 3.1 mbgs

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 1, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-4

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597754 **Zone** 17T
Northing: 4809654 **Datum:** NAD83
MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft / m)	Description	Depth/Elev	Sample Number	Type	Recovery (%)	N-Value / RQD (%)	Remarks
	Ground Surface	152.35					
0 / 0	***TOPSOIL***	0.00 151.74					
2 / 1	***SANDY SILT to SILTY SAND*** Trace gravel, moist with organics	0.61 150.98	1	CS	66		- SS = Split Spoon Sample - CS = Continuous Sampler
5 / 2	***CLAYEY SILT (TILL)*** Brown, mottled, some organics, wet to saturated	1.37 150.22		SS	66	10	- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
7 / 2	***SANDY SILT to SILTY SAND (TILL)*** Brown to grey-brown, moist, very dense, massive	2.13	2	CS	100		
10 / 3	- minor rust staining			SS	72	52	
12 / 4	***CLAYEY SILT (TILL)*** Grey, moist to wet	3.61	3	CS	100		- Water level measured at 3.73 metres below ground surface on June 19, 2009
14 / 4	- minor fractures to 4.0 mbgs	147.93					
15 / 5	***SANDY SILT (TILL)*** Brown, some stones, moist, massive	4.42		SS	0	>50	
17 / 5			4	CS	100		
19 / 6		146.33					
20 / 6	End of Borehole	6.02					**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 2.9 to 5.9 mbgs. - 3/8" holeplug from 0.3 to 2.44 mbgs - #2 sand pack from 2.44 to 6.02 mbgs

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: June 8, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-5D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597483 **Zone** 17T
Northing: 4809933 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD (%)	Remarks
		Ground Surface	159.31						
0 / 0		***TOPSOIL***	0.00						
2 / 1		***SANDY SILT*** Brown, some clay and stones, moist, till like appearance	158.65 0.66		1	CS	96		- SS = Split Spoon Sample - CS = Continuous Sampler
3 / 1		***CLAYEY SILT (TILL)*** Brown, some sand, trace gravel, moist, massive			2	SS CS	66 100	38	- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
10 / 3					3	SS CS	77 100	65	
12 / 4		Becoming grey with fractures - rust colour observed	155.60 3.71		4	SS CS	94 100	27	- Water level measured at 3.98 metres below ground surface on June 19, 2009
20 / 6		- Fractures no longer evident below 6.0 mbgs			5	SS CS	77 100	23	
25 / 8					6	SS CS	100 77	30	

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: June 5, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 2

Log of Borehole: MMM09-5D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597483 **Zone** 17T
Northing: 4809933 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
30									
31									
32					7	SS	100	41	
33	10					CS	100		
34									
35						SS	100	36	
36	11	-0.05 m thick sand seam at 11.0 mbgs - becoming red in colour - increase in sand content with depth			8	CS	100		
37									
38									
39	12							>50	
40						SS	44		
41					9	CS	100		
42									
43	13								
44									
45						SS	70	>50	
46	14		145.19						
47		***SANDY SILT*** Red, some clay, compact	14.12		10	CS	100		**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 15.04 to 16.54 mbgs. - 3/8" holeplug from 0.3 to 14.42 mbgs - #2 sand pack from 14.42 to 16.56 mbgs
48			144.79						
49	15	***SANDY SILT (TILL)*** Red, moist to wet, very dense, shale fragments	14.52						
50						SS	36	>50	
51					11	CS	100		
52	16								
53									
54			142.75						
55		End of Borehole	16.56						
56	17								
57									
58									
59									

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 5, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 2 of 2

Log of Borehole: MMM09-5S

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597483 **Zone** 17T

Northing: 4809933 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
			Ground Surface	159.00						
0	0		***TOPSOIL***	0.00						
1			***SANDY SILT*** Brown, some clay and stones, moist, till like appearance	158.34 / 0.66						- Shallow well not sampled
2			***CLAYEY SILT (TILL)*** Brown, some sand, trace gravel, moist, massive							
3	1									
4										
5										
6	2									
7										
8										
9										
10	3									
11										
12				155.29						
13	4		Becoming grey with fractures	3.71						
14			- rust colour observed							
15										
16	5									
17										
18										- Water level measured at 5.63 metres below ground surface on June 19, 2009
19										
20	6		- Fractures no longer evident below 6.0mbgs							
21										
22										
23	7									
24										
25										
26	8									
27										
28										
29				150.06						
			End of Borehole	8.94						

WELL CONSTRUCTION
- well constructed with 50 mm Sch.40 PVC riser and screen
- #10 slot screen from 5.82 to 8.92 mbgs.
- 3/8" holeplug from 0.3 to 4.88 mbgs
- #2 sand pack from 4.88 to 8.94 mbgs

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 5, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-6D

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597168 **Zone** 17T

Northing: 4809531 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Description	Depth/Elev	Sample Number	Type	Recovery (%)	N-Value / RQD	Remarks
		Ground Surface	155.36					
0	0	***TOPSOIL***	0.00					
1		***CLAYEY SILT (TILL)*** Brown, some sand and gravel		1	CS	100		- SS = Split Spoon Sample - CS = Continuous Sampler - HQ = HQ Core Sample
2	1	- minor fracturing with rust discolouration - large pieces of red shale observed						
4					SS	44	44	- Water level measured at 0.73 metres below ground surface on June 19, 2009
5				2	CS	100		
7	2							- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
8								
9		- change in colour to reddish brown						
10	3				SS	25	>91	
11			151.83	3	CS	100		
12		***TILL/WEATHERED SHALE*** Brownish-red, moist	3.53					
13	4							
14								
15				4	SS CS	100	>50	
16			150.48					
17	5	***WEATHERED SHALE/TILL*** Red with greenish bands	4.88	Run 1	HQ	83		- Auger refusal at 4.88 m - Switch to HQ core
18								
19								
20	6			Run 2	HQ	41		
21			148.81					
22		***SHALE*** Red with green banding -weathered bands 0.1 m thick to about 7 m depth, then becoming less weathered	6.55					
23	7			Run 3	HQ	40		
24								
25								
26	8							
27				Run 4	HQ	91		
28								
29								

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 3, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 100 mm

Sheet: 1 of 2

Log of Borehole: MMM09-6D

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597168 **Zone** 17T

Northing: 4809531 **Datum:** NAD83

MOE ID#: A081567

SUBSURFACE PROFILE					Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
Depth	Symbol	Description	Depth/Elev	Well Data					
10					Run 5	HQ	100		
11		End of Borehole	144.34 11.02						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 9.4 to 10.9 mbgs. - 3/8" holeplug from 0.3 to 8.71 mbgs - #2 sand pack from 8.71 to 11.02 mbgs
12									
13									
14									
15									
16									
17									

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 3, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 100 mm

Sheet: 2 of 2

Log of Borehole: MMM09-6S

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597168 **Zone** 17

Northing: 4809531 **Datum:** NAD 83

MOE ID#:

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
		Ground Surface	155.18						
0 / 0		***TOPSOIL***	0.00						
1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 18 / 19 / 20 / 21 / 22 / 23 / 24 / 25 / 26 / 27 / 28 / 29 / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8		***CLAYEY SILT (TILL)*** Some sand/gravel, brown, moist, minor fracturing with rust discolouration, large pieces of red shale							- Shallow well not sampled
			152.39						
		Reddish-brown colour	2.79						
			151.65						- Water level measured at 3.45 metres below ground surface on June 19, 2009
		SHALEY TILL/WEATHERED SHALE Brownish-red, moist -greenish coloured shale/tillwith depth	3.53						
			150.30						
		WEATHERED SHALE/TILL Red with greenish bands	4.88						
			149.19						
		End of Borehole	5.99						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 3.56 to 5.84 mbgs. - 3/8" holeplug from 0.3 to 2.44 mbgs - #2 sand pack from 2.44 to 5.99 mbgs

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 3, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 100 mm

Sheet: 1 of 1

Log of Borehole: MMM09-7

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597528 **Zone** 17
Northing: 4809605 **Datum:** NAD 83
MOE ID#:

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
		Ground Surface	153.82						
0 / 0		***TOPSOIL***	0.00						
1		***SANDY SILT to SILTY FINE SAND*** Brown, wet			1	CS	72		- SS = Split Spoon Sample - CS = Continuous Sampler
2		***CLAYEY SILT (TILL)*** Trace to some sand with shale fragments, brown, moist, fractures stained rust coloured, some greyish-white infilling of fractures			2	SS	77	48	- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
1 / 3					3	CS	100		
4					4	SS	88	70	
5					5	CS	100		-Water level measured at 1.13 metres below ground surface on June 19, 2009
2 / 6			150.17						
7		-becoming grey coloured -fracturing no longer evident	3.65						
8					6	SS	88	57	
3 / 9			149.10						
10		-becoming red-reddish grey, moist to wet	4.72		7	CS	100		
11									
4 / 12									
13									
14									
5 / 15									
16									
17									
18									
19			147.88						
6 / 20		End of Borehole	5.94						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 2.95 to 5.84 mbgs. - 3/8" holeplug from 0.3 to 2.44 mbgs - #2 sand pack from 2.44 to 5.94 mbgs
21									
22									
7 / 23									
24									
25									
8 / 26									
27									
28									
29									

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: June 8, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-8

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597387 **Zone** 17

Northing: 4809299 **Datum:** NAD 83

MOE ID#:

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD %	Remarks
		Ground Surface	158.01						
0 / 0		***TOPSOIL***	0.00						
1–3 / 0–1		***SANDY to CLAYEY SILT (TILL)*** Brown, moist, fractures infillled with grey clayey silt			1	CS	98		- SS = Split Spoon Sample - CS = Continuous Sampler
4–7 / 1–2					2	SS	66	47	- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
					3	CS			
8–11 / 2–3					4	SS	44	59	- Water level measured at 2.07 metres below ground surface on June 19, 2009
					4	CS	100		
12 / 4			154.11						
13 / 4		-becoming grey-brown, slight mottling, moist to wet -darkto rust coloured oxidation on fractures	3.90		5	SS	66	37	
14–19 / 4–6					6	CS	100		**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 4.52 to 7.87 mbgs. - 3/8" holeplug from 0.3 to 4.27 mbgs - #2 sand pack from 4.27 to 8.0 mbgs
20 / 6					7	SS	50	47	
21–23 / 6–7					8	CS	100		
24 / 7			150.69						
24 / 7		-Reddish coloured with increased shale fragments	7.32		9	SS	33		
25 / 7			150.19		10	CS	100	>92	-Auger refusal at 8.0 m
26 / 8		***WEATHERED SHALE*** Red	7.82						
		End of Borehole							

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 2, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-9

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597562 **Zone** 17

Northing: 4809178 **Datum:** NAD 83

MOE ID#:

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD (%)	Remarks
		Ground Surface	151.64						
0 / 0		***TOPSOIL***	0.00						
3 / 1		***SANDY SILT to CLAYEY SILT (TILL-LIKE APPEARANCE)*** Brown, moist to wet, rust stains on fractures	150.80		1	CS	91		- Water level measured at 0.87 metres below ground surface on June 19, 2009
3 / 1		***CLAYEY SILT (TILL)*** Trace sand, brown, moist to wet with shale fragments - Shale identified at lower tip of sampler	0.84		2	SS	40	57	-Auger refusal at 2.42 m -Assumed bedrock surface
7 / 2			149.22		3	CS	33		
		End of Borehole	2.42						

- SS = Split Spoon Sample
- CS = Continuous Sampler

- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.

WELL CONSTRUCTION

- well constructed with 50 mm Sch.40 PVC riser and screen
- #10 slot screen from 1.65 to 2.26 mbgs.
- 3/8" holeplug from 0.3 to 1.32 mbgs
- #2 sand pack from 1.32 to 2.42 mbgs

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 2, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-10D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597817 **Zone** 17
Northing: 4809284 **Datum:** NAD 83
MOE ID#:

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
			Ground Surface	149.65						
0	0		***TOPSOIL***	0.00 149.14						- Water level measured at 0.34 metres below ground surface on June 19, 2009
2	1		***CLAYEY SILT (TILL)*** Brown to reddish brown, moist to wet, minor rust staining, shale fragments	0.51 148.38		1	CS	85		
4	1		***WEATHERED SHALE*** Red, moist with silty clay matrix	1.27 147.77		2	CS	89		- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
6	2		***SHALE BEDROCK*** Red with green banding - Fractured zones between: -3.05 to 3.48 m depth -4.93 to 5.13 m depth -5.79 to 5.89 m depth	1.88		Run 1	HQ	49		- Auger refusal at 1.88 m - Switch to HQ coring - Soft drilling from 2.64 to 2.95
10	3					Run 2	HQ	100		
14	4									- SS = Split Spoon Sample - CS = Continuous Sampler - HQ = HQ Core Sample
16	5					Run 3	HQ	94		**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 6.30 to 7.67 mbgs. - 3/8" holeplug from 0.3 to 6.4 mbgs - #2 sand pack from 5.18 to 7.67 mbgs
20	6									
22	7					Run 4	HQ	100		
25	7			141.98						
26	8		End of Borehole	7.67						

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: June 1, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-10S

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597817 **Zone** 17

Northing: 4809284 **Datum:** NAD 83

MOE ID#: A081567

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD	Remarks
		Ground Surface	149.69						
0	0	***TOPSOIL***	0.00						
1			149.18						
2		***CLAYEY SILT (TILL)*** Brown to reddish brown, moist to wet, minor rust staining, shale fragments	0.51						- Water level measured at 0.43 metres below ground surface on June 19, 2009
3	1								
4			148.42						
5		***WEATHERED SHALE*** Red, moist with silty clay matrix	1.27						
6			147.81						- Shallow well not sampled
7	2	***SHALE BEDROCK*** Red with green banding - Fractured zones between: -3.05 to 3.48 m depth -4.93 to 5.13 m depth -5.79 to 5.89 m depth	1.88						
8			147.43						
9			2.26						
10	3	End of Borehole							**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 1.5 to 2.26 mbgs. - 3/8" holeplug from 0.3 to 1.2 mbgs - #2 sand pack from 1.2 to 2.26 mbgs
11									
12									
13	4								
14									
15									
16									
17	5								
18									
19									
20	6								
21									
22									
23	7								
24									
25									
26	8								
27									
28									
29									

N-Value: 10 30 50 70 90

RQD %: 10 30 50 70 90

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 1, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-11

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597838 **Zone** 17

Northing: 4808916 **Datum:** NAD 83

MOE ID#:

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD %	Remarks
		Ground Surface	153.52						
0 / 0		***TOPSOIL***	0.00						
1 / 0		***CLAYEY SILT (TILL)*** Brown, moist, fractured -some greyish-white clayey silt infilling of fractures			1	CS	70		- SS = Split Spoon Sample - CS = Continuous Sampler
4 / 1					2	SS	94	33	- Water level measured at 1.02 metres below ground surface on June 19, 2010
6 / 2					3	CS	100		
9 / 3					4	SS	100	46	- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
11 / 3					5	CS	100		
13 / 4			149.48						
13 / 4		***CLAYEY SILT (TILL)/WEATHERED SHALE*** Red, moist	4.04		6	SS	50	>50	
15 / 5		***WEATHERED SHALE*** Red, moist			7	CS	100		
18 / 5			147.86						- Auger refusal at 5.66 m
19 / 6		End of Borehole	5.66						

WELL CONSTRUCTION
- well constructed with 50 mm Sch.40 PVC riser and screen
- #10 slot screen from 2.6 to 5.6 mbgs.
- 3/8" holeplug from 0.3 to 2.1 mbgs
- #2 sand pack from 2.1 to 5.66 mbgs

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: June 8, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-12

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 598012 **Zone** 17
Northing: 4808710 **Datum:** NAD 83
MOE ID#:

SUBSURFACE PROFILE

Depth (ft / m)	Description	Depth/Elev	Sample Number	Type	Recovery (%)	N-Value / RQD (%)	Remarks
	Ground Surface	152.71					
0 / 0	***TOPSOIL***	0.00					- SS = Split Spoon Sample - CS = Continuous Sampler - Water level measured at 1.62 metres below ground surface on June 19, 2009 - Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals. - Auger refusal at 3.43m
	CLAYEY SILT Brown, mottled, moist to wet	152.26 0.45					
1 / 0	***CLAYEY SILT (TILL)/WEATHERED SHALE*** Brown, mottled, fractured, infilled with greyish-white clayey silt, moist		1	CS	100		
3 / 1			3	CS	100	53	
8 / 2		150.09					
9 / 2	***CLAYEY SILT (TILL)/SHALEY TILL*** Red and green coloured, moist, changing to weathered shale	2.62					
10 / 3		149.41	4 5	SS CS	30 100	>50	
11 / 3	***WEATHERED SHALE*** Red/green, moist	3.30					
	End of Borehole						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 1.9 to 3.4 mbgs. - 3/8" holeplug from 0.3 to 1.4 mbgs - #2 sand pack from 1.4 to 3.43 mbgs

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: June 9, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-13

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597436 **Zone** 17T
Northing: 4808897 **Datum:** NAD83

MOE ID#: A081574

SUBSURFACE PROFILE

Depth (ft / m)	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD (%)	Remarks
	Ground Surface	157.30						
0 / 0	***TOPSOIL***	0.00						- SS = Split Spoon Sample - CS = Continuous Sampler
1 / 0	***CLAYEY SILT (TILL)*** Brown, trace gravel, moist to wet, massive			1	CS	97		- Water level measured at 0.35 metres below ground surface on December 18, 2009
4 / 1	-greyish vertical fractures observed				SS	80	36	
7 / 2	-fractures decreasing with depth			2	CS	80		- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
9 / 3		154.53						
10 / 3	***WEATHERED SHALE*** Red, minor green banding, fissile, moist	2.77			SS	21	50 for 0.1m	
11 / 3				3	CS	78		
		153.69						
12 / 4	End of Borehole	3.61						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 1.82 to 3.2 mbgs - 3/8" holeplug from 0.1 to 1.52 mbgs - #2 sand pack from 1.52 to 3.61 mbgs
29 / 8								

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 9, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-14

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597136 **Zone** 17T
Northing: 4809160 **Datum:** NAD83

MOE ID#: A081576

SUBSURFACE PROFILE

Depth (ft / m)	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD	Remarks
0 / 0	Ground Surface	155.53						
0 / 0	***TOPSOIL***	0.00 155.28						- SS = Split Spoon Sample - CS = Continuous Sampler
1 / 0	***CLAYEY SILT (TILL)*** Brown, trace gravel, moist, massive	0.25		1	CS	80		- Water level measured at 1.11 metres below ground surface on November 17, 2009
2 / 1	- Fractured with rust oxidation - greyish infilling along vertical fractures							
5 / 2				2	SS CS	100 100	34	
9 / 3	- Red, some sand, massive, some stones							- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
10 / 3				3	SS CS	70 80	67 for 0.1m	
13 / 4		151.36						
13 / 4	***WEATHERED SHALE*** Red with green banding, fissile, moist	4.17		4	CS	97		
17 / 5		150.20						
17 / 5	End of Borehole	5.33						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 2.3 to 5.3 mbgs. - 3/8" holeplug from 0.1 to 1.8 mbgs - #2 sand pack from 1.8 to 5.3 mbgs

N-Value: 10 30 50 70 90
RQD %: 10 30 50 70 90

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 10, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-15D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597150 **Zone** 17T
Northing: 4808904 **Datum:** NAD83
MOE ID#: A081575

Depth (ft)	Depth (m)	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD (%)	Remarks
		Ground Surface	159.13						
0	0	***TOPSOIL***	0.00 158.88						- SS = Split Spoon - CS = Continuous Sampler - HQ = HQ Rock Core
1		***CLAYEY SILT (TILL)*** Brown, trace gravel, moist, massive	0.25						
2					1	CS	100		
3	1	- fractured with rust oxidation - greyish infilling along vertical fractures							- Water level measured at 0.78 m below ground surface on November 17, 2009
4			157.61						
5		***SHALEY TILL/WEATHERED SHALE*** Red, weathered, moist	1.52			SS	100	50 for 0.1 m	
6	2				2	CS	100		
7									
8			156.53						
9		***WEATHERED SHALE*** Red, signs of oxidation, fissile	2.60						
10	3								- Overburden was sampled using continuous sampling techniques. Split spoon samples were collected from the upper portion of the continuous sample interval. - Sampler refusal at 4.6 metres - Switch to HQ core
11									
12					3	CS	100		
13	4	- red with green banding							
14									
15					Run 1	HQ	100		
16	5	- highly weathered							
17									
18		- highly weathered							
19		- highly weathered			Run 2	HQ	100		
20	6								
21									
22									
23	7				Run 3	HQ	99		
24									
25		- weathered to fractured							
26	8								
27									
28					Run 4	HQ	86		
29									

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 10, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 100 mm
Sheet: 1 of 2

Log of Borehole: MMM09-15D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 597150 **Zone** 17T
Northing: 4808904 **Datum:** NAD83

MOE ID#: A081575

SUBSURFACE PROFILE					Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
Depth	Symbol	Description	Depth/Elev	Well Data					
30		- weathered with fractures							**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 11.3 to 12.8 mbgs. - 3/8" holeplug from 0.1 to 10.8 mbgs - #2 sand pack from 10.8 to 12.8 mbgs
31									
32									
33	10								
34					Run 5	HQ	97		
35									
36	11								
37									
38									
39	12				Run 6	HQ	95		
40									
41			146.30						
42		End of Borehole	12.83						
43	13								
44									
45									
46	14								
47									
48									
49	15								
50									
51									
52	16								
53									
54									
55									
56	17								
57									
58									
59									

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 10, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 100 mm
Sheet: 2 of 2

Log of Borehole: MMM09-15S

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 597150 **Zone** 17T

Northing: 4808904 **Datum:** NAD83

MOE ID#: A081575

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
		Ground Surface	159.18						
0 / 0		***TOPSOIL***	0.00 158.93						
1		***CLAYEY SILT TILL*** Brown, trace gravel, moist, massive	0.25						- Water level measured at 0.34 metres below ground surface on November 17, 2009
2 / 1		- fractured with rust oxidation - greyish infilling along vertical fractures	157.66						
5		***SHALEY TILL/WEATHERED SHALE*** Red, weathered, moist	1.52						- Shallow well not sampled
8 / 2			156.58						
9		***WEATHERED SHALE*** Red, signs of oxidation, fissile	2.60						
13 / 4		- red with green banding							
14			154.61						
15		End of Borehole	4.57						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 1.5 to 4.5 mbgs. - 3/8" holeplug from 0.3 to 1.2 mbgs - #2 sand pack from 1.2 to 4.5 mbgs
20 / 6									
23 / 7									
26 / 8									
29									

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: November 10, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-16

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 596524 **Zone** 17T
Northing: 4809519 **Datum:** NAD83

MOE ID#: A085858

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD	Remarks
ft / m		Ground Surface	163.75						
0 / 0		***TOPSOIL***	0.00						- SS = Split Spoon - CS = Continuous Sampler - HQ = HQ Rock Core
1		***CLAYEY SILT TILL*** Brown, massive, moist, some gravel			1	CS	100		
2 / 1		- fractured with rust - greyish-white infilling along fractures				SS	89		- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
3					2	CS	100	35	
4						SS	100		
5 / 2					3	CS	100	39	
6									
7									
8 / 3		- black staining with rust along vertical fractures from 2.9m to 4.5m							
9									
10									
11									
12 / 4									
13									
14			159.20						
15		Grey, massive, moist to wet	4.55			SS	89	21	
16					4	CS	100		
17 / 5									
18		- fractures with rust oxidation							- Water level measured at 5.80 metres below ground surface on November 18, 2009
19									
20 / 6									
21			157.20			SS	88	63 for 0.13m	
22		End of Borehole	6.55						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 2.9 to 5.9 mbgs. - 3/8" holeplug from 0.3 to 2.4 mbgs - #2 sand pack from 2.4 to 6.5 mbgs
23 / 7									
24									
25									
26 / 8									
27									
28									
29									

N-Value: 10 30 50 70 90
RQD %: 10 30 50 70 90

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 13, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-17

Project No: 14-09222-001-HG1

Project: 407 West Employment Lands

Client: bcIMC Realty Corporation c/o Bentall LP

Location: North Oakville, Ontario

Easting: 596202 **Zone** 17T

Northing: 4809821 **Datum:** NAD83

MOE ID#: A081575

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Description	Depth/Elev	Sample Number	Type	Recovery (%)	N-Value / RQD (%)	Remarks
		Ground Surface	162.72					
0	0	***TOPSOIL***	0.00					- SS = Split Spoon - CS = Continuous Sampler - HQ = HQ Rock Core
1–2		***CLAYEY SILT (TILL)*** Brown, massive, moist - greyish-white infilling along vertical fractures - black staining with rust		1	CS	80		
3–4	1							- Water level measured at 1.51 metres below ground surface on November 17, 2009
5–6	2			2	SS	100	29	
7			160.43		CS	100		
8		Grey, massive, moist to wet	2.29					
9–10	3				SS	100	70	- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
11–12				3	CS	100		
13–14	4							
15–16					SS	100	35	
16	5		157.59	4	CS	100		
17		***SANDY SILT (TILL)*** Red brown, moist, massive, hard	5.13					- Water level measured at 1.29 metres below ground surface on November 18, 2009
18–19		- greyish-white infilling						
20	6		156.42		SS		55	
21		End of Borehole	6.30					**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 3.3 to 6.3 mbgs. - 3/8" holeplug from 0.3 to 2.2 mbgs - #2 sand pack from 2.2 to 6.3 mbgs
22–23	7							
24–26								
27–29	8							

N-Value: 10 30 50 70 90

RQD %: 10 30 50 70 90

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: November 13, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-18D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 595804 **Zone** 17T
Northing: 4809219 **Datum:** NAD83
MOE ID#: A085856

Depth (ft)	Depth (m)	Description	Depth/Elev	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
		Ground Surface	169.38					
0	0	***TOPSOIL***	0.00					- SS = Split Spoon - CS = Continuous Sampler - HQ = HQ Rock Core - Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
1		***CLAYEY SILT (TILL)*** Brown, massive, moist		1	CS	100		
2	1	- greyish-white infilling, mottled, minor fracturing						
3				2	CS	100		
4								
5								
6	2							
7								
8								
9								
10	3	- massive, blocky		3	CS	100		
11		- black staining						
12								
13	4							
14		- massive, minor rust stains to fracturing	164.83					
15		Grey, massive, moist to wet	4.55	4	CS	100		- Water level measured at 5.15 metres below ground surface on November 17, 2009
16								
17	5	- minor rust stains in fractures						
18								
19								
20	6							
21			162.83					
22		***SANDY SILT (TILL)*** Red, some gravel, massive	6.55	5	CS	100		
23	7							
24								
25								
26	8			7	CS	100		
27		- fine sandy silt till, moist						
28								
29								

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 11, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 100 mm
Sheet: 1 of 2

Log of Borehole: MMM09-18D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 595804 **Zone** 17T
Northing: 4809219 **Datum:** NAD83

MOE ID#: A085856

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
30		- signs of oxidation							
31									
32									
33	10				8	CS	98		
34			158.88						
35		***CLAYEY SILT (TILL)*** Red, some gravel, massive, moist to wet, shale fragments	10.50						
36	11				9	CS	92		
37									
38									
39			157.48						
40	12	***SHALEY TILL/WEATHERED SHALE*** Red with green banding, moist, fissile	11.90		10	CS	50		
41									
42									
43	13				Run 1	HQ	100		**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 13.9 to 15.4 mbgs. - 3/8" holeplug from 0.3 to 13.5 mbgs - #2 sand pack from 13.5 to 15.6 mbgs
44									
45									
46	14								
47									
48					Run 2	HQ	87		
49	15								
50									
51			153.78						
52		End of Borehole	15.60						
53	16								
54									
55									
56	17								
57									
58									
59									

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 11, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 100 mm
Sheet: 2 of 2

Log of Borehole: MMM09-18S

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 595804 **Zone** 17T
Northing: 4809219 **Datum:** NAD83

MOE ID#: A085856

SUBSURFACE PROFILE

Depth (ft / m)	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD %	Remarks
	Ground Surface	169.36						
0 / 0	***TOPSOIL***	0.00						- Shallow well not sampled
	CLAYEY SILT (TILL) Brown, massive, moist							
	- greyish-white infilling, mottled, minor fracturing				SS		26	
10 / 3	- massive, blocky - black staining				SS		32	
	- massive, minor rust stains to fracturing	164.81						
15 / 4.55	Grey brown, massive, moist to wet	4.55			SS		20	
	- minor rust stains in fractures							- Water level measured at 5.02 metres below ground surface on November 17, 2009
20 / 6					SS		25	
		162.81						
22 / 7	End of Borehole	6.55						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 3.2 to 6.1 mbgs. - 3/8" holeplug from 0.3 to 2.1 mbgs - #2 sand pack from 2.1 to 6.5 mbgs
26 / 8								
29								

Drilled By: All-Terrain Drilling

Drill Method: HSA/HQ Coring

Drill Date: November 12, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny

Checked By: A. Kulin

Hole Size: 180 mm

Sheet: 1 of 1

Log of Borehole: MMM09-19D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 595386 **Zone** 17T
Northing: 4810338 **Datum:** NAD83

MOE ID#: A085837

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD %	Remarks
		Ground Surface	180.18						
0 / 0		***CLAYEY SILT FILL*** Brown, massive, moist	0.00		1	CS	100		- SS = Split Spoon - CS = Continuous Sampler - HQ = HQ Rock Core
3 / 1			179.09						
4 / 1		***CLAYEY SILT (TILL)*** Brown, some sand and gravel, massive, rust stains, moist	1.09			SS	50	42	- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
6 / 2					2	CS	100		
8 / 2		- fractured				SS	50		
10 / 3					3	CS	100		
12 / 3			176.48						
13 / 4		Grey, trace of gravel, moist	3.70			SS	50	34	
14 / 4		- occasional rust coloured staining observed - minor fracturing			4	CS	100		
15 / 4		- fractures decrease							
18 / 5						SS	56	26	- Water level measured at 13.90 metres below ground surface on December 18, 2009
20 / 6					5	CS	100		
23 / 7						SS	56	30	
25 / 7		- becoming brownish			6	CS	100		
28 / 8						SS	78	25	

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 16, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 2

Log of Borehole: MMM09-19D

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 595386 **Zone** 17T
Northing: 4810338 **Datum:** NAD83

MOE ID#: A085837

SUBSURFACE PROFILE

Depth	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
30									
31					7	CS	100		
32									
33	10								
34								26	
35						SS	61		
36	11				8	CS	92		
37									
38									
39								25	
40	12					SS	100		
41					9	CS	100		
42									
43	13								**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 13.7 to 15.2 mbgs. - 3/8" holeplug from 0.3 to 13.2 mbgs - #2 sand pack from 13.2 to 15.2 mbgs
44									
45									
46	14	- grey, massive, moist			10	CS	100		
47									
48									
49	15				11	CS			
50		End of Borehole	164.94 15.24						
51									
52									
53	16								
54									
55									
56	17								
57									
58									
59									

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 16, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 2 of 2

Log of Borehole: MMM09-19S

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 595386 **Zone** 17T
Northing: 4810338 **Datum:** NAD83

MOE ID#: A081575

SUBSURFACE PROFILE

Depth (ft / m)	Symbol	Description	Depth/Elev	Well Data	Sample Number	Type	Recovery (%)	N-Value / RQD % (10 30 50 70 90)	Remarks
		Ground Surface	180.22						
0 – 1		***CLAYEY SILT FILL*** Brown, massive, moist	0.00 179.13						- Shallow well not sampled
1 – 3		***CLAYEY SILT (TILL)*** Brown, some sand and gravel, massive, rust stains, moist - fractured	1.09 176.52						
3 – 6		Grey, trace of gravel, moist - occasional rust coloured staining observed - minor fracturing - fractures decrease	3.70 174.15						- Water level measured at 4.52 metres below ground surface on December 18, 2009
6 – 8		End of Borehole	6.07						**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 3.0 to 6.0 mbgs. - 3/8" holeplug from 0.3 to 2.2 mbgs - #2 sand pack from 2.2 to 6.1 mbgs

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 16, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole: MMM09-20

Project No: 14-09222-001-HG1
Project: 407 West Employment Lands
Client: bcIMC Realty Corporation c/o Bentall LP
Location: North Oakville, Ontario

Easting: 594806 **Zone** 17T
Northing: 4809566 **Datum:** NAD83

MOE ID#: A085838

SUBSURFACE PROFILE

Depth (ft / m)	Description	Depth/Elev	Sample Number	Type	Recovery (%)	N-Value / RQD (%)	Remarks
	Ground Surface	181.50					
0 / 0	***CLAYEY SILT (TILL)*** Brown, some sand, some gravel, massive, moist	0.00	1	CS	100		- SS = Split Spoon - CS = Continuous Sampler - HQ = HQ Rock Core
3 / 1	- occasional orange staining			SS	61	39	- Overburden was sampled using continuous sampling techniques. Split spoon samples were obtained from the upper portion of the sample intervals.
6 / 2	- greyish-white inclusions		2	CS	100		
10 / 3				SS	56	61	- Water level measured at 6.85 metres below ground surface on November 18, 2009
11		177.92	3	CS	100		
12	Grey, some gravel, massive, moist to wet	3.58					
13 / 4	- fractures observed			SS	78	23	
16 / 5			4	CS	100		**WELL CONSTRUCTION** - well constructed with 50 mm Sch.40 PVC riser and screen - #10 slot screen from 4.2 to 7.2 mbgs. - 3/8" holeplug from 0.3 to 3.5 mbgs - #2 sand pack from 3.5 to 7.7 mbgs
19 / 6	- mottling			SS	61	27	
20			5	CS	100		
24 / 7				SS	78	24	
25		173.80					
	End of Borehole	7.70					
26 / 8							

Drilled By: All-Terrain Drilling
Drill Method: HSA/HQ Coring
Drill Date: November 17, 2009

MMM Group Limited
100 Commerce Valley Drive West
Thornhill, Ontario L3T 0A1

Borehole Log is for Environmental Purposes Only

Logged By: E. Kaleny
Checked By: A. Kulin
Hole Size: 180 mm
Sheet: 1 of 1

Log of Borehole MMM-11-21

Project No. BRM00059627-C0
Drawing No. 6
Project: Geotechnical Investigation
Sheet No. 1 of 1
Location: 14 Mile Creek, Oakville, Ontario

Date Drilled: July 14, 2011
Drill Type: CME 55 - Trackmount
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)
		MMM Survey Elevation = 150.67 masl		
		~400 mm topsoil over **CLAYEY SILT TILL:** trace gravel, sand seams, brown and grey with occasional reddish brown pockets, moist, hard	150.92	0
		-becoming wet		1
				2
				3
			146.8	4
		SHALE: weathered, limestone layers, reddish brown, moist (Queenston Formation)		5
			144.8	6
		END OF BOREHOLE		

SPT (N Value) 20 40 60 80
Shear Strength kPa 100 200
Combustible Vapour Reading (ppm) 25 50 75
Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30

8
24
32
32
60
50/100 mm
50/30 mm

Sample | Natural Unit Weight kN/m³

LAGWGL02EXP BH LOGS.GPJ NEW.GDT 8/9/11

Notes:
1. Borehole advanced to completion at 6.125 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM00059627-C0); borehole data requires interpretation assistance by exp professional staff before use by others.
3. Monitoring Well installed and borehole backfilled as shown on completion.

exp.
New identity of Trow Associates Inc.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m) MW = Mon. Well
On completion	6.0	6.20
July 15, 2011	3.63	
July 27, 2011	3.99	

Log of Borehole MMM-11-22-D

Project No. BRM00059627-C0 Drawing No. 7

Project: Geotechnical Investigation Sheet No. 1 of 1

Location: 14 Mile Creek, Oakville, Ontario

Date Drilled: July 14, 2011

Drill Type: CME 55 - Trackmount

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m
		MMM Survey Elevation = 151.74 masl	152.00
		~350 mm topsoil over **CLAYEY SILT TILL:** trace gravel, sand seams, brown, reddish brown pockets, oxidized fissures, moist, hard	
		-wet, larger gravel sizes and cobbles	
		-becoming wet	
		-becoming reddish brown with shale fragments	
			146.5
		SHALE: weathered, reddish brown, moist (Queenston Formation)	
			142.8
		END OF BOREHOLE	

Depth (m)

SPT (N Value) 20 40 60 80

Shear Strength kPa 100 200

Combustible Vapour Reading (ppm) 25 50 75

Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30

Sample

Natural Unit Weight kN/m³

0 1 2 3 4 5 6 7 8 9

20 28 23 33 23 98/230 mm 50/50 mm 50/35 mm 50/15 mm

LAGWGL02EXP BH LOGS.GPJ NEW.GDT 8/8/11

Notes:
1. Borehole advanced to completion at 9.165 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM00059627-C0); borehole data requires interpretation assistance by exp professional staff before use by others.
3. Monitoring Well installed and borehole backfilled as shown on completion.

exp.
New identity of Trow Associates Inc.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m) MW = Mon. Well
On completion	8.54	9.15
July 15, 2011	4.48	
July 27, 2011	4.84	

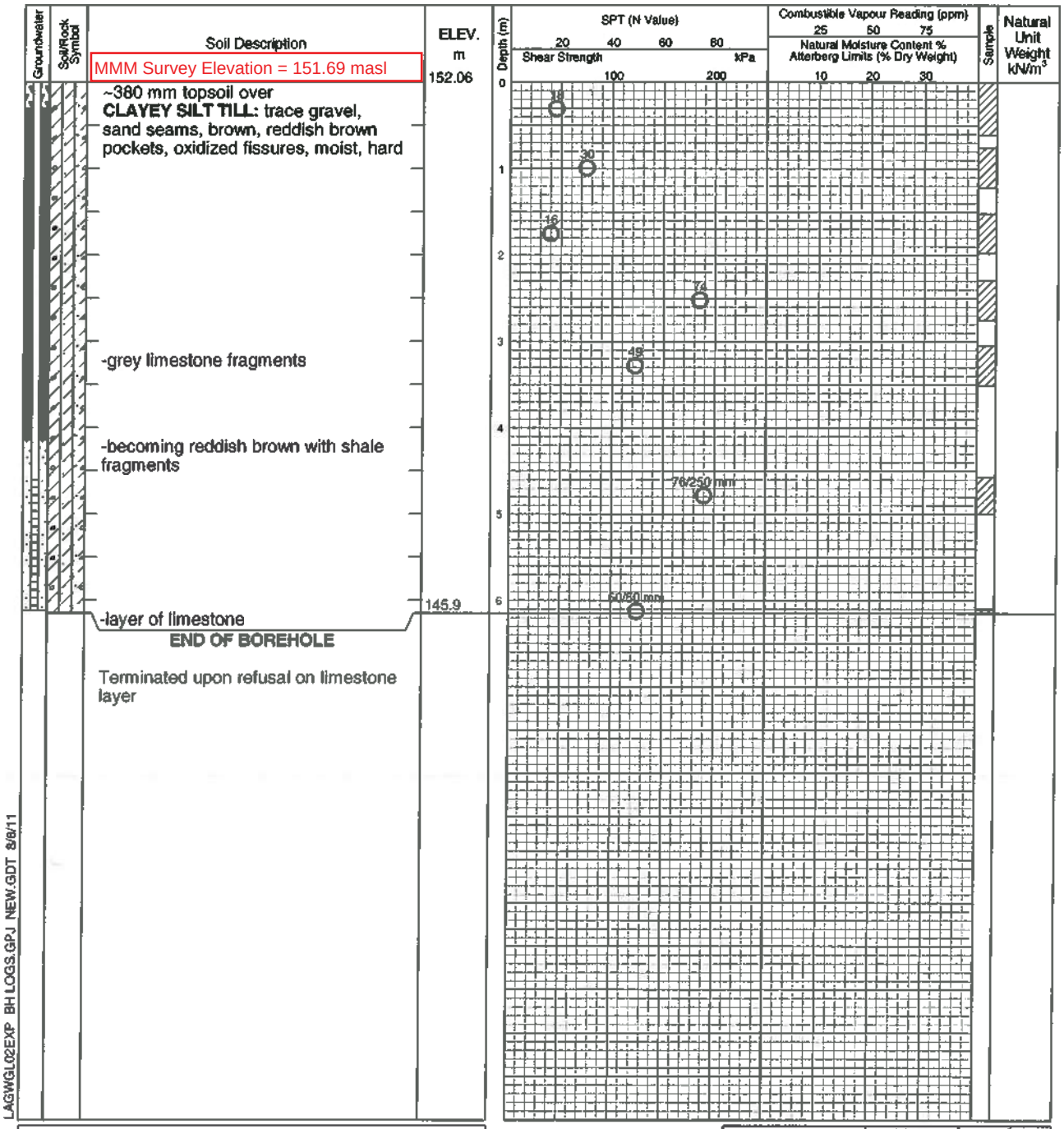
Log of Borehole MMM-11-22-S

Project No. BRM00059627-C0
Drawing No. 8
Project: Geotechnical Investigation
Sheet No. 1 of 1
Location: 14 Mile Creek, Oakville, Ontario

Date Drilled: July 13, 2011
Drill Type: CME 55 - Trackmount
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer



LAGWGL02EXP BH LOGS.GPJ NEW.GDT 8/8/11

Notes:
1. Borehole advanced to completion at 6.15 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM00059627-C0); borehole data requires interpretation assistance by exp professional staff before use by others.
3. Monitoring Well installed and borehole backfilled as shown on completion.

exp.
New identity of Trow Associates Inc.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m) MW = Mon. Well
On completion	No free water	6.12
July 15, 2011	4.28	
July 27, 2011	4.56	

Log of Borehole 1

Project No. BRM00059627-C0

Drawing No. 2

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 14 Mile Creek, Oakville, Ontario

Date Drilled: July 14, 2011

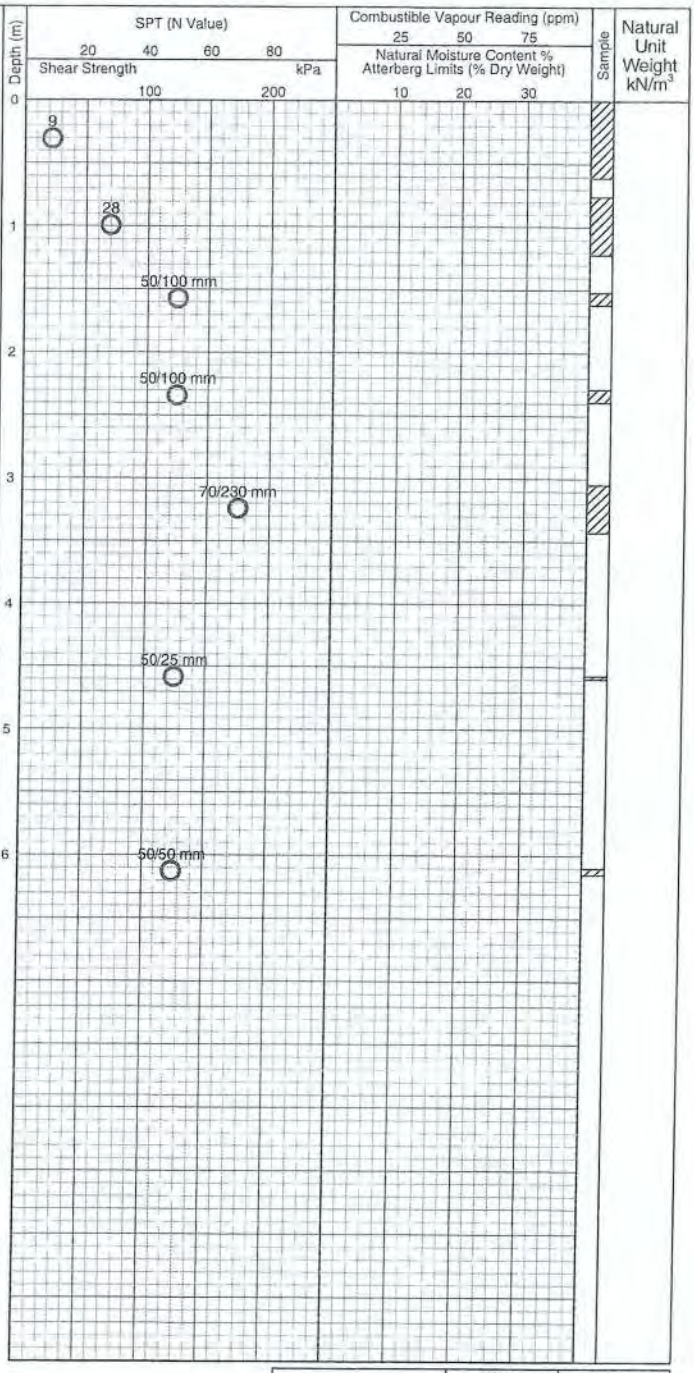
Drill Type: CME 55 - Trackmount

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m
		~400 mm topsoil over **FILL:** clayey silt, topsoil and shale fragment inclusions, trace rootlets, brown to reddish brown, moist	146.77
		SHALE: weathered, limestone layers, reddish brown, grey layers, moist (Queenston Formation)	~145.4
		-becoming wet	~140.6
		END OF BOREHOLE	



Notes:
1. Borehole advanced to completion at ~6.2 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report **(Ref. BRM00059627-C0);** borehole data requires interpretation assistance by **exp** professional staff before use by others.
3. Standpipe piezometer installed and borehole backfilled as shown on completion.

Elapsed Time	Water Level (m)	Hole Open to (m) SP = Standpipe
On completion	2.13	6.10
July 15, 2011	1.80	
July 27, 2011	1.32	

EXPLOGBRAMPTON BH LOGS.GPJ NEW.GDT 11/8/11

exp.
New identity of Trow Associates Inc.

Log of Borehole 2

Project No. BRM00059627-C0
Drawing No. 3
Project: Geotechnical Investigation
Sheet No. 1 of 1
Location: 14 Mile Creek, Oakville, Ontario

Date Drilled: July 13, 2011
Drill Type: CME 55 - Trackmount
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)
		~700 mm topsoil over **WEATHER SHALE/TILL COMPLEX:** reddish brown with grey interlayers, moist, compact to dense	145.99	0
			~143.2	2
		SHALE: weathered, reddish brown with grey interlayers, moist (Queenston Foundation)	~142.9	3
		END OF BOREHOLE		

SPT (N Value): 20 40 60 80
Shear Strength kPa: 100 200
Combustible Vapour Reading (ppm): 25 50 75
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

4
26
50/125 mm
95/230 mm
50/50 mm

Sample
Natural Unit Weight kN/m³

Notes:
1. Borehole advanced to completion at ~3.1 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report **(Ref. BRM00059627-C0);** borehole data requires interpretation assistance by **exp** professional staff before use by others.
3. Standpipe piezometer installed and borehole backfilled as shown on completion.

Elapsed Time	Water Level (m)	Hole Open to (m) SP = Standpipe
On completion	2.41	3.10
July 13, 2011 PM	0.22	
July 15, 2011	0.20	
July 27, 2011	0.53	

EXPLOGBRAMPTON BH LOGS.GPJ NEW.GDT 11/8/11

exp.
New identity of Trow Associates Inc.

Log of Borehole 3

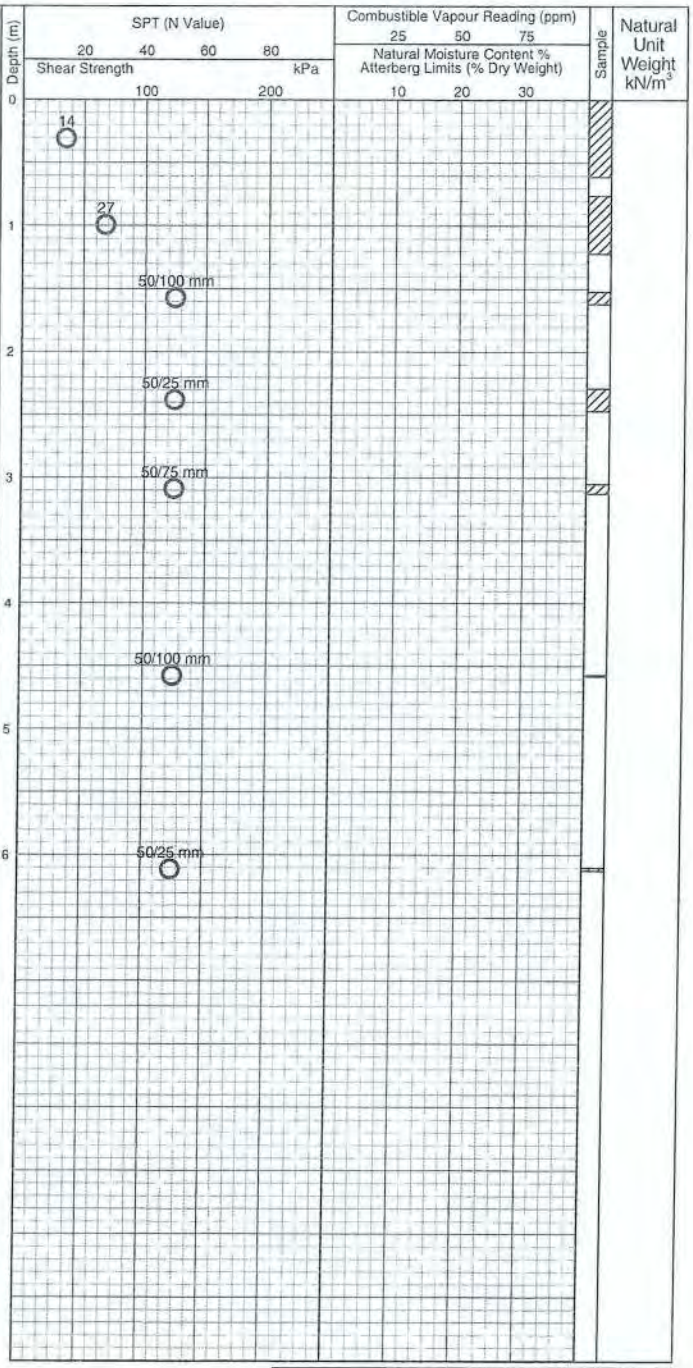
Project No. BRM00059627-C0
Drawing No. 4
Project: Geotechnical Investigation
Sheet No. 1 of 1
Location: 14 Mile Creek, Oakville, Ontario

Date Drilled: July 13, 2011
Drill Type: CME 55 - Trackmount
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)
Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m
		~450 mm topsoil over **FILL:** silt, trace clay, trace gravel, minor rootlets, brown, moist	147.78
		WEATHER SHALE/ TILL COMPLEX: reddish brown, moist, very dense	~146.8
		SHALE: weathered, limestone layers, reddish brown, grey interlayers, moist (Queenston Formation)	~146.4
		END OF BOREHOLE	~141.7

Notes:
1. Borehole advanced to completion at ~6.1 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report **(Ref. BRM00059627-C0);** borehole data requires interpretation assistance by **exp** professional staff before use by others.
3. Standpipe piezometer installed and borehole backfilled as shown on completion.



Elapsed Time	Water Level (m)	Hole Open to (m) SP = Standpipe
On completion	4.32	6.07
July 13, 2011 PM	3.14	
July 15, 2011	3.20	
July 27, 2011	3.56	

exp.
New identity of Trow Associates Inc.

EXPLOGBRAMPTON BH LOGS.GPJ NEW.GDT 11/8/11

Log of Borehole 4

Project No. BRM00059627-C0 | Drawing No. 5

Project: Geotechnical Investigation | Sheet No. 1 of 1

Location: 14 Mile Creek, Oakville, Ontario

Date Drilled: July 15, 2011

Drill Type: Manual SPT

Datum: Geodetic

Auger Sample ☒ | Combustible Vapour Reading □

SPT (N) Value ○ ▨ | Natural Moisture ×

Dynamic Cone Test — | Plastic and Liquid Limit ⊢—○

Shelby Tube ■ | Undrained Triaxial at % Strain at Failure ⊕

Field Vane Test S | Penetrometer ▲

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)
		~200mm topsoil over **WEATHER SHALE/TILL COMPLEX:** reddish brown, moist, compact	145.65	0
			~144.6	
		SHALE: weathered, limestone layers, reddish brown, grey layers, moist (Queenston Formation)	~144.2	1
		END OF BOREHOLE		

Notes:

1. Borehole advanced to completion at ~1.4 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report **(Ref. BRM00059627-C0);** borehole data requires interpretation assistance by **exp** professional staff before use by others.
3. Standpipe piezometer installed and borehole backfilled as shown on completion.

SPT (N Value): 20 40 60 80 | Shear Strength kPa: 100 200

Combustible Vapour Reading (ppm): 25 50 75

Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30

Sample | Natural Unit Weight kN/m³

9

53

50/50 mm

Elapsed Time	Water Level (m)	Hole Open to (m) SP = Standpipe
On completion	0.85	1.43
July 27, 2011	1.32	

exp.

New identity of Trow Associates Inc.

EXPLOGBRAMPTON BH LOGS.GPJ NEW.GDT 11/8/11

PLAN 20 R-10226
RECEIVED AND DEPOSITED
Date 03 JAN. 1991
LAND REGISTRAR FOR THE REGISTRY DIVISION OF HALTON (No. 20)

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE REGISTRY ACT
Date DEC. 19, 1990
A.T.McLAREN, O.L.S.

SCHEDULE

PART	LOT	CON.	INST.No	AREA
1	PART OF		151912 OAKVILLE	367 sq. ft.
2	33		517273	2,294 sq. ft.
3	PART OF	NORTH	REM.	2,471,437 sq. ft. 56.737 acres
4	33 & 34	OF	OF	8,069,590 sq. ft. 185.252 acres
5	PART OF 34	DUNDAS	22324	11,565 sq. ft.
6	PART OF	STREET	(SECONDLY)	11,010 sq. ft.
7	33		PCL OF 369654 (SECONDLY)	10,990 sq. ft.
8			REM OF 223242 (SECONDLY)	340 sq. ft.

PART 1 IS SUBJECT TO A RIGHT OF WAY AS IN INST. 151912 OAK.
PART 2 IS SUBJECT TO A RIGHT OF WAY AS IN INST. 517273
PART 5 IS SUBJECT TO A RIGHT OF WAY AS IN INST. 645159
PART 6 IS SUBJECT TO A RIGHT OF WAY AS IN INST. 22324 (SECONDLY)
PART 7 IS TOGETHER WITH A RIGHT OF WAY AS IN INST. 22324 (SECONDLY)

BURNHAMTHORPE ROAD
ORIGINAL ROAD ALLOWANCE BETWEEN CONCESSIONS I AND 2, N.D.S.

PART 8
PART 1
SUBJECT TO A RIGHT OF WAY AS IN INST. 151912 OAK.
SEE DETAIL 'B'
INSTRUMENT Nº 173045 (PLAN ATTACHED BY R.J. TOPHAM, O.L.S., DATED JULY 8, 1964)
INSTRUMENT Nº 171352 (H.E.P.C. LANDS)
PART 4, PLAN 20R-4596

DETAIL 'B' NOT TO SCALE

PART 3, PLAN 20R-4596
PART 4, PLAN 20R-4596
PART 2

PART 1
PART 2 INSTRUMENT Nº 601057
PART 3 INSTRUMENT Nº 601059
PART 4 INSTRUMENT Nº 601042
PART 5 INSTRUMENT Nº 601057
PART 6 INSTRUMENT Nº 601042
PART 7 INSTRUMENT Nº 601042
PLAN 20R-4596 PART 1

REMAINDER OF INSTRUMENT Nº 22324 (SECONDLY)
REMAINDER OF INSTRUMENT Nº 21971
INSTRUMENT Nº 688693 PLAN BY K.H. McCONNELL, O.L.S., DATED MAY 3, 1967 (T-2232)
INSTRUMENT Nº 166136 (PLAN ATTACHED BY J.A. COPELAND, O.L.S., DATED AUGUST 29, 1963)
WESTERLY CORNER OF LOT 33, CONCESSION 1, N.D.S.

PLAN 1341 MISC.
PLAN 439 MISC.
PLAN 436 MISC.
PLAN 443 MISC.
PART 1, PLAN 439 MISC.
PART 2, PLAN 439 MISC.
PART 3, PLAN 439 MISC.
PART 4, PLAN 439 MISC.
PART 1, PLAN 436 MISC.
PART 5, PLAN 20R-3466
PART 1, PLAN 20R-3466
INSTRUMENT Nº 517000
INSTRUMENT Nº 477177
INSTRUMENT Nº 645159
INSTRUMENT Nº 324262 OAKVILLE (PLAN ATTACHED BY F.G. CUNNINGHAM, O.L.S., DATED JULY 15, 1969)
INSTRUMENT Nº 561669
PLAN BY T.A. YOUNG, O.L.S., DATED JULY 21, 1989 (89-T2296)
REMAINDER OF PLAN BY T.A. YOUNG, O.L.S., DATED JULY 21, 1989 (89-T2296)

LOT 35 LOT 34 LOT 33
CONCESSION 1 N.D.S.

PART 2 PLAN 20R-4596
PART 3 PLAN 20R-4596
PART 4 PLAN 20R-4596
PART 5 PLAN 20R-4596
PART 6 PLAN 20R-4596
PART 7 PLAN 20R-4596

PART 4
PART 5
PART 7
TOGETHER WITH A RIGHT OF WAY AS IN INST. 22324 (SECONDLY)

DETAIL 'C' NOT TO SCALE
SEE DETAIL 'C'

DETAIL 'A' NOT TO SCALE
SEE DETAIL 'A'

THE KING'S HIGHWAY Nº 5 KNOWN AS DUNDAS STREET
ORIGINAL ROAD ALLOWANCE BETWEEN CONCESSIONS I N.D.S. AND I S.D.S.
DEPOSITED PLAN 443 MISC.
DUNDAS STREET

TP 48 El. 164.3 m
TP 46 El. 164.4 m
TP 45 El. 157.9 m
TP 44 El. 161.7 m
TP 43 El. 165.7 m
TP 42 El. 169.1 m
TP 41 El. 169.2 m
TP 40 El. 166.6 m
TP 39 El. 166.8 m
TP 38 El. 161.1 m
TP 37 El. 156.7 m
TP 36 El. 152.0 m
TP 35 El. 151.7 m
TP 34 El. 152.1 m
TP 33 El. 152.7 m
TP 32 El. 157.5 m
TP 31 El. 152.7 m
TP 30 El. 153.5 m
TP 29 El. 153.8 m
TP 28 El. 151.4 m
TP 27 El. 154.0 m
TP 26 El. 153.6 m
TP 25 El. 153.6 m
TP 24 El. 153.1 m
TP 23 El. 152.9 m
TP 22 El. 154.0 m
TP 21 El. 153.7 m
TP 20 El. 149.8 m
TP 19 El. 149.3 m
TP 18 El. 151.0 m
TP 17 El. 151.0 m
TP 16 El. 152.0 m
TP 15 El. 152.5 m
TP 14 El. 151.1 m
TP 13 El. 152.4 m
TP 12 El. 151.8 m
TP 11 El. 151.7 m
TP 10 El. 151.0 m
TP 9 El. 151.1 m
TP 8 El. 151.5 m
TP 7 El. 151.2 m
TP 6 El. 151.9 m
TP 5 El. 149.7 m
TP 4 El. 150.6 m
TP 3 El. 150.5 m
TP 2 El. 150.4 m
TP 1 El. 150.1 m

BH 41 El. 165.0 m
BH 40 El. 168.5 m
BH 39 El. 167.2 m
BH 38 El. 161.4 m
BH 37 El. 157.2 m
BH 36 El. 160.6 m
BH 35 El. 154.9 m
BH 34 El. 157.2 m
BH 33 El. 156.9 m
BH 32 El. 160.2 m
BH 31 El. 156.1 m
BH 30 El. 153.9 m
BH 29 El. 158.4 m
BH 28 El. 155.9 m
BH 27 El. 152.7 m
BH 26 El. 153.5 m
BH 25 El. 157.9 m
BH 24 El. 154.0 m
BH 23 El. 156.4 m
BH 22 El. 155.9 m
BH 21 El. 152.6 m
BH 20 El. 154.5 m
BH 19 El. 152.7 m
BH 18 El. 151.2 m
BH 17 El. 153.9 m
BH 16 El. 153.8 m
BH 15 El. 152.8 m
BH 14 El. 154.6 m
BH 13 El. 152.0 m
BH 12 El. 152.9 m
BH 11 El. 153.6 m
BH 10 El. 152.0 m
BH 9 El. 151.9 m
BH 8 El. 152.3 m
BH 7 El. 151.2 m
BH 6 El. 151.7 m
BH 5 El. 150.5 m
BH 4 El. 150.5 m
BH 3 El. 152.2 m
BH 2 El. 149.7 m
BH 1 El. 152.4 m
BH MW1 El. 150.1 m
BH MW2 El. 149.8 m
BH MW3 El. 151.2 m
BH MW4 El. 152.8 m

PLAN OF SURVEY
OF PART OF
LOTS 33 AND 34
CONCESSION 1, NORTH OF DUNDAS STREET
GEOGRAPHIC
TOWNSHIP OF TRAFALGAR
NOW IN THE
TOWN OF OAKVILLE
REGIONAL MUNICIPALITY OF HALTON
SCALE: 1 Inch = 200 feet
A.T. McLAREN, O.L.S. – 1990

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT AND THE REGISTRY ACT AND THE REGULATIONS MADE THEREUNDER;
2. THE SURVEY WAS COMPLETED ON THE 19th DAY OF DECEMBER, 1990
DEC. 19, 1990 DATE
A.T.McLAREN, O.L.S.

LEGEND:
BH 1 El. 152.4 m — Borehole Location and Identification
BH MW1 El. 150.1 m — Monitoring Well Location and Identification
TP 1 El. 150.1 m — Test Pit Location and Identification

NOTES:
1. The boundaries and soil types have been established only at borehole and test pit locations. Between boreholes and test pits they are assumed and may be subject to considerable error.
2. Soil samples will be retained in storage for 3 months and then destroyed unless client advises that an extended time period is required.
3. This drawing forms part of the report, project number as referenced, and should be used only in conjunction with this report.
4. Topsoil quantities should not be established from the information provided at the borehole and test pit locations.
5. This drawing was reproduced from a site plan supplied by the Client.

N.T.S.

TROW CONSULTING ENGINEERS LTD.
1595 Clark Boulevard
Brampton, Ontario L6T 4V1
Telephone: (905) 793 - 9800
Fax: (905) 793 - 0641

Preliminary Geotechnical and Geo-Environmental Investigation
Pigott Farm Land
Oakville, Ontario

BOREHOLE AND TEST PIT LOCATION PLAN

BRGE00059627A	Date : January 23, 2001	Drawing No. 1

A.T. McLAREN LIMITED
LEGAL AND ENGINEERING SURVEYS
103 JOHN STREET SOUTH
HAMILTON – ONTARIO
527-0032 – 527-8559

Drawn RBM	Checked TP	Scale 1"=200'	Orig.No. 25087

TK

Project No. BRGE0059627A

Log of Borehole MW1

Dwg No. 2

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

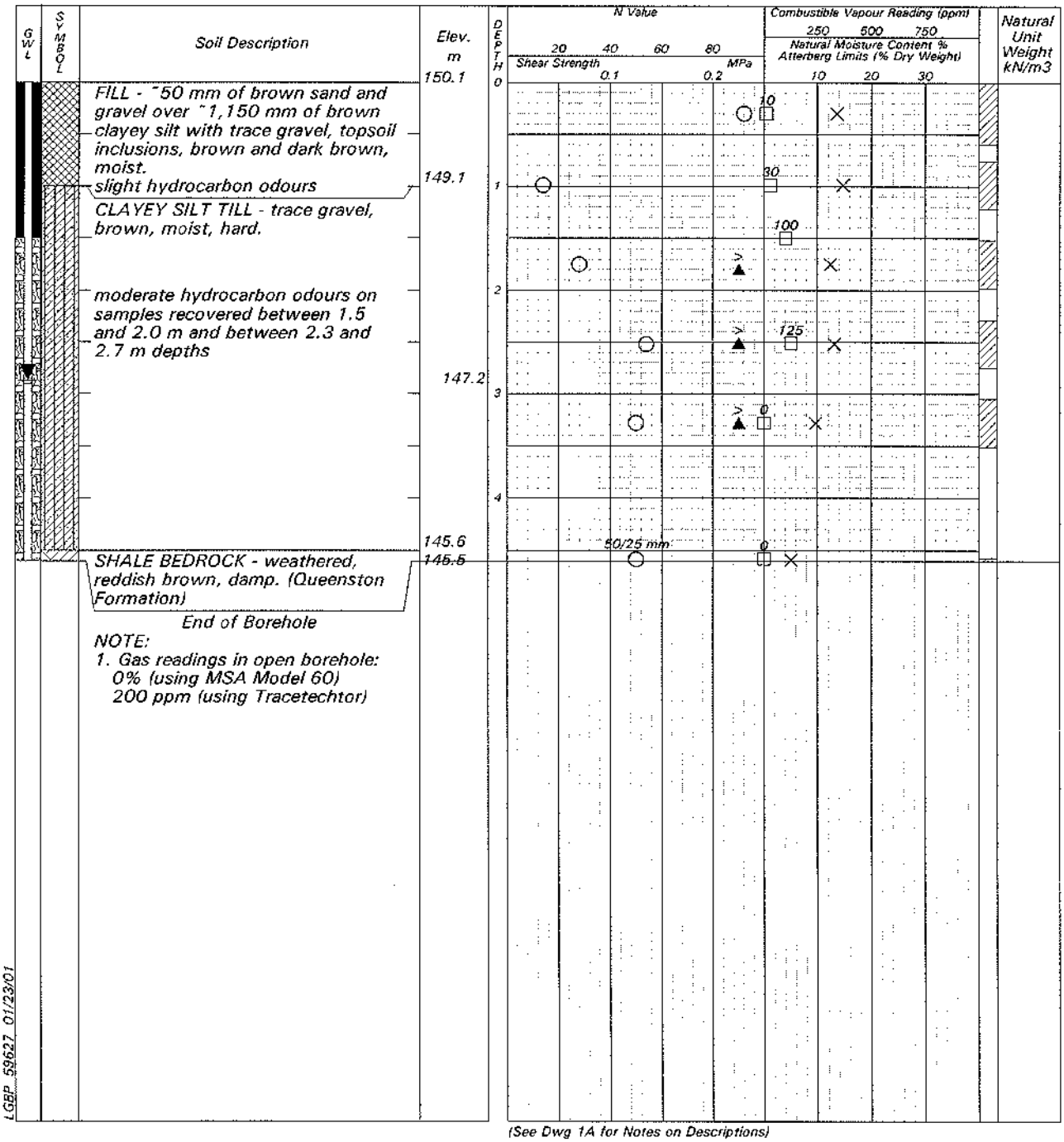
Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test +s

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○—|
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲



NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   200 ppm (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60
Well	3.25	1/4/01
Well	2.90	1/11/01

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole MW2

Dwg No. 3

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		FILL - ~50 mm of brown sand and gravel over ~1,150 mm of brown clayey silt with trace gravel, brown, moist.	149.8	0			
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, mottled brown and grey, moist, dense.	148.6	1			
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, hard.	147.5	2			
▼			146.2	3			
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	145.4	4	50/25 mm		
		End of Borehole	145.2				

N Value: 20 40 60 80
Shear Strength: 50/50 mm, 0.1, 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60
Well	4.05	1/6/01
Well	3.65	1/11/01

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole MW3

Dwg No. 4

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

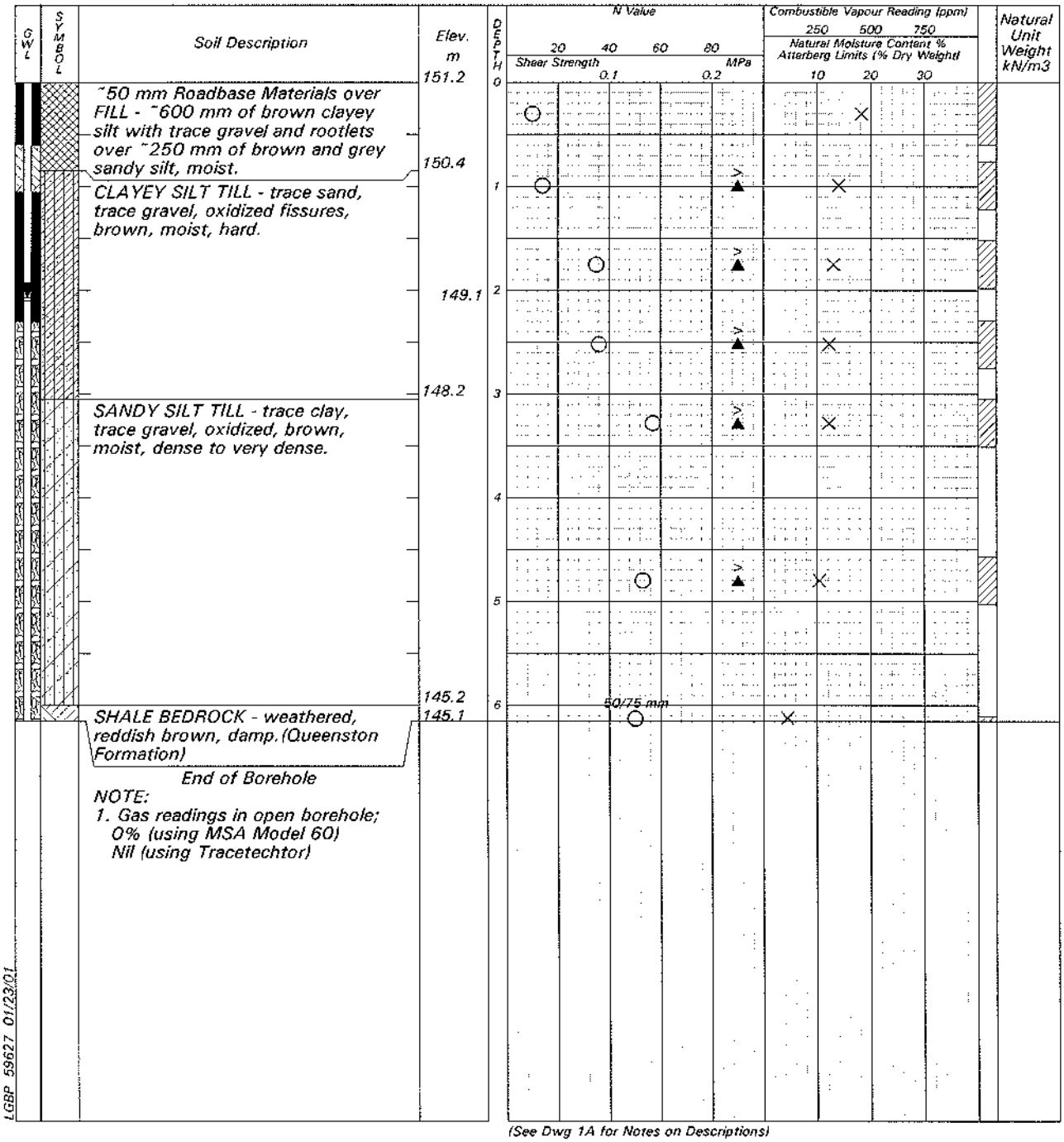
Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer



LGBP 59627 01/23/01

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	6.15
Well	3.05	1/4/01
Well	2.10	1/11/01

Trow

Project No. BRGE0059627A

Log of Borehole MW4

Dwg No. 5

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		200 mm Topsoil over	152.8	0
		FILL - clayey silt, trace sand, trace gravel, brown, moist.		1
			151.3	
▽		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, oxidized, mottled brown and grey, moist, compat to very dense.		2
			150.0	3
		occasional shale fragments below 4.6 m depth		4
			147.9	
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 MPa 0.2
50/150 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.90
Well	4.30	1/04/01
Well	2.85	1/11/01

Trow

Project No. BRGE0059627A

Log of Borehole 1

Dwg No. 6

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~250 mm Topsoil over FILL - clayey silt, trace sand, trace gravel, rootlets, topsoil inclusions, brown, moist.	152.4	0
		moderate hydrocarbon odours on recovered soil samples between 1.5 and 2.0 m depth		1
			150.1	2
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, hard.		
		moderate hydrocarbon odours on recovered soil sample between 3.0 and 3.5 m depth		3
		limestone fragments below ~4.6 m depth	147.7	4
		End of Borehole		

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   200 ppm (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

100
150
200
60/150 mm

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	4.30	4.70

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 2

Dwg No. 7

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		125 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, stiff to hard.	149.7	0			
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, oxidized, brown, moist, dense to very dense.	147.8	2			
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	145.3	4	50/50 mm		
		End of Borehole	145.1				

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30

NOTE:
1. Gas readins in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 3

Dwg No. 8

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		600 m Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, occasional shale fragments, brown, moist, hard.	152.2	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	250 500 750; Natural Moisture Content %; Atterberg Limits (% Dry Weight): 10 20 30	
				1			
			150.6		50/50 mm		
		Borehole Terminated Upon Practical Auger Refusal on Probable Bedrock at 1.60 m Depth NOTE: 1. Gas readings in open borehole; 0% (using MSA Model 60) Nil (using Tracetechtor)					

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	1.50

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 4

Dwg No. 9

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m
		150.5	
		75 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized fissures, brown, moist, firm in upper 0.6 m, hard below.	
		148.2	
		SANDY SILT TILL - trace clay, trace gravel, oxidized, brown, moist, very dense.	
		occasional shale fragments below 4.5 m depth	145.8
		End of Borehole	

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

DEPTH 0 1 2 3 4

N Value: 20 40 60 80

Shear Strength: 0.1 0.2 MPa

60/150 mm

Combustible Vapour Reading (ppm): 250 500 750

Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.70

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 5

Dwg No. 10

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

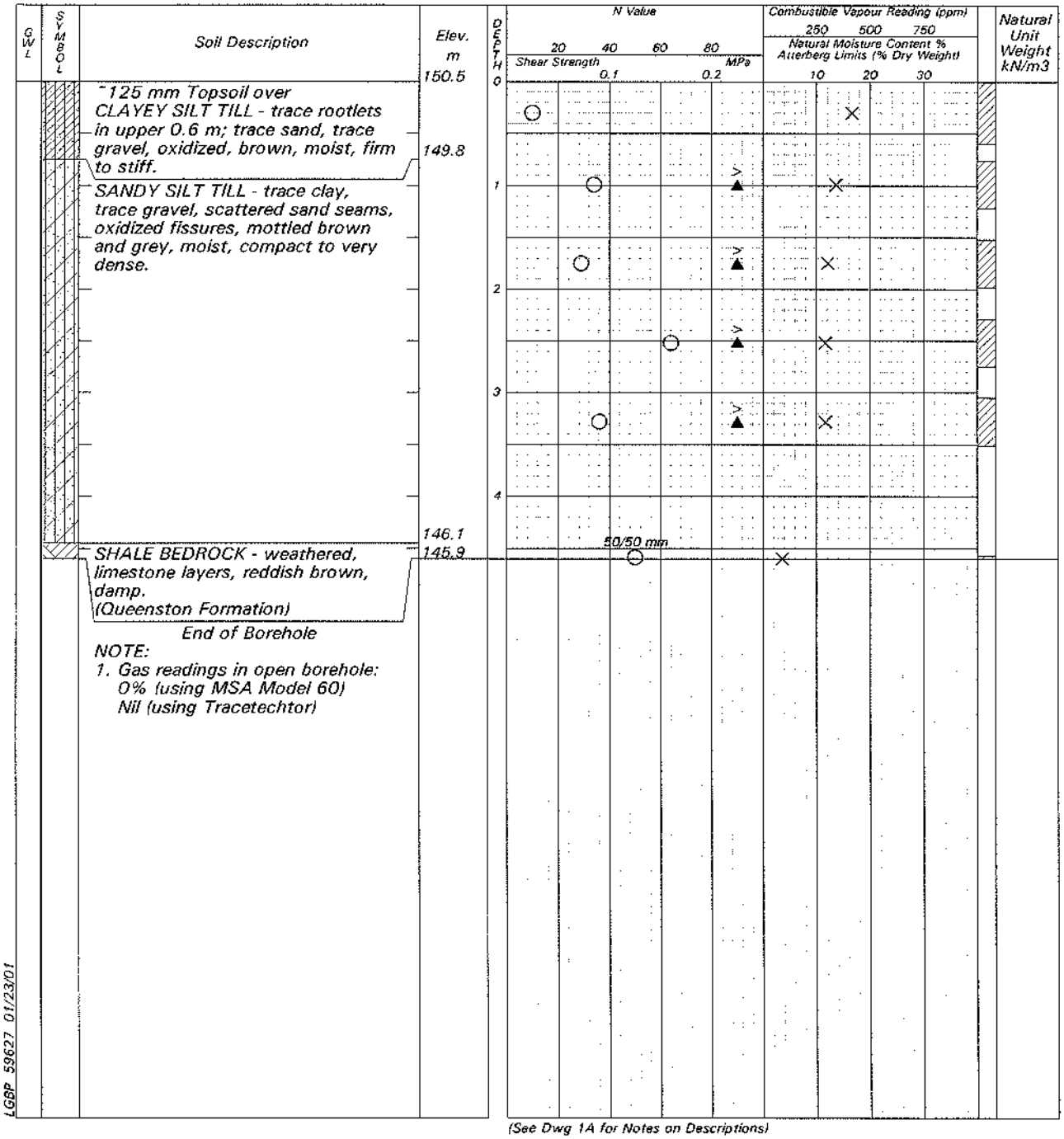
Date Drilled: 01/02/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer



(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 6

Dwg No. 11

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test S_u

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~300 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, firm.	151.7	0			
		SANDY SILT TILL - trace clay, trace gravel, oxidized, brown, moist, hard.	151.0	1			
				2			
				3			
				4			
			147.2		50/150 mm		
		SHALE BEDROCK - weathered, reddish brown, moist. (Queenston Formation)	147.0				
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

LGBP 59627 01/23/01

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	4.30	4.60

Trow

Project No. BRGE0059627A

Log of Borehole 7

Dwg No. 12

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test S_u

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		400 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, hard.	151.2	0			
		SANDY SILT TILL - trace clay, trace gravel, occasional shale and limestone fragments, brown, moist, very dense.	150.0	1	50/150 mm		
				2	50/150 mm		
				3	50/100 mm		
				4	50/50 mm		
			146.6				
		End of Borehole					

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.50

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 8

Dwg No. 13

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (20 40 60 80 / 0.1 0.2 MPa)	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30	Natural Unit Weight kN/m3
		100 mm Topsoil over CLAYEY SILT TILL - some sand in upper 0.6 m; trace sand, trace gravel, scattered silt and sand seams, oxidized, mottled brown and grey, moist, stiff to hard.	152.3	0			
		SANDY SILT TILL - trace clay, trace gravel, scattered silt seams, ocasional shale fragments, mottled brown and grey, moist, dense to very dense.	149.4	1			
				2			
				3			
			147.8	4	50/75 mm		
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	147.7				
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 9

Dwg No. 14

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/02/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxiel at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~100 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel,scattered silt seams, oxidized, mottled brown and grey, moist, firm to very stiff.	151.9	0
		SANDY SILT TILL - trace clay, trace gravel, scattered silt and sand seams, brown, moist, dense.	150.4	1
		encountered boulder at ~3.7 m depth		2
				3
				4
		Borehole Terminated Upon Practical Auger Refusal on Probable Bedrock at ~4.60 m Depth	147.3	

Note:
1. Gas readings in open borehole;
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/25 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.50

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 10

Dwg No. 15

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m
		100 mm Topsoil over CLAYEY SILT TILL - trae sand, trace gravel, oxidized, scattered sand seams, brown, moist, hard.	152.0
		occasional shale fragments below 3.1 m depth	
			147.5
		SANDY SILT TILL - trace clay, trace gravel, occasional shale fragments, brown, moist, very dense.	147.3
		End of Borehole	

NOTE:
1. Gas readings in open borehole;
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

DEPTH 0 1 2 3 4

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/50 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 11

Dwg No. 16

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		400 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized, brown, moist, stiff to hard.	153.6	0
				1
				2
				3
				4
			148.6	5
		End of Borehole		

N Value
Shear Strength 20 40 60 80 MPa 0.1 0.2

Combustible Vapour Reading (ppm) 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.95

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 12

Dwg No. 17

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	Symbol	Soil Description	Elev. m	Depth
		~100 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered silt seams, oxidized, brown, moist, stiff to hard.	152.9	0
		SANDY SILT TILL - trace clay, trace gravel, scattered silt seams, oxidized, brown, moist, dense.	151.4	1
		CLAYEY SILT TILL - trace sand, trace gravel, occasional shale and limestone fragments, brown, moist, hard.	150.6	2
				3
				4
		SHALE BEDROCK - weathered, reddish brown, moist. (Queenston Formation)	148.4	
		End of Borehole	148.3	

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/150 mm
50/75 mm
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 13

Dwg No. 18

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/02/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
			152.0	0	20 40 60 80; 0.1 0.2	250 500 750; 10 20 30	
		~75 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, stiff.	151.4				
		SANDY SILT TILL - trace clay, trace gravel, scattered silt seams, mottled brown and grey, moist, dense.		1			
				2			
		occasional shale fragments below ~3.0 m depth		3	50/100 mm		
				4			
			147.5		50/50 mm		
		SHALE BEDROCK - weathered, reddish brown, damp. (Queenston Formation)	147.4				
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

LGBP 59627 01/23/01

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	3.50	4.50

Trow

Project No. BRGE0059627A

Log of Borehole 14

Dwg No. 19

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value 20 40 60 80 / Shear Strength 0.1 0.2 MPa	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30	Natural Unit Weight kN/m3
		~200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized fissures, brown, moist, hard.	154.6	0			
				1			
				2			
				3			
				4			
			149.6	5			
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.95

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 15

Dwg No. 20

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~250 mm Topsoil over CLAYEY SILT TILL - some sand, trace gravel, brown, moist, very stiff.	152.8	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	Combustible Vapour Reading (ppm): 250 500 750; Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30	
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, brown, moist, dense.	152.2	1			
			150.5	2			
		Borehole Terminated Upon Practical Auger Refusal on Probabale Bedrock at 2.30 m Depth					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	2.20

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 16

Dwg No. 21

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m
		~150 mm Topsoil over	153.8
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, firm.	153.1
		SANDY SILT TILL - trace clay, trace gravel, oxidized fissures, mottled brown and grey, moist, compact to dense.	
		occasional shale and limestone fragments below 4.6 m depth	149.0
		End of Borehole	

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

DEPTH 0 1 2 3 4

N Value: 20 40 60 80

Shear Strength: 0.1 0.2 MPa

50/100 mm

Combustible Vapour Reading (ppm): 250 500 750

Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.70

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 17

Dwg No. 22

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

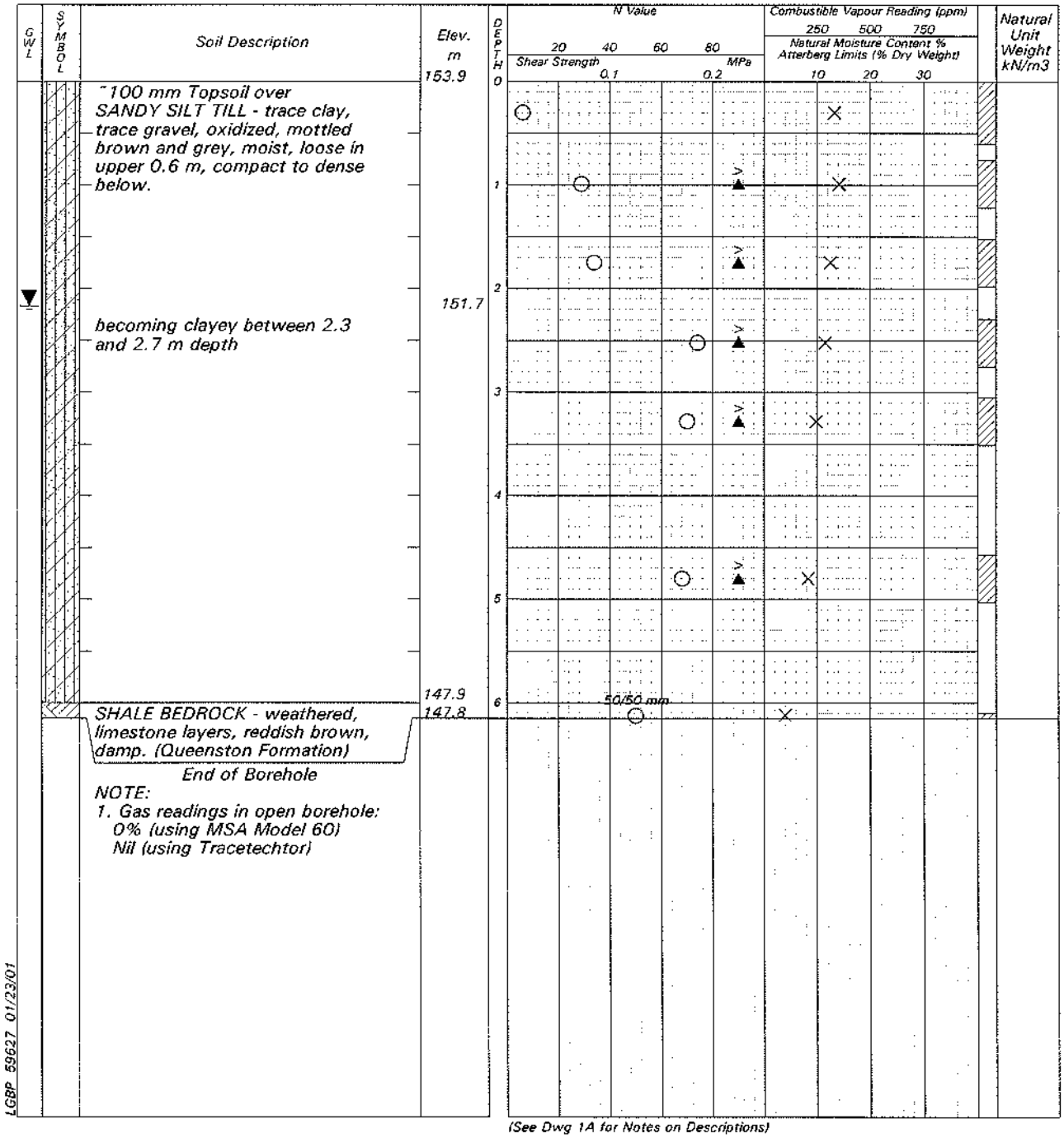
Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer



(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	2.15	5.95

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 18

Dwg No. 23

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~350 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, firm in upper 0.6 m, hard below.	151.2	0
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, occasional shale fragements, brown, moist, very dense.	149.2	2
		Borehole Terminated Upon Practical Auger Refusal on Probable Bedrock at 4.25 m Depth. NOTE: 1. Gas readings in open borehole: 0% (using MSA Model 60) Nil (using Tracetechtor)	147.0	4

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/85 mm
50/110 mm
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.15

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 19

Dwg No. 24

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (20 40 60 80 / 0.1 0.2 MPa)	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30	Natural Unit Weight kN/m3
		~400 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, occasional shale fragments below ~1.5 m depth, brown, moist, hard.	152.7	0			
				1			
					55/125 mm		
				2			
			150.4		50/75 mm		
		SANDY SILT TILL - trace gravel, occasional shale fragments, brown, moist, very dense.	150.1				
		Borehole Terminated Upon Practical Auger Refusal on Probable Bedrock at 2.60 m Depth					
		NOTE: 1. Gas readings in open borehole: 0% (using MSA Model 60) Nil (using Tracetechtor)					

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	2.50

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 20

Dwg No. 25

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

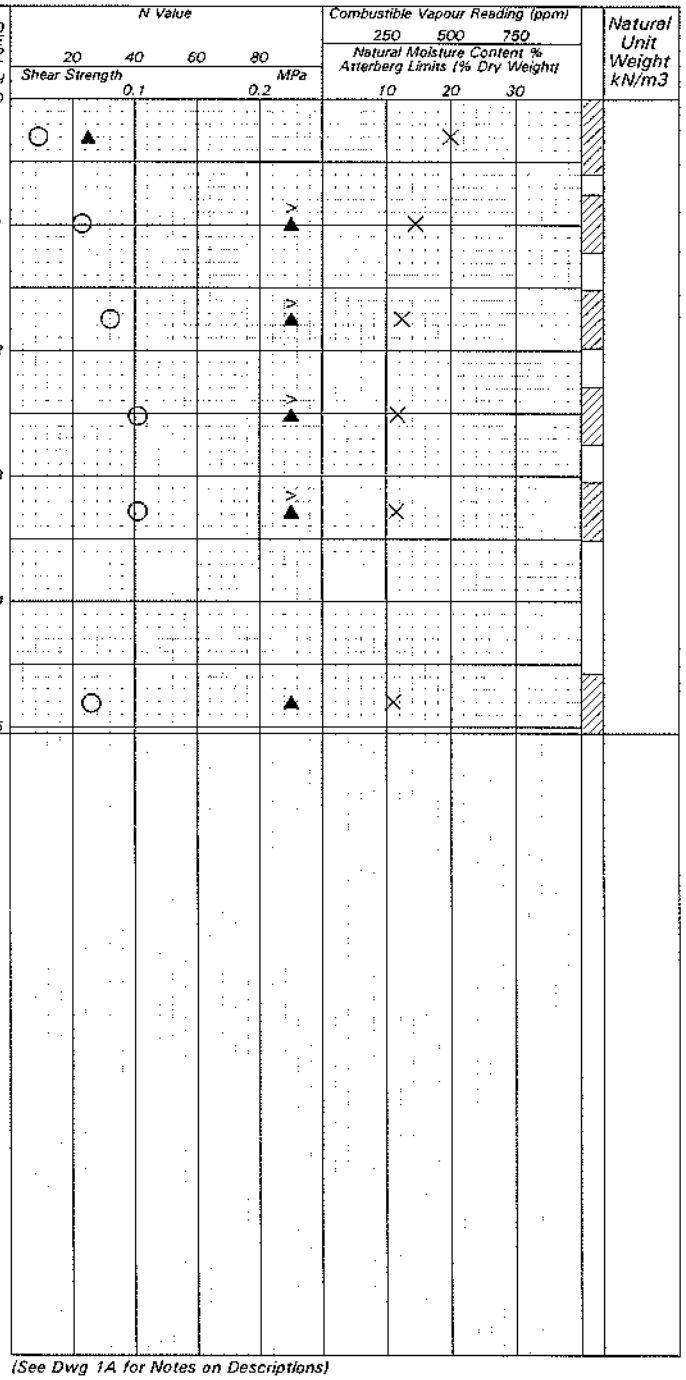
Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m
		150 mm Topsoil over	154.5
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, stiff.	153.9
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, oxidized, brown, moist, dense to very dense.	
		becoming grey below 3.3 m depth	
		silty clay layer below 4.6 m depth	149.5
		End of Borehole	

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)



(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 21

Dwg No. 26

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~400 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, occasional shale fragments below ~3.1 m depth, oxidized, brown, moist, firm in upper 0.6 m, very stiff to hard below.	152.6	0
				1
				2
				3
				4
			148.1	
		SANDY SILT TILL - trace clay, trace gravel, occasional shale and limestone fragments, brown, moist, very dense.	147.9	
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/150 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readins in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 22

Dwg No. 27

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m
		~200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized, brown, moist, very stiff to hard.	155.9
		SANDY SILT TILL - trace clay, trace gravel, brown, moist, very dense.	152.9
		becoming grey below ~4.5 m depth	150.9
		End of Borehole	

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tractetechtor)

DEPTH 0 1 2 3 4 5

N Value 20 40 60 80

Shear Strength 0.1 0.2 MPa

Combustible Vapour Reading (ppm) 250 500 750

Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 23

Dwg No. 28

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~350 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, occasional cobbles, oxidized, brown, moist, hard.	156.4	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa; Combustible Vapour Reading (ppm): 250 500 750; Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30		
				1			
				2			
				3			
				4			
			151.4	5			
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 24

Dwg No. 29

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-75 Track Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, hard.	154.0	0	20 40 60 80 / 0.1 0.2 MPa	250 500 750 / 10 20 30	
		SANDY SILT TILL - trace clay, trace gravel, brown, moist, compact to dense.	151.7	2			
		becoming grey below ~4.6 m depth		4			
		End of Borehole	149.0	5			

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 25

Dwg No. 30

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		300 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, stiff.	157.9	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	Combustible Vapour Reading (ppm): 250 500 750; Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30	
		SANDY SILT TILL - trace clay, trace gravel, brown, moist, compact to dense.	157.2	1			
				2			
			154.8	3			
		CLAYEY SILT TILL - some sand, trace gravel, brown, moist, hard.		4			
			152.9	5			
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 26

Dwg No. 31

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test S_u

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~350 mm Topsoil	153.5	0
		CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, occasional cobbles, oxidized, brown, moist, stiff to ~0.6 m, hard below.		1
		becomng grey below ~3.1 m depth		2
				3
		SANDY SILT TILL - trace clay, trace gravel, grey, moist, very dense.	149.9	4
			148.8	
		End of Borehole		

N Value
Shear Strength 20 40 60 80 MPa 0.1 0.2

Combustible Vapour Reading (ppm) 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30

Natural Unit Weight kN/m3

50/150 mm

NOTE;
1. Gas readings in open borehole:
0% (using MSA Model 60)
Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.70

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 27

Dwg No. 32

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~700 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, brown, moist, hard.	152.7	0
		SANDY SILT TILL - trace clay, trace gravel, occasional shale fragments, brown, moist, very dense.	151.5	1
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	149.7	2
		End of Borehole	148.1	3

NOTE:
1. Gas readings in open borehole
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/125 mm
50/75 mm
50/125 mm
50/75 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	2.30	4.50

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 28

Dwg No. 33

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, brown, moist, very stiff to hard.	155.9	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	250 500 750; Natural Moisture Content %; Atterberg Limits (% Dry Weight): 10 20 30	
				1			
				2			
			152.9	3			
		SANDY SILT TILL - trace clay, trace gravel, oxidized, brown, moist, dense to very dense.					
		becoming gret below ~4.6 m depth	150.9	4			
		End of Borehole		5			

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 29

Dwg No. 34

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH m
		~350 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, firm.	158.4	0
		SANDY SILT TILL - trace clay, trace gravel, oxidized, brown, moist, compact to dense.	157.7	1
				2
		CLAYEY SILT TILL - some sand, trace gravel, brown, moist, hard.	155.8	3
		becoming grey below ~4.5 m depth		4
			153.4	5
		End of Borehole		

N Value: 20, 40, 60, 80
Shear Strength: 0.1, 0.2 MPa

Combustible Vapour Reading (ppm): 250, 500, 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10, 20, 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 30

Dwg No. 35

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~300 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, stiff to hard.	153.9	0
		becoming motttled brown and grey below ~1.5 m depth		1
				2
				3
				4
			148.9	5
		End of Borehole		

N Value: 20, 40, 60, 80
Shear Strength: 0.1, 0.2 MPa
Combustible Vapour Reading (ppm): 250, 500, 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10, 20, 30
Natural Unit Weight kN/m3

NOTE;
1. Gas readings in open borehole;
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 31

Dwg No. 36

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		250 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, oxidized, scattered sand seams, occasional shale fragments, brown, moist, very stiff to hard.	156.1	0	20 40 60 80; Shear Strength 0.1 0.2 MPa	250 500 750; 10 20 30	
		SANDY SILT TILL - trace clay, trace gravel, occasional limestone fragments, brown, moist, dense to very dense.	153.1	3			
		End of Borehole	151.5	4	50/75 mm		

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

Project No. BRGE0059627A

Log of Borehole 32

Dwg No. 37

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ☑
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○—|
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~250 mm Topsoil over SANDY SILT TILL - trace clay, trace gravel, scatttered sand seams, oxidized, brown, moist, compact to dense.	160.2	0
				1
				2
				3
				4
			155.7	
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, hard.	155.2	5
		End of Borehole		

N Value
20 40 60 80
Shear Strength 0.1 0.2 MPa

Combustible Vapour Reading (ppm)
250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight)
10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 33

Dwg No. 38

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~150 mm Topsoil over SANDY SILT TILL - trace clay, trace gravel, scattered silt and sand seams, oxidized, brown, moist, dense to very dense.	156.9	0
				1
				2
				3
				4
			152.4	5
		CLAYEY SILT TILL - trace gravel, oxidized fissures, moist, grey, hard.	151.9	
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa

50/150 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE;
1. Gas readings in open borehole:
0% (using MSA Model 60)
Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 34

Dwg No. 39

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, firm.	157.2	0
		SANDY SILT TILL - trace clay, trace gravel, scattered silt and sand seams, oxidized, brown, moist, very dense.	156.6	1
▼		occasional shale and limestone fragments below 4.6 m depth	152.5	4
		End of Borehole	152.4	

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

50/125 mm

NOTE;
1. Gas readings in open borehole:
0% (using MSA Model 60)
Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	4.85	4.80

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 35

Dwg No. 40

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test S

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~500 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, stiff.	154.9	0
		SANDY SILT TILL - trace clay, trace gravel, brown, moist, compact to dense.	154.2	1
		CLAYEY SILT TILL - some sand, trace gravel, oxidized, brown, moist, hard.	152.5	2
		becoming grey below ~4.5 m depth	149.9	3
		End of Borehole		4
		NOTE; 1. Gas readings in open borehole: 0% (using MSA Model 60) Nil (using Tracetechtor)		5

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 36

Dwg No. 41

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/10/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~350 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized, brown, moist, stiff in the upper 0.6 m, hard below.	160.6	0
				1
				2
				3
				4
			155.6	5
		End of Borehole		

N Value
20 40 60 80
Shear Strength 0.1 0.2 MPa

Combustible Vapour Reading (ppm)
250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight)
10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 37

Dwg No. 42

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/10/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~300 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized fissures, brown, moist, hard.	157.2	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	250 500 750; Natural Moisture Content %; Atterberg Limits (% Dry Weight): 10 20 30	
		becomimg grey below ~4.5 m depth	152.2	5			
		End of Borehole					

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 38

Dwg No. 43

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/10/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized fissures, brown, moist, hard.	161.4	0
				1
				2
				3
				4
			156.4	5
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 39

Dwg No. 44

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/10/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~225 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, sacttered wet sand seams, oxidized, brown, moist, stiff in upper 0.6 m, hard below.	167.2	0	20 40 60 80; Shear Strength 0.1 0.2 MPa	250 500 750; 10 20 30	
				1			
				2			
				3			
				4			
			162.2	5			
		End of Borehole					
		NOTE; 1. Gas readings in open borehole: 0% (using MSA Model 60) Nil (using Tracetechtor)					

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

Project No. BRGE0059627A

Log of Borehole 40

Dwg No. 45

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~250 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized, brown, moist, very stiff to hard.	168.5	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	Combustible Vapour Reading (ppm): 250 500 750; Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30	
				1			
				2			
				3			
				4			
			163.5	5			
		End of Borehole					

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 41

Dwg No. 46

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~450 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized, brown, moist to ~2.7 m, wet below, soft to firm in upper ~1.2 m, hard below.	165.0	0
				1
				2
				3
				4
			160.0	5
		End of Borehole		

N Value
20 40 60 80
Shear Strength 0.1 0.2 MPa

Combustible Vapour Reading (ppm)
250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight)
10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole;
0% (using MSA Model 60)
Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	3.05	5.0

Trow

LGBP 59627 01/23/01

Log of Test Pit No. 1		Ground Surface Elevation : 150.1 m
Depth (m)		Description
0.00	2.00	FILL: ~0.3 m of brown clayey silt with trace gravel over ~1.7 m of dark brown silty clay with topsoil inclusions, brick fragments, wood pieces, boulders, slight hydrocarbon odour, gas reading: 30 ppm.
2.00	2.30	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the vicinity of the former 13,600 L gasoline AST on the north side of 3269 Dundas Street West.		

Log of Test Pit No. 2		Ground Surface Elevation : 150.4 m
Depth (m)		Description
0.00	1.40	FILL: mixed clayey silt, sand and gravel, topsoil inclusions and rootlets, brown, moist.
1.40	1.70	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the vicinity of old emergency generator room on the west side of 3269 Dundas Street West.		

Log of Test Pit No. 3		Ground Surface Elevation : 150.5 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.20	FILL: ~1.0 m of brown clayey silt with trace gravel over ~0.9 m of brown silty clay with some gravel and topsoil inclusions, moist.
2.00	2.30	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated on the south side of two historic houses.		

Log of Test Pit No. 4		Ground Surface Elevation : 150.6 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	1.80	FILL: clayey silt with trace gravel, topsoil inclusions, brick fragments and rootlets.
1.80	2.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated on the north side of two historic houses.		

Log of Test Pit No. 5		Ground Surface Elevation : 149.7 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	1.20	FILL: clayey silt with trace gravel, topsoil inclusions, brick fragments and rootlets.
1.20	2.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the vicinity of corrugated pipes.		

Log of Test Pit No. 6		Ground Surface Elevation : 151.9 m
Depth (m)		Description
0.00	1.20	FILL: ~0.2 m of brown sand and gravel with rootlets over brown silty clay with brick fragments and topsoil inclusions.
1.20	1.70	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the vicinity of 8 nos. 208 L drum - paint ball paint.		

Log of Test Pit No. 7		Ground Surface Elevation : 151.2 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.40	FILL: clayey silt with trace gravel, rootlets, topsoil inclusions, boulders and scrap metal.
1.40	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated on the south side of the 15,000 gal pig manure UST. 3.Metal tank was exposed on the north side of the test pit at ~ 0.65 m depth.		

Log of Test Pit No. 8		Ground Surface Elevation : 151.5 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.50	FILL: sandy silt with trace gravel, rootlets, topsoil inclusions, boulders and scrap metal, brown, moist.
1.50	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of concrete pad for historic silo.		

Log of Test Pit No. 9		Ground Surface Elevation : 151.1 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	0.65	FILL: clayey silt with trace gravel, rootlets, topsoil inclusions, brick fragments, and scrap metal, brown, moist.
0.65	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of historic house (housed fuel tank).		

Log of Test Pit No. 10		Ground Surface Elevation : 151.0 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	0.70	FILL: clayey silt with trace gravel, topsoil inclusions, brown, moist.
1.40	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 11		Ground Surface Elevation : 151.7 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.30	0.60	FILL: clayey silt with trace gravel, topsoil inclusions, rootlets, brown, moist.
1.40	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated at about 20 m west of existing well.		

Log of Test Pit No. 12		Ground Surface Elevation : 151.8 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	0.40	FILL: silty clay with some gravel, rootlets, brown, moist.
1.40	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of the 1,000 AST		

Log of Test Pit No. 13		Ground Surface Elevation :152.4 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.00	FILL: ~0.25 m of brown clayey silt with trace gravel, wood pieces over ~0.60.m of brown silty clay with trace gravel and brick fragments, ,moist.
1.00	1.50	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 14		Ground Surface Elevation :151.1 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.35	0.60	FILL: clayey silt with trace gravel, topsoil inclusions, brown, moist.
0.60	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of concrete blocks.		

Log of Test Pit No. 15		Ground Surface Elevation : 152.5 m
Depth (m)		Description
0.00	1.20	FILL:~0.25 m of dark brown silty clay with topsoil inclusions over ~0.95 m of brown clayey silt with trace gravel, rootlets, topsoil inclusions, moist.
1.20	2.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of two 10,000 gal pig manure USTs.		

Log of Test Pit No. 16		Ground Surface Elevation : 152.0 m
Depth (m)		Description
0.00	0.75	FILL: clayey silt with trace gravel, rootlets, topsoil inclusions, brick fragments and wood pieces.
0.75	1.40	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 17		Ground Surface Elevation : 151.0 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 18		Ground Surface Elevation : 151.0 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 19		Ground Surface Elevation : 149.3 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 20		Ground Surface Elevation : 149.8 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	2.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 21		Ground Surface Elevation : 153.7 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 22		Ground Surface Elevation : 154.0 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.15	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 23		Ground Surface Elevation : 152.9 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 24		Ground Surface Elevation : 153.1 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 25		Ground Surface Elevation : 153.6 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 26		Ground Surface Elevation : 153.6 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 27		Ground Surface Elevation : 154.0 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.35	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 28		Ground Surface Elevation : 151.4 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 29		Ground Surface Elevation : 153.8 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 30		Ground Surface Elevation : 153.5 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 31		Ground Surface Elevation : 152.7 m
Depth (m)		Description
0.00	0.80	TOPSOIL
0.80	1.30	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 32		Ground Surface Elevation : 157.5 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 33		Ground Surface Elevation : 152.7 m
Depth (m)		Description
0.00	0.10	TOPSOIL
0.10	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 34		Ground Surface Elevation :152.1 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.10	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 35		Ground Surface Elevation : 151.7 m
Depth (m)		Description
0.00	0.10	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 36		Ground Surface Elevation : 152.0 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 37		Ground Surface Elevation : 156.7 m
Depth (m)		Description
0.00	0.40	TOPSOIL
0.40	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 38		Ground Surface Elevation : 161.1 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 39		Ground Surface Elevation : 166.8 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 40		Ground Surface Elevation : 166.6 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 41		Ground Surface Elevation : 169.2 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 42		Ground Surface Elevation : 169.1 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 43		Ground Surface Elevation : 165.7 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.20	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 44		Ground Surface Elevation : 161.7 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.35	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard..
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 45		Ground Surface Elevation : 157.9 m
Depth (m)		Description
0.00	0.40	TOPSOIL
0.40	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 46		Ground Surface Elevation : 164.4 m
Depth (m)		Description
0.00	0.40	TOPSOIL
0.40	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 47		Ground Surface Elevation : 167.0 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.35	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 48		Ground Surface Elevation : 164.3 m
Depth (m)		Description
0.00	0.40	TOPSOIL
0.40	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW1

SHEET 1 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Oct.1-3, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR-FIX-FRACTURE, CL-CLEAVAGE, SH-SHEAR, VN-VEIN; F-FAULT, J-JOINT, P-POLISHED, S-SLICKENSIDED; SM-SMOOTH, R-ROUGH, ST-STEPPED, PL-PLANAR; FL-FLEXURED, UE-UNEVEN, W-WAVY, C-CURVED; BC-BROKEN CORE, MB-MECH. BREAK, B-BEDDING

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	COLOUR, % RETURN / FLUSH	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
0		GROUND SURFACE		163.80												
		One inch of grass sod overlying a rooty, moist SILT, trace clay, trace cobble, firm. (OH)		0.00 163.50												
		Compositional change: Firm/compact, fine SAND and SILT, brown, moist, rooty, occ. cobbles, rounded to sub-rounded. (TILL) (ML)		0.30 162.66												BENTONITE SEAL
1		TILL, Grades to very hard clay till, moist to slightly moist (almost dry), trace silt, trace gravel, no roots. Colour is mottled brown (more silty) and blue-grey (more clayey). (ML-CL)		1.14												
2																
3																
				160.22												
		Grades to firm-hard, dark grey to brown grey CLAY and SILT TILL. Slightly less firm than above, trace gravel. (ML-CL)		3.58												
4																
				159.38												
	Overburden	Change to a moist, firm/hard clayey fine sand silt (grey coloured). (ML-SM)		4.42 159.08												SAND
		Dry, crumbly, gravelly silt and clay till.		4.72												
5		Grey, firm-hard, moist SILT and CLAY TILL, gravelly, occ. cobble. (GM-ML)		4.88												
				158.08												
		Brown, moist-dry, fine to firm-hard CLAY and SILT TILL.		5.72												
6				157.73												
		Brown, moist-dry, fine to firm-hard SILTY SAND TILL.		6.05 157.44												
		Brown-grey, moist-dry, hard CLAY TILL, occ. cobbles, gravelly. (GM-CL) Basal TILL		6.36												
7																
				156.56												
		Brown-grey, dry, cobbly SANDY TILL, very hard, dry. (SM)		7.24												
8																
				155.65												
		Light brown-grey, dry, hard SANDY SILT TILL, occ. cobbles. (SM)		8.15												
9																BENTONITE SEAL
				154.25												
	RQ Core	Very weak to weak, moderate to highly weathered red SHALE.		9.55	1								B,J BC			
10																
		CONTINUED NEXT PAGE														

DEPTH SCALE

1 : 50

LOGGED: MR

CHECKED:

Golder Associates

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW1

SHEET 2 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Oct.1-3, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE CL-CLEAVAGE SH-SHEAR VN-VEIN

F-FAULT J-JOINT P-POLISHED S-SLICKENSIDED

SM-SMOOTH R-ROUGH ST-STEPPED PL-PLANAR

FL-FLEXURED UE-UNEVEN W-WAVY C-CURVED

BC-BROKEN CORE MB-MECH. BREAK B-BEDDING

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	FLUSH / COLOUR % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —														
10		Very weak to weak, moderate to highly weathered red SHALE.														
		1% Green coloured			1								BC			
11													J			
					2								B/FX			
12													B/FX			
		Run 3: Pounded out of drill in minute pieces. Low RQD strictly mechanical.											FX			
13													FX			BENTONITE SEAL
					3								FX			
													BC			
													FX			
14													FX			
		Run 4: As above														
					4								BC/FX			
15	RQ Core															
		Red Shale, weak, slightly weathered 10% green coloured.											BC			
16													FX			
					5								FX			
													FX			
17													FX			
													FX			
													FX			
18		Highly friable interval. Disking every 0.25".		145.80 / 18.00	6								BC			SAND
													BC			
				145.10 / 18.70									FX/B			
19		Discontinuities are all perpendicular to the core axis.											FX/B			
					7								FX/B			
													FX/B			
20													FX/B			
		CONTINUED NEXT PAGE														

DEPTH SCALE 1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW1

SHEET 3 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Oct.1-3, 2002

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (cm/min)	FLUSH / COLOUR % RETURN	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —														
20		Red shale, slightly weathered, weak to very weak. 10% grey-green coloured bands.			7								FX			SAND
21					8								FX			
22					9								FX/B			
23													BC			SAND
24		Friable and pitted in intervals of broken core (BC).			10								FX/B			
25	RQ Core	Fracture surfaces are planar and smooth to rough.			11								FX/B			PLUG BRIDGE/ROCK BRIDGE
26													FX/B			
27					12								FX/B			
28		Zone of broken core and increased weathering. Shale is highly friable, very weak and weathered.		135.96 27.84									FX/B			
29					13								BC/B			BENTONITE SEAL
30		*CONTINUED NEXT PAGE*			14								BC/B			

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW1

SHEET 4 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Oct.1-3, 2002

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	COLOUR % RETURN	FLUSH	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w/r.a. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —															
30		Zone of broken core and increased weathering. Shale is highly friable, very weak and weathered.			14									FX/B FX/B			
				132.91													
31		Highly weathered and friable.		30.99	15									FX/B, gypsum coating first noted. FX/B FX/B FX/B			BENTONITE SEAL
				131.71													
32		Red shale, moderately weathered, weak, friable.		32.09										FX/B			
33					16									FX/B FX/B FX/B FX/B, gypsum coating			
34					17									FX/B FX/B FX/B FX/B			
35	RQ Core	Fracture surfaces are planar and smooth to rough.												FX/B FX/B			
					18									FX/B BC FX/B FX/B, gypsum, 4mm FX/B			
37				126.70													
		Extremely friable zone. Discontinuities		37.10	19									FX/B FX/B FX/B			
38				125.80													
		Red shale, fresh, weak to moderately strong.		38.00										FX/B			
39					20												
														FX/B			
40														FX/B			SAND
		CONTINUED NEXT PAGE															

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS ROCK 021-1228.GPJ GLDR CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW1

SHEET 5 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Oct.1-3, 2002

DATUM:

INCLINATION: -90° AZIMUTH: --

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE (min/0.3m)	FLUSH COLOUR & RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
40		— CONTINUED FROM PREVIOUS PAGE —														
		Red shale, fresh, weak to moderately strong.											B/F			
													BC			
													BC			
					21								B/FX			
41		10% grey-green coloured.											B/FX			
													B/FX			
													BC			
42													B/FX			
					22								BC			
													B/FX			
													B/FX			SAND
43	RQ Core			120.80												
		Red shale, fresh, weak, 10% green coloured.		43.00												
													B/FX			
44					23											
													B/FX			
													B/FX			
45													B/FX			
					24								B/FX			
													B/FX			
46				117.67												
		END OF BOREHOLE		46.13												
47																
48																
49																
50																

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW2

SHEET 1 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Sept.26&30, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FRFX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UN-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	COLOUR, RETURN %	FLUSH	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		GROUND SURFACE		165.99													
0		Dark brown soil, moist, loose, roots/organics. (OH)		0.00													
		TILL, brown, moist to slightly moist, firm to hard with depth, CLAYEY SAND and SILT, some gravel, occ. cobble. Coarser material is sub-ang to ang. (ML)		0.15													
				164.99													
1		As above Very dry and crumbly during sampling. (ML)		0.91													BENTONITE SEAL
2																	
3																	
				162.60													
		As above Colour changes to brownish-grey.		3.30													
4																	
				161.73													
	AUGER	TILL, grey, firm-hard, moist SILTY CLAY, occ. gravel. (GM-ML)		4.17													
5																	SAND
6																	
				158.88													
7		TILL, very hard, dry, brown bouldery CLAY SILT TILL, occ. cobbles. (CM)		7.01													
8																	
				156.86													
9		BEDROCK Red shale, very weak, friable. Fresh, moderately weathered upper 3.05 to 4.57m from bedrock surface recovered as rubble/broken core.		9.04													BENTONITE SEAL
10																	
		CONTINUED NEXT PAGE															

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR
CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW2

SHEET 2 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Sept.26&30, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FRFX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
BH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	COREBARREL & RETURN FLUSH	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
10		— CONTINUED FROM PREVIOUS PAGE —														
	AUGER	BEDROCK Red shale, very weak, friable. Fresh, moderately weathered upper 3.05 to 4.57m from bedrock surface recovered as rubble/broken core.		154.05												
11				11.61												
12		Red shale with occasional (10%+/-) green coloured bands, weak. This interval recovered as broken core.			1								FX			
													Broken Core			
13					2								FX			
													B			
14				151.78									B/FX			
	HQ CORE	Intact core begins.		14.12									B/FX			BENTONITE SEAL
					3								B/FX			
15													B/FX			
													B/FX			
													B/FX			
16					4								B/FX			
													B/FX			
													B/FX			
17													B/FX			
					5								B/FX			
18													B/FX			
													B/FX			
													B/FX			
19					6								B/FX			SAND
													B/FX			
20				145.90									B/FX			
		CONTINUED NEXT PAGE														

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1226

RECORD OF DRILLHOLE: MW2

SHEET 3 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Sept.26&30, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	FLUSH	COLOUR, % RETURN	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K_s cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
20		— CONTINUED FROM PREVIOUS PAGE —															
		Red shale, weak, moderately weathered. Some very weak red shale bands. Friable.		20.00	6									B/FX			
21					7									B/FX			
22														B/FX			SAND
					8									B/FX			
23				142.60										B/FX			
				23.30										B/FX			
		Slight strength increase to moderately strong in green coloured shale bands.			9									B/FX			
24														B/FX			
														B/FX			
25	HQ CORE				10									B/FX			
														B/FX			
26		Discontinuity surfaces are perpendicular to core axis, planar and smooth. They appear to be bedding parallel, mechanically induced fractures.												B/FX			
27					11									B/FX			SAND
														B/FX			
28														B/FX			
					12									B/FX			BENTONITE SEAL
29														B/FX			
					13									B/FX			
30		CONTINUED NEXT PAGE												B/FX			

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1226.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW2

SHEET 4 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Sept.26&30, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH US-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	COLOUR, % RETURN / FLUSH	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —														
30		SHALE, Fresh to slightly weathered, weak, pitted and friable. Mainly red coloured, 5% to 10% green coloured bands, up to 10cm thick, spaced every 2 cm to 5 cm.			13								B/FX			
31					14								B/FX, gypsum coating			
32					15								B/FX			BENTONITE SEAL
33		First gypsum coatings on joint surfaces noted at 29.18m and 32.10m.														
34	HQ CORE				16								B/FX, gypsum coatings 1mm, 4mm			
35																
36					17								B/FX, gypsum nodules			
37		Low RQD zone in red and green shales. Full of gypsum nodules.			18								B/FX			
38																
39		As above, increased rock strength to moderately strong.			19								B/FX, gypsum nodules			
40		CONTINUED NEXT PAGE														SAND

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR
CHECKED:

MISS ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW2

SHEET 5 OF 5

LOCATION: Refer to Plan

DRILLING DATE: Sept.26&30, 2002

DATUM:

INCLINATION: -90° AZIMUTH: --

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/in)	FLUSH	COLOUR, % RETURN	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP to c.a. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
40		— CONTINUED FROM PREVIOUS PAGE —															
	HQ CORE	Red shale, moderately strong, fresh to slightly weathered. Rock is mainly red coloured with green bands (4"-2") every 1' to 2'.			20									B/FX			
41														B/FX			
														B/FX			
														B/FX			
														B/FX			
42					21												
																	SAND
43		Gypsum coat at 43.5, 3mm thick.															
					22												
44																	
45					23												
46				119.77													
		END OF BOREHOLE		46.13													
47																	
48																	
49																	
50																	

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR
CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW3

SHEET 1 OF 4

LOCATION: Refer to Plan

DRILLING DATE: July 24 & 25, 2002

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FRFX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	FLUSH	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
0		GROUND SURFACE		162.20												
		Brown, organic sandy silt (roots), compact.		0.00												
				161.59												
		TILL, moist to slightly moist, firm to hard, rooty first 0.6m, SILTY CLAY with angular cobbles and coarse gravel. (CL)		0.61												
				156.10												
		TILL, moist to dry, hard, mainly SILTY CLAY (CL), some sand, gravel and cobbles. Gravel and cobbles are sub-ang to sub-rounded.		6.10												
10	AUGER	*CONTINUED NEXT PAGE*														BENTONITE SEAL; SAND

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR
CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW3

SHEET 2 OF 4

LOCATION: Refer to Plan

DRILLING DATE: July 24 & 25, 2002

DATUM:

INCLINATION: -90° AZIMUTH: --

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED SC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	COLOUR, % RETURN / FLUSH	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY (cm/sec)	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
10		— CONTINUED FROM PREVIOUS PAGE —														
		TILL, moist to dry, hard, mainly SILTY CLAY (CL), some sand, gravel and cobbles. Gravel and cobbles are sub-ang to sub-rounded.		151.53												
		TILL, brown, hard, moist, gravelly SAND and SILT (SG-MG), some clay, some sub-rounded cobbles. (BASAL TILL)		10.67												
11		Auger refusal on Boulder. Coring through very hard grey till and cobbles as above.														
12	AUGER															SAND
13																
14																
				147.87												
		Completely weathered, very weak, green SHALE, original structure still visible.		14.33												
15																
				146.36												
16	HQ CORE	Fresh to slightly weathered, weak to moderately strong, red and green (predominantly red) coloured, massive to finely laminated SHALE.		15.86									B,FX			
													B,FX XJ			
					1								B,FX XJ			
17																BENTONITE SEAL
													XJ			
													B,FX			
		Fractures are bedding parallel and tend to be smooth and planar.											B,FX			
18					2								B,FX			
													B,FX XJ			
19													B,FX			
					3								B,FX			
													B,FX			
20		CONTINUED NEXT PAGE														

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR
CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW3

SHEET 3 OF 4

LOCATION: Refer to Plan

DRILLING DATE: July 24 & 25, 2002

DATUM:

INCLINATION: -90° AZIMUTH: --

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH US-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	FLUSH	COLOUR & % RETURN	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —															
20				141.78	3									B,FX			
		Fresh to slightly weathered, not friable, moderately strong to weak, mainly red coloured and massive with some green coloured bands. Thinly laminated.		20.42										B,FX			BENTONITE SEAL
21					4									B			
														B XJ			
														B,FX			
22														B,FX			
		First noted occurance of gypsum.			5									B,FX, gypsum coating			
23														B,FX			
														B,FX			
					6									J B			
24														B,FX			
														B,FX			
					7									B,FX			
25	HQ CORE	Possible turbidity flow or debris torrent layer from 10.92m to 26.2m.												B,FX			
														B,FX			SAND
26														B,FX			
					8									B,FX			
														B,FX			
27														B,FX			
				134.46										B,FX			
		Red SHALE, fresh to slightly weathered, weak to medium strong, occasional green coloured bands. Massive to thinly laminated.		27.74										FX B, spun core gypsum coatings			
28					9									FX			
														FX			
29														FX			
					10									FX			
		Discontinuities are fractures parallel to												FX			
30		*CONTINUED NEXT PAGE*															

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR
CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW3

SHEET 4 OF 4

LOCATION: Refer to Plan

DRILLING DATE: July 24 & 25, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FRIFX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	FLUSH	COLOUR % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
30		— CONTINUED FROM PREVIOUS PAGE —															
		bedding. They are mainly mechanically induced. Red SHALE, fresh to slightly weathered, weak to medium strong, occasional green coloured bands. Massive to thinly laminated.			10									F			
31														FX			
					11									FX			
														FX			
32														FX			SAND
														FX			
														FX			
33														FX			
														FX			
					12									FX			
34																	
	HQ CORE																
35														B,FX			
														BJ, gypsum coating			
														B,FX			
														B,FX			
36														B,FX			
					13									B,FX			
														B,FX			SAND
37														B,FX			
														B,FX			
					14									B,FX			
38														B, gypsum coating			
														B, gypsum coating			
														B,FX			
39					15									B,FX			
														B,FX			
				122.65 39.56													
		END OF HOLE															
40																	

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW4

SHEET 1 OF 5

LOCATION: Refer to Plan

DRILLING DATE: July 4-9, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UB-UNEVEN MB-MECH.BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	COLOUR, % RETURN / FLUSH	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	ROCK STRENGTH INDEX	WEATHERING INDEX	NOTES WATER LEVELS INSTRUMENTATION
0		GROUND SURFACE		164.70												
	Overburden	Brown, moist, firm to hard TILL. Soil is a clayey silt, trace sub-rounded cobbles and gravel, some sand. Well-graded. (CL)		0.00												
1				163.46												BENTONITE SEAL
		As above, firm, dry-slightly moist, friable, sandy silt, trace clay. (ML)		1.22												
2				161.96												
		Reddish brown, firm. Friable, dry-slightly moist, sandy silt and clay till, occ. sub-rounded gravel and cobbles. (CL/ML)		2.74												
3				160.43												
		Sandy TILL, grey brown, firm, friable silty sand, trace clay, trace gravel. Dry to slightly moist. (ML) Fines to sandy silt till.		4.27												
4																
5				158.91												
		Gravelly TILL, reddish-brown, dense, moist silty sand to silty gravel, trace cobbles and clay.		5.79												SAND
6				158.30												
		Brown grey, firm to hard sandy silt, trace clay, trace gravel, moist TILL.		6.40												
7				157.36												
		Red-brown, moist-wet, gravelly silt, firm-hard 30% rock/cobbles (angular), wet rock (shale) at 7.6m, trace sand TILL. (MG)		7.32												
8																
9				155.56												
		Inferred top of rock, moist, red-brown (80%) and green (20%), highly weathered, very weak, friable SHALE.		9.14												BENTONITE SEAL
10																
		CONTINUED NEXT PAGE														

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW4

SHEET 2 OF 5

LOCATION: Refer to Plan

DRILLING DATE: July 4-9, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	FLUSH	COLOUR, % RETURN	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	ROCK STRENGTH INDEX	WEATHERING INDEX	NOTES WATER LEVELS INSTRUMENTATION
10		— CONTINUED FROM PREVIOUS PAGE —															
	Overburden	Inferred top of rock, moist, red-brown (80%) and green (20%), highly weathered, very weak, friable SHALE.		153.60													
11	RQ Core	Red SHALE, very weak R1/R2, friable, moderate to highly weathered (W3-W5)		10.90													BENTONITE SEAL
					2									B			
12														B			
13					3									B			
														B			
14					4												
15														B,FX			
				149.16										B,FX			
16		Moderately weathered, weak to medium strong, red shale. All fractures/breaks are bedding parallel.		15.54													SAND
					5									B,FX			
17														B,FX			
														B,FX			
					6									C XJ			
18														B,FX XJ			
														B,FX			
														B,FX XJ			
19					7									FX			
														FX			
20														B,FX			
		CONTINUED NEXT PAGE															

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR
CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT 021-1228

LOCATION N 5929113 E 4600670.0

INCLINATION -90° AZIMUTH -

RECORD OF DRILLHOLE: MW4

DRILLING DATE: July 4-9, 2002

DRILL RIG: CME 75 TRUCK MOUNT

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

DATUM: Geodetic

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV DEPTH (m)	RUN No	PENETRATION RATE (min/m)	CORE LOSS	FLUSH	RECOVERY TOTAL CORE %	RECOVERY ROCK CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	ROCK STRENGTH INDEX	WEATHERING INDEX	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —															
		SHALE, marble, moderately weathered, moderately strong, significantly more competent.		20.13	6									B,FX B,FX BC B,FX			
		Weak to medium strong, marble. Tends to break along red/green colour contacts.		21.64	6									B,FX B,FX			
		Fractures/breaks at bedding and smooth			10									B,FX B,FX B,FX B,FX			
	HQ Core July 5, 2002				11									B,FX			
					12									B,FX B,FX B,FX B,FX			SAND
					12									B,FX B,FX B,FX B,FX			
		Slightly weathered, red (80%) and green (10%), medium strong, finely laminated SHALE		135.44 22.35	14									FX,B			
		CONTINUED NEXT PAGE															

DEPTH SCALE

1:50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GAL-CAN/ADA.GDT 22/1/04 PB

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW4

SHEET 4 OF 5

LOCATION: Refer to Plan

DRILLING DATE: July 4-9, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

PR/FX-FRACTURE F-FAULT SM-SMOOTH PL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	FLUSH	COLOUR, TEXTURE %	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	ROCK STRENGTH INDEX	WEATHERING INDEX	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —															
30	RQ Core	Slightly weathered, red (90%) and green (10%), medium strong, finely laminated SHALE.			14									FX,B			SAND
														FX,B			
														F,B			
31					15									FX,B			
		This interval not friable.												FX,B			
32														B,J, gypsum			
														B,FX			BENTONITE SEAL
														B,FX			
33		Fractures are all bedding parallel, smooth and planar.			16									B,FX, gypsum			
														B,FX			
34														B,FX			
		Green portions appear to be stronger.			17									B,FX			
35				129.35													
		Red-brown, moderately weathered (red) to slightly weathered (green) shale. Medium strong, (R2), friable (especially one day after recovery).		36.56										B,FX			
														B,FX			
36					18									B,FX			
														B			
37														B,FX			
														B,FX			
					19									B,FX			
38														B			
														B,FX			
														B,FX			
39														B,FX			
					20									B,FX			SAND
														B,FX			
40		CONTINUED NEXT PAGE															

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW4

SHEET 5 OF 5

LOCATION: Refer to Plan

DRILLING DATE: July 4-9, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	FLUSH	COLOUR, % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	ROCK STRENGTH INDEX	WEATHERING INDEX	NOTES WATER LEVELS INSTRUMENTATION
40		— CONTINUED FROM PREVIOUS PAGE —															
		Red-brown, moderately weathered (red) to slightly weathered (green) shale. Medium strong, (R2), friable (especially one day after recovery).			21									J			
41														V,S			
														B,FX			
														B,FX			
														J			
					22									B			
42														B			SAND
														B			
43	RQ Core													B,FX			
					23									B,FX			
44														B,FX			
		Gypsum blebs/nodules at 45.24-45.24m.															
45																	
46				118.68 / 46.02													
		END OF HOLE															
47																	
48																	
49																	
50																	

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW5

SHEET 1 OF 5

LOCATION: Refer to Plan

DRILLING DATE: July 10-11, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	COLOUR, % RETURN FLUSH	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
0		GROUND SURFACE		160.50												
		Dry to slightly moist, loose-compact, yellow-brown silty sand to sandy silt, trace cobbles, gravel clay. (SM-ML)		0.00												
				159.59												
1		Firm, yellow-brown, moist to slightly moist, silty sand to sandy silt, some 5% gravel. (ML-TILL)		0.91												
2				158.06												BENTONITE SEAL
		Compact, moist, yellow-brown gravelly sand, some silt, trace clay, some cobbles. (TILL) (SG-ML)		2.44												
3				157.30												
		Yellow-brown, moist, compact, cobbley silty sand TILL. (SM)		3.20												
4				155.78												
	AUGER	Brown, damp, dense silty sand (SM), occ. gravel.		4.72												
5				155.01												
		Brown, moist, dense silty sand to silty gravel. (SM-GM)		5.49												
6				154.25												
		Brown, moist, compact sand, trace some silt, some sub-ang gravel & cobbles, trace clay.		6.25												
7				152.88												SAND
		Brown-yellow brown, wet, very dense sand TILL, some silt, clay, gravel and cobbles. (SM)		7.62												
8				152.12												
		Grey, hard to very hard SILT, some sand, moist to slightly moist, some clay. (ML)		8.38												
9		Transition from moist to wet soil: water table inferred.														BENTONITE SEAL
10		CONTINUED NEXT PAGE														

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW5

SHEET 2 OF 5

LOCATION: Refer to Plan

DRILLING DATE: July 10-11, 2002

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	FLUSH / % RETURN	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —		150.44												
10		Brown, dense, moist silty coarse gravelly sand to silty gravel TILL. (SM-GM)		10.06												
				149.68												
11		Brown, dense moist SILT, trace gravel.		10.82												
				148.92												
		Wet, dense, grey SAND and GRAVEL, some silt. (TILL) (SG-GM)		11.58												
12				148.16												
		Brown, moist, hard, cobbley, gravelly SILT TILL. (SM)		12.34												
13	AUGER															
				146.63												BENTONITE SEAL
14		BEDROCK, highly weathered, very weak, friable red shale, easily augered.		13.87												
15																
				144.85												
16	HQ CORE	Red SHALE, finely laminated, weak to moderately strong, slightly weathered.		15.65	1								B			
													B			
17																
													B,FX			
		Core is highly discked, reducing RQD.											B,FX			
18					2								B,FX			SAND
													B,FX			
													B J			
													B,FX			
19													B,FX			
					3								B,FX J			
20													B,FX			
		CONTINUED NEXT PAGE														

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW5

SHEET 3 OF 5

LOCATION: Refer to Plan

DRILLING DATE: July 10-11, 2002

DATUM:

INCLINATION: -90° AZIMUTH: --

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	FLUSH	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	NOTES WATER LEVELS INSTRUMENTATION
20		— CONTINUED FROM PREVIOUS PAGE —			3				
21		Red SHALE, finely laminated, weak to moderately strong, slightly weathered. Green shale bands are slightly stronger than the red shale bands. (Metalic sound when tapped with geologic hammer)			4			B,FX B,FX B,FX B,FX	
22		Run 5: Core wet at about 22.86m below ground. Slight strength decrease and weathering increase at water table.			5			B,FX B,FX B,FX	
23								B,FX	
24					6			B,FX B,FX B,FX B,FX	
25	HQ CORE	Red and green SHALE, moderate to slightly weathered, medium strong, finely laminated, not friable. Rock is up to 10% green coloured.		135.81 24.69	7			B,FX B,FX B,FX B,FX B,FX	
26		Discontinuities are planar and rough to smooth. (DISCKING)						B,FX BC	SAND
27					8			B,FX B,FX B,FX	
28					9			B,FX B,FX B,FX	
29								B,FX B,FX J B,FX	BENTONITE SEAL
30		CONTINUED NEXT PAGE			10			B,FX B, crush, <2cm	

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

RECOVERY: TOTAL CORE % / SOLID CORE %
R.Q.D. %
FRACT. INDEX PER 0.3
DISCONTINUITY DATA: DIP w.r.t. CORE AXIS
HYDRAULIC CONDUCTIVITY: K, cm/sec
DIAMETRAL POINT LOAD INDEX (MPa)

DEPTH SCALE
1 : 50

LOGGED: MR

CHECKED:

Golder Associates

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW5

SHEET 4 OF 5

LOCATION: Refer to Plan

DRILLING DATE: July 10-11, 2002

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

FR/FX-FRACTURE F-FAULT SM-SMOOTH FL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH US-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	FLUSH	COLOUR & % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —															
30		Red and green SHALE, moderate to slightly weathered, medium strong, finely laminated, not friable. Rock is up to 10% green coloured. * First gypsum coatings noted on fracture surfaces at 30.07m.			10									B B,FX B,FX B B			
31					11									FX, gypsum, <1mm FX			
32		Red SHALE, moderately strong, cannot be scratched with knife, slightly weathered. Finely laminated. Friable.		128.50 32.00										B,FX B,FX			BENTONITE SEAL
33					12									BC			
34					13									B,FX B,FX B,FX B,FX B,FX			
35	HQ CORE													B,FX			
36		Discontinuities are planar and smooth to rough. They tend to be perpendicular to the core axis. they are interpreted as bedding/mechanically induced fractures.			14									B,FX B,FX B			
37														B,FX B,FX J			
38		Red shale, finely laminated, some debris flow/turbidity bedding. (38.46m-38.55m)			15									BC B,FX, gypsum, <1mm			
39		Note that approximately 6%-10% of the recovered core is coloured green.			16									B B,FX B,FX B,FX B,FX			SAND
40		CONTINUED NEXT PAGE			17												

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 16/1/04 PS

RECORD OF DRILLHOLE: MW5

PROJECT: 021-1228

LOCATION: Refer to Plan

INCLINATION: -90° AZIMUTH: —

DRILLING DATE: July 10-11, 2002

DRILL RIG: CME 75

DRILLING CONTRACTOR: ALL TERRAIN DRILLING

SHEET 5 OF 5

DATUM:

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE (min/m)	FLUSH	COLOUR, % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —															
40		Red SHALE, moderately strong, cannot be scratched with knife, slightly weathered. Finely laminated. Friable.												B,FX			
														B,FX			
					17									B,FX			
41														B,FX, gypsum coating			
														B			
														B,FX			
42														B			
					18									B,FX			SAND
														B			
43	HQ CORE																
					19									B,FX			
44																	
45					20									B,FX			
														B,FX			
														B			
46				114.49 46.02										S			
		END OF HOLE															
47																	
48																	
49																	
50																	

FRFX-FRACTURE F-FAULT SM-SMOOTH PL-FLEXURED BC-BROKEN CORE
CL-CLEAVAGE J-JOINT R-ROUGH UE-UNEVEN MB-MECH. BREAK
SH-SHEAR P-POLISHED ST-STEPPED W-WAVY B-BEDDING
VN-VEIN S-SLICKENSIDED PL-PLANAR C-CURVED

HYDRAULIC CONDUCTIVITY K, cm/sec: 10^{-11} 10^{-9} 10^{-7} 10^{-5}

DIAMETRAL POINT LOAD INDEX (MPa): 2 4 6

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MR

CHECKED:

MISS_ROCK 021-1228.GPJ GLDR_CAN.GDT 15/1/04 PS

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-05S

SHEET 1 OF 2

LOCATION: N 596134.0 ;E 4808769.0

DRILLING DATE: July 9, 2007

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/(m)	FLUSH / % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	DISCONTINUITY DATA: Jr	DISCONTINUITY DATA: Ja/Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -Q' AVG.	NOTES WATER LEVELS INSTRUMENTATION
		GROUND SURFACE		167.03																
0		Compact, dry, brown SILT with some clay and trace to some gravel, (0.5 cm to 3.03 cm) subangular to subrounded (TILL)		0.00																Cement
1																				
2																				
3		Occasional cobbles after 2.74 m depth																		
4				162.83																
		Compact, moist to wet, brown SANDY SILT with some gravel, and occasional cobble, subrounded to subangular, heterogeneous (TILL)		4.20																
5																				Grout
6																				
				160.63																
		Compact, saturated, brown SAND with some gravel and silt		6.40																
7																				
8				158.87																
		Compact, wet, brown SILT with some sand and gravel		8.16																
9		Silt layer from 28.8 m to 30.5 m																		
		Becoming clayey at 9.29 m depth																		
10																				
		CONTINUED NEXT PAGE																		

JN - Joint, FLT - Fault, SHR- Shear, VN - Vein, CJ - Conjugate; BD- Bedding, FO- Foliation, CO- Contact, OR- Orthogonal, CL - Cleavage; PL - Planar, CU- Curved, UN- Undulating, ST - Stepped, IR - Irregular; PO- Polished, K - Slickensided, SM- Smooth, Ro - Rough, MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE
1 : 50

LOGGED: AI

CHECKED: SW

Golder Associates

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-05S

SHEET 2 OF 2

LOCATION: N 5961340 ;E 4808769.0

DRILLING DATE: July 9, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE min/(m)	FLUSH	CORE OUR RETURN %
10		— CONTINUED FROM PREVIOUS PAGE —						
		Compact, wet, brown SILT with some sand and gravel		156.73				
		Loose, grey, poorly graded, clean, homogeneous fine SAND		10.30				
11				155.45				
		Very dense, brown SILTY fine SAND with gravel and cobbles		11.58				
12								
13								
14								
15				151.46				
		Slightly weathered, very thinly bedded, brownish red and green SHALE		15.57				
16								
17								
18				148.90				
		END OF DRILLHOLE		18.13				
19								
20								

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate

BD - Bedding; FO - Foliation; CO - Contact; OR - Orthogonal; CL - Cleavage

PL - Planar; CU - Curved; UN - Undulating; ST - Stepped; IR - Irregular

PO - Polished; K - Slickensided; SM - Smooth; Ro - Rough; MB - Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DISCONTINUITY DATA: DIP to C.A. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -Q' AVG.
999R	999R	999R	999R	999R	999R							
						,BD,PL,UE						
						,BD,SH,UE						
						,SH, PL,UE,Ro						
						,SH, BD,UE,Ro						
						,PL,UE,Ro						
						,PL,UE,Ro						
						,SH,BD,Ro						
						,PL,W,UE						
						,PL,CU,UE						
						,PL,UE,VR						
						,PL,Ro,S.C.						

NOTES
WATER LEVELS
INSTRUMENTATION

Grout

Hole Plug

Sand

Screen

Sand

DEPTH SCALE
1 : 50

LOGGED: AI

CHECKED: SW

Golder Associates

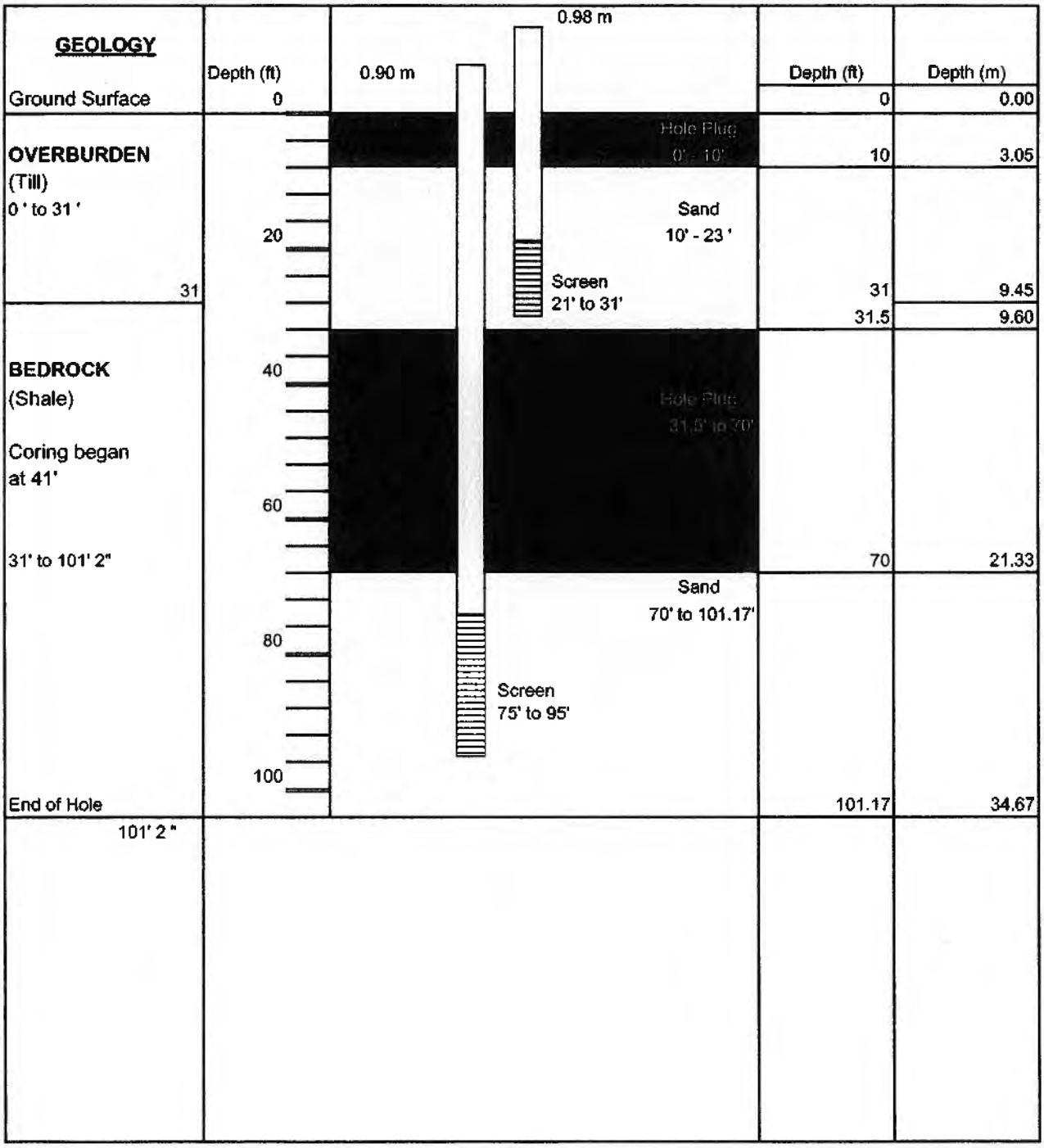
MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

CANADA BRICK - TREMAINE ROAD, BURLINGTON
WELL COMPLETION DETAILS

FIGURE A.6

MONITORING WELL MW-06

Note: Borehole logging and well completion was not supervised by Golder.



Not to Scale

Project: 021-1228 (5100)

Date: July 2002

Drawn: MR

Checked: D.M.

GOLDER ASSOCIATES

RECORD OF DRILLHOLE: MW-06S

PROJECT: 021-1228

LOCATION: N 596351.0 ;E 4808882.0

INCLINATION: -90° AZIMUTH: ---

DRILLING DATE: July 6 and 10, 2007

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

SHEET 1 OF 2

DATUM:

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/(m)	FLUSH	COLOUR % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA β Angle	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	UNC. Q' AVG.	NOTES WATER LEVELS INSTRUMENTATION
0		GROUND SURFACE		166.05															
0		Loose to compact, dry, brown SILT, some clay (TILL)		0.00															
1																			
2		Some gravel from 8.44 m to 2.84 m depth																	
3				162.70															
		Slightly moist, brown SANDY SILT, some clay, cobble/gravel bands (TILL)		3.35															Cement
4																			
5																			
				160.27															
6		Wet, brown SAND and GRAVEL		5.78															
7		Silty sand, reddish brown, lens of clay, gravel at 7.32 m depth																	Hole Plug
				158.13															Sand
8		Reddish brown SILT, trace gravel (TILL)		7.92															
9																			Screen
				156.91															
		SHALE, reddish, slightly porous, slight weathering, some gravel		9.14															
10		*CONTINUED NEXT PAGE*																	

JN - Joint, FLT - Fault, SHR- Shear, VN - Vein, CJ - Conjugate; BD- Bedding, FO- Foliation, CO- Contact, OR- Orthogonal, CL - Cleavage; PL - Planar, CU- Curved, UN- Undulating, ST - Stepped, IR - Irregular; PO- Polished, K - Slickensided, SM- Smooth, Ro - Rough, MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE
1 : 50

LOGGED: MD

CHECKED: SW

Golder Associates

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 2/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-06S

SHEET 2 OF 2

LOCATION: N 596351.0 ;E 4808892.0

DRILLING DATE: July 6 and 10, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planer; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; RO - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/(m)	FLUSH	COLOUR RETURN	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: θ Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	GRAIN SIZE	NOTES WATER LEVELS INSTRUMENTATION
10		--- CONTINUED FROM PREVIOUS PAGE ---																				
		Moderately weathered, thinly bedded, redish brown and green SHALE		10.88																		Screen
11				154.80																		Sand
		END OF DRILLHOLE		11.25																		
12																						
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: MD

CHECKED: SW

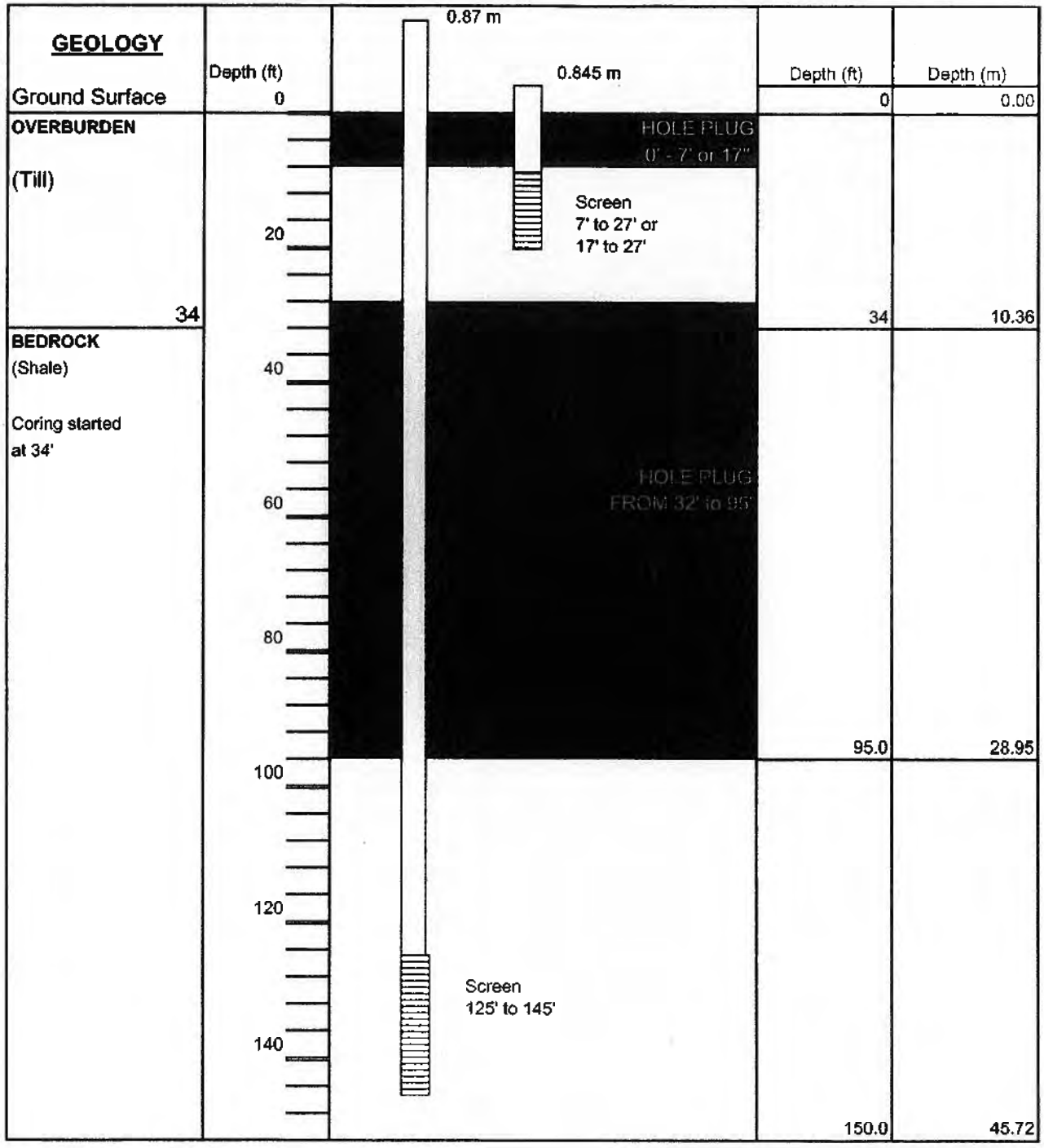
MIS-ROK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

CANADA BRICK - TREMAINE ROAD, BURLINGTON
WELL COMPLETION DETAILS

FIGURE A.7

MONITORING WELL MW-7

Note: Borehole logging and well completion was not supervised by Golder. This hole was originally numbered MW-12.



Not to Scale

Project: 021-1228 (5100)

Date: July 2002

Drawn: MR

Checked: D.M.

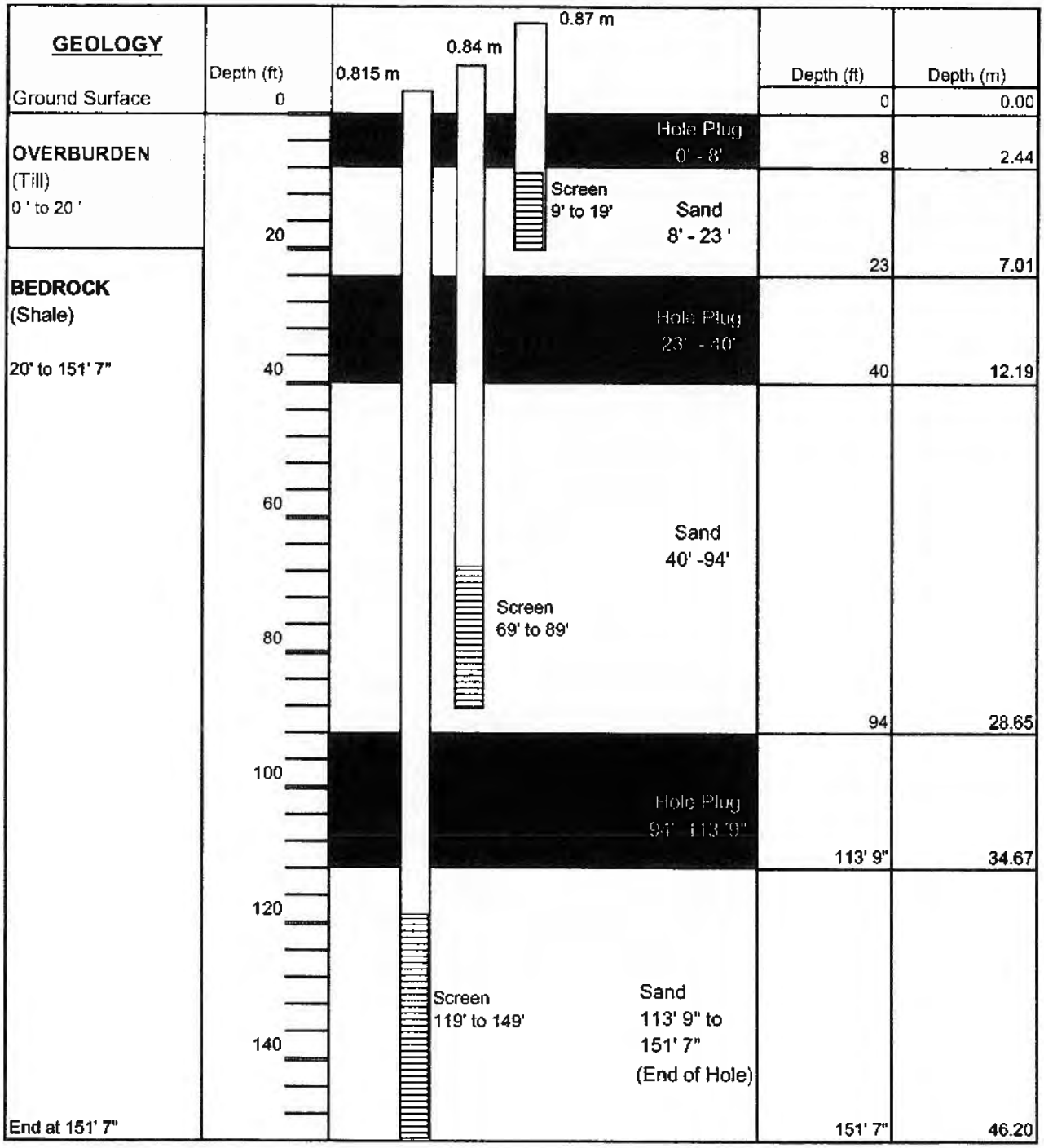
GOLDER ASSOCIATES

CANADA BRICK - TREMAINE ROAD, BURLINGTON
WELL COMPLETION DETAILS

FIGURE A.8

MONITORING WELL MW-08

Note: Borehole logging and well completion was not supervised by Golder.



Not to Scale

Project: 021-1228 (5100)

Date: July 2002

Drawn: MR

Checked: A.M.

GOLDER ASSOCIATES

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-09

SHEET 1 OF 5

LOCATION: N 598166.0 ;E 4809014.0

DRILLING DATE: July 3 to 5, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE min/m	FLUSH	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	W.C. % /Or W/L
		GROUND SURFACE		166.53													
0		Stiff, brown clayey silt till with trace gravel and organics (TOPSOIL)		0.00													
				164.08													
1		Firm, brown SILT with some clay, sand, semirounded gravel and cobbles (TILL)		1.45													
2																	
3																	
4																	
5																	
				159.75													
6		Slightly firm, reddish brown CLAYEY SILT with very fine and very course semirounded sand, gravel and cobbles (TILL)		5.78													
7																	
8																	
				157.00													
9		Stiff, brown SILTY CLAY with very course sand and cobbles (TILL)		8.53													
				156.78													
10		Stiff, reddish brown SILTY CLAY (Weathered Shale)		9.75													
		CONTINUED NEXT PAGE															

NOTES
WATER LEVELS
INSTRUMENTATION

(S)

(I)

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: AK
CHECKED: SW

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-09

SHEET 2 OF 5

LOCATION: N 5986166.0 ;E 4809014.0

DRILLING DATE: July 3 to 5, 2007

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/m	FLUSH	COLOUR OF RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA β Angle	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -C/ kN/m	NOTES WATER LEVELS INSTRUMENTATION
10		— CONTINUED FROM PREVIOUS PAGE —																				
		Stiff, reddish brown SILTY CLAY (Weathered Shale)																				
11																						
12				153.34																		
		Stiff, reddish brown SILTY CLAY with some broken shale (Weathered Shale)		12.19																		
13																						
				151.81																		
		Slightly weathered, weak, very thinly to thinly bedded, redish brown and green SHALE		13.72											JN,IR,Ro							
14					1										JN,IR,Ro							
															JN,IR,Ro							
															JN,IR,Ro							
															FO,IR,Ro							
															BD,IR,Ro							
15					2										JN,IR,Ro							
															FR,IR,Ro							
															JN,IR,Ro							
16															FO,IR,Ro							
															JN,IR,Ro							
															JN,ST,Ro							
					3										JN,IR,Ro							
17															FR,IR,Ro							
															JN,IR,Ro							
															JN,IR,Ro							
															FR,IR,Ro							
					4																	
18															FR,IR,Ro							
					5										JN,PL,SM							
															JN,IR,Ro							
19															FO,PL,SM							
					6										FO,IR,Ro							
															FO,IR,Ro							
															JN,PL,Ro							
20		CONTINUED NEXT PAGE																				

DEPTH SCALE

1 : 60

Golder Associates

LOGGED: AK

CHECKED: SW

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 2/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-09

SHEET 3 OF 5

LOCATION: N 596166.0 ;E 4809014.0

DRILLING DATE: July 3 to 5, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO - Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planer; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/m	FLUSH	CORE DIA. & RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: B Angle	DIP & D.D. CORE AXIS	TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	UNC. -QP AVG.	NOTES WATER LEVELS INSTRUMENTATION
20		— CONTINUED FROM PREVIOUS PAGE —																				
		Slightly weathered, weak, very thinly to thinly bedded, redish brown and green SHALE			6										,JN,CU,Ro							
															,JN,IR,Ro							
															,FO,PL,SM							
21															,FO,IR,Ro							
					7										,JN,PL,Ro							
															,FO,IR,Ro							
															,JN,IR,Ro							
22															,BD,PL,Ro							
															,JN,IR,Ro							
					8										,BD,PL,Ro							
															,FR,IR,Ro							
23															,JN,IR,Ro							
															,JN,IR,Ro							
															,JN,IR,Ro							
															,JN,IR,Ro							
															,FO,IR,SM							
24					9										,JN,IR,Ro							
															,FO,IR,Ro							
															,JN,UE,SM							
															,FO,IR,Ro							
															,JN,IR,Ro							
25															,FR,IR,VR							
															,JN,,Ro							
															,BD,PL,Ro							
					10										,JN,PL,SM							
26															,FR,IR,Ro							
															,JN,IR,Ro							
															,FR,IR,SM							
															,JN,IR,Ro							
27															,JN,IR,VR							
					11																	
															,JN,CU,SM							
															,JN,PL,SM							
28															,JN,CU,SM							
					12										,FR,IR,Ro							
															,JN,IR,Ro							
29															,FR,PL,Ro							
					13										,JN,UE,Ro							
30		CONTINUED NEXT PAGE																				

DEPTH SCALE 1 : 50

LOGGED: AK

CHECKED: SW

Golder Associates

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-09

SHEET 4 OF 5

LOCATION: N 598186.0 ;E 4809014.0

DRILLING DATE: July 3 to 5, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/m	FLUSH	COLOUR % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC 'Q' AVG.	NOTES WATER LEVELS INSTRUMENTATION
30		— CONTINUED FROM PREVIOUS PAGE —																	
		Slightly weathered, weak, very thinly to thinly bedded, reddish brown and green SHALE			13										,JN,IR,SM				
31															,JN,IR,PO				
															,FR,IR,SM				
					14										,JN,UE,Ro				
32															,JN,IR,SM				
															,JN,PL,SM				
															,JN,IR,Ro				
															,JN,IR,SM				
33					15										,JN,IR,Ro				
															,FR,IR,Ro				
															,JN,IR,Ro				
34																			
					16										,FR,IR,Ro				
															,JN,UE,SM				
35															,JN,IR,Ro				
															,FR,IR,VR				
															,FR,IR,Ro				
															,JN,PL,SM				
36																			
					17										,JN,UE,SM				
															,JN,PL,Ro				
															,FR,IR,Ro				
37																			
					18										,JN,IR,Ro				
															,JN,PL,SM				
38															,FO,IR,Ro				
															,JN,IR,Ro				
															,JN,PL,SM				
															,FR,IR,VR				
39					19										,JN,IR,Ro				
															,JN,IR,Ro				
															,FR,IR,Ro				
															,JN,IR,Ro				
40															,JN,ST,Ro				
		CONTINUED NEXT PAGE																	

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: AK

CHECKED: SW

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-09

SHEET 5 OF 5

LOCATION: N 596166.0 ;E 4809014.0

DRILLING DATE: July 3 to 5, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/(m)	FLUSH	COLOUR % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -'C' AVG.	NOTES WATER LEVELS INSTRUMENTATION
40		— CONTINUED FROM PREVIOUS PAGE —																				
		Slightly weathered, weak, thinly bedded, redish brown and green SHALE		125.43 40.10	19										,JN,IR,Ro							
															,JN,IR,Ro							
41					20										,JN,PL,SM							
															,JN,IR,Ro							
															,JN,CU,SM							
															,FR,IR,Ro							
42															,JN,IR,Ro							
															,FR,IR,Ro							
					21										,FR,IR,VR							
															,FR,IR,VR							
															,FR,IR,Ro							
43				122.43											,JN,CU,SM							
		Slightly weathered, weak, layered, redish brown and green SHALE		43.10											,JN,IR,Ro							
															,FR,IR,Ro							
					22										,JN,PL,SM							
44															,JN,IR,Ro							
															,FR,IR,SM							
45																						
					23										,JN,PL,SM							
46				119.28																		
		END OF DRILLHOLE		46.25																		
47																						
48																						
49																						
50																						

(D)

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/08 DD

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: AK

CHECKED: SW

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-10

SHEET 1 OF 5

LOCATION: N 596045.0 ;E 4809002.0

DRILLING DATE: June 20 to 21, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planer; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; RO - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/(m)	FLUSH / COLOUR % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC /Cr AVG.	NOTES WATER LEVELS INSTRUMENTATION
0		GROUND SURFACE		168.78																	
		Soft, brown clayey silt with organics and trace grey silt and gravel (TOPSOIL)		0.06																	
1		Stiff, brown to grey brown CLAYEY SILT with semiangular gravel (TILL)																			
2																					
3																					
4				162.72																	
		Very soft, reddish brown very fine SANDY SILT with semirounded gravel and cobbles (TILL)		4.06																	
5																					
6																					
7																					
8																					
				158.25																	
		Stiff, reddish brown CLAYEY SILT with trace sand and gravel (TILL)		8.53																	
9				157.79																	
		Soft, grey brown fine SILTY SAND with gravel (TILL)		8.99																	
				157.18																	
		Stiff, grey brown very fine SANDY SILT with coarse sand, gravel and cobble s (TILL)		9.60																	
10		*CONTINUED NEXT PAGE*																			

Hole Plug

Grout

(S)

(S)

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: AK

CHECKED: SW

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 2/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-10

SHEET 2 OF 5

LOCATION: N 596045.0 ;E 4809002.0

DRILLING DATE: June 20 to 21, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate

BD - Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage

PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular

PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE mm/m	COLOUR % RETURN FLUSH	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA β Angle	DISCONTINUITY DATA DIP w.r.t. CORE AXIS	DISCONTINUITY DATA TYPE AND SURFACE DESCRIPTION	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	FRACT. INDEX PER 0.3 m	NOTES WATER LEVELS INSTRUMENTATION
10		-- CONTINUED FROM PREVIOUS PAGE --																
		Stiff, reddish brown CLAYEY SILT with semiangular gravel (TILL)		158.64 10.14														
11		SHALE		155.81 10.97														
12																		
13																		
14																		
				152.07														
15		Slightly to moderately weathered, weak, very thinly to thinly bedded, reddish brown and green SHALE		14.71	1									FO,ST,Ro JN,IR,SM JN,IR,Ro				Grout
16					3									JN,IR,Ro JN,IR,VR FO,IR,Ro JN,IR,Ro				
17					2									JN,UE,SM JN,IR,Ro FR,CU,SM FR,IR,Ro JN,IR,VR JN,IR,Ro JN,IR,Ro FO,PL,SM				
18					4									JN,IR,Ro FO,IR,Ro FO,CU,Ro JN,PL,SM FO,IR,Ro JN,IR,Ro				
19					6									JN,UE,Ro JN,UE,Ro				
20		CONTINUED NEXT PAGE																

DEPTH SCALE 1 : 50

LOGGED: AK

CHECKED: SW

Golder Associates

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/08 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-10

SHEET 3 OF 5

LOCATION: N 596045.0 ;E 4809002.0

DRILLING DATE: June 20 to 21, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planer; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE min/0.3m	FLUSH	CORE DIAM. & RETURN %	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: B Angle	DISCONTINUITY DATA: DIP/DIP DIR. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	UCS -Qt AVG.	NOTES WATER LEVELS INSTRUMENTATION
20		*--- CONTINUED FROM PREVIOUS PAGE ---*																				
		Slightly to moderately weathered, weak, very thinly to thinly bedded, redish brown and green SHALE			5										,JN,IR,SM							
					6										,FO,ST,Ro ,FO,PL,SM ,BD,IR,Ro ,FO,IR,Ro							
21				145.46											,FO,ST,SM							
		Highly weathered, very weak, thinly bedded, redish brown and green SHALE		21.30	7										,FO,PL,SM ,JN,PL,SM ,JN,IR,Ro ,JN,IR,Ro ,JN,IR,Ro ,FO,ST,Ro							
22				143.98																		
		Slightly weathered, weak, redish brown and green SHALE		22.80											,JN,IR,Ro							
23					8										,FR,PL,SM ,FR,ST,SM ,JN,PL,SM ,JN,IR,Ro							
24															,JN,UE,SM ,FR,IR,Ro							
					9										,JN,IR,Ro ,BD,PL,SM ,BD,IR,Ro ,FO,PL,SM							Grout
25																						
															,JN,ST,Ro ,FO,IR,SM ,JN,PL,SM ,JN,PL,SM ,FO,IR,Ro							
26					10										,FO,IR,Ro ,JN,IR,Ro							
27																						
28					11										,FR,IR,Ro ,JN,IR,Ro							
29					12										,FO,PL,SM ,FO,ST,SM ,JN,UE,SM							
30		*CONTINUED NEXT PAGE*																				Hole Plug

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: AK

CHECKED: SW

MIS-ROK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-10

SHEET 4 OF 5

LOCATION: N 5960450 ;E 4609002.0

DRILLING DATE: June 20 to 21, 2007

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE min/m	FLUSH	COLOUR % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: B Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	PMC -Q' AVG.	NOTES WATER LEVELS INSTRUMENTATION
30		— CONTINUED FROM PREVIOUS PAGE —																				
		Slightly weathered, weak, redish brown and green SHALE			12										,JN,CU,SM							
															,JN,IR,Ro							
31															,FO,IR,Ro							
															,FO,IR,Ro							
					13										,FO,IR,Ro							
32															,JN,PL,SM							
															,JN,UE,SM							
															,JN,PL,SM							
					14										,FR,IR,Ro							
33															,JN,PL,SM							Hole Plug
															,FR,ST,SM							
															,FO,IR,Ro							
															,JN,PL,SM							
34															,JN,IR,Ro							
					15										,JN,PL,SM							
															,JN,IR,Ro							
35																						
															,JN,IR,Ro							
					16										,JN,PL,SM							
36															,FO,IR,Ro							
															,JN,PL,SM							
37																						
					17										,JN,UE,SM							Sand
															,FR,IR,Ro							
38															,FR,IR,Ro							
															,JN,IR,Ro							
					18										,JN,PL,SM							
39															,FO,IR,Ro							Screen
40		CONTINUED NEXT PAGE			19																	

DEPTH SCALE 1 : 50

LOGGED: AK

CHECKED: SW

Golder Associates

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-10

SHEET 5 OF 5

LOCATION: N 596045.0 ;E 4809002.0

DRILLING DATE: June 20 to 21, 2007

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planer; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/m	FLUSH / COLOUR % RETURN	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -Cr AVG.	NOTES WATER LEVELS INSTRUMENTATION
		— CONTINUED FROM PREVIOUS PAGE —																			
40		Slightly weathered, weak, redish brown and green SHALE																			
					19									JR,ST,SM							
														JN,PL,SM							
41														FO,PL,SM							
														JN,IR,Ro							
														JN,IR,Ro							(D)
42					20									JN,PL,VR							
														JN,PL,Ro							Screen
														JN,IR,Ro							
43					21																
														JN,ST,Ro							
														JN,UE,Ro							
														FR,UE,Ro							
44					22																
														JN,PL,Ro							
														JN,ST,SM							
														JN,UE,SM							
45					23									FO,PL,SM							Sand
														JN,IR,Ro							
		END OF DRILLHOLE		121.11 45.67																	
46																					
47																					
48																					
49																					
50																					

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: AK

CHECKED: SW

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-11

SHEET 1 OF 5

LOCATION: N 595870.0 ;E 4808946.0

DRILLING DATE: July 11, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	ELEV. / DEPTH (m)
0		GROUND SURFACE	168.31
		Compact, dry, brown SILT, trace clay (TILL)	0.00
1		Loose to compact silty clay till from 1.2 m to 2.4 m depth	
2		Damp from 1.8 m to 2.4 m depth	
3			
4			164.04
		Dry, brown to grey SILT, trace gravel/cobbles, angular to subangular gravel (TILL)	4.27
5			
6			161.80
		Damp, brown to grey SANDY SILT with trace subangular rounded gravel, hetero (TILL)	6.71
7			
8			
			158.47
9		Soft, grey to brown silty fine SAND (TILL)	9.84
10			
		CONTINUED NEXT PAGE	

SYMBOLIC LOG | RUN No. | PENETRATION RATE min/(m) | FLUSH | COLOUR % RETURN

JN - Joint, FLT - Fault, SHR- Shear, VN - Vein, CJ - Conjugate; BD- Bedding, FO- Foliation, CO- Contact, OR- Orthogonal, CL - Cleavage; PL - Planer, CU- Curved, UN- Undulating, ST - Stepped, IR - Irregular; PO- Polished, K - Slickensided, SM- Smooth, Ro - Rough, MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

RECOVERY: TOTAL CORE % | SOLID CORE %

R.Q.D. %

FRACT. INDEX PER 0.3 m

DISCONTINUITY DATA: β Angle | DIP w.r.t. CORE AXIS | TYPE AND SURFACE DESCRIPTION | Jr | Ja | Jn

HYDRAULIC CONDUCTIVITY K, cm/sec: 10⁻⁴ | 10⁻⁵ | 10⁻⁶ | 10⁻⁷

Diametral Point Load Index (MPa): 4 | 2 | 1

RMD -Q' AVG.

NOTES WATER LEVELS INSTRUMENTATION

Hole [illegible]

Grout

Bent. (S)

DEPTH SCALE 1 : 50

LOGGED: MD & AK

CHECKED: SW

Golder Associates

MIS-RCK 004 021-1228 [2007].GPJ GAL-MISS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-11

SHEET 2 OF 5

LOCATION: N 595870.0 ;E 4808946.0

DRILLING DATE: July 11, 2007

DATUM:

INCLINATION: -90° AZIMUTH: —

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD - Bedding; FO - Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; ME- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/m	FLUSH	COLOUR % RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: α Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -Q' AVG.	NOTES WATER LEVELS INSTRUMENTATION
10		— CONTINUED FROM PREVIOUS PAGE —																				
		Soft, grey to brown silty fine SAND (TILL)																				
11																						
12																						
13																						
14																						
15				153.43																		
		Slightly to moderately weathered, weak, thinly bedded, redish brown and green SHALE		14.88	1										,JN,IR,Ro							Grout
															,JN,CU,SM							
															,JN,IR,Ro							
16					2										,JN,IR,VR							
															,JN,IR,Ro							
															,JN,IR,Ro							
															,JN,IR,SM							
				151.55											,JN,IR,Ro							
		Moderately to highly weathered, thinly bedded, redish brown SHALE with some thin greyish green beds		16.76																		
17															,JN,IR,SM							
					3										,JN,IR,SM							
															,JN,IR,Ro							
18															,JN,IR,SM							
															,JN,IR,SM							
															,JN,IR,SM							
															,JN,IR,Ro							
															,JN,IR,Ro							
19					4										,JN,ST,Ro							
															,JN,IR,SM							
															,JN,IR,Ro							
															,JN,IR,SM							
															,JN,IR,Ro							
															,JN,IR,Ro							
															,JN,ST,SM							
20				148.31											,JN,IR,SM							
		CONTINUED NEXT PAGE																				

DEPTH SCALE 1 : 50

Golder Associates

LOGGED: MD & AK

CHECKED: SW

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 2/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-11

SHEET 3 OF 5

LOCATION: N 595870.0 ;E 4808946.0

DRILLING DATE: July 11, 2007

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD - Bedding; FO - Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planer; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; ME- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE mm/m	COLOUR & % RETURN FLUSH	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DIP w.r.t. CORE AXIS	TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -0' AVG.	NOTES WATER LEVELS INSTRUMENTATION
20		--- CONTINUED FROM PREVIOUS PAGE ---																			
		Slightly weathered, thinly bedded, reddish brown SHALE with some thin green beds		20.00	5									,JN,IR,Ro ,JN,IR,SM ,JN,IR,Ro ,JN,IR,Ro ,JN,IR,Ro ,JN,IR,Ro							
21																					
22					6									,JN,IR,SM ,JN,IR,SM ,JN,IR,Ro ,JN,IR,Ro							
23																					
24					7									,JN,IR,Ro ,JN,IR,Ro ,JN,IR,Ro ,JN,ST,Ro ,JN,IR,SM ,JN,IR,Ro							
25					8									,JN,IR,SM ,JN,IR,Ro ,JN,IR,SM ,JN,IR,Ro ,JN,IR,SM ,JN,IR,Ro							Grout
26				142.10										,JN,IR,Ro							
		Slightly weathered, very thinly to thinly bedded, weak, reddish brown and green SHALE		26.21	9									,JN,CU,SM ,JN,IR,SM ,JN,IR,SM ,JN,IR,SM ,JN,IR,Ro ,JN,IR,Ro ,JN,IR,Ro							
27																					
28					10									,JN,IR,SM ,JN,IR,Ro ,JN,IR,Ro							
29					11									,JN,IR,Ro ,JN,IR,SM ,JN,IR,Ro ,JN,IR,SM							
30		CONTINUED NEXT PAGE																			

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

DEPTH SCALE 1 : 50

Golder Associates

LOGGED: MD & AK

CHECKED: SW

RECORD OF DRILLHOLE: MW-11

PROJECT: 021-1228

LOCATION: N 595870.0 ;E 4808946.0

INCLINATION: -90° AZIMUTH: ---

DRILLING DATE: July 11, 2007

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

SHEET 4 OF 5

DATUM:

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols.

DEPTH SCALE METRES	DESCRIPTION	ELEV. / DEPTH (m)	RUN No.	PENETRATION RATE min/(m)	FLUSH	COLOUR & RETURN	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: α Angle	DISCONTINUITY DATA: DIP/ WRT CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jr	Ja	Jn	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC %/ AVG.	NOTES WATER LEVELS INSTRUMENTATION
30	— CONTINUED FROM PREVIOUS PAGE —																			
	Slightly weathered, very thinly to thinly bedded, weak, redish brown and green SHALE		11										JN,IR,Ro							
													JN,IR,SM							
31													JN,IR,Ro							
			12										JN,IR,SM							
													JN,IR,Ro							
													JN,IR,Ro							Grout
32													JN,IR,Ro							
													JN,IR,Ro							
													JN,IR,Ro							
			13										JN,IR,Ro							
33													JN,IR,Ro							
													JN,IR,Ro							
													JN,IR,Ro							
													JN,IR,SM							
													JN,IR,Ro							
													JN,UE,Ro							
34			14										JN,IR,SM							
													JN,IR,PO							
35																				Hole Plug
													JN,IR,SM							
													JN,IR,Ro							
36			15										JN,IR,Ro							
													JN,PL,SM							
37																				Sand
													JN,IR,SM							
			16										JN,PL,PO							
38													FR,IR,Ro							
													JN,PL,Ro							
39			17										JN,CU,Ro							Screen
			18										JN,IR,Ro							
40	CONTINUED NEXT PAGE																			

DEPTH SCALE 1 : 50

Golder Associates

LOGGED: MD & AK

CHECKED: SW

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF DRILLHOLE: MW-11

SHEET 5 OF 5

LOCATION: N 595870.0 ;E 4808946.0

DRILLING DATE: July 11, 2007

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME - 75 Track Mount

DRILLING CONTRACTOR: All-Terrain Drilling Limited

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate; BD- Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage; PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular; PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break; BR - Broken Rock

NOTE: For additional abbreviations refer to list of abbreviations & symbols

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE min/(m)	FLUSH / LOSS OF RETURN %	RECOVERY TOTAL CORE %	RECOVERY SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	DISCONTINUITY DATA: β Angle	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Js	Jn	Ja	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -Q' AVG.	NOTES WATER LEVELS INSTRUMENTATION
40		-- CONTINUED FROM PREVIOUS PAGE --																			
		Slightly weathered, very thinly to thinly bedded, weak, redish brown and green SHALE												,JN,IR,VR							
														,JN,PL,PO							
					16									,FR,IR,VR							
41														,FR,UE,Ro							
														,JN,IR,SM							
														,JN,IR,Ro							
														,JN,PL,Ro							(D)
														,JN,IR,Ro							
42					19									,JN,PL,Ro							Screen
														,FR,ST,Ro							
														,JN,UE,Ro							
														,JN,IR,Ro							
43														,JN,IR,Ro							
														,JN,FL,Ro							
					20									,FR,PL,SM							
														,JN,CU,PO							
44																					
														,JN,UE,SM							
					21									,JN,IR,Ro							
														,FR,IR,SM							
45														,JN,IR,Ro							
														,JN,IR,Ro							Sand
														,JN,ST,Ro							
					22									,JN,FL,Ro							
				122.39										,JN,IR,Ro							
46		END OF DRILLHOLE		45.92										,JN,UE,Ro							
47																					
48																					
49																					
50																					

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: MD & AK

CHECKED: SW

MIS-RCK 004 021-1228 (2007).GPJ GAL-MISS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW1

SHEET 1 OF 2

LOCATION: N 4806946.0 ;E 595581.0

BORING DATE: August 29, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. + Q - ● rem V. ⊕ U - ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl) (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		167.64							
0	Air Rotary Drilling 152.4 mm Diameter	Dense, brown, fine grained SILT (TILL) (HALTON TILL)		0.00							
6		Dense, brown, fine grained SILT, some gravel , trace clay (TILL) (HALTON TILL)		161.54 6.10							
10		*CONTINUED NEXT PAGE*									

Sept. 14/07

DEPTH SCALE 1 : 50

Golder Associates

LOGGED: MD

CHECKED: SMD

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW1

SHEET 2 OF 2

LOCATION: N 4808946.0 ;E 595581.0

BORING DATE: August 29, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80)	SHEAR STRENGTH Cu, kPa (nat V. +, rem V. ⊕, Q - ●, U - ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-5} 10^{-6} 10^{-4} 10^{-3})	WATER CONTENT PERCENT (Wp — W — Wl) (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
10		— CONTINUED FROM PREVIOUS PAGE —											
	Air Rotary Drilling 152.4 mm Diameter	Dense, brown, fine grained SILT, some gravel , trace clay (TILL) (HALTON TILL)											
16		Weathered red SHALE		151.66 / 15.98									Casing ends at 15.98m depth Open hole to 18.29m depth
18		END OF BOREHOLE		149.35 / 18.29									
20													

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: MD

CHECKED: SMD

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW2

SHEET 1 OF 4

LOCATION: N 4810362.0 ;E 595617.0

BORING DATE: August 29, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. + Q- ● rem V. ⊕ U- ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl) (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0	Air Rotary Drilling 152.4 mm Diameter	GROUND SURFACE		178.33							
		Dense, brown/grey fine grained SILT, trace gravel (TILL) (HALTON TILL)		0.00							
1											
2											
3											
4											
5											
6											
7											
8											
9											
10		CONTINUED NEXT PAGE									

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MD
CHECKED: SMD

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW2

SHEET 2 OF 4

LOCATION: N 4810362.0 ;E 595617.0

BORING DATE: August 29, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80)	SHEAR STRENGTH Cu, kPa (nat V. + Q- ● / rem V. ⊕ U- ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3})	WATER CONTENT PERCENT (Wp — W — Wl) (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
10	Air Rotary Drilling 152.4 mm Diameter	— CONTINUED FROM PREVIOUS PAGE —											
		Dense, brown/grey fine grained SILT, trace gravel (TILL) (HALTON TILL)											
11													
12													
13													
14													
15													
16													
17													
18				168.03 / 16.30									
		Dense, reddish brown fine grained SILT, some gravel (TILL) (HALTON TILL)											Casing ends at 18.3m depth Open hole to 32.01m depth
19													
20		CONTINUED NEXT PAGE											

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

DEPTH SCALE

1 : 50

Golder Associates

LOGGED: MD

CHECKED: SMD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW2

SHEET 3 OF 4

LOCATION: N 4810362.0 ;E 595617.0

BORING DATE: August 29, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (20 40 60 80) nat V. + Q - ● rem V. ⊕ U - ○	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-4} 10^{-5} 10^{-6} 10^{-7}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
20	Air Rotary Drilling 152.4 mm Diameter	— CONTINUED FROM PREVIOUS PAGE —									
		Dense, reddish brown fine grained SILT, some gravel (TILL) (HALTON TILL)									
21											
22											
23											
24											
25											
26											
27											
28											
29											
30		CONTINUED NEXT PAGE									

DEPTH SCALE
1 : 50

LOGGED: MD
CHECKED: SMD

Golder Associates

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW2

SHEET 4 OF 4

LOCATION: N 4810362.0 ;E 595617.0

BORING DATE: August 29, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80)	SHEAR STRENGTH Cu, kPa (nat V. +, rem V. ⊕; Q- ●, U- ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3})	WATER CONTENT PERCENT (Wp — W — Wl) (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
30		— CONTINUED FROM PREVIOUS PAGE —											
31	Air Rotary Drilling 182.4 mm Diameter	Dense, reddish brown fine grained SILT, some gravel (TILL) (HALTON TILL)											
32		END OF BOREHOLE		144.32 32.01									
33													
34													
35													
36													
37													
38													
39													
40													

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MD
CHECKED: SMD

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW3

SHEET 1 OF 3

LOCATION: N 4810005.0 ;E 586410.0

BORING DATE: August 29, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (20 40 60 80) net V. + rem V. ⊕ Q- ◆ U- ○	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0	Air Rotary Drilling 152.4 mm Diameter	GROUND SURFACE		166.85							
		Dense, brown fine grained SILT, trace gravel (TILL) (HALTON TILL)		0.00							
6		Dense, brown fine grained SILT, some gravel (TILL) (HALTON TILL)		160.76 6.09							
10		CONTINUED NEXT PAGE									

DEPTH SCALE

1 : 50

LOGGED: MD

CHECKED: SMD

Golder Associates

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW3

SHEET 2 OF 3

LOCATION: N 4810005.0 ;E 596410.0

BORING DATE: August 29, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80)	SHEAR STRENGTH Cu, kPa (nat V. + Q- ● rem V. ⊕ U- ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3})	WATER CONTENT PERCENT (Wp ⊢ w ⊣ Wl) (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
10	Air Rotary Drilling 152.4 mm Diameter	-- CONTINUED FROM PREVIOUS PAGE --											
		Dense, brown fine grained SILT, some gravel (TILL) (HALTON TILL)											
12				154.65									
		Dense, brownish grey, fine grained SILT, trace gravel, trace weathered shalt throughout (TILL) (HALTON TILL)		12.20									
13													
													Sept. 14/07
14													
15													
16													
17													
18													
19													
				147.03									
		Red SHALE		19.82									
20		CONTINUED NEXT PAGE											

DEPTH SCALE
1 : 50

Golder Associates

LOGGED: MD
CHECKED: SMD

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

PROJECT: 021-1228

RECORD OF BOREHOLE: TW3

SHEET 3 OF 3

LOCATION: N 4810005.0 ;E 596410.0

BORING DATE: August 28, 2007

DATUM:

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. +, rem V. ⊕, Q- ●, U- ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-4} 10^{-5} 10^{-6} 10^{-7}) / WATER CONTENT PERCENT (Wp, W, Wl) (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
20	Air Rotary Drilling 152.4 mm Diameter	— CONTINUED FROM PREVIOUS PAGE —									
		Red SHALE									Casing ends at 20.4m depth. Open hole to 23.62m depth
21											
22											
23				143.23							
		END OF BOREHOLE		23.62							
24											
25											
26											
27											
28											
29											
30											

MIS-BHS 001 021-1228 (2007).GPJ GAL-MIS.GDT 25/9/09 DD

DEPTH SCALE
1 : 50

Golder Associates

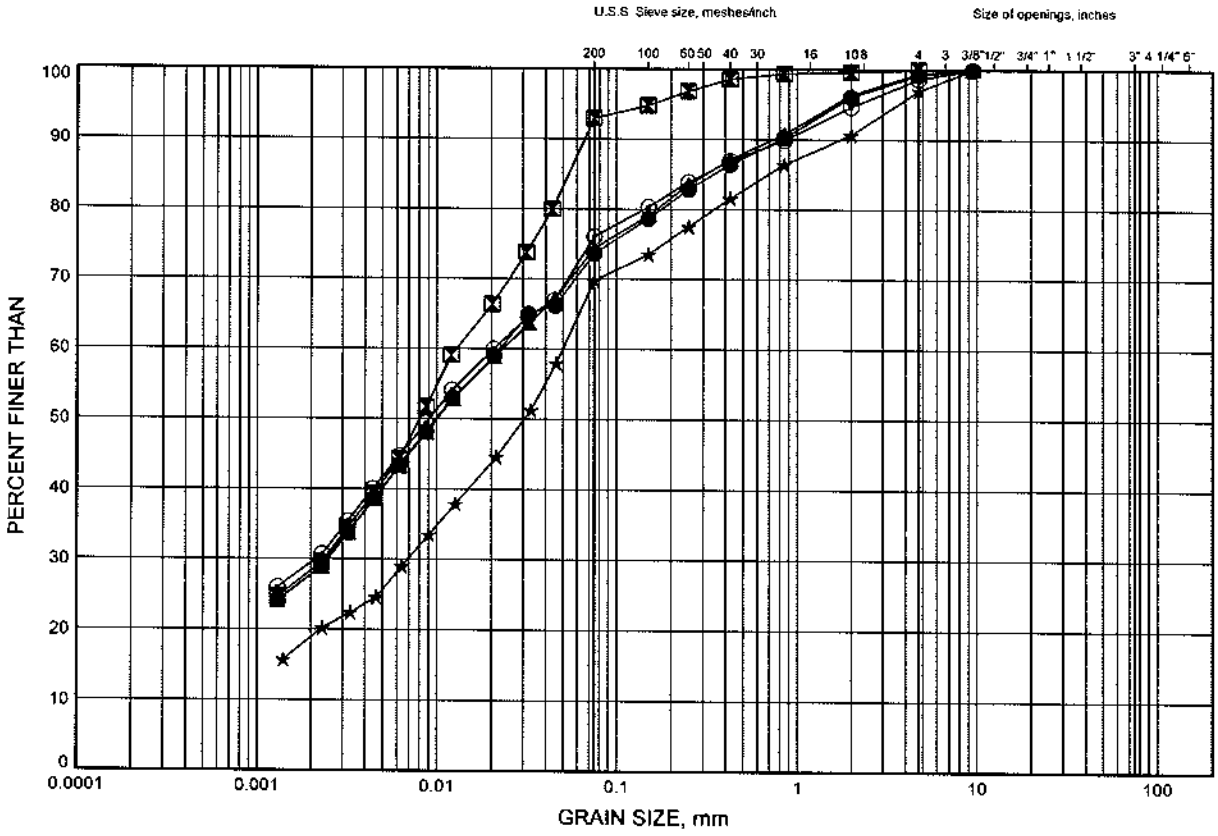
LOGGED: MD
CHECKED: SMD

APPENDIX 4-3
Soil Analysis Results

Hwy 407 West Employment Lands (Bentall)

GRAIN SIZE DISTRIBUTION

FIGURE 1



SILT and CLAY	FINE	MEDIUM	COARSE	FINE	COARSE	COBBLE SIZE
FINE GRAINED	SAND			GRAVEL		

LEGEND

SYMBOL	BOREHOLE	DEPTH (m)	ELEV. (m)
●	MMM09-11	1.10	
⊠	MMM09-12	2.62	
▲	MMM09-13	0.61	
★	MMM09-17	5.56	
⊙	MMM09-18D	1.07	

W.P.# 14-09222-001-HG1
Prepared By EA
Checked By WM

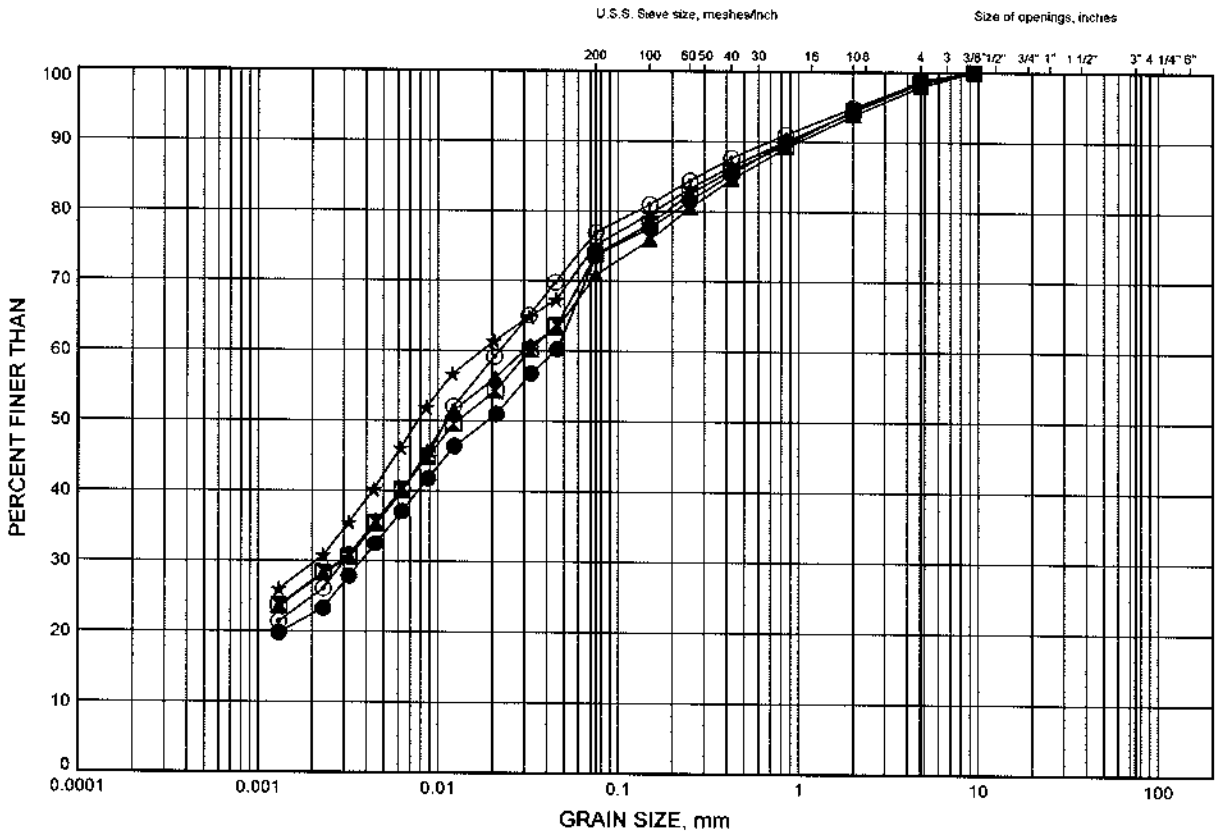
THURBER

GRAIN SIZE DISTRIBUTION - THURBER 6130.GPJ 3/11/10

Hwy 407 West Employment Lands (Bentall)

GRAIN SIZE DISTRIBUTION

FIGURE 2



SILT and CLAY	FINE	MEDIUM	COARSE	FINE	COARSE	COBBLE SIZE
FINE GRAINED	SAND			GRAVEL		

LEGEND

SYMBOL	BOREHOLE	DEPTH (m)	ELEV. (m)
●	MMM09-19D	3.76	
⊠	MMM09-1D	1.60	
▲	MMM09-5D	2.77	
★	MMM09-8	1.02	
⊙	MMM09-9	1.07	

W.P.# 14-09222-001-HG1
Prepared By EA
Checked By WM

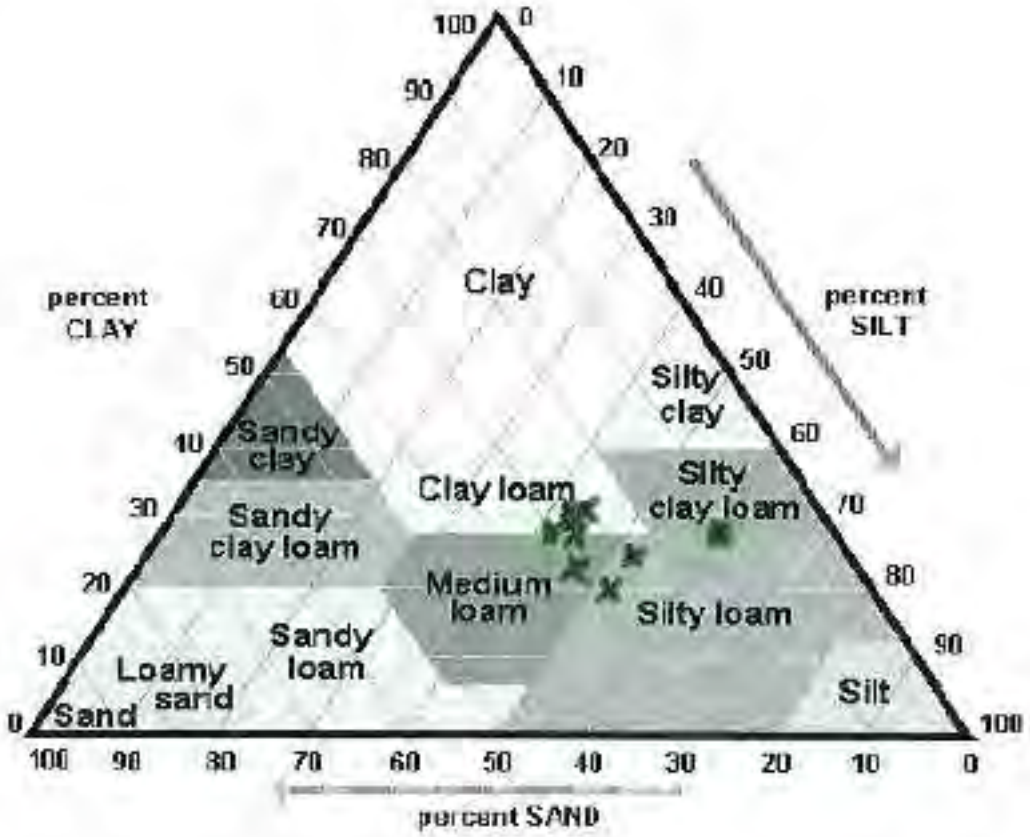
THURBER

GRAIN SIZE DISTRIBUTION - THURBER 6130.GPJ 3/11/10

Soil Classification

BH/SA	Depth (mbgs)	Description	% Content (excl. gravel content) Sand	Silt	Clay	Soil Classification	For Calculations Gravel	% Content Sand	Silt	Clay
							All values based on actual grain size (MIT/BSI classification)			
MMM-09-01D	1.60	Clayey Silt (TILL), some sand	26	45	28	CLAY LOAM	5	25	43	27
MMM-09-05D	2.77	Clayey Sandy Silt (TILL)	29	42	28	CLAY LOAM	5	28	40	27
MMM-09-08	1.02	Clayey Silt (TILL), some sand	26	43	31	CLAY LOAM	5	25	41	29
MMM-09-09	1.07	Clayey Silt (TILL), some sand	22	52	26	SILTY LOAM	5	21	49	25
MMM-09-11	1.10	Clayey Silt (TILL), some sand	27	44	29	CLAY LOAM	4	26	42	28
MMM-09-12	2.62	Clayey Silt (TILL), trace sand	12	60	28	SILTY CLAY LOAM	0	12	60	28
MMM-09-13	0.61	Clayey Silt (TILL), some sand	27	44	29	CLAY LOAM	4	26	42	28
MMM-09-17	5.56	Sandy Silt (TILL), some clay	28	52	20	SILTY LOAM	10	25	47	18
MMM-09-18D	1.07	Clayey Silt (TILL), some sand	24	45	31	CLAY LOAM	5	23	43	29
MMM-09-19D	3.76	Clayey Silt (TILL), some sand	29	47	23	MEDIUM LOAM	5	28	45	22

Soil Classification

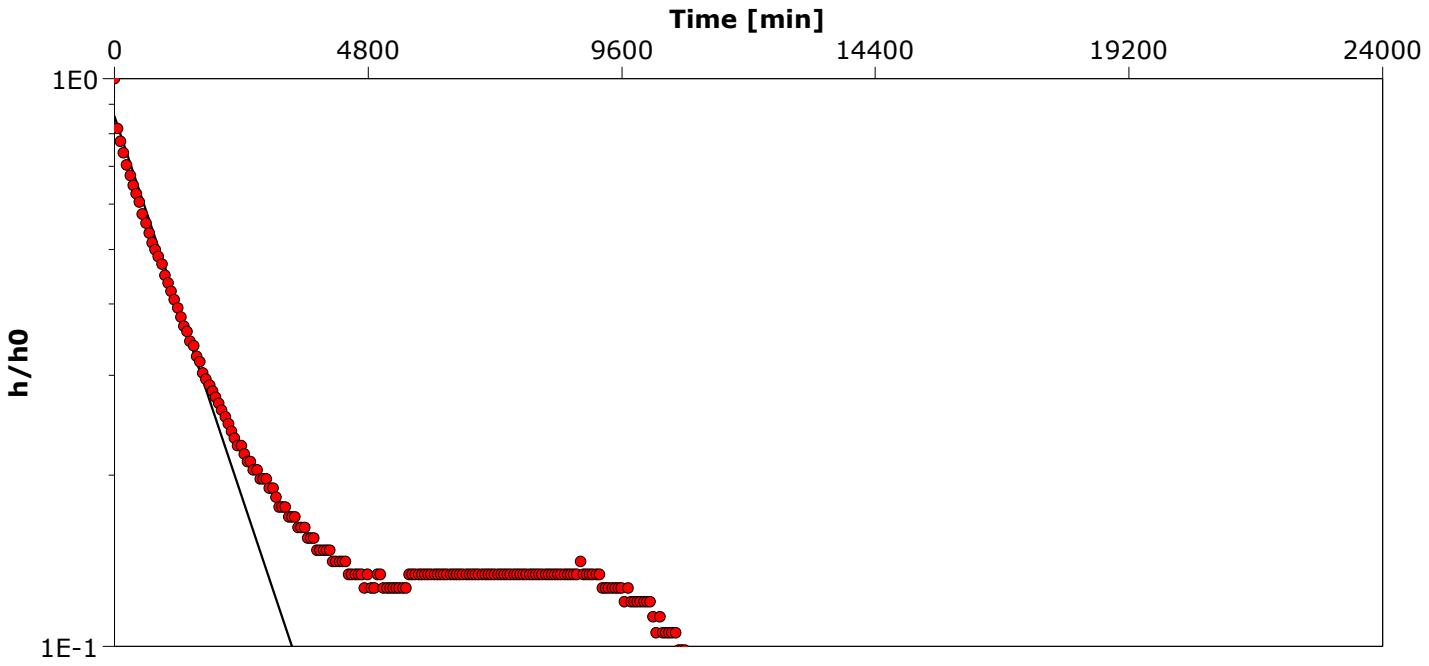


Source: http://web.ukonline.co.uk/fred.moor/soil/formed/f0107.htm

APPENDIX 4-4
Hydraulic Conductivity Testing

MMM Group 100 Commerce Valley Drive West Thornhill, ON Canada L3T 0A1	**Slug Test Analysis Report**
	Project: Hydrogeological Evaluation and WB
	Number: 14-09222-001-HG1
	Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-4	Test Well: MMM09-4
Test Conducted by: A. Blazeiko		Test Date: 12/18/2009
Analysis Performed by: N. Codoban	Rising Head test - MMM09-4	Analysis Date: 5/18/2010
Aquifer Thickness:		



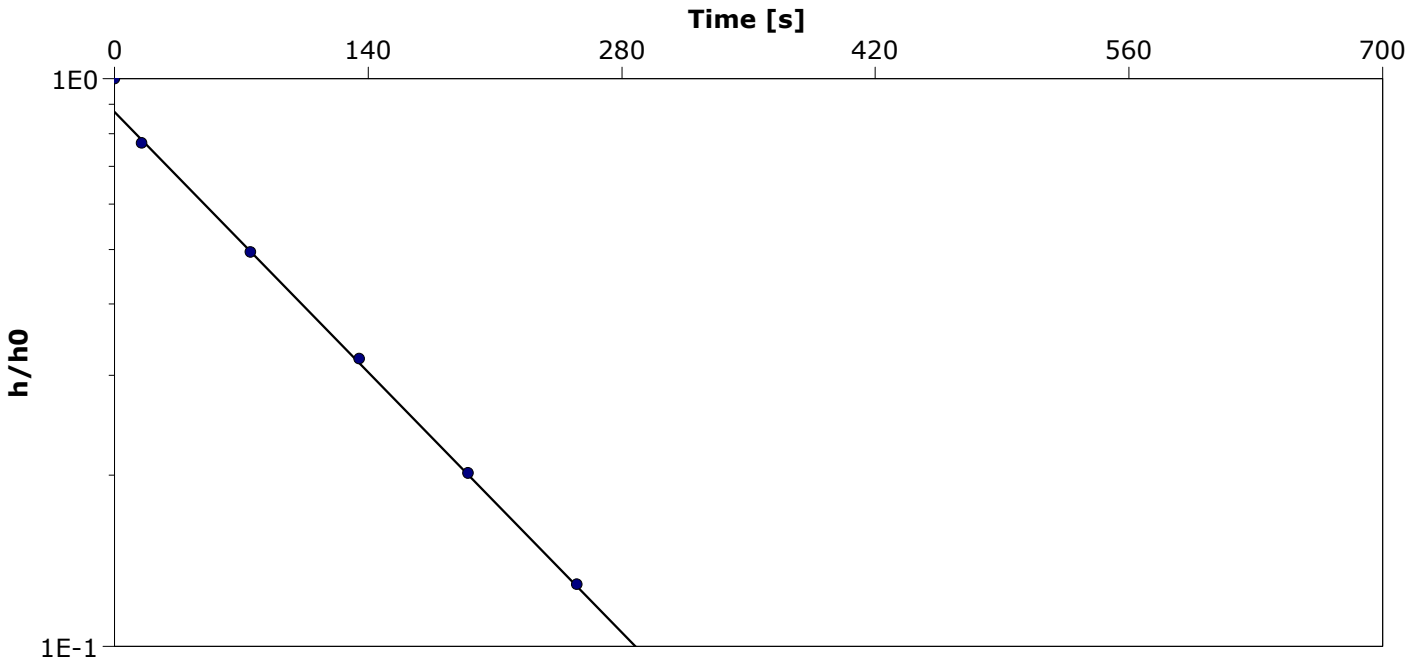
Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-4	4.37×10^{-9}	

The well is screened in Sandy Silt to Silty Sand Till, Clayey Silt Till and Sandy Silt Till at depth of 3.0 m to 6.0 m below grade.

MMM Group 100 Commerce Valley Drive West Thornhill, ON Canada L3T 0A1	**Slug Test Analysis Report**
	Project: Hydrogeological Evaluation and WB
	Number: 14-09222-001-HG1
	Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-9	Test Well: MMM09-9
Test Conducted by: AB		Test Date: 12/18/2009
Analysis Performed by: N. Codoban	Rising Head Test - MMM09-9	Analysis Date: 10/8/2010
Aquifer Thickness:		



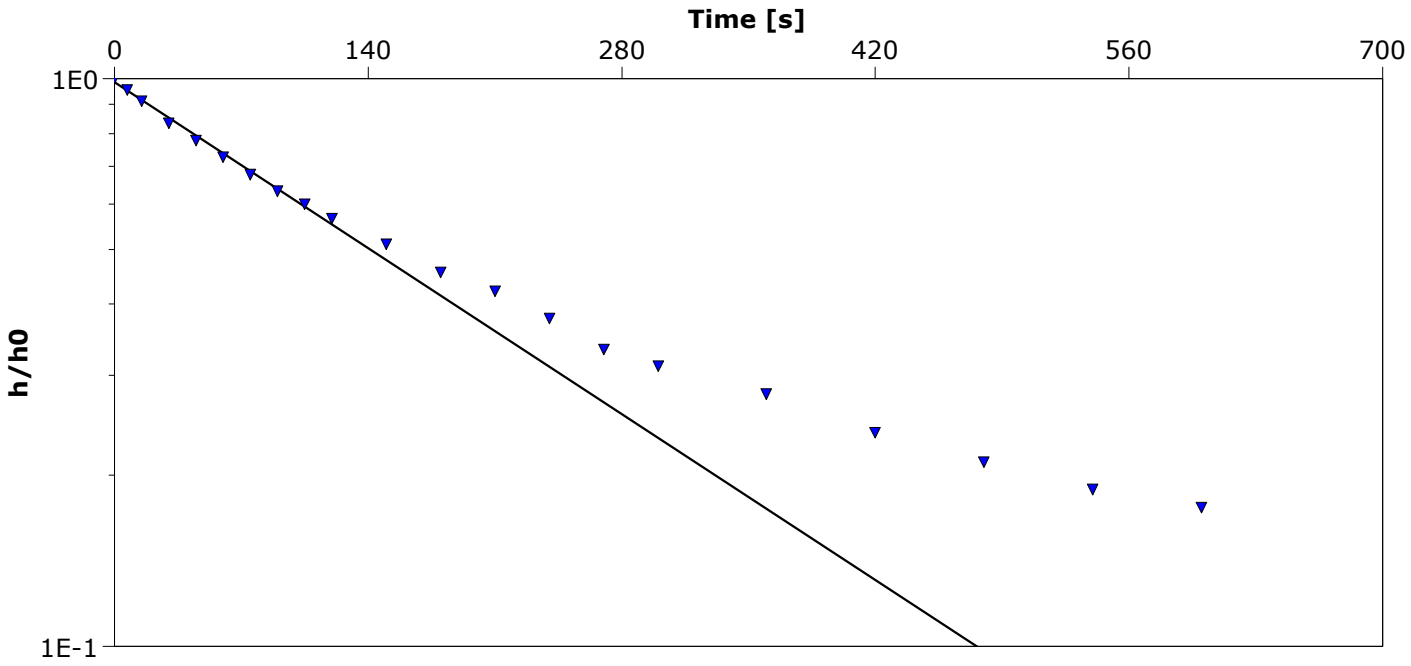
Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-9	9.00×10^{-6}	

The well is screened in Clayey Silt Till at depth of 1.8 to 2.3 m below grade.

MMM Group 100 Commerce Valley Drive West Thornhill, ON Canada L3T 0A1	**Slug Test Analysis Report**
	Project: Hydrogeological Evaluation and WB
	Number: 14-09222-001-HG1
	Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-10S	Test Well: MMM09-10S
Test Conducted by: AB and RS		Test Date: 10/18/2010
Analysis Performed by: Natalia Codoban	Falling H. Test - MMM09-10S	Analysis Date: 11/17/2010
Aquifer Thickness:		



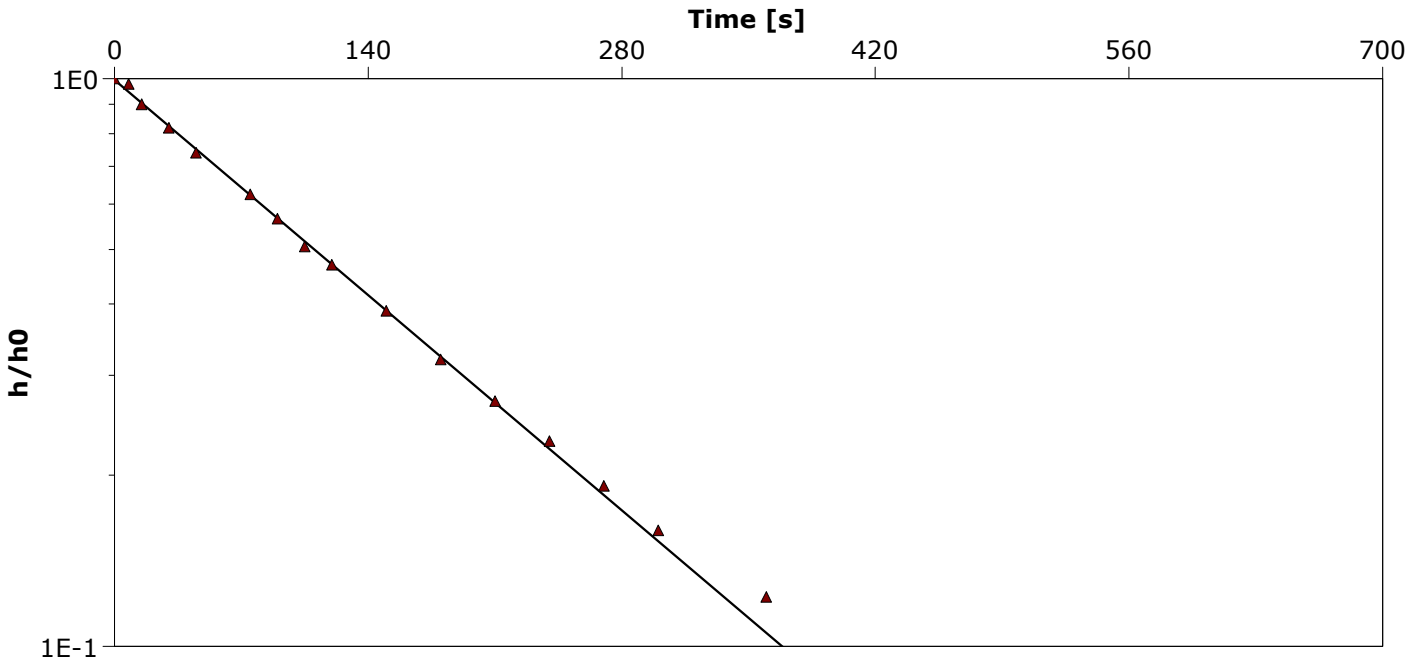
Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-10S	6.40×10^{-6}	

The well is screened in Shale at depth of 1.6 to 2.1 m below grade.

MMM Group 100 Commerce Valley Drive West Thornhill, ON Canada L3T 0A1	**Slug Test Analysis Report**
	Project: Hydrogeological Evaluation and WB
	Number: 14-09222-001-HG1
	Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-10D (Rising Head)	Test Well: MMM09-10D
Test Conducted by: AB and RS		Test Date: 10/18/2010
Analysis Performed by: Natalia Codoban	Rising H. Test - MMM09-10D	Analysis Date: 11/17/2010
Aquifer Thickness:		



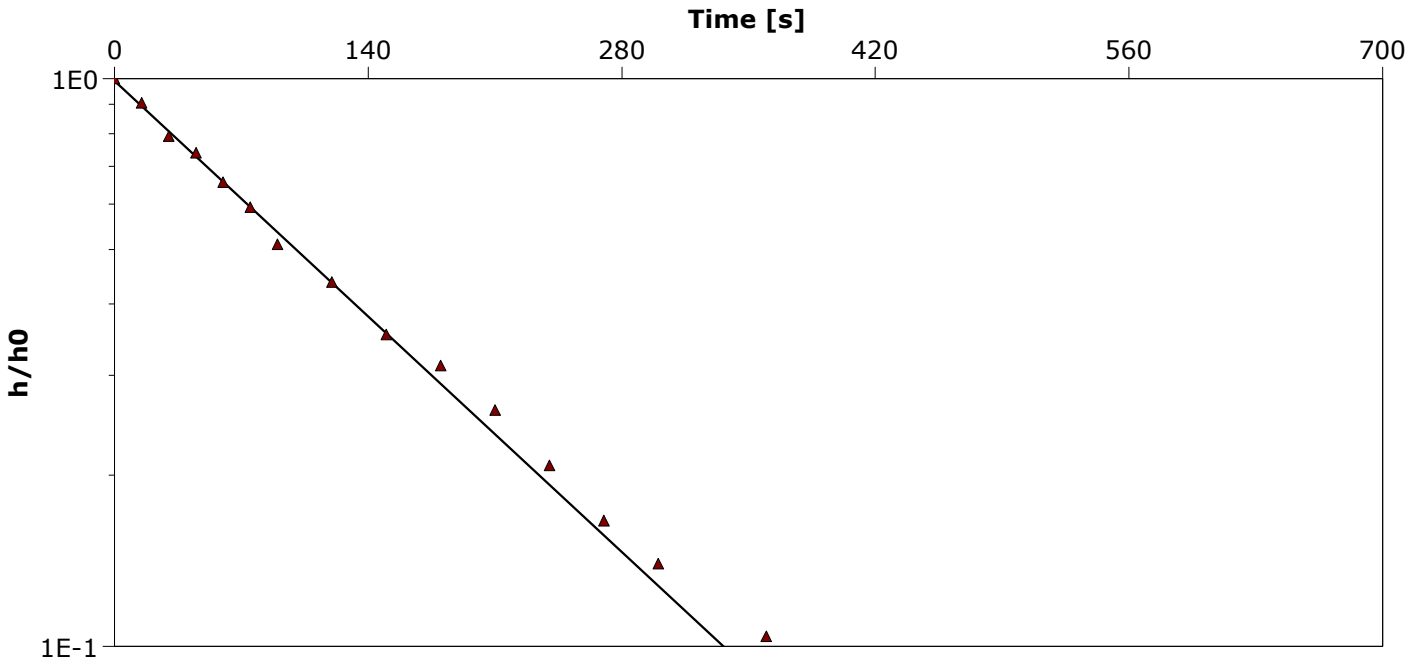
Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-10D	4.20×10^{-6}	

The well is screened in Shale at depth of 6.2 to 7.7 m below grade.

MMM Group 100 Commerce Valley Drive West Thornhill, ON Canada L3T 0A1	**Slug Test Analysis Report**
	Project: Hydrogeological Evaluation and WB
	Number: 14-09222-001-HG1
	Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-10D (Falling Head)	Test Well: MMM09-10D
Test Conducted by: AB and RS		Test Date: 10/18/2010
Analysis Performed by: Natalia Codoban	Falling H. Test - MMM09-10D	Analysis Date: 11/16/2010
Aquifer Thickness:		



Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-10D	4.60×10^{-6}	

The well is screened in Shale at depth of 6.2 to 7.7 m below grade.

MMM Group
100 Commerce Valley Drive West
Thornhill, ON Canada L3T 0A1

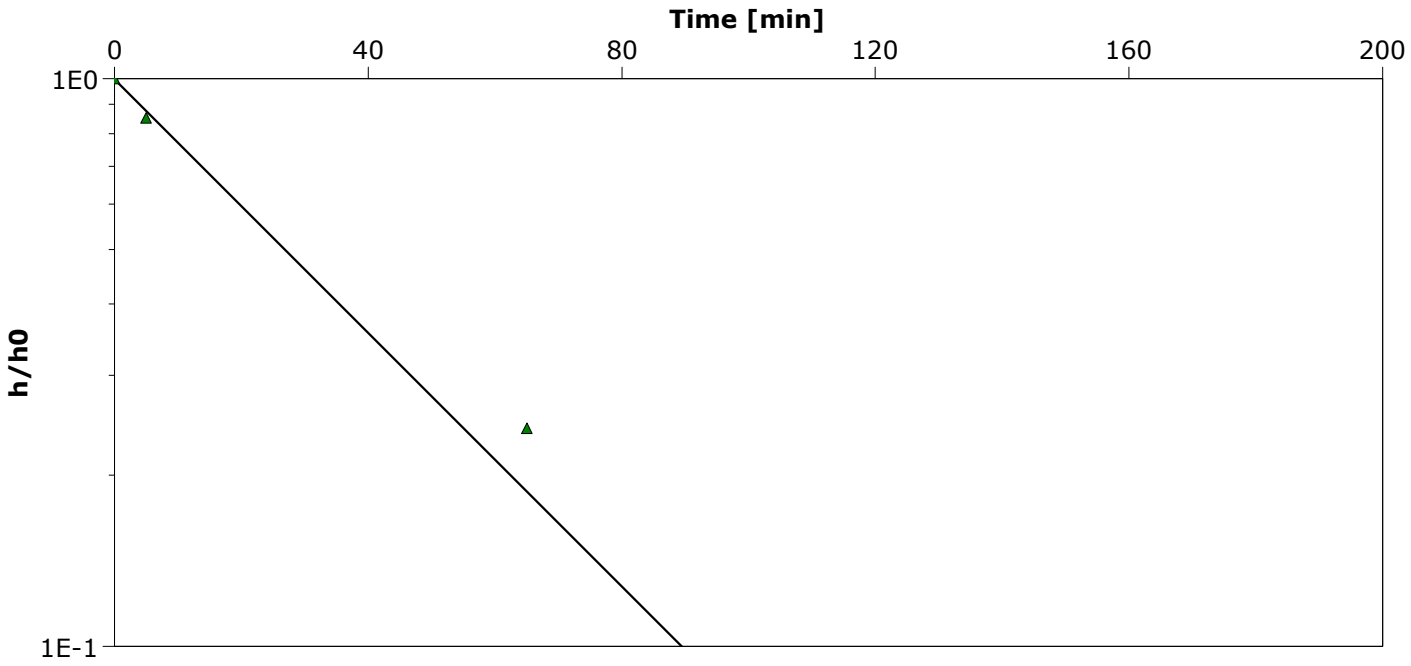
Slug Test Analysis Report

Project: Hydrogeological Evaluation and WB

Number: 14-09222-001-HG1

Client: bclMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-15S	Test Well: MMM09-15S
Test Conducted by: A. Blazeiko		Test Date: 12/18/2009
Analysis Performed by: N. Codoban	Rising Head Test - MMM09-15S	Analysis Date: 5/18/2010
Aquifer Thickness:		



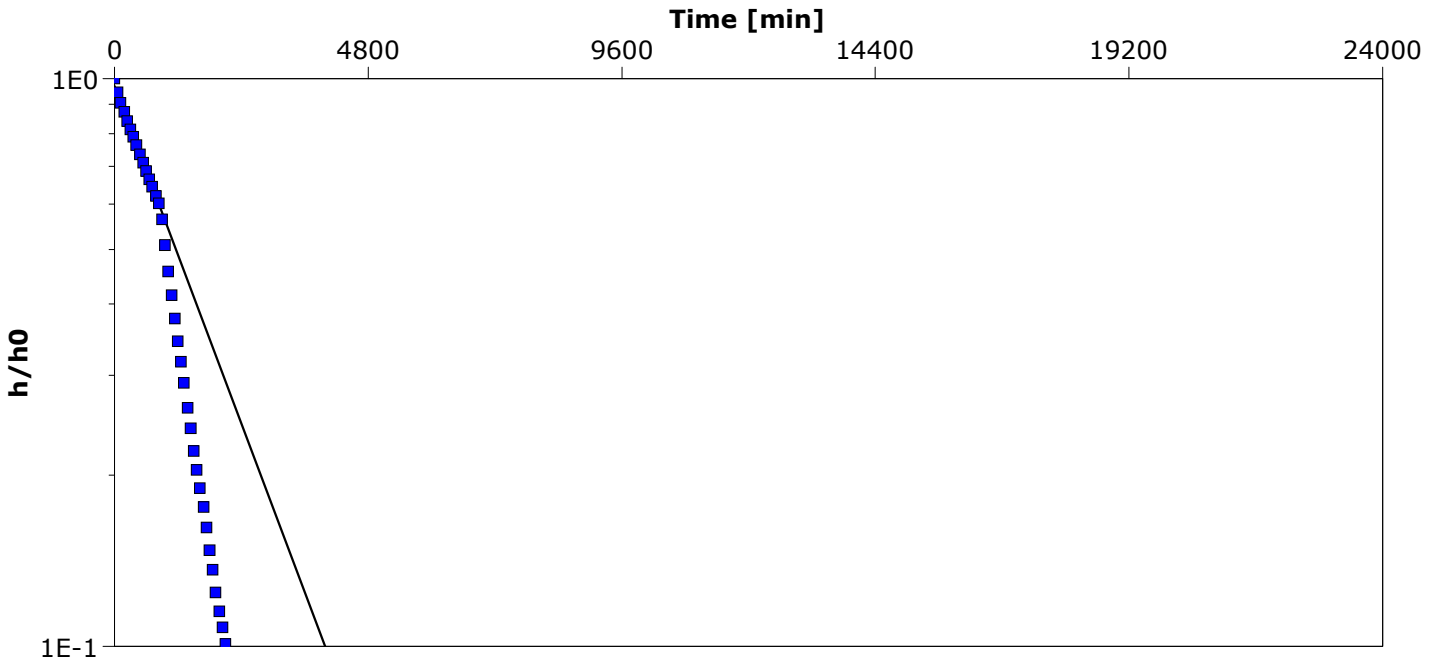
Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-15S	1.80×10^{-7}	

The well is screened in Shaley Till / Weathered Shale at depth of 1.5 to 4.4 m below grade.

MMM Group 100 Commerce Valley Drive West Thornhill, ON Canada L3T 0A1	**Slug Test Analysis Report**
	Project: Hydrogeological Evaluation and WB
	Number: 14-09222-001-HG1
	Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-17	Test Well: MMM09-17
Test Conducted by: A. Blazeiko		Test Date: 12/18/2009
Analysis Performed by: N. Codoban	Rising Head Test - MMM09-17	Analysis Date: 5/19/2010
Aquifer Thickness: 100.00 m		



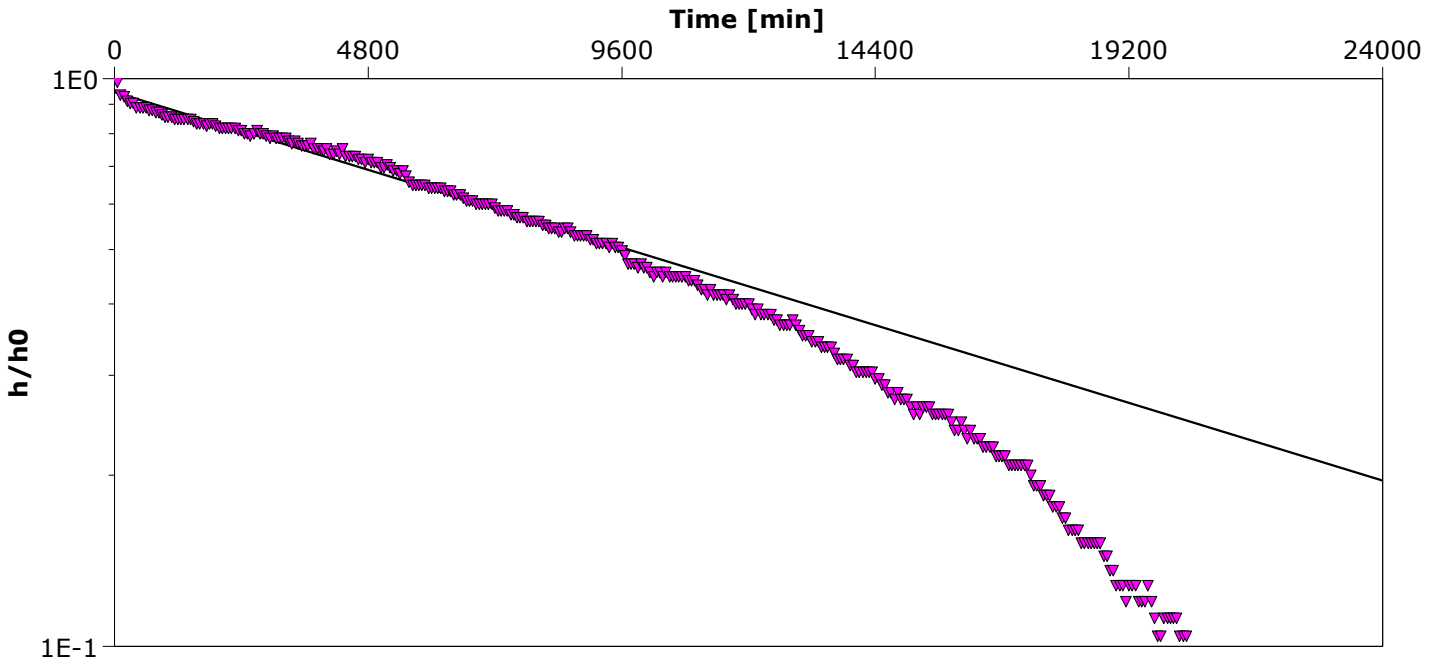
Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-17	3.94×10^{-9}	

The well is screened in Clayey Silt Till and Sandy Silt Till at depth of 2.9 to 5.9 m below grade. An increased water level recovery during the test occurred above the sand pack at depth of 2.9 m below grade.

MMM Group 100 Commerce Valley Drive West Thornhill, ON Canada L3T 0A1	**Slug Test Analysis Report**
	Project: Hydrogeological Evaluation and WB
	Number: 14-09222-001-HG1
	Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-19S	Test Well: MMM09-19S
Test Conducted by: A. Blazeiko		Test Date: 1/21/2010
Analysis Performed by: N. Codoban	Rising Head Test - MMM09-19S	Analysis Date: 5/21/2010
Aquifer Thickness:		



Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-19S	4.78×10^{-10}	

The well is screened in Clayey Silt Till at depth of 3.2 m to 5.9 m below grade.

MMM Group
100 Commerce Valley Drive West
Thornhill, ON Canada L3T 0A1

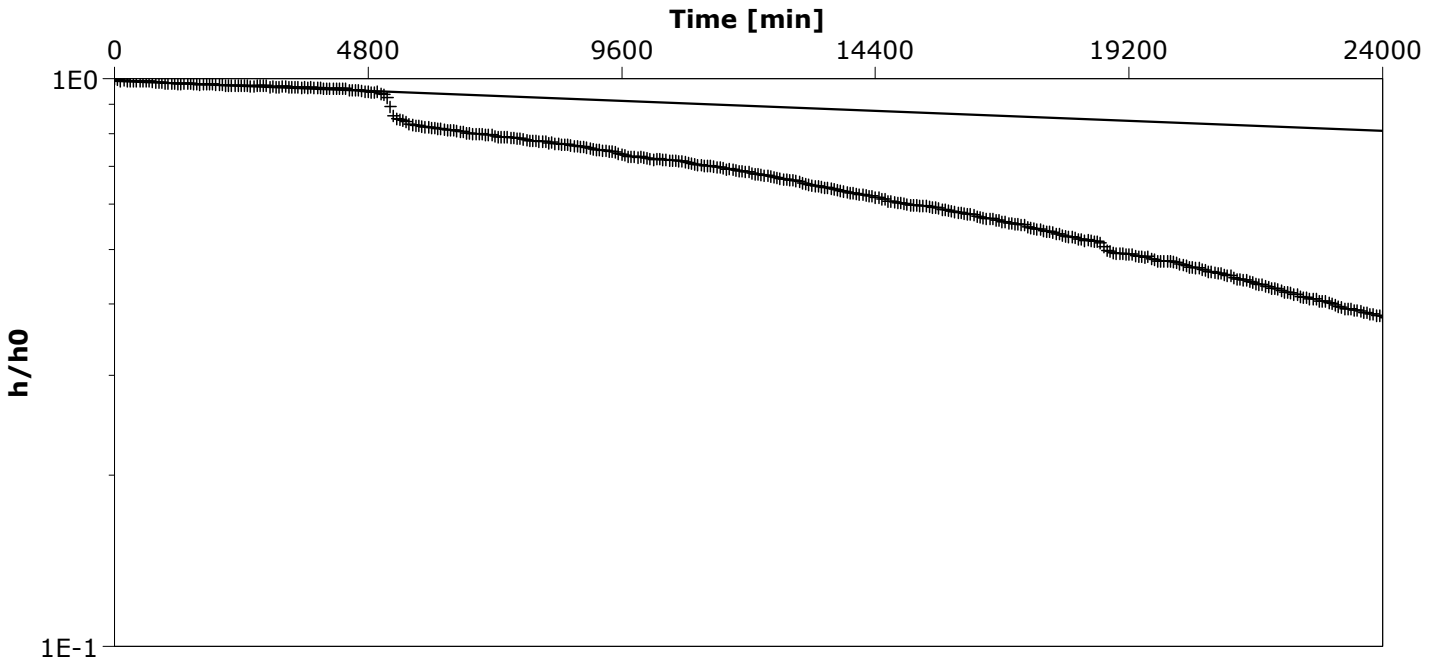
Slug Test Analysis Report

Project: Hydrogeological Evaluation and WB

Number: 14-09222-001-HG1

Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-19D	Test Well: MMM09-19D
Test Conducted by: A. Blazeiko		Test Date: 1/21/2010
Analysis Performed by: N. Codoban	Rising Head Test - MMM09-19D	Analysis Date: 5/25/2010
Aquifer Thickness:		



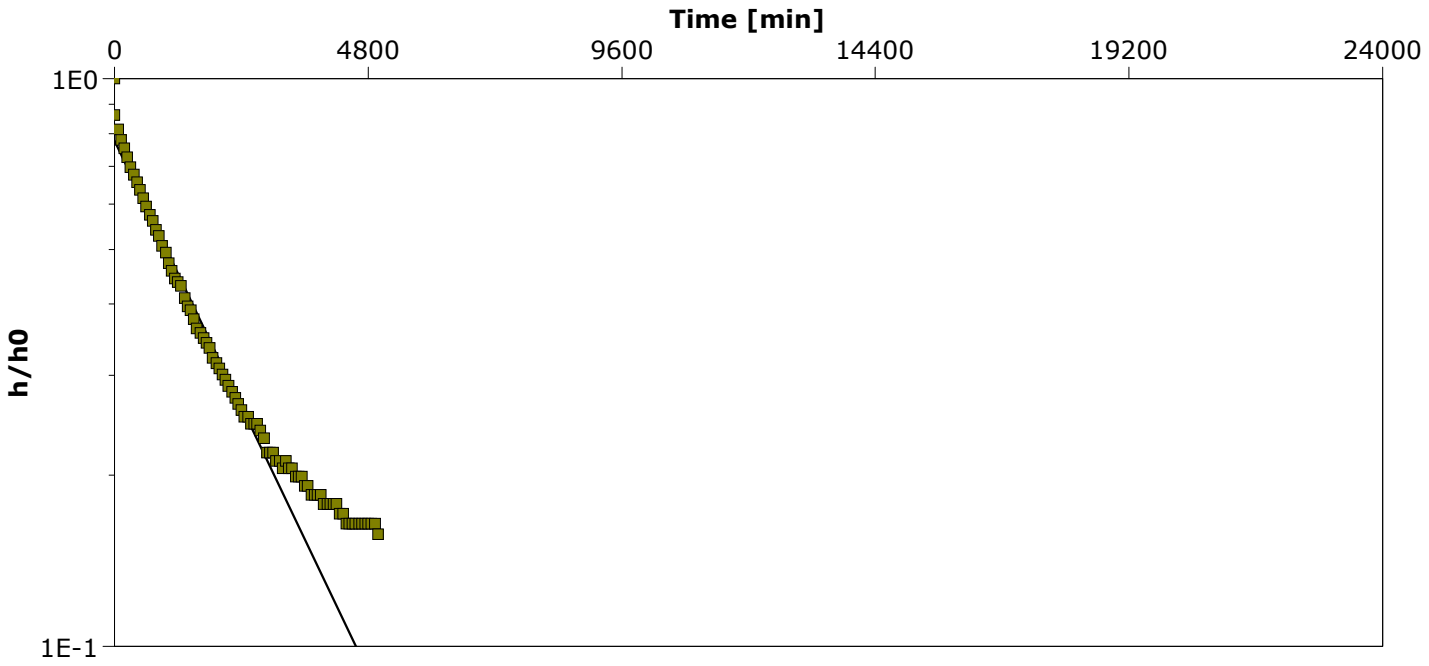
Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-19D	9.81×10^{-11}	

The well is screened in Clayey Silt Till at depth of 13.6 to 15.1 m below grade. Water level recovery increased between 5040 and 5580 min as a result of snow melt and rain on January 25, 2010.

MMM Group 100 Commerce Valley Drive West Thornhill, ON Canada L3T 0A1	**Slug Test Analysis Report**
	Project: Hydrogeological Evaluation and WB
	Number: 14-09222-001-HG1
	Client: bcIMC Realty Corporation c/o Bentall LP

Location: 407 West Employment Area, Oakville, ON	Slug Test: Slug Test - MMM09-20	Test Well: MMM09-20
Test Conducted by: A. Blazeiko		Test Date: 5/25/2010
Analysis Performed by: N. Codoban	Rising Head Test - MMM09-20	Analysis Date: 5/25/2010
Aquifer Thickness:		



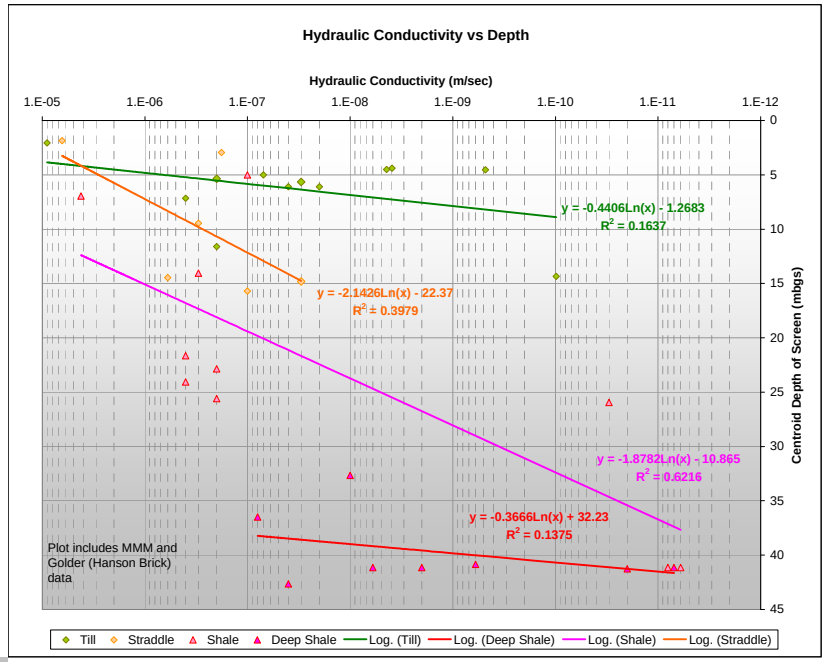
Calculation after Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MMM09-20	3.09×10^{-9}	

The well is screened in Clayey Silt Till at depth of 4.2 to 7.2 m below grade.

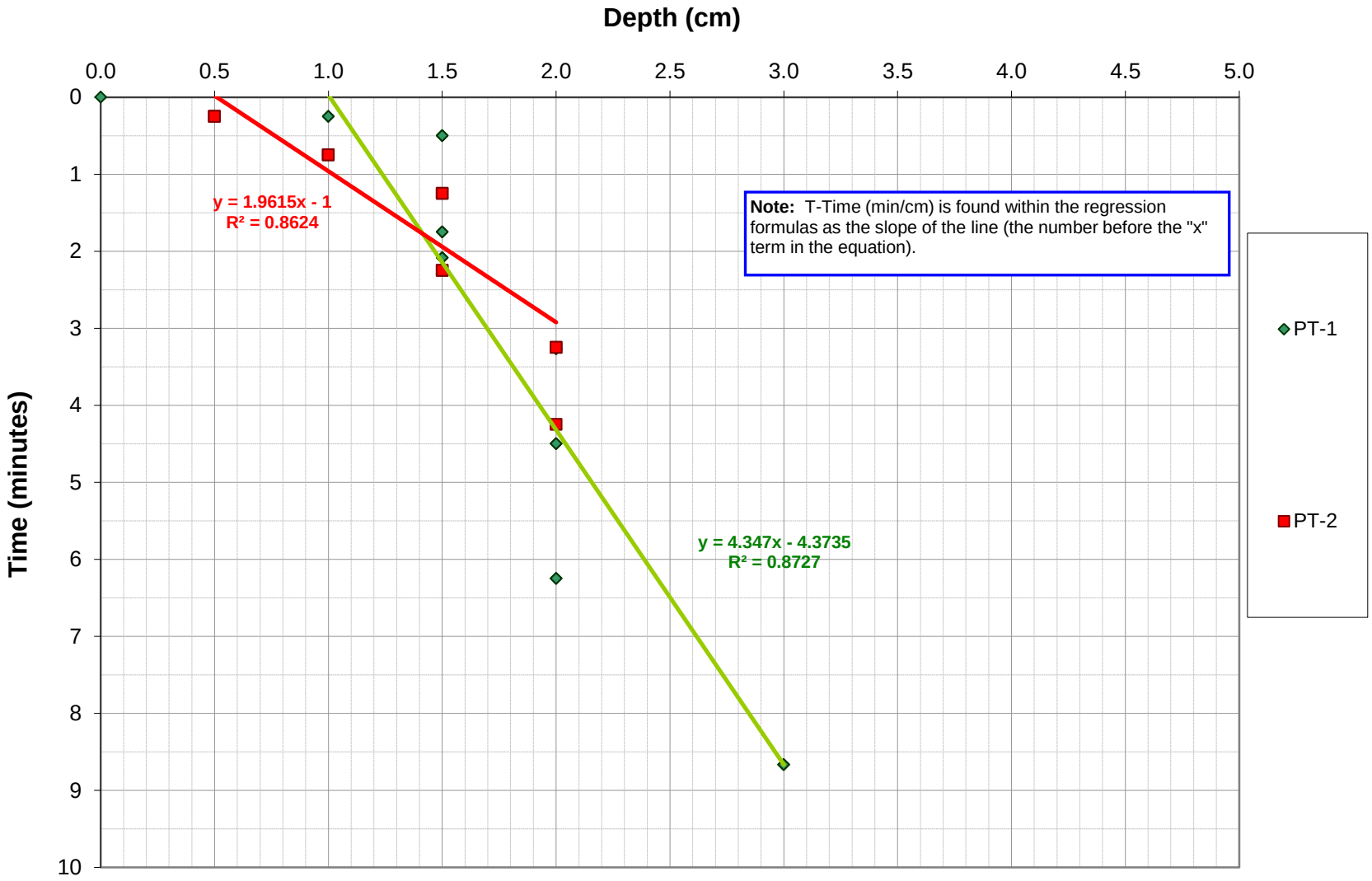
Hydraulic Conductivity Measurements

Monitor	Till	Till/Bedrock Interface	Shale	Deeper Shale	Screen Top (mbgs)	Screen Bottom (mbgs)	Screen Centroid (mbgs)
MMM Monitors							
MMM-09-04	4.4E-09				3.0	6.0	4.5
MMM-09-09	9.0E-06				1.8	2.3	2.1
MMM-09-10S		6.4E-06			1.6	2.1	1.9
MMM-09-10D			4.2E-06		6.2	7.7	7.0
MMM-09-15S		1.8E-07			1.5	4.4	3.0
MMM-09-17	3.9E-09				2.9	5.9	4.4
MMM-09-19S	4.8E-10				3.2	5.9	4.55
MMM-09-19D	9.8E-11				13.6	15.1	14.35
Hanson Brick Monitors (Golder Associates)							
MW-1			1.0E-07		2.7	7.3	5.0
MW-1				1.0E-08	25.7	39.6	32.7
MW-2	7.0E-08				2.7	7.3	5.0
MW-2			2.0E-07		24.4	26.8	25.6
MW-2				4.0E-08	39.6	45.7	42.7
MW-3	2.0E-07				9.3	13.9	11.6
MW-3				8.0E-08	33.5	39.5	36.5
MW-4	4.0E-08				4.6	7.6	6.1
MW-4			2.0E-07		19.8	25.9	22.9
MW-4				2.0E-09	38.1	44.2	41.2
MW-5	4.0E-07				5.6	8.7	7.2
MW-5		1.0E-07			14.2	17.2	15.7
MW-5			4.0E-07		18.6	24.7	21.7
MW-5				2.0E-11	38.2	44.3	41.3
MW-6		3.0E-07			7.9	11.0	9.5
MW-6			3.0E-11		22.9	29.0	26.0
MW-7	3.0E-09						
MW-7				6.0E-09	38.1	44.2	41.2
MW-8			4.0E-07		21.0	27.1	24.1
MW-8				6.0E-10	36.3	45.4	40.9
MW-9	2.0E-07				3.8	6.9	5.4
MW-9			3.0E-07		11.0	17.1	14.1
MW-9				7.0E-12	38.1	44.2	41.2
MW-10	2.0E-08				4.6	7.6	6.1
MW-10		3.0E-08			11.8	17.8	14.8
MW-10			8.0E-12		38.1	44.2	41.2
MW-11	3.0E-08				4.1	7.2	5.7
MW-11		6.0E-07			11.4	17.5	14.5
MW-11			6.0E-12		38.1	44.2	41.2
Min	9.8E-11	3.0E-08	6.0E-12	7.0E-12			
Max	9.0E-06	6.4E-06	4.2E-06	8.0E-08			
Geomean	**2.3E-08**	**2.9E-07**	**1.6E-08**	**1.5E-09**			



Notes:
Hydraulic Conductivities are reported in m/sec
Hydraulic Conductivities from the Hanson Brick monitors are taken from information presented on Figures C-1 through C-11 in the 2008 Annual Monitoring Report (Golder Associates, November 2009)

Percolation Testing



APPENDIX 4-5
Water Level Data

Table SWL-1: Static Water Levels at Monitoring Wells

Well ID	Location Easting m	Location Northing m	Ground Elevation masl	Stick-up mag	Top Elevation masl	Screen Bottom mbg	Screen Top mbg	Screen Length m	Install Date	Water Level 05-May-09 mbtop	Water Level 05-May-09 masl	Water Level 19-Jun-09 mbtop	Water Level 19-Jun-09 masl	Water Level 24-Sep-09 mbtop	Water Level 24-Sep-09 masl	Water Level 17-Nov-09 mbtop	Water Level 17-Nov-09 masl	Water Level 18-Nov-09 mbtop	Water Level 18-Nov-09 masl	Water Level 18-Dec-09 mbtop	Water Level 18-Dec-09 masl	Water Level 21-Jan-10 mbtop	Water Level 21-Jan-10 masl	Water Level 22-Jan-10 mbtop	Water Level 22-Jan-10 masl	Water Level 13-Apr-10 mbtop	Water Level 13-Apr-10 masl	Water Level 06-Aug-10 mbtop	Water Level 06-Aug-10 masl	Water Level 18-Oct-10 mbtop	Water Level 18-Oct-10 masl	Water Level 19-Oct-10 mbtop	Water Level 19-Oct-10 masl	Water Level 17-Feb-11 mbtop	Water Level 17-Feb-11 masl	Water Level 18-Feb-11 mbtop	Water Level 18-Feb-11 masl
MMM09-01-S	598300	4809022	148.48	1.00	149.48	5.18	2.18	3.00	9-Jun-09			5.77	143.71	5.99	143.49					4.60	144.88			5.45	144.03	4.22	145.25	5.47	144.01	4.75	144.73					5.19	144.29
MMM09-01-D	598301	4809024	148.27	1.05	149.32	8.89	7.39	1.50	9-Jun-09			5.65	143.67	6.21	143.11					5.15	144.18			5.59	143.73	5.05	144.28	5.47	143.85	5.23	144.09					5.02	144.30
MMM09-02	598132	4809239	151.16	1.10	152.26	5.21	2.21	3.00	1-Jun-09			5.92	146.34	5.00	147.26					3.99	148.27	4.72	147.54			3.87	148.40	4.73	147.54	4.26	148.00					4.02	148.24
MMM09-03	597983	4809410	151.40	1.13	152.53	3.07	1.57	1.50	1-Jun-09			2.68	149.85	2.77	149.76					1.50	151.03	2.12	150.41			1.39	151.15	2.38	150.16	1.99	150.54					1.83	150.71
MMM09-04	597761	4809653	152.35	1.09	153.44	6.02	3.02	3.00	8-Jun-09			4.82	148.62	2.50	150.94					2.10	151.34	2.38	151.06			2.21	151.22	2.42	151.02	2.26	151.17					2.22	151.22
MMM09-05-S	597485	4809933	159.00	1.23	160.23	8.66	5.66	3.00	5-Jun-09			6.86	153.37	2.39	157.84							2.23	158.00			1.86	158.36	2.40	157.83	2.46	157.77					2.21	158.02
MMM09-05-D	597482	4809935	159.31	1.09	160.40	16.41	14.91	1.50	5-Jun-09			5.07	155.33	12.10	148.30							11.39	149.01			11.26	149.14	11.34	149.06	11.41	149.00					11.22	149.18
MMM09-06-S	597170	4809527	155.18	1.19	156.37	5.84	3.34	2.50	4-Jun-09			4.64	151.73	1.74	154.63							1.93	154.44			1.67	154.70	1.76	154.61	1.95	154.43					1.99	154.38
MMM09-06-D	597170	4809529	155.36	1.15	156.51	10.87	9.37	1.50	4-Jun-09			1.88	154.63	1.72	154.79							1.89	154.62			2.23	154.28	1.76	154.75	1.68	154.83					2.09	154.42
MMM09-07	597526	4809600	153.82	1.06	154.88	5.84	2.84	3.00	8-Jun-09			2.19	152.69	2.34	152.54							2.59	152.29			2.44	152.44	2.31	152.58	2.58	152.31					2.54	152.34
MMM09-08	597395	4809298	158.01	0.95	158.95	7.87	4.37	3.50	2-Jun-09			3.02	155.93	3.06	155.89							2.97	155.98			2.46	156.49	2.92	156.04	2.47	156.49					2.83	156.12
MMM09-09	597550	4809184	151.64	1.08	152.72	2.26	1.76	0.50	2-Jun-09			1.95	150.77	2.11	150.61					1.63	151.09	1.73	150.99			1.66	151.06	2.08	150.64	1.67	151.05					1.40	151.32
MMM09-10-S	597811	4809270	149.69	1.08	150.77	2.13	1.63	0.50	2-Jun-09			1.50	149.27	1.75	149.02					1.14	149.63	1.37	149.40			1.18	149.58	1.59	149.18	1.36	149.41					1.14	149.63
MMM09-10-D	597813	4809270	149.65	1.07	150.72	7.67	6.17	1.50	2-Jun-09			1.41	149.31	1.59	149.13					1.08	149.64	1.28	149.44			1.05	149.68	1.40	149.32	1.19	149.53					1.06	149.66
MMM09-11	597840	4808917	153.52	1.06	154.58	5.51	2.51	3.00	8-Jun-09			2.08	152.50	2.50	152.08							2.21	152.37			1.60	152.98			1.74	152.84					2.29	152.29
MMM09-12	598015	4808712	152.71	1.09	153.80	3.38	1.88	1.50	9-Jun-09			2.71	151.09	3.20	150.60							2.47	151.33			1.97	151.83	2.91	150.89	2.17	151.63					2.22	151.58
MMM09-13	597431	4808891	157.30	1.08	158.38	3.20	1.83	1.37	9-Nov-09											1.43	156.96			2.11	156.27	1.43	156.95	2.54	155.84			1.80	156.58	2.24	156.14		
MMM09-14	597154	4809172	155.53	0.98	156.51	5.13	2.24	2.90	10-Nov-09							2.09	154.42							1.82	154.69	1.54	154.97	1.93	154.58			1.57	154.94	1.79	154.72		
MMM09-15S	597151	4808905	159.18	1.02	160.20	4.42	1.52	2.90	11-Nov-10							1.36	158.84	1.36	158.84	1.18	159.02			1.35	158.85	1.25	158.95	1.61	158.59			1.23	158.97	1.23	158.97		
MMM09-15D	597153	4808903	159.13	1.09	160.22	12.50	11.13	1.37	11-Nov-10							1.87	158.35	1.89	158.33	2.51	157.71			3.00	157.22	7.88	152.34	6.16	154.06			6.12	154.10	6.12	154.10		
MMM09-16	596526	4809514	163.75	1.15	164.90	5.94	2.97	2.97	13-Nov-09							Dry to 7.11		6.95	157.95	5.30	159.60			3.24	161.66	1.55	163.35	2.33	162.57			2.73	162.18	2.40	162.50		
MMM09-17	596202	4809823	162.72	1.00	163.72	5.92	2.97	2.95	13-Nov-09							2.51	161.21	2.29	161.43	1.25	162.47	1.40	162.32			1.21	162.51	1.10	162.63			1.23	162.49	1.17	162.55		
MMM09-18S	595803	4809213	169.36	1.11	170.47	6.10	3.20	2.90	12-Nov-09							6.13	164.34	6.01	164.46	2.28	168.19	2.31	168.16			1.70	168.77	2.48	167.99			2.27	168.20	2.26	168.21		
MMM09-18D	595805	4809215	169.38	1.06	170.43	15.37	13.94	1.42	12-Nov-09							6.21	164.22	6.25	164.18	5.74	164.69	5.90	164.53			5.01	165.42	5.83	164.61			6.02	164.42	5.91	164.52		
MMM09-19S	595387	4810334	180.22	(0.11)	180.11	5.92	3.17	2.74	17-Nov-09									Dry to 5.95		4.41	175.70	3.10	177.01			0.37	179.74	0.79	179.32			0.62	179.49	1.35	178.76		
MMM09-19D	595388	4810336	180.18	(0.08)	180.10	15.06	13.64	1.42	16-Nov-09									Dry to 15.08		13.82	166.28	8.92	171.18			5.52	174.58	4.46	175.64			4.54	175.56	4.13	175.97		
MMM09-20	594807	4809575	181.50	(0.15)	181.35	7.21	4.24	2.97	17-Nov-09									6.70	174.65	0.47	180.88	1.22	180.13			0.52	180.83	1.15	180.21			0.67	180.68			0.30	181.05
MMM11-21	598145	4809144	150.67	0.91	151.57	6.20	4.68	1.52	14-Jul-11																												
MMM11-22-S	598045	4809175	151.69	0.93	152.62	6.12	4.60	1.52	14-Jul-11																												
MMM11-22-D	598046	4809175	151.74	0.84	152.58	9.16	7.64	1.52	14-Jul-11																												
TROW MW-1	598305	4809194	149.79	(0.08)	149.72	4.60	1.60	3.00	3-Jan-01	1.47	148.25	2.32	147.40	2.75	146.97											1.38	148.34	2.27	147.45	2.01	147.71					1.84	147.88
TROW MW-2	598337	4809146	149.70	(0.08)	149.62	4.60	1.60	3.00	5-Jan-01	0.87	148.75	1.58	148.04	2.16	147.46													1.82	147.80	2.31	147.31					1.99	147.63
TROW MW-3	598131	4808935	150.94	1.00	151.94	6.10	3.10	3.00	3-Jan-01	1.77	150.17	2.70	149.24	2.80	149.14							2.44	149.50			1.98	149.96	2.66	149.28	2.08	149.86					2.17	149.77
Pond Gauge	598203	4809154	147.94	1.00	148.94				4-Jul-11																									0.40	148.57		
Pond Gauge Replaced	598155	4809153	148.48	1.32	149.80				11-Jul-11																												
Pond Gauge Replaced2	598167	4809144	148.10	1.18	149.28				6-May-14																												
EXP MW-1	5981557	4809073	146.77	0.87	147.64	6.20	4.25	1.95	14-Jul-11																												
EXP MW-2	598157	4809067	145.99	0.73	146.72	3.10	1.59	1.51	13-Jul-11																												
EXP MW-3	598200	4809077	147.78	1.10	148.88	6.08	4.08	2.00	13-Jul-11																												
EXP MW-4	598215	4809075	145.65	0.87	146.52	1.45	0.55	0.90	15-Jul-11																												
Lazy Pat Well	598308	4809122	149.66	0.15	149.81									3.95	145.86													CNL									

Upward Gradient (Nests Only)
Downward Gradient (Nests Only)
Static Water Level within 0.3 m of grade
Static Water Level is above grade

Table SWL-1: Static Water Levels at Monitoring Wells

Well ID	Location Easting m	Location Northing m	Ground Elevation masl	Stick-up mag	Top Elevation masl	Screen Bottom mbg	Screen Top mbg	Screen Length m	Install Date	Water Level 04-Jul-11 mbtop	Water Level 04-Jul-11 masl	Water Level 05-Jul-11 mbtop	Water Level 05-Jul-11 masl	Water Level 15-Jul-11 mbtop	Water Level 15-Jul-11 masl	Water Level 27-Jul-11 mbtop	Water Level 27-Jul-11 masl	Water Level 19-Aug-11 mbtop	Water Level 19-Aug-11 masl	Water Level 24-Aug-11 mbtop	Water Level 24-Aug-11 masl	Water Level 08-Sep-11 mbtop	Water Level 08-Sep-11 masl	Water Level 30-Sep-11 mbtop	Water Level 30-Sep-11 masl	Water Level 20-Oct-11 mbtop	Water Level 20-Oct-11 masl	Water Level 19-Jan-12 mbtop	Water Level 19-Jan-12 masl	Water Level 06-Jul-12 mbtop	Water Level 06-Jul-12 masl	Water Level 18-Jul-12 mbtop	Water Level 18-Jul-12 masl	Water Level 05-Nov-12 mbtop	Water Level 05-Nov-12 masl	Water Level 06-Nov-12 mbtop	Water Level 06-Nov-12 masl
MMM09-01-S	598300	4809022	148.48	1.00	149.48	5.18	2.18	3.00	9-Jun-09			5.42	144.06			5.89	143.59							5.89	143.59			4.60	144.88			5.90	143.58			4.81	144.67
MMM09-01-D	598301	4809024	148.27	1.05	149.32	8.89	7.39	1.50	9-Jun-09			5.62	143.70			6.29	143.03							5.75	143.57			5.15	144.17			6.47	142.85			5.41	143.91
MMM09-02	598132	4809239	151.16	1.10	152.26	5.21	2.21	3.00	1-Jun-09	4.66	147.60					5.60	146.66							5.41	146.85			3.92	148.34			5.30	146.96	4.58	147.68		
MMM09-03	597983	4809410	151.40	1.13	152.53	3.07	1.57	1.50	1-Jun-09	2.24	150.29													3.50	149.03			1.65	150.88					1.56	150.97		
MMM09-04	597761	4809653	152.35	1.09	153.44	6.02	3.02	3.00	8-Jun-09	2.37	151.07					2.60	150.84							2.47	150.97			2.14	151.30					2.46	150.98		
MMM09-05-S	597485	4809933	159.00	1.23	160.23	8.66	5.66	3.00	5-Jun-09	1.90	158.33													2.82	157.41			1.72	158.51					3.34	156.89		
MMM09-05-D	597482	4809935	159.31	1.09	160.40	16.41	14.91	1.50	5-Jun-09	11.17	149.23													11.31	149.09			11.32	149.08					11.49	148.91		
MMM09-06-S	597170	4809527	155.18	1.19	156.37	5.84	3.34	2.50	4-Jun-09			1.80	154.57											2.65	153.72			1.58	154.79					2.06	154.31		
MMM09-06-D	597170	4809529	155.36	1.15	156.51	10.87	9.37	1.50	4-Jun-09			1.96	154.55											2.07	154.44			1.71	154.80					2.05	154.46		
MMM09-07	597526	4809600	153.82	1.06	154.88	5.84	2.84	3.00	8-Jun-09	2.12	152.76													2.84	152.04			2.21	152.67					3.22	151.66		
MMM09-08	597395	4809298	158.01	0.95	158.95	7.87	4.37	3.50	2-Jun-09			2.55	156.40											3.42	155.53			2.10	156.85					2.71	156.24		
MMM09-09	597550	4809184	151.64	1.08	152.72	2.26	1.76	0.50	2-Jun-09			2.01	150.71			2.31	150.41							1.99	150.73			1.58	151.14					1.71	151.01		
MMM09-10-S	597811	4809270	149.69	1.08	150.77	2.13	1.63	0.50	2-Jun-09			1.43	149.34			2.01	148.76							1.93	148.84			1.10	149.67			2.02	148.75	1.40	149.37		
MMM09-10-D	597813	4809270	149.65	1.07	150.72	7.67	6.17	1.50	2-Jun-09			1.62	149.10			1.82	148.90							1.84	148.88			0.99	149.73			1.80	148.92	1.27	149.45		
MMM09-11	597840	4808917	153.52	1.06	154.58	5.51	2.51	3.00	8-Jun-09	2.36	152.22													3.49	151.09			1.46	153.12							1.95	152.63
MMM09-12	598015	4808712	152.71	1.09	153.80	3.38	1.88	1.50	9-Jun-09	2.84	150.96													4.30	149.50			1.91	151.89							2.24	151.56
MMM09-13	597431	4808891	157.30	1.08	158.38	3.20	1.83	1.37	9-Nov-09																												
MMM09-14	597154	4809172	155.53	0.98	156.51	5.13	2.24	2.90	10-Nov-09																												
MMM09-15S	597151	4808905	159.18	1.02	160.20	4.42	1.52	2.90	11-Nov-10																												
MMM09-15D	597153	4808903	159.13	1.09	160.22	12.50	11.13	1.37	11-Nov-10																												
MMM09-16	596526	4809514	163.75	1.15	164.90	5.94	2.97	2.97	13-Nov-09																												
MMM09-17	596202	4809823	162.72	1.00	163.72	5.92	2.97	2.95	13-Nov-09																												
MMM09-18S	595803	4809213	169.36	1.11	170.47	6.10	3.20	2.90	12-Nov-09																												
MMM09-18D	595805	4809215	169.38	1.06	170.43	15.37	13.94	1.42	12-Nov-09																												
MMM09-19S	595387	4810334	180.22	(0.11)	180.11	5.92	3.17	2.74	17-Nov-09																												
MMM09-19D	595388	4810336	180.18	(0.08)	180.10	15.06	13.64	1.42	16-Nov-09																												
MMM09-20	594807	4809575	181.50	(0.15)	181.35	7.21	4.24	2.97	17-Nov-09																												
MMM11-21	598145	4809144	150.67	0.91	151.57	6.20	4.68	1.52	14-Jul-11					4.54	147.04	4.79	146.78							4.97	146.60			3.74	147.83			5.04	146.53			4.38	147.19
MMM11-22-S	598045	4809175	151.69	0.93	152.62	6.12	4.60	1.52	14-Jul-11					5.19	147.43	5.34	147.28							5.60	147.02			4.31	148.31			5.53	147.09			4.92	147.70
MMM11-22-D	598046	4809175	151.74	0.84	152.58	9.16	7.64	1.52	14-Jul-11					5.32	147.26	5.68	146.90							6.08	146.50			4.74	147.84			5.90	146.68			5.41	147.17
TROW MW-1	598305	4809194	149.79	(0.08)	149.72	4.60	1.60	3.00	3-Jan-01			2.07	147.65											3.09	146.63							3.01	146.71			2.71	147.01
TROW MW-2	598337	4809146	149.70	(0.08)	149.62	4.60	1.60	3.00	5-Jan-01															Dry								2.52	147.10			2.55	147.07
TROW MW-3	598131	4808935	150.94	1.00	151.94	6.10	3.10	3.00	3-Jan-01	2.72	149.22													3.28	148.66			1.91	150.03							2.21	149.73
Pond Gauge	598203	4809154	147.94	1.00	148.94				4-Jul-11			0.71	148.65			0.47	148.41	0.32	148.26	0.30	148.24	0.25	148.19	0.23	148.17	1.39	149.33	1.18	149.12	0.60	148.54	0.52	148.46	0.97	148.91	0.94	148.88
Pond Gauge Replaced	598155	4809153	148.48	1.32	149.80				11-Jul-11																												
Pond Gauge Replaced2	598167	4809144	148.10	1.18	149.28				6-May-14																												
EXP MW-1	5981557	4809073	146.77	0.87	147.64	6.20	4.25	1.95	14-Jul-11							1.32	146.32																			1.44	146.20
EXP MW-2	598157	4809067	145.99	0.73	146.72	3.10	1.59	1.51	13-Jul-11							0.53	146.19																			0.58	146.14
EXP MW-3	598200	4809077	147.78	1.10	148.88	6.08	4.08	2.00	13-Jul-11							3.56	145.32																			3.60	145.28
EXP MW-4	598215	4809075	145.65	0.87	146.52	1.45	0.55	0.90	15-Jul-11							1.32	145.20																			1.47	145.05
Lazy Pat Well	598308	4809122	149.66	0.15	149.81																																

Upward Gradient (Nests Only)
Downward Gradient (Nests Only)
Static Water Level within 0.3 m of grade
Static Water Level is above grade

Table SWL-1: Static Water Levels at Monitoring Wells

Well ID	Location Easting m	Location Northing m	Ground Elevation masl	Stick-up mag	Top Elevation masl	Screen Bottom mbg	Screen Top mbg	Screen Length m	Install Date	Water Level 28-Nov-12		Water Level 22-Apr-13		Water Level 10-Jul-13		Water Level 11-Jul-13		Water Level 04-Sep-13		Water Level 05-Sep-13		Water Level 09-Sep-13		Water Level 10-Oct-13		Water Level 22-Oct-13		Water Level 29-Oct-13		Water Level 01-Nov-13		Water Level 11-Nov-13		Water Level 16-Dec-13		Water Level 17-Dec-13	
										mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl
MMM09-01-S	598300	4809022	148.48	1.00	149.48	5.18	2.18	3.00	9-Jun-09			4.65	144.83			5.03	144.45	6.18	143.30																	5.45	144.03
MMM09-01-D	598301	4809024	148.27	1.05	149.32	8.89	7.39	1.50	9-Jun-09			5.20	144.12			5.32	144.00	6.24	143.08																	5.58	143.74
MMM09-02	598132	4809239	151.16	1.10	152.26	5.21	2.21	3.00	1-Jun-09			4.06	148.20	4.35	147.91			5.02	147.24					4.67	147.59	4.56	147.70			4.23	148.04	4.32	147.94	4.66	147.60		
MMM09-03	597983	4809410	151.40	1.13	152.53	3.07	1.57	1.50	1-Jun-09			1.62	150.91	2.25	150.28					3.25	149.28													2.53	150.00		
MMM09-04	597761	4809653	152.35	1.09	153.44	6.02	3.02	3.00	8-Jun-09			2.33	151.11	2.03	151.41					2.74	150.70													2.38	151.06		
MMM09-05-S	597485	4809933	159.00	1.23	160.23	8.66	5.66	3.00	5-Jun-09			1.77	158.46	2.21	158.02					3.00	157.23													3.79	156.44		
MMM09-05-D	597482	4809935	159.31	1.09	160.40	16.41	14.91	1.50	5-Jun-09			10.99	149.41	11.15	149.25					11.29	149.11													11.48	148.92		
MMM09-06-S	597170	4809527	155.18	1.19	156.37	5.84	3.34	2.50	4-Jun-09			1.61	154.76	1.48	154.89					1.94	154.43													1.76	154.61		
MMM09-06-D	597170	4809529	155.36	1.15	156.51	10.87	9.37	1.50	4-Jun-09			2.49	154.02	1.83	154.68					1.62	154.89													1.64	154.87		
MMM09-07	597526	4809600	153.82	1.06	154.88	5.84	2.84	3.00	8-Jun-09			2.33	152.55	1.97	152.91					2.44	152.44													2.40	152.48		
MMM09-08	597395	4809298	158.01	0.95	158.95	7.87	4.37	3.50	2-Jun-09			2.28	156.67	2.16	156.79					3.21	155.74													2.30	156.65		
MMM09-09	597550	4809184	151.64	1.08	152.72	2.26	1.76	0.50	2-Jun-09			1.69	151.03																					1.84	150.88		
MMM09-10-S	597811	4809270	149.69	1.08	150.77	2.13	1.63	0.50	2-Jun-09			1.21	149.56	1.17	149.60			1.99	148.78					1.64	149.13	1.43	149.34			1.18	149.58	1.22	149.55	1.46	149.31		
MMM09-10-D	597813	4809270	149.65	1.07	150.72	7.67	6.17	1.50	2-Jun-09			1.10	149.62	1.03	149.69			1.91	148.81					1.53	149.20	1.34	149.38			1.06	149.66	1.04	149.68	1.31	149.41		
MMM09-11	597840	4808917	153.52	1.06	154.58	5.51	2.51	3.00	8-Jun-09			1.53	153.05							2.83	151.75																
MMM09-12	598015	4808712	152.71	1.09	153.80	3.38	1.88	1.50	9-Jun-09			1.91	151.89							3.53	150.27																
MMM09-13	597431	4808891	157.30	1.08	158.38	3.20	1.83	1.37	9-Nov-09																												
MMM09-14	597154	4809172	155.53	0.98	156.51	5.13	2.24	2.90	10-Nov-09																												
MMM09-15S	597151	4808905	159.18	1.02	160.20	4.42	1.52	2.90	11-Nov-10																												
MMM09-15D	597153	4808903	159.13	1.09	160.22	12.50	11.13	1.37	11-Nov-10																												
MMM09-16	596526	4809514	163.75	1.15	164.90	5.94	2.97	2.97	13-Nov-09																												
MMM09-17	596202	4809823	162.72	1.00	163.72	5.92	2.97	2.95	13-Nov-09																												
MMM09-18S	595803	4809213	169.36	1.11	170.47	6.10	3.20	2.90	12-Nov-09																												
MMM09-18D	595805	4809215	169.38	1.06	170.43	15.37	13.94	1.42	12-Nov-09																												
MMM09-19S	595387	4810334	180.22	(0.11)	180.11	5.92	3.17	2.74	17-Nov-09																												
MMM09-19D	595388	4810336	180.18	(0.08)	180.10	15.06	13.64	1.42	16-Nov-09																												
MMM09-20	594807	4809575	181.50	(0.15)	181.35	7.21	4.24	2.97	17-Nov-09																												
MMM11-21	598145	4809144	150.67	0.91	151.57	6.20	4.68	1.52	14-Jul-11			3.99	147.58			4.35	147.22	4.98	146.59					4.64	146.93	4.52	147.05	4.52	147.05	4.31	147.26	4.39	147.18			4.60	146.97
MMM11-22-S	598045	4809175	151.69	0.93	152.62	6.12	4.60	1.52	14-Jul-11			4.48	148.14			4.74	147.88	5.38	147.24					4.96	147.66	4.84	147.78			4.57	148.06	4.70	147.92			4.91	147.71
MMM11-22-D	598046	4809175	151.74	0.84	152.58	9.16	7.64	1.52	14-Jul-11			4.93	147.65			5.13	147.45	5.74	146.84					5.38	147.20	5.26	147.32			5.07	147.51	5.01	147.57			5.27	147.31
TROW MW-1	598305	4809194	149.79	(0.08)	149.72	4.60	1.60	3.00	3-Jan-01			1.37	148.35	1.63	148.09			2.48	147.24																	2.37	147.35
TROW MW-2	598337	4809146	149.70	(0.08)	149.62	4.60	1.60	3.00	5-Jan-01			0.78	148.84	1.64	147.98			Dry																		2.27	147.35
TROW MW-3	598131	4808935	150.94	1.00	151.94	6.10	3.10	3.00	3-Jan-01			2.03	149.91			2.16	149.78			3.15	148.78															2.30	149.64
Pond Gauge	598203	4809154	147.94	1.00	148.94				4-Jul-11	0.94	148.88	**Destroyed**																										
Pond Gauge Replaced	598155	4809153	148.48	1.32	149.80				11-Jul-11							1.05	148.75	1.34	148.46					1.09	148.71	1.00	148.80	1.05	148.75	0.84	148.96	1.06	148.74			MP-21	149.92
Pond Gauge Replaced2	598167	4809144	148.10	1.18	149.28				6-May-14																												
EXP MW-1	5981557	4809073	146.77	0.87	147.64	6.20	4.25	1.95	14-Jul-11			1.13	146.51			1.33	146.31	2.08	145.56																	1.47	146.17
EXP MW-2	598157	4809067	145.99	0.73	146.72	3.10	1.59	1.51	13-Jul-11			0.08	146.64			0.45	146.27	Dry																		0.5 to ice	
EXP MW-3	598200	4809077	147.78	1.10	148.88	6.08	4.08	2.00	13-Jul-11			3.41	145.47			3.53	145.35	4.42	144.46																	3.72	145.16
EXP MW-4	598215	4809075	145.65	0.87	146.52	1.45	0.55	0.90	15-Jul-11			1.45	145.07			1.50	145.02	2.33	144.19																	0.96	145.56
Lazy Pat Well	598308	4809122	149.66	0.15	149.81																																

Upward Gradient (Nests Only)
Downward Gradient (Nests Only)
Static Water Level within 0.3 m of grade
Static Water Level is above grade

Table SWL-1: Static Water Levels at Monitoring Wells

Well ID	Location Easting m	Location Northing m	Ground Elevation masl	Stick-up mag	Top Elevation masl	Screen Bottom mbg	Screen Top mbg	Screen Length m	Install Date	Water Level 29-Apr-14		Water Level 30-Apr-14		Water Level 06-May-14		Water Level 25-Jul-14		Water Level 05-Aug-14		Water Level 20-Oct-14		Water Level 22-Jan-15		Water Level 27-Apr-15		Water Level 04-May-15		Water Level 28-Jul-15		Water Level 30-Oct-15		Water Level 11-Nov-15		Water Level 23-Dec-15		Water Level 25-Jan-16	
										mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl	mbtop	masl
MMM09-01-S	598300	4809022	148.48	1.00	149.48	5.18	2.18	3.00	9-Jun-09	4.82	144.66					5.41	144.07			5.68	143.79	5.37	144.11	4.61	144.86			5.58	143.90	Dry				5.70	143.77	5.06	144.42
MMM09-01-D	598301	4809024	148.27	1.05	149.32	8.89	7.39	1.50	9-Jun-09	5.05	144.27					5.52	143.80			5.78	143.54	5.61	143.71	5.25	144.07			5.94	143.38	5.84	143.48			5.85	143.47	5.57	143.75
MMM09-02	598132	4809239	151.16	1.10	152.26	5.21	2.21	3.00	1-Jun-09			3.58	148.68	3.84	148.42	4.70	147.56			4.73	147.53	4.69	147.58	4.09	148.18	4.30	147.97	4.87	147.40	5.26	147.00			5.04	147.22	4.75	147.51
MMM09-03	597983	4809410	151.40	1.13	152.53	3.07	1.57	1.50	1-Jun-09			1.34	151.19			2.53	150.00			3.11	149.42	2.46	150.07	1.65	150.88			Damaged									
MMM09-04	597761	4809653	152.35	1.09	153.44	6.02	3.02	3.00	8-Jun-09			2.16	151.28			2.37	151.07			2.43	151.01	2.39	151.05	2.32	151.11			2.49	150.95	2.53	150.91			2.46	150.98	2.44	151.00
MMM09-05-S	597485	4809933	159.00	1.23	160.23	8.66	5.66	3.00	5-Jun-09			1.76	158.47			2.31	157.92			3.00	157.23	2.43	157.80	1.75	158.48			1.99	158.24	3.16	157.07					2.22	158.01
MMM09-05-D	597482	4809935	159.31	1.09	160.40	16.41	14.91	1.50	5-Jun-09			11.05	149.35			11.14	149.26			11.33	149.07	11.41	149.00	11.38	149.03			11.38	149.02	11.47	148.93					11.43	148.97
MMM09-06-S	597170	4809527	155.18	1.19	156.37	5.84	3.34	2.50	4-Jun-09			1.67	154.70			1.81	154.56			2.03	154.34	1.98	154.39	1.57	154.80	1.69	154.68	1.82	154.55	2.57	153.80	2.48	153.89			2.07	154.30
MMM09-06-D	597170	4809529	155.36	1.15	156.51	10.87	9.37	1.50	4-Jun-09			2.00	154.51			1.71	154.80			1.56	154.95	1.85	154.66	2.28	154.23	2.22	154.29	1.92	154.59	2.05	154.46	2.42	154.09			2.09	154.42
MMM09-07	597526	4809600	153.82	1.06	154.88	5.84	2.84	3.00	8-Jun-09			2.36	152.52			2.27	152.61			2.38	152.50	2.57	152.31	2.27	152.61			2.22	152.66	3.14	151.74					2.80	152.08
MMM09-08	597395	4809298	158.01	0.95	158.95	7.87	4.37	3.50	2-Jun-09			2.10	156.85			2.32	156.63			Damaged																	
MMM09-09	597550	4809184	151.64	1.08	152.72	2.26	1.76	0.50	2-Jun-09			1.42	151.30			1.98	150.74			1.90	150.81	1.92	150.79	1.70	151.02			2.19	150.53	1.93	150.79					1.87	150.85
MMM09-10-S	597811	4809270	149.69	1.08	150.77	2.13	1.63	0.50	2-Jun-09			1.10	149.67			1.65	149.11			1.56	149.21	1.56	149.21	1.26	149.50			1.78	148.99	1.91	148.86			1.60	149.16	1.48	149.29
MMM09-10-D	597813	4809270	149.65	1.07	150.72	7.67	6.17	1.50	2-Jun-09			1.05	149.68			1.47	149.26			1.37	149.35	1.37	149.35	1.07	149.66			1.55	149.18	1.87	148.85			1.50	149.22	1.31	149.41
MMM09-11	597840	4808917	153.52	1.06	154.58	5.51	2.51	3.00	8-Jun-09	1.46	153.12							1.51	153.07	2.54	152.04	2.26	152.32	1.65	152.93			2.34	152.24	3.63	150.95					1.89	152.69
MMM09-12	598015	4808712	152.71	1.09	153.80	3.38	1.88	1.50	9-Jun-09	1.79	152.01							1.91	151.89	3.03	150.77	2.65	151.15	1.99	151.81			2.84	150.96							2.41	151.39
MMM09-13	597431	4808891	157.30	1.08	158.38	3.20	1.83	1.37	9-Nov-09																												
MMM09-14	597154	4809172	155.53	0.98	156.51	5.13	2.24	2.90	10-Nov-09																												
MMM09-15S	597151	4808905	159.18	1.02	160.20	4.42	1.52	2.90	11-Nov-10																												
MMM09-15D	597153	4808903	159.13	1.09	160.22	12.50	11.13	1.37	11-Nov-10																												
MMM09-16	596526	4809514	163.75	1.15	164.90	5.94	2.97	2.97	13-Nov-09																												
MMM09-17	596202	4809823	162.72	1.00	163.72	5.92	2.97	2.95	13-Nov-09																												
MMM09-18S	595803	4809213	169.36	1.11	170.47	6.10	3.20	2.90	12-Nov-09																												
MMM09-18D	595805	4809215	169.38	1.06	170.43	15.37	13.94	1.42	12-Nov-09																												
MMM09-19S	595387	4810334	180.22	(0.11)	180.11	5.92	3.17	2.74	17-Nov-09																												
MMM09-19D	595388	4810336	180.18	(0.08)	180.10	15.06	13.64	1.42	16-Nov-09																												
MMM09-20	594807	4809575	181.50	(0.15)	181.35	7.21	4.24	2.97	17-Nov-09																												
MMM11-21	598145	4809144	150.67	0.91	151.57	6.20	4.68	1.52	14-Jul-11			3.62	147.96			4.77	146.81			4.75	146.83	4.65	146.93	4.13	147.45	4.32	147.25	4.87	146.71	5.29	146.28			5.00	146.58	4.66	146.91
MMM11-22-S	598045	4809175	151.69	0.93	152.62	6.12	4.60	1.52	14-Jul-11			4.04	148.58			5.06	147.56			4.97	147.65	4.94	147.68	4.53	148.10	4.74	147.88	5.21	147.41	5.88	146.74			5.41	147.21	5.09	147.53
MMM11-22-D	598046	4809175	151.74	0.84	152.58	9.16	7.64	1.52	14-Jul-11			4.82	147.76			5.44	147.15			5.32	147.26	5.25	147.33	4.79	147.79	5.06	147.53	5.45	147.13	6.50	146.08			5.75	146.83	5.39	147.19
TROW MW-1	598305	4809194	149.79	(0.08)	149.72	4.60	1.60	3.00	3-Jan-01					1.17	148.54	2.38	147.34			2.70	147.01	2.35	147.37	1.45	148.27			2.63	147.09	Dry						2.60	147.12
TROW MW-2	598337	4809146	149.70	(0.08)	149.62	4.60	1.60	3.00	5-Jan-01	1.00	148.63					2.06	147.57			2.57	147.06	Frozen		0.98	148.64			Dry to 2.755		Dry						Dry to 2.75	
TROW MW-3	598131	4808935	150.94	1.00	151.94	6.10	3.10	3.00	3-Jan-01	2.00	149.93					2.47	149.46			2.63	149.31	2.44	149.50	2.12	149.81			2.74	149.19	2.98	148.96					2.27	149.67
Pond Gauge	598203	4809154	147.94	1.00	148.94				4-Jul-11																												
Pond Gauge Replaced	598155	4809153	148.48	1.32	149.80				11-Jul-11	Destroyed																												
Pond Gauge Replaced2	598167	4809144	148.10	1.18	149.28				6-May-14					0.49	148.78	0.83	148.45			0.66	148.61	Frozen to 0.36		0.51	148.77	0.56	148.71	0.73	148.55	0.31	148.97						
EXP MW-1	5981557	4809073	146.77	0.87	147.64	6.20	4.25	1.95	14-Jul-11	0.99	146.65					1.53	146.11			1.55	146.09	1.47	146.17	1.06	146.58			1.73	145.91	2.16	145.48			1.77	145.87	1.48	146.17
EXP MW-2	598157	4809067	145.99	0.73	146.72	3.10	1.59	1.51	13-Jul-11	Damaged																											
EXP MW-3	598200	4809077	147.78	1.10	148.88	6.08	4.08	2.00	13-Jul-11	3.30	145.58					3.73	145.15			3.87	145.02	3.75	145.14	3.39	145.49			4.07	144.82	4.15	144.73			3.97	144.91	3.70	145.18
EXP MW-4	598215	4809075	145.65	0.87	146.52	1.45	0.55	0.90	15-Jul-11	1.08	145.45					1.62	144.90			1.68	144.85	1.61	144.92	1.49	145.04			2.03	144.49	1.61	144.91			1.57	144.96	1.54	144.98
Lazy Pat Well	598308	4809122	149.66	0.15	149.81																																

Upward Gradient (Nests Only)
Downward Gradient (Nests Only)
Static Water Level within 0.3 m of grade
Static Water Level is above grade

Table SWL-1: Static Water Levels at Monitoring Wells

Well ID	Location Easting m	Location Northing m	Ground Elevation masl	Stick-up mag	Top Elevation masl	Screen Bottom mbg	Screen Top mbg	Screen Length m	Install Date	Water Level 04-Apr-16 mbtop	Water Level 04-Apr-16 masl	Water Level 14-Jul-16 mbtop	Water Level 14-Jul-16 masl	Water Level 28-Jul-16 mbtop	Water Level 28-Jul-16 masl	Water Level 14-Oct-16 mbtop	Water Level 14-Oct-16 masl	Water Level 06-Mar-17 mbtop	Water Level 06-Mar-17 masl	Water Level 18-Apr-17 mbtop	Water Level 18-Apr-17 masl
MMM09-01-S	598300	4809022	148.48	1.00	149.48	5.18	2.18	3.00	9-Jun-09	4.05	145.43	5.73	143.75			5.89	143.59	4.51	144.97	4.98	144.50
MMM09-01-D	598301	4809024	148.27	1.05	149.32	8.89	7.39	1.50	9-Jun-09	5.01	144.31	6.51	142.82			6.41	142.92	5.20	144.12	5.31	144.01
MMM09-02	598132	4809239	151.16	1.10	152.26	5.21	2.21	3.00	1-Jun-09	3.85	148.41	5.40	146.86	5.55	146.71	5.78	146.48	4.14	148.12	4.40	147.86
MMM09-03	597983	4809410	151.40	1.13	152.53	3.07	1.57	1.50	1-Jun-09												
MMM09-04	597761	4809653	152.35	1.09	153.44	6.02	3.02	3.00	8-Jun-09	1.92	151.52	2.79	150.65			2.60	150.83	2.28	151.15	2.32	151.12
MMM09-05-S	597485	4809933	159.00	1.23	160.23	8.66	5.66	3.00	5-Jun-09	1.62	158.61	2.27	157.96			3.16	157.07	2.08	158.15	1.80	158.43
MMM09-05-D	597482	4809935	159.31	1.09	160.40	16.41	14.91	1.50	5-Jun-09	11.22	149.18	11.18	149.22			11.36	149.04	11.30	149.10	9.87	150.53
MMM09-06-S	597170	4809527	155.18	1.19	156.37	5.84	3.34	2.50	4-Jun-09	1.54	154.83	2.18	154.19			2.06	154.31	1.78	154.59	1.76	154.61
MMM09-06-D	597170	4809529	155.36	1.15	156.51	10.87	9.37	1.50	4-Jun-09	1.89	154.62	1.98	154.53			1.89	154.62	2.13	154.38	2.05	154.46
MMM09-07	597526	4809600	153.82	1.06	154.88	5.84	2.84	3.00	8-Jun-09	2.30	152.58	2.56	152.33			2.95	151.94	1.57	153.32	2.47	152.41
MMM09-08	597395	4809298	158.01	0.95	158.95	7.87	4.37	3.50	2-Jun-09												
MMM09-09	597550	4809184	151.64	1.08	152.72	2.26	1.76	0.50	2-Jun-09	1.37	151.35	2.45	150.27			2.20	150.52	1.64	151.08	1.73	150.99
MMM09-10-S	597811	4809270	149.69	1.08	150.77	2.13	1.63	0.50	2-Jun-09	1.20	149.57	2.09	148.68			2.40	148.37	1.34	149.43	1.40	149.37
MMM09-10-D	597813	4809270	149.65	1.07	150.72	7.67	6.17	1.50	2-Jun-09	Frozen to 0.97		1.81	148.91			1.92	148.81	1.18	149.54	1.24	149.48
MMM09-11	597840	4808917	153.52	1.06	154.58	5.51	2.51	3.00	8-Jun-09	1.39	153.19	2.52	152.06			3.44	151.14	1.67	152.91	1.81	152.77
MMM09-12	598015	4808712	152.71	1.09	153.80	3.38	1.88	1.50	9-Jun-09	1.73	152.07	3.38	150.42			4.21	149.59	1.99	151.81	2.08	151.72
MMM09-13	597431	4808891	157.30	1.08	158.38	3.20	1.83	1.37	9-Nov-09												
MMM09-14	597154	4809172	155.53	0.98	156.51	5.13	2.24	2.90	10-Nov-09												
MMM09-15S	597151	4808905	159.18	1.02	160.20	4.42	1.52	2.90	11-Nov-10												
MMM09-15D	597153	4808903	159.13	1.09	160.22	12.50	11.13	1.37	11-Nov-10												
MMM09-16	596526	4809514	163.75	1.15	164.90	5.94	2.97	2.97	13-Nov-09												
MMM09-17	596202	4809823	162.72	1.00	163.72	5.92	2.97	2.95	13-Nov-09												
MMM09-18S	595803	4809213	169.36	1.11	170.47	6.10	3.20	2.90	12-Nov-09												
MMM09-18D	595805	4809215	169.38	1.06	170.43	15.37	13.94	1.42	12-Nov-09												
MMM09-19S	595387	4810334	180.22	(0.11)	180.11	5.92	3.17	2.74	17-Nov-09												
MMM09-19D	595388	4810336	180.18	(0.08)	180.10	15.06	13.64	1.42	16-Nov-09												
MMM09-20	594807	4809575	181.50	(0.15)	181.35	7.21	4.24	2.97	17-Nov-09												
MMM11-21	598145	4809144	150.67	0.91	151.57	6.20	4.68	1.52	14-Jul-11	4.05	147.52	5.42	146.15	5.47	146.10	5.55	146.02	4.32	147.26	4.52	147.05
MMM11-22-S	598045	4809175	151.69	0.93	152.62	6.12	4.60	1.52	14-Jul-11	4.39	148.23	5.89	146.73			6.20	146.42	4.58	148.04	4.81	147.81
MMM11-22-D	598046	4809175	151.74	0.84	152.58	9.16	7.64	1.52	14-Jul-11	4.66	147.92	6.24	146.34			6.74	145.84	5.04	147.54	5.22	147.36
TROW MW-1	598305	4809194	149.79	(0.08)	149.72	4.60	1.60	3.00	3-Jan-01	1.26	148.46	3.22	146.50			Dry to 3.481		1.66	148.06	1.86	147.86
TROW MW-2	598337	4809146	149.70	(0.08)	149.62	4.60	1.60	3.00	5-Jan-01	1.71	147.91	2.73	146.89			Dry to 2.750		1.15	148.47	1.15	148.47
TROW MW-3	598131	4808935	150.94	1.00	151.94	6.10	3.10	3.00	3-Jan-01	1.95	149.99	3.12	148.82			3.58	148.36	2.12	149.81	2.24	149.70
Pond Gauge	598203	4809154	147.94	1.00	148.94				4-Jul-11												
Pond Gauge Replaced	598155	4809153	148.48	1.32	149.80				11-Jul-11												
Pond Gauge Replaced2	598167	4809144	148.10	1.18	149.28				6-May-14	0.40	148.88	1.05	148.23	1.17	148.11	Dry to 1.192		0.55	148.73	0.56	148.72
EXP MW-1	5981557	4809073	146.77	0.87	147.64	6.20	4.25	1.95	14-Jul-11	0.93	146.71	2.47	145.17			2.41	145.24	1.14	146.50	1.23	146.41
EXP MW-2	598157	4809067	145.99	0.73	146.72	3.10	1.59	1.51	13-Jul-11												
EXP MW-3	598200	4809077	147.78	1.10	148.88	6.08	4.08	2.00	13-Jul-11	3.24	145.64	4.73	144.16			4.61	144.28	3.39	145.49	3.48	145.40
EXP MW-4	598215	4809075	145.65	0.87	146.52	1.45	0.55	0.90	15-Jul-11	1.36	145.16	Dry to 2.565				2.46	144.06	1.44	145.08	1.46	145.06
Lazy Pat Well	598308	4809122	149.66	0.15	149.81																

Upward Gradient (Nests Only)
Downward Gradient (Nests Only)
Static Water Level within 0.3 m of grade
Static Water Level is above grade

Table SWL-2: Static Water Levels at Mini-Piezometers, Staff Gauges, and Flow Measuring Points

ID	Location[1]		Ground Elevation [2]	Stick-up	Top Elevation	Screen Bottom	Screen Top	Screen	Install Date	Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels		
	Easting	Northing								05-May-09			29-May-09			19-Jun-09			24-Sep-09			09-Nov-09			18-Dec-09			21-Jan-10			13-Apr-10			06-Aug-10		
	m	m	masl	mag	masl	mbg	mbg	m		In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta
MP-01	597409	4809840	154.59	1.22	155.81	0.64	0.39	0.25	05-May-09		1.16		1.17	1.19	(0.02)	1.18	1.02	0.16	1.20	1.14	0.06	1.17	1.20	(0.03)				1.08	1.16	N/A	1.05	1.10	(0.05)	1.22	Dry to 1.22	N/A
MP-02	597769	4809666	151.54	1.05	152.59	0.81	0.56	0.25	05-May-09		1.00		1.17	1.02	0.15	1.21	1.04	0.17	Dry to 1.47	Dry to 0.98	N/A	1.02	Dry to 1.03	N/A	0.94	0.97	N/A	1.04	1.02	N/A	0.97	0.92	0.06	1.42	Dry to 1.03	N/A
MP-03	597808	4809266	149.16	1.35	150.51	0.50	0.25	0.25	05-May-09		1.27		1.27	1.29	(0.02)	1.32	1.37	(0.05)	Dry to 1.47	Dry to 1.34	N/A							1.16	1.22	N/A	Could not locate			Dry to 1.35	Dry to 1.35	N/A
MP-04	597972	4809088	144.12	1.44	145.56	0.41	0.16	0.25	05-May-09		1.42		1.40	1.40	0.00	1.40	1.36	0.04	Dry to 1.47	Dry to 1.41	N/A							Destroyed by ice								
MP-05 (pond on hill)	597514	4809671	157.61	1.27	158.88	0.59	0.34	0.25	05-May-09		1.11		1.37	Dry to 1.27	N/A	1.57	Dry to 1.27	N/A	Dry to 1.47	Dry to 1.27	N/A	1.33	Dry to 1.27	N/A				1.19	1.10	N/A	1.11	1.09	0.02	Dry to 1.55	Dry to 1.27	N/A
MP-06	597348	4809418	152.20	1.25	153.45	0.61	0.36	0.25	05-May-09		1.12		1.22	1.14	0.08	1.29	1.16	0.13	Dry to 1.57	Dry to 1.20	N/A							1.05	1.08	N/A	1.11	1.08	0.03	1.43	Dry to 1.20	N/A
MP-07	597541	4809150	150.78	1.29	152.07	0.57	0.32	0.25	05-May-09		1.08		1.08	1.08	0.00	1.29	1.05	0.24	Dry to 1.56	Dry to 1.26	N/A							1.12	1.13	N/A	1.07	1.10	(0.03)	1.33	Dry to 1.26	N/A
MP-21	598162	4809146	148.83	1.85	150.69	0.51	0.26	0.25	04-Jul-11																											
MP-22	598051	4809192	148.76	1.84	150.60	0.55	0.30	0.25	04-Jul-11																											
MP-23	598045	4809233	148.77	1.82	150.58	0.68	0.43	0.25	04-Jul-11																											
MP-24s	597912	4809256	148.80	0.93	149.73	0.44	0.31		22-Oct-13																											
MP-24d	597912	4809256	148.80	1.30	150.11	1.28	1.19		22-Oct-13																											
Observations at Other Locations - Not Mini-Piezometers																																			
Stream Gauge #1	597677	4809113	149.61	0.95	150.57				24-Sep-09										0.14	pooled		0.18			0.19			Frozen	0.19			0.18		0.12	pooled	
Stream Gauge #2	598345	4809063	142.35	0.99	143.34				24-Sep-09										0.10	pooled					0.21			Frozen	0.18	Flow under ice		0.21		0.12	pooled	
FMP-01	597622	4809128	150.16		N/A																		0.02	pooled	0.09	0.09	average		Frozen	No Flow		0.11	average			Dry
FMP-02	597574	4809796	153.31		N/A																								Frozen	No Flow		0.04	average			Dry
FMP-03	596266	4809815			N/A																											0.10	average			Dry
FMP-04	597523	4809561																			pooled			pooled					Frozen	No Flow		0.03	average			Dry

Notes:

Difference in heads

- Negative Value = Upward Flow (from ground into channel)
- Positive Value = Downward Flow (from channel into ground)
- indicates piezometer and/or surface water were frozen (ice)

Minipiezometers are between 1.85 to 1.86 m total length from top of pipe to tip (2009 installations)

Table SWL-2: Static Water Levels at Mini-Piezometers, Staff Gauges, and Flow Measuring Points

ID	Location[1]		Ground Elevation [2]	Stick-up	Top Elevation	Screen Bottom	Screen Top	Screen	Install Date	Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels		
	Easting	Northing								18-Oct-10			17-Feb-11			05-Jul-11			27-Jul-11			30-Sep-11			19-Jan-12			18-Jul-12			05-Nov-12			06-Nov-12		
	m	m	masl	mag	masl	mbg	mbg	m		In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta
MP-01	597409	4809840	154.59	1.22	155.81	0.64	0.39	0.25	05-May-09	1.12	1.00	0.12	1.03	0.92	N/A	1.12	1.18	(0.06)				1.14	1.08	0.06	Frozen at 0.97	Frozen at 1.03	N/A									
MP-02	597769	4809666	151.54	1.05	152.59	0.81	0.56	0.25	05-May-09	1.02	0.92	0.10	0.90	0.91	N/A	1.39	Dry to 1.06					1.02	0.97	0.05	Frozen at 0.88	Frozen at 0.88	N/A				1.04	1.04	0.00			
MP-03	597808	4809266	149.16	1.35	150.51	0.50	0.25	0.25	05-May-09	1.18	1.14	0.04	1.14	0.80	N/A	Destroyed																				
MP-04	597972	4809088	144.12	1.44	145.56	0.41	0.16	0.25	05-May-09																											
MP-05 (pond on hill)	597514	4809671	157.61	1.27	158.88	0.59	0.34	0.25	05-May-09	1.28	Dry to 1.16	N/A	1.19	Dry to 1.18	N/A	Dry to 1.55	Dry to 1.22	N/A				1.39	Dry to 1.26		Frozen at 1.05	Frozen at 1.06	N/A				1.27	Dry to 1.24				
MP-06	597348	4809418	152.20	1.25	153.45	0.61	0.36	0.25	05-May-09	1.14	1.04	0.10				Dry to 1.54	Dry to 1.13	N/A																		
MP-07	597541	4809150	150.78	1.29	152.07	0.57	0.32	0.25	05-May-09	1.13	1.08	0.05																			1.14	1.15	(0.01)			
MP-21	598162	4809146	148.83	1.85	150.69	0.51	0.26	0.25	04-Jul-11							2.24	1.84	0.40				Dry to 2.26	Dry to 1.74		Frozen at 1.69	Frozen at 1.71	N/A	Dry to 2.34	Dry to 1.86					1.98	1.84	0.14
MP-22	598051	4809192	148.76	1.84	150.60	0.55	0.30	0.25	04-Jul-11							2.22	1.88	0.34				Dry to 2.25	Dry to 1.77		1.87	Frozen at 1.62	N/A	1.77	Dry to 1.84					1.84	1.83	0.01
MP-23	598045	4809233	148.77	1.82	150.58	0.68	0.43	0.25	04-Jul-11							2.03	1.73	0.30				2.39	dry to 1.71		Frozen at 1.56	Frozen at 1.61	N/A	1.69	Dry to 1.79		1.76	1.75	0.01			
MP-24s	597912	4809256	148.80	0.93	149.73	0.44	0.31		22-Oct-13																											
MP-24d	597912	4809256	148.80	1.30	150.11	1.28	1.19		22-Oct-13																											
Observations at Other Locations - Not Mini-Piezometers																																				
Stream Gauge #1	597677	4809113	149.61	0.95	150.57				24-Sep-09	0.15			0.88			0.14	pooled					0.20			0.24						0.18					
Stream Gauge #2	598345	4809063	142.35	0.99	143.34				24-Sep-09	0.20			0.90			Destroyed																				
FMP-01	597622	4809128	150.16		N/A									Frozen	No Flow																	0.08	Good			
FMP-02	597574	4809796	153.31		N/A									Frozen	No Flow			Dry														0.12	No flow			
FMP-03	596266	4809815			N/A									Frozen	No Flow																					
FMP-04	597523	4809561												Frozen	No Flow																	0.05	Average			

Notes:

Difference in heads

- Negative Value = Upward Flow (from ground into channel)
- Positive Value = Downward Flow (from channel into ground)
- indicates piezometer and/or surface water were frozen (ice)

Minipiezometers are between 1.85 to 1.86 m total length from top of pipe to tip (2009 installations)

Table SWL-2: Static Water Levels at Mini-Piezometers, Staff Gauges, and Flow Measuring Points

ID	Location[1]		Ground Elevation [2]	Stick-up	Top Elevation	Screen Bottom	Screen Top	Screen	Install Date	Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels		
	Easting	Northing								22-Apr-13			10-Jul-13			04-Sep-13			05-Sep-13			09-Sep-13			12-Sep-13			10-Oct-13			22-Oct-13			29-Oct-13		
	m	m	masl	mag	masl	mbg	mbg	m		In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta
MP-01	597409	4809840	154.59	1.22	155.81	0.64	0.39	0.25	05-May-09	1.04	1.10	(0.06)																								
MP-02	597769	4809666	151.54	1.05	152.59	0.81	0.56	0.25	05-May-09	1.01	0.97	0.04	1.05	1.08	(0.03)																					
MP-03	597808	4809266	149.16	1.35	150.51	0.50	0.25	0.25	05-May-09																											
MP-04	597972	4809088	144.12	1.44	145.56	0.41	0.16	0.25	05-May-09																											
MP-05 (pond on hill)	597514	4809671	157.61	1.27	158.88	0.59	0.34	0.25	05-May-09	1.16	1.17	(0.01)	1.53	Dry to 1.26																					
MP-06	597348	4809418	152.20	1.25	153.45	0.61	0.36	0.25	05-May-09	1.09	1.09	0.00		Not located																					
MP-07	597541	4809150	150.78	1.29	152.07	0.57	0.32	0.25	05-May-09	1.07	1.09	(0.02)		Not located																					
MP-21	598162	4809146	148.83	1.85	150.69	0.51	0.26	0.25	04-Jul-11	1.90	dry		1.91	Dry to 1.83		2.24	Dry to 1.82		2.24			2.22			2.30	Dry to 1.84		2.01	Dry to 1.81		1.98	1.85	0.13			
MP-22	598051	4809192	148.76	1.84	150.60	0.55	0.30	0.25	04-Jul-11	1.64	dry		1.65	1.88	(0.23)	1.40	Dry to 1.64		2.28	Dry to 1.64		2.27			2.26	Dryto 1.80		2.28	Dry to 1.79		2.26	1.80	0.46	2.23	1.91	0.32
MP-23	598045	4809233	148.77	1.82	150.58	0.68	0.43	0.25	04-Jul-11	1.45	dry		1.36	Dry to 1.75		1.41	Dry to 1.60		2.48	Dry to 1.60		2.42			2.40	Dry to 1.62 to		2.25	Dry to 1.66		2.10	1.68	0.42	2.00	Dry to 1.66	
MP-24s	597912	4809256	148.80	0.93	149.73	0.44	0.31		22-Oct-13																					0.96	Dry to 0.92		0.96	Dry to 0.92	
MP-24d	597912	4809256	148.80	1.30	150.11	1.28	1.19		22-Oct-13																					1.30	Dry to 1.31		1.24	Dry to 1.31	
Observations at Other Locations - Not Mini-Piezometers																																				
Stream Gauge #1	597677	4809113	149.61	0.95	150.57				24-Sep-09				0.20																							
Stream Gauge #2	598345	4809063	142.35	0.99	143.34				24-Sep-09																											
FMP-01	597622	4809128	150.16		N/A									0.09	Good																					
FMP-02	597574	4809796	153.31		N/A									0.04	Good																					
FMP-03	596266	4809815			N/A																															
FMP-04	597523	4809561												0.02	Slow Flow																					

Notes:

Difference in heads

- Negative Value = Upward Flow (from ground into channel)
- Positive Value = Downward Flow (from channel into ground)
- indicates piezometer and/or surface water were frozen (ice)

Minipiezometers are between 1.85 to 1.86 m total length from top of pipe to tip (2009 installations)

Table SWL-2: Static Water Levels at Mini-Piezometers, Staff Gauges, and Flow Measuring Points

ID	Location[1]		Ground Elevation [2]	Stick-up	Top Elevation	Screen Bottom	Screen Top	Screen	Install Date	Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels		
	Easting	Northing								01-Nov-13			11-Nov-13			17-Dec-13			29-Apr-14			30-Apr-14			06-May-14			25-Jul-14			14-Oct-16			22-Jan-15		
	m	m	masl	mag	masl	mbg	mbg	m		In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta
MP-01	597409	4809840	154.59	1.22	155.81	0.64	0.39	0.25	05-May-09													1.01	1.02	(0.01)				1.14	Dry to 1.09		1.19	Dry to 1.09		Frozen to 1.06	Ice	
MP-02	597769	4809666	151.54	1.05	152.59	0.81	0.56	0.25	05-May-09							1.055 to ice	Dry to 1.03					0.94	0.94	0.00				1.14	Dry to 1.07		1.26	Dry to 1.04		Frozen to 0.99	Ice	
MP-03	597808	4809266	149.16	1.35	150.51	0.50	0.25	0.25	05-May-09																											
MP-04	597972	4809088	144.12	1.44	145.56	0.41	0.16	0.25	05-May-09																											
MP-05 (pond on hill)	597514	4809671	157.61	1.27	158.88	0.59	0.34	0.25	05-May-09							1.48	1.22	0.26				1.18	1.18	0.00				Dry to 1.28	Dry to 1.56		Dry to 1.25	Dry to 1.25		Frozen to 1.18	Dry to 1.19	
MP-06	597348	4809418	152.20	1.25	153.45	0.61	0.36	0.25	05-May-09													0.89	0.89					1.17	Dry to 1.135		1.15	Dry to 1.12		Frozen to 0.98	Ice	
MP-07	597541	4809150	150.78	1.29	152.07	0.57	0.32	0.25	05-May-09							1.185 to ice	Dry to 1.13					0.85	0.85					1.18	Dry to 1.12		1.23	Dry to 1.12		Frozen to 0.95	Dry to 1.03	
MP-21	598162	4809146	148.83	1.85	150.69	0.51	0.26	0.25	04-Jul-11	1.88	1.76	0.12	1.89	dry to 1.85		1.94	1.77	0.17	1.56	1.68	(0.12)	1.56	1.66	(0.11)	1.72	Dry to 1.82		1.91	Dry to 1.76		2.05	Dry to 1.815		1.94	Snow/ dry to 1.78	
MP-22	598051	4809192	148.76	1.84	150.60	0.55	0.30	0.25	04-Jul-11	2.24	1.66	0.58	2.22	dry to 1.84		2.18	1.79	0.39				2.06	1.53	0.53	2.04	1.82	0.23	2.06	Dry to 1.78		1.97	Dry to 1.785		Frozen to 1.55	Snow/dry to 1.75	
MP-23	598045	4809233	148.77	1.82	150.58	0.68	0.43	0.25	04-Jul-11	2.00	1.63	0.37	1.92	dry to 1.745		1.89	1.67	0.22				1.52	1.52	0.00	1.65	Dry to 1.72		1.68	Dry to 1.72		1.78	Dry to 1.73		1.83	Dry to 2.49	
MP-24s	597912	4809256	148.80	0.93	149.73	0.44	0.31		22-Oct-13	0.78	0.78	0.00	0.98			1.11	0.88	0.23				0.68	0.69	(0.01)	0.92	Dry to 0.92		1.33	Dry to 0.90		1.14	Dry to 0.89		Frozen to 0.73	Ice to 0.87	
MP-24d	597912	4809256	148.80	1.30	150.11	1.28	1.19		22-Oct-13	1.26	1.15	0.11	1.28	dry to 1.25		1.31 to ice	1.19					1.29	1.06	0.24	1.35	Dry to 1.24		1.50	Dry to 1.23		1.54	Dry to 1.23		Frozen to 1.47	Ice to 1.47	
Observations at Other Locations - Not Mini-Piezometers																																				
Stream Gauge #1	597677	4809113	149.61	0.95	150.57				24-Sep-09													0.50									0.10			Frozen to 0.30		
Stream Gauge #2	598345	4809063	142.35	0.99	143.34				24-Sep-09																											
FMP-01	597622	4809128	150.16		N/A																										0.10					
FMP-02	597574	4809796	153.31		N/A																										DRY					
FMP-03	596266	4809815			N/A																															
FMP-04	597523	4809561																													DRY					

Notes:

Difference in heads

- Negative Value = Upward Flow (from ground into channel)
- Positive Value = Downward Flow (from channel into ground)
- indicates piezometer and/or surface water were frozen (ice)

Minipiezometers are between 1.85 to 1.86 m total length from top of pipe to tip (2009 installations)

Table SWL-2: Static Water Levels at Mini-Piezometers, Staff Gauges, and Flow Measuring Points

ID	Location[1]		Ground Elevation [2]	Stick-up	Top Elevation	Screen Bottom	Screen Top	Screen	Install Date	Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels			Water Levels		
	Easting	Northing								27-Apr-15			04-May-15			28-Jul-15			30-Oct-15			23-Dec-15			25-Jan-16			04-Apr-16			14-Jul-16		
	m	m	masl	mag	masl	mbg	mbg	m		In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta
MP-01	597409	4809840	154.59	1.22	155.81	0.64	0.39	0.25	05-May-09	1.15	1.15					Dry to 1.55	Dry to 1.06		1.14	Dry to 1.16					Frozen to 1.07	Dry to 1.15		1.03	1.08	(0.05)	1.26	Dry to 1.160	
MP-02	597769	4809666	151.54	1.05	152.59	0.81	0.56	0.25	05-May-09	1.03	1.03					Dry to 1.54	Dry to 1.15		1.06	Dry to 1.05		1.06	Dry to 1.07		Frozen to 0.93	Dry to 1.04		0.94	0.97	(0.03)	Dry to 1.540	Dry to 1.090	
MP-03	597808	4809266	149.16	1.35	150.51	0.50	0.25	0.25	05-May-09																								
MP-04	597972	4809088	144.12	1.44	145.56	0.41	0.16	0.25	05-May-09																								
MP-05 (pond on hill)	597514	4809671	157.61	1.27	158.88	0.59	0.34	0.25	05-May-09	1.23	1.24	(0.01)				Dry to 1.54	Dry to 1.28		1.47	Dry to 1.28					Dry to 1.54	Dry to 1.25		1.15	1.12	0.03	Dry to 1.540	Dry to 1.3	
MP-06	597348	4809418	152.20	1.25	153.45	0.61	0.36	0.25	05-May-09	1.09	1.08	0.01				Dry to 1.54	Dry to 1.02		1.11	Dry to 1.02					Frozen to 0.99	Dry/ice to 0.88		0.95	0.97	(0.02)	Dry to 1.540	Dry to 1.145	
MP-07	597541	4809150	150.78	1.29	152.07	0.57	0.32	0.25	05-May-09	1.17	1.17					Dry to 1.54	Dry to 1.08		1.20	Dry to 1.07					Frozen to 1.02	Dry to 1.07		1.01	1.01		Dry to 1.542	Dry to 1.150	
MP-21	598162	4809146	148.83	1.85	150.69	0.51	0.26	0.25	04-Jul-11	1.69	Dry to 1.81		1.68	Dry/ damp to 1.85		1.83	Dry to 1.81		2.24	Dry to 1.80		2.05	Dry to 1.76		Frozen to 1.73	Dry to 1.76		Frozen to 1.63	Dry to 1.81		Dry to 2.325	Dry to 1.815	
MP-22	598051	4809192	148.76	1.84	150.60	0.55	0.30	0.25	04-Jul-11	1.71	1.84	(0.13)	1.73	Dry to 1.81		1.89	Dry to 1.83		2.15	Dry to 1.83		1.92	Dry to 1.69		1.95	Dry to 1.72		1.53	1.76	(0.23)	2.18	Dry to 1.855	
MP-23	598045	4809233	148.77	1.82	150.58	0.68	0.43	0.25	04-Jul-11	1.82	Dry to 1.68		1.82	Dry to 1.68		1.86	Dry to 1.695		2.11	Dry to 1.68		2.05	Dry to 1.70		Dry to 2.49	Dry to 1.67		1.91	Dry to 1.65		1.86	Dry to 1.650	
MP-24s	597912	4809256	148.80	0.93	149.73	0.44	0.31		22-Oct-13	0.97	Damp to 0.94		1.04	Dry to 0.935		Dry to 1.38	Dry to 0.93		1.08	Dry to 0.93		1.08	Dry to 0.93		Frozen to 0.97	Dry to 0.90		0.89	Frozen to 0.89		Dry to 1.128	Dry to 0.963	
MP-24d	597912	4809256	148.80	1.30	150.11	1.28	1.19		22-Oct-13	1.40	Damp to 1.29		1.43	Dry to 1.30		1.83	Dry to 1.28		1.46	Dry to 1.26		1.46	Dry to 1.29		Frozen to 1.21	Dry to 1.23		1.27	Frozen to 1.26		Dry to 2.022	Dry to 1.282	
Observations at Other Locations - Not Mini-Piezometers																																	
Stream Gauge #1	597677	4809113	149.61	0.95	150.57				24-Sep-09	0.17						< 0.10																		
Stream Gauge #2	598345	4809063	142.35	0.99	143.34				24-Sep-09																								
FMP-01	597622	4809128	150.16		N/A											Dry																		
FMP-02	597574	4809796	153.31		N/A											Dry																Dry to 1.210		
FMP-03	596266	4809815			N/A											Dry																		
FMP-04	597523	4809561														Dry																		

Notes:

Difference in heads

- Negative Value = Upward Flow (from ground into channel)
- Positive Value = Downward Flow (from channel into ground)
- indicates piezometer and/or surface water were frozen (ice)

Minipiezometers are between 1.85 to 1.86 m total length from top of pipe to tip (2009 installations)

Table SWL-2: Static Water Levels at Mini-Piezometers, Staff Gauges, and Flow Measuring Points

ID	Location[1]		Ground Elevation [2]	Stick-up	Top Elevation	Screen Bottom	Screen Top	Screen	Install Date	Water Levels			Water Levels			Water Levels			Water Levels			Water Levels		
	Easting	Northing								28-Jul-16			14-Oct-16			04-Nov-16			06-Mar-17			18-Apr-17		
	m	m	masl	mag	masl	mbg	mbg	m		In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta	In	Out	Delta
MP-01	597409	4809840	154.59	1.22	155.81	0.64	0.39	0.25	05-May-09				1.26	Dry to 1.160					Frozen to 1.07	Frozen to 1.15		1.15	1.19	0.04
MP-02	597769	4809666	151.54	1.05	152.59	0.81	0.56	0.25	05-May-09				1.33	Dry to 1.07					Frozen to 1.04	1.05		1.05	1.06	0.01
MP-03	597808	4809266	149.16	1.35	150.51	0.50	0.25	0.25	05-May-09															
MP-04	597972	4809088	144.12	1.44	145.56	0.41	0.16	0.25	05-May-09															
MP-05 (pond on hill)	597514	4809671	157.61	1.27	158.88	0.59	0.34	0.25	05-May-09				Dry to 1.54	Dry to 1.307					1.30	1.30		1.29	1.30	0.01
MP-06	597348	4809418	152.20	1.25	153.45	0.61	0.36	0.25	05-May-09				Dry to 1.54	Dry to 1.10					1.01	Frozen to 0.98		1.07	1.10	0.03
MP-07	597541	4809150	150.78	1.29	152.07	0.57	0.32	0.25	05-May-09				1.27	Dry to 1.110					1.22	Dry to 1.118		1.19	1.21	0.02
MP-21	598162	4809146	148.83	1.85	150.69	0.51	0.26	0.25	04-Jul-11	Dry to 2.327	Dry to 1.845		Dry to 2.328	Dry to 1.834					1.97	Frozen to 1.85		1.95	Dry to 1.74	
MP-22	598051	4809192	148.76	1.84	150.60	0.55	0.30	0.25	04-Jul-11				Dry to 2.328	Dry to 1.765					1.89	frozen to 1.74		1.84	Dry to 1.80	
MP-23	598045	4809233	148.77	1.82	150.58	0.68	0.43	0.25	04-Jul-11				2.36	Dry to 1.64					Frozen to 1.41	Dry to 1.65		1.29	Dry to 1.78	
MP-24s	597912	4809256	148.80	0.93	149.73	0.44	0.31		22-Oct-13				Dry to 1.125	Dry to 0.887		1.08	Dry to 0.910		1.03	Dry to 0.94		1.02	Dry to 0.97	
MP-24d	597912	4809256	148.80	1.30	150.11	1.28	1.19		22-Oct-13				1.99	Dry to 1.235		1.45	Dry to 1.305		1.41	Dry to 1.31		1.39	Dry to 1.25	
Observations at Other Locations - Not Mini-Piezometers																								
Stream Gauge #1	597677	4809113	149.61	0.95	150.57				24-Sep-09										0.18	No flow				
Stream Gauge #2	598345	4809063	142.35	0.99	143.34				24-Sep-09															
FMP-01	597622	4809128	150.16		N/A															Frozen to 1.15	no flow			
FMP-02	597574	4809796	153.31		N/A								1.24							Frozen to 1.15	no flow			
FMP-03	596266	4809815			N/A															Frozen	no flow			
FMP-04	597523	4809561																		Frozen	no flow			

Notes:

Difference in heads

- Negative Value = Upward Flow (from ground into channel)
- Positive Value = Downward Flow (from channel into ground)
- indicates piezometer and/or surface water were frozen (ice)

Minipiezometers are between 1.85 to 1.86 m total length from top of pipe to tip (2009 installations)

Figure SWL-1: Static Water Levels (2009-2017)

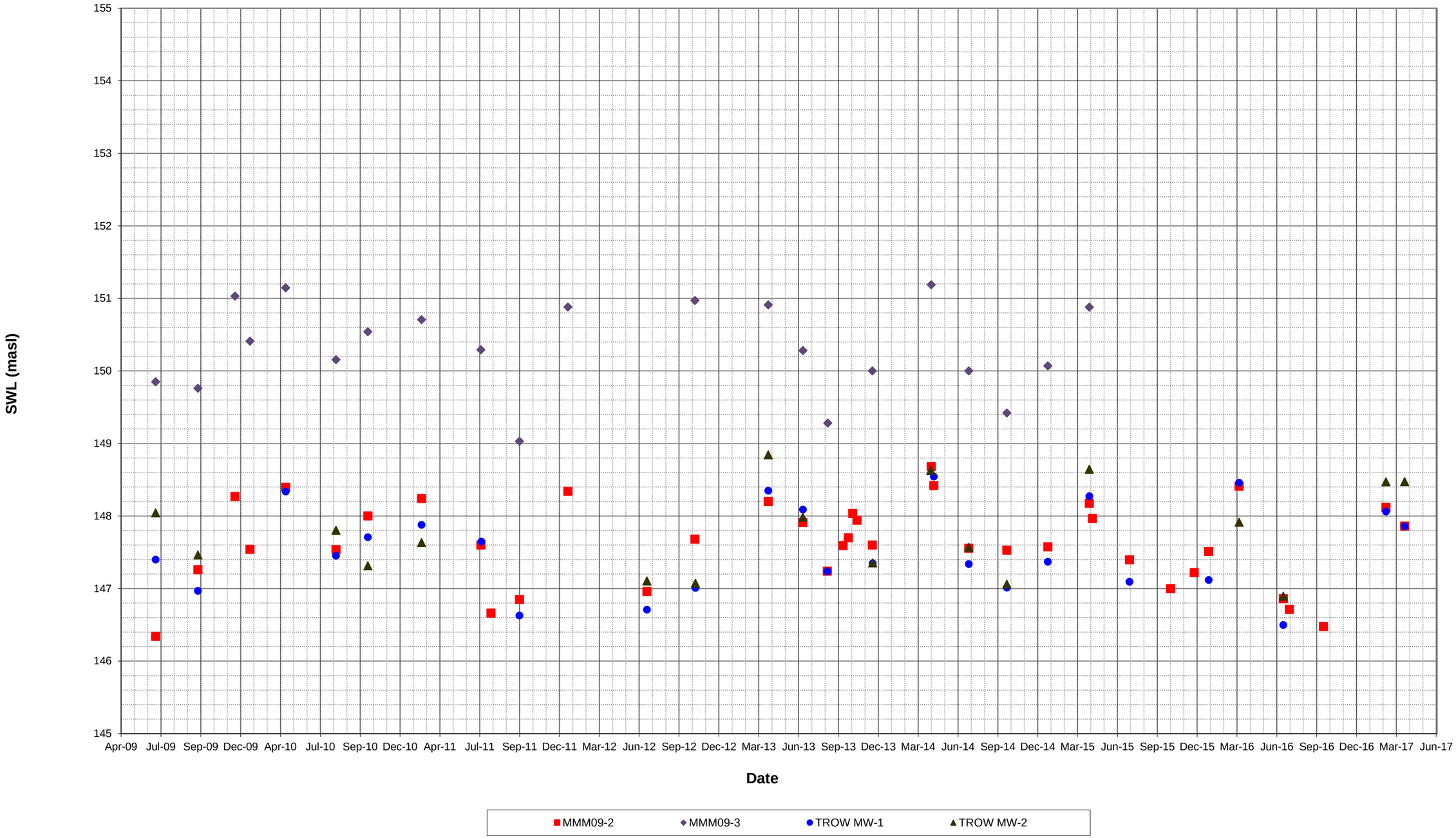


Figure SWL-2: Static Water Levels (2009-2017)

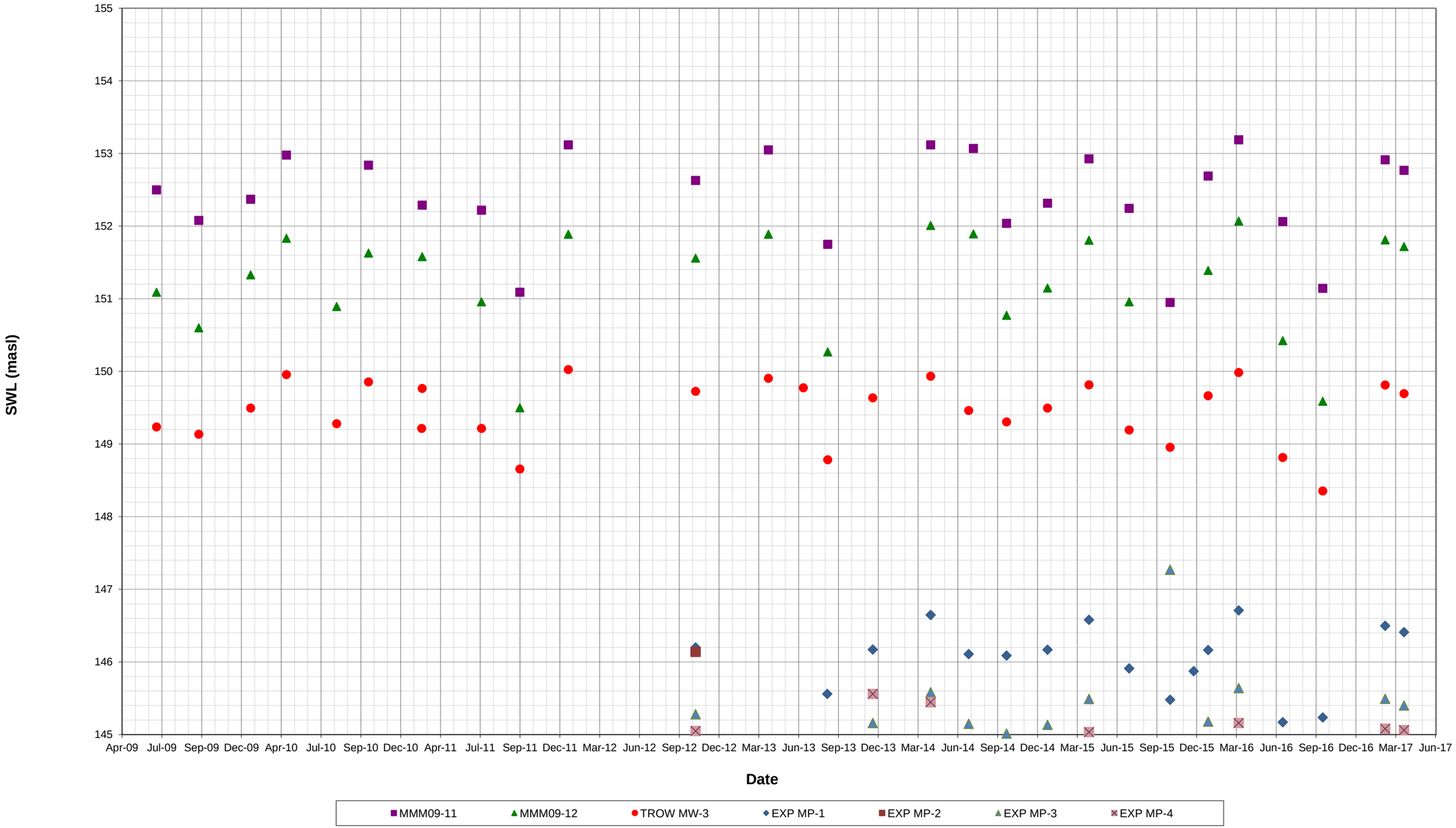


Figure SWL-3: Static Water Levels (2009-2017)

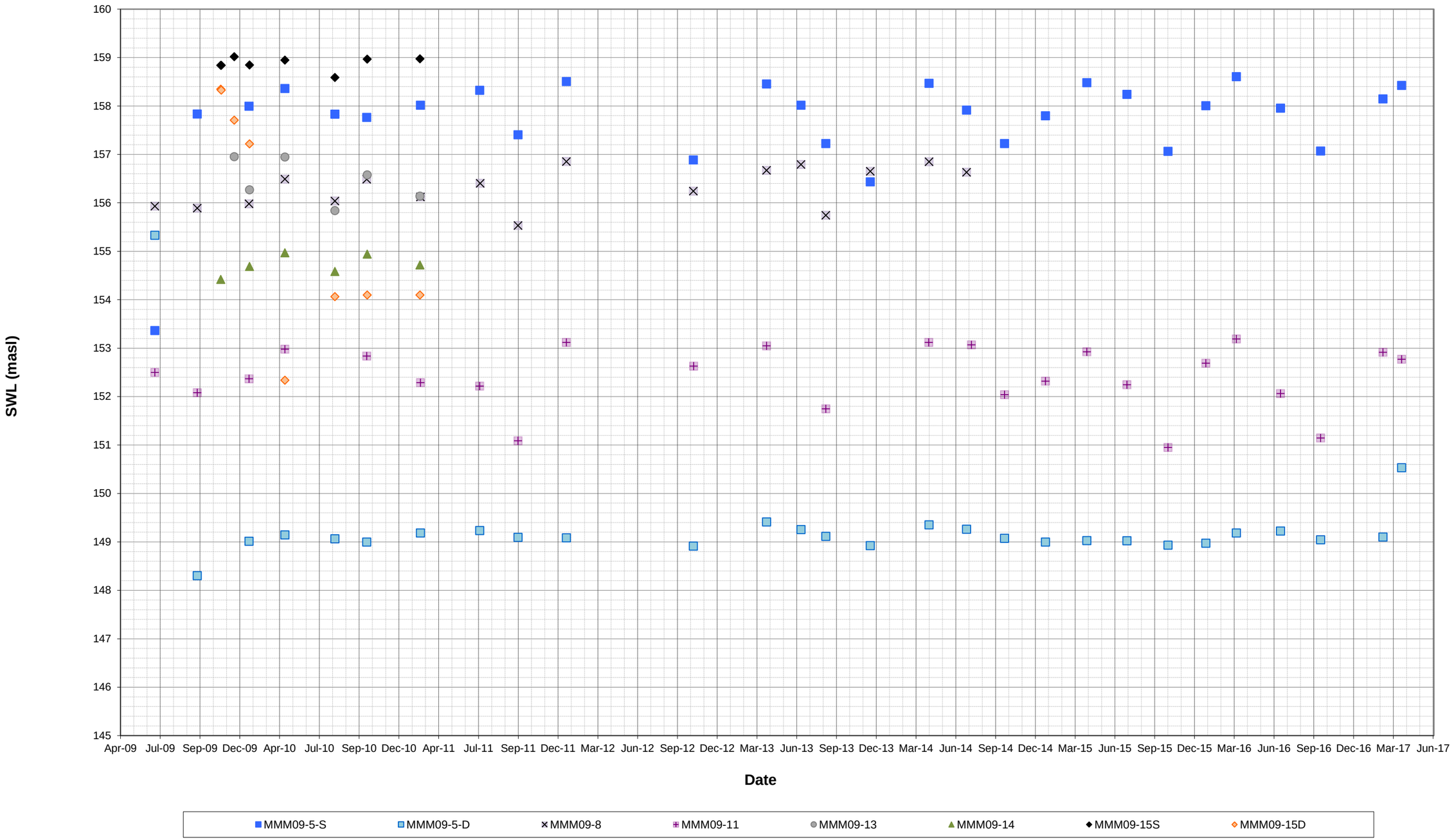


Figure SWL-4: Static Water Levels (2009-2017)

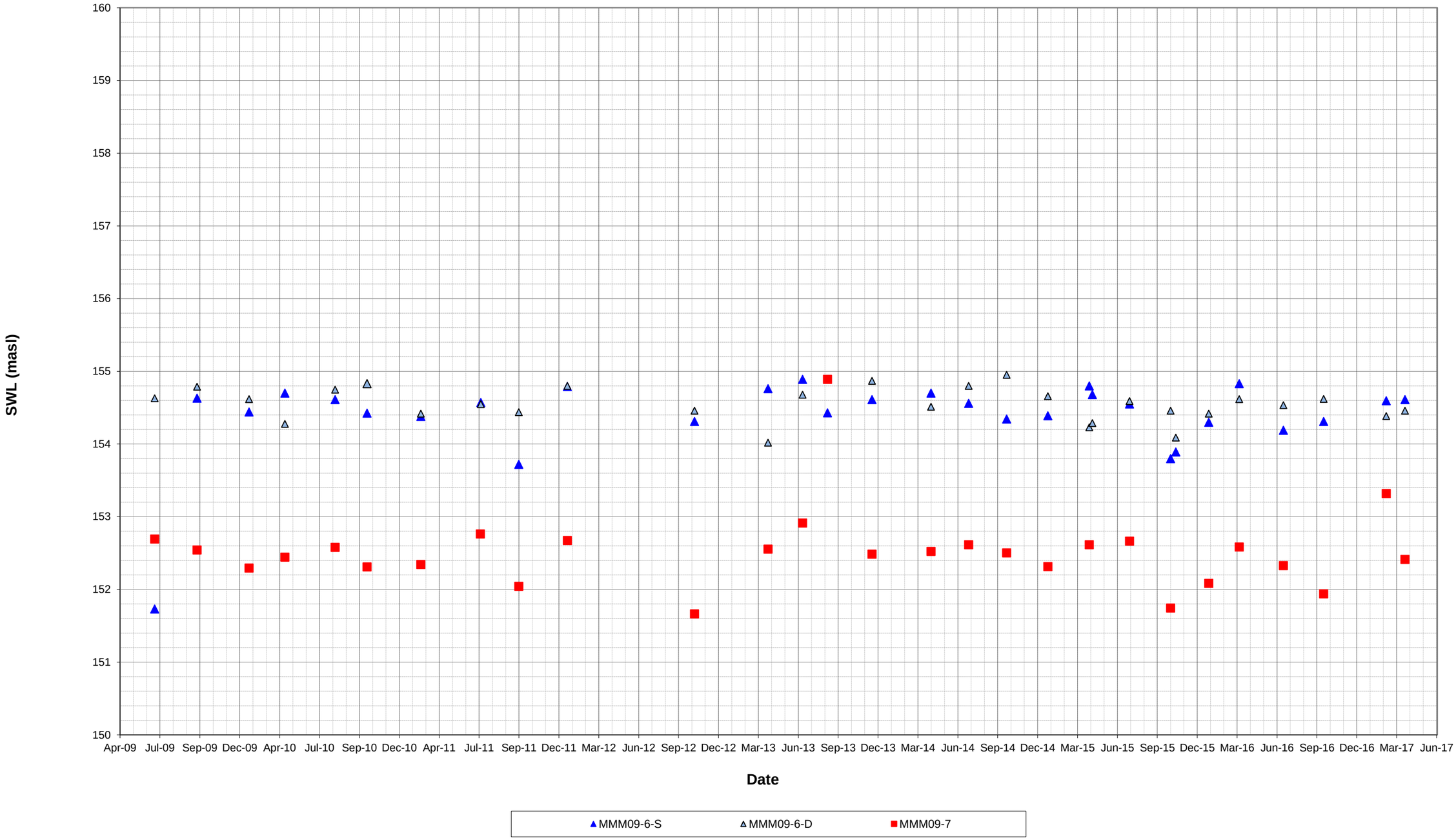


Figure SWL-5: Static Water Levels (2009-2017)

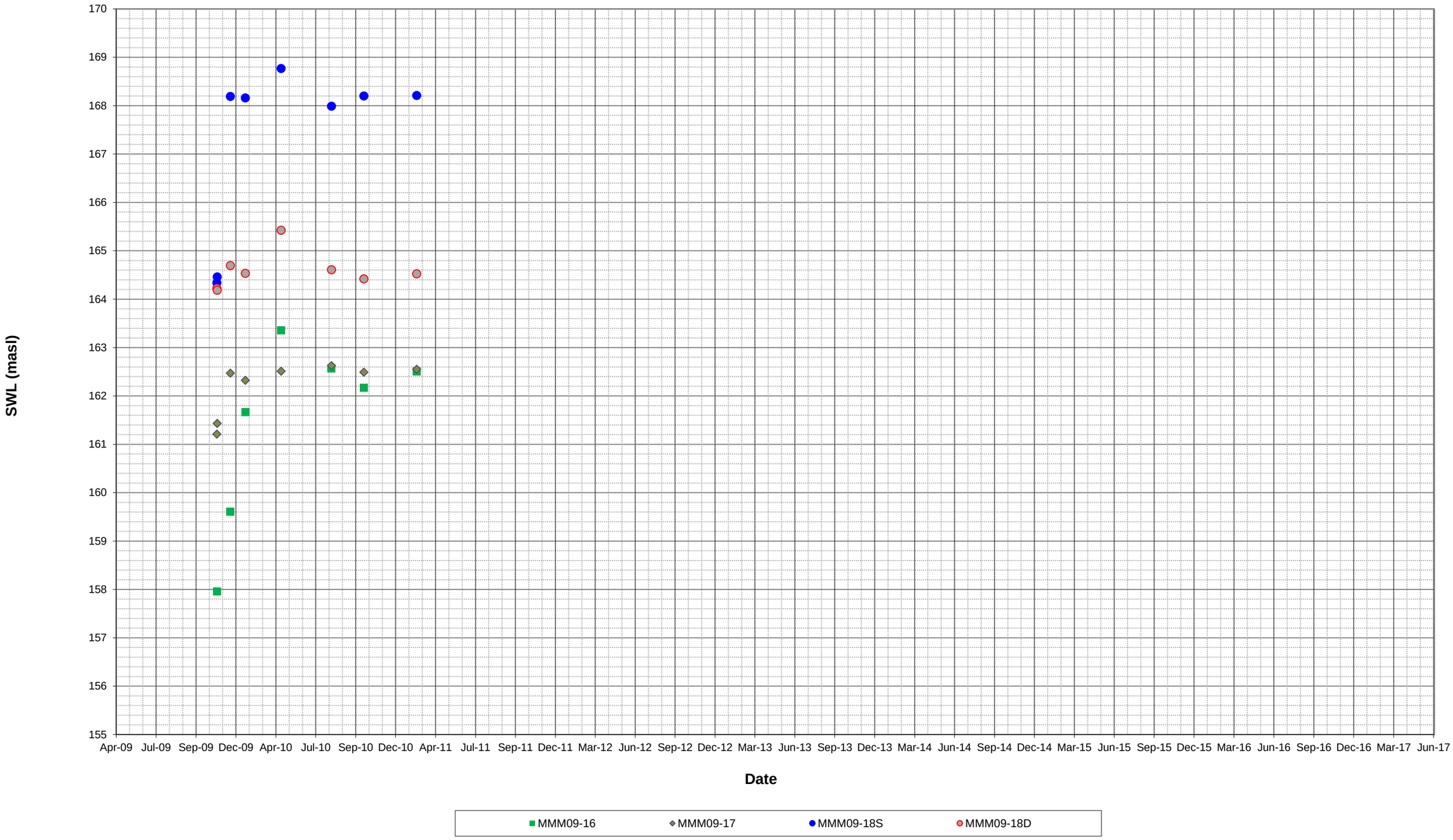


Figure SWL-6: Static Water Levels (2009-2017)

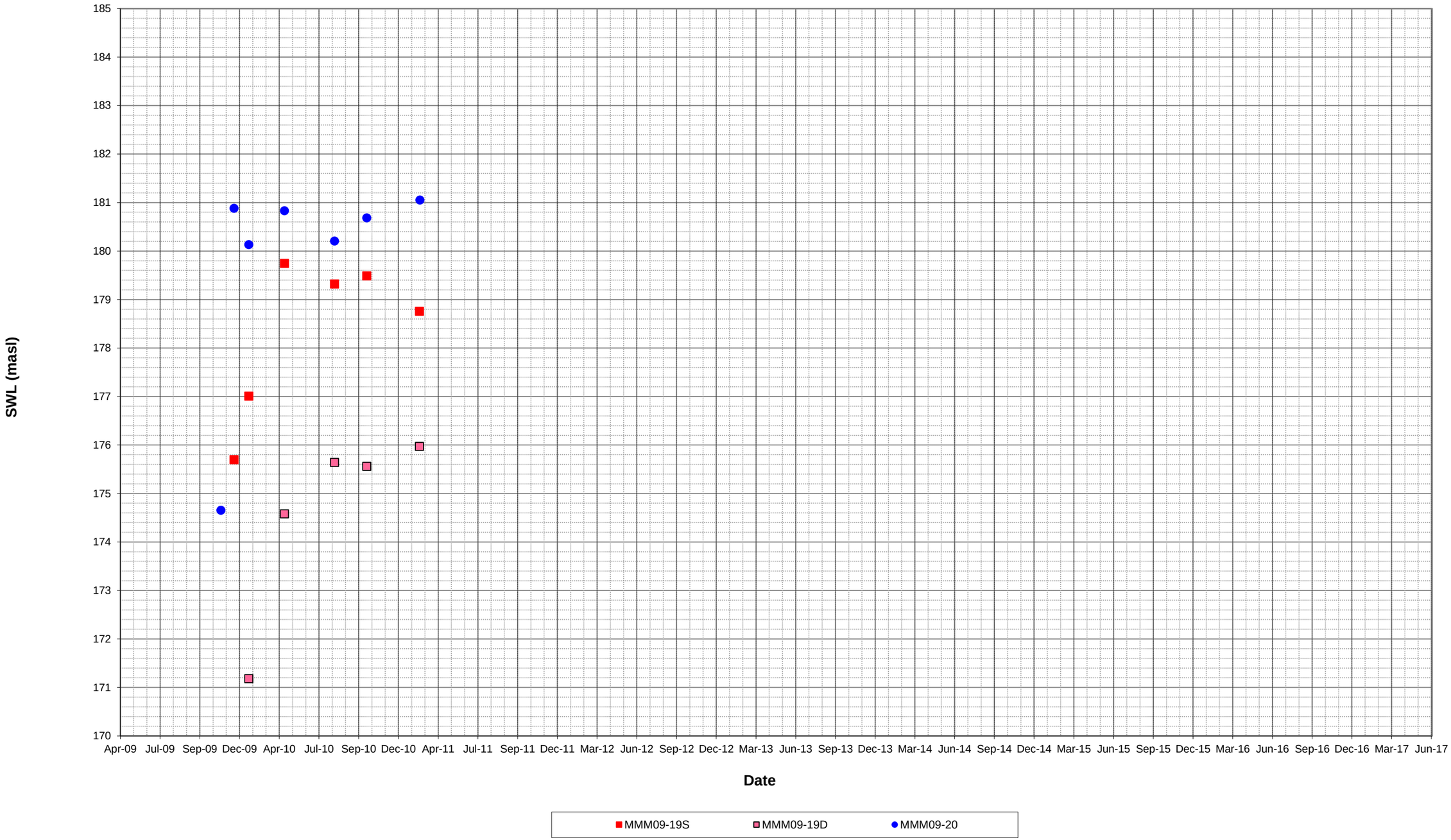


Figure SWL-7: Static Water Levels and Groundwater Temperature
MMM-09-01 Nest

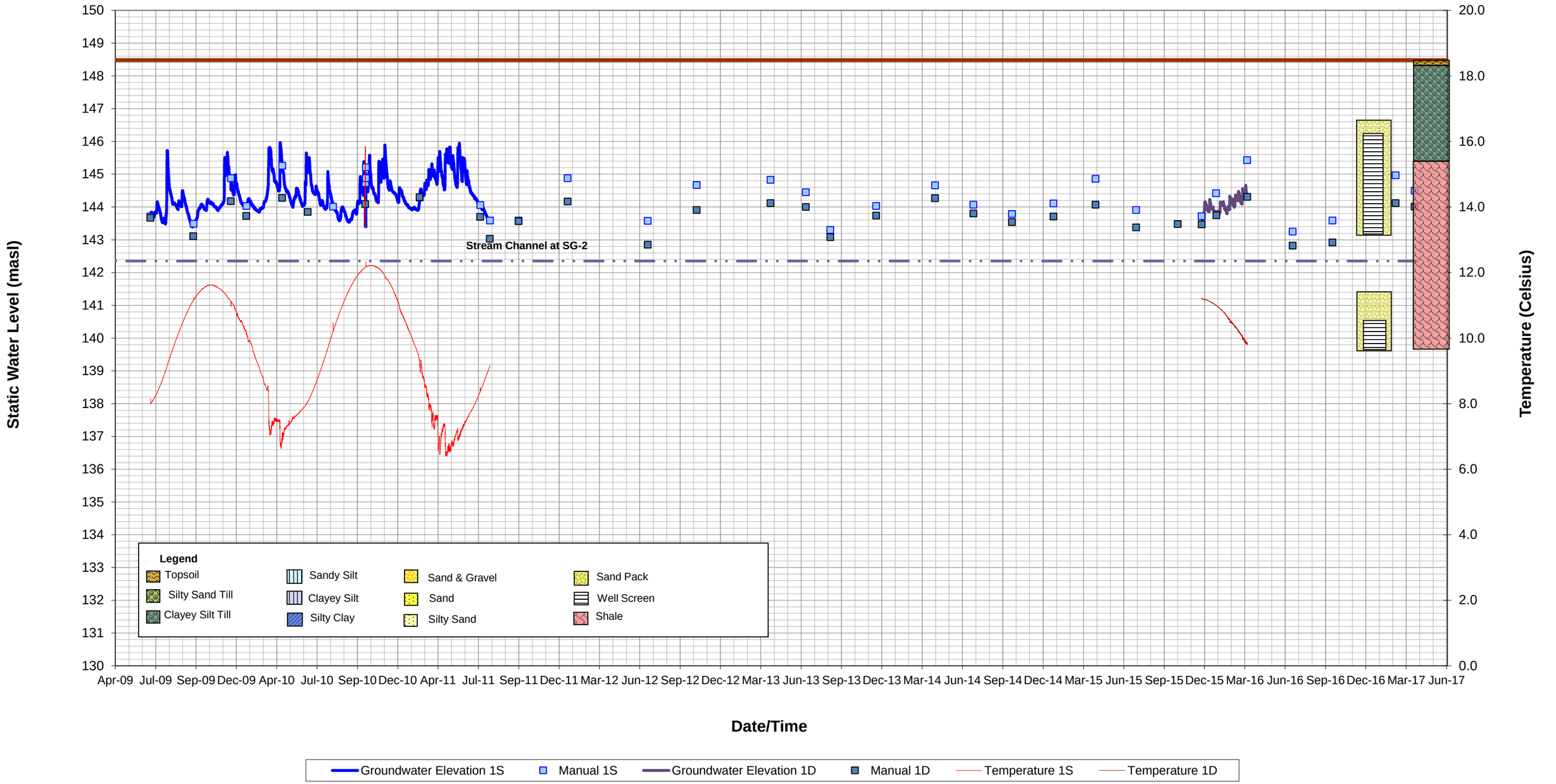


Figure SWL-7a: Static Water Levels
MMM-09-01 Nest - 5 m Vertical Scale

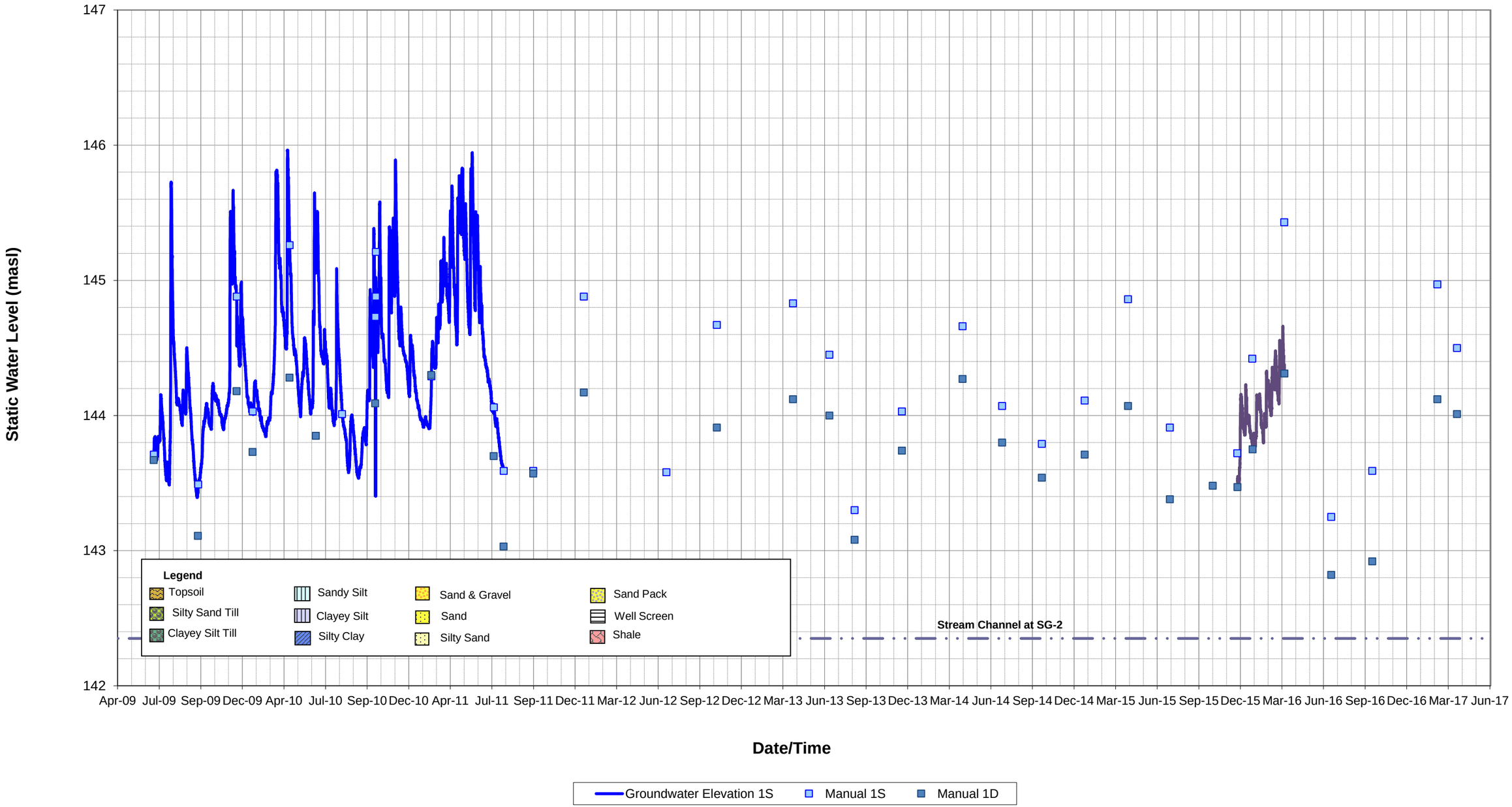


Figure SWL-8: Static Water Levels and Groundwater Temperature
MMM-09-04

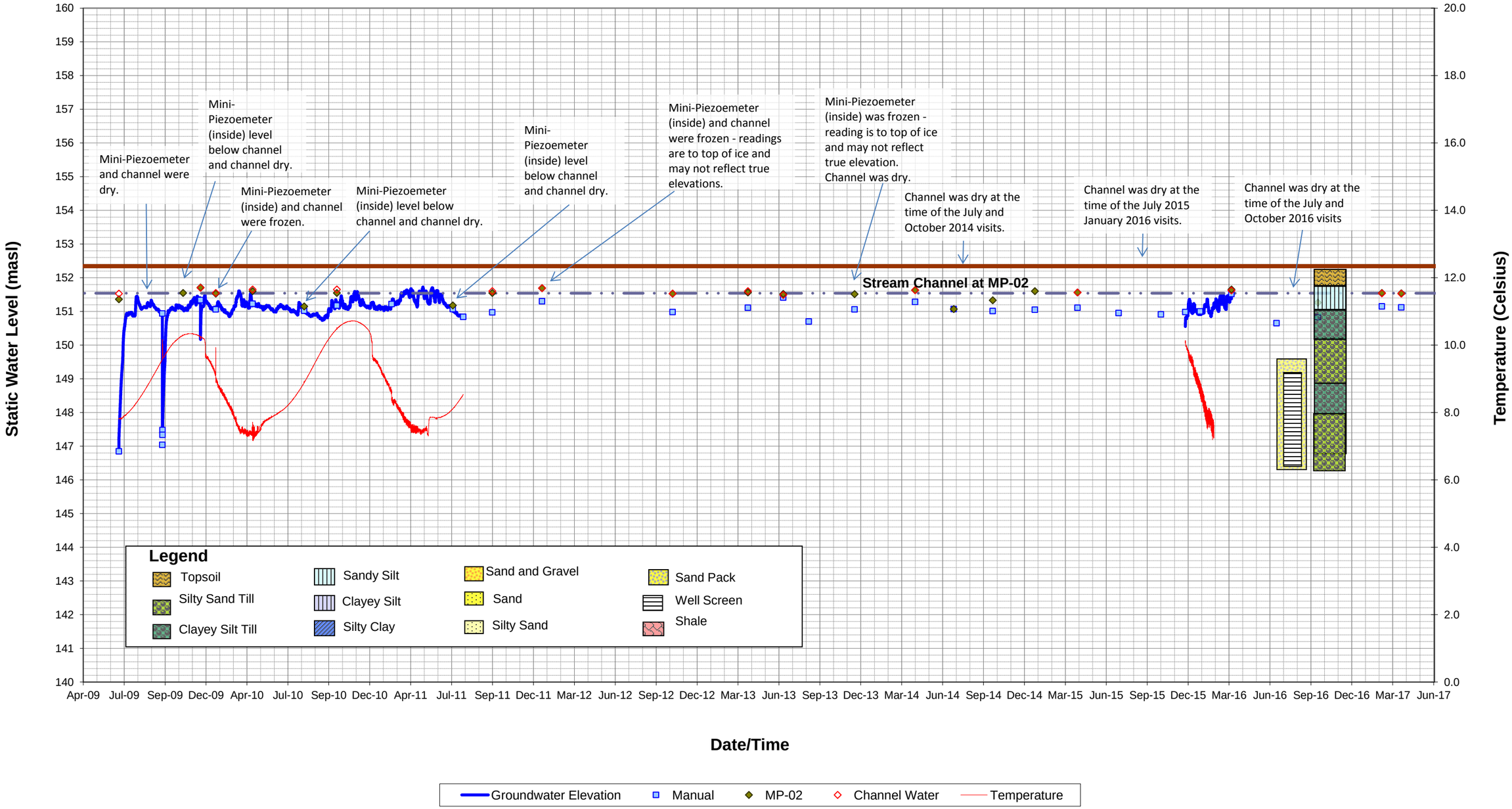


Figure SWL-8a: Static Water Levels
MMM-09-04 - 5 m Vertical Scale

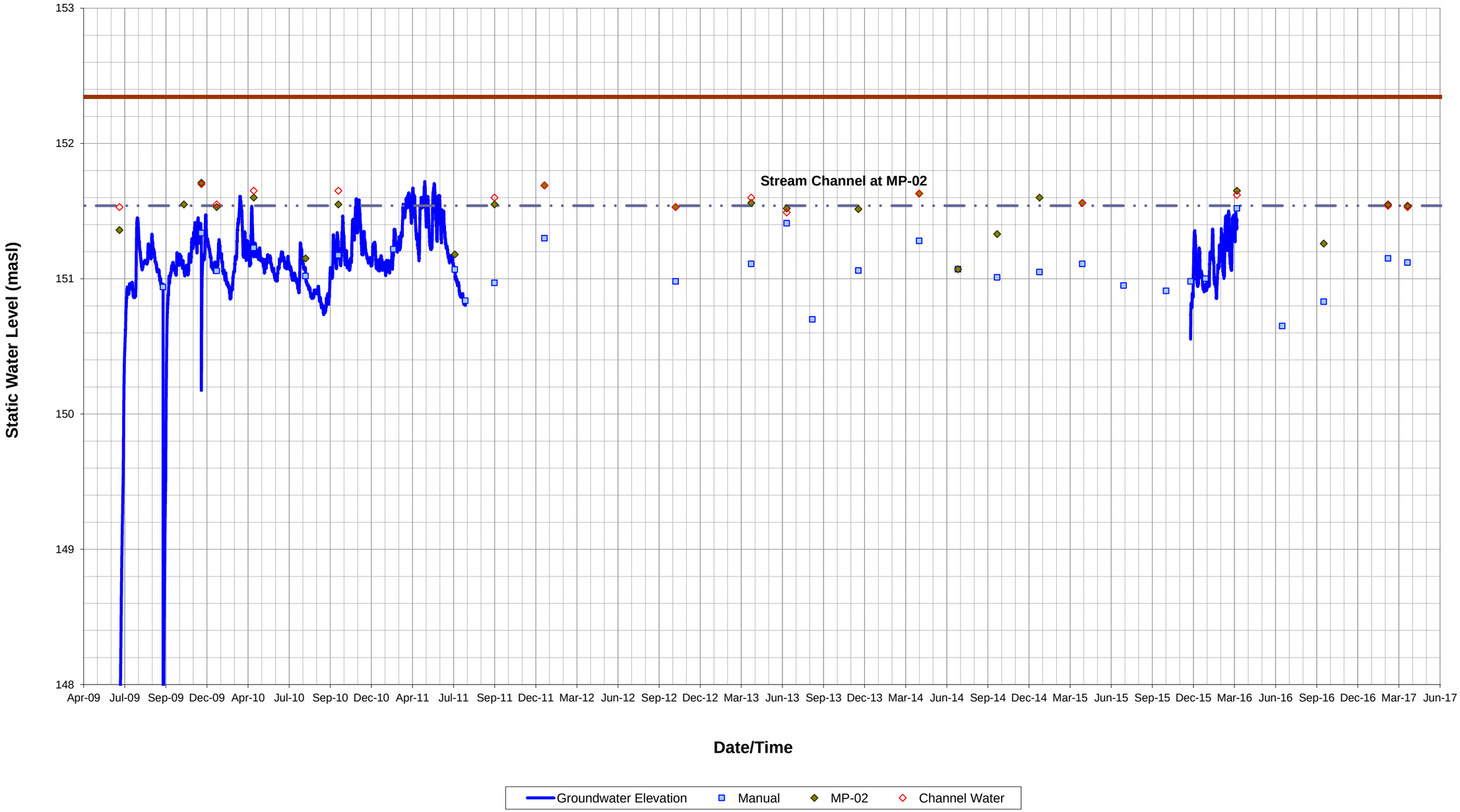


Figure SWL-9: Static Water Levels and Groundwater Temperature
MMM-09-09

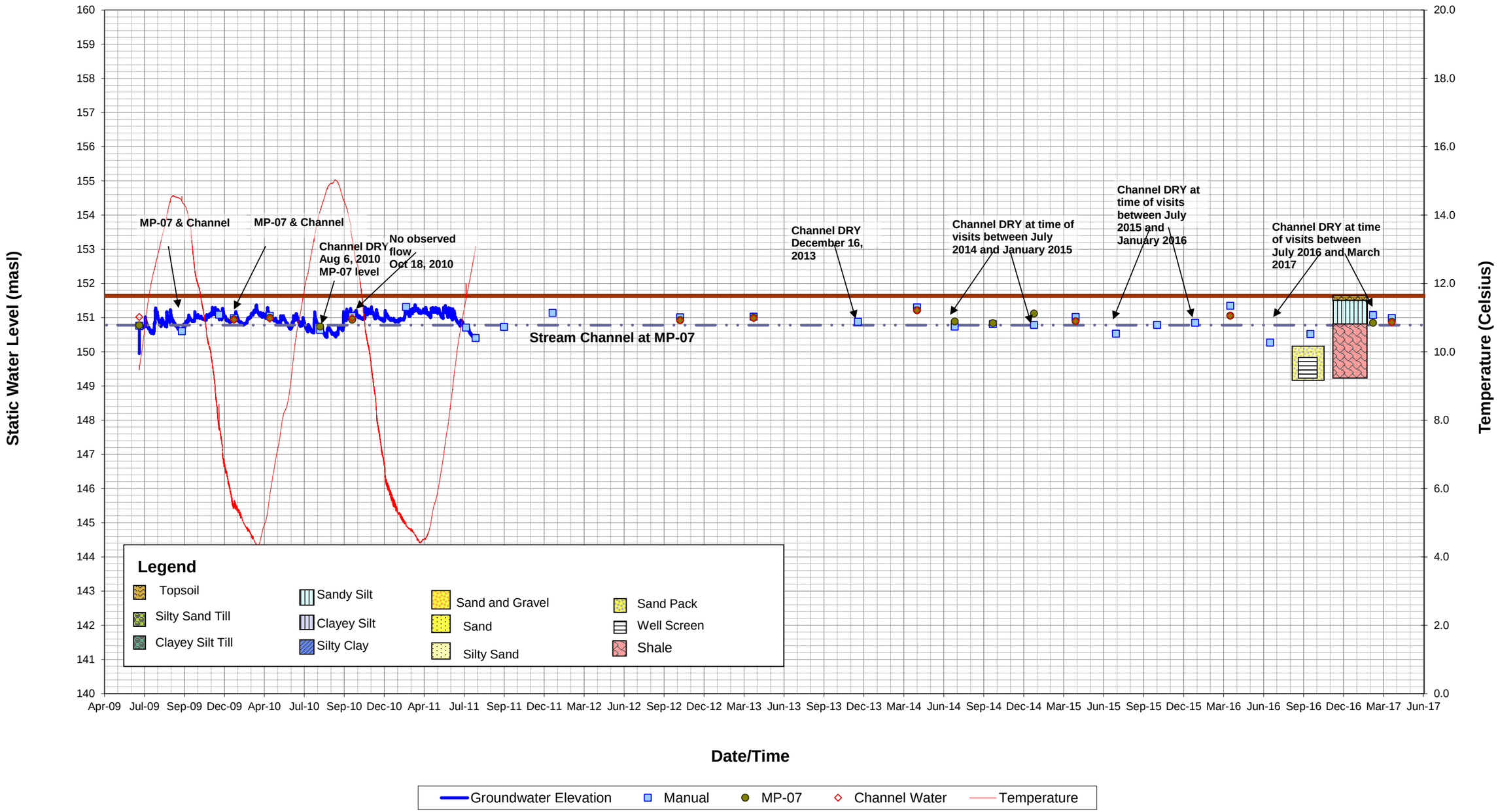


Figure SWL-9a: Static Water Levels
MMM-09-09 - 5 m Vertical Scale

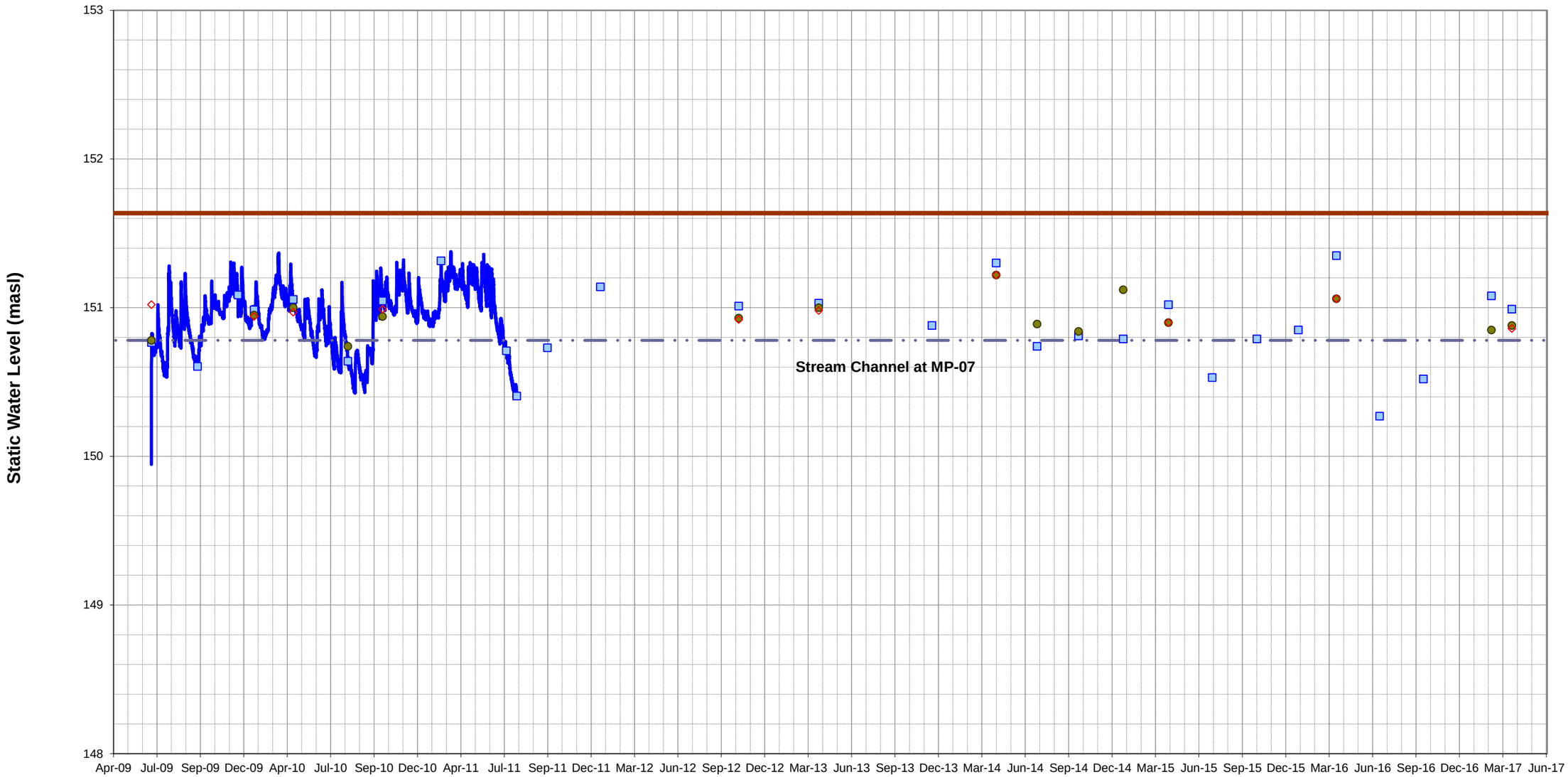


Figure SWL-10: Static Water Levels and Groundwater Temperature
MMM-09-10 Nest

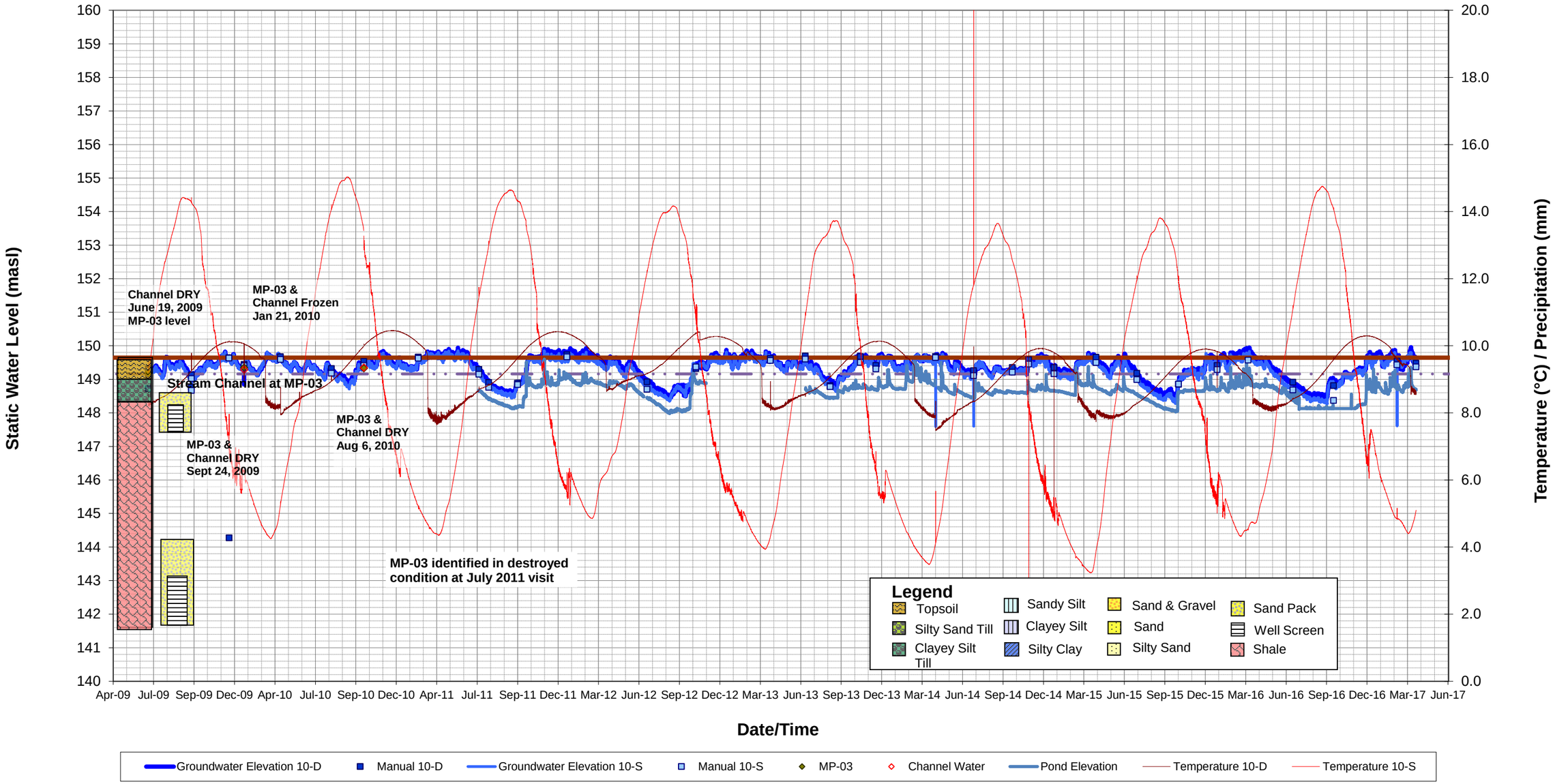


Figure SWL-10a: Static Water Level
MMM-09-10 Nest - 5 m Vertical Scale

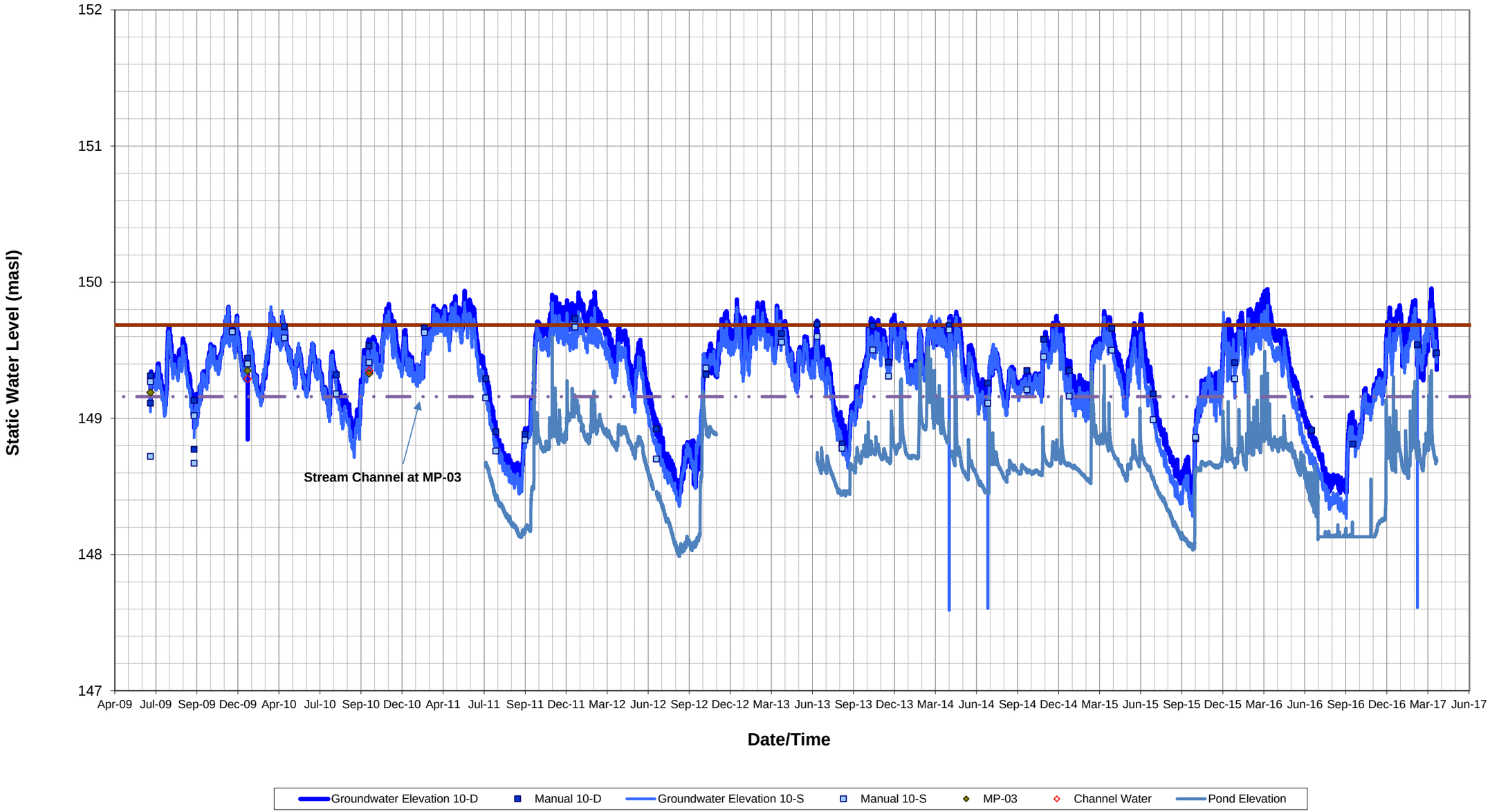


Figure SWL-11: Static Water Levels and Groundwater Temperature
MMM-09-15S (2009-2011)

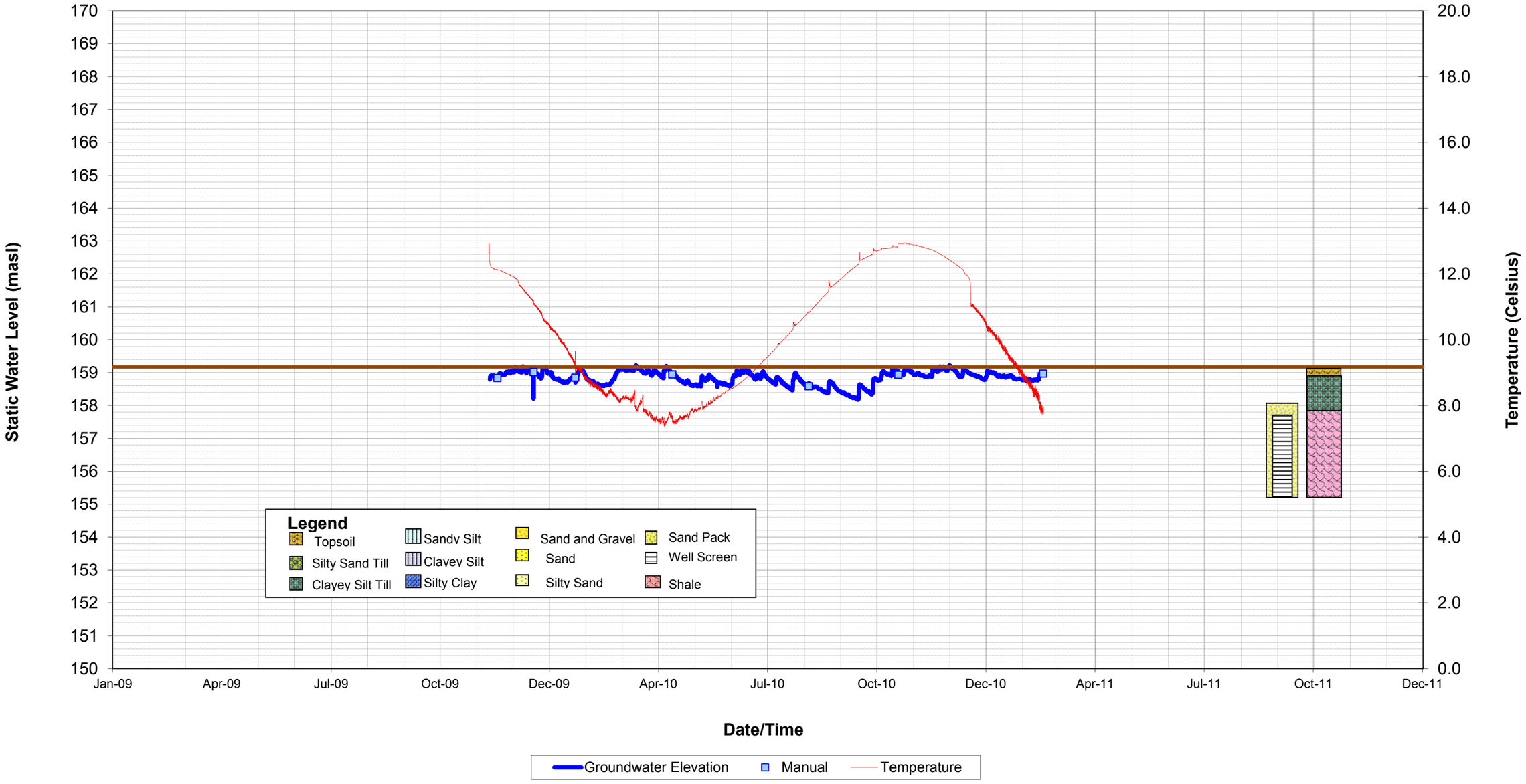


Figure SWL-11a: Static Water Levels
MMM-09-15S - 5 m Vertical Scale (2009-2011)

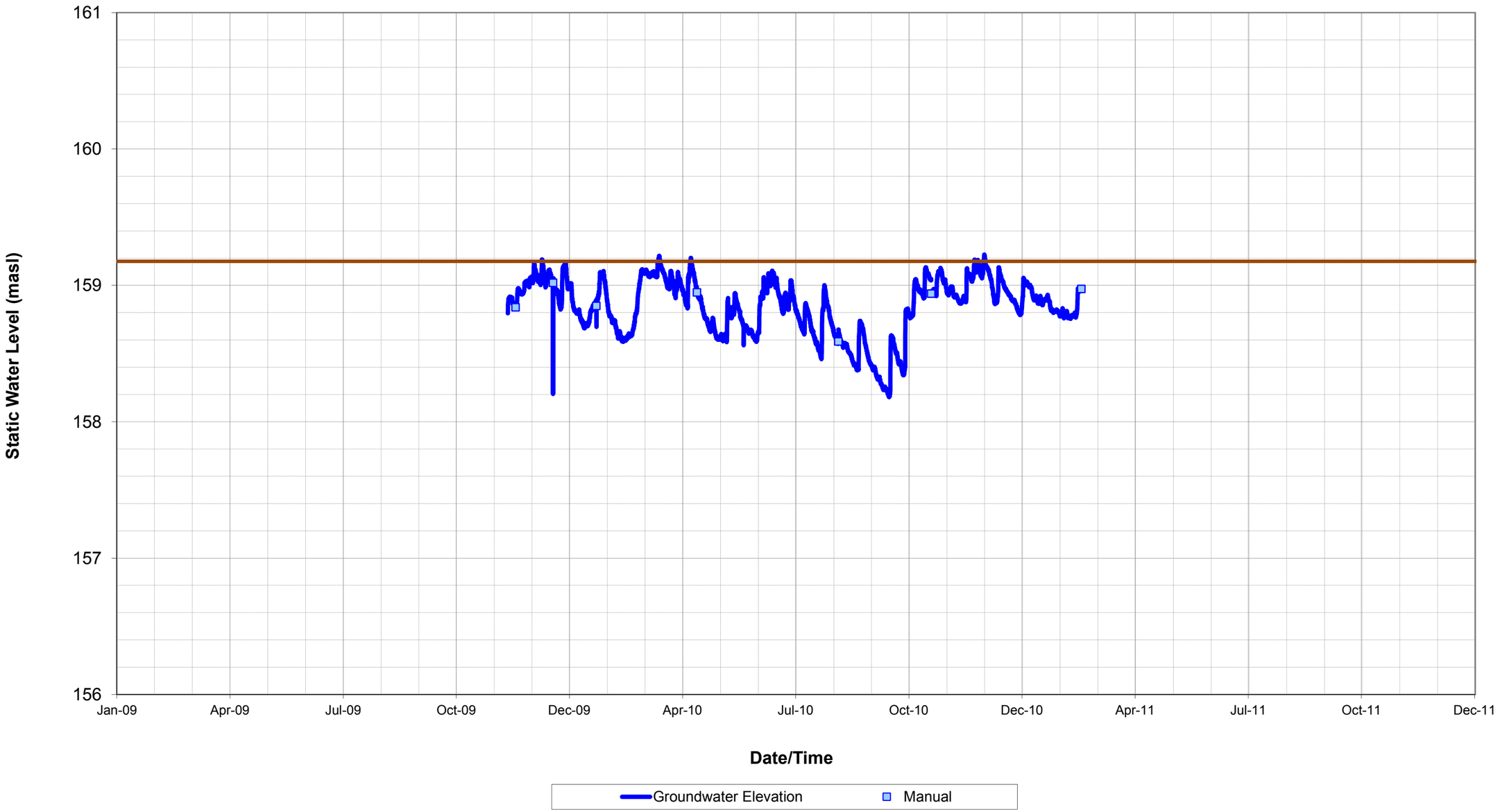


Figure SWL-12: Static Water Levels and Groundwater Temperature
MMM-09-17 (2009-2011)

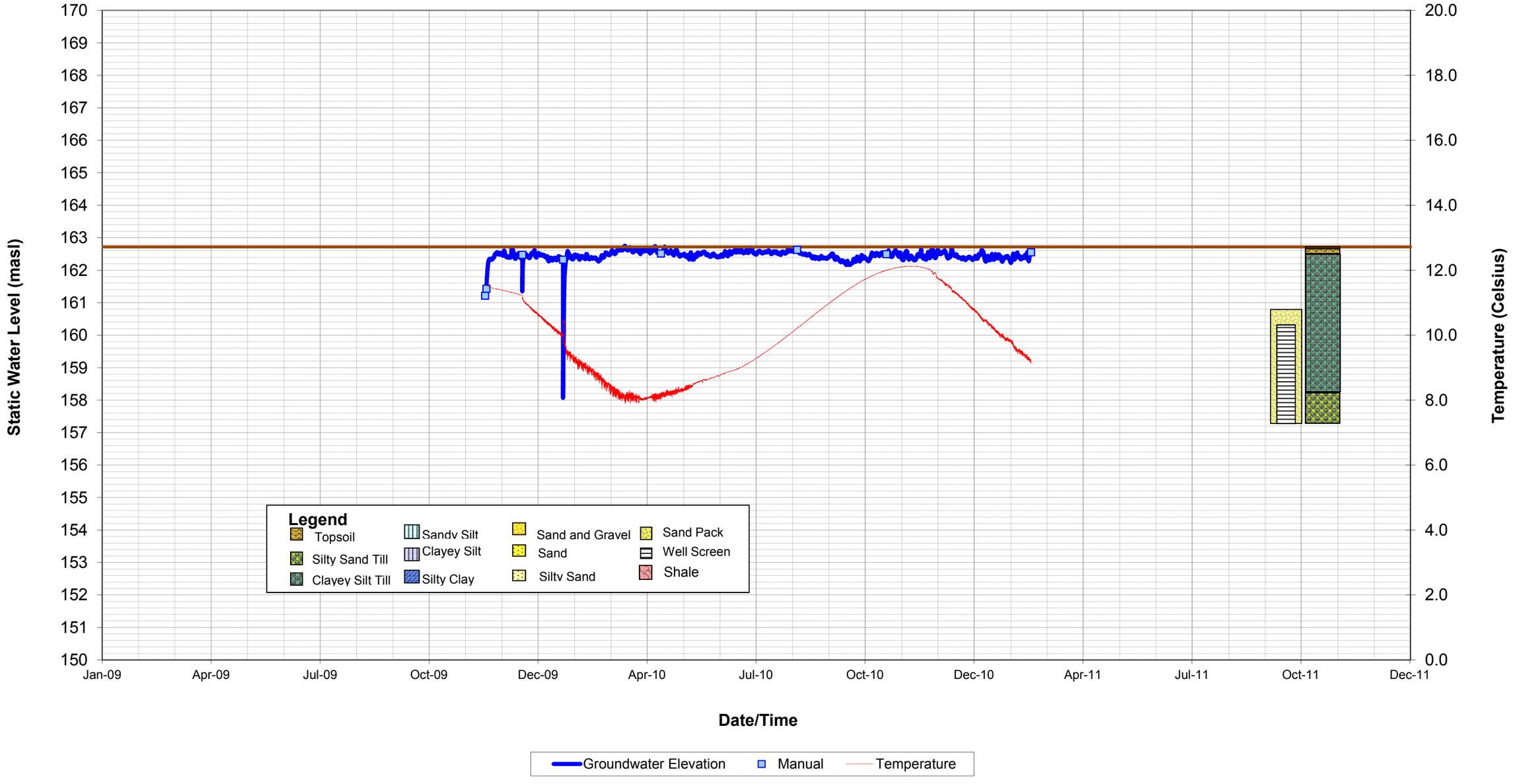


Figure SWL-12a: Static Water Levels
MMM-09-17 - 5 m Vertical Scale (2009-2011)

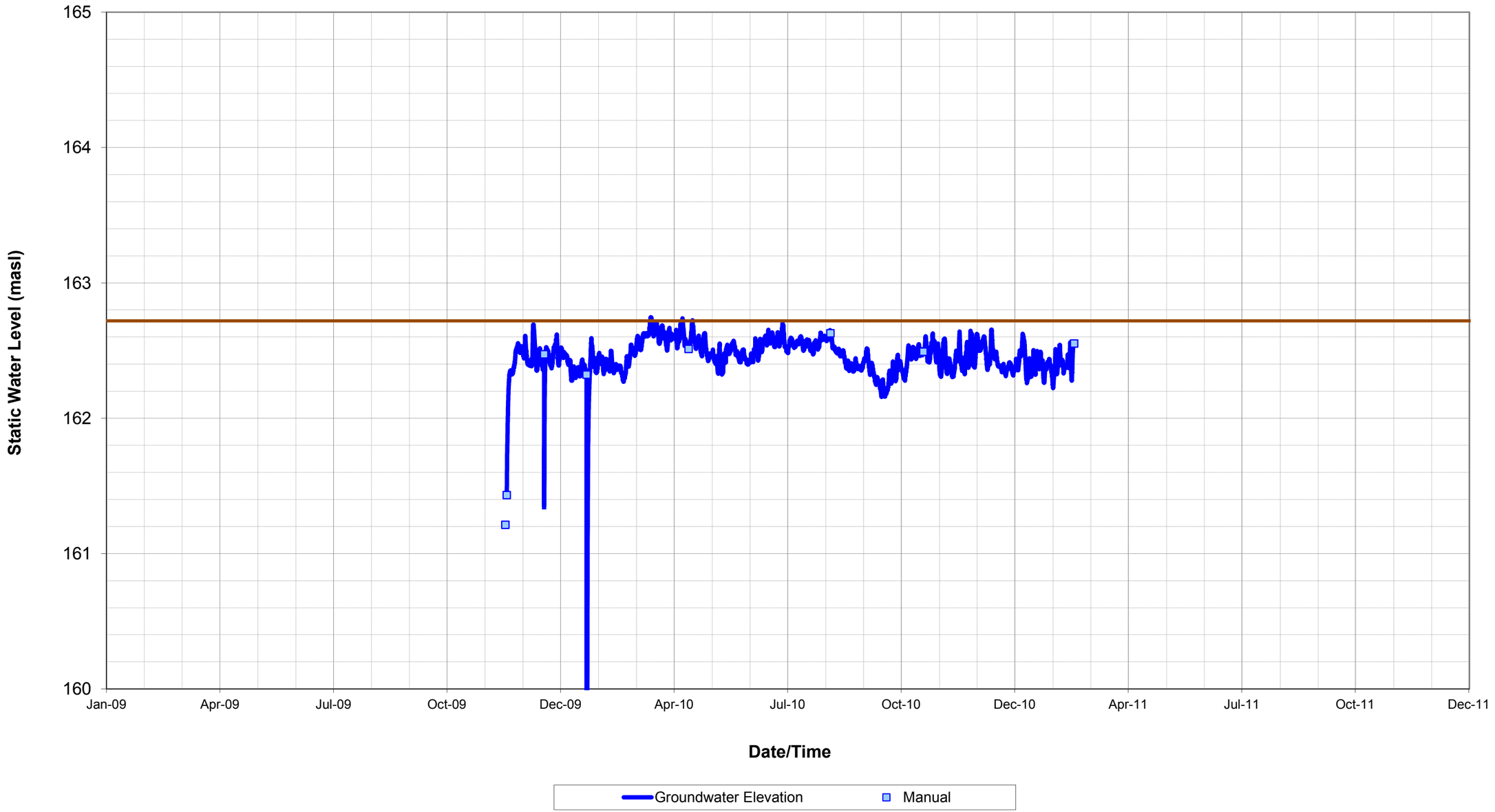


Figure SWL-13: Static Water Levels and Groundwater Temperature
MMM-09-19 Nest (2009-2011)

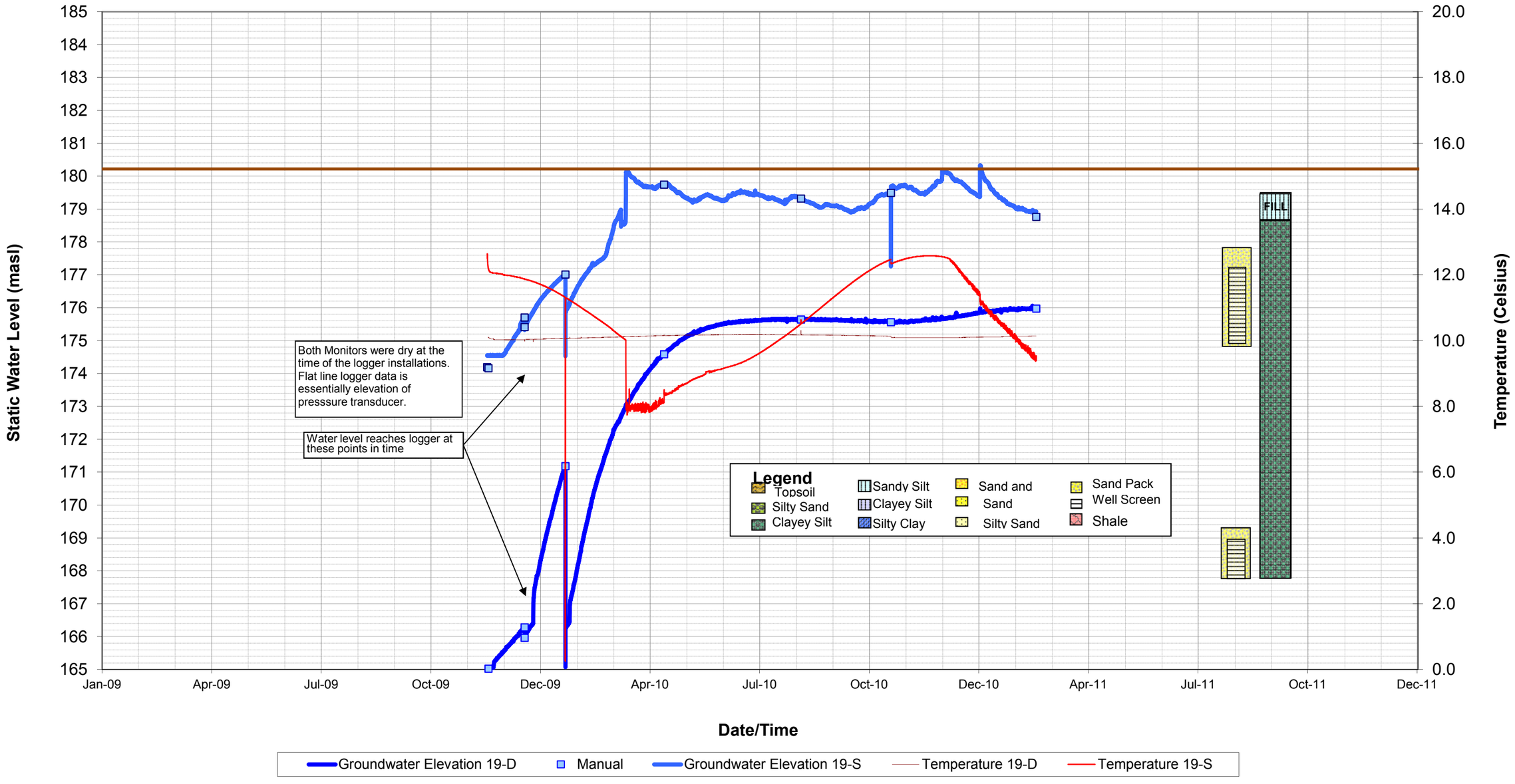


Figure SWL-13a: Static Water Levels
MMM-09-19 Nest - 5 m Vertical Scale (2009-2011)

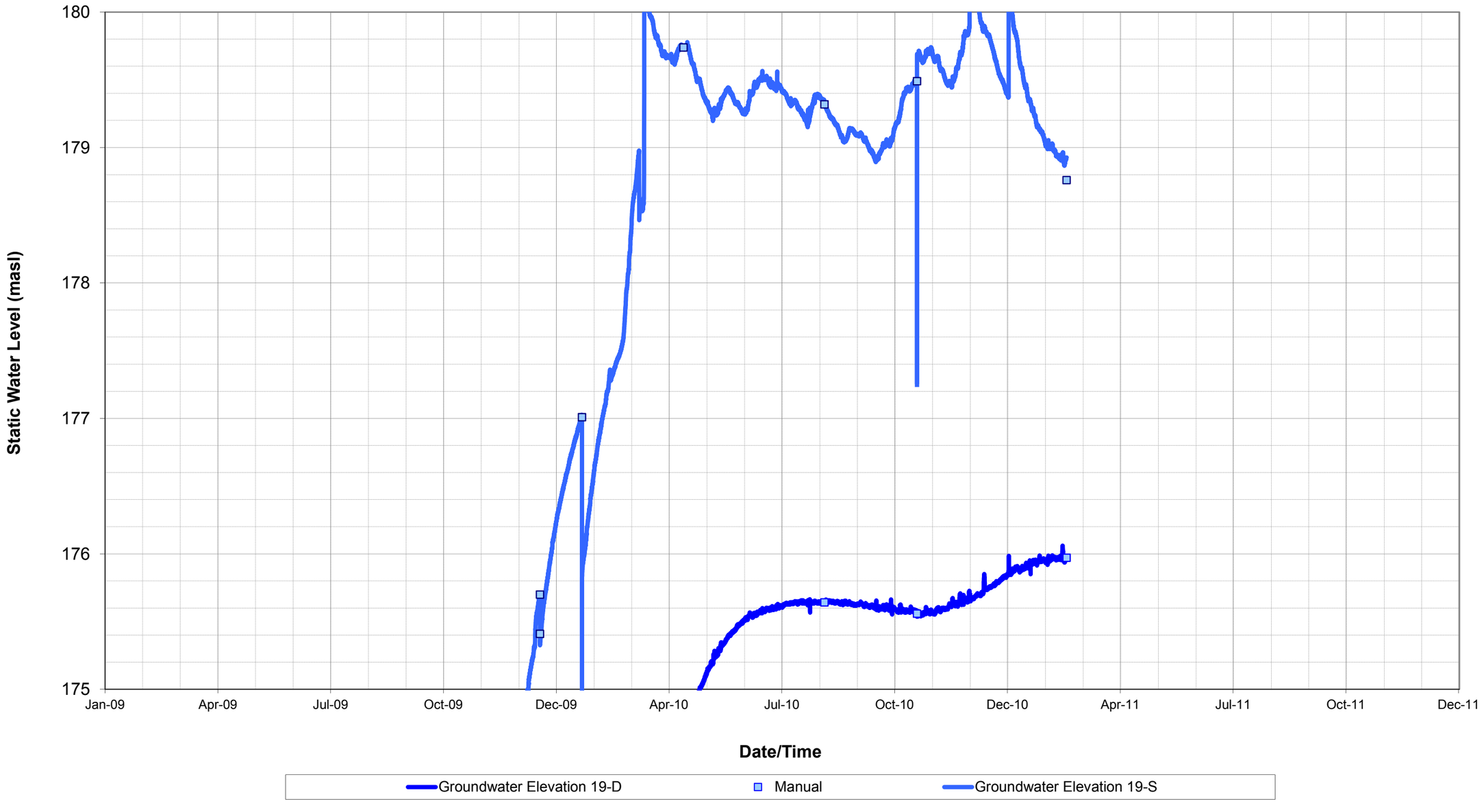


Figure SWL-14: Static Water Levels and Groundwater Temperature
MMM-09-20 (2009-2011)

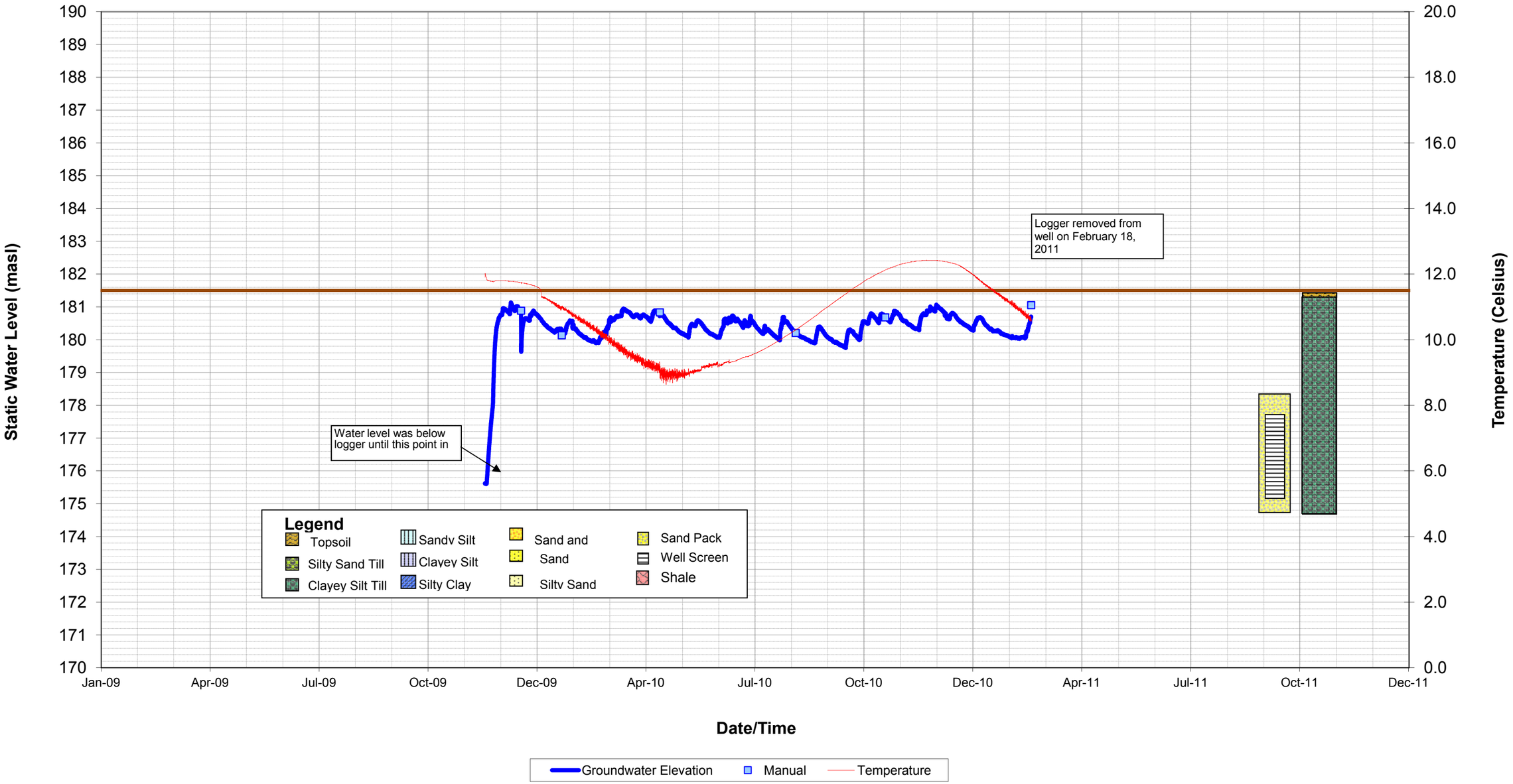


Figure SWL-14a: Static Water Levels
MMM-09-20 - 5 m Vertical Scale (2009-2011)

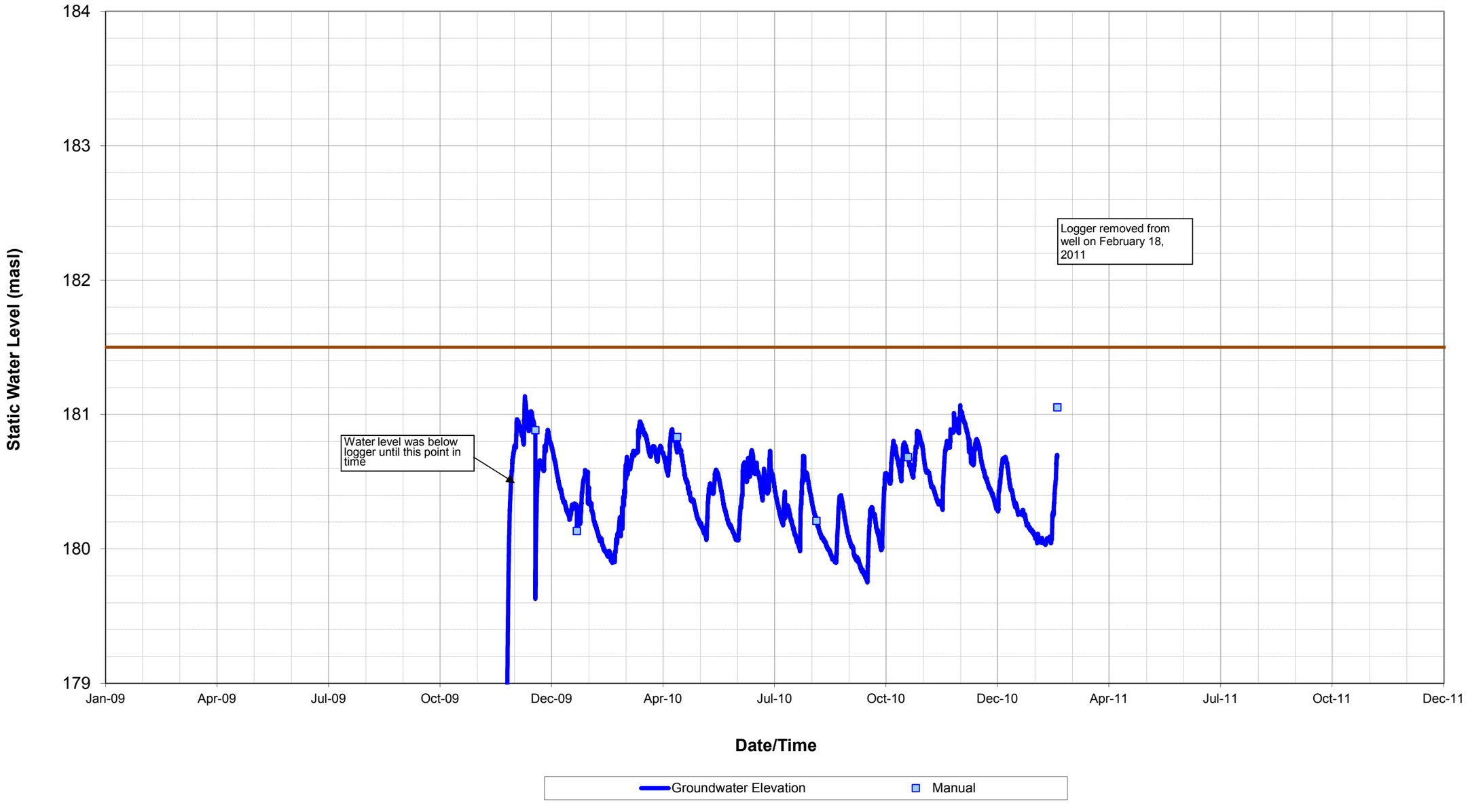


Figure SWL-15: Static Water Levels and Groundwater Temperature
MMM-09-06 Nest

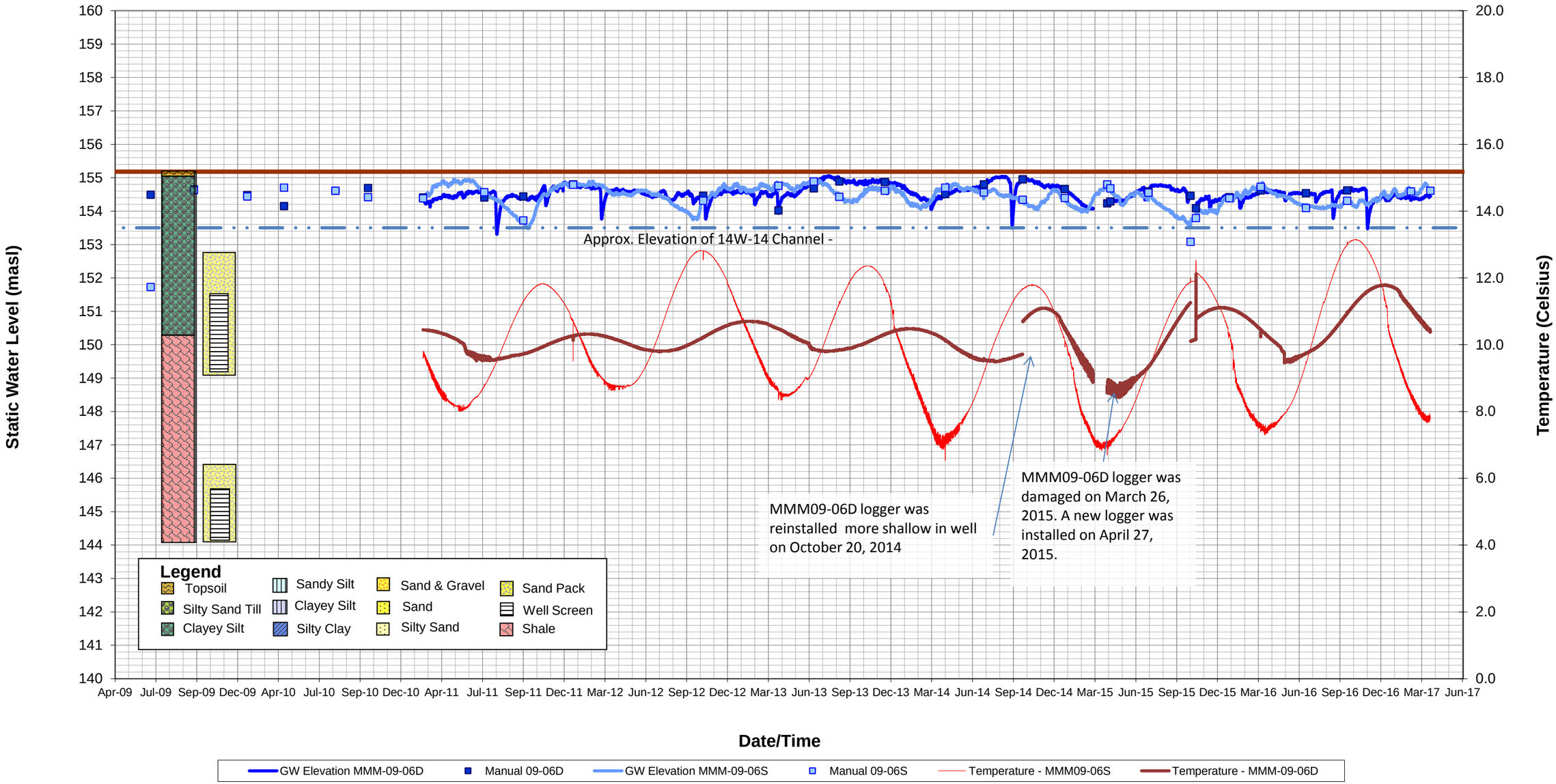


Figure SWL-15a: Static Water Levels
MMM-09-06 Nest - 5 m Vertical Scale

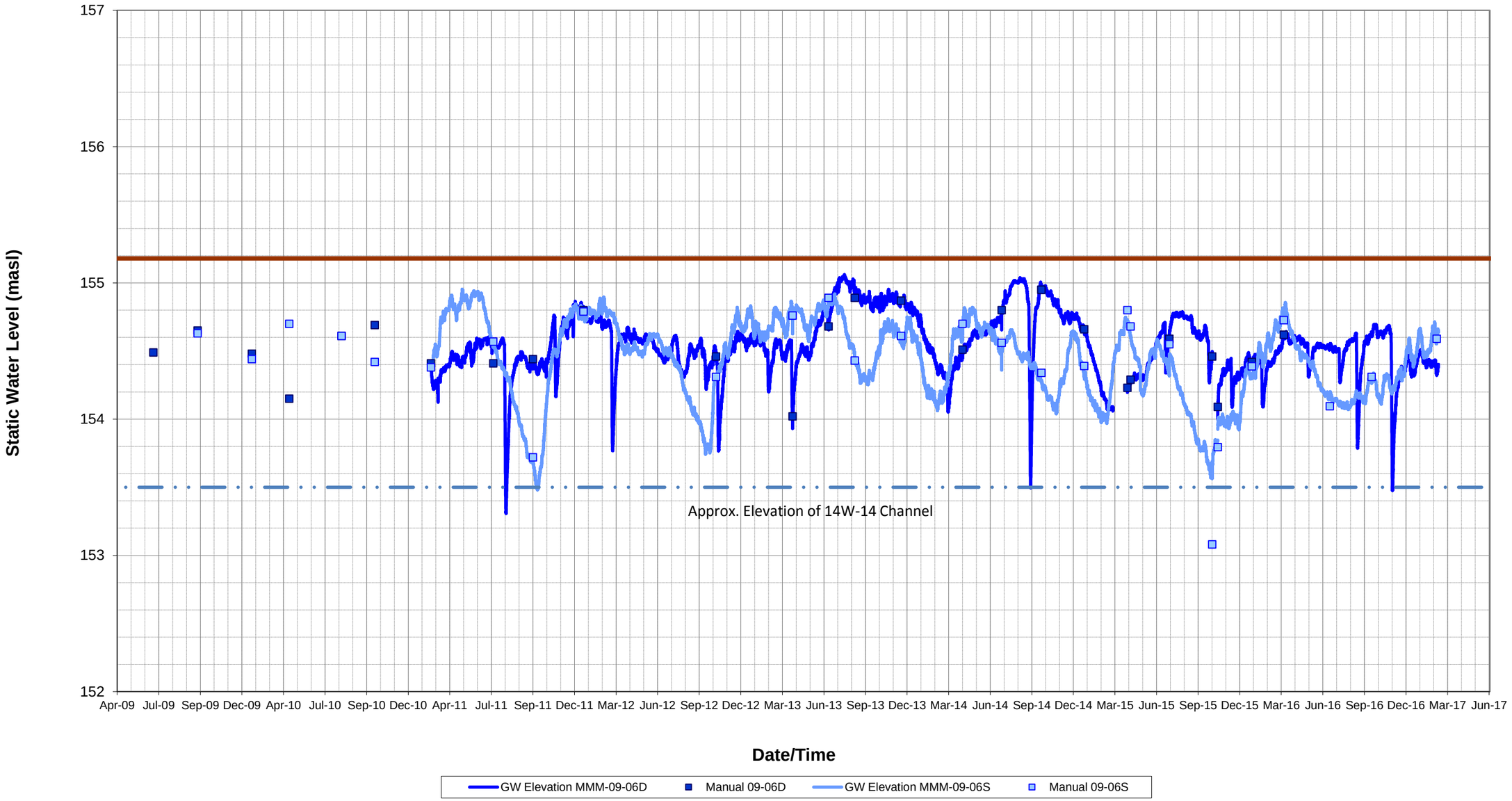
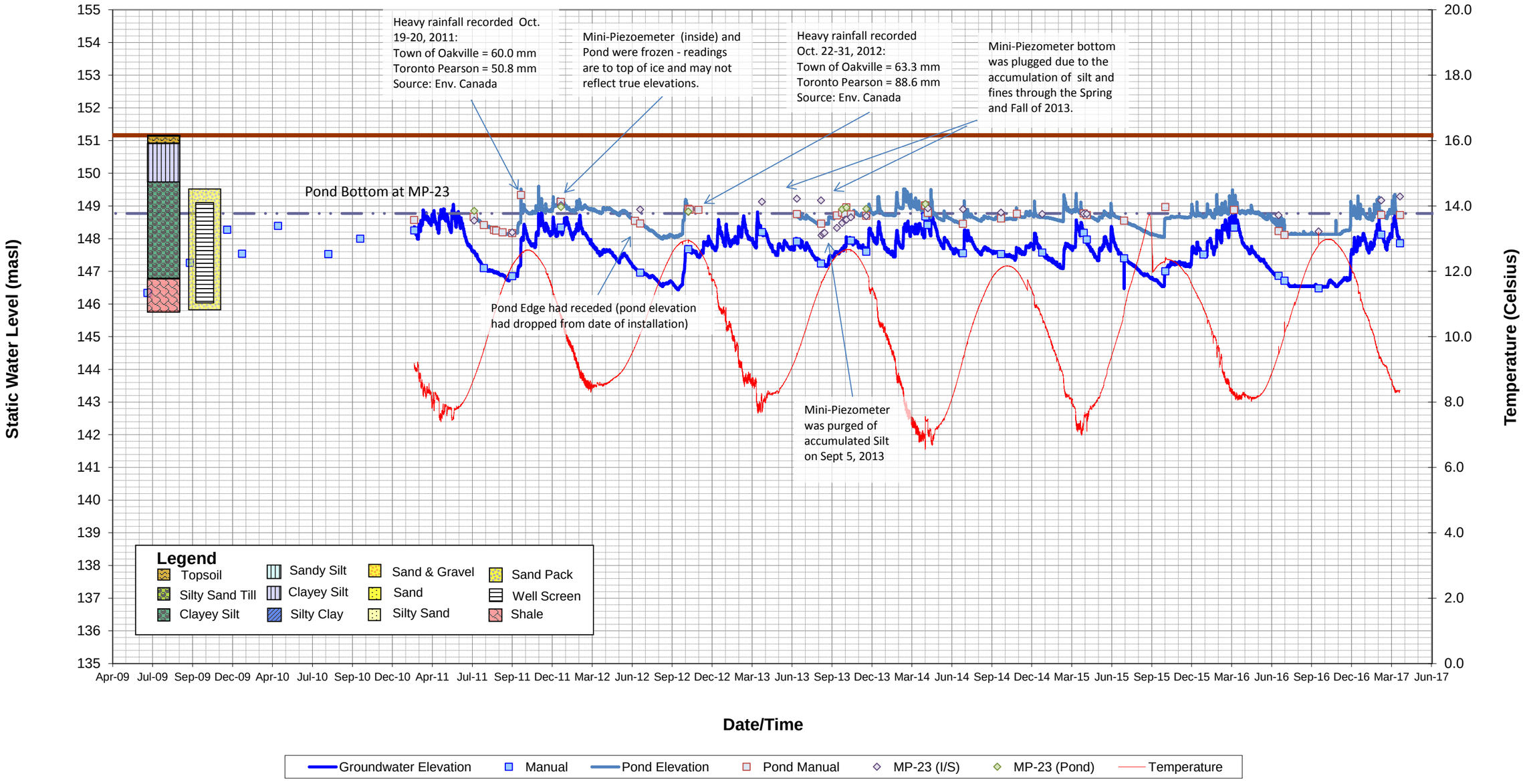


Figure SWL-16: Static Water Levels and Groundwater Temperature
MMM-09-02



Date/Time

Groundwater Elevation | Manual | Pond Elevation | Pond Manual | MP-23 (I/S) | MP-23 (Pond) | Temperature

Figure SWL-16a: Static Water Levels
MMM-09-02

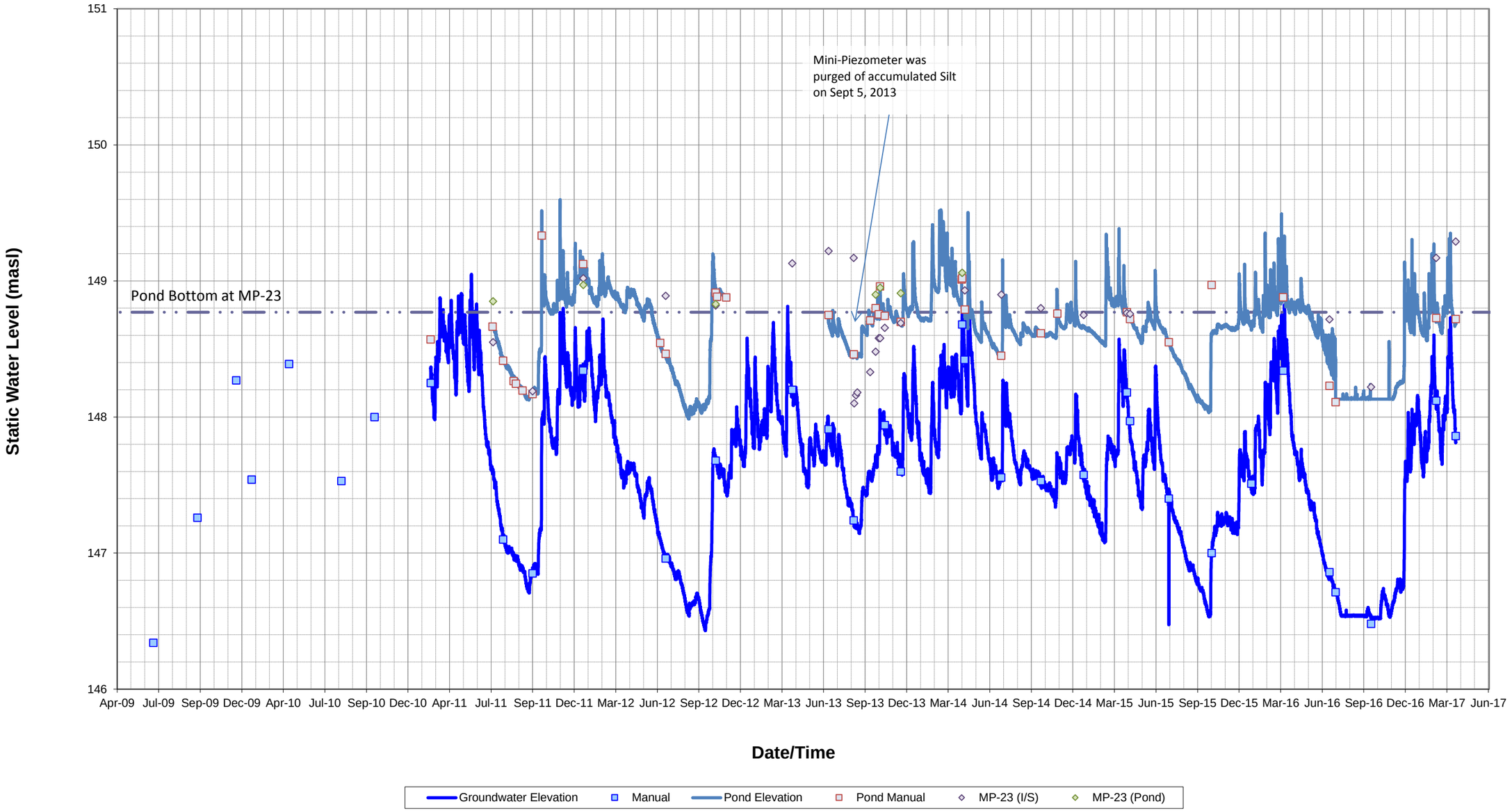
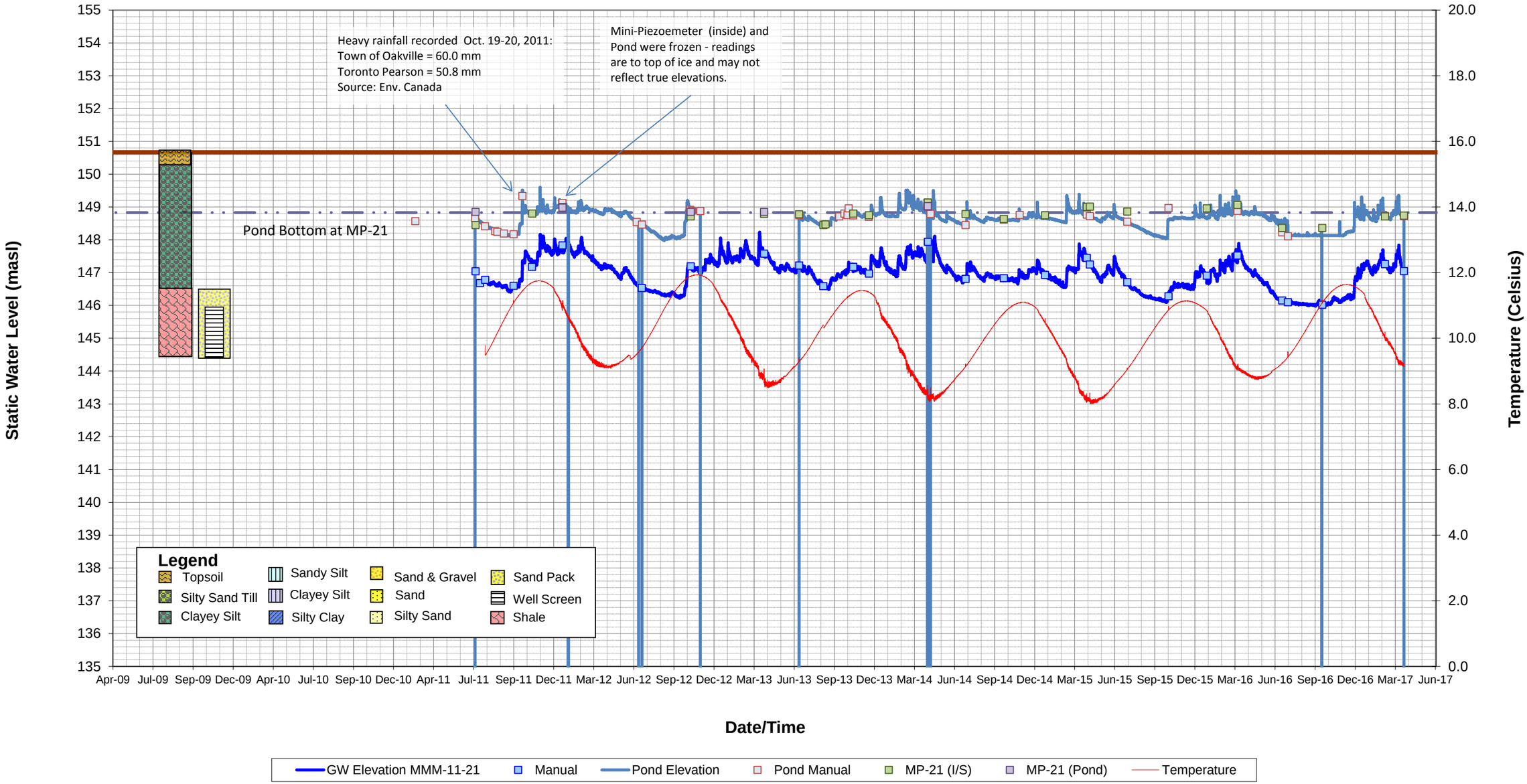


Figure SWL-17: Static Water Levels and Groundwater Temperature
MMM-11-21



Date/Time

GW Elevation MMM-11-21 | Manual | Pond Elevation | Pond Manual | MP-21 (I/S) | MP-21 (Pond) | Temperature

Figure SWL-17a: Static Water Levels
MMM-11-21 - 5 m Vertical Scale

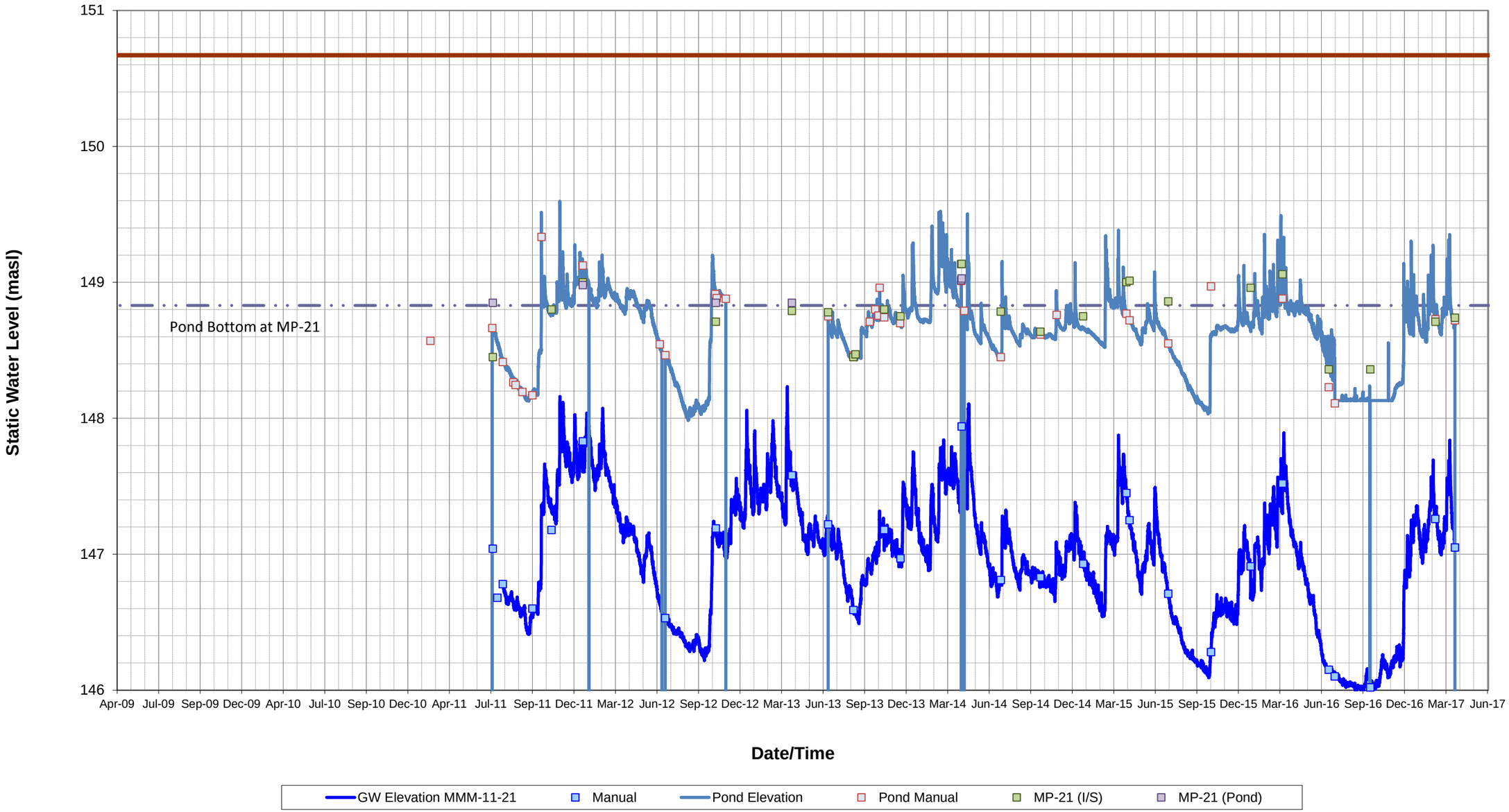
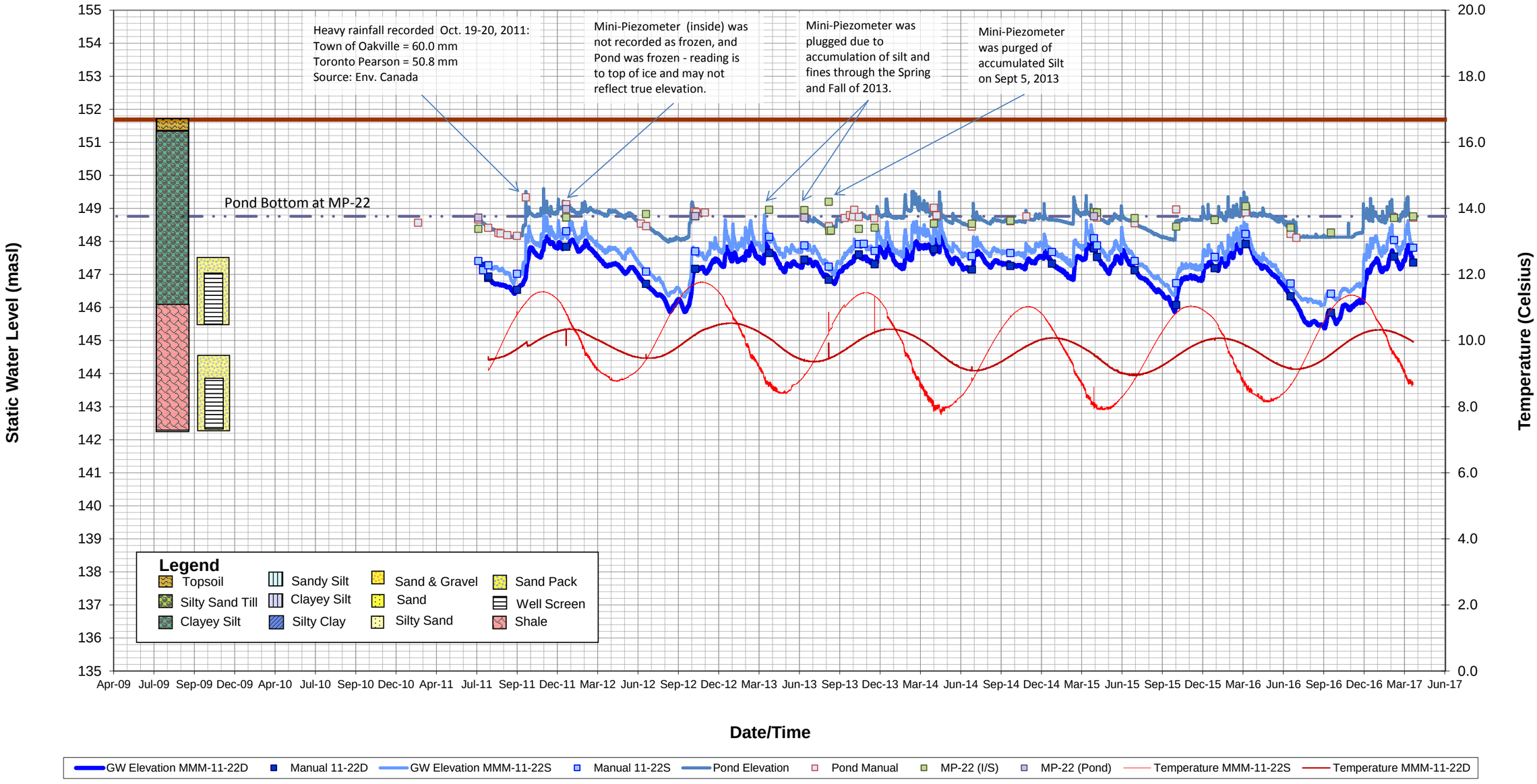


Figure SWL-18: Static Water Levels and Groundwater Temperature
MMM-11-22 Nest



Date/Time

GW Elevation MMM-11-22D | Manual 11-22D | GW Elevation MMM-11-22S | Manual 11-22S | Pond Elevation | Pond Manual | MP-22 (I/S) | MP-22 (Pond) | Temperature MMM-11-22S | Temperature MMM-11-22D

Figure SWL-18a: Static Water Levels
MMM-11-22 Nest - 5 m Vertical Scale

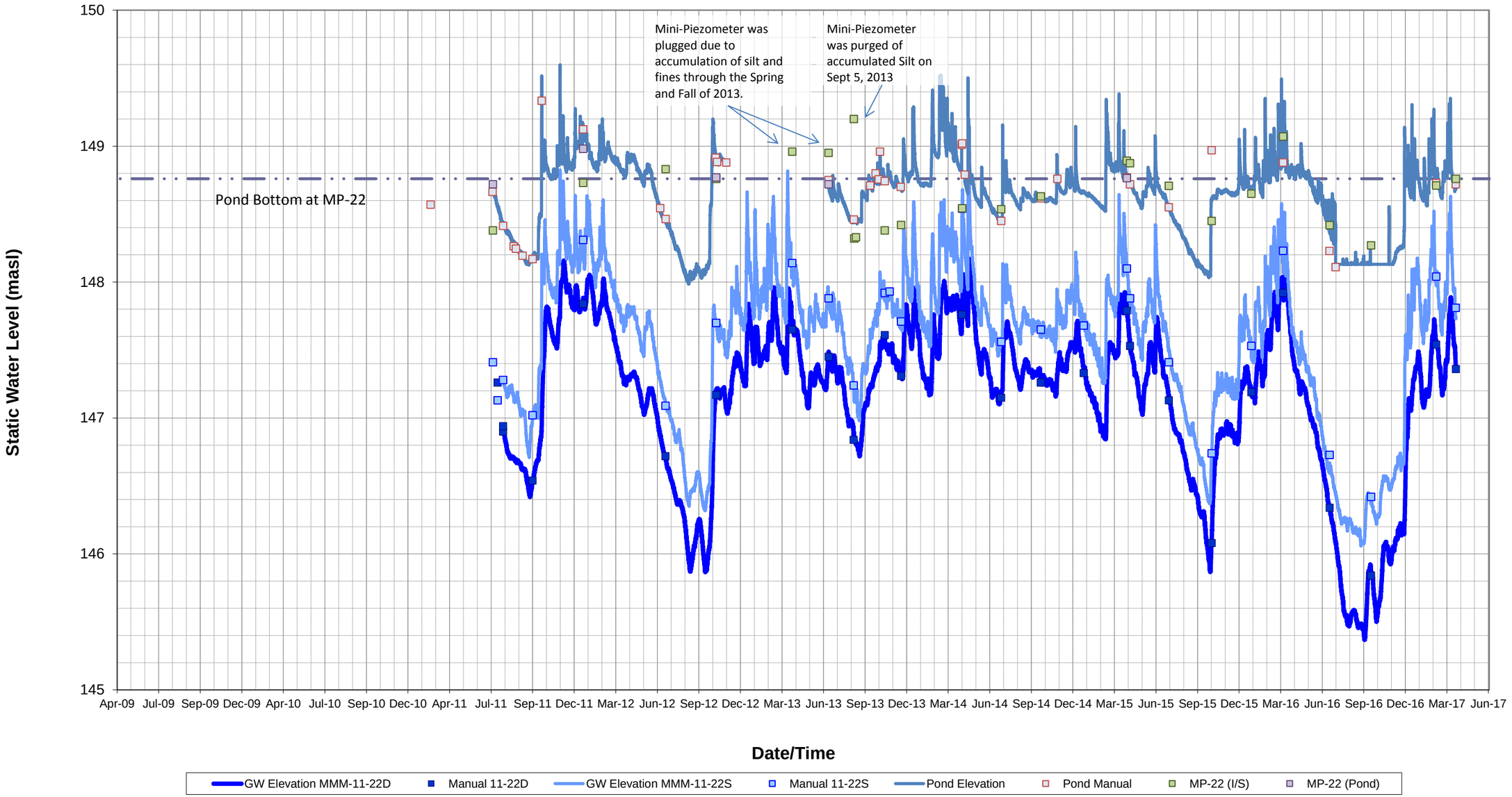


Figure SWL-19: Pond Water Level and Temperature
MMM-11-Pond

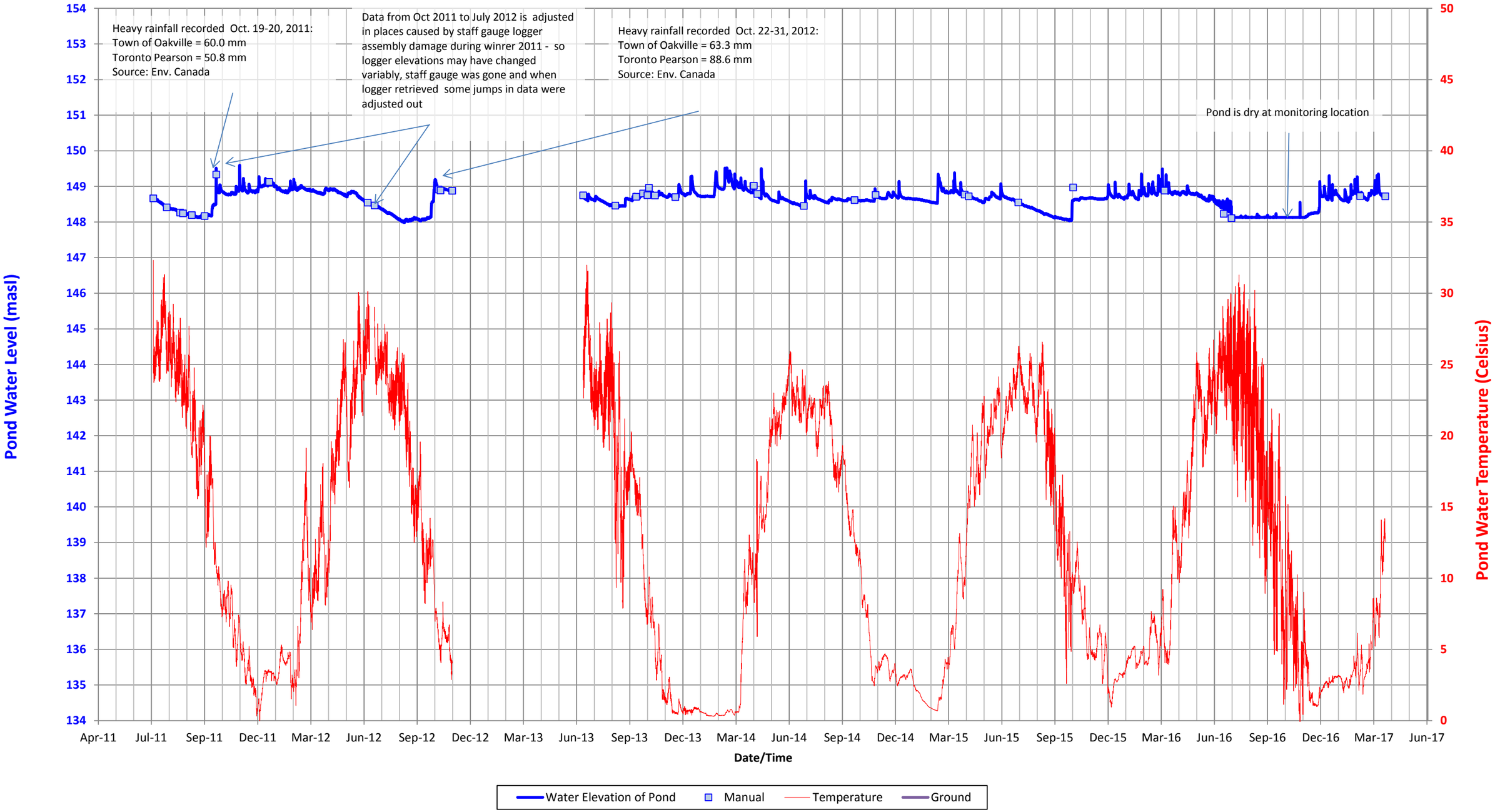


Figure SWL-19a: Pond Water Level and Temperature
MMM-11-Pond - 5 m Vertical Scale

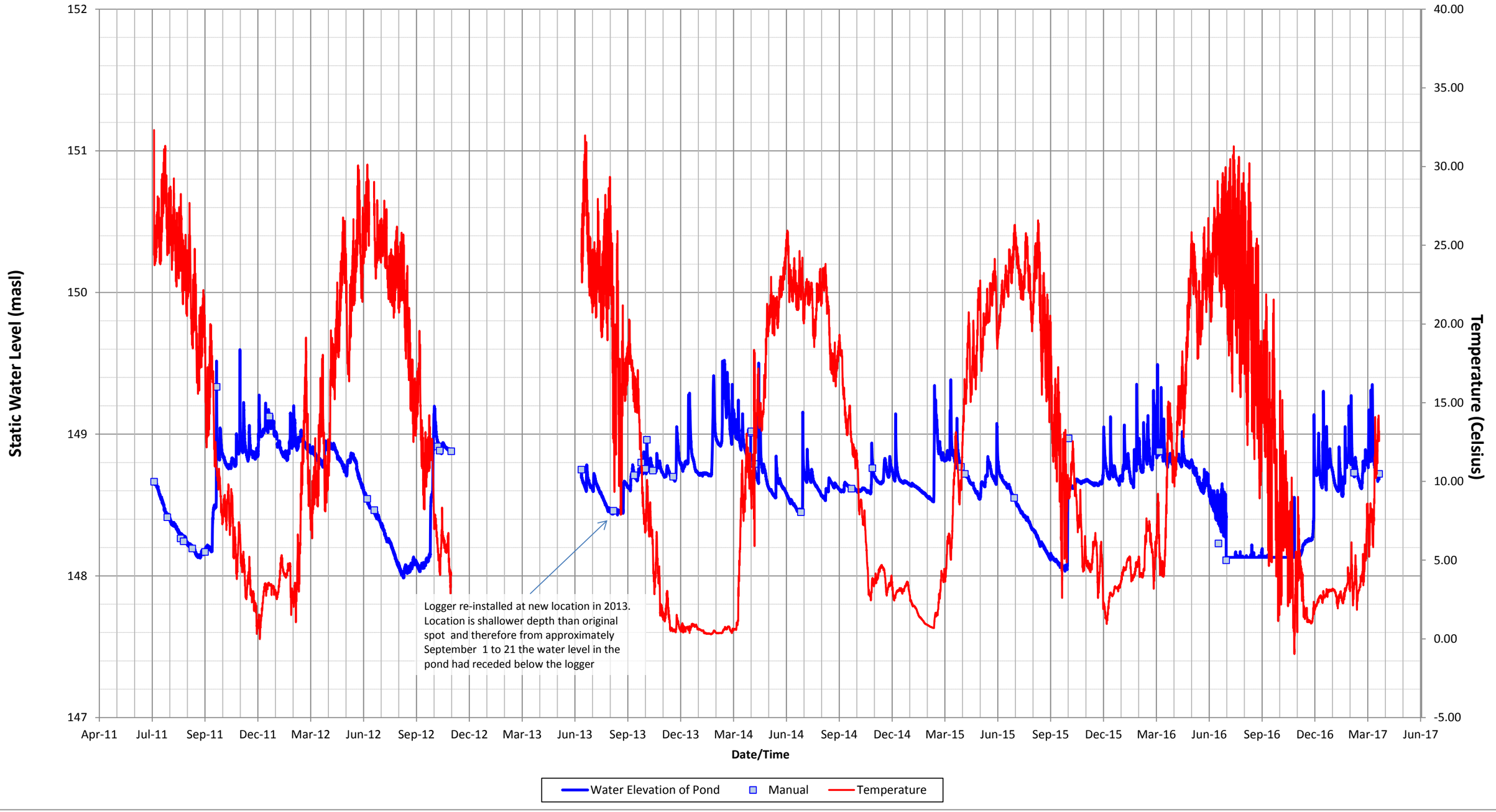


Figure SWL-19b: Pond Water Level and Temperature
MMM-11-Pond

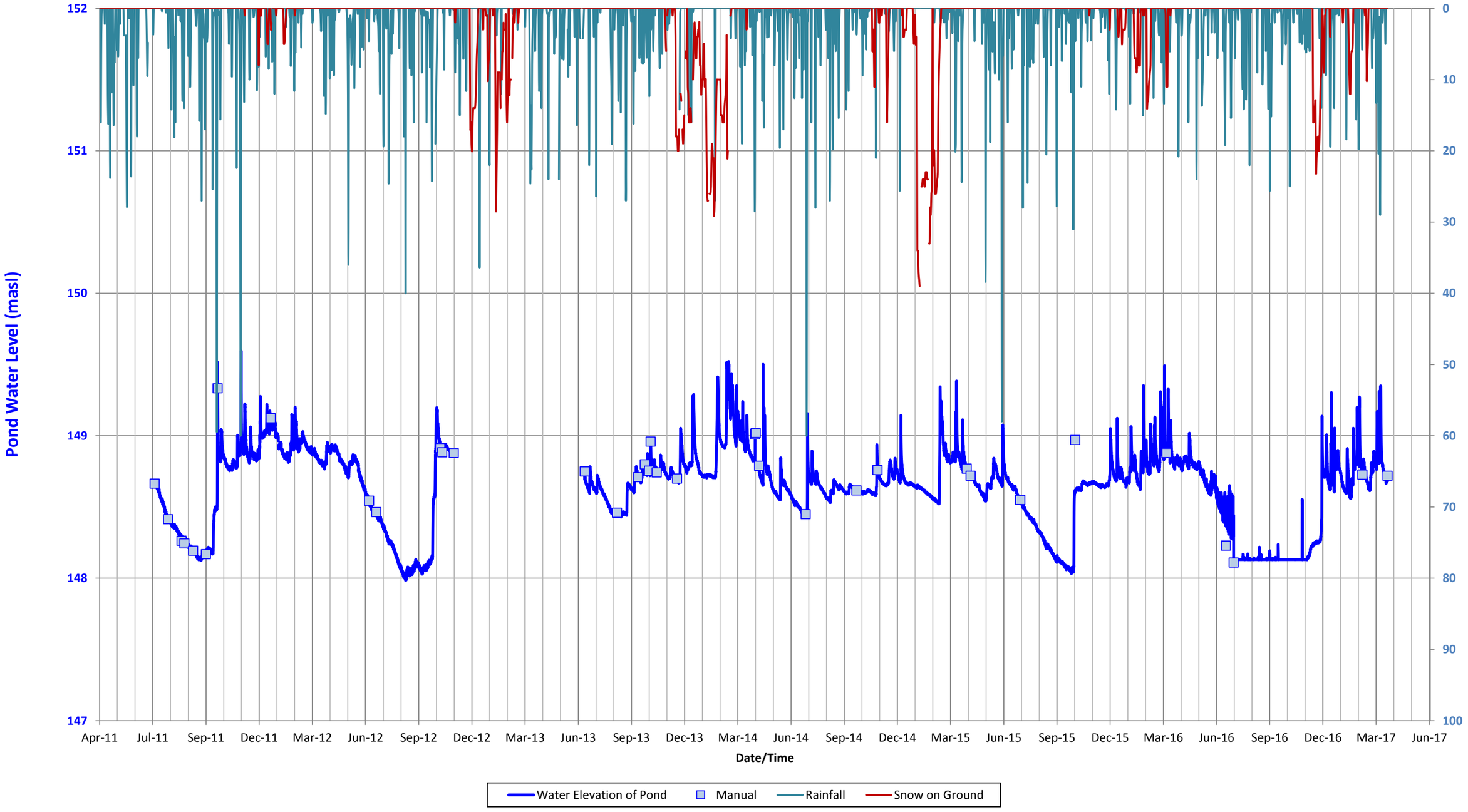


Figure SWL 20-1: Static Water Levels and Groundwater Temperature MMM-MP24 (2013-2015)

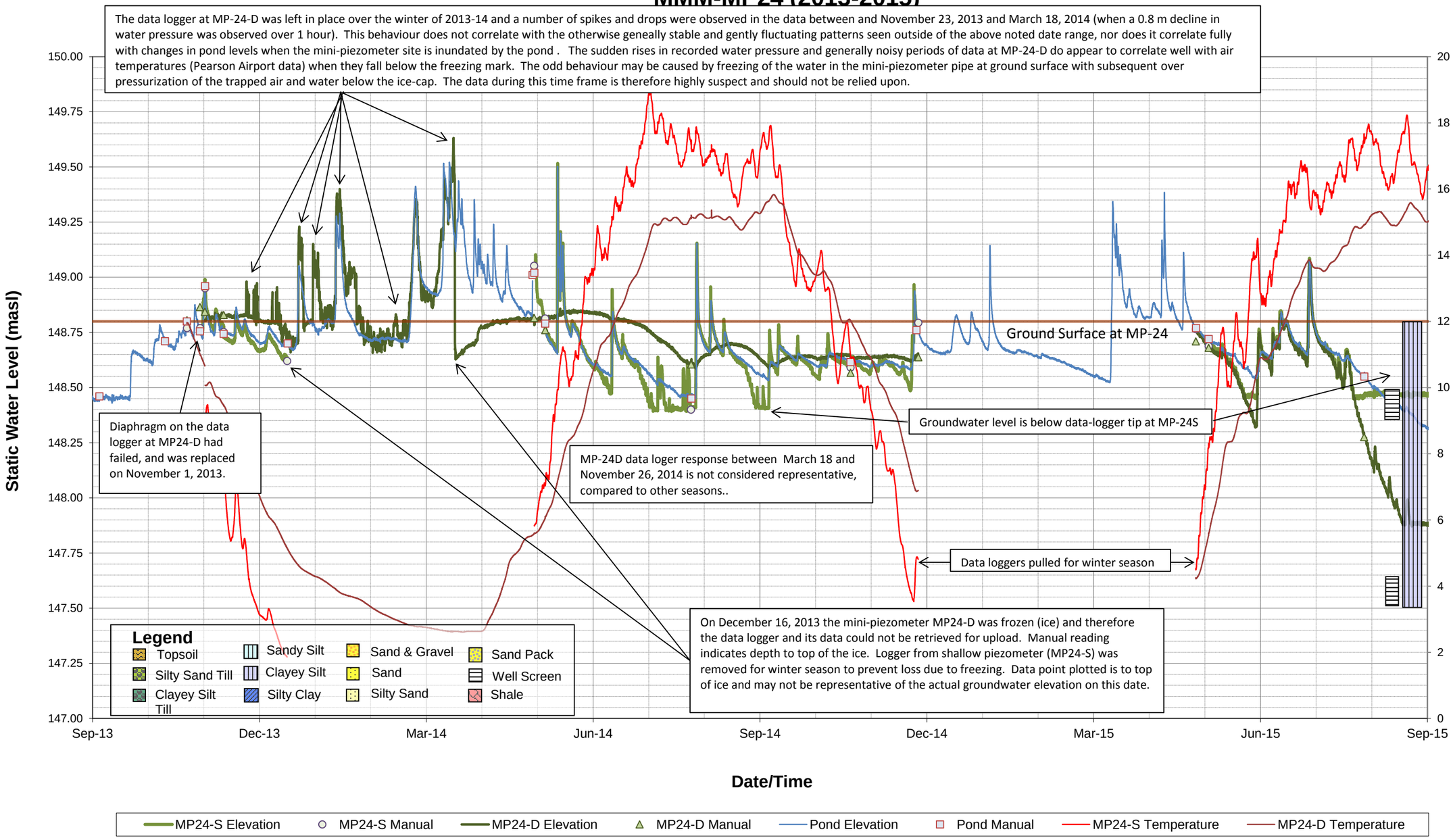


Figure SWL 20-2: Static Water Levels and Groundwater Temperature
MMM-MP24 (2015-2017)

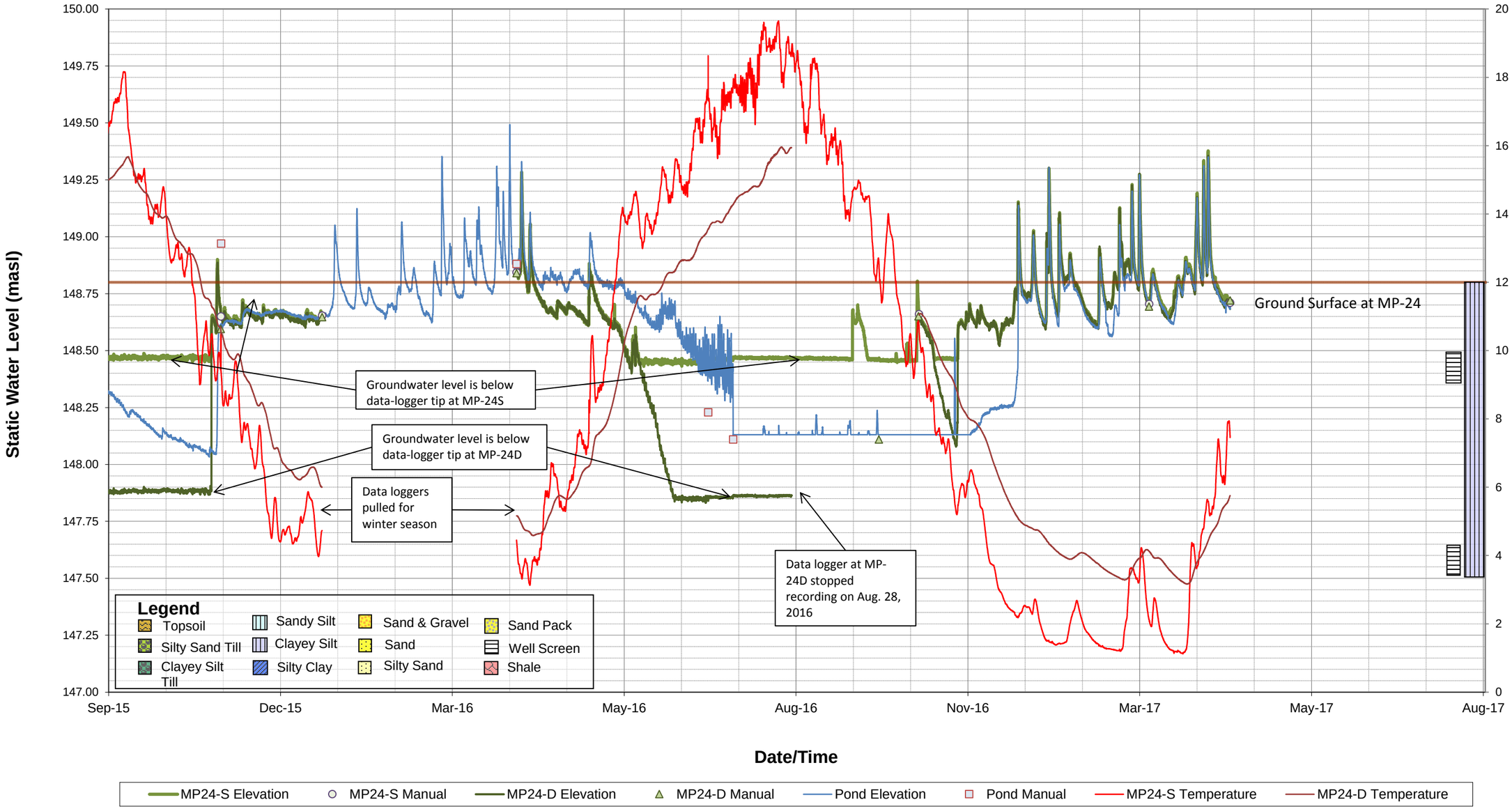


Figure SWL 20-1a: Static Water Levels
MMM-MP24 - 5 m Vertical Scale (2013-2015)

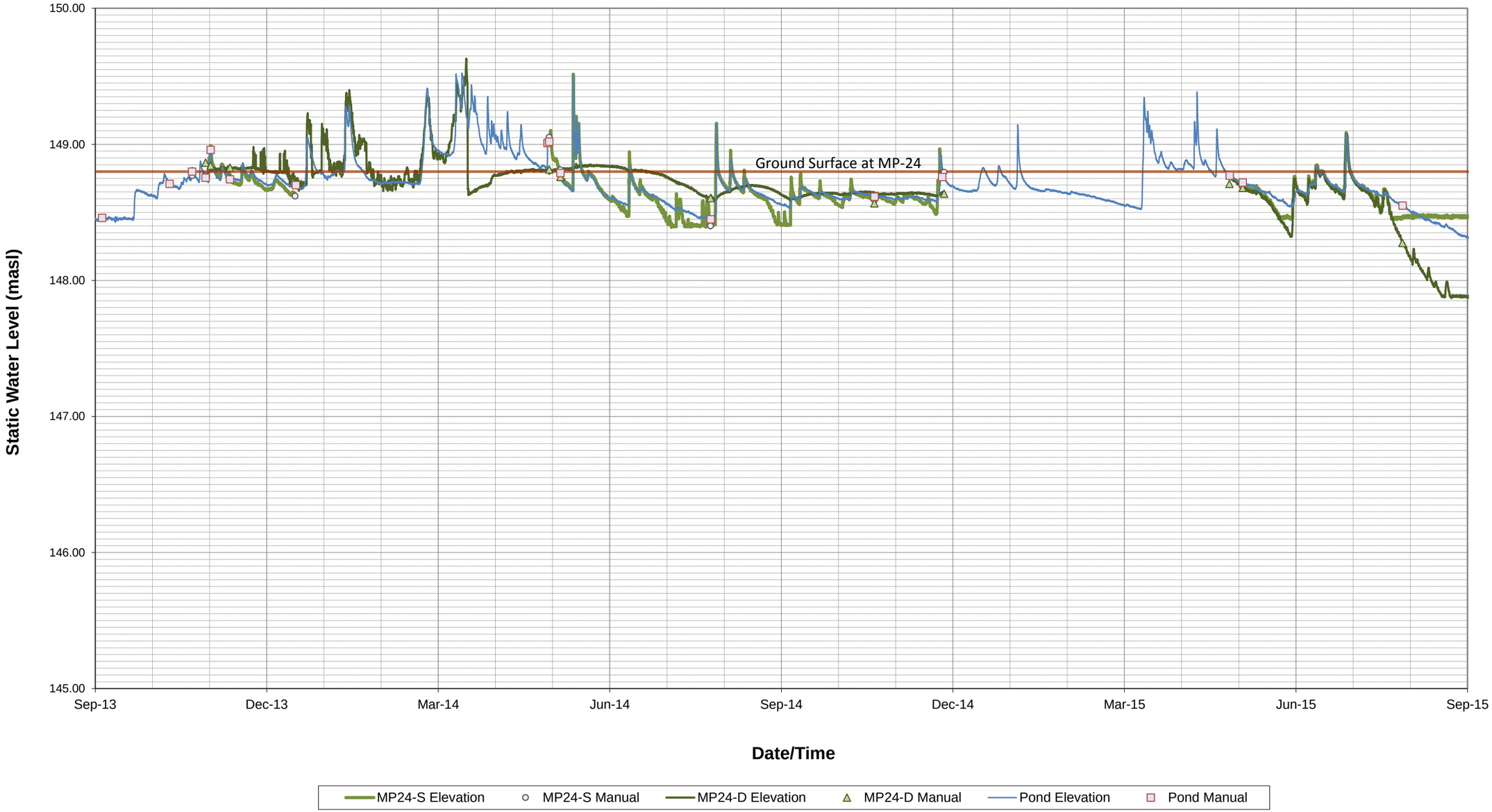
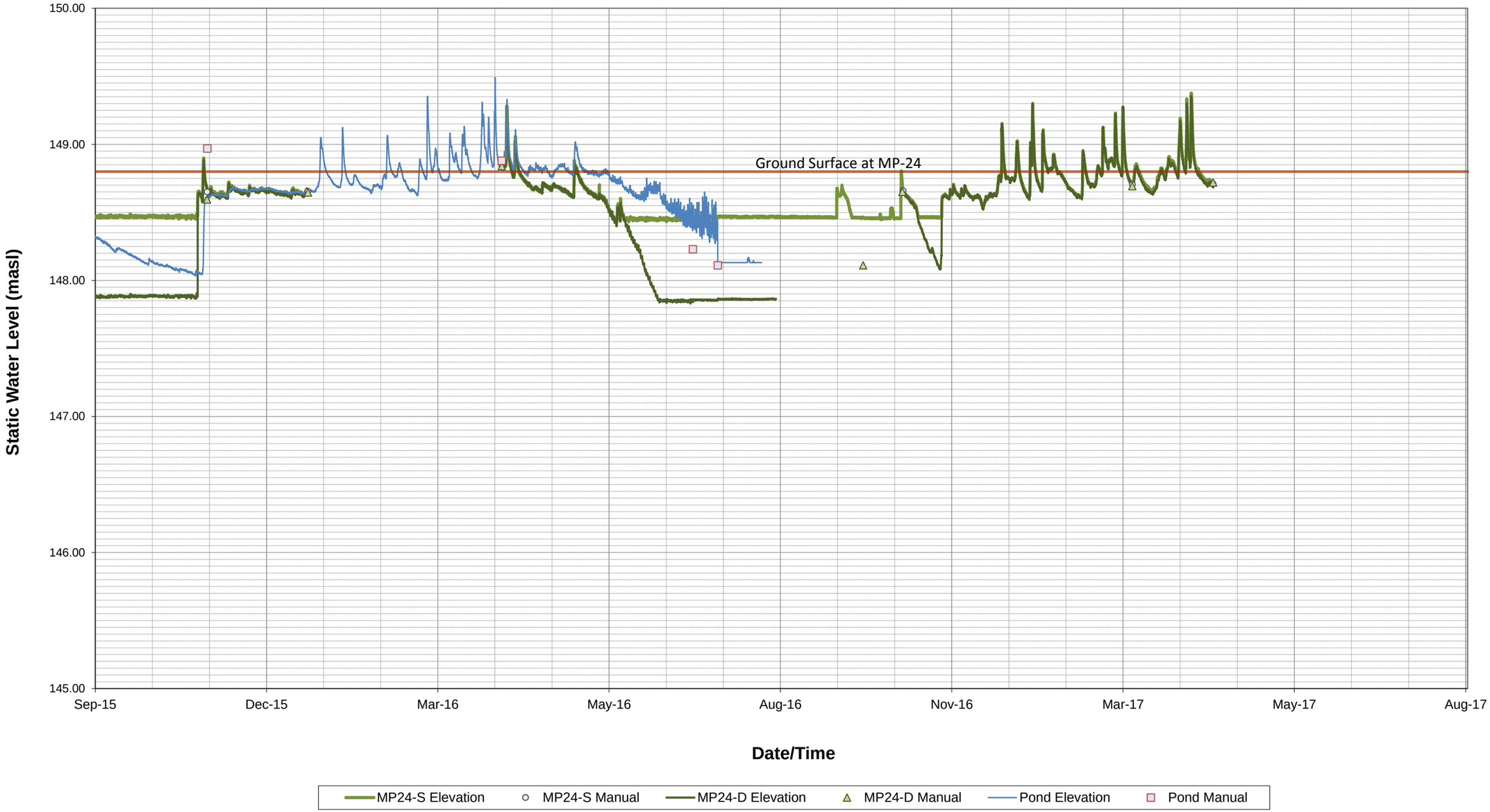


Figure SWL 20-2a: Static Water Levels
MMM-MP24 - 5 m Vertical Scale (2015-2017)



Environmental Implementation Report / Functional Servicing Study for 14 Mile Creek West and the Lazy Pat Farm Property

Onsite Monitoring Locations in Vicinity of the Pond

MMM-09-10S	(masl)	(Δm vs. Pond)
Min	147.59	-1.10
Max	149.85	+1.10
Mean	**149.24**	**+0.58**
i_{mean}		**-0.137**

gradient is vs. nearby channel

MMM-09-10D	(masl)	(Δm vs. Pond)
Min	148.43	-0.26
Max	149.95	+1.11
Mean	**149.33**	**+0.67**
i_{mean}		**-0.088**

gradient is vs. nearby channel

MP-24S	(masl)	(Δm vs. Pond)
Min	148.39	-0.32
Max	149.52	+0.71
Mean	**148.66**	**-0.00**
i_{mean}		**+0.000**

Oct 22, 2013 to Apr 18, 2017

MP-24D	(masl)	(Δm vs. Pond)
Min	147.86	-0.84
Max	149.63	+0.69
Mean	**148.66**	**-0.02**
i_{mean}		**+0.007**

Oct 22, 2013 to Apr 18, 2017

MMM-09-2	(masl)	(Δm vs. Pond)
Min	146.43	-2.07
Max	148.96	-0.07
Mean	**147.57**	**-1.06**
i_{mean}		**+0.042**

Pond WL	(masl)
Min	147.99
Max	149.60
Mean	**148.68**

MMM-11-22S	(masl)	(Δm vs. Pond)
Min	146.06	-2.17
Max	148.82	-0.23
Mean	**147.56**	**-1.06**
i_{mean}		**+0.048**

MMM-11-22D	(masl)	(Δm vs. Pond)
Min	145.37	-2.90
Max	148.17	-0.65
Mean	**147.15**	**-1.45**
i_{mean}		**+0.064**

MMM-11-21	(masl)	(Δm vs. Pond)
Min	145.99	-2.51
Max	148.22	-0.91
Mean	**146.96**	**-1.70**
i_{mean}		**+0.118**

MMM09-03
MMM-09-10-Nest
MP-03
MP-24-Nest
MMM09-02
MP-23
MP-22
MMM11-22-Nest
MP-21
MMM11-21
MP-04
SG-01
SG-02
EXP MW-1
EXP MW-2
EXP MW-3
EXP MW-4
TROW MW-1
TROW MW-2
TROW MW-3
Lazy Pat Farm Well
MMM-09-01-Nest
MMM09-11
A
A'
B
B'

Legend

- Pond Logger (July 2013 - Present)
- Pond Logger (July 2011 - November 2012)
- Lost / Destroyed Mini-Piezometers
- Lost / Destroyed MWs

Monitoring Locations

- EXP Monitoring Well (2011)
- MMM Monitoring Well (2009/2011)
- Mini-Piezometer
- TROW Monitoring Well (2001)
- Lazy Pat Farm Well
- Flow Monitoring Points
- Staff Gauge
- Surface Water Sampling Location at SG-01
- Supplemental Pond Study Cross Section
- Watercourse

Topographic Contours

- 5 m Interval
- 1 m Interval
- Subject Property

Scale 0 50 100 200 Metres

Client: QuadReal

Prepared By: wsp

Date: May 2019

Project No. 09M-00013-01

Scale as Shown

Figure: HG-1

© Queen's Printer for Ontario

© 2017 Microsoft Corporation and its data suppliers http://www.bing.com/maps

Notes regarding the ranges shown for the monitoring locations and the pond:
Elevations (masl) are based on all data recorded from data loggers from July 4, 2011 to April 18, 2017.
Min, Max and Mean elevations are based on all data, over differing time periods for each individual monitor. Care should be exercised in comparing these between different monitors considering the different time periods.
Differences between groundwater levels at monitors and the water level on the pond are based on the differences recorded at each hourly time step, and only at times when both loggers are present and recording at the same time intervals.
The mean hydraulic gradients (iMean) are calculated using mean differences in elevation between the pond/watercourse and the monitor, and the vertical and horizontal distances from the monitor centroid to the edge of the pond at the mean pond water level.
Data is not calculated at all stations at times when the pond was dry (at the pond logger location), nor was data calculated at individual stations when they were dry.

Negative Gradients indicate flow from ground towards the pond or watercourse.

J:\11442 Projects by Job Number\2009\14-09222-001-HG1 Bentall Lands\050 Mapping\MXD\Report\Figure HG-1 On-Site Monitoring Locations - rev1.mxd

A

FACING NORTH

A'

TRIBUTARY 14-W12

MMM 11-22 (NEST)

POND
14-W14A

MMM 09-2

PROPERTY LIMIT

POND'S WATER LEVELS
RECORDED RANGE
148.0 TO 149.6 masl
(BETWEEN FEB. 2011
& APR. 2017)

148.6 (AVG)

MMM 11-22S GWL RANGE
146.1 TO 149.1 masl
(BETWEEN JULY 2011
& APR. 2017)

MMM 11-22D GWL RANGE
145.4 TO 148.2 masl
(BETWEEN JULY 2011
& APR. 2017)

MMM 09-2 GWL RANGE
146.4 TO 149.1 masl
(BETWEEN JUNE 2009
& APR. 2017)

DIRECTION
OF FLOW

ELEVATION (masl)

155
154
153
152
151
150
149
148
147
146
145
144
143
142
141
140

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340

DISTANCE (m)

LEGEND

CLAYEY SILT

CLAYEY SILT TILL

SHALE BEDROCK

GWL RANGE

SCREEN

MMM 09-2 ——— BOREHOLE ID.

NOTE:
POND BOTTOM BASED ON BATHYMETRY DATA.

Environmental Implementation Report / Functional Servicing Study for 14 Mile Creek West and the Lazy Pat Farm Property

Hydrogeological Cross-Section A-A' Through Pond

Scale: H = 1:1000 V = 1:100

Client: QuadReal

Prepared by: wsp

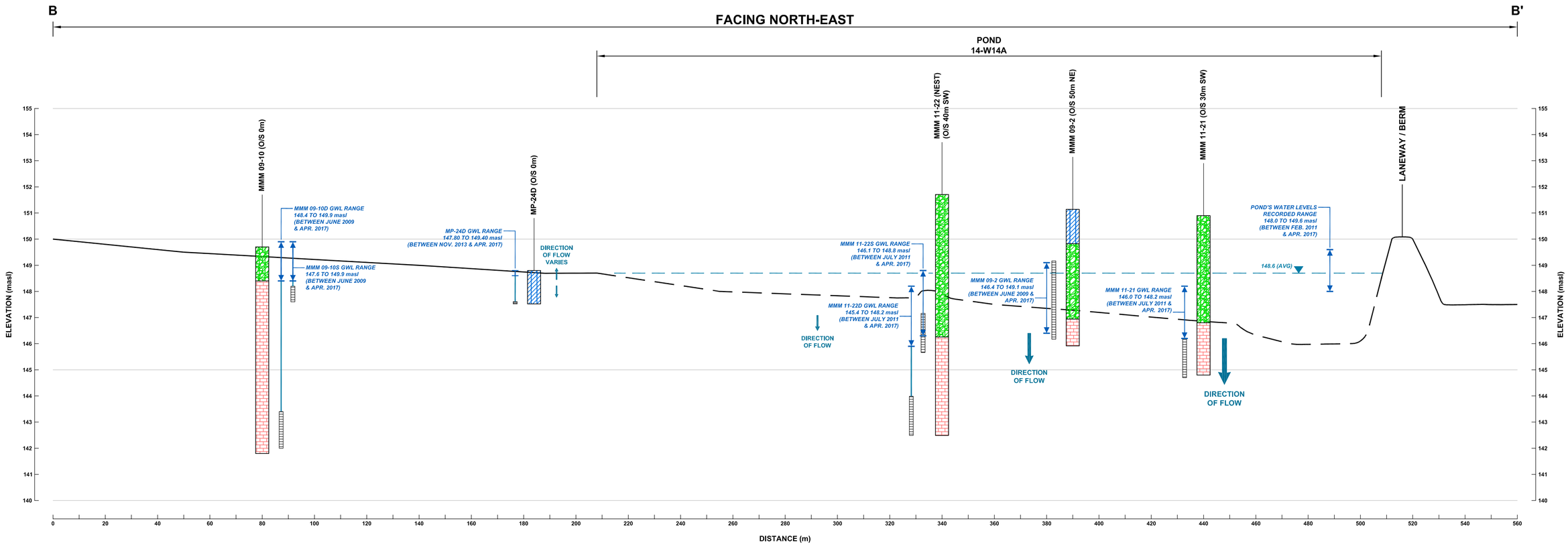
Date: MAY 2019

Project No.: 09M-00013-01 (1409222-001)

Aerial Photo:

Figure HG2

FIGURE - Cross-Sections.dwg FIGURE HG2 - Hydrogeological Cross-Section A-A' Through Pond S:\14-42\1409222-001-HG\1006-REPORT MAY 2019\ May 07, 2019 - 1:17pm



Environmental Implementation Report / Functional Servicing Study for 14 Mile Creek West and the Lazy Pat Farm Property

Hydrogeological Cross-Section B-B' Through Pond

Scale: H = 1:1000 V = 1:100

Client: QuadReal

Prepared by: wsp

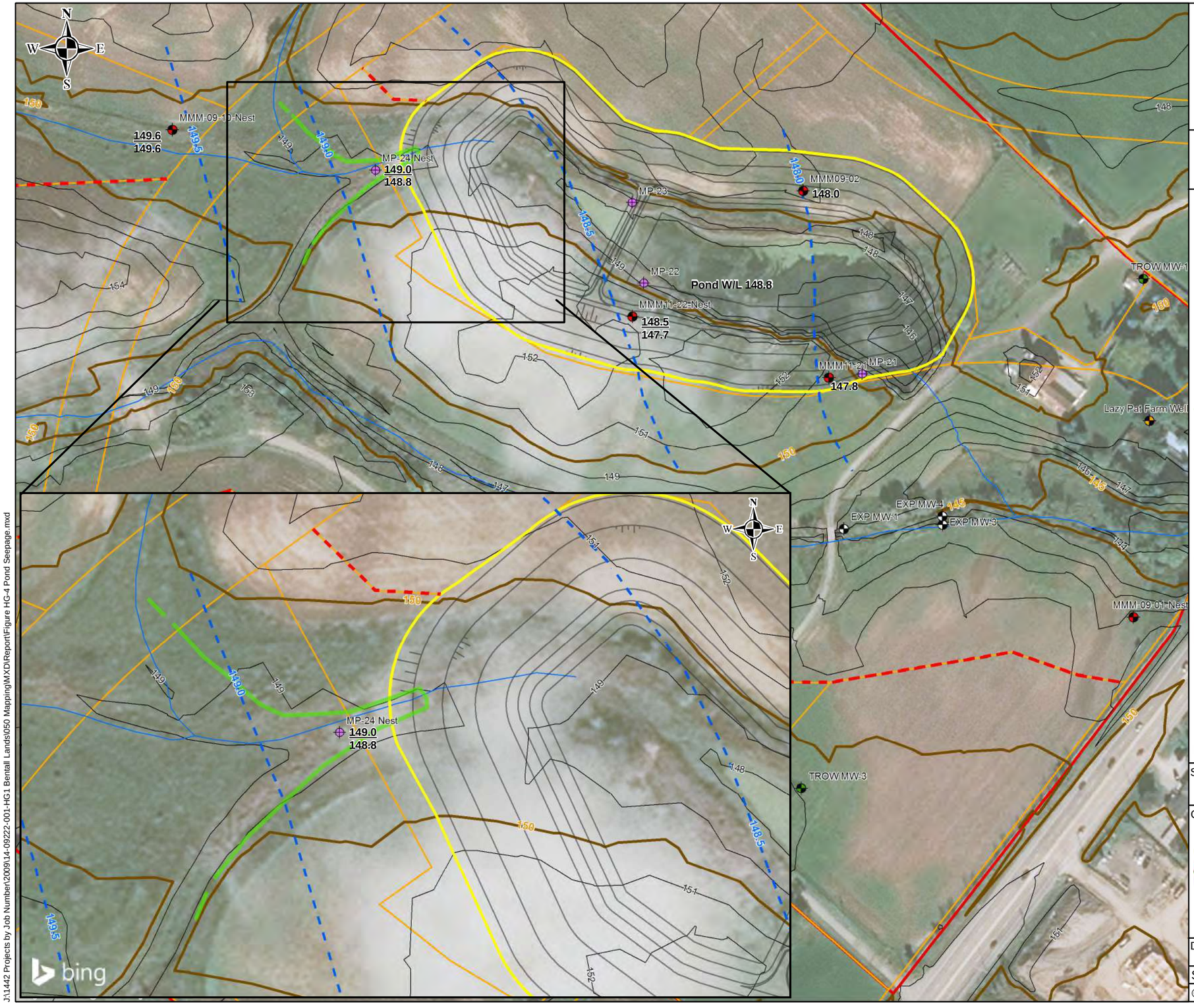
Date: MAY 2019

Project No.: 09M-00013-01 (1409222-001)

Aerial Photo:

Figure HG3

FIGURE - Cross-Sections.dwg FIGURE HG3 - Hydrogeological Cross-Section B-B' Through Pond Ss1142\1409222\001\HG\1000\REPORT MAY 2019. May 07, 2019 - 1:14pm



Environmental Implementation Report / Functional Servicing Study for 14 Mile Creek West and the Lazy Pat Farm Property

Potential Seepage Area Near Upper End of Central Pond

Legend

Monitoring Locations

- EXP Monitoring Well (2011)
- MMM Monitoring Well (2009/2011)
- Mini-Piezometer
- TROW Monitoring Well (2001)
- Lazy Pat Farm Well
- Interpreted Contours for Seepage
- Potential Seepage Zone
- Proposed Infiltration Trenches
- Proposed Limit of SWMP Cut/Fill
- Pond Grading Contours
- Watercourse

Topographic Contours

- 5 m Interval
- 1 m Interval
- Development Parcels
- Subject Property

Note: Static water levels were taken on April 30, 2014.

Scale 0 50 100 Metres

Client: QuadReal

Prepared By: WSP

Date: May 2019

Project No. 09M-00013-01

Scale as Shown

Figure: HG-4

© Queen's Printer for Ontario

J:\11442 Projects by Job Number\2009\14-09222-001-HG1 Bentall Lands\050 Mapping\MXD\Report\Figure HG-4 Pond Seepage.mxd

Flow Estimates

Bentall Lands Oakville - May 5, 2009

	Bank Edge		Bank Edge	Sums/Avgs
MP-03 Location				
Length (inches)	34.00			
Width (inches)	7.00			
Depth (inches)	2.00	3.50	3.00	
Sub-Section Location (m)	0.000	0.089	0.178	
Sub-section Width (m)		0.089	0.089	0.178
Sub-Section Depth (m)	0.051	0.089	0.076	
Areas (m^2)		0.006	0.007	0.014
Length of Run (m)	0.86			
Run # -->	1	2	3	
Time (seconds)	1.74	1.99	1.98	
	4	5	6	
	2.10	1.63	2.07	1.92
Avg. Vel	0.450	m/sec		
Q=vA	0.006	m^3/sec		
(ignores friction so these	366.0	L/min		
may be overestimated)	80.5	igpm		

MP-01 Location				
Length (inches)	24.00			
Width (inches)	9.00			
Depth (inches)	2.25	2.50	1.50	
Sub-Section Location (m)	0.000	0.114	0.229	
Sub-section Width (m)		0.114	0.114	0.229
Sub-Section Depth (m)	0.057	0.064	0.038	
Areas (m^2)		0.007	0.006	0.013
Length of Run (m)	0.61			
Run # -->	1	2	3	
Time (seconds)	2.12	2.02	1.95	
	4	5	6	
	2.00	2.35	2.10	2.09
Avg. Vel	0.292	m/sec		
Q=vA	0.004	m^3/sec		
(ignores friction so these	222.3	L/min		
may be overestimated)	48.9	igpm		

Flow Estimates

Bentall Lands Oakville - May 5, 2009

	Bank Edge		Bank Edge	Sums/Avgs
MP-07 (West of Small Pond)				
Length (inches)	14.00			
Width (inches)	15.00			
Depth (inches)	1.50	2.25	2.00	
Sub-Section Location (m)	0.000	0.191	0.381	
Sub-section Width (m)		0.191	0.191	0.381
Sub-Section Depth (m)	0.038	0.057	0.051	
Areas (m^2)		0.009	0.010	0.019
Length of Run (m)	0.36			
Run # -->	1	2	3	
Time (seconds)	0.86	0.84	0.94	
	4	5	6	
	0.85	0.95	1.05	0.92
Avg. Vel	0.389	m/sec		
Q=vA	0.008	m^3/sec		
(ignores friction so these	451.3	L/min		
may be overestimated)	99.3	igpm		

Main Tributary by Dundas Street				
Length (inches)	28.00			
Width (inches)	33.00			
Depth (inches)	5.00	7.00	5.00	
Sub-Section Location (m)	0.000	0.419	0.838	
Sub-section Width (m)		0.419	0.419	0.838
Sub-Section Depth (m)	0.127	0.178	0.127	
Areas (m^2)		0.064	0.064	0.128
Length of Run (m)	0.71			
Run # -->	1	2	3	
Time (seconds)	4.92	8.12	6.11	
	4	5	6	
	3.65	4.60	4.73	5.36
Avg. Vel	0.133	m/sec		
Q=vA	0.017	m^3/sec		
(ignores friction so these	1017.9	L/min		
may be overestimated)	223.9	igpm		

Flow Estimates

Bentall Lands Oakville - May 29, 2009

	Bank Edge		Bank Edge	Sums/Avgs
MP-02				
Length (m)	0.70			
Width (m)	0.46			
Depth (m)	0.06	0.07	0.03	
Sub-Section Location (m)	0.000	0.230	0.460	
Sub-section Width (m)		0.230	0.230	0.460
Sub-Section Depth (m)	0.060	0.070	0.030	
Areas (m^2)		0.015	0.012	0.026
Length of Run (m)	0.70			
Run # -->	1	2	3	
Time (seconds)	4.00	4.70	4.80	
	4	5	6	
				4.50
Avg. Vel	0.156	m/sec		
Q=vA	0.004	m^3/sec		
(ignores friction so these	246.9	L/min		
may be overestimated)	54.3	igpm		

MP-07				
Length (m)	0.70			
Width (m)	0.32			
Depth (m)	0.09	0.16	0.12	
Sub-Section Location (m)	0.000	0.160	0.320	
Sub-section Width (m)		0.160	0.160	0.320
Sub-Section Depth (m)	0.090	0.160	0.120	
Areas (m^2)		0.020	0.022	0.042
Length of Run (m)	0.70			
Run # -->	1	2	3	
Time (seconds)	4.00	4.00	4.00	
	4	5	6	
				4.00
Avg. Vel	0.175	m/sec		
Q=vA	0.007	m^3/sec		
(ignores friction so these	445.2	L/min		
may be overestimated)	97.9	igpm		

Flow Estimates

Bentall Lands Oakville - May 29, 2009

	Bank Edge		Bank Edge	Sums/Avgs
MP-04				
Length (m)	0.70			
Width (m)	0.30			
Depth (m)	0.04	0.05	0.03	
Sub-Section Location (m)	0.000	0.150	0.300	
Sub-section Width (m)		0.150	0.150	0.300
Sub-Section Depth (m)	0.040	0.050	0.030	
Areas (m^2)		0.007	0.006	0.013
Length of Run (m)	0.70			
Run # -->	1	2	3	
Time (seconds)	2.00	2.00	2.00	
	4	5	6	
				2.00
Avg. Vel	0.350	m/sec		
Q=vA	0.004	m^3/sec		
(ignores friction so these	267.8	L/min		
may be overestimated)	58.9	igpm		

MP-01				
Length (m)	0.60			
Width (m)	0.55			
Depth (m)	0.04	0.05	0.02	
Sub-Section Location (m)	0.000	0.275	0.550	
Sub-section Width (m)		0.275	0.275	0.550
Sub-Section Depth (m)	0.040	0.050	0.020	
Areas (m^2)		0.012	0.010	0.022
Length of Run (m)	0.60			
Run # -->	1	2	3	
Time (seconds)	6.00	6.50	6.00	
	4	5	6	
				6.17
Avg. Vel	0.097	m/sec		
Q=vA	0.002	m^3/sec		
(ignores friction so these	128.4	L/min		
may be overestimated)	28.3	igpm		

Flow Estimates

Bentall Lands Oakville - May 29, 2009

	Bank Edge		Bank Edge	Sums/Avgs
MP-03				
Length (m)	0.30			
Width (m)	0.16			
Depth (m)	0.02	0.04	0.02	
Sub-Section Location (m)	0.000	0.080	0.160	
Sub-section Width (m)		0.080	0.080	0.160
Sub-Section Depth (m)	0.020	0.040	0.020	
Areas (m^2)		0.002	0.002	0.005
Length of Run (m)	0.30			
Run # -->	1	2	3	
Time (seconds)	2.00	2.00	2.00	
	4	5	6	
				2.00
Avg. Vel	0.150	m/sec		
Q=vA	0.001	m^3/sec		
(ignores friction so these	43.2	L/min		
may be overestimated)	9.5	igpm		

Flow Estimates

Bentall Lands Oakville - June 19, 2009

	Bank Edge		Bank Edge	Sums/Avgs
MP-04				
Length (m)	1.00			
Width (m)	0.42			
Depth (m)	0.04	0.05	0.03	
Sub-Section Location (m)	0.000	0.210	0.420	
Sub-section Width (m)		0.210	0.210	0.420
Sub-Section Depth (m)	0.040	0.050	0.030	
Areas (m^2)		0.009	0.008	0.018
Length of Run (m)	1.00			
Run # -->	1	2	3	
Time (seconds)	1.50	1.78	1.70	
	4	5	6	
				1.66
Avg. Vel	0.602	m/sec		
Q=vA	0.011	m^3/sec		
(ignores friction so these	645.2	L/min		
may be overestimated)	141.9	igpm		

Flow Estimates

Bentall Lands Oakville - Nov 9, 2009

	Bank Edge			Bank Edge	Sums/Avgs
SG-1					
Length (m)	0.50				
Width (m)	0.30				
Depth (m)	0.02	0.04	0.06	0.02	
Sub-Section Location (m)	0.000	0.100	0.200	0.300	
Sub-section Width (m)		0.100	0.100	0.100	0.300
Sub-Section Depth (m)	0.020	0.040	0.060	0.020	
Areas (m^2)		0.003	0.005	0.004	0.012
Length of Run (m)	0.50				
Run # -->	1	2	3		
Time (seconds)	3.00	3.00	4.00		
	4	5	6		
	3.00	4.00			3.40
Avg. Vel	0.147	m/sec			
Q=vA	0.002	m^3/sec			
(ignores friction so these	105.9	L/min			
may be overestimated)	23.3	igpm			

Flow Estimates

Bentall Lands Oakville - Nov 20, 2009

	Bank Edge			Bank Edge			Sums/Avgs
SG-2							
Length (m)	1.00						
Width (m)	1.15						
Depth (m)	0.25	0.04	0.06	0.06	0.06	0.06	
Sub-Section Location (m)	0.000	0.420	0.550	0.650	1.000	1.150	
Sub-section Width (m)		0.420	0.130	0.100	0.350	0.150	**1.000**
Sub-Section Depth (m)	0.250	0.250	0.140	0.100	0.040	0.000	
Areas (m^2)		0.105	0.025	0.012	0.025	0.003	**0.167**
Length of Run (m)	**1.00**						
Run # -->	**1**	**2**	**3**				
Time (seconds)	5.00	6.50	6.00				
	4	**5**	**6**				
	7.00						**6.13**
Avg. Vel	**0.163**	m/sec					
Q=vA	**0.027**	m^3/sec					
(ignores friction so these	**1634.4**	L/min					
may be overestimated)	**359.5**	igpm					

Flow Estimates

Bentall Lands Oakville - Dec. 18, 2009

	Bank Edge				Bank Edge	Sums/Avgs
FMP-1						
Length (m)	0.50					
Width (m)	0.90					
Depth (m)	0.04	0.10	0.14	0.09	0.06	
Sub-Section Location (m)	0.000	0.225	0.450	0.675	0.900	
Sub-section Width (m)		0.225	0.225	0.225	0.225	0.900
Sub-Section Depth (m)	0.040	0.100	0.140	0.090	0.060	
Areas (m^2)		0.016	0.027	0.026	0.017	0.086
Length of Run (m)	0.50					
Run # -->	1	2	3			
Time (seconds)	4.00	5.00	4.00			
	4	5	6			4.33
Avg. Vel	0.115	m/sec				
Q=vA	0.010	m^3/sec				
(ignores friction so these	591.9	L/min				
may be overestimated)	130.2	igpm				

Flow Estimates

Bentall Lands Oakville - Jan 21, 2010

	Bank Edge		Bank Edge	Sums/Avgs
MP-04 Location				
Length (m)	0.20			
Width (m)	0.12			
Depth (m)	0.04			
Sub-Section Location (m)	0.000	0.060	0.120	
Sub-section Width (m)	0.12	0.120	0.100	0.220
Sub-Section Depth (m)	0.030	0.040	0.040	
Areas (m^2)		0.004	0.004	0.008
Length of Run (m)	0.20			
Run # -->	1	2	3	
Time (seconds)	1.50	1.70	1.50	
	4	5	6	
				1.57
Avg. Vel	0.128	m/sec		
Q=vA	0.001	m^3/sec		
(ignores friction so these	62.8	L/min		
may be overestimated)	13.8	igpm		

Flow Estimates

Bentall Lands Oakville - April 13, 2010

	Bank Edge			Bank Edge	Sums/Avgs
FMP-2					
Length (m)	1.00				
Upstream Cross-Section (25% weighted contribution)					
Width (m)	0.23				
Depth (m)	0.02	0.02	0.02	0.04	
Sub-Section Location (m)	0.000	0.077	0.153	0.230	
Sub-section Width (m)		0.077	0.077	0.077	0.230
Sub-Section Depth (m)	0.020	0.020	0.020	0.040	
Areas (m^2)		0.002	0.002	0.002	0.005
Midpoint Cross-Section (50% weighted contribution)					
Width (m)	0.40				
Depth (m)	0.04	0.07	0.07	0.01	
Sub-Section Location (m)	0.000	0.133	0.267	0.400	
Sub-section Width (m)		0.133	0.133	0.133	0.400
Sub-Section Depth (m)	0.040	0.070	0.070	0.010	
Areas (m^2)		0.007	0.009	0.005	0.022
Downstream Cross-Section (25% weighted contribution)					
Width (m)	0.40				
Depth (m)	0.02	0.03	0.07	0.04	
Sub-Section Location (m)	0.000	0.133	0.267	0.400	
Sub-section Width (m)		0.133	0.133	0.133	0.400
Sub-Section Depth (m)	0.020	0.030	0.070	0.040	
Areas (m^2)		0.003	0.007	0.007	0.017
Weighted Cross-Sectional Area (m^2)					0.017
Length of Run (m)	1.00				
Run # -->	1	2	3		
Time (seconds)	2.59	4.62	3.07		
	4	5	6		
	3.18	2.50	3.40		3.23
Avg. Vel	0.310	m/sec			
Q=vA	0.002	m^3/sec			
(ignores friction so these	99.8	L/min			
may be overestimated)	22.0	igpm			

Flow Estimates

Bentall Lands Oakville - April 13, 2010

	Bank Edge			Bank Edge	Sums/Avgs
FMP-4					
Length (m)	0.50				
Upstream Cross-Section (25% weighted contribution)					
Width (m)	0.30				
Depth (m)	0.03	0.04	0.03		
Sub-Section Location (m)	0.000	0.150	0.300		
Sub-section Width (m)		0.150	0.150		0.300
Sub-Section Depth (m)	0.030	0.040	0.030		
Areas (m^2)		0.005	0.005		0.011
Midpoint Cross-Section (50% weighted contribution)					
Width (m)	0.35				
Depth (m)	0.02	0.04	0.03		
Sub-Section Location (m)	0.000	0.175	0.350		
Sub-section Width (m)		0.175	0.175		0.350
Sub-Section Depth (m)	0.020	0.040	0.030		
Areas (m^2)		0.005	0.006		0.011
Downstream Cross-Section (25% weighted contribution)					
Width (m)	0.40				
Depth (m)	0.02	0.04	0.01		
Sub-Section Location (m)	0.000	0.200	0.400		
Sub-section Width (m)		0.200	0.200		0.400
Sub-Section Depth (m)	0.020	0.040	0.010		
Areas (m^2)		0.006	0.005		0.011
Weighted Cross-Sectional Area (m^2)					0.011
Length of Run (m)	**0.50**				
Run # -->	**1**	**2**	**3**		
Time (seconds)	4.10	3.60	3.20		
	4	**5**	**6**		
	3.80	3.30		3.60	
Avg. Vel	**0.139**	m/sec			
Q=vA	**0.001**	m^3/sec			
(ignores friction so these	**87.5**	L/min			
may be overestimated)	**19.2**	igpm			

Flow Estimates

Bentall Lands Oakville - April 13, 2010

	Bank Edge			Bank Edge		Sums/Avgs
FMP-1						
Length (m)	1.00					
Upstream Cross-Section (25% weighted contribution)						
Width (m)	0.80					
Depth (m)	0.01	0.05	0.15	0.16	0.10	
Sub-Section Location (m)	0.000	0.200	0.400	0.600	0.800	
Sub-section Width (m)		0.200	0.200	0.200	0.200	0.800
Sub-Section Depth (m)	0.010	0.050	0.150	0.160	0.100	
Areas (m^2)		0.006	0.020	0.031	0.026	0.083
Midpoint Cross-Section (50% weighted contribution)						
Width (m)	0.90					
Depth (m)	0.01	0.05	0.12	0.16	0.14	
Sub-Section Location (m)	0.000	0.225	0.450	0.675	0.900	
Sub-section Width (m)		0.225	0.225	0.225	0.225	0.900
Sub-Section Depth (m)	0.010	0.050	0.120	0.160	0.140	
Areas (m^2)		0.007	0.019	0.032	0.034	0.091
Downstream Cross-Section (25% weighted contribution)						
Width (m)	0.90					
Depth (m)	0.04	0.09	0.16	0.14		
Sub-Section Location (m)	0.000	0.300	0.600	0.900		
Sub-section Width (m)		0.300	0.300	0.300		0.900
Sub-Section Depth (m)	0.040	0.090	0.160	0.140		
Areas (m^2)		0.020	0.038	0.045		0.102
Weighted Cross-Sectional Area (m^2)						0.092
Length of Run (m)	1.00					
Run # -->	1	2	3			
Time (seconds)	11.30	13.70	13.80			
	4	5	6			
	14.90	11.70			13.08	
Avg. Vel	0.076	m/sec				
Q=vA	0.006	m^3/sec				
(ignores friction so these	380.7	L/min				
may be overestimated)	83.8	igpm				

Flow Estimates

Bentall Lands Oakville - April 13, 2010

	Bank Edge			Bank Edge	Sums/Avgs
MP-03					
Length (m)	1.00				
Upstream Cross-Section (25% weighted contribution)					
Width (m)	0.19				
Depth (m)	0.04	0.06	0.02		
Sub-Section Location (m)	0.000	0.095	0.190		
Sub-section Width (m)		0.095	0.095		0.190
Sub-Section Depth (m)	0.040	0.060	0.020		
Areas (m^2)		0.005	0.004		0.009
Midpoint Cross-Section (50% weighted contribution)					
Width (m)	0.20				
Depth (m)	0.10	0.04	0.02		
Sub-Section Location (m)	0.000	0.100	0.200		
Sub-section Width (m)		0.100	0.100		0.200
Sub-Section Depth (m)	0.100	0.040	0.020		
Areas (m^2)		0.007	0.003		0.010
Downstream Cross-Section (25% weighted contribution)					
Width (m)	0.24				
Depth (m)	0.07	0.05	0.05	0.02	
Sub-Section Location (m)	0.000	0.080	0.160	0.240	
Sub-section Width (m)		0.080	0.080	0.080	0.240
Sub-Section Depth (m)	0.070	0.050	0.050	0.020	
Areas (m^2)		0.005	0.004	0.003	0.012
Weighted Cross-Sectional Area (m^2)					0.010
Length of Run (m)	1.00				
Run # -->	1	2	3		
Time (seconds)	2.89	2.93	2.31		
	4	5	6		
	3.12	2.79			2.81
Avg. Vel	0.356	m/sec			
Q=vA	0.003	m^3/sec			
(ignores friction so these	182.7	L/min			
may be overestimated)	40.2	igpm			

Flow Estimates

Bentall Lands Oakville - April 13, 2010

	Bank Edge		Bank Edge	Sums/Avgs
FMP-3				
Length (m)	1.00			
Upstream Cross-Section (50% weighted contribution)				
Width (m)	0.40			
Depth (m)	0.05	0.10	0.06	
Sub-Section Location (m)	0.000	0.200	0.400	
Sub-section Width (m)		0.200	0.200	0.400
Sub-Section Depth (m)	0.050	0.100	0.060	
Areas (m^2)		0.015	0.016	0.031
Downstream Cross-Section (50% weighted contribution)				
Width (m)	0.60			
Depth (m)	0.15	0.18	0.10	
Sub-Section Location (m)	0.000	0.300	0.600	
Sub-section Width (m)		0.300	0.300	0.600
Sub-Section Depth (m)	0.150	0.180	0.100	
Areas (m^2)		0.050	0.042	0.092
Weighted Cross-Sectional Area (m^2)				0.061
Length of Run (m)	1.00			
Run # -->	1	2	3	
Time (seconds)	7.14	8.68	8.32	
	4	5	6	
	7.67	7.77		7.92
Avg. Vel	0.126	m/sec		
Q=vA	0.004	m^3/sec		
(ignores friction so these	235.0	L/min		
may be overestimated)	51.7	igpm		

Flow Estimates

Bentall Lands Oakville - April 13, 2010

	Bank Edge		Bank Edge	Sums/Avgs
FMP-6/MP-04				
Length (m)	0.60			
Upstream Cross-Section (25% weighted contribution)				
Width (m)	0.65			
Depth (m)	0.05	0.15	0.05	
Sub-Section Location (m)	0.000	0.325	0.650	
Sub-section Width (m)		0.325	0.325	0.650
Sub-Section Depth (m)	0.050	0.150	0.050	
Areas (m^2)		0.033	0.033	0.065
Midpoint Cross-Section (50% weighted contribution)				
Width (m)	0.45			
Depth (m)	0.05	0.08	0.06	
Sub-Section Location (m)	0.000	0.225	0.450	
Sub-section Width (m)		0.225	0.225	0.450
Sub-Section Depth (m)	0.050	0.080	0.060	
Areas (m^2)		0.015	0.016	0.030
Downstream Cross-Section (25% weighted contribution)				
Width (m)	0.75			
Depth (m)	0.06	0.07	0.05	
Sub-Section Location (m)	0.000	0.375	0.750	
Sub-section Width (m)		0.375	0.375	0.750
Sub-Section Depth (m)	0.060	0.070	0.050	
Areas (m^2)		0.024	0.023	0.047
Weighted Cross-Sectional Area (m^2)				0.043
Length of Run (m)	0.60			
Run # -->	1	2	3	
Time (seconds)	3.01	2.57	2.89	
	4	5	6	
	2.42	2.53		2.68
Avg. Vel	0.224	m/sec		
Q=vA	0.015	m^3/sec		
(ignores friction so these	871.8	L/min		
may be overestimated)	191.8	igpm		

Flow Estimates

Bentall Lands Oakville - October 18-19, 2010

	Bank Edge		Bank Edge	Sums/Avgs
FMP-2				
Length (m)	1.00			
Upstream Cross-Section (25% weighted contribution)				
Width (m)	0.34			
Depth (m)	0.02	0.04	0.02	
Sub-Section Location (m)	0.000	0.170	0.340	
Sub-section Width (m)		0.170	0.170	0.340
Sub-Section Depth (m)	0.020	0.040	0.020	
Areas (m^2)		0.005	0.002	0.007
Midpoint Cross-Section (50% weighted contribution)				
Width (m)	0.32			
Depth (m)	0.02	0.05	0.01	
Sub-Section Location (m)	0.000	0.160	0.320	
Sub-section Width (m)		0.160	0.160	0.320
Sub-Section Depth (m)	0.015	0.050	0.010	
Areas (m^2)		0.005	0.001	0.006
Downstream Cross-Section (25% weighted contribution)				
Width (m)	0.37			
Depth (m)	0.01	0.05	0.03	
Sub-Section Location (m)	0.000	0.185	0.370	
Sub-section Width (m)		0.185	0.185	0.370
Sub-Section Depth (m)	0.010	0.050	0.030	
Areas (m^2)		0.006	0.003	0.008
Weighted Cross-Sectional Area (m^2)				0.007
Length of Run (m)	1.00			
Run # -->	1	2	3	
Time (seconds)	12.00	11.13	12.88	
	4	5	6	
	14.65			12.67
Avg. Vel	0.079	m/sec		
Q=vA	0.001	m^3/sec		
(ignores friction so these	32.2	L/min		
may be overestimated)	7.1	igpm		

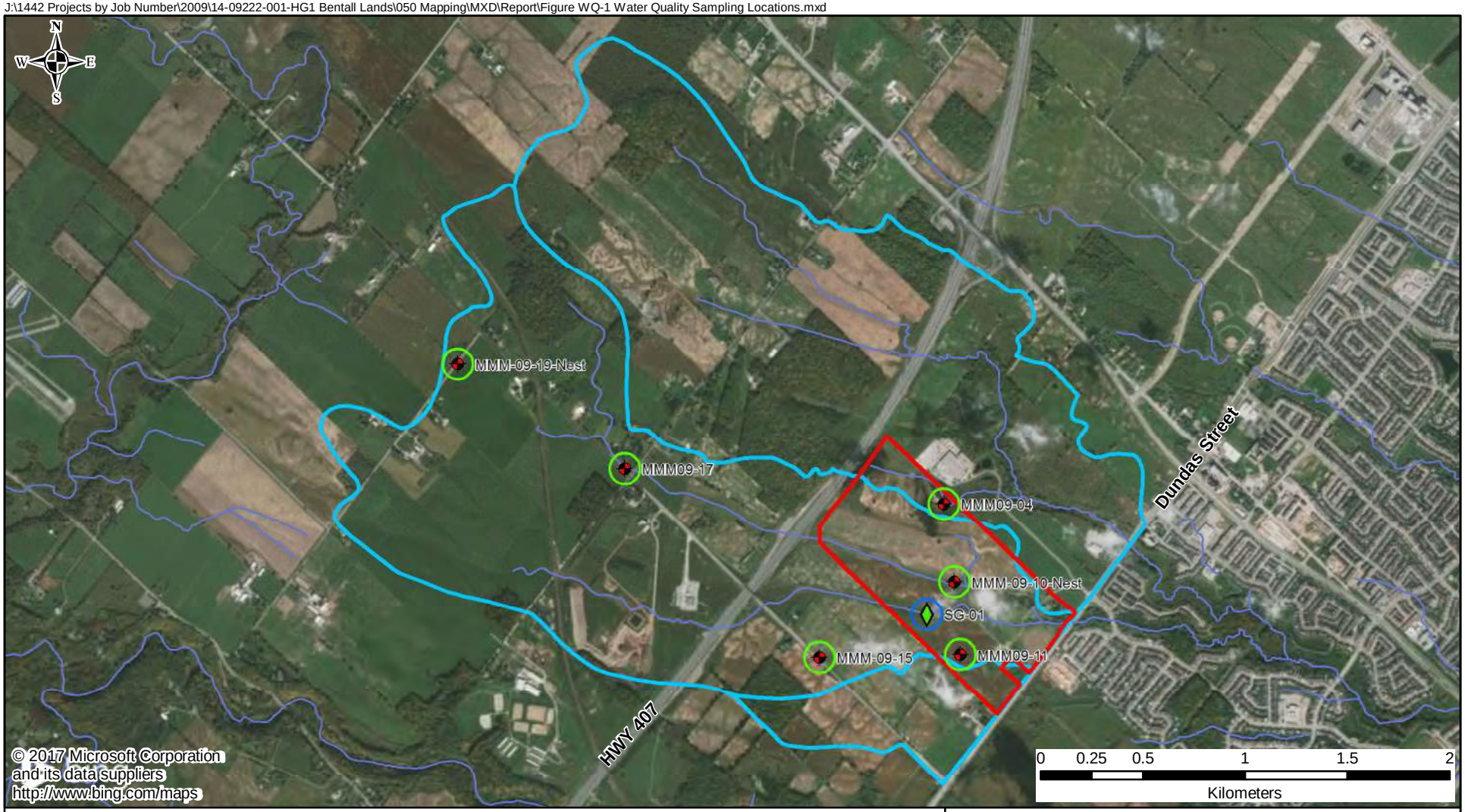
Flow Estimates

Bentall Lands Oakville - October 18-19, 2010

	Bank Edge			Bank Edge	Sums/Avgs
FMP-5/MP-03					
Length (m)	1.00				
Upstream Cross-Section (25% weighted contribution)					
Width (m)	0.20				
Depth (m)	0.04	0.04	0.04		
Sub-Section Location (m)	0.000	0.100	0.200		
Sub-section Width (m)		0.100	0.100		0.200
Sub-Section Depth (m)	0.040	0.040	0.040		
Areas (m^2)		0.004	0.002		0.006
Midpoint Cross-Section (50% weighted contribution)					
Width (m)	0.20				
Depth (m)	0.06	0.05	0.03		
Sub-Section Location (m)	0.000	0.100	0.200		
Sub-section Width (m)		0.100	0.100		0.200
Sub-Section Depth (m)	0.060	0.050	0.030		
Areas (m^2)		0.006	0.002		0.007
Downstream Cross-Section (25% weighted contribution)					
Width (m)	0.20				
Depth (m)	0.03	0.04	0.03		
Sub-Section Location (m)	0.000	0.100	0.200		
Sub-section Width (m)		0.100	0.100		0.200
Sub-Section Depth (m)	0.030	0.040	0.030		
Areas (m^2)		0.004	0.002		0.005
Weighted Cross-Sectional Area (m^2)					0.006
Length of Run (m)	1.00				
Run # -->	1	2	3		
Time (seconds)	4.24	4.77	4.30		
	4	5	6		
	4.00			4.33	
Avg. Vel	0.231	m/sec			
Q=vA	0.001	m^3/sec			
(ignores friction so these	83.2	L/min			
may be overestimated)	18.3	igpm			

APPENDIX 4-6
Ground Water and Surface Water Quality

J:\1442 Projects by Job Number\2009\14-09222-001-HG1 Bentall Lands\050 Mapping\MXD\Report\Figure WQ-1 Water Quality Sampling Locations.mxd



Legend

- Subject Property
- Subcatchment Areas
- Watercourse

Monitoring Locations

- Surface Water Sample (Staff Gauge)
- Groundwater Samples (Monitoring Wells)

Client: **QuadReal**

Title: **Water Quality Sampling locations**

Prepared By: WSP

09M-00013-01	Scale as Shown	Review: AK
Date: May 2019		
© Queen's Printer for Ontario		

Figure: WQ-1

Figure WQ-2
Selected General Chemistry and Metal Parameter Concentrations
Oakville, Ontario

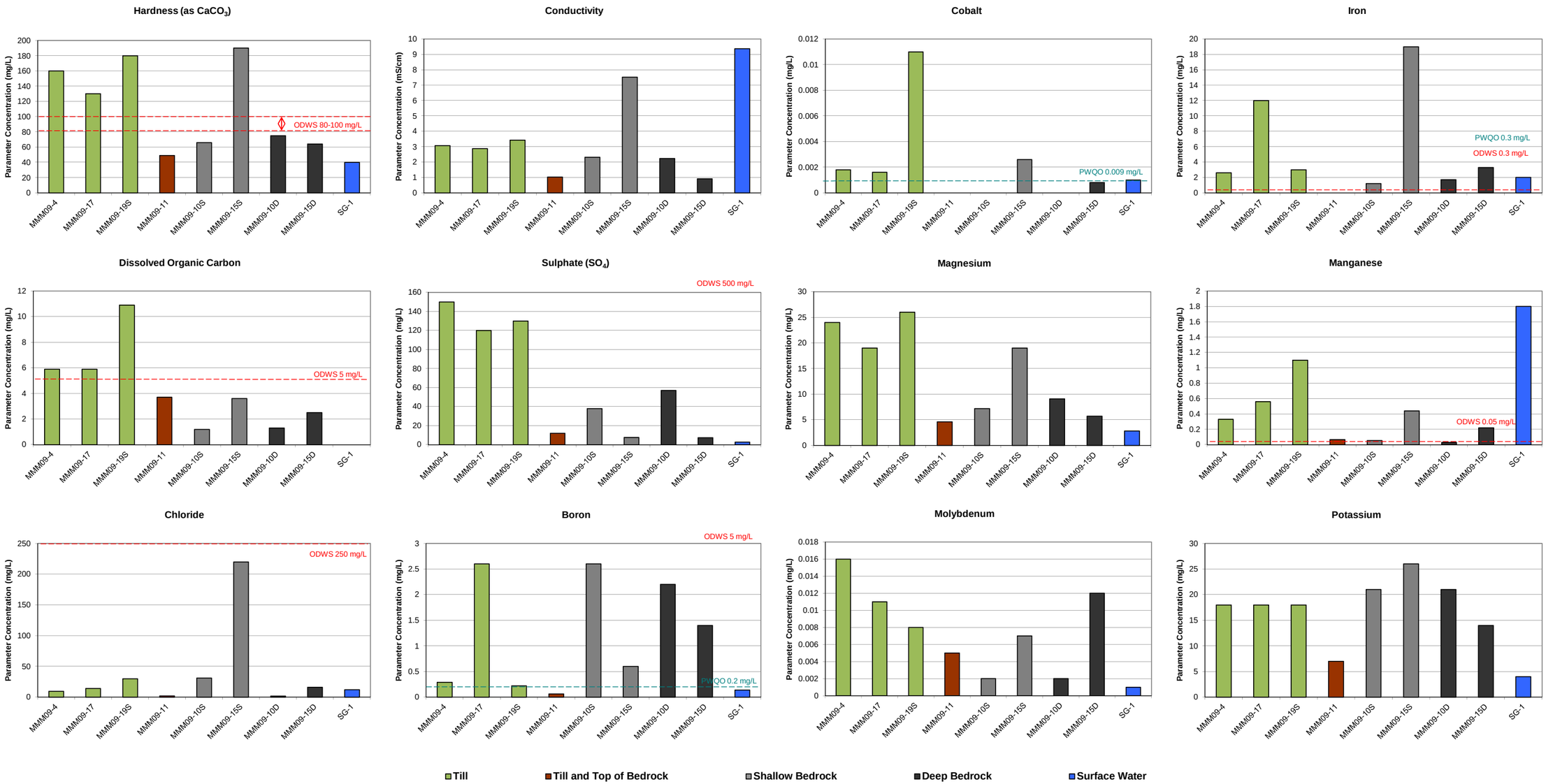
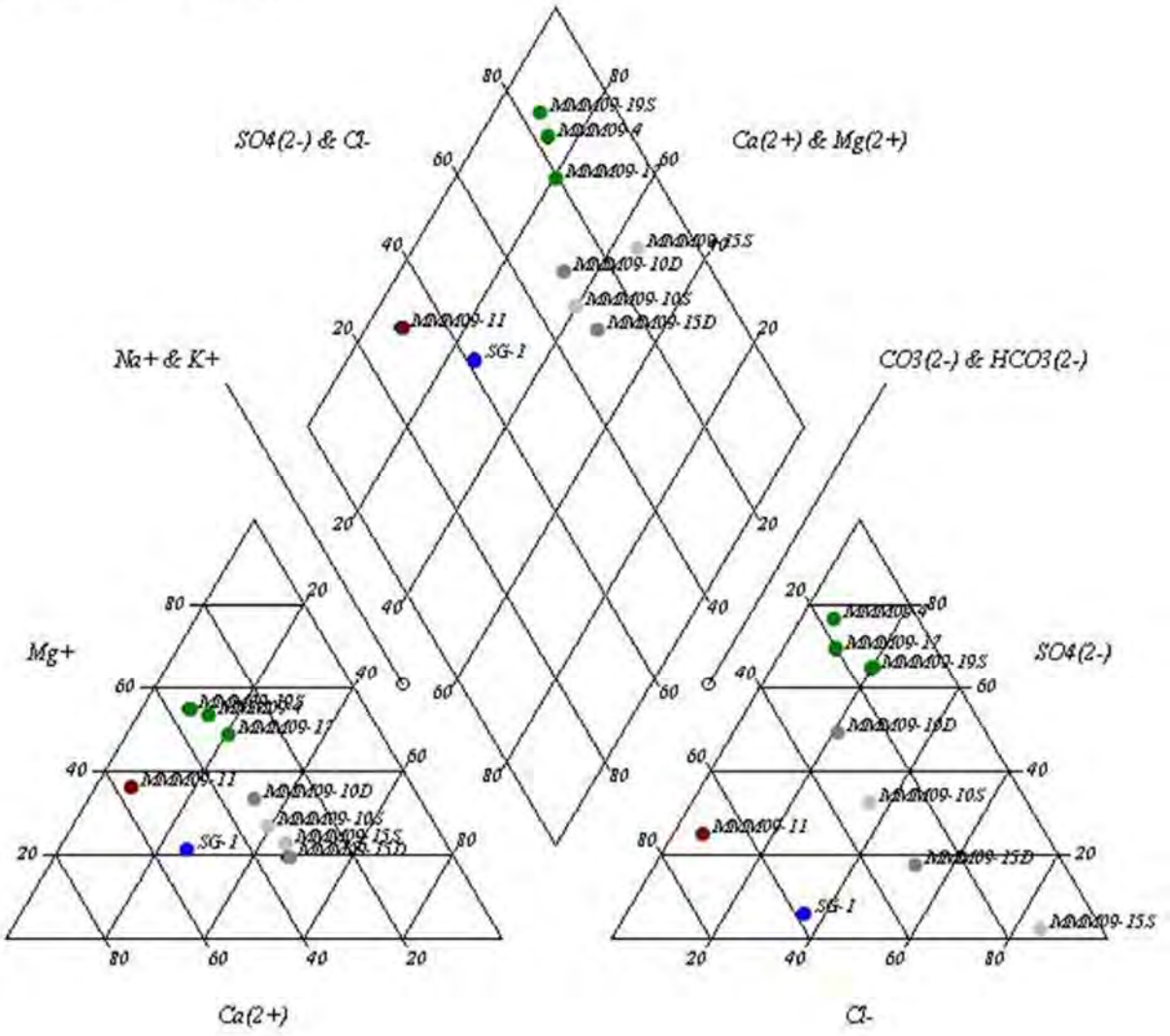


Figure WQ-3
Piper / Trilinear Plot
Oakville, Ontario

Triplot Results:

9 points (Data Provided in MEq).



Source: http://www.rime.com.au/triplot/triplot.html

Table WQ-1
Summary of Water Quality Results
Dissolved Metals
Oakville, Ontario

Parameter	PWQO	ODWS	RDL	MMM09-4	RDL	MMM09-17	FD-1 (MMM09-17)	MMM09-19S	RDL	MMM09-11	MMM09-10S	RDL	MMM09-15S	RDL	MMM09-10D	RDL	MMM09-15D	RDL	SG-1
Date Sampled -->	mg/L			24-Sept-2009		24-Jan-2010	24-Jan-2010	24-Jan-2010		24-Sept-2009	24-Sept-2009		24-Jan-2010		24-Sept-2009		24-Jan-2010		24-Sept-2009
Dissolved Aluminum (Al)	0.075	0.1	0.005	0.012	0.005	0.009	0.006	0.006	0.005	0.006	<0.005	0.005	0.005	0.005	<0.005	0.005	0.007	0.005	**(1.6)**
Dissolved Antimony (Sb)	0.02	0.006	0.0005	0.0006	0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	0.0005	<0.0005	0.0005	<0.0005	0.0005	<0.0005	0.0005	(<0.0005)
Dissolved Arsenic (As)	0.1	0.025	0.001	0.003	0.001	0.006	0.006	0.001	0.001	<0.001	0.003	0.001	0.006	0.001	<0.001	0.001	0.002	0.001	(0.002)
Dissolved Barium (Ba)	NV	1	0.005	0.007	0.005	0.027	0.027	0.005	0.005	0.036	0.023	0.005	0.24	0.005	0.015	0.005	0.17	0.005	(0.095)
Dissolved Beryllium (Be)	1.1	NV	0.0005	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.005	<0.0005	0.0005	<0.0005	0.0005	<0.0005	0.0005	<0.0005	0.0005	(<0.0005)
Dissolved Bismuth (Bi)	NV	NV	0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001	-
Dissolved Boron (B)	0.2	5	0.01	**0.29**	0.01	**2.6**	**2.6**	**0.22**	0.01	0.063	**2.6**	0.01	**0.6**	0.01	**2.2**	0.01	**1.4**	0.01	(0.14)
Dissolved Cadmium (Cd)	0.0002	0.005	0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0002	0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	0.0001	(<0.0001)
Dissolved Calcium (Ca)	NV	NV	0.2	240	0.2	200	200	280	0.2	120	150	0.2	450	0.2	150	0.2	160	0.2	115 (95)
Dissolved Chromium (Cr)	NV	0.05	0.005	<0.005	0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	0.005	<0.005	0.005	<0.005	0.005	<0.005	0.005	(<0.005)
Dissolved Cobalt (Co)	0.0009	NV	0.0005	**0.0018**	0.0005	**0.0016**	**0.0016**	**0.011**	0.0005	<0.0005	<0.0005	0.0005	**0.0026**	0.0005	<0.0005	0.0005	0.0008	0.0005	**(0.001)**
Dissolved Copper (Cu)	0.005	1	0.001	<0.001	0.001	<0.001	<0.001	0.002	0.001	0.003	0.002	0.001	0.002	0.001	<0.001	0.001	<0.001	0.001	**(0.006)**
Dissolved Iron (Fe)	0.3	0.3	0.1	**2.6**	0.1	**12**	**12**	**3**	0.1	<0.1	**1.2**	0.1	**19**	0.1	**1.7**	0.1	**3.3**	0.1	**(2)**
Dissolved Lead (Pb)	0.025	0.01	0.0005	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	0.0005	<0.0005	0.0005	<0.0005	0.0005	<0.0005	0.0005	(0.0011)
Dissolved Magnesium (Mg)	NV	NV	0.05	240	0.05	190	190	260	0.05	46	72	0.05	190	0.05	91	0.05	57	0.05	28.2 (25)
Dissolved Manganese (Mn)	NV	0.05	0.002	**0.33**	0.002	**0.56**	**0.54**	**1.1**	0.002	**0.066**	**0.055**	0.002	**0.44**	0.002	0.029	0.002	**0.22**	0.002	**(1.8)**
Dissolved Molybdenum (Mo)	0.04	NV	0.001	0.016	0.001	0.011	0.011	0.008	0.001	0.005	0.002	0.001	0.007	0.001	0.002	0.001	0.012	0.001	(0.001)
Dissolved Nickel (Ni)	0.025	NV	0.001	0.006	0.001	0.004	0.005	0.012	0.001	<0.001	<0.001	0.001	<0.005	0.001	0.002	0.001	0.002	0.001	(0.002)
Dissolved Phosphorus (P)	NV	NV	0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	(0.16)
Dissolved Potassium (K)	NV	NV	0.2	18	0.2	18	18	18	0.2	7	21	0.2	26	0.2	21	0.2	14	0.2	4 (4)
Dissolved Selenium (Se)	0.1	0.01	0.002	<0.002	0.002	<0.002	<0.002	0.005	0.002	<0.002	<0.002	0.002	<0.002	0.002	<0.002	0.002	<0.002	0.002	(<0.002)
Dissolved Silicon (Si)	NV	NV	0.05	6.9	0.05	7.5	7.4	6.7	0.05	7.4	6.3	0.05	7.5	0.05	5.6	0.05	3.7	0.05	(6.1)
Dissolved Silver (Ag)	0.0001	NV	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	**0.0002**	0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	0.0001	(<0.0001)
Dissolved Sodium (Na)	NV	200	0.1	110	0.1	140	140	74	0.1	13	190	0.1	**700**	0.1	160	0.1	**250**	0.1	61.2 (50)
Dissolved Strontium (Sr)	NV	NV	0.001	7	0.001	5.9	5.8	1.9	0.001	1.9	23	0.001	36	0.001	25	0.001	9.3	0.001	-
Dissolved Thallium (Tl)	0.0003	NV	5E-05	0.00006	5E-05	<0.00005	<0.00005	<0.00005	5E-05	<0.00005	0.00005	5E-05	<0.00005	5E-05	<0.00005	5E-05	<0.00005	5E-05	(<0.00005)
Dissolved Titanium (Ti)	NV	NV	0.005	<0.005	0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	0.005	<0.005	0.005	<0.005	0.005	<0.005	0.005	-
Dissolved Tungsten (W)	NV	NV	0.001	-		-	-	-	0.001	-	-		-	0.001	-		-	0.001	(<0.001)
Dissolved Uranium (U)	0.005	0.02	0.0001	**0.014**	0.0001	**0.0092**	**0.0088**	**0.016**	0.0001	**0.0058**	0.0003	0.0001	**0.011**	0.0001	0.0003	0.0001	0.0036	0.0001	(0.0015)
Dissolved Vanadium (V)	0.006	NV	0.001	<0.001	0.001	0.002	0.002	0.002	0.001	<0.001	0.002	0.001	<0.005	0.001	<0.001	0.001	<0.001	0.001	(0.003)
Dissolved Zinc (Zn)	0.03	5	0.005	<0.005	0.005	**0.22**	**0.2**	**4.4**	0.005	0.006	0.007	0.005	**0.31**	0.005	<0.005	0.005	**0.038**	0.005	**(0.032)**
Dissolved Zirconium (Zr)	NV	NV	0.001	-		-	-	-	0.001	-	-		-	0.001	-		-	0.001	(0.001)

All units in mg/L, unless otherwise stated

NV: No Value

PWQO:Water Management, Policies, Guidelines, Provincial Water Quality Objectives, Ministry of Environment and Energy, July 1994, revised February 1999, Appendix A, Table 2 - Table of PWQOs and Interim PWQOs

ODWS: Technical Support Document for Ontario Drinking Water; Standards, Objectives and Guidelines, June 2003, Table 2 - Chemical Standards and Table 4 - Chemical/Physical Objectives and Guidelines

(0.01) Total Calcium

100 Exceeds PWQO

100 Exceeds ODWS

100 Exceeds ODWS and PWQO

Table WQ-2
Summary of Water Quality Results
Inorganic Parameters
Oakville, Ontario

Parameter **Date Sampled -->**	PWQO	ODWS	Units	RDL	**MMM09-4** **24-Sept-2009**	RDL	**MMM09-17** **24-Jan-2010**	**FD-1 (MMM09-17)** **24-Jan-2010**	**MMM09-19S** **24-Jan-2010**	RDL	**MMM09-11** **24-Sept-2009**	**MMM09-10S** **24-Sept-2009**	RDL	**MMM09-15S** **24-Jan-2010**	RDL	**MMM09-10D** **24-Sept-2009**	RDL	**MMM09-15D** **24-Jan-2010**	RDL	**SG-1** **24-Sept-2009**
Anion Sum	NV	NV	me/L	N/A	40.5	N/A	35.8	36	43.1	N/A	11.9	24.5	N/A	72.2	N/A	24	N/A	8.69	N/A	-
Bicarb. Alkalinity (calc. as CaCO3)	NV	NV	mg/L	1	347	1	367	368	326	1	347	385	1	453	1	358	1	129	1	272
Carb. Alkalinity (calc. as CaCO3)	NV	NV	mg/L	1	1	1	2	2	1	1	2	2	1	1	1	2	1	1	1	2
Total Alkalinity (as CaCO3)	NV	30-500	mg/L	1	348	1	369	370	328	1	349	387	1	454	1	359	1	130	1	274
Cation Sum	NV	NV	me/L	N/A	36.8	N/A	32.8	32.6	39	N/A	10.5	22.2	N/A	69.8	N/A	22.5	N/A	24	N/A	-
Hardness (CaCO3)	NV	80-100	mg/L	1	**1600**	1	**1300**	**1300**	**1800**	1	**490**	**660**	1	**1900**	1	**750**	1	**640**	1	**400**
Ion Balance (% Difference)	NV	NV	%	N/A	4.79	N/A	4.28	4.87	4.95	N/A	6.28	5.07	N/A	1.66	N/A	3.17	N/A	46.8	N/A	-
Langelier Index (@ 20C)	NV	NV	N/A	N/A	0.898		0.959	0.962	0.834	N/A	0.842	0.85		1.02	N/A	0.852		0.856	N/A	0.852
Langelier Index (@ 4C)	NV	NV	N/A	N/A	0.656		0.716	0.718	0.592	N/A	0.595	0.605		0.783	N/A	0.607		0.61	N/A	0.605
Saturation pH (@ 20C)	NV	NV	N/A	N/A	6.76		6.79	6.79	6.72	N/A	6.88	6.84		6.44	N/A	6.87		7.2	N/A	6.98
Saturation pH (@ 4C)	NV	NV	N/A	N/A	7		7.03	7.04	6.96	N/A	7.13	7.08		6.68	N/A	7.11		7.45	N/A	7.22
Total Ammonia-N	NV	NV	mg/L	0.05	0.32	0.05	0.33	0.48	0.33	0.05	0.07	1.3	0.05	0.42	0.05	2	0.05	0.82	0.05	0.29
- Unionized Ammonia - Calculated	0.02	NV	mg/L	N/A	0.003		0.003	0.005	0.002	N/A	0.001	0.011		0.002	N/A	0.017		0.017	N/A	0.003
Calculated TDS	NV	500	mg/L	1	**2410**	1	**2110**	**2120**	**2490**	1	**665**	**1380**	1	**3930**	1	**1400**	1	**805**	1	-
Conductivity	NV	NV	umho/cm	1	3070	1	2870	2860	3430	1	1030	2310	1	7520	1	2230	1	918	1	937
Dissolved Organic Carbon	NV	5	mg/L	0.2	**5.9**	0.2	**5.9**	**5.9**	**10.9**	0.2	3.7	1.2	0.2	3.6	0.2	1.3	0.2	2.5	0.2	-
Total Organic Carbon (TOC)	NV	NV	mg/L	0.2	-	-	-	-	-	0.2	-	-	-	-	0.2	-	-	-	0.2	9.5
Orthophosphate (P)	NV	NV	mg/L	0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01
pH	6.5 - 8.5	6.5-8.5	pH	pH	7.7	pH	7.7	7.8	7.6	pH	7.7	7.7	pH	7.5	pH	7.7	pH	8.1	pH	7.8
Dissolved Sulphate (SO4)	NV	500	mg/L	10	**1500**	10	**1200**	**1200**	**1300**	10	120	380	10	75	10	**570**	10	74	10	27
Dissolved Chloride (Cl)	NV	250	mg/L	1	95	1	140	140	**300**	1	21	**310**	1	**2200**	1	180	1	160	1	120
Nitrite (N)	NV	1	mg/L	0.01	<0.01	0.01	<0.01	<0.01	0.02	0.01	0.08	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01
Nitrate (N)	NV	10	mg/L	0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	**25**	<0.1	0.1	<0.1	0.1	<0.1	0.1	0.4	0.1	<0.1

Notes:
All units in mg/L, unless otherwise stated
NV: No Value

Unionized Ammonia: The percentages of un-ionized ammonia (NH3) in aqueous ammonia solution is different for different temperature and pH conditions listed in a table within the PWQO that lists the percentage contribution of un-ionized ammonia relative to total ammonia. For example, at a pH of 8.0 and at a temperature of 11C, un-ionized ammonia will comprise approximately 2.0% of the total ammonia concentration.

PWQO:Water Management, Policies, Guidelines, Provincial Water Quality Objectives, Ministry of Environment and Energy, July 1994, revised February 1999, Appendix A, Table 2 - Table of PWQOs and Interim PWQOs
ODWS: Technical Support Document for Ontario Drinking Water; Standards, Objectives and Guidelines, June 2003, Table 2 - Chemical Standards and Table 4 - Chemical/Physical Objectives and Guidelines

100	Exceeds PWQO
100	Exceeds ODWS
100	Exceeds ODWS and PWQO

Your Project #: 14-09222-001-HG1
Site: 407 WEST AREA , OAKVILLE
Your C.O.C. #: 16404601, 164046-0

Attention: Annette Blazeiko
MMM GROUP LIMITED
100 Commerce Valley Dr W
Thornhill, ON
CANADA L3T 0A1

Report Date: 2009/10/02

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A9C6886
Received: 2009/09/24, 17:40

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Alkalinity	5	N/A	2009/09/30	CAM SOP-00448	SM 2320B
Carbonate, Bicarbonate and Hydroxide	5	N/A	2009/10/01		
Chloride by Automated Colourimetry	5	N/A	2009/10/01	CAM SOP-00463	SM 4500 Cl E
Conductivity	5	N/A	2009/09/30	CAM SOP-00448	SM 2510
Dissolved Organic Carbon (DOC)	4	N/A	2009/09/30	CAM SOP-00446	SM 5310 B
Hardness (calculated as CaCO3)	1	N/A	2009/09/30	CAM SOP 0102	SM 2340 B
Hardness (calculated as CaCO3)	3	N/A	2009/10/01	CAM SOP 0102	SM 2340 B
Hardness (calculated as CaCO3)	1	N/A	2009/10/02	CAM SOP 0102	SM 2340 B
Lab Filtered Metals Analysis by ICP	1	2009/10/01	2009/10/01	CAM SOP-00408	EPA 6010
Dissolved Metals by ICPMS	1	N/A	2009/09/29	CAM SOP-00447	EPA 6020
Dissolved Metals by ICPMS	3	N/A	2009/10/01	CAM SOP-00447	EPA 6020
Total Metals Analysis by ICPMS	1	N/A	2009/10/01	CAM SOP-00447	EPA 6020
Ion Balance (% Difference)	4	N/A	2009/10/01		
Anion and Cation Sum	4	N/A	2009/10/01		
Ammonia-N	5	N/A	2009/10/01	CAM SOP-00441	US GS I-2522-90
Nitrate (NO3) and Nitrite (NO2) in Water (1)	5	N/A	2009/09/29	CAM SOP-00440	SM 4500 NO3I/NO2B
pH	5	N/A	2009/09/30	CAM SOP-00448	SM 4500H
Orthophosphate	5	N/A	2009/10/01	CAM SOP-00461	SM 4500 P-F
Sat. pH and Langelier Index (@ 20C)	4	N/A	2009/10/01		
Sat. pH and Langelier Index (@ 20C)	1	N/A	2009/10/02		
Sat. pH and Langelier Index (@ 4C)	4	N/A	2009/10/01		
Sat. pH and Langelier Index (@ 4C)	1	N/A	2009/10/02		
Sulphate by Automated Colourimetry	5	N/A	2009/10/01	CAM SOP-00464	EPA 375.4
Total Dissolved Solids (TDS calc)	4	N/A	2009/10/01		
Total Dissolved Solids (TDS calc)	1	N/A	2009/10/02		
Total Organic Carbon (TOC)	1	N/A	2009/10/01	CAM SOP-00446	EPA 415.1 modified
Total Phosphorus (Colourimetric)	1	2009/09/30	2009/10/02	CAM SOP-00407	APHA 4500 P,B,F
Turbidity	1	N/A	2009/09/28	CAM SOP-00417	APHA 2130

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

(1) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

../2

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SEAN CONACHER, Project Manager
Email: Sean.Conacher@maxxamanalytics.com
Phone# (905) 817-5700 Ext:5806

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		DU9940			DU9941			DU9942		DU9943	DU9943		
Sampling Date		2009/09/24			2009/09/24			2009/09/24		2009/09/24	2009/09/24		
	Units	**MMM09-10D**	**RDL**	**QC Batch**	**MMM09-10S**	**RDL**	**QC Batch**	**MMM09-11**	**RDL**	**MMM09-4**	**MMM09-4 Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters													
Anion Sum	me/L	24.0	N/A	1950921	24.5	N/A	1950921	11.9	N/A	40.5		N/A	1950921
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	358	1	1950917	385	1	1950917	347	1	347		1	1950917
Calculated TDS	mg/L	1400	1	1950926	1380	1	1950926	665	1	2410		1	1950926
Carb. Alkalinity (calc. as CaCO3)	mg/L	2	1	1950917	2	1	1950917	2	1	1		1	1950917
Cation Sum	me/L	22.5	N/A	1950921	22.2	N/A	1950921	10.5	N/A	36.8		N/A	1950921
Hardness (CaCO3)	mg/L	750	1	1950919	660	1	1950919	490	1	1600		1	1950919
Ion Balance (% Difference)	%	3.17	N/A	1950920	5.07	N/A	1950920	6.28	N/A	4.79		N/A	1950920
Langelier Index (@ 20C)	N/A	0.852		1950923	0.850		1950923	0.842		0.898			1950923
Langelier Index (@ 4C)	N/A	0.607		1950924	0.605		1950924	0.595		0.656			1950924
Saturation pH (@ 20C)	N/A	6.87		1950923	6.84		1950923	6.88		6.76			1950923
Saturation pH (@ 4C)	N/A	7.11		1950924	7.08		1950924	7.13		7.00			1950924
Inorganics													
Total Ammonia-N	mg/L	2.0	0.05	1955758	1.3	0.05	1955758	0.07	0.05	0.32		0.05	1955758
Conductivity	umho/cm	2230	1	1956461	2310	1	1956461	1030	1	3070	3070	1	1956461
Dissolved Organic Carbon	mg/L	1.3	0.2	1955991	1.2	0.2	1955991	3.7	0.2	5.9		0.2	1955991
Orthophosphate (P)	mg/L	<0.01	0.01	1956603	<0.01	0.01	1956603	<0.01	0.01	<0.01		0.01	1956603
pH	pH	7.7		1956460	7.7		1956460	7.7		7.7	7.7		1956460
Dissolved Sulphate (SO4)	mg/L	570	5	1956605	380	1	1956605	120	1	1500		10	1956605
Alkalinity (Total as CaCO3)	mg/L	359	1	1956459	387	1	1956459	349	1	348	345	1	1956459
Dissolved Chloride (Cl)	mg/L	180	2	1956600	310	5	1956600	21	1	95		1	1956600
Nitrite (N)	mg/L	<0.01	0.01	1953404	<0.01	0.01	1953404	0.08	0.01	<0.01		0.01	1953404
Nitrate (N)	mg/L	<0.1	0.1	1953404	<0.1	0.1	1953404	25	1	<0.1		0.1	1953404
p-Alkalinity	mg/L	<1	1	1956459	<1	1	1956459	<1	1	<1	<1	1	1956459
Nitrate + Nitrite	mg/L	<0.1	0.1	1953404	<0.1	0.1	1953404	25	1	<0.1		0.1	1953404

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		DU9940			DU9941			DU9942		DU9943	DU9943		
Sampling Date		2009/09/24			2009/09/24			2009/09/24		2009/09/24	2009/09/24		
	Units	**MMM09-10D**	**RDL**	**QC Batch**	**MMM09-10S**	**RDL**	**QC Batch**	**MMM09-11**	**RDL**	**MMM09-4**	**MMM09-4 Lab-Dup**	**RDL**	**QC Batch**
Metals													
Dissolved Aluminum (Al)	ug/L	<5	5	1956731	<5	5	1954827	6	5	12		5	1956731
Dissolved Antimony (Sb)	ug/L	<0.5	0.5	1956731	<0.5	0.5	1954827	<0.5	0.5	0.6		0.5	1956731
Dissolved Arsenic (As)	ug/L	1	1	1956731	3	1	1954827	<1	1	3		1	1956731
Dissolved Barium (Ba)	ug/L	15	5	1956731	23	5	1954827	36	5	7		5	1956731
Dissolved Beryllium (Be)	ug/L	<0.5	0.5	1956731	<0.5	0.5	1954827	<0.5	0.5	<0.5		0.5	1956731
Dissolved Bismuth (Bi)	ug/L	<1	1	1956731	<1	1	1954827	<1	1	<1		1	1956731
Dissolved Boron (B)	ug/L	2200	10	1956731	2600	10	1954827	63	10	290		10	1956731
Dissolved Cadmium (Cd)	ug/L	<0.1	0.1	1956731	<0.1	0.1	1954827	<0.1	0.1	<0.1		0.1	1956731
Dissolved Calcium (Ca)	ug/L	150000	200	1956731	150000	200	1954827	120000	200	240000		200	1956731
Dissolved Chromium (Cr)	ug/L	<5	5	1956731	<5	5	1954827	<5	5	<5		5	1956731
Dissolved Cobalt (Co)	ug/L	<0.5	0.5	1956731	<0.5	0.5	1954827	<0.5	0.5	1.8		0.5	1956731
Dissolved Copper (Cu)	ug/L	<1	1	1956731	2	1	1954827	3	1	<1		1	1956731
Dissolved Iron (Fe)	ug/L	1700	100	1956731	1200	100	1954827	<100	100	2600		100	1956731
Dissolved Lead (Pb)	ug/L	<0.5	0.5	1956731	<0.5	0.5	1954827	<0.5	0.5	<0.5		0.5	1956731
Dissolved Magnesium (Mg)	ug/L	91000	50	1956731	72000	50	1954827	46000	50	240000		50	1956731
Dissolved Manganese (Mn)	ug/L	29	2	1956731	55	2	1954827	66	2	330		2	1956731
Dissolved Molybdenum (Mo)	ug/L	2	1	1956731	2	1	1954827	5	1	16		1	1956731
Dissolved Nickel (Ni)	ug/L	2	1	1956731	<1	1	1954827	<1	1	6		1	1956731
Dissolved Phosphorus (P)	ug/L	<100	100	1956731	<100	100	1954827	<100	100	<100		100	1956731
Dissolved Potassium (K)	ug/L	21000	200	1956731	21000	200	1954827	7000	200	18000		200	1956731
Dissolved Selenium (Se)	ug/L	<2	2	1956731	<2	2	1954827	<2	2	<2		2	1956731
Dissolved Silicon (Si)	ug/L	5600	50	1956731	6300	50	1954827	7400	50	6900		50	1956731
Dissolved Silver (Ag)	ug/L	<0.1	0.1	1956731	0.2	0.1	1954827	<0.1	0.1	<0.1		0.1	1956731
Dissolved Sodium (Na)	ug/L	160000	100	1956731	190000	100	1954827	13000	100	110000		100	1956731
Dissolved Strontium (Sr)	ug/L	25000	1	1956731	23000	1	1954827	1900	1	7000		1	1956731
Dissolved Thallium (Tl)	ug/L	<0.05	0.05	1956731	0.05	0.05	1954827	<0.05	0.05	0.06		0.05	1956731
Dissolved Titanium (Ti)	ug/L	<5	5	1956731	<5	5	1954827	<5	5	<5		5	1956731
Dissolved Uranium (U)	ug/L	0.3	0.1	1956731	0.3	0.1	1954827	5.8	0.1	14		0.1	1956731
Dissolved Vanadium (V)	ug/L	<1	1	1956731	2	1	1954827	<1	1	1		1	1956731
Dissolved Zinc (Zn)	ug/L	<5	5	1956731	7	5	1954827	6	5	<5		5	1956731

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

RCAP - SURFACE WATER (WATER)

Maxxam ID		DU9939	DU9939		
Sampling Date		2009/09/24	2009/09/24		
	Units	**SG1**	**SG1 Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters					
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	272		1	1950917
Carb. Alkalinity (calc. as CaCO3)	mg/L	2		1	1950917
Hardness (CaCO3)	mg/L	400		1	1950919
Langelier Index (@ 20C)	N/A	0.852			1950923
Langelier Index (@ 4C)	N/A	0.605			1950924
Saturation pH (@ 20C)	N/A	6.98			1950923
Saturation pH (@ 4C)	N/A	7.22			1950924
Inorganics					
Total Ammonia-N	mg/L	0.29		0.05	1955758
Conductivity	umho/cm	937		1	1956461
Total Organic Carbon (TOC)	mg/L	9.5		0.2	1955919
Orthophosphate (P)	mg/L	<0.01		0.01	1956603
pH	pH	7.8			1956460
Total Phosphorus	mg/L	0.16		0.002	1956010
Dissolved Sulphate (SO4)	mg/L	27		1	1956605
Turbidity	NTU	48		0.1	1951932
Alkalinity (Total as CaCO3)	mg/L	274		1	1956459
Dissolved Chloride (Cl)	mg/L	120		1	1956600
Nitrite (N)	mg/L	<0.01		0.01	1953404
Nitrate (N)	mg/L	<0.1		0.1	1953404

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

RCAP - SURFACE WATER (WATER)

Maxxam ID		DU9939	DU9939		
Sampling Date		2009/09/24	2009/09/24		
	Units	**SG1**	**SG1 Lab-Dup**	**RDL**	**QC Batch**
Metals					
Dissolved Calcium (Ca)	mg/L	115	115	0.05	1957621
Dissolved Magnesium (Mg)	mg/L	28.2	28.0	0.05	1957621
Dissolved Potassium (K)	mg/L	4	4	1	1957621
Dissolved Sodium (Na)	mg/L	61.2	61.7	0.5	1957621
Total Aluminum (Al)	ug/L	1600		5	1957498
Total Antimony (Sb)	ug/L	<0.5		0.5	1957498
Total Arsenic (As)	ug/L	2		1	1957498
Total Barium (Ba)	ug/L	95		5	1957498
Total Beryllium (Be)	ug/L	<0.5		0.5	1957498
Total Boron (B)	ug/L	140		10	1957498
Total Cadmium (Cd)	ug/L	<0.1		0.1	1957498
Total Calcium (Ca)	ug/L	95000		200	1957498
Total Chromium (Cr)	ug/L	<5		5	1957498
Total Cobalt (Co)	ug/L	1.0		0.5	1957498
Total Copper (Cu)	ug/L	6		1	1957498
Total Iron (Fe)	ug/L	2000		100	1957498
Total Lead (Pb)	ug/L	1.1		0.5	1957498
Total Magnesium (Mg)	ug/L	25000		50	1957498
Total Manganese (Mn)	ug/L	1800		2	1957498
Total Molybdenum (Mo)	ug/L	1		1	1957498
Total Nickel (Ni)	ug/L	2		1	1957498
Total Potassium (K)	ug/L	4000		200	1957498
Total Selenium (Se)	ug/L	<2		2	1957498
Total Silicon (Si)	ug/L	6100		50	1957498
Total Silver (Ag)	ug/L	<0.1		0.1	1957498
Total Sodium (Na)	ug/L	50000		100	1957498
Total Thallium (Tl)	ug/L	<0.05		0.05	1957498
Total Tungsten (W)	ug/L	<1		1	1957498
Total Uranium (U)	ug/L	1.5		0.1	1957498
Total Vanadium (V)	ug/L	3		1	1957498
Total Zinc (Zn)	ug/L	32		5	1957498
Total Zirconium (Zr)	ug/L	1		1	1957498

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

RESULTS OF ANALYSES OF WATER

Maxxam ID		DU9939		
Sampling Date		2009/09/24		
	Units	**SG1**	**RDL**	**QC Batch**
Calculated Parameters				
Calculated TDS	mg/L	534	1	1950926

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
1951932	Turbidity	2009/09/28					<0.1	NTU	NC	25	99	85 - 115
1953404	Nitrite (N)	2009/09/29	97	75 - 125	105	80 - 120	<0.01	mg/L	NC	25		
1953404	Nitrate (N)	2009/09/29	95	75 - 125	99	80 - 120	<0.1	mg/L	NC	25		
1953404	Nitrate + Nitrite	2009/09/29					<0.1	mg/L	NC	25		
1954827	Dissolved Aluminum (Al)	2009/09/29	95	80 - 120	98	90 - 110	<5	ug/L				
1954827	Dissolved Antimony (Sb)	2009/09/29	103	80 - 120	102	90 - 110	<0.5	ug/L				
1954827	Dissolved Arsenic (As)	2009/09/29	104	80 - 120	101	90 - 110	<1	ug/L				
1954827	Dissolved Barium (Ba)	2009/09/29	NC	80 - 120	101	90 - 110	<5	ug/L				
1954827	Dissolved Beryllium (Be)	2009/09/29	96	80 - 120	100	90 - 110	<0.5	ug/L				
1954827	Dissolved Bismuth (Bi)	2009/09/29	87	80 - 120	101	90 - 110	<1	ug/L				
1954827	Dissolved Boron (B)	2009/09/29	97	80 - 120	97	90 - 110	<10	ug/L				
1954827	Dissolved Cadmium (Cd)	2009/09/29	94	80 - 120	100	90 - 110	<0.1	ug/L				
1954827	Dissolved Calcium (Ca)	2009/09/29	NC	80 - 120	99	90 - 110	<200	ug/L				
1954827	Dissolved Chromium (Cr)	2009/09/29	101	80 - 120	102	90 - 110	<5	ug/L				
1954827	Dissolved Cobalt (Co)	2009/09/29	96	80 - 120	99	90 - 110	<0.5	ug/L				
1954827	Dissolved Copper (Cu)	2009/09/29	91	80 - 120	99	90 - 110	<1	ug/L				
1954827	Dissolved Iron (Fe)	2009/09/29	99	80 - 120	102	90 - 110	<100	ug/L				
1954827	Dissolved Lead (Pb)	2009/09/29	92	80 - 120	102	90 - 110	<0.5	ug/L	NC	25		
1954827	Dissolved Magnesium (Mg)	2009/09/29	NC	80 - 120	98	90 - 110	<50	ug/L				
1954827	Dissolved Manganese (Mn)	2009/09/29	NC	80 - 120	100	90 - 110	<2	ug/L				
1954827	Dissolved Molybdenum (Mo)	2009/09/29	107	80 - 120	100	90 - 110	<1	ug/L				
1954827	Dissolved Nickel (Ni)	2009/09/29	94	80 - 120	99	90 - 110	<1	ug/L				
1954827	Dissolved Phosphorus (P)	2009/09/29	107	80 - 120	95	90 - 110	<100	ug/L				
1954827	Dissolved Potassium (K)	2009/09/29	101	80 - 120	96	90 - 110	<200	ug/L				
1954827	Dissolved Selenium (Se)	2009/09/29	94	80 - 120	99	90 - 110	<2	ug/L				
1954827	Dissolved Silicon (Si)	2009/09/29	102	80 - 120	100	90 - 110	<50	ug/L				
1954827	Dissolved Silver (Ag)	2009/09/29	85	80 - 120	100	90 - 110	<0.1	ug/L				
1954827	Dissolved Sodium (Na)	2009/09/29	NC	80 - 120	99	90 - 110	<100	ug/L				
1954827	Dissolved Strontium (Sr)	2009/09/29	NC	80 - 120	102	90 - 110	<1	ug/L				
1954827	Dissolved Thallium (Tl)	2009/09/29	91	80 - 120	101	90 - 110	<0.05	ug/L				
1954827	Dissolved Titanium (Ti)	2009/09/29	106	80 - 120	100	90 - 110	<5	ug/L				
1954827	Dissolved Uranium (U)	2009/09/29	97	80 - 120	101	90 - 110	<0.1	ug/L				
1954827	Dissolved Vanadium (V)	2009/09/29	105	80 - 120	101	90 - 110	<1	ug/L				
1954827	Dissolved Zinc (Zn)	2009/09/29	86	80 - 120	99	90 - 110	<5	ug/L				
1955758	Total Ammonia-N	2009/10/01	103	80 - 120	102	80 - 120	<0.05	mg/L	NC	25		
1955919	Total Organic Carbon (TOC)	2009/10/01	NC	75 - 125	101	75 - 125	<0.2	mg/L	1.7	20		
1955991	Dissolved Organic Carbon	2009/10/01	NC	75 - 125	105	75 - 125	<0.2	mg/L	2.0	20		
1956010	Total Phosphorus	2009/10/02	105	75 - 125	110	75 - 125	<0.002	mg/L	NC	25	108	85 - 115
1956459	Alkalinity (Total as CaCO3)	2009/09/30					<1	mg/L	0.9	25	97	85 - 115
1956459	p-Alkalinity	2009/09/30					<1	mg/L	NC	25	97	85 - 115

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
1956461	Conductivity	2009/09/30					<1	umho/cm	0	25	100	85 - 115
1956600	Dissolved Chloride (Cl)	2009/10/01	NC	75 - 125	102	80 - 120	<1	mg/L	1	20		
1956603	Orthophosphate (P)	2009/10/01	104	75 - 125	101	80 - 120	<0.01	mg/L	NC	25		
1956605	Dissolved Sulphate (SO4)	2009/10/01	NC	75 - 125	100	80 - 120	<1	mg/L	0.4	25		
1956731	Dissolved Aluminum (Al)	2009/10/01	84	80 - 120	99	90 - 110	<5	ug/L	NC	25		
1956731	Dissolved Antimony (Sb)	2009/10/01	102	80 - 120	100	90 - 110	<0.5	ug/L	NC	25		
1956731	Dissolved Arsenic (As)	2009/10/01	101	80 - 120	101	90 - 110	<1	ug/L	NC	25		
1956731	Dissolved Barium (Ba)	2009/10/01	95	80 - 120	99	90 - 110	<5	ug/L	NC	25		
1956731	Dissolved Beryllium (Be)	2009/10/01	93	80 - 120	97	90 - 110	<0.5	ug/L	NC	25		
1956731	Dissolved Bismuth (Bi)	2009/10/01	77(1)	80 - 120	94	90 - 110	<1	ug/L	NC	25		
1956731	Dissolved Boron (B)	2009/10/01	NC	80 - 120	99	90 - 110	<10	ug/L	1.4	25		
1956731	Dissolved Cadmium (Cd)	2009/10/01	99	80 - 120	101	90 - 110	<0.1	ug/L	NC	25		
1956731	Dissolved Calcium (Ca)	2009/10/01	NC	80 - 120	102	90 - 110	<200	ug/L	1.1	25		
1956731	Dissolved Chromium (Cr)	2009/10/01	89	80 - 120	98	90 - 110	<5	ug/L	NC	25		
1956731	Dissolved Cobalt (Co)	2009/10/01	94	80 - 120	101	90 - 110	<0.5	ug/L	NC	25		
1956731	Dissolved Copper (Cu)	2009/10/01	89	80 - 120	99	90 - 110	<1	ug/L	NC	25		
1956731	Dissolved Iron (Fe)	2009/10/01	95	80 - 120	103	90 - 110	<100	ug/L	NC	25		
1956731	Dissolved Lead (Pb)	2009/10/01	93	80 - 120	96	90 - 110	<0.5	ug/L	NC	25		
1956731	Dissolved Magnesium (Mg)	2009/10/01	NC	80 - 120	102	90 - 110	<50	ug/L	0.5	25		
1956731	Dissolved Manganese (Mn)	2009/10/01	91	80 - 120	102	90 - 110	<2	ug/L	NC(2)	25		
1956731	Dissolved Molybdenum (Mo)	2009/10/01	102	80 - 120	98	90 - 110	<1	ug/L	NC	25		
1956731	Dissolved Nickel (Ni)	2009/10/01	91	80 - 120	98	90 - 110	<1	ug/L	NC	25		
1956731	Dissolved Phosphorus (P)	2009/10/01	96	80 - 120	90	90 - 110	<100	ug/L	NC	25		
1956731	Dissolved Potassium (K)	2009/10/01	92	80 - 120	101	90 - 110	<200	ug/L	1.3	25		
1956731	Dissolved Selenium (Se)	2009/10/01	103	80 - 120	99	90 - 110	<2	ug/L	NC	25		
1956731	Dissolved Silicon (Si)	2009/10/01	92	80 - 120	101	90 - 110	<50	ug/L	1.2	25		
1956731	Dissolved Silver (Ag)	2009/10/01	84	80 - 120	91	90 - 110	<0.1	ug/L	NC	25		
1956731	Dissolved Sodium (Na)	2009/10/01	NC	80 - 120	104	90 - 110	<100	ug/L	2.8	25		
1956731	Dissolved Strontium (Sr)	2009/10/01	NC	80 - 120	99	90 - 110	<1	ug/L	2.6	25		
1956731	Dissolved Thallium (Tl)	2009/10/01	93	80 - 120	97	90 - 110	<0.05	ug/L	NC	25		
1956731	Dissolved Titanium (Ti)	2009/10/01	95	80 - 120	104	90 - 110	<5	ug/L	NC	25		
1956731	Dissolved Uranium (U)	2009/10/01	95	80 - 120	95	90 - 110	<0.1	ug/L	NC	25		
1956731	Dissolved Vanadium (V)	2009/10/01	92	80 - 120	99	90 - 110	<1	ug/L	NC	25		
1956731	Dissolved Zinc (Zn)	2009/10/01	92	80 - 120	98	90 - 110	<5	ug/L	NC	25		
1957498	Total Aluminum (Al)	2009/10/01	93	80 - 120	97	80 - 120	5, RDL=5	ug/L	4.8	25		
1957498	Total Antimony (Sb)	2009/10/01	105	80 - 120	103	82 - 120	<0.5	ug/L	NC	25		
1957498	Total Arsenic (As)	2009/10/01	100	80 - 120	100	86 - 119	<1	ug/L	NC	25		
1957498	Total Barium (Ba)	2009/10/01	96	80 - 120	96	83 - 115	<5	ug/L	3.3	25		
1957498	Total Beryllium (Be)	2009/10/01	95	75 - 125	96	85 - 132	<0.5	ug/L	NC	25		
1957498	Total Boron (B)	2009/10/01	96	75 - 125	97	78 - 133	<10	ug/L	NC	25		

Maxxam Job #: A9C6886
Report Date: 2009/10/02

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1
Project name: 407 WEST AREA , OAKVILLE

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
1957498	Total Cadmium (Cd)	2009/10/01	98	80 - 120	96	85 - 116	<0.1	ug/L	NC	25		
1957498	Total Calcium (Ca)	2009/10/01	NC	75 - 125	101	75 - 125	240, RDL=200	ug/L	5.2	25		
1957498	Total Chromium (Cr)	2009/10/01	96	80 - 120	97	80 - 120	<5	ug/L	NC	25		
1957498	Total Cobalt (Co)	2009/10/01	95	80 - 120	97	82 - 117	<0.5	ug/L	NC	25		
1957498	Total Copper (Cu)	2009/10/01	94	80 - 120	97	80 - 117	<1	ug/L	5.7	25		
1957498	Total Iron (Fe)	2009/10/01	97	80 - 120	96	80 - 120	<100	ug/L	NC	25		
1957498	Total Lead (Pb)	2009/10/01	95	80 - 120	96	80 - 120	<0.5	ug/L	NC	25		
1957498	Total Magnesium (Mg)	2009/10/01	93	80 - 120	97	80 - 120	85, RDL=50	ug/L	6.8	25		
1957498	Total Manganese (Mn)	2009/10/01	95	80 - 120	97	80 - 120	<2	ug/L	4.2	25		
1957498	Total Molybdenum (Mo)	2009/10/01	101	80 - 120	100	82 - 117	<1	ug/L	NC	25		
1957498	Total Nickel (Ni)	2009/10/01	95	80 - 120	96	81 - 117	<1	ug/L	NC	25		
1957498	Total Potassium (K)	2009/10/01	97	75 - 125	101	75 - 125	<200	ug/L	7.6	25		
1957498	Total Selenium (Se)	2009/10/01	97	75 - 125	97	82 - 118	<2	ug/L	NC	25		
1957498	Total Silicon (Si)	2009/10/01	93	75 - 125	98	67 - 140	<50	ug/L	6.4	25		
1957498	Total Silver (Ag)	2009/10/01	94	80 - 120	95	80 - 120	<0.1	ug/L	NC	25		
1957498	Total Sodium (Na)	2009/10/01	NC	75 - 125	101	75 - 125	<100	ug/L	5.7	25		
1957498	Total Thallium (Tl)	2009/10/01	95	80 - 120	96	80 - 129	<0.05	ug/L	NC	25		
1957498	Total Tungsten (W)	2009/10/01	102	75 - 125	102	81 - 123	<1	ug/L	NC	25		
1957498	Total Uranium (U)	2009/10/01	99	80 - 120	98	82 - 120	<0.1	ug/L	NC	25		
1957498	Total Vanadium (V)	2009/10/01	96	80 - 120	97	82 - 118	<1	ug/L	NC	25		
1957498	Total Zinc (Zn)	2009/10/01	95	80 - 120	96	80 - 120	<5	ug/L	NC	25		
1957498	Total Zirconium (Zr)	2009/10/01	100	75 - 125	100	84 - 118	<1	ug/L	NC	25		
1957621	Dissolved Calcium (Ca)	2009/10/01	NC	85 - 115	101	85 - 115	<0.05	mg/L	0.3	25		
1957621	Dissolved Magnesium (Mg)	2009/10/01	NC	85 - 115	98	85 - 115	<0.05	mg/L	0.7	25		
1957621	Dissolved Potassium (K)	2009/10/01	103	85 - 115	94	85 - 115	<1	mg/L	NC	25		
1957621	Dissolved Sodium (Na)	2009/10/01	NC	85 - 115	102	85 - 115	<0.5	mg/L	0.8	25		

N/A = Not Applicable
RDL = Reportable Detection Limit
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.
(2) - Detection Limit was raised due to matrix interferences.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Validation Signature Page

Maxxam Job #: A9C6886

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

TROY CARRIERE, B.Sc., C.Chem, Scientific Specialist

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Your Project #: 14-09222-001-HG1/407 WEST
Site: OAKVILLE
Your C.O.C. #: OO616891

Attention: Annette Blazeiko
MMM GROUP LIMITED
100 Commerce Valley Dr W
Thornhill, ON
CANADA L3T 0A1

Report Date: 2010/02/03
This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B008307
Received: 2010/01/22, 13:57

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Alkalinity	6	N/A	2010/01/26	CAM SOP-00448	SM 2320B
Carbonate, Bicarbonate and Hydroxide	6	N/A	2010/01/27		
Chloride by Automated Colourimetry	6	N/A	2010/01/27	CAM SOP-00463	SM 4500 Cl E
Conductivity	6	N/A	2010/01/26	CAM SOP-00448	SM 2510
Dissolved Organic Carbon (DOC)	6	N/A	2010/01/26	CAM SOP-00446	SM 5310 B
Hardness (calculated as CaCO3)	5	N/A	2010/01/26	CAM SOP 00102	SM 2340 B
Hardness (calculated as CaCO3)	1	N/A	2010/01/27	CAM SOP 00102	SM 2340 B
Lab Filtered Metals by ICPMS	1	2010/01/26	2010/01/27	CAM SOP-00447	EPA 6020
Dissolved Metals by ICPMS	4	N/A	2010/01/26	CAM SOP-00447	EPA 6020
Dissolved Metals by ICPMS	1	N/A	2010/02/02	CAM SOP-00447	EPA 6020
Ion Balance (% Difference)	6	N/A	2010/01/28		
Anion and Cation Sum	6	N/A	2010/01/27		
Ammonia-N	6	N/A	2010/01/28	CAM SOP-00441	US GS I-2522-90
Nitrate (NO3) and Nitrite (NO2) in Water (1)	6	N/A	2010/01/27	CAM SOP-00440	SM 4500 NO3I/NO2B
pH	6	N/A	2010/01/26	CAM SOP-00448	SM 4500H
Orthophosphate	6	N/A	2010/01/27	CAM SOP-00461	SM 4500 P-F
Sat. pH and Langelier Index (@ 20C)	6	N/A	2010/01/28		
Sat. pH and Langelier Index (@ 4C)	6	N/A	2010/01/28		
Sulphate by Automated Colourimetry	6	N/A	2010/01/27	CAM SOP-00464	EPA 375.4
Total Dissolved Solids (TDS calc)	6	N/A	2010/01/28		

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

(1) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

../2

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

SEAN CONACHER, Project Manager
Email: Sean.Conacher@maxxamanalytics.com
Phone# (905) 817-5700 Ext:5806

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

Total cover pages: 2

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		EX4639		EX4640		
Sampling Date		2010/01/21		2010/01/21		
	Units	**FD-1**	**RDL**	**MMM09-19S**	**RDL**	**QC Batch**
Calculated Parameters						
Anion Sum	me/L	36.0	N/A	43.1	N/A	2062861
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	368	1	326	1	2062859
Calculated TDS	mg/L	2120	1	2490	1	2062864
Carb. Alkalinity (calc. as CaCO3)	mg/L	2	1	1	1	2062859
Cation Sum	me/L	32.6	N/A	39.0	N/A	2062861
Hardness (CaCO3)	mg/L	1300	1	1800	1	2062769
Ion Balance (% Difference)	%	4.87	N/A	4.95	N/A	2062860
Langelier Index (@ 20C)	N/A	0.962		0.834		2062862
Langelier Index (@ 4C)	N/A	0.718		0.592		2062863
Saturation pH (@ 20C)	N/A	6.79		6.72		2062862
Saturation pH (@ 4C)	N/A	7.04		6.96		2062863
Inorganics						
Total Ammonia-N	mg/L	0.48	0.05	0.33	0.05	2065528
Conductivity	umho/cm	2860	1	3430	1	2064280
Dissolved Organic Carbon	mg/L	5.9	0.2	10.9	0.2	2063611
Orthophosphate (P)	mg/L	<0.01	0.01	<0.01	0.01	2064525
pH	pH	7.8		7.6		2064278
Dissolved Sulphate (SO4)	mg/L	1200	10	1300	5	2064526
Alkalinity (Total as CaCO3)	mg/L	370	1	328	1	2064277
Dissolved Chloride (Cl)	mg/L	140	1	300	2	2064522
Nitrite (N)	mg/L	<0.01	0.01	0.02	0.01	2064410
Nitrate (N)	mg/L	<0.1	0.1	<0.1	0.1	2064410
p-Alkalinity	mg/L	<1	1	<1	1	2064277
Nitrate + Nitrite	mg/L	<0.1	0.1	<0.1	0.1	2064410

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		EX4639		EX4640		
Sampling Date		2010/01/21		2010/01/21		
	Units	**FD-1**	**RDL**	**MMM09-19S**	**RDL**	**QC Batch**
Metals						
Dissolved Aluminum (Al)	ug/L	6	5	6	5	2063962
Dissolved Antimony (Sb)	ug/L	<0.5	0.5	<0.5	0.5	2063962
Dissolved Arsenic (As)	ug/L	6	1	1	1	2063962
Dissolved Barium (Ba)	ug/L	27	5	5	5	2063962
Dissolved Beryllium (Be)	ug/L	<0.5	0.5	<0.5	0.5	2063962
Dissolved Bismuth (Bi)	ug/L	<1	1	<1	1	2063962
Dissolved Boron (B)	ug/L	2600	10	220	10	2063962
Dissolved Cadmium (Cd)	ug/L	<0.1	0.1	0.2	0.1	2063962
Dissolved Calcium (Ca)	ug/L	200000	200	280000	200	2063962
Dissolved Chromium (Cr)	ug/L	<5	5	<5	5	2063962
Dissolved Cobalt (Co)	ug/L	1.6	0.5	11	0.5	2063962
Dissolved Copper (Cu)	ug/L	<1	1	2	1	2063962
Dissolved Iron (Fe)	ug/L	12000	100	3000	100	2063962
Dissolved Lead (Pb)	ug/L	<0.5	0.5	<0.5	0.5	2063962
Dissolved Magnesium (Mg)	ug/L	190000	50	260000	50	2063962
Dissolved Manganese (Mn)	ug/L	540	2	1100	2	2063962
Dissolved Molybdenum (Mo)	ug/L	11	1	8	1	2063962
Dissolved Nickel (Ni)	ug/L	5	1	12	1	2063962
Dissolved Phosphorus (P)	ug/L	<100	100	<100	100	2063962
Dissolved Potassium (K)	ug/L	18000	200	18000	200	2063962
Dissolved Selenium (Se)	ug/L	<2	2	5	2	2063962
Dissolved Silicon (Si)	ug/L	7400	50	6700	50	2063962
Dissolved Silver (Ag)	ug/L	<0.1	0.1	<0.1	0.1	2063962
Dissolved Sodium (Na)	ug/L	140000	100	74000	100	2063962
Dissolved Strontium (Sr)	ug/L	5800	1	1900	1	2063962
Dissolved Thallium (Tl)	ug/L	<0.05	0.05	0.07	0.05	2063962
Dissolved Titanium (Ti)	ug/L	<5	5	<5	5	2063962
Dissolved Uranium (U)	ug/L	8.8	0.1	16	0.1	2063962
Dissolved Vanadium (V)	ug/L	2	1	2	1	2063962
Dissolved Zinc (Zn)	ug/L	200	5	4400	5	2063962

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		EX4641		EX4642			EX4643		
Sampling Date		2010/01/21		2010/01/22			2010/01/22		
	Units	**MMM09-17**	**RDL**	**MMM09-15S**	**RDL**	**QC Batch**	**MMM09-15D**	**RDL**	**QC Batch**
Calculated Parameters									
Anion Sum	me/L	35.8	N/A	72.2	N/A	2062861	8.69	N/A	2062861
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	367	1	453	1	2062859	129	1	2062859
Calculated TDS	mg/L	2110	1	3930	1	2062864	805	1	2062864
Carb. Alkalinity (calc. as CaCO3)	mg/L	2	1	1	1	2062859	1	1	2062859
Cation Sum	me/L	32.8	N/A	69.8	N/A	2062861	24.0	N/A	2062861
Hardness (CaCO3)	mg/L	1300	1	1900	1	2062769	640	1	2062769
Ion Balance (% Difference)	%	4.28	N/A	1.66	N/A	2062860	46.8	N/A	2062860
Langelier Index (@ 20C)	N/A	0.959		1.02		2062862	0.856		2062862
Langelier Index (@ 4C)	N/A	0.716		0.783		2062863	0.610		2062863
Saturation pH (@ 20C)	N/A	6.79		6.44		2062862	7.20		2062862
Saturation pH (@ 4C)	N/A	7.03		6.68		2062863	7.45		2062863
Inorganics									
Total Ammonia-N	mg/L	0.33	0.05	0.42	0.05	2065528	0.82	0.05	2065528
Conductivity	umho/cm	2870	1	7520	1	2064280	918	1	2064280
Dissolved Organic Carbon	mg/L	5.9	0.2	3.6	0.2	2063611	2.5	0.2	2063611
Orthophosphate (P)	mg/L	<0.01	0.01	<0.01	0.01	2064525	<0.01	0.01	2064525
pH	pH	7.7		7.5		2064278	8.1		2064278
Dissolved Sulphate (SO4)	mg/L	1200	10	75	1	2064526	74	1	2064526
Alkalinity (Total as CaCO3)	mg/L	369	1	454	1	2064277	130	1	2064277
Dissolved Chloride (Cl)	mg/L	140	1	2200	30	2064522	160	1	2064522
Nitrite (N)	mg/L	<0.01	0.01	<0.01	0.01	2064410	<0.01	0.01	2064410
Nitrate (N)	mg/L	<0.1	0.1	<0.1	0.1	2064410	0.4	0.1	2064410
p-Alkalinity	mg/L	<1	1	<1	1	2064277	<1	1	2064277
Nitrate + Nitrite	mg/L	<0.1	0.1	<0.1	0.1	2064410	0.4	0.1	2064410

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		EX4641		EX4642			EX4643		
Sampling Date		2010/01/21		2010/01/22			2010/01/22		
	Units	**MMM09-17**	**RDL**	**MMM09-15S**	**RDL**	**QC Batch**	**MMM09-15D**	**RDL**	**QC Batch**
Metals									
Dissolved Aluminum (Al)	ug/L	9	5	5	5	2063962	7	5	2069058
Dissolved Antimony (Sb)	ug/L	<0.5	0.5	<0.5	0.5	2063962	<0.5	0.5	2069058
Dissolved Arsenic (As)	ug/L	6	1	6(1)	5	2063962	2	1	2069058
Dissolved Barium (Ba)	ug/L	27	5	240	5	2063962	170	5	2069058
Dissolved Beryllium (Be)	ug/L	<0.5	0.5	<0.5	0.5	2063962	<0.5	0.5	2069058
Dissolved Bismuth (Bi)	ug/L	<1	1	<1	1	2063962	<1	1	2069058
Dissolved Boron (B)	ug/L	2600	10	600	10	2063962	1400	10	2069058
Dissolved Cadmium (Cd)	ug/L	<0.1	0.1	<0.1	0.1	2063962	<0.1	0.1	2069058
Dissolved Calcium (Ca)	ug/L	200000	200	450000	200	2063962	160000	200	2069058
Dissolved Chromium (Cr)	ug/L	<5	5	<5	5	2063962	<5	5	2069058
Dissolved Cobalt (Co)	ug/L	1.6	0.5	2.6	0.5	2063962	0.8	0.5	2069058
Dissolved Copper (Cu)	ug/L	<1	1	2	1	2063962	<1	1	2069058
Dissolved Iron (Fe)	ug/L	12000	100	19000	100	2063962	3300	100	2069058
Dissolved Lead (Pb)	ug/L	<0.5	0.5	<0.5	0.5	2063962	<0.5	0.5	2069058
Dissolved Magnesium (Mg)	ug/L	190000	50	190000	50	2063962	57000	50	2069058
Dissolved Manganese (Mn)	ug/L	560	2	440	2	2063962	220	2	2069058
Dissolved Molybdenum (Mo)	ug/L	11	1	7	1	2063962	12	1	2069058
Dissolved Nickel (Ni)	ug/L	4	1	<5(1)	5	2063962	2	1	2069058
Dissolved Phosphorus (P)	ug/L	<100	100	<100	100	2063962	<100	100	2069058
Dissolved Potassium (K)	ug/L	18000	200	26000	200	2063962	14000	200	2069058
Dissolved Selenium (Se)	ug/L	<2	2	<2	2	2063962	<2	2	2069058
Dissolved Silicon (Si)	ug/L	7500	50	7500	50	2063962	3700	50	2069058
Dissolved Silver (Ag)	ug/L	<0.1	0.1	<0.1	0.1	2063962	<0.1	0.1	2069058
Dissolved Sodium (Na)	ug/L	140000	100	700000	1000	2063962	250000	100	2069058
Dissolved Strontium (Sr)	ug/L	5900	1	36000	1	2063962	9300	1	2069058
Dissolved Thallium (Tl)	ug/L	<0.05	0.05	<0.05	0.05	2063962	<0.05	0.05	2069058
Dissolved Titanium (Ti)	ug/L	<5	5	<5	5	2063962	<5	5	2069058
Dissolved Uranium (U)	ug/L	9.2	0.1	11	0.1	2063962	3.6	0.1	2069058
Dissolved Vanadium (V)	ug/L	2	1	<5(1)	5	2063962	<1	1	2069058
Dissolved Zinc (Zn)	ug/L	220	5	310	5	2063962	38	5	2069058

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) - Detection Limit was raised due to matrix interferences.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		EX4643		
Sampling Date		2010/01/22		
	Units	**MMM09-15D Lab-Dup**	**RDL**	**QC Batch**
Metals				
Dissolved Aluminum (Al)	ug/L	7	5	2069058
Dissolved Antimony (Sb)	ug/L	<0.5	0.5	2069058
Dissolved Arsenic (As)	ug/L	2	1	2069058
Dissolved Barium (Ba)	ug/L	170	5	2069058
Dissolved Beryllium (Be)	ug/L	<0.5	0.5	2069058
Dissolved Bismuth (Bi)	ug/L	<1	1	2069058
Dissolved Boron (B)	ug/L	1400	10	2069058
Dissolved Cadmium (Cd)	ug/L	<0.1	0.1	2069058
Dissolved Calcium (Ca)	ug/L	160000	200	2069058
Dissolved Chromium (Cr)	ug/L	<5	5	2069058
Dissolved Cobalt (Co)	ug/L	0.8	0.5	2069058
Dissolved Copper (Cu)	ug/L	1	1	2069058
Dissolved Iron (Fe)	ug/L	3300	100	2069058
Dissolved Lead (Pb)	ug/L	<0.5	0.5	2069058
Dissolved Magnesium (Mg)	ug/L	56000	50	2069058
Dissolved Manganese (Mn)	ug/L	220	2	2069058
Dissolved Molybdenum (Mo)	ug/L	12	1	2069058
Dissolved Nickel (Ni)	ug/L	2	1	2069058
Dissolved Phosphorus (P)	ug/L	<100	100	2069058
Dissolved Potassium (K)	ug/L	14000	200	2069058
Dissolved Selenium (Se)	ug/L	<2	2	2069058
Dissolved Silicon (Si)	ug/L	3700	50	2069058
Dissolved Silver (Ag)	ug/L	<0.1	0.1	2069058
Dissolved Sodium (Na)	ug/L	250000	100	2069058
Dissolved Strontium (Sr)	ug/L	9400	1	2069058
Dissolved Thallium (Tl)	ug/L	<0.05	0.05	2069058
Dissolved Titanium (Ti)	ug/L	<5	5	2069058
Dissolved Uranium (U)	ug/L	3.6	0.1	2069058
Dissolved Vanadium (V)	ug/L	<1	1	2069058
Dissolved Zinc (Zn)	ug/L	38	5	2069058

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

RCAP - COMPREHENSIVE (LAB FILTERED)

Maxxam ID		EX4638		
Sampling Date		2010/01/21		
	Units	**MMM09-19D**	**RDL**	**QC Batch**
Calculated Parameters				
Anion Sum	me/L	12.3	N/A	2062861
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	241	1	2062859
Calculated TDS	mg/L	704	1	2062864
Carb. Alkalinity (calc. as CaCO3)	mg/L	2	1	2062859
Cation Sum	me/L	12.3	N/A	2062861
Hardness (CaCO3)	mg/L	420	1	2062769
Ion Balance (% Difference)	%	0.0300	N/A	2062860
Langelier Index (@ 20C)	N/A	0.568		2062862
Langelier Index (@ 4C)	N/A	0.321		2062863
Saturation pH (@ 20C)	N/A	7.45		2062862
Saturation pH (@ 4C)	N/A	7.69		2062863
Inorganics				
Total Ammonia-N	mg/L	0.47	0.05	2065528
Conductivity	umho/cm	1110	1	2064280
Dissolved Organic Carbon	mg/L	7.6	0.2	2063611
Orthophosphate (P)	mg/L	<0.01	0.01	2064525
pH	pH	8.0		2064278
Dissolved Sulphate (SO4)	mg/L	270	1	2064526
Alkalinity (Total as CaCO3)	mg/L	243	1	2064277
Dissolved Chloride (Cl)	mg/L	62	1	2064522
Nitrite (N)	mg/L	<0.01	0.01	2064410
Nitrate (N)	mg/L	<0.1	0.1	2064410

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

RCAP - COMPREHENSIVE (LAB FILTERED)

Maxxam ID		EX4638		
Sampling Date		2010/01/21		
	Units	**MMM09-19D**	**RDL**	**QC Batch**
Metals				
Dissolved Aluminum (Al)	ug/L	6	5	2064316
Dissolved Antimony (Sb)	ug/L	0.6	0.5	2064316
Dissolved Arsenic (As)	ug/L	1	1	2064316
Dissolved Barium (Ba)	ug/L	23	5	2064316
Dissolved Beryllium (Be)	ug/L	<0.5	0.5	2064316
Dissolved Boron (B)	ug/L	670	10	2064316
Dissolved Cadmium (Cd)	ug/L	<0.1	0.1	2064316
Dissolved Calcium (Ca)	ug/L	47000	200	2064316
Dissolved Chromium (Cr)	ug/L	<5	5	2064316
Dissolved Cobalt (Co)	ug/L	0.8	0.5	2064316
Dissolved Copper (Cu)	ug/L	1	1	2064316
Dissolved Iron (Fe)	ug/L	<100	100	2064316
Dissolved Lead (Pb)	ug/L	<0.5	0.5	2064316
Dissolved Magnesium (Mg)	ug/L	74000	50	2064316
Dissolved Manganese (Mn)	ug/L	140	2	2064316
Dissolved Molybdenum (Mo)	ug/L	21	1	2064316
Dissolved Nickel (Ni)	ug/L	2	1	2064316
Dissolved Phosphorus (P)	ug/L	<100	100	2064316
Dissolved Potassium (K)	ug/L	7800	200	2064316
Dissolved Selenium (Se)	ug/L	<2	2	2064316
Dissolved Silicon (Si)	ug/L	3700	50	2064316
Dissolved Silver (Ag)	ug/L	<0.1	0.1	2064316
Dissolved Sodium (Na)	ug/L	84000	100	2064316
Dissolved Strontium (Sr)	ug/L	2500	1	2064316
Dissolved Thallium (Tl)	ug/L	0.10	0.05	2064316
Dissolved Titanium (Ti)	ug/L	<5	5	2064316
Dissolved Uranium (U)	ug/L	6.5	0.1	2064316
Dissolved Vanadium (V)	ug/L	<1	1	2064316
Dissolved Zinc (Zn)	ug/L	650	5	2064316

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

GENERAL COMMENTS

Sample EX4643-01: Elevated ion balance result was confirmed by re-analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2063611	Dissolved Organic Carbon	2010/01/26	NC	75 - 125	103	75 - 125	<0.2	mg/L	1.2	20		
2063962	Dissolved Aluminum (Al)	2010/01/26	97	80 - 120	92	90 - 110	<5	ug/L				
2063962	Dissolved Antimony (Sb)	2010/01/26	107	80 - 120	101	90 - 110	<0.5	ug/L				
2063962	Dissolved Arsenic (As)	2010/01/26	107	80 - 120	99	90 - 110	<1	ug/L				
2063962	Dissolved Barium (Ba)	2010/01/26	99	80 - 120	96	90 - 110	<5	ug/L				
2063962	Dissolved Beryllium (Be)	2010/01/26	99	80 - 120	100	90 - 110	<0.5	ug/L				
2063962	Dissolved Bismuth (Bi)	2010/01/26	87	80 - 120	101	90 - 110	<1	ug/L				
2063962	Dissolved Boron (B)	2010/01/26	98	80 - 120	94	90 - 110	<10	ug/L				
2063962	Dissolved Cadmium (Cd)	2010/01/26	98	80 - 120	102	90 - 110	<0.1	ug/L				
2063962	Dissolved Calcium (Ca)	2010/01/26	NC	80 - 120	93	90 - 110	<200	ug/L				
2063962	Dissolved Chromium (Cr)	2010/01/26	102	80 - 120	96	90 - 110	<5	ug/L				
2063962	Dissolved Cobalt (Co)	2010/01/26	99	80 - 120	96	90 - 110	<0.5	ug/L				
2063962	Dissolved Copper (Cu)	2010/01/26	94	80 - 120	95	90 - 110	<1	ug/L				
2063962	Dissolved Iron (Fe)	2010/01/26	103	80 - 120	101	90 - 110	<100	ug/L				
2063962	Dissolved Lead (Pb)	2010/01/26	90	80 - 120	101	90 - 110	<0.5	ug/L	NC	25		
2063962	Dissolved Magnesium (Mg)	2010/01/26	NC	80 - 120	92	90 - 110	<50	ug/L				
2063962	Dissolved Manganese (Mn)	2010/01/26	NC	80 - 120	98	90 - 110	<2	ug/L				
2063962	Dissolved Molybdenum (Mo)	2010/01/26	113	80 - 120	101	90 - 110	<1	ug/L				
2063962	Dissolved Nickel (Ni)	2010/01/26	97	80 - 120	96	90 - 110	<1	ug/L				
2063962	Dissolved Phosphorus (P)	2010/01/26	110	80 - 120	86(1)	90 - 110	<100	ug/L				
2063962	Dissolved Potassium (K)	2010/01/26	NC	80 - 120	92	90 - 110	<200	ug/L				
2063962	Dissolved Selenium (Se)	2010/01/26	103	80 - 120	103	90 - 110	<2	ug/L				
2063962	Dissolved Silicon (Si)	2010/01/26	103	80 - 120	94	90 - 110	<50	ug/L				
2063962	Dissolved Silver (Ag)	2010/01/26	93	80 - 120	99	90 - 110	<0.1	ug/L				
2063962	Dissolved Sodium (Na)	2010/01/26	S	80 - 120	93	90 - 110	<100	ug/L				
2063962	Dissolved Strontium (Sr)	2010/01/26	NC	80 - 120	99	90 - 110	<1	ug/L				
2063962	Dissolved Thallium (Tl)	2010/01/26	90	80 - 120	101	90 - 110	<0.05	ug/L				
2063962	Dissolved Titanium (Ti)	2010/01/26	108	80 - 120	96	90 - 110	<5	ug/L				
2063962	Dissolved Uranium (U)	2010/01/26	94	80 - 120	103	90 - 110	<0.1	ug/L				
2063962	Dissolved Vanadium (V)	2010/01/26	105	80 - 120	96	90 - 110	<1	ug/L				
2063962	Dissolved Zinc (Zn)	2010/01/26	91	80 - 120	100	90 - 110	<5	ug/L				
2064277	Alkalinity (Total as CaCO3)	2010/01/26					2, RDL=1	mg/L	1.0	25	94	85 - 115
2064277	p-Alkalinity	2010/01/26					<1	mg/L			94	85 - 115
2064280	Conductivity	2010/01/26					<1	umho/cm	0.1	25	101	85 - 115
2064316	Dissolved Aluminum (Al)	2010/01/27	94	80 - 120	103	90 - 110	<5	ug/L				
2064316	Dissolved Antimony (Sb)	2010/01/27	116	80 - 120	102	90 - 110	<0.5	ug/L	NC	25		
2064316	Dissolved Arsenic (As)	2010/01/27	100	80 - 120	103	90 - 110	<1	ug/L	3.2	25		
2064316	Dissolved Barium (Ba)	2010/01/27	99	80 - 120	100	90 - 110	<5	ug/L	0.08	25		
2064316	Dissolved Beryllium (Be)	2010/01/27	96	80 - 120	99	90 - 110	<0.5	ug/L	NC	25		
2064316	Dissolved Boron (B)	2010/01/27	NC	80 - 120	99	90 - 110	<10	ug/L	7.1	25		

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2064316	Dissolved Cadmium (Cd)	2010/01/27	101	80 - 120	103	90 - 110	<0.1	ug/L	NC	25		
2064316	Dissolved Calcium (Ca)	2010/01/27	NC	80 - 120	109	90 - 110	<200	ug/L				
2064316	Dissolved Chromium (Cr)	2010/01/27	100	80 - 120	103	90 - 110	<5	ug/L	NC	25		
2064316	Dissolved Cobalt (Co)	2010/01/27	99	80 - 120	100	90 - 110	<0.5	ug/L	NC	25		
2064316	Dissolved Copper (Cu)	2010/01/27	92	80 - 120	99	90 - 110	<1	ug/L	NC	25		
2064316	Dissolved Iron (Fe)	2010/01/27	102	80 - 120	106	90 - 110	<100	ug/L				
2064316	Dissolved Lead (Pb)	2010/01/27	99	80 - 120	103	90 - 110	<0.5	ug/L	NC	25		
2064316	Dissolved Magnesium (Mg)	2010/01/27	NC	80 - 120	102	90 - 110	<50	ug/L	1.7	25		
2064316	Dissolved Manganese (Mn)	2010/01/27	NC	80 - 120	104	90 - 110	<2	ug/L				
2064316	Dissolved Molybdenum (Mo)	2010/01/27	121(1)	80 - 120	102	90 - 110	<1	ug/L	NC	25		
2064316	Dissolved Nickel (Ni)	2010/01/27	93	80 - 120	97	90 - 110	<1	ug/L	NC	25		
2064316	Dissolved Phosphorus (P)	2010/01/27	108	80 - 120	103	90 - 110	<100	ug/L	NC	25		
2064316	Dissolved Potassium (K)	2010/01/27	NC	80 - 120	103	90 - 110	<200	ug/L	2.8	25		
2064316	Dissolved Selenium (Se)	2010/01/27	98	80 - 120	102	90 - 110	<2	ug/L	NC	25		
2064316	Dissolved Silicon (Si)	2010/01/27	107	80 - 120	105	90 - 110	<50	ug/L				
2064316	Dissolved Silver (Ag)	2010/01/27	89	80 - 120	102	90 - 110	<0.1	ug/L	NC	25		
2064316	Dissolved Sodium (Na)	2010/01/27	NC	80 - 120	104	90 - 110	<100	ug/L	0.2	25		
2064316	Dissolved Strontium (Sr)	2010/01/27	NC	80 - 120	101	90 - 110	<1	ug/L				
2064316	Dissolved Thallium (Tl)	2010/01/27	100	80 - 120	104	90 - 110	<0.05	ug/L	NC	25		
2064316	Dissolved Titanium (Ti)	2010/01/27	115	80 - 120	106	90 - 110	<5	ug/L				
2064316	Dissolved Uranium (U)	2010/01/27	102	80 - 120	102	90 - 110	<0.1	ug/L				
2064316	Dissolved Vanadium (V)	2010/01/27	102	80 - 120	105	90 - 110	<1	ug/L	NC	25		
2064316	Dissolved Zinc (Zn)	2010/01/27	92	80 - 120	99	90 - 110	<5	ug/L	NC	25		
2064410	Nitrite (N)	2010/01/27	NC	75 - 125	100	80 - 120	<0.01	mg/L	0.8	25		
2064410	Nitrate (N)	2010/01/27	NC	75 - 125	97	80 - 120	<0.1	mg/L	0.8	25		
2064410	Nitrate + Nitrite	2010/01/27					<0.1	mg/L	0.8	25		
2064522	Dissolved Chloride (Cl)	2010/01/27	NC	75 - 125	101	80 - 120	<1	mg/L	0.9	20		
2064525	Orthophosphate (P)	2010/01/27	104	75 - 125	99	80 - 120	<0.01	mg/L	NC	25		
2064526	Dissolved Sulphate (SO4)	2010/01/27	NC	75 - 125	102	80 - 120	<1	mg/L	0.4	25		
2065528	Total Ammonia-N	2010/01/28	100	80 - 120	100	80 - 120	<0.05	mg/L	NC	25		
2069058	Dissolved Aluminum (Al)	2010/02/02	100	80 - 120	100	90 - 110	<5	ug/L	NC	25		
2069058	Dissolved Antimony (Sb)	2010/02/02	106	80 - 120	101	90 - 110	<0.5	ug/L	NC	25		
2069058	Dissolved Arsenic (As)	2010/02/02	103	80 - 120	100	90 - 110	<1	ug/L	NC	25		
2069058	Dissolved Barium (Ba)	2010/02/02	101	80 - 120	100	90 - 110	<5	ug/L	0.6	25		
2069058	Dissolved Beryllium (Be)	2010/02/02	101	80 - 120	100	90 - 110	<0.5	ug/L	NC	25		
2069058	Dissolved Bismuth (Bi)	2010/02/02	95	80 - 120	96	90 - 110	<1	ug/L	NC	25		
2069058	Dissolved Boron (B)	2010/02/02	NC	80 - 120	106	90 - 110	<10	ug/L	0.4	25		
2069058	Dissolved Cadmium (Cd)	2010/02/02	101	80 - 120	102	90 - 110	<0.1	ug/L	NC	25		
2069058	Dissolved Calcium (Ca)	2010/02/02	NC	80 - 120	103	90 - 110	<200	ug/L	0.3	25		
2069058	Dissolved Chromium (Cr)	2010/02/02	98	80 - 120	100	90 - 110	<5	ug/L	NC	25		

Maxxam Job #: B008307
Report Date: 2010/02/03

MMM GROUP LIMITED
Client Project #: 14-09222-001-HG1/407 WEST
Project name: OAKVILLE

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
2069058	Dissolved Cobalt (Co)	2010/02/02	99	80 - 120	99	90 - 110	<0.5	ug/L	NC	25		
2069058	Dissolved Copper (Cu)	2010/02/02	95	80 - 120	97	90 - 110	<1	ug/L	NC	25		
2069058	Dissolved Iron (Fe)	2010/02/02	99	80 - 120	100	90 - 110	<100	ug/L	0.9	25		
2069058	Dissolved Lead (Pb)	2010/02/02	95	80 - 120	97	90 - 110	<0.5	ug/L	NC	25		
2069058	Dissolved Magnesium (Mg)	2010/02/02	NC	80 - 120	101	90 - 110	<50	ug/L	0.6	25		
2069058	Dissolved Manganese (Mn)	2010/02/02	98	80 - 120	100	90 - 110	<2	ug/L	1	25		
2069058	Dissolved Molybdenum (Mo)	2010/02/02	108	80 - 120	100	90 - 110	<1	ug/L	1.1	25		
2069058	Dissolved Nickel (Ni)	2010/02/02	95	80 - 120	98	90 - 110	<1	ug/L	NC	25		
2069058	Dissolved Phosphorus (P)	2010/02/02	103	80 - 120	100	90 - 110	<100	ug/L	NC	25		
2069058	Dissolved Potassium (K)	2010/02/02	NC	80 - 120	100	90 - 110	<200	ug/L	1	25		
2069058	Dissolved Selenium (Se)	2010/02/02	103	80 - 120	100	90 - 110	<2	ug/L	NC	25		
2069058	Dissolved Silicon (Si)	2010/02/02	102	80 - 120	101	90 - 110	<50	ug/L	0.7	25		
2069058	Dissolved Silver (Ag)	2010/02/02	73(1)	80 - 120	96	90 - 110	<0.1	ug/L	NC	25		
2069058	Dissolved Sodium (Na)	2010/02/02	NC	80 - 120	100	90 - 110	<100	ug/L	0.6	25		
2069058	Dissolved Strontium (Sr)	2010/02/02	NC	80 - 120	98	90 - 110	<1	ug/L	1.3	25		
2069058	Dissolved Thallium (Tl)	2010/02/02	94	80 - 120	95	90 - 110	<0.05	ug/L	NC	25		
2069058	Dissolved Titanium (Ti)	2010/02/02	102	80 - 120	101	90 - 110	<5	ug/L	NC	25		
2069058	Dissolved Uranium (U)	2010/02/02	96	80 - 120	94	90 - 110	<0.1	ug/L	0.8	25		
2069058	Dissolved Vanadium (V)	2010/02/02	102	80 - 120	98	90 - 110	<1	ug/L	NC	25		
2069058	Dissolved Zinc (Zn)	2010/02/02	97	80 - 120	101	90 - 110	<5	ug/L	0.6	25		

N/A = Not Applicable
RDL = Reportable Detection Limit
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Validation Signature Page

Maxxam Job #: B008307

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

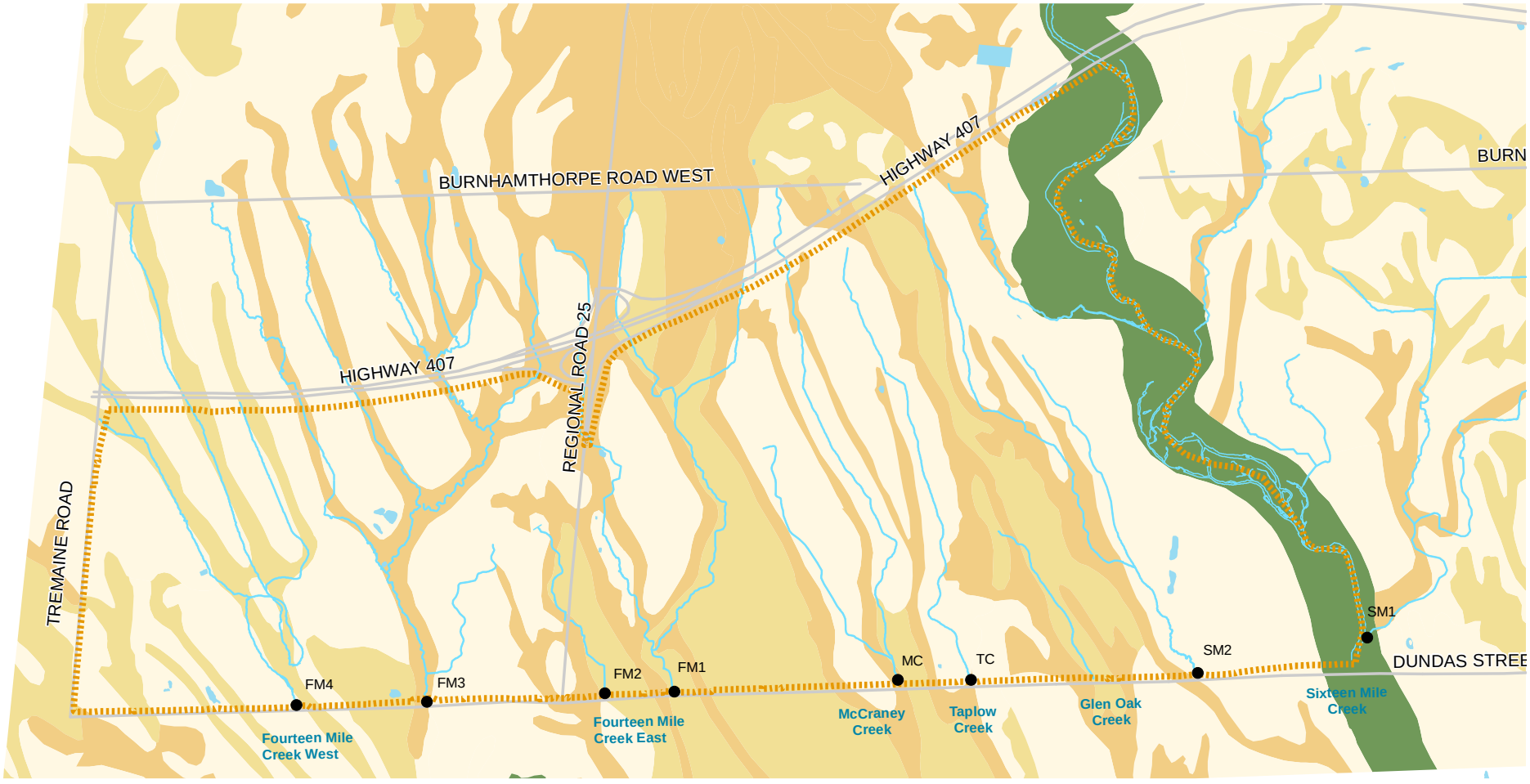
CRISTINA CARRIERE, Scientific Services

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

APPENDIX 4-7
Meteorological Information and Water Balance



NORTH OAKVILLE CREEKS SUBWATERSHED STUDY

August 2006

0 250 500
Meters

Legend

- West Study Area
- Road
- Watercourse
- Pond
- Flow Monitoring Station

Soil Type

- Bottom Land
- Brady (Sandy Loam)
- Chinguacousy (Rocky Phase)
- Chinguacousy Clay Loam
- Jeddo Clay Loam
- Lockport Clay
- Oneida (Rocky Phase)
- Onieda Clay Loam
- Trafalgar Clay

West Study Area

Soils and Flow Monitoring Locations

Figure 4W.6.1

Table WB-1: Pre and Post-Development Water Balance (mm Equivalents)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Pre-Development													
Forested Areas													
Water Holding Capacity (WHC) 400 mm													
Average Temperature (C)	-3.6	-2.7	1.2	7.2	13.1	19.1	21.9	21.4	17.3	10.3	4.8	-0.4	**9.0**
Precipitation (P) (mm)	77	53	56	74	84	63	84	59	72	60	73	64	**819**
Rainfall (mm)	36	32	38	73	84	63	84	59	72	60	70	46	
Melt (mm)	21	32	35	1	0	0	0	0	0	0	3	10	
Potential Evapotranspiration (PET) (mm)	2	3	11	34	75	117	139	126	85	43	16	5	**656**
Actual Evapotranspiration (AET) (mm)	2	3	11	34	75	117	138	122	80	41	16	5	**644**
Deficit (mm)	0	0	0	0	0	0	-1	-4	-5	-2	0	0	
Surplus - available for infiltration/runoff (mm	15	26	53	35	15	1	0	0	0	2	6	13	**166**
Snowfall (mm)	28	18	0	0	0	0	0	0	0	0	0	8	
Soil Moisture (mm)	339	374	383	388	383	328	274	211	202	220	270	309	
Change in Soil Moisture Storage (mm)	30	35	9	5	-5	-55	-54	-63	-9	18	50	39	
Data for Use with Pre-Development Water Balance													
Precipitation (P) (mm)	77.0	53.0	56.0	74.0	84.0	63.0	84.0	59.0	72.0	60.0	73.0	64.0	**819.0**
Actual Evapotranspiration (AET) (mm)	2.0	3.0	11.0	34.0	75.0	117.0	138.0	122.0	80.0	41.0	16.0	5.0	**644.0**
Surplus - available for infiltration/runoff (mm	15.0	26.0	53.0	35.0	15.0	1.0	0.0	0.0	0.0	2.0	6.0	13.0	**166.0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	6.5	11.2	22.8	15.1	6.5	0.4	0.0	0.0	0.0	0.9	2.6	5.6	**71.4**
Runoff (MOE Methodology) (m^3)	8.6	14.8	30.2	20.0	8.6	0.6	0.0	0.0	0.0	1.1	3.4	7.4	**94.6**
Open/Cropped Areas													
Water Holding Capacity (WHC) 200 mm													
Average Temperature (C)	-3.6	-2.7	1.2	7.2	13.1	19.1	21.9	21.4	17.3	10.3	4.8	-0.4	**9.0**
Precipitation (P) (mm)	77	53	56	74	84	63	84	59	72	60	73	64	**819**
Rainfall (mm)	36	32	38	73	84	63	84	59	72	60	70	46	
Melt (mm)	21	32	35	1	0	0	0	0	0	0	3	10	
Potential Evapotranspiration (PET) (mm)	2	3	11	34	75	117	139	126	85	43	16	5	**656**
Actual Evapotranspiration (AET) (mm)	2	3	11	34	75	117	135	102	68	39	16	5	**607**
Deficit (mm)	0	0	0	0	0	0	-5	-23	-18	-5	0	0	
Surplus - available for infiltration/runoff (mm	22	42	61	43	18	1	0	0	0	2	7	14	**210**
Snowfall (mm)	28	18	0	0	0	0	0	0	0	0	0	8	
Soil Moisture (mm)	179	199	200	197	189	134	83	40	45	65	114	151	
Change in Soil Moisture Storage (mm)	28	20	1	-3	-8	-55	-51	-43	5	20	49	37	
Data for Use with Pre-Development Water Balance													
Precipitation (P) (mm)	77.0	53.0	56.0	74.0	84.0	63.0	84.0	59.0	72.0	60.0	73.0	64.0	**819.0**
Actual Evapotranspiration (AET) (mm)	2.0	3.0	11.0	34.0	75.0	117.0	135.0	102.0	68.0	39.0	16.0	5.0	**607.0**
Surplus - available for infiltration/runoff (mm	22.0	42.0	61.0	43.0	18.0	1.0	0.0	0.0	0.0	2.0	7.0	14.0	**210.0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	7.3	13.9	20.1	14.2	5.9	0.3	0.0	0.0	0.0	0.7	2.3	4.6	**69.3**
Runoff (MOE Methodology) (m^3)	14.7	28.1	40.9	28.8	12.1	0.7	0.0	0.0	0.0	1.3	4.7	9.4	**140.7**
Post-Development													
Development Lands Only - Landscaped/Grassed Areas													
Water Holding Capacity (WHC) 100 mm													
Average Temperature (C)	-3.6	-2.7	1.2	7.2	13.1	19.1	21.9	21.4	17.3	10.3	4.8	-0.4	**9.0**
Precipitation (P) (mm)	77	53	56	74	84	63	84	59	72	60	73	64	**819**
Rainfall (mm)	36	32	38	73	84	63	84	59	72	60	70	46	
Melt (mm)	21	32	35	1	0	0	0	0	0	0	3	10	
Potential Evapotranspiration (PET) (mm)	2	3	11	34	75	117	139	126	85	43	16	5	**656**
Actual Evapotranspiration (AET) (mm)	2	3	11	34	75	114	106	70	63	37	16	5	**536**
Deficit (mm)	0	0	0	0	0	-3	-33	-56	-22	-6	0	0	
Surplus - available for infiltration/runoff (mm	45	60	62	43	18	1	0	0	0	2	15	34	**280**
Snowfall (mm)	28	18	0	0	0	0	0	0	0	0	0	8	
Soil Moisture (mm)	100	100	100	97	89	37	15	5	13	34	75	92	
Change in Soil Moisture Storage (mm)	8	0	0	-3	-8	-52	-22	-10	8	21	41	17	
Data for Use with Post-Development Water Balance													
Precipitation (P) (mm)	77.0	53.0	56.0	74.0	84.0	63.0	84.0	59.0	72.0	60.0	73.0	64.0	**819.0**
Actual Evapotranspiration (AET) (mm)	2.0	3.0	11.0	34.0	75.0	114.0	106.0	70.0	63.0	37.0	16.0	5.0	**536.0**
Surplus - available for infiltration/runoff (mm	45.0	60.0	62.0	43.0	18.0	1.0	0.0	0.0	0.0	2.0	15.0	34.0	**280.0**
Infiltration (MOE Methodology) (m^3) **i = 0.35**	15.8	21.0	21.7	15.1	6.3	0.4	0.0	0.0	0.0	0.7	5.3	11.9	**98.0**
Runoff (MOE Methodology) (m^3)	29.3	39.0	40.3	28.0	11.7	0.7	0.0	0.0	0.0	1.3	9.8	22.1	**182.0**
Development Lands Only - Landscaped/Grassed Areas with Additional Topsoil													
Water Holding Capacity (WHC) 100 mm													
Average Temperature (C)	-3.6	-2.7	1.2	7.2	13.1	19.1	21.9	21.4	17.3	10.3	4.8	-0.4	**9.0**
Precipitation (P) (mm)	77	53	56	74	84	63	84	59	72	60	73	64	**819**
Rainfall (mm)	36	32	38	73	84	63	84	59	72	60	70	46	
Melt (mm)	21	32	35	1	0	0	0	0	0	0	3	10	
Potential Evapotranspiration (PET) (mm)	2	3	11	34	75	117	139	126	85	43	16	5	**656**
Actual Evapotranspiration (AET) (mm)	2	3	11	34	75	114	106	70	63	37	16	5	**536**
Deficit (mm)	0	0	0	0	0	-3	-33	-56	-22	-6	0	0	
Surplus - available for infiltration/runoff (mm	45	60	62	43	18	1	0	0	0	2	15	34	**280**
Snowfall (mm)	28	18	0	0	0	0	0	0	0	0	0	8	
Soil Moisture (mm)	100	100	100	97	89	37	15	5	13	34	75	92	
Change in Soil Moisture Storage (mm)	8	0	0	-3	-8	-52	-22	-10	8	21	41	17	
Data for Use with Post-Development Water Balance													
Precipitation (P) (mm)	77.0	53.0	56.0	74.0	84.0	63.0	84.0	59.0	72.0	60.0	73.0	64.0	**819.0**
Actual Evapotranspiration (AET) (mm)	2.0	3.0	11.0	34.0	75.0	114.0	106.0	70.0	63.0	37.0	16.0	5.0	**536.0**
Surplus - available for infiltration/runoff (mm	45.0	60.0	62.0	43.0	18.0	1.0	0.0	0.0	0.0	2.0	15.0	34.0	**280.0**
Infiltration (MOE Methodology) (m^3) **i = 0.40**	18.0	24.0	24.8	17.2	7.2	0.4	0.0	0.0	0.0	0.8	6.0	13.6	**112.0**
Runoff (MOE Methodology) (m^3)	27.0	36.0	37.2	25.8	10.8	0.6	0.0	0.0	0.0	1.2	9.0	20.4	**168.0**

Notes:

1. Monthly climate data, including soil deficits, soil moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this ca water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is describe in the text and presented on Table 4.6 of the main report
3. Evaporative losses of 10% are modeled for impervious surfaces. This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater syste
4. There is minor round-off error within the Environment Canada data

Table WB-2-1001: Pre-Development Water Balance - Subwatershed FM1001 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands													
Pervious Area (Open/Agricultural) *59.64 ha*	WHC = 200 mm												
Precipitation (m^3)	45,923	31,609	33,398	44,134	50,098	37,573	50,098	35,188	42,941	35,784	43,537	38,170	**488,452**
Total AET (m^3)	1,193	1,789	6,560	20,278	44,730	69,779	80,514	60,833	40,555	23,260	9,542	2,982	**362,015**
Water Surplus (m^3)	13,121	25,049	36,380	25,645	10,735	596	0	0	0	1,193	4,175	8,350	**125,244**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	4,330	8,266	12,006	8,463	3,543	197	0	0	0	394	1,378	2,755	**41,331**
Runoff (MOE Methodology) (m^3)	8,791	16,783	24,375	17,182	7,193	400	0	0	0	799	2,797	5,594	**83,913**
Pervious Area (Forest) *0.80 ha*	WHC = 400 mm												
Precipitation (m^3)	616	424	448	592	672	504	672	472	576	480	584	512	**6,552**
Total AET (m^3)	16	24	88	272	600	936	1,104	976	640	328	128	40	**5,152**
Water Surplus (m^3)	120	208	424	280	120	8	0	0	0	16	48	104	**1,328**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	52	89	182	120	52	3	0	0	0	7	21	45	**571**
Runoff (MOE Methodology) (m^3)	68	119	242	160	68	5	0	0	0	9	27	59	**757**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **60.44 ha**													
Precipitation (m^3)	46,539	32,033	33,846	44,726	50,770	38,077	50,770	35,660	43,517	36,264	44,121	38,682	**495,004**
Total AET (m^3)	1,209	1,813	6,648	20,550	45,330	70,715	81,618	61,809	41,195	23,588	9,670	3,022	**367,167**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	4,381	8,356	12,188	8,583	3,594	200	0	0	0	401	1,398	2,800	**41,902**
Runoff (MOE Methodology) (m^3)	8,859	16,901	24,617	17,342	7,261	404	0	0	0	808	2,824	5,654	**84,670**
Water Balance for Future Development Lands owned by others													
Pervious Area (Open/Agricultural) *44.50 ha*	WHC = 200 mm												
Precipitation (m^3)	34,265	23,585	24,920	32,930	37,380	28,035	37,380	26,255	32,040	26,700	32,485	28,480	**364,455**
Total AET (m^3)	890	1,335	4,895	15,130	33,375	52,065	60,075	45,390	30,260	17,355	7,120	2,225	**270,115**
Water Surplus (m^3)	9,790	18,690	27,145	19,135	8,010	445	0	0	0	890	3,115	6,230	**93,450**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	3,231	6,168	8,958	6,315	2,643	147	0	0	0	294	1,028	2,056	**30,839**
Runoff (MOE Methodology) (m^3)	6,559	12,522	18,187	12,820	5,367	298	0	0	0	596	2,087	4,174	**62,612**
Pervious Area (Forest) *4.10 ha*	WHC = 400 mm												
Precipitation (m^3)	3,157	2,173	2,296	3,034	3,444	2,583	3,444	2,419	2,952	2,460	2,993	2,624	**33,579**
Total AET (m^3)	82	123	451	1,394	3,075	4,797	5,658	5,002	3,280	1,681	656	205	**26,404**
Water Surplus (m^3)	615	1,066	2,173	1,435	615	41	0	0	0	82	246	533	**6,806**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	264	458	934	617	264	18	0	0	0	35	106	229	**2,927**
Runoff (MOE Methodology) (m^3)	351	608	1,239	818	351	23	0	0	0	47	140	304	**3,879**
Impervious Area (Ex. Roads, Industrial) *0.40 ha*													
Precipitation (m^3)	308	212	224	296	336	252	336	236	288	240	292	256	**3,276**
Evaporative Lossess at 10% Precipitation (m^3)	31	21	22	30	34	25	34	24	29	24	29	26	**328**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	277	191	202	266	302	227	302	212	259	216	263	230	**2,948**
Summary Total **49.00 ha**													
Precipitation (m^3)	37,730	25,970	27,440	36,260	41,160	30,870	41,160	28,910	35,280	29,400	35,770	31,360	**401,310**
Total AET (m^3)	972	1,458	5,346	16,524	36,450	56,862	65,733	50,392	33,540	19,036	7,776	2,430	**296,519**
Evaporative Lossess at 10% Precipitation (m^3)	31	21	22	30	34	25	34	24	29	24	29	26	**328**
Infiltration (MOE Methodology) (m^3)	3,495	6,626	9,892	6,932	2,908	164	0	0	0	329	1,134	2,285	**33,765**
Runoff (MOE Methodology) (m^3)	7,187	13,321	19,627	13,905	6,020	548	302	212	259	859	2,490	4,708	**69,439**

Table WB-2-1001: Pre-Development Water Balance - Subwatershed FM1001 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *218.16 ha* WHC = 200 mm													
Precipitation (m^3)	167,983	115,625	122,170	161,438	183,254	137,441	183,254	128,714	157,075	130,896	159,257	139,622	**1,786,730**
Total AET (m^3)	4,363	6,545	23,998	74,174	163,620	255,247	294,516	222,523	148,349	85,082	34,906	10,908	**1,324,231**
Water Surplus (m^3)	47,995	91,627	133,078	93,809	39,269	2,182	0	0	0	4,363	15,271	30,542	**458,136**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	15,838	30,237	43,916	30,957	12,959	720	0	0	0	1,440	5,039	10,079	**151,185**
Runoff (MOE Methodology) (m^3)	32,157	61,390	89,162	62,852	26,310	1,462	0	0	0	2,923	10,232	20,463	**306,951**
Pervious Area (Forest) *21.00 ha* WHC = 400 mm													
Precipitation (m^3)	16,170	11,130	11,760	15,540	17,640	13,230	17,640	12,390	15,120	12,600	15,330	13,440	**171,990**
Total AET (m^3)	420	630	2,310	7,140	15,750	24,570	28,980	25,620	16,800	8,610	3,360	1,050	**135,240**
Water Surplus (m^3)	3,150	5,460	11,130	7,350	3,150	210	0	0	0	420	1,260	2,730	**34,860**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	1,355	2,348	4,786	3,161	1,355	90	0	0	0	181	542	1,174	**14,990**
Runoff (MOE Methodology) (m^3)	1,796	3,112	6,344	4,190	1,796	120	0	0	0	239	718	1,556	**19,870**
Impervious Area (Ex. Roads, Industrial) *8.40 ha*													
Precipitation (m^3)	6,468	4,452	4,704	6,216	7,056	5,292	7,056	4,956	6,048	5,040	6,132	5,376	**68,796**
Evaporative Lossess at 10% Precipitation (m^3)	647	445	470	622	706	529	706	496	605	504	613	538	**6,880**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	5,821	4,007	4,234	5,594	6,350	4,763	6,350	4,460	5,443	4,536	5,519	4,838	**61,916**
Summary Total **247.56 ha**													
Precipitation (m^3)	190,621	131,207	138,634	183,194	207,950	155,963	207,950	146,060	178,243	148,536	180,719	158,438	**2,027,516**
Total AET (m^3)	4,783	7,175	26,308	81,314	179,370	279,817	323,496	248,143	165,149	93,692	38,266	11,958	**1,459,471**
Evaporative Lossess at 10% Precipitation (m^3)	647	445	470	622	706	529	706	496	605	504	613	538	**6,880**
Infiltration (MOE Methodology) (m^3)	17,193	32,585	48,702	34,117	14,313	810	0	0	0	1,620	5,581	11,253	**166,175**
Runoff (MOE Methodology) (m^3)	39,773	68,509	99,740	72,636	34,456	6,344	6,350	4,460	5,443	7,699	16,469	26,858	**388,738**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *27.20 ha* WHC = 200 mm													
Precipitation (m^3)	20,944	14,416	15,232	20,128	22,848	17,136	22,848	16,048	19,584	16,320	19,856	17,408	**222,768**
Total AET (m^3)	544	816	2,992	9,248	20,400	31,824	36,720	27,744	18,496	10,608	4,352	1,360	**165,104**
Water Surplus (m^3)	5,984	11,424	16,592	11,696	4,896	272	0	0	0	544	1,904	3,808	**57,120**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	1,975	3,770	5,475	3,860	1,616	90	0	0	0	180	628	1,257	**18,850**
Runoff (MOE Methodology) (m^3)	4,009	7,654	11,117	7,836	3,280	182	0	0	0	364	1,276	2,551	**38,270**
Pervious Area (Forest) *4.00 ha* WHC = 400 mm													
Precipitation (m^3)	3,080	2,120	2,240	2,960	3,360	2,520	3,360	2,360	2,880	2,400	2,920	2,560	**32,760**
Total AET (m^3)	80	120	440	1,360	3,000	4,680	5,520	4,880	3,200	1,640	640	200	**25,760**
Water Surplus (m^3)	600	1,040	2,120	1,400	600	40	0	0	0	80	240	520	**6,640**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	258	447	912	602	258	17	0	0	0	34	103	224	**2,855**
Runoff (MOE Methodology) (m^3)	342	593	1,208	798	342	23	0	0	0	46	137	296	**3,785**
Impervious Area (Ex. Roads, Industrial) *7.10 ha*													
Precipitation (m^3)	5,467	3,763	3,976	5,254	5,964	4,473	5,964	4,189	5,112	4,260	5,183	4,544	**58,149**
Evaporative Lossess at 10% Precipitation (m^3)	547	376	398	525	596	447	596	419	511	426	518	454	**5,815**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	4,920	3,387	3,578	4,729	5,368	4,026	5,368	3,770	4,601	3,834	4,665	4,090	**52,334**
Summary Total **38.30 ha**													
Precipitation (m^3)	29,491	20,299	21,448	28,342	32,172	24,129	32,172	22,597	27,576	22,980	27,959	24,512	**313,677**
Total AET (m^3)	624	936	3,432	10,608	23,400	36,504	42,240	32,624	21,696	12,248	4,992	1,560	**190,864**
Evaporative Lossess at 10% Precipitation (m^3)	547	376	398	525	596	447	596	419	511	426	518	454	**5,815**
Infiltration (MOE Methodology) (m^3)	2,233	4,217	6,387	4,462	1,874	107	0	0	0	214	732	1,480	**21,705**
Runoff (MOE Methodology) (m^3)	9,272	11,634	15,903	13,363	8,990	4,231	5,368	3,770	4,601	4,244	6,077	6,937	**94,389**
Water Balance Totals for Subwatershed FM1001 **395.30 ha**													
Precipitation (m^3)	304,381	209,509	221,368	292,522	332,052	249,039	332,052	233,227	284,616	237,180	288,569	252,992	**3,237,507**
Total AET (m^3)	7,588	11,382	41,734	128,996	284,550	443,898	513,087	392,968	261,580	148,564	60,704	18,970	**2,314,021**
Evaporative Lossess at 10% Precipitation (m^3)	1,224	843	890	1,177	1,336	1,002	1,336	938	1,145	954	1,161	1,018	**13,022**
Infiltration (MOE Methodology) (m^3)	27,302	51,784	77,169	54,094	22,689	1,282	0	0	0	2,564	8,845	17,818	**263,546**
Runoff (MOE Methodology) (m^3)	65,091	110,365	159,887	117,245	56,727	11,527	12,020	8,443	10,303	13,610	27,860	44,157	**637,237**
Potential Stream Base Flows (LPM) - does not account for lag	550	1,156	1,556	1,127	457	27	0	0	0	52	184	359	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this ca water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is describe in the text and presented on Table 4.6 of the main report
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater s
4. There is minor round-off error within the Environment Canada data

Table WB-3-1001: Post-Development Water Balance (No Mitigation) - Subwatershed FM1001 (Volumetric Calculations based on Pervious Area)
Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands														
Pervious Area (Open/Agricultural)	*15.02 ha*	WHC = 200 mm												
Precipitation (m^3)		11,565	7,961	8,411	11,115	12,617	9,463	12,617	8,862	10,814	9,012	10,965	9,613	**123,014**
Total AET (m^3)		300	451	1,652	5,107	11,265	17,573	20,277	15,320	10,214	5,858	2,403	751	**91,171**
Water Surplus (m^3)		3,304	6,308	9,162	6,459	2,704	150	0	0	0	300	1,051	2,103	**31,542**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	1,090	2,082	3,024	2,131	892	50	0	0	0	99	347	694	**10,409**
Runoff (MOE Methodology) (m^3)		2,214	4,227	6,139	4,327	1,811	101	0	0	0	201	704	1,409	**21,133**
Pervious Area (Forest)	*0.00 ha*	WHC = 400 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Landscaped)	*5.67 ha*	WHC = 100 mm												
Precipitation (m^3)		4,369	3,007	3,177	4,199	4,766	3,575	4,766	3,348	4,085	3,404	4,142	3,631	**46,470**
Total AET (m^3)		113	170	624	1,929	4,256	6,468	6,014	3,972	3,575	2,099	908	284	**30,413**
Water Surplus (m^3)		2,553	3,404	3,518	2,440	1,021	57	0	0	0	113	851	1,929	**15,887**
Infiltration (MOE Methodology) (m^3)	**i = 0.35**	894	1,192	1,231	854	357	20	0	0	0	40	298	675	**5,561**
Runoff (MOE Methodology) (m^3)		1,660	2,213	2,287	1,586	664	37	0	0	0	74	553	1,254	**10,327**
Impervious Area (Ex. Roads, Industrial)	*39.75 ha*													
Precipitation (m^3)		30,604	21,065	22,258	29,412	33,387	25,040	33,387	23,450	28,617	23,848	29,015	25,437	**325,520**
Evaporative Lossess at 10% Precipitation (m^3)		3,060	2,107	2,226	2,941	3,339	2,504	3,339	2,345	2,862	2,385	2,901	2,544	**32,552**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		27,544	18,959	20,032	26,471	30,048	22,536	30,048	21,105	25,755	21,463	26,113	22,894	**292,968**
Summary Total	**60.44 ha**													
Precipitation (m^3)		46,539	32,033	33,846	44,726	50,770	38,077	50,770	35,660	43,517	36,264	44,121	38,682	**495,004**
Total AET (m^3)		414	621	2,276	7,036	15,521	24,042	26,291	19,292	13,788	7,957	3,311	1,035	**121,584**
Evaporative Lossess at 10% Precipitation (m^3)		3,060	2,107	2,226	2,941	3,339	2,504	3,339	2,345	2,862	2,385	2,901	2,544	**32,552**
Infiltration (MOE Methodology) (m^3)		1,984	3,273	4,255	2,985	1,250	69	0	0	0	139	645	1,369	**15,969**
Runoff (MOE Methodology) (m^3)		31,418	25,398	28,457	32,384	32,523	22,673	30,048	21,105	25,755	21,738	27,371	25,557	**324,428**
Water Balance for Future Development Lands owned by others														
Pervious Area (Open/Agricultural)	*5.49 ha*	WHC = 200 mm												
Precipitation (m^3)		4,227	2,910	3,074	4,063	4,612	3,459	4,612	3,239	3,953	3,294	4,008	3,514	**44,963**
Total AET (m^3)		110	165	604	1,867	4,118	6,423	7,412	5,600	3,733	2,141	878	275	**33,324**
Water Surplus (m^3)		1,208	2,306	3,349	2,361	988	55	0	0	0	110	384	769	**11,529**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	399	761	1,105	779	326	18	0	0	0	36	127	254	**3,805**
Runoff (MOE Methodology) (m^3)		809	1,545	2,244	1,582	662	37	0	0	0	74	257	515	**7,724**
Pervious Area (Forest)	*4.10 ha*	WHC = 400 mm												
Precipitation (m^3)		3,157	2,173	2,296	3,034	3,444	2,583	3,444	2,419	2,952	2,460	2,993	2,624	**33,579**
Total AET (m^3)		82	123	451	1,394	3,075	4,797	5,658	5,002	3,280	1,681	656	205	**26,404**
Water Surplus (m^3)		615	1,066	2,173	1,435	615	41	0	0	0	82	246	533	**6,806**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	264	458	934	617	264	18	0	0	0	35	106	229	**2,927**
Runoff (MOE Methodology) (m^3)		351	608	1,239	818	351	23	0	0	0	47	140	304	**3,879**
Pervious Area (Landscaped)	*5.75 ha*	WHC = 100 mm												
Precipitation (m^3)		4,427	3,047	3,219	4,254	4,829	3,622	4,829	3,392	4,139	3,449	4,197	3,679	**47,083**
Total AET (m^3)		115	172	632	1,955	4,312	6,554	6,094	4,024	3,622	2,127	920	287	**30,814**
Water Surplus (m^3)		2,587	3,449	3,564	2,472	1,035	57	0	0	0	115	862	1,955	**16,097**
Infiltration (MOE Methodology) (m^3)	**i = 0.35**	905	1,207	1,247	865	362	20	0	0	0	40	302	684	**5,634**
Runoff (MOE Methodology) (m^3)		1,682	2,242	2,317	1,607	673	37	0	0	0	75	561	1,270	**10,463**
Impervious Area (Ex. Roads, Industrial)	*33.66 ha*													
Precipitation (m^3)		25,919	17,840	18,850	24,909	28,275	21,207	28,275	19,860	24,236	20,197	24,573	21,543	**275,685**
Evaporative Lossess at 10% Precipitation (m^3)		2,592	1,784	1,885	2,491	2,828	2,121	2,828	1,986	2,424	2,020	2,457	2,154	**27,569**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		23,327	16,056	16,965	22,418	25,448	19,086	25,448	17,874	21,812	18,177	22,115	19,389	**248,117**
Summary Total	**49.00 ha**													
Precipitation (m^3)		37,730	25,970	27,440	36,260	41,160	30,870	41,160	28,910	35,280	29,400	35,770	31,360	**401,310**
Total AET (m^3)		307	460	1,687	5,215	11,504	17,774	19,163	14,626	10,635	5,949	2,454	767	**90,542**
Evaporative Lossess at 10% Precipitation (m^3)		2,592	1,784	1,885	2,491	2,828	2,121	2,828	1,986	2,424	2,020	2,457	2,154	**27,569**
Infiltration (MOE Methodology) (m^3)		1,568	2,427	3,287	2,261	953	56	0	0	0	112	534	1,167	**12,365**
Runoff (MOE Methodology) (m^3)		26,169	20,451	22,764	26,425	27,133	19,183	25,448	17,874	21,812	18,372	23,074	21,478	**270,183**

Table WB-3-1001: Post-Development Water Balance (No Mitigation) - Subwatershed FM1001 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *218.16 ha* WHC = 200 mm													
Precipitation (m^3)	167,983	115,625	122,170	161,438	183,254	137,441	183,254	128,714	157,075	130,896	159,257	139,622	**1,786,730**
Total AET (m^3)	4,363	6,545	23,998	74,174	163,620	255,247	294,516	222,523	148,349	85,082	34,906	10,908	**1,324,231**
Water Surplus (m^3)	47,995	91,627	133,078	93,809	39,269	2,182	0	0	0	4,363	15,271	30,542	**458,136**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	15,838	30,237	43,916	30,957	12,959	720	0	0	0	1,440	5,039	10,079	**151,185**
Runoff (MOE Methodology) (m^3)	32,157	61,390	89,162	62,852	26,310	1,462	0	0	0	2,923	10,232	20,463	**306,951**
Pervious Area (Forest) *21.00 ha* WHC = 400 mm													
Precipitation (m^3)	16,170	11,130	11,760	15,540	17,640	13,230	17,640	12,390	15,120	12,600	15,330	13,440	**171,990**
Total AET (m^3)	420	630	2,310	7,140	15,750	24,570	28,980	25,620	16,800	8,610	3,360	1,050	**135,240**
Water Surplus (m^3)	3,150	5,460	11,130	7,350	3,150	210	0	0	0	420	1,260	2,730	**34,860**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	1,355	2,348	4,786	3,161	1,355	90	0	0	0	181	542	1,174	**14,990**
Runoff (MOE Methodology) (m^3)	1,796	3,112	6,344	4,190	1,796	120	0	0	0	239	718	1,556	**19,870**
Impervious Area (Ex. Roads, Industrial) *8.40 ha*													
Precipitation (m^3)	6,468	4,452	4,704	6,216	7,056	5,292	7,056	4,956	6,048	5,040	6,132	5,376	**68,796**
Evaporative Lossess at 10% Precipitation (m^3)	647	445	470	622	706	529	706	496	605	504	613	538	**6,880**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	5,821	4,007	4,234	5,594	6,350	4,763	6,350	4,460	5,443	4,536	5,519	4,838	**61,916**
Summary Total 247.56 ha													
Precipitation (m^3)	190,621	131,207	138,634	183,194	207,950	155,963	207,950	146,060	178,243	148,536	180,719	158,438	**2,027,516**
Total AET (m^3)	4,783	7,175	26,308	81,314	179,370	279,817	323,496	248,143	165,149	93,692	38,266	11,958	**1,459,471**
Evaporative Lossess at 10% Precipitation (m^3)	647	445	470	622	706	529	706	496	605	504	613	538	**6,880**
Infiltration (MOE Methodology) (m^3)	17,193	32,585	48,702	34,117	14,313	810	0	0	0	1,620	5,581	11,253	**166,175**
Runoff (MOE Methodology) (m^3)	39,773	68,509	99,740	72,636	34,456	6,344	6,350	4,460	5,443	7,699	16,469	26,858	**388,738**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *19.30 ha* WHC = 200 mm													
Precipitation (m^3)	14,861	10,229	10,808	14,282	16,212	12,159	16,212	11,387	13,896	11,580	14,089	12,352	**158,067**
Total AET (m^3)	386	579	2,123	6,562	14,475	22,581	26,055	19,686	13,124	7,527	3,088	965	**117,151**
Water Surplus (m^3)	4,246	8,106	11,773	8,299	3,474	193	0	0	0	386	1,351	2,702	**40,530**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	1,401	2,675	3,885	2,739	1,146	64	0	0	0	127	446	892	**13,375**
Runoff (MOE Methodology) (m^3)	2,845	5,431	7,888	5,560	2,328	129	0	0	0	259	905	1,810	**27,155**
Pervious Area (Forest) *2.00 ha* WHC = 400 mm													
Precipitation (m^3)	1,540	1,060	1,120	1,480	1,680	1,260	1,680	1,180	1,440	1,200	1,460	1,280	**16,380**
Total AET (m^3)	40	60	220	680	1,500	2,340	2,760	2,440	1,600	820	320	100	**12,880**
Water Surplus (m^3)	300	520	1,060	700	300	20	0	0	0	40	120	260	**3,320**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	129	224	456	301	129	9	0	0	0	17	52	112	**1,428**
Runoff (MOE Methodology) (m^3)	171	296	604	399	171	11	0	0	0	23	68	148	**1,892**
Impervious Area (Ex. Roads, Industrial) *17.00 ha*													
Precipitation (m^3)	13,090	9,010	9,520	12,580	14,280	10,710	14,280	10,030	12,240	10,200	12,410	10,880	**139,230**
Evaporative Lossess at 10% Precipitation (m^3)	1,309	901	952	1,258	1,428	1,071	1,428	1,003	1,224	1,020	1,241	1,088	**13,923**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	11,781	8,109	8,568	11,322	12,852	9,639	12,852	9,027	11,016	9,180	11,169	9,792	**125,307**
Summary Total 38.30 ha													
Precipitation (m^3)	29,491	20,299	21,448	28,342	32,172	24,129	32,172	22,597	27,576	22,980	27,959	24,512	**313,677**
Total AET (m^3)	426	639	2,343	7,242	15,975	24,921	28,815	22,126	14,724	8,347	3,408	1,065	**130,031**
Evaporative Lossess at 10% Precipitation (m^3)	1,309	901	952	1,258	1,428	1,071	1,428	1,003	1,224	1,020	1,241	1,088	**13,923**
Infiltration (MOE Methodology) (m^3)	1,530	2,899	4,341	3,040	1,275	72	0	0	0	145	497	1,003	**14,803**
Runoff (MOE Methodology) (m^3)	14,797	13,836	17,060	17,281	15,351	9,780	12,852	9,027	11,016	9,461	12,143	11,751	**154,355**
Water Balance Totals for Subwatershed FM1001 **395.30 ha**													
Precipitation (m^3)	304,381	209,509	221,368	292,522	332,052	249,039	332,052	233,227	284,616	237,180	288,569	252,992	**3,237,507**
Total AET (m^3)	5,930	8,895	32,614	100,808	222,370	346,554	397,766	304,187	204,296	115,946	47,439	14,825	**1,801,628**
Evaporative Lossess at 10% Precipitation (m^3)	7,608	5,237	5,533	7,312	8,300	6,225	8,300	5,830	7,114	5,928	7,213	6,324	**80,923**
Infiltration (MOE Methodology) (m^3)	22,276	41,183	60,584	42,404	17,791	1,008	0	0	0	2,016	7,258	14,792	**209,312**
Runoff (MOE Methodology) (m^3)	112,156	128,195	168,021	148,726	109,463	57,981	74,698	52,467	64,027	57,270	79,056	85,643	**1,137,703**
Potential Stream Base Flows (LPM) - does not account for lag	449	919	1,221	883	359	21	0	0	0	41	151	298	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this ca water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is describe in the text and presented on Table 4.6 of the main report
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater s
4. There is minor round-off error within the Environment Canada data

Table WB-4-1001: Post-Development Water Balance (With Mitigation) - Subwatershed FM1001 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands														
Pervious Area (Open/Agricultural)	*15.02 ha*	WHC = 200 mm												
Precipitation (m^3)		11,565	7,961	8,411	11,115	12,617	9,463	12,617	8,862	10,814	9,012	10,965	9,613	**123,014**
Total AET (m^3)		300	451	1,652	5,107	11,265	17,573	20,277	15,320	10,214	5,858	2,403	751	**91,171**
Water Surplus (m^3)		3,304	6,308	9,162	6,459	2,704	150	0	0	0	300	1,051	2,103	**31,542**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	1,090	2,082	3,024	2,131	892	50	0	0	0	99	347	694	**10,409**
Runoff (MOE Methodology) (m^3)		2,214	4,227	6,139	4,327	1,811	101	0	0	0	201	704	1,409	**21,133**
Pervious Area (Forest)	*0.00 ha*	WHC = 400 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Landscaped)	*5.67 ha*	WHC = 100 mm												
Precipitation (m^3)		4,369	3,007	3,177	4,199	4,766	3,575	4,766	3,348	4,085	3,404	4,142	3,631	**46,470**
Total AET (m^3)		113	170	624	1,929	4,256	6,468	6,014	3,972	3,575	2,099	908	284	**30,413**
Water Surplus (m^3)		2,553	3,404	3,518	2,440	1,021	57	0	0	0	113	851	1,929	**15,887**
Infiltration (MOE Methodology) (m^3)	**i = 0.40**	1,021	1,362	1,407	976	409	23	0	0	0	45	340	772	**6,355**
Runoff (MOE Methodology) (m^3)		1,532	2,043	2,111	1,464	613	34	0	0	0	68	511	1,157	**9,532**
Impervious Area (Ex. Roads, Industrial)	*39.75 ha*													
Precipitation (m^3)		30,604	21,065	22,258	29,412	33,387	25,040	33,387	23,450	28,617	23,848	29,015	25,437	**325,520**
Evaporative Lossess at 10% Precipitation (m^3)		3,060	2,107	2,226	2,941	3,339	2,504	3,339	2,345	2,862	2,385	2,901	2,544	**32,552**
Roof Runoff diverted to Mitigation Measures (m^3)		2,815	1,938	2,047	2,705	3,071	2,303	3,071	2,157	2,632	2,193	2,669	2,340	**29,940**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		24,729	17,021	17,985	23,766	26,977	20,233	26,977	18,948	23,123	19,269	23,444	20,554	**263,028**
Mitigations Measures	*4.06 ha*	<-- Roof Area Required of the impervious area shown above to be directed to swales												
Infiltration Swales (length)	1,620 (m)													
Infiltration Flat Bottomed-Swales (length)	- (m)													
Available Volume of Roof Water directed to mitigation (m^3)		2,815	1,938	2,047	2,705	3,071	2,303	3,071	2,157	2,632	2,193	2,669	2,340	**29,940**
Subsurface Gravel Wetland (SGW) Area	- (m^2)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration Swales connected to SGW	- (m)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (m^3) daily capacity -->	69 m^3/d	2,145	1,938	2,047	2,076	2,145	2,076	2,145	2,145	2,076	2,145	2,076	2,145	**25,159**
Runoff (m^3)		670	0	0	629	926	227	926	12	556	48	593	195	**4,781**
Summary Total	**60.44 ha**													
Precipitation (m^3)		46,539	32,033	33,846	44,726	50,770	38,077	50,770	35,660	43,517	36,264	44,121	38,682	**495,004**
Total AET (m^3)		414	621	2,276	7,036	15,521	24,042	26,291	19,292	13,788	7,957	3,311	1,035	**121,584**
Evaporative Lossess at 10% Precipitation (m^3)		3,060	2,107	2,226	2,941	3,339	2,504	3,339	2,345	2,862	2,385	2,901	2,544	**32,552**
Infiltration (MOE Methodology) (m^3)		4,257	5,381	6,478	5,183	3,446	2,148	2,145	2,145	2,076	2,290	2,763	3,611	**41,923**
Runoff (MOE Methodology) (m^3)		29,145	23,291	26,234	30,186	30,327	20,595	27,903	18,960	23,679	19,587	25,252	23,315	**298,474**
Water Balance for Future Development Lands owned by others														
Pervious Area (Open/Agricultural)	*5.49 ha*	WHC = 200 mm												
Precipitation (m^3)		4,227	2,910	3,074	4,063	4,612	3,459	4,612	3,239	3,953	3,294	4,008	3,514	**44,963**
Total AET (m^3)		110	165	604	1,867	4,118	6,423	7,412	5,600	3,733	2,141	878	275	**33,324**
Water Surplus (m^3)		1,208	2,306	3,349	2,361	988	55	0	0	0	110	384	769	**11,529**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	399	761	1,105	779	326	18	0	0	0	36	127	254	**3,805**
Runoff (MOE Methodology) (m^3)		809	1,545	2,244	1,582	662	37	0	0	0	74	257	515	**7,724**
Pervious Area (Forest)	*4.10 ha*	WHC = 400 mm												
Precipitation (m^3)		3,157	2,173	2,296	3,034	3,444	2,583	3,444	2,419	2,952	2,460	2,993	2,624	**33,579**
Total AET (m^3)		82	123	451	1,394	3,075	4,797	5,658	5,002	3,280	1,681	656	205	**26,404**
Water Surplus (m^3)		615	1,066	2,173	1,435	615	41	0	0	0	82	246	533	**6,806**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	264	458	934	617	264	18	0	0	0	35	106	229	**2,927**
Runoff (MOE Methodology) (m^3)		351	608	1,239	818	351	23	0	0	0	47	140	304	**3,879**
Pervious Area (Landscaped)	*5.75 ha*	WHC = 100 mm												
Precipitation (m^3)		4,427	3,047	3,219	4,254	4,829	3,622	4,829	3,392	4,139	3,449	4,197	3,679	**47,083**
Total AET (m^3)		115	172	632	1,955	4,312	6,554	6,094	4,024	3,622	2,127	920	287	**30,814**
Water Surplus (m^3)		2,587	3,449	3,564	2,472	1,035	57	0	0	0	115	862	1,955	**16,097**
Infiltration (MOE Methodology) (m^3)	**i = 0.40**	1,035	1,380	1,426	989	414	23	0	0	0	46	345	782	**6,439**
Runoff (MOE Methodology) (m^3)		1,552	2,070	2,139	1,483	621	34	0	0	0	69	517	1,173	**9,658**
Impervious Area (Ex. Roads, Industrial)	*33.66 ha*													
Precipitation (m^3)		25,919	17,840	18,850	24,909	28,275	21,207	28,275	19,860	24,236	20,197	24,573	21,543	**275,685**
Evaporative Lossess at 10% Precipitation (m^3)		2,592	1,784	1,885	2,491	2,828	2,121	2,828	1,986	2,424	2,020	2,457	2,154	**27,569**
Roof Runoff diverted to Mitigation Measures (m^3)		1,750	1,204	1,272	1,681	1,909	1,432	1,909	1,341	1,636	1,363	1,659	1,454	**18,610**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		21,578	14,852	15,693	20,737	23,539	17,654	23,539	16,533	20,176	16,814	20,457	17,935	**229,507**
Mitigations Measures	*2.52 ha*	<-- Roof Area Required of the impervious area shown above												
Infiltration Swales (length)	1,190 m													
Infiltration Bio-Swales (length)	- m													
Available Volume of Water directed to mitigation (m^3)		1,750	1,204	1,272	1,681	1,909	1,432	1,909	1,341	1,636	1,363	1,659	1,454	**18,610**
Infiltration (m^3) daily capacity -->	43 m^3/d	1,333	1,204	1,272	1,290	1,333	1,290	1,333	1,333	1,290	1,333	1,290	1,333	**15,638**
Runoff (m^3)		416	0	0	391	575	141	575	7	346	30	368	121	**2,972**
Summary Total	**49.00 ha**													
Precipitation (m^3)		37,730	25,970	27,440	36,260	41,160	30,870	41,160	28,910	35,280	29,400	35,770	31,360	**401,310**
Total AET (m^3)		307	460	1,687	5,215	11,504	17,774	19,163	14,626	10,635	5,949	2,454	767	**90,542**
Evaporative Lossess at 10% Precipitation (m^3)		2,592	1,784	1,885	2,491	2,828	2,121	2,828	1,986	2,424	2,020	2,457	2,154	**27,569**
Infiltration (MOE Methodology) (m^3)		3,031	3,803	4,738	3,675	2,338	1,349	1,333	1,333	1,290	1,451	1,868	2,598	**28,808**
Runoff (MOE Methodology) (m^3)		24,706	19,074	21,314	25,011	25,748	17,890	24,115	16,541	20,522	17,033	21,740	20,047	**253,741**

Table WB-4-1001: Post-Development Water Balance (With Mitigation) - Subwatershed FM1001 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *218.16 ha* WHC = 200 mm													
Precipitation (m^3)	167,983	115,625	122,170	161,438	183,254	137,441	183,254	128,714	157,075	130,896	159,257	139,622	**1,786,730**
Total AET (m^3)	4,363	6,545	23,998	74,174	163,620	255,247	294,516	222,523	148,349	85,082	34,906	10,908	**1,324,231**
Water Surplus (m^3)	47,995	91,627	133,078	93,809	39,269	2,182	0	0	0	4,363	15,271	30,542	**458,136**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	15,838	30,237	43,916	30,957	12,959	720	0	0	0	1,440	5,039	10,079	**151,185**
Runoff (MOE Methodology) (m^3)	32,157	61,390	89,162	62,852	26,310	1,462	0	0	0	2,923	10,232	20,463	**306,951**
Pervious Area (Forest) *21.00 ha* WHC = 400 mm													
Precipitation (m^3)	16,170	11,130	11,760	15,540	17,640	13,230	17,640	12,390	15,120	12,600	15,330	13,440	**171,990**
Total AET (m^3)	420	630	2,310	7,140	15,750	24,570	28,980	25,620	16,800	8,610	3,360	1,050	**135,240**
Water Surplus (m^3)	3,150	5,460	11,130	7,350	3,150	210	0	0	0	420	1,260	2,730	**34,860**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	1,355	2,348	4,786	3,161	1,355	90	0	0	0	181	542	1,174	**14,990**
Runoff (MOE Methodology) (m^3)	1,796	3,112	6,344	4,190	1,796	120	0	0	0	239	718	1,556	**19,870**
Impervious Area (Ex. Roads, Industrial) *8.40 ha*													
Precipitation (m^3)	6,468	4,452	4,704	6,216	7,056	5,292	7,056	4,956	6,048	5,040	6,132	5,376	**68,796**
Evaporative Lossess at 10% Precipitation (m^3)	647	445	470	622	706	529	706	496	605	504	613	538	**6,880**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	5,821	4,007	4,234	5,594	6,350	4,763	6,350	4,460	5,443	4,536	5,519	4,838	**61,916**
Summary Total **247.56 ha**													
Precipitation (m^3)	190,621	131,207	138,634	183,194	207,950	155,963	207,950	146,060	178,243	148,536	180,719	158,438	**2,027,516**
Total AET (m^3)	4,783	7,175	26,308	81,314	179,370	279,817	323,496	248,143	165,149	93,692	38,266	11,958	**1,459,471**
Evaporative Lossess at 10% Precipitation (m^3)	647	445	470	622	706	529	706	496	605	504	613	538	**6,880**
Infiltration (MOE Methodology) (m^3)	17,193	32,585	48,702	34,117	14,313	810	0	0	0	1,620	5,581	11,253	**166,175**
Runoff (MOE Methodology) (m^3)	39,773	68,509	99,740	72,636	34,456	6,344	6,350	4,460	5,443	7,699	16,469	26,858	**388,738**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *19.30 ha* WHC = 200 mm													
Precipitation (m^3)	14,861	10,229	10,808	14,282	16,212	12,159	16,212	11,387	13,896	11,580	14,089	12,352	**158,067**
Total AET (m^3)	386	579	2,123	6,562	14,475	22,581	26,055	19,686	13,124	7,527	3,088	965	**117,151**
Water Surplus (m^3)	4,246	8,106	11,773	8,299	3,474	193	0	0	0	386	1,351	2,702	**40,530**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	1,401	2,675	3,885	2,739	1,146	64	0	0	0	127	446	892	**13,375**
Runoff (MOE Methodology) (m^3)	2,845	5,431	7,888	5,560	2,328	129	0	0	0	259	905	1,810	**27,155**
Pervious Area (Forest) *2.00 ha* WHC = 400 mm													
Precipitation (m^3)	1,540	1,060	1,120	1,480	1,680	1,260	1,680	1,180	1,440	1,200	1,460	1,280	**16,380**
Total AET (m^3)	40	60	220	680	1,500	2,340	2,760	2,440	1,600	820	320	100	**12,880**
Water Surplus (m^3)	300	520	1,060	700	300	20	0	0	0	40	120	260	**3,320**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	129	224	456	301	129	9	0	0	0	17	52	112	**1,428**
Runoff (MOE Methodology) (m^3)	171	296	604	399	171	11	0	0	0	23	68	148	**1,892**
Impervious Area (Ex. Roads, Industrial) *17.00 ha*													
Precipitation (m^3)	13,090	9,010	9,520	12,580	14,280	10,710	14,280	10,030	12,240	10,200	12,410	10,880	**139,230**
Evaporative Lossess at 10% Precipitation (m^3)	1,309	901	952	1,258	1,428	1,071	1,428	1,003	1,224	1,020	1,241	1,088	**13,923**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	11,781	8,109	8,568	11,322	12,852	9,639	12,852	9,027	11,016	9,180	11,169	9,792	**125,307**
Summary Total **38.30 ha**													
Precipitation (m^3)	29,491	20,299	21,448	28,342	32,172	24,129	32,172	22,597	27,576	22,980	27,959	24,512	**313,677**
Total AET (m^3)	426	639	2,343	7,242	15,975	24,921	28,815	22,126	14,724	8,347	3,408	1,065	**130,031**
Evaporative Lossess at 10% Precipitation (m^3)	1,309	901	952	1,258	1,428	1,071	1,428	1,003	1,224	1,020	1,241	1,088	**13,923**
Infiltration (MOE Methodology) (m^3)	1,530	2,899	4,341	3,040	1,275	72	0	0	0	145	497	1,003	**14,803**
Runoff (MOE Methodology) (m^3)	14,797	13,836	17,060	17,281	15,351	9,780	12,852	9,027	11,016	9,461	12,143	11,751	**154,355**
Water Balance Totals for Subwatershed FM1001 **395.30 ha**													
Precipitation (m^3)	304,381	209,509	221,368	292,522	332,052	249,039	332,052	233,227	284,616	237,180	288,569	252,992	**3,237,507**
Total AET (m^3)	5,930	8,895	32,614	100,808	222,370	346,554	397,766	304,187	204,296	115,946	47,439	14,825	**1,801,628**
Evaporative Lossess at 10% Precipitation (m^3)	7,608	5,237	5,533	7,312	8,300	6,225	8,300	5,830	7,114	5,928	7,213	6,324	**80,923**
Infiltration (MOE Methodology) (m^3)	26,011	44,668	64,258	46,015	21,372	4,380	3,478	3,478	3,366	5,505	10,710	18,465	**251,708**
Runoff (MOE Methodology) (m^3)	108,421	124,710	164,348	145,114	105,882	54,609	71,220	48,988	60,661	53,780	75,604	81,970	**1,095,307**
Potential Stream Base Flows (LPM) - does not account for lag	524	997	1,296	959	431	91	70	70	70	111	223	372	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this case water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used.
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is described in the text and presented on Table 4.6 of the main report.
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater syst
4. There is minor round-off error within the Environment Canada data.

Table WB-2-1109: Pre-Development Water Balance - Subwatershed FM1109 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands														
Pervious Area (Open/Agricultural)	*9.15 ha*	WHC = 200 mm												
Precipitation (m^3)		7,046	4,850	5,124	6,771	7,686	5,765	7,686	5,399	6,588	5,490	6,680	5,856	**74,939**
Total AET (m^3)		183	275	1,007	3,111	6,863	10,706	12,353	9,333	6,222	3,569	1,464	458	**55,541**
Water Surplus (m^3)		2,013	3,843	5,582	3,935	1,647	92	0	0	0	183	641	1,281	**19,215**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	664	1,268	1,842	1,298	544	30	0	0	0	60	211	423	**6,341**
Runoff (MOE Methodology) (m^3)		1,349	2,575	3,740	2,636	1,103	61	0	0	0	123	429	858	**12,874**
Pervious Area (Forest)	*0.80 ha*	WHC = 400 mm												
Precipitation (m^3)		616	424	448	592	672	504	672	472	576	480	584	512	**6,552**
Total AET (m^3)		16	24	88	272	600	936	1,104	976	640	328	128	40	**5,152**
Water Surplus (m^3)		120	208	424	280	120	8	0	0	0	16	48	104	**1,328**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	52	89	182	120	52	3	0	0	0	7	21	45	**571**
Runoff (MOE Methodology) (m^3)		68	119	242	160	68	5	0	0	0	9	27	59	**757**
Impervious Area (Ex. Roads, Industrial)	*0.00 ha*													
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total	**9.95 ha**													
Precipitation (m^3)		7,662	5,274	5,572	7,363	8,358	6,269	8,358	5,871	7,164	5,970	7,264	6,368	**81,491**
Total AET (m^3)		199	299	1,095	3,383	7,463	11,642	13,457	10,309	6,862	3,897	1,592	498	**60,693**
Evaporative Lossess at 10% Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		716	1,358	2,024	1,419	595	34	0	0	0	67	232	467	**6,912**
Runoff (MOE Methodology) (m^3)		1,417	2,693	3,981	2,796	1,172	66	0	0	0	132	456	918	**13,631**
Water Balance for Future Development Lands owned by others														
Pervious Area (Open/Agricultural)	*78.02 ha*	WHC = 200 mm												
Precipitation (m^3)		60,075	41,351	43,691	57,735	65,537	49,153	65,537	46,032	56,174	46,812	56,955	49,933	**638,984**
Total AET (m^3)		1,560	2,341	8,582	26,527	58,515	91,283	105,327	79,580	53,054	30,428	12,483	3,901	**473,581**
Water Surplus (m^3)		17,164	32,768	47,592	33,549	14,044	780	0	0	0	1,560	5,461	10,923	**163,842**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	5,664	10,814	15,705	11,071	4,634	257	0	0	0	515	1,802	3,605	**54,068**
Runoff (MOE Methodology) (m^3)		11,500	21,955	31,887	22,478	9,409	523	0	0	0	1,045	3,659	7,318	**109,774**
Pervious Area (Forest)	*16.00 ha*	WHC = 400 mm												
Precipitation (m^3)		12,320	8,480	8,960	11,840	13,440	10,080	13,440	9,440	11,520	9,600	11,680	10,240	**131,040**
Total AET (m^3)		320	480	1,760	5,440	12,000	18,720	22,080	19,520	12,800	6,560	2,560	800	**103,040**
Water Surplus (m^3)		2,400	4,160	8,480	5,600	2,400	160	0	0	0	320	960	2,080	**26,560**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	1,032	1,789	3,646	2,408	1,032	69	0	0	0	138	413	894	**11,421**
Runoff (MOE Methodology) (m^3)		1,368	2,371	4,834	3,192	1,368	91	0	0	0	182	547	1,186	**15,139**
Impervious Area (Ex. Roads, Industrial)	*4.80 ha*													
Precipitation (m^3)		3,696	2,544	2,688	3,552	4,032	3,024	4,032	2,832	3,456	2,880	3,504	3,072	**39,312**
Evaporative Lossess at 10% Precipitation (m^3)		370	254	269	355	403	302	403	283	346	288	350	307	**3,931**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		3,326	2,290	2,419	3,197	3,629	2,722	3,629	2,549	3,110	2,592	3,154	2,765	**35,381**
Summary Total	**98.82 ha**													
Precipitation (m^3)		76,091	52,375	55,339	73,127	83,009	62,257	83,009	58,304	71,150	59,292	72,139	63,245	**809,336**
Total AET (m^3)		1,880	2,821	10,342	31,967	70,515	110,003	127,407	99,100	65,854	36,988	15,043	4,701	**576,621**
Evaporative Lossess at 10% Precipitation (m^3)		370	254	269	355	403	302	403	283	346	288	350	307	**3,931**
Infiltration (MOE Methodology) (m^3)		6,696	12,602	19,352	13,479	5,666	326	0	0	0	653	2,215	4,499	**65,489**
Runoff (MOE Methodology) (m^3)		16,195	26,616	39,140	28,866	14,406	3,336	3,629	2,549	3,110	3,820	7,360	11,269	**160,294**

Table WB-2-1109: Pre-Development Water Balance - Subwatershed FM1109 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *183.33 ha* WHC = 200 mm													
Precipitation (m^3)	141,164	97,165	102,665	135,664	153,997	115,498	153,997	108,165	131,998	109,998	133,831	117,331	**1,501,473**
Total AET (m^3)	3,667	5,500	20,166	62,332	137,498	214,496	247,496	186,997	124,664	71,499	29,333	9,167	**1,112,813**
Water Surplus (m^3)	40,333	76,999	111,831	78,832	32,999	1,833	0	0	0	3,667	12,833	25,666	**384,993**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	13,310	25,410	36,904	26,015	10,890	605	0	0	0	1,210	4,235	8,470	**127,048**
Runoff (MOE Methodology) (m^3)	27,023	51,589	74,927	52,817	22,110	1,228	0	0	0	2,457	8,598	17,196	**257,945**
Pervious Area (Forest) *66.40 ha* WHC = 400 mm													
Precipitation (m^3)	51,128	35,192	37,184	49,136	55,776	41,832	55,776	39,176	47,808	39,840	48,472	42,496	**543,816**
Total AET (m^3)	1,328	1,992	7,304	22,576	49,800	77,688	91,632	81,008	53,120	27,224	10,624	3,320	**427,616**
Water Surplus (m^3)	9,960	17,264	35,192	23,240	9,960	664	0	0	0	1,328	3,984	8,632	**110,224**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	4,283	7,424	15,133	9,993	4,283	286	0	0	0	571	1,713	3,712	**47,396**
Runoff (MOE Methodology) (m^3)	5,677	9,840	20,059	13,247	5,677	378	0	0	0	757	2,271	4,920	**62,828**
Impervious Area (Ex. Roads, Industrial) *6.50 ha*													
Precipitation (m^3)	5,005	3,445	3,640	4,810	5,460	4,095	5,460	3,835	4,680	3,900	4,745	4,160	**53,235**
Evaporative Lossess at 10% Precipitation (m^3)	501	345	364	481	546	410	546	384	468	390	475	416	**5,324**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	4,505	3,101	3,276	4,329	4,914	3,686	4,914	3,452	4,212	3,510	4,271	3,744	**47,912**
Summary Total **256.23 ha**													
Precipitation (m^3)	197,297	135,802	143,489	189,610	215,233	161,425	215,233	151,176	184,486	153,738	187,048	163,987	**2,098,524**
Total AET (m^3)	4,995	7,492	27,470	84,908	187,298	292,184	339,128	268,005	177,784	98,723	39,957	12,487	**1,540,429**
Evaporative Lossess at 10% Precipitation (m^3)	501	345	364	481	546	410	546	384	468	390	475	416	**5,324**
Infiltration (MOE Methodology) (m^3)	17,593	32,833	52,037	36,008	15,173	891	0	0	0	1,781	5,948	12,182	**174,444**
Runoff (MOE Methodology) (m^3)	37,205	64,530	98,262	70,393	32,701	5,292	4,914	3,452	4,212	6,724	15,140	25,861	**368,684**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **0.00 ha**													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance Totals for Subwatershed FM1109 **365.00 ha**													
Precipitation (m^3)	281,050	193,450	204,400	270,100	306,600	229,950	306,600	215,350	262,800	219,000	266,450	233,600	**2,989,350**
Total AET (m^3)	7,074	10,611	38,907	120,258	265,275	413,829	479,991	377,414	250,500	139,607	56,592	17,685	**2,177,743**
Evaporative Lossess at 10% Precipitation (m^3)	870	599	633	836	949	712	949	667	814	678	825	723	**9,255**
Infiltration (MOE Methodology) (m^3)	25,005	46,793	73,413	50,906	21,434	1,250	0	0	0	2,501	8,395	17,148	**246,845**
Runoff (MOE Methodology) (m^3)	54,816	93,839	141,383	102,055	48,279	8,694	8,543	6,000	7,322	10,675	22,956	38,047	**542,610**
Potential Stream Base Flows (LPM) - does not account for lag	504	1,044	1,480	1,061	432	26	0	0	0	50	175	346	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this ca water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is describe in the text and presented on Table 4.6 of the main report
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater s
4. There is minor round-off error within the Environment Canada data

Table WB-3-1109: Post-Development Water Balance (No Mitigation) - Subwatershed FM1109 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands														
Pervious Area (Open/Agricultural)	*2.63 ha*	WHC = 200 mm												
Precipitation (m^3)		2,025	1,394	1,473	1,946	2,209	1,657	2,209	1,552	1,894	1,578	1,920	1,683	**21,540**
Total AET (m^3)		53	79	289	894	1,973	3,077	3,551	2,683	1,788	1,026	421	132	**15,964**
Water Surplus (m^3)		579	1,105	1,604	1,131	473	26	0	0	0	53	184	368	**5,523**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	191	365	529	373	156	9	0	0	0	17	61	122	**1,823**
Runoff (MOE Methodology) (m^3)		388	740	1,075	758	317	18	0	0	0	35	123	247	**3,700**
Pervious Area (Forest)	*0.50 ha*	WHC = 400 mm												
Precipitation (m^3)		385	265	280	370	420	315	420	295	360	300	365	320	**4,095**
Total AET (m^3)		10	15	55	170	375	585	690	610	400	205	80	25	**3,220**
Water Surplus (m^3)		75	130	265	175	75	5	0	0	0	10	30	65	**830**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	32	56	114	75	32	2	0	0	0	4	13	28	**357**
Runoff (MOE Methodology) (m^3)		43	74	151	100	43	3	0	0	0	6	17	37	**473**
Pervious Area (Landscaped)	*1.07 ha*	WHC = 100 mm												
Precipitation (m^3)		824	567	599	792	899	674	899	631	770	642	781	685	**8,763**
Total AET (m^3)		21	32	118	364	802	1,220	1,134	749	674	396	171	54	**5,735**
Water Surplus (m^3)		482	642	663	460	193	11	0	0	0	21	161	364	**2,996**
Infiltration (MOE Methodology) (m^3)	**i = 0.35**	169	225	232	161	67	4	0	0	0	7	56	127	**1,049**
Runoff (MOE Methodology) (m^3)		313	417	431	299	125	7	0	0	0	14	104	236	**1,947**
Impervious Area (Ex. Roads, Industrial)	*5.75 ha*													
Precipitation (m^3)		4,428	3,048	3,220	4,255	4,830	3,623	4,830	3,393	4,140	3,450	4,198	3,680	**47,093**
Evaporative Lossess at 10% Precipitation (m^3)		443	305	322	426	483	362	483	339	414	345	420	368	**4,709**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		3,985	2,743	2,898	3,830	4,347	3,260	4,347	3,053	3,726	3,105	3,778	3,312	**42,383**
Summary Total	**9.95 ha**													
Precipitation (m^3)		7,662	5,274	5,572	7,363	8,358	6,269	8,358	5,871	7,164	5,970	7,264	6,368	**81,491**
Total AET (m^3)		84	126	462	1,428	3,150	4,882	5,375	4,042	2,863	1,627	672	210	**24,919**
Evaporative Lossess at 10% Precipitation (m^3)		443	305	322	426	483	362	483	339	414	345	420	368	**4,709**
Infiltration (MOE Methodology) (m^3)		392	645	876	609	256	15	0	0	0	29	130	277	**3,228**
Runoff (MOE Methodology) (m^3)		4,728	3,974	4,555	4,986	4,832	3,288	4,347	3,053	3,726	3,160	4,023	3,832	**48,504**
Water Balance for Future Development Lands owned by others														
Pervious Area (Open/Agricultural)	*26.40 ha*	WHC = 200 mm												
Precipitation (m^3)		20,328	13,992	14,784	19,536	22,176	16,632	22,176	15,576	19,008	15,840	19,272	16,896	**216,216**
Total AET (m^3)		528	792	2,904	8,976	19,800	30,888	35,640	26,928	17,952	10,296	4,224	1,320	**160,248**
Water Surplus (m^3)		5,808	11,088	16,104	11,352	4,752	264	0	0	0	528	1,848	3,696	**55,440**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	1,917	3,659	5,314	3,746	1,568	87	0	0	0	174	610	1,220	**18,295**
Runoff (MOE Methodology) (m^3)		3,891	7,429	10,790	7,606	3,184	177	0	0	0	354	1,238	2,476	**37,145**
Pervious Area (Forest)	*16.00 ha*	WHC = 400 mm												
Precipitation (m^3)		12,320	8,480	8,960	11,840	13,440	10,080	13,440	9,440	11,520	9,600	11,680	10,240	**131,040**
Total AET (m^3)		320	480	1,760	5,440	12,000	18,720	22,080	19,520	12,800	6,560	2,560	800	**103,040**
Water Surplus (m^3)		2,400	4,160	8,480	5,600	2,400	160	0	0	0	320	960	2,080	**26,560**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	1,032	1,789	3,646	2,408	1,032	69	0	0	0	138	413	894	**11,421**
Runoff (MOE Methodology) (m^3)		1,368	2,371	4,834	3,192	1,368	91	0	0	0	182	547	1,186	**15,139**
Pervious Area (Landscaped)	*7.43 ha*	WHC = 100 mm												
Precipitation (m^3)		5,723	3,939	4,162	5,500	6,243	4,682	6,243	4,385	5,351	4,459	5,425	4,756	**60,868**
Total AET (m^3)		149	223	818	2,527	5,574	8,472	7,878	5,202	4,682	2,750	1,189	372	**39,836**
Water Surplus (m^3)		3,344	4,459	4,608	3,196	1,338	74	0	0	0	149	1,115	2,527	**20,810**
Infiltration (MOE Methodology) (m^3)	**i = 0.35**	1,171	1,561	1,613	1,119	468	26	0	0	0	52	390	884	**7,283**
Runoff (MOE Methodology) (m^3)		2,174	2,898	2,995	2,077	870	48	0	0	0	97	725	1,642	**13,526**
Impervious Area (Ex. Roads, Industrial)	*48.99 ha*													
Precipitation (m^3)		37,721	25,964	27,433	36,251	41,150	30,862	41,150	28,903	35,271	29,393	35,761	31,352	**401,212**
Evaporative Lossess at 10% Precipitation (m^3)		3,772	2,596	2,743	3,625	4,115	3,086	4,115	2,890	3,527	2,939	3,576	3,135	**40,121**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		33,949	23,367	24,690	32,626	37,035	27,776	37,035	26,013	31,744	26,454	32,185	28,217	**361,091**
Summary Total	**98.82 ha**													
Precipitation (m^3)		76,091	52,375	55,339	73,127	83,009	62,257	83,009	58,304	71,150	59,292	72,139	63,245	**809,336**
Total AET (m^3)		997	1,495	5,482	16,943	37,374	58,080	65,598	51,650	35,434	19,606	7,973	2,492	**303,124**
Evaporative Lossess at 10% Precipitation (m^3)		3,772	2,596	2,743	3,625	4,115	3,086	4,115	2,890	3,527	2,939	3,576	3,135	**40,121**
Infiltration (MOE Methodology) (m^3)		4,119	7,009	10,573	7,273	3,068	182	0	0	0	364	1,413	2,998	**36,999**
Runoff (MOE Methodology) (m^3)		41,382	36,066	43,308	45,501	42,456	28,093	37,035	26,013	31,744	27,086	34,695	33,521	**426,901**

Table WB-3-1109: Post-Development Water Balance (No Mitigation) - Subwatershed FM1109 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *183.33 ha* WHC = 200 mm													
Precipitation (m^3)	141,164	97,165	102,665	135,664	153,997	115,498	153,997	108,165	131,998	109,998	133,831	117,331	**1,501,473**
Total AET (m^3)	3,667	5,500	20,166	62,332	137,498	214,496	247,496	186,997	124,664	71,499	29,333	9,167	**1,112,813**
Water Surplus (m^3)	40,333	76,999	111,831	78,832	32,999	1,833	0	0	0	3,667	12,833	25,666	**384,993**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	13,310	25,410	36,904	26,015	10,890	605	0	0	0	1,210	4,235	8,470	**127,048**
Runoff (MOE Methodology) (m^3)	27,023	51,589	74,927	52,817	22,110	1,228	0	0	0	2,457	8,598	17,196	**257,945**
Pervious Area (Forest) *66.40 ha* WHC = 400 mm													
Precipitation (m^3)	51,128	35,192	37,184	49,136	55,776	41,832	55,776	39,176	47,808	39,840	48,472	42,496	**543,816**
Total AET (m^3)	1,328	1,992	7,304	22,576	49,800	77,688	91,632	81,008	53,120	27,224	10,624	3,320	**427,616**
Water Surplus (m^3)	9,960	17,264	35,192	23,240	9,960	664	0	0	0	1,328	3,984	8,632	**110,224**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	4,283	7,424	15,133	9,993	4,283	286	0	0	0	571	1,713	3,712	**47,396**
Runoff (MOE Methodology) (m^3)	5,677	9,840	20,059	13,247	5,677	378	0	0	0	757	2,271	4,920	**62,828**
Impervious Area (Ex. Roads, Industrial) *6.50 ha*													
Precipitation (m^3)	5,005	3,445	3,640	4,810	5,460	4,095	5,460	3,835	4,680	3,900	4,745	4,160	**53,235**
Evaporative Lossess at 10% Precipitation (m^3)	501	345	364	481	546	410	546	384	468	390	475	416	**5,324**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	4,505	3,101	3,276	4,329	4,914	3,686	4,914	3,452	4,212	3,510	4,271	3,744	**47,912**
Summary Total **256.23 ha**													
Precipitation (m^3)	197,297	135,802	143,489	189,610	215,233	161,425	215,233	151,176	184,486	153,738	187,048	163,987	**2,098,524**
Total AET (m^3)	4,995	7,492	27,470	84,908	187,298	292,184	339,128	268,005	177,784	98,723	39,957	12,487	**1,540,429**
Evaporative Lossess at 10% Precipitation (m^3)	501	345	364	481	546	410	546	384	468	390	475	416	**5,324**
Infiltration (MOE Methodology) (m^3)	17,593	32,833	52,037	36,008	15,173	891	0	0	0	1,781	5,948	12,182	**174,444**
Runoff (MOE Methodology) (m^3)	37,205	64,530	98,262	70,393	32,701	5,292	4,914	3,452	4,212	6,724	15,140	25,861	**368,684**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **0.00 ha**													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance Totals for Subwatershed FM1109 **365.00 ha**													
Precipitation (m^3)	281,050	193,450	204,400	270,100	306,600	229,950	306,600	215,350	262,800	219,000	266,450	233,600	**2,989,350**
Total AET (m^3)	6,075	9,113	33,414	103,279	227,822	355,146	410,100	323,697	216,081	119,955	48,602	15,188	**1,868,472**
Evaporative Lossess at 10% Precipitation (m^3)	4,715	3,246	3,429	4,532	5,144	3,858	5,144	3,613	4,409	3,674	4,470	3,919	**50,154**
Infiltration (MOE Methodology) (m^3)	22,103	40,487	63,486	43,890	18,497	1,087	0	0	0	2,174	7,491	15,457	**214,671**
Runoff (MOE Methodology) (m^3)	83,315	104,570	146,126	120,880	79,989	36,673	46,296	32,517	39,682	36,970	53,857	63,214	**844,089**
Potential Stream Base Flows (LPM) - does not account for lag	446	904	1,280	914	373	23	0	0	0	44	156	312	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this ca water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is describe in the text and presented on Table 4.6 of the main report
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater s
4. There is minor round-off error within the Environment Canada data

Table WB-4-1109: Post-Development Water Balance (With Mitigation) - Subwatershed FM1109 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands														
Pervious Area (Open/Agricultural)	*2.63 ha*	WHC = 200 mm												
Precipitation (m^3)		2,025	1,394	1,473	1,946	2,209	1,657	2,209	1,552	1,894	1,578	1,920	1,683	**21,540**
Total AET (m^3)		53	79	289	894	1,973	3,077	3,551	2,683	1,788	1,026	421	132	**15,964**
Water Surplus (m^3)		579	1,105	1,604	1,131	473	26	0	0	0	53	184	368	**5,523**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	191	365	529	373	156	9	0	0	0	17	61	122	**1,823**
Runoff (MOE Methodology) (m^3)		388	740	1,075	758	317	18	0	0	0	35	123	247	**3,700**
Pervious Area (Forest)	*0.50 ha*	WHC = 400 mm												
Precipitation (m^3)		385	265	280	370	420	315	420	295	360	300	365	320	**4,095**
Total AET (m^3)		10	15	55	170	375	585	690	610	400	205	80	25	**3,220**
Water Surplus (m^3)		75	130	265	175	75	5	0	0	0	10	30	65	**830**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	32	56	114	75	32	2	0	0	0	4	13	28	**357**
Runoff (MOE Methodology) (m^3)		43	74	151	100	43	3	0	0	0	6	17	37	**473**
Pervious Area (Landscaped)	*1.07 ha*	WHC = 100 mm												
Precipitation (m^3)		824	567	599	792	899	674	899	631	770	642	781	685	**8,763**
Total AET (m^3)		21	32	118	364	802	1,220	1,134	749	674	396	171	54	**5,735**
Water Surplus (m^3)		482	642	663	460	193	11	0	0	0	21	161	364	**2,996**
Infiltration (MOE Methodology) (m^3)	**i = 0.40**	193	257	265	184	77	4	0	0	0	9	64	146	**1,198**
Runoff (MOE Methodology) (m^3)		289	385	398	276	116	6	0	0	0	13	96	218	**1,798**
Impervious Area (Ex. Roads, Industrial)	*5.75 ha*													
Precipitation (m^3)		4,428	3,048	3,220	4,255	4,830	3,623	4,830	3,393	4,140	3,450	4,198	3,680	**47,093**
Evaporative Lossess at 10% Precipitation (m^3)		443	305	322	426	483	362	483	339	414	345	420	368	**4,709**
Roof Runoff diverted to Mitigation Measures (m^3)		742	511	540	714	810	607	810	569	694	579	704	617	**7,897**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		3,242	2,232	2,358	3,116	3,537	2,653	3,537	2,484	3,032	2,526	3,074	2,695	**34,486**
Mitigations Measures	*1.07 ha*	<-- Roof Area Required of the impervious area shown above to be directed to swales												
Infiltration Swales (length)	505 (m)													
Infiltration Flat Bottomed-Swales (length)	- (m)													
Available Volume of Roof Water directed to mitigation (m^3)		742	511	540	714	810	607	810	569	694	579	704	617	**7,897**
Subsurface Gravel Wetland (SGW) Area	- (m^2)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration Swales connected to SGW	- (m)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (m^3) daily capacity -->	18 m^3/d	566	511	540	548	566	548	566	566	548	566	548	566	**6,636**
Runoff (m^3)		177	0	0	166	244	60	244	3	147	13	156	51	**1,261**
Summary Total	**9.95 ha**													
Precipitation (m^3)		7,662	5,274	5,572	7,363	8,358	6,269	8,358	5,871	7,164	5,970	7,264	6,368	**81,491**
Total AET (m^3)		84	126	462	1,428	3,150	4,882	5,375	4,042	2,863	1,627	672	210	**24,919**
Evaporative Lossess at 10% Precipitation (m^3)		443	305	322	426	483	362	483	339	414	345	420	368	**4,709**
Infiltration (MOE Methodology) (m^3)		982	1,188	1,449	1,180	831	563	566	566	548	596	685	861	**10,014**
Runoff (MOE Methodology) (m^3)		4,138	3,431	3,982	4,415	4,257	2,740	3,781	2,487	3,178	2,593	3,467	3,248	**41,718**
Water Balance for Future Development Lands owned by others														
Pervious Area (Open/Agricultural)	*26.40 ha*	WHC = 200 mm												
Precipitation (m^3)		20,328	13,992	14,784	19,536	22,176	16,632	22,176	15,576	19,008	15,840	19,272	16,896	**216,216**
Total AET (m^3)		528	792	2,904	8,976	19,800	30,888	35,640	26,928	17,952	10,296	4,224	1,320	**160,248**
Water Surplus (m^3)		5,808	11,088	16,104	11,352	4,752	264	0	0	0	528	1,848	3,696	**55,440**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	1,917	3,659	5,314	3,746	1,568	87	0	0	0	174	610	1,220	**18,295**
Runoff (MOE Methodology) (m^3)		3,891	7,429	10,790	7,606	3,184	177	0	0	0	354	1,238	2,476	**37,145**
Pervious Area (Forest)	*16.00 ha*	WHC = 400 mm												
Precipitation (m^3)		12,320	8,480	8,960	11,840	13,440	10,080	13,440	9,440	11,520	9,600	11,680	10,240	**131,040**
Total AET (m^3)		320	480	1,760	5,440	12,000	18,720	22,080	19,520	12,800	6,560	2,560	800	**103,040**
Water Surplus (m^3)		2,400	4,160	8,480	5,600	2,400	160	0	0	0	320	960	2,080	**26,560**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	1,032	1,789	3,646	2,408	1,032	69	0	0	0	138	413	894	**11,421**
Runoff (MOE Methodology) (m^3)		1,368	2,371	4,834	3,192	1,368	91	0	0	0	182	547	1,186	**15,139**
Pervious Area (Landscaped)	*7.43 ha*	WHC = 100 mm												
Precipitation (m^3)		5,723	3,939	4,162	5,500	6,243	4,682	6,243	4,385	5,351	4,459	5,425	4,756	**60,868**
Total AET (m^3)		149	223	818	2,527	5,574	8,472	7,878	5,202	4,682	2,750	1,189	372	**39,836**
Water Surplus (m^3)		3,344	4,459	4,608	3,196	1,338	74	0	0	0	149	1,115	2,527	**20,810**
Infiltration (MOE Methodology) (m^3)	**i = 0.40**	1,338	1,784	1,843	1,278	535	30	0	0	0	59	446	1,011	**8,324**
Runoff (MOE Methodology) (m^3)		2,007	2,676	2,765	1,917	803	45	0	0	0	89	669	1,516	**12,486**
Impervious Area (Ex. Roads, Industrial)	*48.99 ha*													
Precipitation (m^3)		37,721	25,964	27,433	36,251	41,150	30,862	41,150	28,903	35,271	29,393	35,761	31,352	**401,212**
Evaporative Lossess at 10% Precipitation (m^3)		3,772	2,596	2,743	3,625	4,115	3,086	4,115	2,890	3,527	2,939	3,576	3,135	**40,121**
Roof Runoff diverted to Mitigation Measures (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		33,949	23,367	24,690	32,626	37,035	27,776	37,035	26,013	31,744	26,454	32,185	28,217	**361,091**
Mitigations Measures	*0.00 ha*	<-- Roof Area Required of the impervious area shown above												
Infiltration Swales (length)	- m													
Infiltration Bio-Swales (length)	- m													
Available Volume of Water directed to mitigation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (m^3) daily capacity -->	0 m^3/d	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total	**98.82 ha**													
Precipitation (m^3)		76,091	52,375	55,339	73,127	83,009	62,257	83,009	58,304	71,150	59,292	72,139	63,245	**809,336**
Total AET (m^3)		997	1,495	5,482	16,943	37,374	58,080	65,598	51,650	35,434	19,606	7,973	2,492	**303,124**
Evaporative Lossess at 10% Precipitation (m^3)		3,772	2,596	2,743	3,625	4,115	3,086	4,115	2,890	3,527	2,939	3,576	3,135	**40,121**
Infiltration (MOE Methodology) (m^3)		4,286	7,232	10,804	7,432	3,135	186	0	0	0	371	1,469	3,125	**38,040**
Runoff (MOE Methodology) (m^3)		41,215	35,843	43,078	45,341	42,389	28,089	37,035	26,013	31,744	27,079	34,639	33,395	**425,860**

Table WB-4-1109: Post-Development Water Balance (With Mitigation) - Subwatershed FM1109 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *183.33 ha* WHC = 200 mm													
Precipitation (m^3)	141,164	97,165	102,665	135,664	153,997	115,498	153,997	108,165	131,998	109,998	133,831	117,331	**1,501,473**
Total AET (m^3)	3,667	5,500	20,166	62,332	137,498	214,496	247,496	186,997	124,664	71,499	29,333	9,167	**1,112,813**
Water Surplus (m^3)	40,333	76,999	111,831	78,832	32,999	1,833	0	0	0	3,667	12,833	25,666	**384,993**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	13,310	25,410	36,904	26,015	10,890	605	0	0	0	1,210	4,235	8,470	**127,048**
Runoff (MOE Methodology) (m^3)	27,023	51,589	74,927	52,817	22,110	1,228	0	0	0	2,457	8,598	17,196	**257,945**
Pervious Area (Forest) *66.40 ha* WHC = 400 mm													
Precipitation (m^3)	51,128	35,192	37,184	49,136	55,776	41,832	55,776	39,176	47,808	39,840	48,472	42,496	**543,816**
Total AET (m^3)	1,328	1,992	7,304	22,576	49,800	77,688	91,632	81,008	53,120	27,224	10,624	3,320	**427,616**
Water Surplus (m^3)	9,960	17,264	35,192	23,240	9,960	664	0	0	0	1,328	3,984	8,632	**110,224**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	4,283	7,424	15,133	9,993	4,283	286	0	0	0	571	1,713	3,712	**47,396**
Runoff (MOE Methodology) (m^3)	5,677	9,840	20,059	13,247	5,677	378	0	0	0	757	2,271	4,920	**62,828**
Impervious Area (Ex. Roads, Industrial) *6.50 ha*													
Precipitation (m^3)	5,005	3,445	3,640	4,810	5,460	4,095	5,460	3,835	4,680	3,900	4,745	4,160	**53,235**
Evaporative Lossess at 10% Precipitation (m^3)	501	345	364	481	546	410	546	384	468	390	475	416	**5,324**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	4,505	3,101	3,276	4,329	4,914	3,686	4,914	3,452	4,212	3,510	4,271	3,744	**47,912**
Summary Total 256.23 ha													
Precipitation (m^3)	197,297	135,802	143,489	189,610	215,233	161,425	215,233	151,176	184,486	153,738	187,048	163,987	**2,098,524**
Total AET (m^3)	4,995	7,492	27,470	84,908	187,298	292,184	339,128	268,005	177,784	98,723	39,957	12,487	**1,540,429**
Evaporative Lossess at 10% Precipitation (m^3)	501	345	364	481	546	410	546	384	468	390	475	416	**5,324**
Infiltration (MOE Methodology) (m^3)	17,593	32,833	52,037	36,008	15,173	891	0	0	0	1,781	5,948	12,182	**174,444**
Runoff (MOE Methodology) (m^3)	37,205	64,530	98,262	70,393	32,701	5,292	4,914	3,452	4,212	6,724	15,140	25,861	**368,684**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total 0.00 ha													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance Totals for Subwatershed FM1109 **365.00 ha**													
Precipitation (m^3)	281,050	193,450	204,400	270,100	306,600	229,950	306,600	215,350	262,800	219,000	266,450	233,600	**2,989,350**
Total AET (m^3)	6,075	9,113	33,414	103,279	227,822	355,146	410,100	323,697	216,081	119,955	48,602	15,188	**1,868,472**
Evaporative Lossess at 10% Precipitation (m^3)	4,715	3,246	3,429	4,532	5,144	3,858	5,144	3,613	4,409	3,674	4,470	3,919	**50,154**
Infiltration (MOE Methodology) (m^3)	22,861	41,253	64,289	44,620	19,139	1,639	566	566	548	2,748	8,102	16,167	**222,498**
Runoff (MOE Methodology) (m^3)	82,557	103,804	145,322	120,150	79,347	36,121	45,730	31,952	39,135	36,395	53,246	62,504	**836,263**
Potential Stream Base Flows (LPM) - does not account for lag	461	921	1,296	930	386	34	11	11	11	55	169	326	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this case water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used.
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is described in the text and presented on Table 4.6 of the main report.
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater syst
4. There is minor round-off error within the Environment Canada data.

Table WB-2-1102: Pre-Development Water Balance - Subwatershed FM1102 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands														
Pervious Area (Open/Agricultural)	*4.70 ha*	WHC = 200 mm												
Precipitation (m^3)		3,619	2,491	2,632	3,478	3,948	2,961	3,948	2,773	3,384	2,820	3,431	3,008	**38,493**
Total AET (m^3)		94	141	517	1,598	3,525	5,499	6,345	4,794	3,196	1,833	752	235	**28,529**
Water Surplus (m^3)		1,034	1,974	2,867	2,021	846	47	0	0	0	94	329	658	**9,870**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	341	651	946	667	279	16	0	0	0	31	109	217	**3,257**
Runoff (MOE Methodology) (m^3)		693	1,323	1,921	1,354	567	31	0	0	0	63	220	441	**6,613**
Pervious Area (Forest)	*0.00 ha*	WHC = 400 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial)	*0.00 ha*													
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total	**4.70 ha**													
Precipitation (m^3)		3,619	2,491	2,632	3,478	3,948	2,961	3,948	2,773	3,384	2,820	3,431	3,008	**38,493**
Total AET (m^3)		94	141	517	1,598	3,525	5,499	6,345	4,794	3,196	1,833	752	235	**28,529**
Evaporative Lossess at 10% Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		341	651	946	667	279	16	0	0	0	31	109	217	**3,257**
Runoff (MOE Methodology) (m^3)		693	1,323	1,921	1,354	567	31	0	0	0	63	220	441	**6,613**
Water Balance for Future Development Lands owned by others														
Pervious Area (Open/Agricultural)	*34.55 ha*	WHC = 200 mm												
Precipitation (m^3)		26,604	18,312	19,348	25,567	29,022	21,767	29,022	20,385	24,876	20,730	25,222	22,112	**282,965**
Total AET (m^3)		691	1,037	3,801	11,747	25,913	40,424	46,643	35,241	23,494	13,475	5,528	1,728	**209,719**
Water Surplus (m^3)		7,601	14,511	21,076	14,857	6,219	346	0	0	0	691	2,419	4,837	**72,555**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	2,508	4,789	6,955	4,903	2,052	114	0	0	0	228	798	1,596	**23,943**
Runoff (MOE Methodology) (m^3)		5,093	9,722	14,121	9,954	4,167	231	0	0	0	463	1,620	3,241	**48,612**
Pervious Area (Forest)	*3.90 ha*	WHC = 400 mm												
Precipitation (m^3)		3,003	2,067	2,184	2,886	3,276	2,457	3,276	2,301	2,808	2,340	2,847	2,496	**31,941**
Total AET (m^3)		78	117	429	1,326	2,925	4,563	5,382	4,758	3,120	1,599	624	195	**25,116**
Water Surplus (m^3)		585	1,014	2,067	1,365	585	39	0	0	0	78	234	507	**6,474**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	252	436	889	587	252	17	0	0	0	34	101	218	**2,784**
Runoff (MOE Methodology) (m^3)		333	578	1,178	778	333	22	0	0	0	44	133	289	**3,690**
Impervious Area (Ex. Roads, Industrial)	*0.70 ha*													
Precipitation (m^3)		539	371	392	518	588	441	588	413	504	420	511	448	**5,733**
Evaporative Lossess at 10% Precipitation (m^3)		54	37	39	52	59	44	59	41	50	42	51	45	**573**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		485	334	353	466	529	397	529	372	454	378	460	403	**5,160**
Summary Total	**39.15 ha**													
Precipitation (m^3)		30,146	20,750	21,924	28,971	32,886	24,665	32,886	23,099	28,188	23,490	28,580	25,056	**320,639**
Total AET (m^3)		769	1,154	4,230	13,073	28,838	44,987	52,025	39,999	26,614	15,074	6,152	1,923	**234,835**
Evaporative Lossess at 10% Precipitation (m^3)		54	37	39	52	59	44	59	41	50	42	51	45	**573**
Infiltration (MOE Methodology) (m^3)		2,760	5,225	7,844	5,490	2,304	131	0	0	0	262	899	1,814	**26,727**
Runoff (MOE Methodology) (m^3)		5,911	10,634	15,652	11,198	5,029	651	529	372	454	885	2,214	3,933	**57,462**

Table WB-2-1102: Pre-Development Water Balance - Subwatershed FM1102 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **0.00 ha**													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **0.00 ha**													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance Totals for Subwatershed FM1102 **43.85 ha**													
Precipitation (m^3)	33,765	23,241	24,556	32,449	36,834	27,626	36,834	25,872	31,572	26,310	32,011	28,064	**359,132**
Total AET (m^3)	863	1,295	4,747	14,671	32,363	50,486	58,370	44,793	29,810	16,907	6,904	2,158	**263,364**
Evaporative Lossess at 10% Precipitation (m^3)	54	37	39	52	59	44	59	41	50	42	51	45	**573**
Infiltration (MOE Methodology) (m^3)	3,101	5,876	8,790	6,157	2,583	146	0	0	0	293	1,007	2,031	**29,984**
Runoff (MOE Methodology) (m^3)	6,604	11,957	17,572	12,552	5,596	682	529	372	454	948	2,434	4,374	**64,075**
Potential Stream Base Flows (LPM) - does not account for lag	63	131	177	128	52	3	0	0	0	6	21	41	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this ca water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is describe in the text and presented on Table 4.6 of the main report
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater s
4. There is minor round-off error within the Environment Canada data

Table WB-3-1102: Post-Development Water Balance (No Mitigation) - Subwatershed FM1102 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands														
Pervious Area (Open/Agricultural)	*0.00 ha*	WHC = 200 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest)	*0.00 ha*	WHC = 400 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Landscaped)	*0.68 ha*	WHC = 100 mm												
Precipitation (m^3)		522	359	380	502	570	427	570	400	488	407	495	434	**5,553**
Total AET (m^3)		14	20	75	231	509	773	719	475	427	251	108	34	**3,634**
Water Surplus (m^3)		305	407	420	292	122	7	0	0	0	14	102	231	**1,898**
Infiltration (MOE Methodology) (m^3)	**i = 0.35**	107	142	147	102	43	2	0	0	0	5	36	81	**664**
Runoff (MOE Methodology) (m^3)		198	264	273	190	79	4	0	0	0	9	66	150	**1,234**
Impervious Area (Ex. Roads, Industrial)	*4.02 ha*													
Precipitation (m^3)		3,097	2,132	2,252	2,976	3,378	2,534	3,378	2,373	2,896	2,413	2,936	2,574	**32,940**
Evaporative Lossess at 10% Precipitation (m^3)		310	213	225	298	338	253	338	237	290	241	294	257	**3,294**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		2,787	1,918	2,027	2,679	3,041	2,280	3,041	2,136	2,606	2,172	2,642	2,317	**29,646**
Summary Total	**4.70 ha**													
Precipitation (m^3)		3,619	2,491	2,632	3,478	3,948	2,961	3,948	2,773	3,384	2,820	3,431	3,008	**38,493**
Total AET (m^3)		14	20	75	231	509	773	719	475	427	251	108	34	**3,634**
Evaporative Lossess at 10% Precipitation (m^3)		310	213	225	298	338	253	338	237	290	241	294	257	**3,294**
Infiltration (MOE Methodology) (m^3)		107	142	147	102	43	2	0	0	0	5	36	81	**664**
Runoff (MOE Methodology) (m^3)		2,986	2,183	2,300	2,868	3,120	2,285	3,041	2,136	2,606	2,181	2,709	2,467	**30,880**
Water Balance for Future Development Lands owned by others														
Pervious Area (Open/Agricultural)	*0.00 ha*	WHC = 200 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest)	*3.90 ha*	WHC = 400 mm												
Precipitation (m^3)		3,003	2,067	2,184	2,886	3,276	2,457	3,276	2,301	2,808	2,340	2,847	2,496	**31,941**
Total AET (m^3)		78	117	429	1,326	2,925	4,563	5,382	4,758	3,120	1,599	624	195	**25,116**
Water Surplus (m^3)		585	1,014	2,067	1,365	585	39	0	0	0	78	234	507	**6,474**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	252	436	889	587	252	17	0	0	0	34	101	218	**2,784**
Runoff (MOE Methodology) (m^3)		333	578	1,178	778	333	22	0	0	0	44	133	289	**3,690**
Pervious Area (Landscaped)	*4.07 ha*	WHC = 100 mm												
Precipitation (m^3)		3,132	2,156	2,278	3,010	3,417	2,563	3,417	2,400	2,929	2,441	2,970	2,603	**33,316**
Total AET (m^3)		81	122	447	1,383	3,051	4,637	4,312	2,848	2,563	1,505	651	203	**21,804**
Water Surplus (m^3)		1,831	2,441	2,522	1,749	732	41	0	0	0	81	610	1,383	**11,390**
Infiltration (MOE Methodology) (m^3)	**i = 0.35**	641	854	883	612	256	14	0	0	0	28	214	484	**3,987**
Runoff (MOE Methodology) (m^3)		1,190	1,586	1,639	1,137	476	26	0	0	0	53	397	899	**7,404**
Impervious Area (Ex. Roads, Industrial)	*31.18 ha*													
Precipitation (m^3)		24,010	16,527	17,462	23,075	26,193	19,645	26,193	18,397	22,451	18,709	22,763	19,957	**255,382**
Evaporative Lossess at 10% Precipitation (m^3)		2,401	1,653	1,746	2,307	2,619	1,964	2,619	1,840	2,245	1,871	2,276	1,996	**25,538**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		21,609	14,874	15,716	20,767	23,574	17,680	23,574	16,558	20,206	16,838	20,487	17,961	**229,843**
Summary Total	**39.15 ha**													
Precipitation (m^3)		30,146	20,750	21,924	28,971	32,886	24,665	32,886	23,099	28,188	23,490	28,580	25,056	**320,639**
Total AET (m^3)		159	239	876	2,709	5,976	9,200	9,694	7,606	5,683	3,104	1,275	398	**46,920**
Evaporative Lossess at 10% Precipitation (m^3)		2,401	1,653	1,746	2,307	2,619	1,964	2,619	1,840	2,245	1,871	2,276	1,996	**25,538**
Infiltration (MOE Methodology) (m^3)		892	1,290	1,772	1,199	508	31	0	0	0	62	314	702	**6,770**
Runoff (MOE Methodology) (m^3)		23,133	17,038	18,533	22,682	24,383	17,729	23,574	16,558	20,206	16,936	21,017	19,149	**240,937**

Table WB-3-1102: Post-Development Water Balance (No Mitigation) - Subwatershed FM1102 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **0.00 ha**													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **0.00 ha**													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance Totals for Subwatershed FM1102 **43.85 ha**													
Precipitation (m^3)	33,765	23,241	24,556	32,449	36,834	27,626	36,834	25,872	31,572	26,310	32,011	28,064	**359,132**
Total AET (m^3)	173	259	951	2,940	6,484	9,973	10,413	8,080	6,110	3,355	1,383	432	**50,554**
Evaporative Lossess at 10% Precipitation (m^3)	2,711	1,866	1,971	2,605	2,957	2,218	2,957	2,077	2,535	2,112	2,570	2,253	**28,832**
Infiltration (MOE Methodology) (m^3)	999	1,433	1,919	1,301	551	33	0	0	0	67	350	783	**7,435**
Runoff (MOE Methodology) (m^3)	26,118	19,221	20,834	25,550	27,503	20,014	26,614	18,693	22,812	19,116	23,725	21,615	**271,817**
Potential Stream Base Flows (LPM) - does not account for lag	20	32	39	27	11	1	0	0	0	1	7	16	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this ca water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is describe in the text and presented on Table 4.6 of the main report
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater s
4. There is minor round-off error within the Environment Canada data

Table WB-4-1102: Post-Development Water Balance (With Mitigation) - Subwatershed FM1102 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Bentall Lands														
Pervious Area (Open/Agricultural)	*0.00 ha*	WHC = 200 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest)	*0.00 ha*	WHC = 400 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Landscaped)	*0.68 ha*	WHC = 100 mm												
Precipitation (m^3)		522	359	380	502	570	427	570	400	488	407	495	434	**5,553**
Total AET (m^3)		14	20	75	231	509	773	719	475	427	251	108	34	**3,634**
Water Surplus (m^3)		305	407	420	292	122	7	0	0	0	14	102	231	**1,898**
Infiltration (MOE Methodology) (m^3)	**i = 0.40**	122	163	168	117	49	3	0	0	0	5	41	92	**759**
Runoff (MOE Methodology) (m^3)		183	244	252	175	73	4	0	0	0	8	61	138	**1,139**
Impervious Area (Ex. Roads, Industrial)	*4.02 ha*													
Precipitation (m^3)		3,097	2,132	2,252	2,976	3,378	2,534	3,378	2,373	2,896	2,413	2,936	2,574	**32,940**
Evaporative Lossess at 10% Precipitation (m^3)		310	213	225	298	338	253	338	237	290	241	294	257	**3,294**
Roof Runoff diverted to Mitigation Measures (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		2,787	1,918	2,027	2,679	3,041	2,280	3,041	2,136	2,606	2,172	2,642	2,317	**29,646**
Mitigations Measures	*0.00 ha*	<-- Roof Area Required of the impervious area shown above to be directed to swales												
Infiltration Swales (length)	- (m)													
Infiltration Flat Bottomed-Swales (length)	- (m)													
Available Volume of Roof Water directed to mitigation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Subsurface Gravel Wetland (SGW) Area	- (m^2)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration Swales connected to SGW	- (m)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (m^3) daily capacity -->	0 m^3/d	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total	**4.70 ha**													
Precipitation (m^3)		3,619	2,491	2,632	3,478	3,948	2,961	3,948	2,773	3,384	2,820	3,431	3,008	**38,493**
Total AET (m^3)		14	20	75	231	509	773	719	475	427	251	108	34	**3,634**
Evaporative Lossess at 10% Precipitation (m^3)		310	213	225	298	338	253	338	237	290	241	294	257	**3,294**
Infiltration (MOE Methodology) (m^3)		122	163	168	117	49	3	0	0	0	5	41	92	**759**
Runoff (MOE Methodology) (m^3)		2,970	2,163	2,279	2,854	3,114	2,285	3,041	2,136	2,606	2,180	2,703	2,455	**30,785**
Water Balance for Future Development Lands owned by others														
Pervious Area (Open/Agricultural)	*0.00 ha*	WHC = 200 mm												
Precipitation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	**i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest)	*3.90 ha*	WHC = 400 mm												
Precipitation (m^3)		3,003	2,067	2,184	2,886	3,276	2,457	3,276	2,301	2,808	2,340	2,847	2,496	**31,941**
Total AET (m^3)		78	117	429	1,326	2,925	4,563	5,382	4,758	3,120	1,599	624	195	**25,116**
Water Surplus (m^3)		585	1,014	2,067	1,365	585	39	0	0	0	78	234	507	**6,474**
Infiltration (MOE Methodology) (m^3)	**i = 0.43**	252	436	889	587	252	17	0	0	0	34	101	218	**2,784**
Runoff (MOE Methodology) (m^3)		333	578	1,178	778	333	22	0	0	0	44	133	289	**3,690**
Pervious Area (Landscaped)	*4.07 ha*	WHC = 100 mm												
Precipitation (m^3)		3,132	2,156	2,278	3,010	3,417	2,563	3,417	2,400	2,929	2,441	2,970	2,603	**33,316**
Total AET (m^3)		81	122	447	1,383	3,051	4,637	4,312	2,848	2,563	1,505	651	203	**21,804**
Water Surplus (m^3)		1,831	2,441	2,522	1,749	732	41	0	0	0	81	610	1,383	**11,390**
Infiltration (MOE Methodology) (m^3)	**i = 0.40**	732	976	1,009	700	293	16	0	0	0	33	244	553	**4,556**
Runoff (MOE Methodology) (m^3)		1,098	1,464	1,513	1,050	439	24	0	0	0	49	366	830	**6,834**
Impervious Area (Ex. Roads, Industrial)	*31.18 ha*													
Precipitation (m^3)		24,010	16,527	17,462	23,075	26,193	19,645	26,193	18,397	22,451	18,709	22,763	19,957	**255,382**
Evaporative Lossess at 10% Precipitation (m^3)		2,401	1,653	1,746	2,307	2,619	1,964	2,619	1,840	2,245	1,871	2,276	1,996	**25,538**
Roof Runoff diverted to Mitigation Measures (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)		21,609	14,874	15,716	20,767	23,574	17,680	23,574	16,558	20,206	16,838	20,487	17,961	**229,843**
Mitigations Measures	*0.00 ha*	<-- Roof Area Required of the impervious area shown above												
Infiltration Swales (length)	- m													
Infiltration Bio-Swales (length)	- m													
Available Volume of Water directed to mitigation (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (m^3) daily capacity -->	0 m^3/d	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (m^3)		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total	**39.15 ha**													
Precipitation (m^3)		30,146	20,750	21,924	28,971	32,886	24,665	32,886	23,099	28,188	23,490	28,580	25,056	**320,639**
Total AET (m^3)		2,560	1,892	2,623	5,017	8,595	11,165	12,313	9,445	7,928	4,975	3,551	2,394	**72,458**
Evaporative Lossess at 10% Precipitation (m^3)		2,416	3,455	4,589	3,114	1,317	80	0	0	0	159	844	1,890	**17,864**
Infiltration (MOE Methodology) (m^3)		984	1,412	1,898	1,287	544	33	0	0	0	66	345	771	**7,340**
Runoff (MOE Methodology) (m^3)		1,432	2,042	2,691	1,828	773	47	0	0	0	93	499	1,119	**10,524**

Table WB-4-1102: Post-Development Water Balance (With Mitigation) - Subwatershed FM1102 (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for Lands North of 407 (Excluding Hanson Brick) - These Lands within Greenbelt and Other Designated Areas are not expected to change over time													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **0.00 ha**													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance for Hanson Brick Property													
Pervious Area (Open/Agricultural) *0.00 ha* WHC = 200 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Pervious Area (Forest) *0.00 ha* WHC = 400 mm													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Impervious Area (Ex. Roads, Industrial) *0.00 ha*													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Summary Total **0.00 ha**													
Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total AET (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Evaporative Lossess at 10% Precipitation (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Water Balance Totals for Subwatershed FM1102 **43.85 ha**													
Precipitation (m^3)	33,765	23,241	24,556	32,449	36,834	27,626	36,834	25,872	31,572	26,310	32,011	28,064	**359,132**
Total AET (m^3)	2,574	1,912	2,697	5,247	9,104	11,938	13,032	9,920	8,355	5,226	3,660	2,428	**76,092**
Evaporative Lossess at 10% Precipitation (m^3)	2,725	3,668	4,814	3,412	1,655	333	338	237	290	401	1,138	2,147	**21,158**
Infiltration (MOE Methodology) (m^3)	1,106	1,575	2,066	1,403	593	36	0	0	0	72	385	863	**8,099**
Runoff (MOE Methodology) (m^3)	4,402	4,205	4,971	4,681	3,887	2,331	3,041	2,136	2,606	2,273	3,203	3,574	**41,309**
Potential Stream Base Flows (LPM) - does not account for lag	22	35	42	29	12	1	0	0	0	1	8	17	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this case water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used.
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is described in the text and presented on Table 4.6 of the main report.
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater syst
4. There is minor round-off error within the Environment Canada data.

Table WB-2-14W-11A: Pre-Development Water Balance - Tributary 14W-11A on Bentall Site (Volumetric Calculations based on Pervious Area)

Weather Station Data: Gerard, ON (1990-2006) **Latitude: 43 degrees 26 minutes N**

Data Provided by Environment Canada - Atmospheric Environment Services - data may exhibit round off error

PARAMETER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Water Balance for the Tributary to FM1109 that passes through Northeast corner of Bentall Lands													
Pervious Area (Open/Agricultural) *18.40 ha* WHC = 200 mm													
Precipitation (m^3)	14,168	9,752	10,304	13,616	15,456	11,592	15,456	10,856	13,248	11,040	13,432	11,776	**150,696**
Total AET (m^3)	368	552	2,024	6,256	13,800	21,528	24,840	18,768	12,512	7,176	2,944	920	**111,688**
Water Surplus (m^3)	4,048	7,728	11,224	7,912	3,312	184	0	0	0	368	1,288	2,576	**38,640**
Infiltration (MOE Methodology) (m^3) **i = 0.33**	1,336	2,550	3,704	2,611	1,093	61	0	0	0	121	425	850	**12,751**
Runoff (MOE Methodology) (m^3)	2,712	5,178	7,520	5,301	2,219	123	0	0	0	247	863	1,726	**25,889**
Pervious Area (Forest) *16.90 ha* WHC = 400 mm													
Precipitation (m^3)	13,013	8,957	9,464	12,506	14,196	10,647	14,196	9,971	12,168	10,140	12,337	10,816	**138,411**
Total AET (m^3)	338	507	1,859	5,746	12,675	19,773	23,322	20,618	13,520	6,929	2,704	845	**108,836**
Water Surplus (m^3)	2,535	4,394	8,957	5,915	2,535	169	0	0	0	338	1,014	2,197	**28,054**
Infiltration (MOE Methodology) (m^3) **i = 0.43**	1,090	1,889	3,852	2,543	1,090	73	0	0	0	145	436	945	**12,063**
Runoff (MOE Methodology) (m^3)	1,445	2,505	5,105	3,372	1,445	96	0	0	0	193	578	1,252	**15,991**
Impervious Area (Ex. Roads, Industrial) *1.30 ha*													
Precipitation (m^3)	1,001	689	728	962	1,092	819	1,092	767	936	780	949	832	**10,647**
Evaporative Lossess at 10% Precipitation (m^3)	100	69	73	96	109	82	109	77	94	78	95	83	**1,065**
Water Surplus (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Infiltration (MOE Methodology) (m^3)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Runoff (MOE Methodology) (m^3)	901	620	655	866	983	737	983	690	842	702	854	749	**9,582**
Summary Total 36.60 ha													
Precipitation (m^3)	28,182	19,398	20,496	27,084	30,744	23,058	30,744	21,594	26,352	21,960	26,718	23,424	**299,754**
Total AET (m^3)	706	1,059	3,883	12,002	26,475	41,301	48,162	39,386	26,032	14,105	5,648	1,765	**220,524**
Evaporative Lossess at 10% Precipitation (m^3)	100	69	73	96	109	82	109	77	94	78	95	83	**1,065**
Infiltration (MOE Methodology) (m^3)	2,426	4,440	7,555	5,154	2,183	133	0	0	0	267	861	1,795	**24,814**
Runoff (MOE Methodology) (m^3)	5,058	8,302	13,281	9,538	4,647	957	983	690	842	1,141	2,295	3,727	**51,462**
Water Balance Totals for Tributary to Subwatershed FM1109 passing through Northeast Corner of Bentall Lands **36.60 ha**													
Precipitation (m^3)	28,182	19,398	20,496	27,084	30,744	23,058	30,744	21,594	26,352	21,960	26,718	23,424	**299,754**
Total AET (m^3)	706	1,059	3,883	12,002	26,475	41,301	48,162	39,386	26,032	14,105	5,648	1,765	**220,524**
Evaporative Lossess at 10% Precipitation (m^3)	100	69	73	96	109	82	109	77	94	78	95	83	**1,065**
Infiltration (MOE Methodology) (m^3)	2,426	4,440	7,555	5,154	2,183	133	0	0	0	267	861	1,795	**24,814**
Runoff (MOE Methodology) (m^3)	5,058	8,302	13,281	9,538	4,647	957	983	690	842	1,141	2,295	3,727	**51,462**
Potential Stream Base Flows (LPM) - does not account for lag	49	99	152	107	44	3	0	0	0	5	18	36	

Notes:

1. Monthly climate data, including soil deficits, sol moisture storage, evapotranspiration and water surplus were provided by Environment Canada, and modeled for different soil water holding capacities. In this ca water holding capacities of 400 mm and 200 mm (pre-development), and 100 mm (post-development) are used
2. Infiltration and Runoff volumes are calculated using the methodology described in the MOE Stormwater Design Manual (2003). Calculation of the infiltration factors used in the analyses is describe in the text and presented on Table 4.6 of the main report
3. Evaporative losses of 10% are modeled for impervious surfaces (none under pre-development condition). This accounts for losses of water, such as water that collects in shallow depressions on these surfaces and does not reach the stormwater s
4. There is minor round-off error within the Environment Canada data

WBNRMSD.400

Oakville Gerard, ON WATER BUDGET MEANS FOR THE PERIOD 1990-2006 DC20492

LAT.... 43.43 WATER HOLDING CAPACITY...400 MM HEAT INDEX... 42.62
LONG... 79.70 LOWER ZONE.....240 MM A..... 1.168

DATE	TEMP (C)	PCPN	RAIN	MELT	PE	AE	DEF	SURP	SNOW	SOIL	ACC P
31- 1	-3.6	77	36	21	2	2	0	15	28	339	277
28- 2	-2.7	53	32	32	3	3	0	26	18	374	328
31- 3	1.2	56	38	35	11	11	0	53	0	383	386
30- 4	7.2	74	73	1	34	34	0	35	0	388	464
31- 5	13.1	84	84	0	75	75	0	15	0	383	546
30- 6	19.1	63	63	0	117	117	0	1	0	328	611
31- 7	21.9	84	84	0	139	138	-1	0	0	274	697
31- 8	21.4	59	59	0	126	122	-4	0	0	211	754
30- 9	17.3	72	72	0	85	80	-5	0	0	202	827
31-10	10.3	60	60	0	43	41	-2	2	0	220	59
30-11	4.8	73	70	3	16	16	0	6	0	270	132
31-12	-.4	64	46	10	5	5	0	13	8	309	193
AVE	9.0 TTL	821	717	102	656	644	-12	166			

Oakville Gerard, ON STANDARD DEVIATIONS FOR THE PERIOD 1990-2006 DC20492

DATE	TEMP (C)	PCPN	RAIN	MELT	PE	AE	DEF	SURP	SNOW	SOIL	ACC P
31- 1	3.0	41	31	17	2	2	0	30	29	69	59
28- 2	2.2	22	24	23	2	2	0	35	27	42	58
31- 3	1.7	27	22	29	5	5	0	47	0	32	68
30- 4	1.3	34	34	3	6	6	0	34	0	26	77
31- 5	1.7	37	37	0	12	12	0	22	0	33	79
30- 6	1.3	27	27	0	9	9	0	6	0	47	88
31- 7	1.5	40	40	0	11	10	5	0	0	69	104
31- 8	1.3	34	34	0	9	12	9	0	0	68	97
30- 9	1.5	36	36	0	8	9	10	0	0	84	113
31-10	1.0	35	35	0	5	6	6	8	0	88	35
30-11	1.5	25	26	6	5	5	0	24	0	88	52
31-12	2.2	33	32	10	3	3	0	27	20	85	53

WBNRMSD.200

Oakville Gerard, ON WATER BUDGET MEANS FOR THE PERIOD 1990-2006 DC20492

LAT.... 43.43 WATER HOLDING CAPACITY...200 MM HEAT INDEX... 42.62
LONG... 79.70 LOWER ZONE.....120 MM A..... 1.168

DATE	TEMP (C)	PCPN	RAIN	MELT	PE	AE	DEF	SURP	SNOW	SOIL	ACC P
31- 1	-3.6	77	36	21	2	2	0	22	28	179	277
28- 2	-2.7	53	32	32	3	3	0	42	18	199	328
31- 3	1.2	56	38	35	11	11	0	61	0	200	386
30- 4	7.2	74	73	1	34	34	0	43	0	197	464
31- 5	13.1	84	84	0	75	75	0	18	0	189	546
30- 6	19.1	63	63	0	117	117	0	1	0	134	611
31- 7	21.9	84	84	0	139	135	-5	0	0	83	697
31- 8	21.4	59	59	0	126	102	-23	0	0	40	754
30- 9	17.3	72	72	0	85	68	-18	0	0	45	827
31-10	10.3	60	60	0	43	39	-5	2	0	65	59
30-11	4.8	73	70	3	16	16	0	7	0	114	132
31-12	-.4	64	46	10	5	5	0	14	8	151	193
AVE	9.0 TTL	821	717	102	656	607	-51	210			

Oakville Gerard, ON STANDARD DEVIATIONS FOR THE PERIOD 1990-2006 DC20492

DATE	TEMP (C)	PCPN	RAIN	MELT	PE	AE	DEF	SURP	SNOW	SOIL	ACC P
31- 1	3.0	41	31	17	2	2	0	31	29	30	59
28- 2	2.2	22	24	23	2	2	0	37	27	6	58
31- 3	1.7	27	22	29	5	5	0	40	0	0	68
30- 4	1.3	34	34	3	6	6	0	32	0	8	77
31- 5	1.7	37	37	0	12	12	0	25	0	17	79
30- 6	1.3	27	27	0	9	9	0	6	0	35	88
31- 7	1.5	40	40	0	11	11	11	0	0	52	104
31- 8	1.3	34	34	0	9	24	25	0	0	41	97
30- 9	1.5	36	36	0	8	19	22	0	0	52	113
31-10	1.0	35	35	0	5	9	10	8	0	56	35
30-11	1.5	25	26	6	5	5	0	24	0	53	52
31-12	2.2	33	32	10	3	3	0	27	20	49	53

WBNRMSD.100

Oakville Gerard, ON WATER BUDGET MEANS FOR THE PERIOD 1990-2006 DC20492

LAT.... 43.43 WATER HOLDING CAPACITY...100 MM HEAT INDEX... 42.62
LONG... 79.70 LOWER ZONE..... 60 MM A..... 1.168

DATE	TEMP (C)	PCPN	RAIN	MELT	PE	AE	DEF	SURP	SNOW	SOIL	ACC P
31- 1	-3.6	77	36	21	2	2	0	45	28	100	277
28- 2	-2.7	53	32	32	3	3	0	60	18	100	328
31- 3	1.2	56	38	35	11	11	0	62	0	100	386
30- 4	7.2	74	73	1	34	34	0	43	0	97	464
31- 5	13.1	84	84	0	75	75	0	18	0	89	546
30- 6	19.1	63	63	0	117	114	-3	1	0	37	611
31- 7	21.9	84	84	0	139	106	-33	0	0	15	697
31- 8	21.4	59	59	0	126	70	-56	0	0	5	754
30- 9	17.3	72	72	0	85	63	-22	0	0	13	827
31-10	10.3	60	60	0	43	37	-6	2	0	34	59
30-11	4.8	73	70	3	16	16	0	15	0	75	132
31-12	-.4	64	46	10	5	5	0	34	8	92	193
AVE	9.0 TTL	821	717	102	656	536	-120	280			

Oakville Gerard, ON STANDARD DEVIATIONS FOR THE PERIOD 1990-2006 DC20492

DATE	TEMP (C)	PCPN	RAIN	MELT	PE	AE	DEF	SURP	SNOW	SOIL	ACC P
31- 1	3.0	41	31	17	2	2	0	38	29	2	59
28- 2	2.2	22	24	23	2	2	0	36	27	0	58
31- 3	1.7	27	22	29	5	5	0	39	0	0	68
30- 4	1.3	34	34	3	6	6	0	32	0	8	77
31- 5	1.7	37	37	0	12	12	0	25	0	17	79
30- 6	1.3	27	27	0	9	8	11	6	0	28	88
31- 7	1.5	40	40	0	11	33	37	0	0	24	104
31- 8	1.3	34	34	0	9	30	33	0	0	18	97
30- 9	1.5	36	36	0	8	23	25	0	0	28	113
31-10	1.0	35	35	0	5	10	12	8	0	37	35
30-11	1.5	25	26	6	5	5	0	35	0	26	52
31-12	2.2	33	32	10	3	3	0	36	20	16	53

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
01/01/09	-3.8		-15.6		-9.7	0		0		0		2
01/02/09	0.7		-4.7		-2	0		1.2		0.6		2
01/03/09	-1.9		-11.8		-6.9	0		0		0		2
01/04/09	-0.7		-12.2		-6.5	0	T	0		0	T	2
01/05/09	0.6		-7.7		-3.6	0	T	0		0	T	1
01/06/09	-0.6		-10		-5.3	0	T	3.6		3.4		1
01/07/09	0.7		-2.8		-1.1	1		9		10		5
01/08/09	-2.8		-12		-7.4	0		0.2		0.2		11
01/09/09	-6		-12.2		-9.1	0		0	T	0	T	11
01/10/09	-6.8		-14.9		-10.9	0		3.8		3.4		11
01/11/09	-6.3		-12.8		-9.6	0		0.2		0.2		14
01/12/09	-3.5		-10.6		-7.1	0		0		0		14
01/13/09	1.1		-16.9		-7.9	0		4		4.6		15
01/14/09	-13.1		-22.1		-17.6	0		0.8		0.8		18
01/15/09	-10.8		-19.3		-15.1	0		0.6		0.6		18
01/16/09	-12.7		-18		-15.4	0		0		0		18
01/17/09	-6.9		-20		-13.5	0		4.8		4		18
01/18/09	-3		-8.6		-5.8	0		2.8		2.8		21
01/19/09	-5.6		-11.6		-8.6	0		0.8		0.8		24
01/20/09	-10.2		-17.5		-13.9	0		0	T	0	T	24
01/21/09	-5.5		-19		-12.3	0		0	T	0	T	24
01/22/09	-1.9		-6		-4	0		0	T	0	T	24
01/23/09	3.6		-6.8		-1.6	0		0	T	0	T	24
01/24/09	-6.7		-19.2		-13	0		0		0		21
01/25/09	-8.9		-15.6		-12.3	0		0		0		21
01/26/09	-8.8		-16.9		-12.9	0		0		0		21
01/27/09	-4		-13.8		-8.9	0		0	T	0	T	21
01/28/09	-3.4		-8.2		-5.8	0		13.4		12.6		23
01/29/09	-3.1		-10.2		-6.7	0		0.4		0.4		32
01/30/09	-3.2		-10.8		-7	0		0	T	0	T	32
01/31/09	-4.7		-16.7		-10.7	0		0.4		0	T	32
02/01/09	4.4		-4.8		-0.2	0		0		0		32
02/02/09	2		-7.9		-3	0		0		0		28
02/03/09	-3.8		-10.5		-7.2	0		7.4		6.2		27
02/04/09	-10.2		-18		-14.1	0		1.6		1		35
02/05/09	-9		-22.2		-15.6	0		0	T	0	T	35
02/06/09	-2		-11.8		-6.9	0		0		0		35
02/07/09	7.9		-8.3		-0.2	0		0		0		32
02/08/09	4		-4.8		-0.4	0		0		0		9
02/09/09	3.2		-6.2		-1.5	0		0		0		6
02/10/09	9.3		-0.1		4.6	0	T	0		0	T	3
02/11/09	8.9		6.5		7.7	25.8		0		25.8		1
02/12/09	7.8		-2.1		2.9	11.8		0	T	11.8		0
02/13/09	-0.9		-7.4		-4.2	0		0		0		0
02/14/09	-1.8		-8.2		-5	0		0		0		0
02/15/09	1.3		-8.9		-3.8	0		0		0		0
02/16/09	0.7		-7.5		-3.4	0		0		0		0
02/17/09	2.2		-6.8		-2.3	0		0		0		0
02/18/09	1		-0.8		0.1	0		8.2		12.4		0
02/19/09	1.3		-7.9		-3.3	0		0.4		0.4		3
02/20/09	-2.6		-8.8		-5.7	0		0	T	0	T	3
02/21/09	-0.5		-11.2		-5.9	0		4.6		3.6		2
02/22/09	-2		-8.3		-5.2	0		0	T	0	T	5
02/23/09	-6		-11.4		-8.7	0		0		0		4
02/24/09	-3.2		-15.1		-9.2	0		0		0		4
02/25/09	2.8		-6.9		-2.1	0.8		2.2		2.8		3
02/26/09	6.5		-0.5		3	3.8		0		3.8		1
02/27/09	9.4		-12		-1.3	5.8		0	T	5.8		0
02/28/09	-6.5		-16.4		-11.5	0		0		0		0
03/01/09	-4.2		-12.5		-8.4	0		0		0		0
03/02/09	-9.5		-15.4		-12.5	0		0		0		0
03/03/09	-3.9		-15.7		-9.8	0		0		0		0
03/04/09	1.6		-12.5		-5.5	0		0		0		0
03/05/09	5.6		-7.1		-0.8	0	T	0		0	T	0
03/06/09	18.9		1.3		10.1	0		0		0		0
03/07/09	4.6		-2		1.3	19.8		0		19.8		0
03/08/09	5.5		1.1		3.3	9.8		0	T	9.8		0
03/09/09	4.4		-0.5		2	1.4		0.6		2.2		0
03/10/09	3.7		0.2		2	6.4		0		6.4		0
03/11/09	9.5		-5.2		2.2	5.4		0	T	5.4		0
03/12/09	-2.1		-9.5		-5.8	0		0	T	0	T	0
03/13/09	-0.7		-10.3		-5.5	0		0		0		0
03/14/09	6.9		-6.1		0.4	0		0		0		0
03/15/09	9.6		-3.8		2.9	0		0		0		0
03/16/09	10		-2.4		3.8	0		0		0		0

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
03/17/09	11.8		-1.8		5	0		0		0		0
03/18/09	15		2.5		8.8	0	T	0		0	T	0
03/19/09	4.3		-3.6		0.4	0		0		0		0
03/20/09	2.8		-6.4		-1.8	0		0		0		0
03/21/09	5.9		-5.7		0.1	0		0		0		0
03/22/09	5.8		-4.3		0.8	0		0		0		0
03/23/09	2.6		-6.4		-1.9	0		0		0		0
03/24/09	4		-2.9		0.6	0		0		0		0
03/25/09	8.6		1.9		5.3	2.6		0		2.6		0
03/26/09	10.4		2		6.2	0	T	0		0	T	0
03/27/09	12.3		-3		4.7	0		0		0		0
03/28/09	13.2		0.3		6.8	0		0		0		0
03/29/09	10.8		2.6		6.7	22.6		0		22.6		0
03/30/09	5.6		-2.7		1.5	0		0		0		0
03/31/09	5.6		-3.1		1.3	0	T	0		0	T	0
04/01/09	14		2.5		8.3	1.8		0		1.8		0
04/02/09	15.1		1.3		8.2	0.2		0		0.2		0
04/03/09	10		3.1		6.6	40.2		0		40.2		0
04/04/09	5.6		2.5		4.1	0	T	0		0	T	0
04/05/09	12.1		0.3		6.2	0.2		0		0.2		0
04/06/09	4.8		-3.3		0.8	13.8		3.8		17.8		0
04/07/09	-0.1		-3.9		-2	0		0	T	0	T	1
04/08/09	8.3		-1.7		3.3	0		0	T	0	T	0
04/09/09	11.7		-1.7		5	0		0		0		0
04/10/09	10.7		-0.6		5.1	0		0		0		0
04/11/09	8.9		-0.8		4.1	0		0		0		0
04/12/09	6.7		-2.5		2.1	0		0		0		0
04/13/09	6.8		-3.9		1.5	0		0		0		0
04/14/09	11.8		3.9		7.9	0		0		0		0
04/15/09	14.5		3.6		9.1	0		0		0		0
04/16/09	14.5		2.5		8.5	0		0		0		0
04/17/09	20.9		3.9		12.4	0		0		0		0
04/18/09	21.2		8		14.6	0		0		0		0
04/19/09	12.4		5.2		8.8	0	T	0		0	T	0
04/20/09	9.3		4.3		6.8	25.8		0		25.8		0
04/21/09	12		3.9		8	1		0		1		0
04/22/09	8		3.5		5.8	0	T	0		0	T	0
04/23/09	12		3.6		7.8	0	T	0		0	T	0
04/24/09	19.8		4.8		12.3	0		0		0		0
04/25/09	27.9		10.5		19.2	9.8		0		9.8		0
04/26/09	16.2		8.1		12.2	3		0		3		0
04/27/09	27.5		7		17.3	0		0		0		0
04/28/09	17.3		4.4		10.9	10.4		0		10.4		0
04/29/09	12.5		3.6		8.1	0		0		0		0
04/30/09	17.5		7.3		12.4	23.4		0		23.4		0
05/01/09	19.5		5.5		12.5	0.4		0		0.4		0
05/02/09	14.6		2.5		8.6	0.6		0		0.6		0
05/03/09	19.8		3.8		11.8	0		0		0		0
05/04/09	17.3		5.4		11.4	0		0		0	Prev. 5 days	0
05/05/09	18		5.1		11.6	0		0		0	24.4	0
05/06/09	17.6		7.4		12.5	2.6		0		2.6		0
05/07/09	19.4		11.9		15.7	2		0		2		0
05/08/09	24.9		12.2		18.6	0	T	0		0	T	0
05/09/09	19.8		8		13.9	10.8		0		10.8		0
05/10/09	12.7		3.3		8	0		0		0		0
05/11/09	13.9		1.4		7.7	0		0		0		0
05/12/09	16.5		3.3		9.9	0		0		0		0
05/13/09	20.1		5.6		12.9	0	T	0		0	T	0
05/14/09	21.7		8.6		15.2	2.4		0		2.4		0
05/15/09	16.9		7.4		12.2	0	T	0		0	T	0
05/16/09	20.3		4.2		12.3	5.2		0		5.2		0
05/17/09	12.5		1.5		7	0		0		0		0
05/18/09	14.7		0.3		7.5	0		0		0		0
05/19/09	22.6		5.7		14.2	0		0		0		0
05/20/09	27.6		13.3		20.5	0		0		0		0
05/21/09	29.1		14.4		21.8	0		0		0		0
05/22/09	21.1		11.7		16.4	0		0		0		0
05/23/09	20.1		9.1		14.6	0		0		0		0

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
05/24/09	22.8		9.9		16.4	0.2		0		0.2		0
05/25/09	18.8		8.2		13.5	0		0		0		0
05/26/09	13.9		9.4		11.7	0.2		0		0.2		0
05/27/09	16		10.5		13.3	16.6		0		16.6		0
05/28/09	17.5		12.2		14.9	12.4		0		12.4	Prev. 5 days	0
05/29/09	23.4		10.4		16.9	3		0		3	32.4	0
05/30/09	20.3		7.5		13.9	4.4		0		4.4		0
05/31/09	12.7		4.6		8.7	0		0		0		0
06/01/09	17.5		8.3		12.9	0	T	0		0	T	0
06/02/09	16.8		8.4		12.6	0		0		0		0
06/03/09	19.5		7.5		13.5	0		0		0		0
06/04/09	18.2		6.8		12.5	0		0		0		0
06/05/09	21		6.9		14	0		0		0		0
06/06/09	23		10.9		17	0		0		0		0
06/07/09	17.8		9.9		13.9	0	T	0		0	T	0
06/08/09	16.3		11.6		14	9.4		0		9.4		0
06/09/09	18.8		10.3		14.6	0	T	0		0	T	0
06/10/09	19.4		8.6		14	0		0		0		0
06/11/09	20.4		10.5		15.5	2.8		0		2.8		0
06/12/09	23.8		11.7		17.8	0		0		0		0
06/13/09	22.8		13.2		18	0		0		0		0
06/14/09	24.3		11.3		17.8	0	T	0		0	T	0
06/15/09	23.6		13.2		18.4	0		0		0		0
06/16/09	24.3		12.3		18.3	0		0		0		0
06/17/09	20.7		14.1		17.4	10.8		0		10.8	Prev. 5 days	0
06/18/09	17.8		13.3		15.6	1.4		0		1.4	12.2	0
06/19/09	23.1		11.6		17.4	0		0		0		0
06/20/09	17.7		14.9		16.3	14.4		0		14.4		0
06/21/09	26.5		14.4		20.5	0		0		0		0
06/22/09	26.1		16.6		21.4	0		0		0		0
06/23/09	27.2		17		22.1	0		0		0		0
06/24/09	31.4		18.4		24.9	0		0		0		0
06/25/09	28.9		20.4		24.7	1.2		0		1.2		0
06/26/09	27.2		18.2		22.7	0		0		0		0
06/27/09	27.9		16.3		22.1	0		0		0		0
06/28/09	21.5		14.7		18.1	9		0		9		0
06/29/09	24		14		19	4.8		0		4.8		0
06/30/09	20.8		14.9		17.9	16.4		0		16.4		0
07/01/09	23.3		14.1		18.7	0	T	0		0	T	0
07/02/09	21.9		15.3		18.6	0.4		0		0.4		0
07/03/09	23.3		13.9		18.6	0		0		0		0
07/04/09	22.4		12		17.2	0		0		0		0
07/05/09	23.5		10.6		17.1	0		0		0		0
07/06/09	25.1		13.6		19.4	0	T	0		0	T	0
07/07/09	20.2		13.8		17	0.4		0		0.4		0
07/08/09	24.1		12.6		18.4	0		0		0		0
07/09/09	24.1		13.5		18.8	0		0		0		0
07/10/09	26.5		14.8		20.7	0		0		0		0
07/11/09	28.3		14.6		21.5	7.4		0		7.4		0
07/12/09	23.4		9.4		16.4	0		0		0		0
07/13/09	23.4		10.6		17	0		0		0		0
07/14/09	25.4		11.6		18.5	0		0		0		0
07/15/09	23.9		11.7		17.8	0.4		0		0.4		0
07/16/09	27.8		15.3		21.6	0		0		0		0
07/17/09	21.2		14.3		17.8	0.2		0		0.2		0
07/18/09	23.2		14.2		18.7	0	T	0		0	T	0
07/19/09	23		12		17.5	0		0		0		0
07/20/09	24.8		12.5		18.7	0		0		0		0
07/21/09	24.2		14.4		19.3	4.6		0		4.6		0
07/22/09	22.7		16		19.4	2.4		0		2.4		0
07/23/09	23.4		17.4		20.4	31.4		0		31.4		0
07/24/09	24.4		16.9		20.7	0	T	0		0	T	0
07/25/09	22.7		17.9		20.3	18		0		18		0
07/26/09	22.9		16.1		19.5	9		0		9		0
07/27/09	27.2		16.1		21.7	0		0		0		0
07/28/09	27.8		20.1		24	0	T	0		0	T	0
07/29/09	23.3		14.2		18.8	10.6		0		10.6		0
07/30/09	25.3		13.4		19.4	0		0		0		0
07/31/09	27.7		16.3		22	0	T	0		0	T	0
08/01/09	27.1		14.6		20.9	0		0		0		0
08/02/09	25.5		15.4		20.5	0	T	0		0	T	0
08/03/09	26.1		12.6		19.4	0	T	0		0	T	0
08/04/09	26.4		15		20.7	18		0		18		0
08/05/09	24.4		10.9		17.7	0		0		0		0
08/06/09	24.4		15		19.7	0		0		0		0

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
08/07/09	22.9		14.1		18.5	0		0		0		0
08/08/09	22		12		17	2.2		0		2.2		0
08/09/09	29.5		18.5		24	40		0		40		0
08/10/09	30		18.8		24.4	1.2		0		1.2		0
08/11/09	26.1		16		21.1	28		0		28		0
08/12/09	25.4		17.5		21.5	2.6		0		2.6		0
08/13/09	28.1		16.8		22.5	0		0		0		0
08/14/09	28.4		17.1		22.8	0		0		0		0
08/15/09	29.6		18.4		24	0		0		0		0
08/16/09	29.3		19.5		24.4	0		0		0		0
08/17/09	31.4		23		27.2	0		0		0		0
08/18/09	29.5		20.9		25.2	0.4		0		0.4		0
08/19/09	26.1		17.3		21.7	0		0		0		0
08/20/09	28.6		20.8		24.7	25.2		0		25.2		0
08/21/09	27.2		19.8		23.5	0.2		0		0.2		0
08/22/09	24.4		16.8		20.6	1.2		0		1.2		0
08/23/09	22.1		14.7		18.4	0		0		0		0
08/24/09	24		13.5		18.8	0		0		0		0
08/25/09	25.8		13.5		19.7	0		0		0		0
08/26/09	23		13.7		18.4	2.8		0		2.8		0
08/27/09	21		11.4		16.2	0		0		0		0
08/28/09	19.7		13.4		16.6	10.8		0		10.8		0
08/29/09	22.3		14.4		18.4	11.4		0		11.4		0
08/30/09	18.5		11.4		15	0	T	0		0	T	0
08/31/09	20.9		10.5		15.7	0		0		0		0
09/01/09	22.5		10.5		16.5	0		0		0		0
09/02/09	23.6		12.2		17.9	0		0		0		0
09/03/09	24.4		12.9		18.7	0		0		0		0
09/04/09	24.8		14.1		19.5	0		0		0		0
09/05/09	23.9		14.8		19.4	0		0		0		0
09/06/09	23.2		13.9		18.6	0		0		0		0
09/07/09	24.2		15.3		19.8	0		0		0		0
09/08/09	25.2		16.7		21	0		0		0		0
09/09/09	24.5		15.3		19.9	0		0		0		0
09/10/09	24.3		12.7		18.5	0		0		0		0
09/11/09	20.4		12.8		16.6	0		0		0		0
09/12/09	24.1		12.7		18.4	0		0		0		0
09/13/09	24.7		12.4		18.6	0		0		0		0
09/14/09	25.8		12.2		19	0		0		0		0
09/15/09	23.5		11.1		17.3	0		0		0		0
09/16/09	18.7		8.8		13.8	0		0		0		0
09/17/09	20.5		10.2		15.4	0		0		0		0
09/18/09	20.8		8.2		14.5	0	T	0		0	T	0
09/19/09	18.8		4.8		11.8	0		0		0		0
09/20/09	21.2		5.5		13.4	0		0		0		0
09/21/09	22		13		17.5	2.2		0		2.2		0
09/22/09	24		19.6		21.8	0	T	0		0	T	0
09/23/09	27.8		15.6		21.7	2.2		0		2.2	Prev. 5 days	0
09/24/09	22.5		12.1		17.3	0		0		0	4.4	0
09/25/09	15.8		10.9		13.4	0		0		0		0
09/26/09	17.7		8.1		12.9	12.8		0		12.8		0
09/27/09	21.2		13.7		17.5	0	T	0		0	T	0
09/28/09	18		11.1		14.6	20.4		0		20.4		0
09/29/09	16.2		7.2		11.7	2.4		0		2.4		0
09/30/09	11.8		5.6		8.7	0.2		0		0.2		0
10/01/09	12		2.4		7.2	0		0		0		0
10/02/09	12.5		4.3		8.4	10.2		0		10.2		0
10/03/09	17.2		8.1		12.7	2.6		0		2.6		0
10/04/09	14		7.2		10.6	1		0		1		0
10/05/09	17		5.9		11.5	0		0		0		0
10/06/09	15		5.9		10.5	8.6		0		8.6		0
10/07/09	13.4		6.7		10.1	0.6		0		0.6		0
10/08/09	17.6		5.5		11.6	0.2		0		0.2		0
10/09/09	11.4		7.3		9.4	20		0		20		0
10/10/09	14.2		6.4		10.3	0	T	0		0	T	0
10/11/09	10.2		-0.2		5	0		0		0		0
10/12/09	6.7		-0.6		3.1	0	T	0		0	T	0
10/13/09	10.7		2.4		6.6	0.2		0		0.2		0
10/14/09	7.3		-1.2		3.1	0		0		0		0
10/15/09	4.5		-0.7		1.9	0		0		0		0
10/16/09	7.1		-0.7		3.2	0		0		0		0
10/17/09	8.6		0.3		4.5	0		0		0		0
10/18/09	9.8		-0.7		4.6	0		0		0		0
10/19/09	15.2		0.3		7.8	0		0		0		0
10/20/09	16.4		10.9		13.7	0		0		0		0

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
10/21/09	14.4		9.5		12	2.8		0		2.8		0
10/22/09	16.5		3.8		10.2	0.6		0		0.6		0
10/23/09	11		2.9		7	14.8		0		14.8		0
10/24/09	13.5		6.2		9.9	0	T	0		0	T	0
10/25/09	13.2		4		8.6	0		0		0		0
10/26/09	11.8		5.8		8.8	0		0		0		0
10/27/09	16.3		8.2		12.3	1.2		0		1.2		0
10/28/09	13		9.6		11.3	2.2		0		2.2		0
10/29/09	11		9.2		10.1	0		0		0		0
10/30/09	15		9.7		12.4	2.6		0		2.6		0
10/31/09	16.7		6.9		11.8	3.4		0		3.4		0
11/01/09	10.7		4.1		7.4	0		0		0		0
11/02/09	10.4		1.1		5.8	1.6		0		1.6		0
11/03/09	8.9		0.9		4.9	0	T	0		0	T	0
11/04/09	6.2		-1.2		2.5	1.8		0		1.8		0
11/05/09	7.5		1.3		4.4	1.6		0		1.6		0
11/06/09	4.9		-1.1		1.9	0		0		0		0
11/07/09	16.1		4.5		10.3	0		0		0		0
11/08/09	18.1		4.7		11.4	0		0		0	Prev. 5 days	0
11/09/09	19.1		3.9		11.5	0		0		0	3.4	0
11/10/09	13.5		3.3		8.4	0		0		0		0
11/11/09	9		-0.5		4.3	0		0		0		0
11/12/09	9.6		-1.8		3.9	0		0		0		0
11/13/09	11.1		-1.5		4.8	0		0		0		0
11/14/09	15.8		3.6		9.7	0		0		0		0
11/15/09	13.5		2		7.8	0		0		0		0
11/16/09	8.8		-0.2		4.3	0		0		0		0
11/17/09	7.5		-2.3		2.6	0		0		0	Prev. 5 days	0
11/18/09	11.3		0.1		5.7	0		0		0	0	0
11/19/09	10.2		2		6.1	12.6		0		12.6	Prev. 5 days	0
11/20/09	10.4		3.7		7.1	1.2		0		1.2	13.8	0
11/21/09	11.7		3		7.4	0		0		0		0
11/22/09	11		2.8		6.9	0		0		0		0
11/23/09	9.8		2.4		6.1	0		0		0		0
11/24/09	7.8		6.2		7	1.2		0		1.2		0
11/25/09	10.6		7.5		9.1	6.2		0		6.2		0
11/26/09	9.5		1.3		5.4	0.4		0		0.4		0
11/27/09	7.1		1.4		4.3	0.4		0		0.4		0
11/28/09	6.5		0.2		3.4	0		0		0		0
11/29/09	6.9		-3		2	4.6		0		4.6		0
11/30/09	5.5		-0.7		2.4	0.6		0		0.6		0
12/01/09	7		0.3		3.7	0		0.2		0.2		0
12/02/09	10.2		0.2		5.2	15.6		0		15.6		0
12/03/09	7.6		-0.6		3.5	5		0		5		0
12/04/09	3.3		-3.8		-0.3	0		0		0		0
12/05/09	0.9		-5.7		-2.4	0		0		0		0
12/06/09	2.7		-3.8		-0.6	0		0	T	0	T	0
12/07/09	1.6		-2.7		-0.6	0		0	T	0	T	0
12/08/09	2.1		-4.5		-1.2	0		0	T	0	T	0
12/09/09	6.1		-0.9		2.6	10.2		9.6		26.2		5
12/10/09	-0.8		-9.5		-5.2	0		1.4		1		2
12/11/09	-6.4		-10.2		-8.3	0		0	T	0	T	2
12/12/09	1.7		-8.5		-3.4	0		0	T	0	T	1
12/13/09	3		-0.4		1.3	0.8		0	T	0.8		1
12/14/09	3.8		0.4		2.1	2.6		0		2.6		1
12/15/09	3		-5		-1	0		0.6		0.6		0
12/16/09	-3.6		-6.3		-5	0		0.6		0.4		0
12/17/09	-4.7		-11.7		-8.2	0		0	T	0	Prev. 5 days	0
12/18/09	-2.9		-7.1		-5	0		0	T	0	4.4	0
12/19/09	-3.3		-9.2		-6.3	0		0		0		0
12/20/09	1.1		-5.8		-2.4	0		0	T	0	T	0
12/21/09	-1.8		-6.7		-4.3	0		0	T	0	T	0
12/22/09	-5.7		-11.7		-8.7	0		0	T	0	T	0
12/23/09	-3.3		-9.9		-6.6	0		0	T	0	T	0
12/24/09	0.5		-7.3		-3.4	0		0.4		0.4		0
12/25/09	3.7		-0.1		1.8	15.6		0		15.6		0
12/26/09	4.4		-2.7		0.9	10.6		0		10.6		0
12/27/09	2		-2.2		-0.1	0		0	T	0	T	0
12/28/09	-1.6		-11.4		-6.5	0		1		0.6		0
12/29/09	-5.2		-15.7		-10.5	0		0.4		0.2		1
12/30/09	-1.2		-8.8		-5	0		0		0		1
12/31/09	2.7		-1.5		0.6	0.6		0	T	0.6		0
01/01/10	0.9		-10.4		-4.8	0		1.6		1.2		0
01/02/10	-10.2		-17.6		-13.9	0		0	T	0	T	1
01/03/10	-8.3		-15.5		-11.9	0		2		1.2		1

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
01/04/10	-7.1		-12.7		-9.9	0		0.8		0.4		2
01/05/10	-3.6		-11.1		-7.4	0		3		2		2
01/06/10	-2.1		-10.3		-6.2	0		0	T	0	T	5
01/07/10	-3		-7.3		-5.2	0		0	T	0	T	5
01/08/10	-7.3		-11.7		-9.5	0		1.4		0.8		5
01/09/10	-8.7		-14.6		-11.7	0		0		0		5
01/10/10	-3.8		-15.6		-9.7	0		0	T	0	T	4
01/11/10	-4.7		-7.8		-6.3	0		1.4		1.2		3
01/12/10	-5.7		-9.1		-7.4	0		0		0		4
01/13/10	0.4		-6.1		-2.9	0		0		0		4
01/14/10	4.8		-6		-0.6	0		0		0		3
01/15/10	4.1		1		2.6	0	T	0		0	T	0
01/16/10	2		-3.2		-0.6	0		0		0		0
01/17/10	2.7		-1.6		0.6	0		0		0		0
01/18/10	1		-2.9		-1	0		0		0		0
01/19/10	2		-3.8		-0.9	0		0.2		0.2		0
01/20/10	-1.8		-7.7		-4.8	0		0		0	Prev. 5 days	0
01/21/10	0.9		-8.9		-4	0		0		0	0.2	0
01/22/10	3.1		-5.3		-1.1	0		0		0		0
01/23/10	1.5		-3.8		-1.2	0		0		0		0
01/24/10	6		-1.3		2.4	6.2		0		6.2		0
01/25/10	6.7		0.2		3.5	10.8		0		10.8		0
01/26/10	0.3		-1.9		-0.8	0		0.2		0.2		0
01/27/10	-1.9		-5.8		-3.9	0		0.2		0.2		0
01/28/10	-3.9		-13.7		-8.8	0		0	T	0	T	0
01/29/10	-9.5		-17.7		-13.6	0		0	T	0	T	0
01/30/10	-9.4		-19		-14.2	0		0		0		0
01/31/10	-4.1		-13.5		-8.8	0		0	T	0	T	0
02/01/10	-3.3		-10.9		-7.1	0		0	T	0	T	0
02/02/10	-1.2		-9.9		-5.6	0		2.6		2		0
02/03/10	0.6		-6.1		-2.8	0		0.4		0.4		2
02/04/10	0.4		-10		-4.8	0		0		0		2
02/05/10	0.1		-6.8		-3.4	0		0		0		1
02/06/10	-5.4		-12		-8.7	0		0		0		1
02/07/10	-2.2		-11.9		-7.1	0		0		0		0
02/08/10	0.9		-11.4		-5.3	0		0		0		0
02/09/10	-3.8		-8.7		-6.3	0		0.2		0.2		0
02/10/10	-3.2		-7.6		-5.4	0		4.4		3.2		3
02/11/10	-1.4		-9.7		-5.6	0		0		0		3
02/12/10	-0.5		-11.5		-6	0		0		0		2
02/13/10	-1.2		-9.6		-5.4	0		0.6		0.6		0
02/14/10	-1.1		-3.8		-2.5	0		0	T	0	T	1
02/15/10	-1.4		-4.1		-2.8	0		0	T	0	T	0
02/16/10	0.6		-4.6		-2	0		0.2		0.2		0
02/17/10	0.6		-3.6		-1.5	0		2.2		1.8		0
02/18/10	1.4		-2.4		-0.5	0		0		0		1
02/19/10	4.1		-2		1.1	0		0		0		0
02/20/10	4.1		-5.6		-0.8	0		0		0		0
02/21/10	4.9		-5.7		-0.4	0		0		0		0
02/22/10	0.6		-6.1		-2.8	0		5		5		0
02/23/10	0.7		-3.8		-1.6	0	T	0.6		0.6		5
02/24/10	0.9		-5.4		-2.3	0		0	T	0	T	5
02/25/10	-0.4		-7.5		-4	0		3		2.8		3
02/26/10	-0.1		-6.3		-3.2	0		6.4		6.2		7
02/27/10	2.2		-0.7		0.8	0		1.8		1.8		8
02/28/10	3.1		0.2		1.7	0		0	T	0	T	4
03/01/10	2.5		-1.3		0.6	0		0		0		1
03/02/10	3		-3.4		-0.2	0		0		0		1
03/03/10	4.4		-3.1		0.7	0		0		0		0
03/04/10	3.8		-4.3		-0.3	0		0		0		0
03/05/10	3.9		-4.1		-0.1	0		0		0		0
03/06/10	9		-4		2.5	0		0		0		0
03/07/10	11.3		-2.7		4.3	0		0		0		0
03/08/10	14.2		-0.2		7	0		0		0		0
03/09/10	13		-0.1		6.5	0		0		0		0
03/10/10	9		-1.9		3.6	0	T	0		0	T	0
03/11/10	12.2		5.1		8.7	0		0		0		0
03/12/10	7.5		5.1		6.3	21.6		0		21.6		0
03/13/10	6.7		4		5.4	20.6		0		20.6		0
03/14/10	5.8		3.3		4.6	4		0		4		0
03/15/10	13.2		3		8.1	0	T	0		0	T	0
03/16/10	16		0.9		8.5	0		0		0		0
03/17/10	17.7		3.5		10.6	0		0		0		0
03/18/10	18.7		3.2		11	0		0		0		0
03/19/10	19.1		3.1		11.1	0		0		0		0

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
03/20/10	5.3		-1.2		2.1	0		0		0		0
03/21/10	5.3		-1.6		1.9	0		0	T	0	T	0
03/22/10	7.9		-0.8		3.6	4		0		4		0
03/23/10	3.7		0.2		2	3.6		0		3.6		0
03/24/10	15.4		-2		6.7	0		0		0		0
03/25/10	9		-3.1		3	0		0		0		0
03/26/10	0.9		-6.7		-2.9	0		0		0		0
03/27/10	4.6		-6.6		-1	0		0		0		0
03/28/10	6.9		0.9		3.9	7.8		0		7.8		0
03/29/10	8.8		-0.5		4.2	1		0		1		0
03/30/10	12.6		-2		5.3	0		0		0		0
03/31/10	14.7		0.3		7.5	0		0		0		0
04/01/10	19.3		6		12.7	0		0		0		0
04/02/10	24.3		7.6		16	0		0		0		0
04/03/10	21.9		7.2		14.6	0	T	0		0	T	0
04/04/10	18.1		5.8		12	0		0		0		0
04/05/10	23.1		9.9		16.5	0	T	0		0	T	0
04/06/10	13.3		8.7		11	7.2		0		7.2		0
04/07/10	17.2		8.4		12.8	14.4		0		14.4		0
04/08/10	11.6		3.7		7.7	10.8		0		10.8		0
04/09/10	4.1		1.3		2.7	0	T	0	T	0	T	0
04/10/10	13.3		-0.8		6.3	0	T	0		0	T	0
04/11/10	17.7		3.8		10.8	0		0		0		0
04/12/10	13.6		3.9		8.8	0		0		0	Prev. 5 days	0
04/13/10	14.9		4.1		9.5	0		0		0	10.8	0
04/14/10	16.5		2.2		9.4	0		0		0		0
04/15/10	19.9		5.6		12.8	0		0		0		0
04/16/10	21.6		4.6		13.1	0	T	0		0	T	0
04/17/10	7.9		3.2		5.6	0.2		0	T	0.2		0
04/18/10	14		3.9		9	0	T	0		0	T	0
04/19/10	16.2		3.4		9.8	0		0		0		0
04/20/10	18.2		4.4		11.3	0		0		0		0
04/21/10	19.1		3.4		11.3	0	T	0		0	T	0
04/22/10	12.6		1.7		7.2	0		0		0		0
04/23/10	15		0.9		8	0		0		0		0
04/24/10	18.1		3		10.6	0		0		0		0
04/25/10	12.7		9.3		11	3.6		0		3.6		0
04/26/10	17.5		5.3		11.4	0		0		0		0
04/27/10	10.6		2.8		6.7	0		0		0		0
04/28/10	14		4		9	0		0		0		0
04/29/10	19.5		3.5		11.5	0	T	0		0	T	0
04/30/10	20.9		10.6		15.8	0		0		0		0
05/01/10	23.2		12		17.6	1.8		0		1.8		0
05/02/10	24.4		15.2		19.8	1.2		0		1.2		0
05/03/10	24.8		14.9		19.9	1.6		0		1.6		0
05/04/10	21.2		12.6		16.9	0	T	0		0	T	0
05/05/10	27.2		11.8		19.5	5.4		0		5.4		0
05/06/10	15.5		7.2		11.4	0		0		0		0
05/07/10	13.1		5.7		9.4	26		0		26		0
05/08/10	12.5		2.2		7.4	3.2		0		3.2		0
05/09/10	10.6		0.7		5.7	0		0	T	0	T	0
05/10/10	13.7		0.9		7.3	0		0		0		0
05/11/10	10.8		2.2		6.5	3.8		0		3.8		0
05/12/10	11.6		4.6		8.1	0.8		0		0.8		0
05/13/10	12.2		3		7.6	5.8		0		5.8		0
05/14/10	20.9		7.2		14.1	0		0		0		0
05/15/10	14.5		7.6		11.1	0		0		0		0
05/16/10	19.5		6.4		13	0		0		0		0
05/17/10	20.9		6.5		13.7	0		0		0		0
05/18/10	20.1		10.2		15.2	0		0		0		0
05/19/10	24.4		8.1		16.3	0		0		0		0
05/20/10	28.7		12.5		20.6	0		0		0		0
05/21/10	21.3		12.5		16.9	0		0		0		0
05/22/10	20.1		15.6		17.9	0.4		0		0.4		0
05/23/10	24.1		14.2		19.2	0		0		0		0
05/24/10	27.2		13.8		20.5	0		0		0		0
05/25/10	28.8		15.9		22.4	0		0		0		0
05/26/10	31.7		18.1		24.9	0		0		0		0
05/27/10	30.9		17		24	0.4		0		0.4		0
05/28/10	26.7		17.6		22.2	0		0		0		0
05/29/10	26.3		16.6		21.5	0		0		0		0
05/30/10	30.7		14.8		22.8	0		0		0		0
05/31/10	27.9		16.8		22.4	0.6		0		0.6		0
06/01/10	27.9		15.3		21.6	5.4		0		5.4		0
06/02/10	27.2		14.5		20.9	33.2		0		33.2		0

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
06/03/10	20.8		16.3		18.6	4.8		0		4.8		0
06/04/10	23.7		13.5		18.6	4.4		0		4.4		0
06/05/10	25.4		15.7		20.6	4		0		4		0
06/06/10	18.9		11.4		15.2	19		0		19		0
06/07/10	19.8		9.7		14.8	0		0		0		0
06/08/10	20.3		7.5		13.9	0		0		0		0
06/09/10	15.3		12.6		14	11.8		0		11.8		0
06/10/10	20.9		13.3		17.1	0	T	0		0	T	0
06/11/10	23.1		13.2		18.2	0		0		0		0
06/12/10	18.4		16.2		17.3	3.4		0		3.4		0
06/13/10	21		16.5		18.8	0.2		0		0.2		0
06/14/10	24.5		16.4		20.5	0	T	0		0	T	0
06/15/10	23		13.6		18.3	0		0		0		0
06/16/10	26.1		14.6		20.4	16.2		0		16.2		0
06/17/10	24.4		13.6		19	0		0		0		0
06/18/10	26.8		13.4		20.1	0		0		0		0
06/19/10	29.9		18.7		24.3	0	T	0		0	T	0
06/20/10	27		17.4		22.2	0		0		0		0
06/21/10	26.1		16.8		21.5	0		0		0		0
06/22/10	24.4		18.3		21.4	19.8		0		19.8		0
06/23/10	29.5		18.3		23.9	0		0		0		0
06/24/10	27.1		17.4		22.3	9		0		9		0
06/25/10	25.2		14.7		20	0		0		0		0
06/26/10	22.3		17.4		19.9	7.2		0		7.2		0
06/27/10	24.1		17		20.6	53.2		0		53.2		0
06/28/10	29.6		16.3		23	0		0		0		0
06/29/10	19.8		10.7		15.3	0		0		0		0
06/30/10	20.5		8.9		14.7	0		0		0		0
07/01/10	22		10.4		16.2	0		0		0		
07/02/10	24.8		11.4		18.1	0		0		0		
07/03/10	30.3		14.8		22.6	0		0		0		
07/04/10	31.7		16.1		23.9	0		0		0		
07/05/10	34.1		22.3		28.2	0		0		0		
07/06/10	33.7		23.3		28.5	0		0		0		
07/07/10	33.3		23		28.2	0	T	0		0	T	
07/08/10	33.3		23.6		28.5	0		0		0		
07/09/10	25		18.8		21.9	19.8		0		19.8		
07/10/10	27.8		16.7		22.3	0		0		0		
07/11/10	28		16.5		22.3	11.6		0		11.6		
07/12/10	25.2		19.8		22.5	0	T	0		0	T	
07/13/10	27.8		20.3		24.1	0		0		0		
07/14/10	27.1		20.1		23.6	0		0		0		
07/15/10	29.3		20.5		24.9	1		0		1		
07/16/10	29.7		22		25.9	0.2		0		0.2		
07/17/10	31.4		18.2		24.8	0.8		0		0.8		
07/18/10	28.6		15.2		21.9	0	T	0		0	T	
07/19/10	26.8		19.2		23	1.8		0		1.8		
07/20/10	27.8		18.3		23.1	0		0		0		
07/21/10	31		19.1		25.1	0		0		0		
07/22/10	29.2		17.6		23.4	0.6		0		0.6		
07/23/10	30.3		17.3		23.8	39		0		39		
07/24/10	27.5		19.8		23.7	11.4		0		11.4		
07/25/10	26		17.9		22	0		0		0		
07/26/10	29		16.3		22.7	0		0		0		
07/27/10	28.7		16.1		22.4	0		0		0		
07/28/10	31		18.7		24.9	3.2		0		3.2		
07/29/10	24.6		15.8		20.2	0		0		0		
07/30/10	23.3		15.6		19.5	0		0		0		
07/31/10	24.2		13.5		18.9	0.2		0		0.2		
08/01/10	25.8		17.7		21.8	0		0		0		0
08/02/10	28		17.4		22.7	0	T	0		0	T	0
08/03/10	31.9		20.7		26.3	0		0		0		0
08/04/10	31.9		20.7		26.3	0	T	0		0	Prev. 5 days	
08/05/10	31		18.9		25	0		0		0	0.2	0
08/06/10	24.4		13.1		18.8	0	T	0		0	T	0
08/07/10	25		10.6		17.8	0		0		0		0
08/08/10	27.7		18.2		23	0.2		0		0.2		0
08/09/10	28.6		20.2		24.4	9.8		0		9.8		0
08/10/10	30.5		20.6		25.6	0		0		0		0
08/11/10	28.7		19.9		24.3	0		0		0		0
08/12/10	27.3		21.5		24.4	0		0		0		0
08/13/10	27.4		19.1		23.3	0		0		0		0
08/14/10	27.1		19.7		23.4	0		0		0		0
08/15/10	30.9		21.8		26.4	1.6		0		1.6		0
08/16/10	27.6		16.7		22.2	0		0		0		0

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
08/17/10	28.3		15.4		21.9	0		0		0		0
08/18/10	24		15.8		19.9	0		0		0		0
08/19/10	29.3		16		22.7	3		0		3		0
08/20/10	23.5		13.5		18.5	0		0		0		0
08/21/10	23.6		19.5		21.6	24		0		24		0
08/22/10	22.1		19.2		20.7	17.2		0		17.2		0
08/23/10	21.3		18.2		19.8	0	T	0		0	T	0
08/24/10	23.3		15.9		19.6	0		0		0		0
08/25/10	26.1		14.9		20.5	2.8		0		2.8		0
08/26/10	21.9		11.7		16.8	0		0		0		0
08/27/10	24.8		9.7		17.3	0		0		0		0
08/28/10	28.7		14.2		21.5	0		0		0		0
08/29/10	30.9		15.4		23.2	0		0		0		0
08/30/10	34.5		20		27.3	0		0		0		0
08/31/10	33.7		21.7		27.7	0		0		0		0
09/01/10	32.7		21.4		27.1	0		0		0		
09/02/10	30.4		22.6		26.5	4.2		0		4.2		
09/03/10	25.7		15.1		20.4	9.6		0		9.6		
09/04/10	17.2		10.8		14	0.4		0		0.4		
09/05/10	19.5		10		14.8	0		0		0		
09/06/10	22.7		11.5		17.1	1.4		0		1.4		
09/07/10	30.2		15.3		22.8	0		0		0		
09/08/10	19.3		14.2		16.8	0.2		0		0.2		
09/09/10	16.8		12.4		14.6	0	T	0		0	T	
09/10/10	20.7		11.8		16.3	0		0		0		
09/11/10	21		9.7		15.4	5.8		0		5.8		
09/12/10	22.1		13.6		17.9	0.4		0		0.4		
09/13/10	24.3		12.6		18.5	1.8		0		1.8		
09/14/10	20.5		9.7		15.1	0		0		0		
09/15/10	17.9		8.2		13.1	0		0		0		
09/16/10	14.4		11.4		12.9	27.2		0		27.2		
09/17/10	16.8		8.6		12.7	0		0		0		
09/18/10	21.9		10.7		16.3	0.6		0		0.6		
09/19/10	19		7.8		13.4	0		0		0		
09/20/10	18.4		6.9		12.7	0		0		0		
09/21/10	26.9		10.8		18.9	0	T	0		0	T	
09/22/10	22.8		11.6		17.2	6		0		6		
09/23/10	20.1		9.3		14.7	0		0		0		
09/24/10	30.8		15.8		23.3	0	T	0		0	T	
09/25/10	17.5		6.9		12.2	0	T	0		0	T	
09/26/10	15.7		6.3		11	0		0		0		
09/27/10	16		8.8		12.4	8		0		8		
09/28/10	18		11.8		14.9	23.2		0		23.2		
09/29/10	19.3		10		14.7	0		0		0		
09/30/10	18.5		12.6		15.6	0	T	0		0	T	
10/01/10	16.8		7.5		12.2	0		0		0		
10/02/10	11.6		6.1		8.9	1		0		1		
10/03/10	12.4		5.8		9.1	0		0		0		
10/04/10	12.4		4		8.2	1		0		1		
10/05/10	15.6		8.9		12.3	11.8		0		11.8		
10/06/10	17.1		9		13.1	0.4		0		0.4		
10/07/10	19.9		7.6		13.8	0		0		0		
10/08/10	23.6		7.5		15.6	0		0		0		
10/09/10	16.8		5.9		11.4	0		0		0		
10/10/10	22.6		3.9		13.3	0		0		0		
10/11/10	14.8		8.3		11.6	0		0		0		
10/12/10	13		4.1		8.6	0		0		0		
10/13/10	15.3		1.1		8.2	4.2		0		4.2		
10/14/10	11.5		4.4		8	12.4		0		12.4		
10/15/10	14		2.9		8.5	0		0		0		
10/16/10	15.6		4.6		10.1	0	T	0		0	T	
10/17/10	16.8		4.1		10.5	0		0		0		
10/18/10	12.5		2.7		7.6	0		0		0	Prev. 5 days	
10/19/10	14.2		2.6		8.4	0	T	0		0	12.4	
10/20/10	16.6		4.7		10.7	2.2		0		2.2		
10/21/10	8.2		2.2		5.2	0	T	0		0	T	
10/22/10	10.6		-0.2		5.2	0	T	0		0	T	
10/23/10	14.9		6.3		10.6	10.6		0		10.6		
10/24/10	11.4		8.3		9.9	5.4		0		5.4		
10/25/10	18.8		9.6		14.2	0		0		0		
10/26/10	20.6		12.5		16.6	7.8		0		7.8		
10/27/10	19.3		11.4		15.4	0		0		0		
10/28/10	14.5		6.9		10.7	0	T	0		0	T	
10/29/10	9.3		3.5		6.4	0.2		0		0.2		
10/30/10	14.1		5.2		9.7	0		0		0		

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
10/31/10	6		-1.2		2.4	0		0.2		0.4		
11/01/10	7.1		-1.6		2.8	0		0		0		
11/02/10	8.2		-2.4		2.9	0		0		0		
11/03/10	10.4		-2.8		3.8	0.8		0		0.8		
11/04/10	8.9		4.8		6.9	1.8		0		1.8		
11/05/10	5.8		-0.2		2.8	2.8		0		2.8		
11/06/10	5.2		-1.6		1.8	0		0		0		
11/07/10	10.1		0.9		5.5	0		0		0		
11/08/10	10.3		-2		4.2	0		0		0		
11/09/10	9.7		0		4.9	0		0		0		
11/10/10	11.1		0.2		5.7	0		0		0		
11/11/10	10.9		0.2		5.6	0		0		0		
11/12/10	12.3		-1.1		5.6	0		0		0		
11/13/10	12.2		-1.7		5.3	0		0		0		
11/14/10	10.9		2.7		6.8	0.6		0		0.6		
11/15/10	12.1		2.1		7.1	0	T	0		0	T	
11/16/10	10.6		1.2		5.9	26.6		0		26.6		
11/17/10	10		2.4		6.2	1.2		0		1.2		
11/18/10	7.5		-1.2		3.2	0.8		0		0.8		
11/19/10	6.7		-1.9		2.4	0		0		0		
11/20/10	6.8		-0.4		3.2	0		0		0		
11/21/10	8.5		-1.6		3.5	0		0	T	0	T	
11/22/10	15.9		8.5		12.2	2		0		2		
11/23/10	16.5		0.9		8.7	5.8		0		5.8		
11/24/10	3.1		-1.2		1	0		0		0		
11/25/10	6.5		0.4		3.5	7.2		0		7.2		
11/26/10	6.8		-2.2		2.3	1.4		0	T	1.4		
11/27/10	4.1		-1.7		1.2	0		0	T	0	T	
11/28/10	2.3		-1.3		0.5	0		0		0		
11/29/10	6.3		-4		1.2	0		0		0		
11/30/10	11.7		4.2		8	15.2		0		15.2		
12/01/10	8.4		-0.9		3.8	10.4		0	T	10.4		
12/02/10	1.1		-1.3		-0.1	0		0	T	0	T	
12/03/10	4		-3.2		0.4	0		0		0		
12/04/10	-0.6		-6.1		-3.4	0		0	T	0	T	
12/05/10	1.2		-6.6		-2.7	0		0	T	0	T	
12/06/10	-2.8		-5.2		-4	0		1.8		1.8		0
12/07/10	-2.1		-6.8		-4.5	0		0	T	0	T	2
12/08/10	-2.8		-11.1		-7	0		0		0		1
12/09/10	-3.2		-13.8		-8.5	0		0		0		0
12/10/10	2.7		-3.3		-0.3	0.4		0	T	0.4		0
12/11/10	4.1		0.5		2.3	0		0		0		0
12/12/10	3.8		-8.5		-2.4	19		1		20		0
12/13/10	-8.3		-13.9		-11.1	0		0.8		0.8		1
12/14/10	-7.6		-11.6		-9.6	0		1.8		1.6		1
12/15/10	-4.3		-12.7		-8.5	0		1		0.8		2
12/16/10	-2.6		-7.2		-4.9	0		0	T	0	T	2
12/17/10	-0.6		-4.2		-2.4	0.2		0	T	0.2		1
12/18/10	-3.2		-7		-5.1	0		0	T	0	T	1
12/19/10	-3.7		-5.6		-4.7	0		0.6		0.6		1
12/20/10	-0.6		-6.7		-3.7	0		0	T	0	T	1
12/21/10	-3.4		-9.9		-6.7	0		0		0		
12/22/10	-2.9		-7.6		-5.3	0		0		0		1
12/23/10	-1.8		-6.1		-4	0		0	T	0	T	1
12/24/10	-2.8		-6.6		-4.7	0		0	T	0	T	1
12/25/10	-5		-7.2		-6.1	0		0		0		1
12/26/10	-5.4		-10.7		-8.1	0		0		0		1
12/27/10	-1.6		-10.8		-6.2	0		0		0		1
12/28/10	-0.2		-5.1		-2.7	0		0	T	0	T	0
12/29/10	-0.3		-5.7		-3	0		0	T	0	T	0
12/30/10	4.2		-7.9		-1.9	0	T	0		0	T	0
12/31/10	10		3.7		6.9	0.2		0		0.2		
01/01/11	12		-1.3		5.4	8.6		0		8.6		
01/02/11	-1.1		-5.5		-3.3	0		0	T	0	T	
01/03/11	0.1		-6.5		-3.2	0		0	T	0	T	
01/04/11	1.3		-3.2		-1	0.4		0		0.4		0
01/05/11	-1		-8.9		-5	0		0		0		0
01/06/11	-2.1		-9		-5.6	0		4.8		4.4		0
01/07/11	-4.3		-10.6		-7.5	0		4.2		1.6		4
01/08/11	-5.3		-10.5		-7.9	0		11.2		6.4		12
01/09/11	-4.4		-11.1		-7.8	0		0	T	0		17
01/10/11	-3.8		-13		-8.4	0		0		0		16
01/11/11	-4.7		-10		-7.4	0		2.8		2.4		16
01/12/11	-7		-11		-9	0		1.8		1.8		19
01/13/11	-5.7		-13		-9.4	0		0	T	0	T	19

Pearson Airport Daily Weather Data

Station Name	TORONTO LESTER B. PEARSON	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.68	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.63	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	173.4	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6158733	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
01/14/11	-2.2		-8.6		-5.4	0		0.2		0.2		18
01/15/11	-2.3		-8.3		-5.3	0		5.8		5.4		18
01/16/11	-5.7		-18.3		-12	0		0		0		21
01/17/11	-2.2		-21.2		-11.7	0		5.2		2.4		21
01/18/11	3.4		-2.6		0.4	2.8		0	T	2.8		21
01/19/11	-2.6		-11.6		-7.1	0		0.2		0.2		8
01/20/11	-5.6		-14.9		-10.3	0		1.8		1.6		8
01/21/11	-6.1		-15.3		-10.7	0		1		0.6		10
01/22/11	-9.1		-16.4		-12.8	0		0.8		0.8		10
01/23/11	-11.8		-20.2		-16	0		0.2		0.2		10
01/24/11	-5.3		-20.7		-13	1		1.6		2.2		10
01/25/11	-0.5		-6		-3.3	0		0	T	0	T	12
01/26/11	-1.3		-3.2		-2.3	0		0	T	0	T	12
01/27/11	-0.8		-4.6		-2.7	0		0	T	0	T	9
01/28/11	-1.3		-5.8		-3.6	0		0	T	0	T	8
01/29/11	-4.7		-10.2		-7.5	0		0	T	0	T	7
01/30/11	-4.4		-14.4		-9.4	0		0		0		7
01/31/11	-10.4		-18.6		-14.5	0		0		0		7
02/01/11	-7.1		-11.8		-9.5	0		1.6		1		7
02/02/11	-8.4		-14.9		-11.7	0		12.8		9.4		15
02/03/11	-3.8		-17.1		-10.5	0		0		0		21
02/04/11	-4.6		-10.2		-7.4	0		0		0		20
02/05/11	-0.9		-9.1		-5	0		11.6		9.8		20
02/06/11	0.6		-3.2		-1.3	0		2.6		1.4		17
02/07/11	0.4		-10.6		-5.1	0		1.2		0.7		17
02/08/11	-9.6		-16		-12.8	0		0	T	0	T	16
02/09/11	-6.3		-13.7		-10	0		0		0		17
02/10/11	-9.2		-15.3		-12.3	0		0		0		17
02/11/11	-4.4		-18		-11.2	0		0	T	0	T	16
02/12/11	-1.9		-7		-4.5	0		0.2		0	T	16
02/13/11	6.8		-6.1		0.4	0		0.2		0.2		16
02/14/11	6.8		-10.3		-1.8	0	T	0		0	T	12
02/15/11	-3.6		-13.6		-8.6	0		0		0		8
02/16/11	5.5		-6.3		-0.4	0		0	T	0	Prev. 5 days	5
02/17/11	**11.3**		-1		5.2	1.2		0		1.2	1.4	3
02/18/11	**10.8**		-1		4.9	0		0	T	0		0
02/19/11	-0.9		-6.7		-3.8	0		0	T	0	T	0
02/20/11	-3.3		-10.1		-6.7	0		4.6		4.2		0
02/21/11	-5.8		-11.8		-8.8	0		0	T	0	T	5
02/22/11	-3.7		-14.2		-9	0		0		0		2

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
01/01/09	-0.8		-16.2		-8.5	0		0		0		5
01/02/09	0.5		-5.5		-2.5	0		0	T	0	T	0
01/03/09	-2.5		-6		-4.3	0		0		0		0
01/04/09	1		-10.5		-4.8	0	T	0		0	T	0
01/05/09	-3		-5.5		-4.3	0		0		0		0
01/06/09	0.5		-8.2		-3.9	0		0		0		0
01/07/09	1		-5.5		-2.3	0		4		11.2		12
01/08/09	-4		-6.8		-5.4	0		0		0		13
01/09/09	-4		-12		-8	0		0.2		0.2		11
01/10/09	-6		-11		-8.5	0		11		11		13
01/11/09	-4.5		-15		-9.8	0		0		0		24
01/12/09	0		-12		-6	0		3		3		0
01/13/09	1		-7.5		-3.3	0		0		0		15
01/14/09	-12		-20.5		-16.3	0		6		6		14
01/15/09	-10		-17.5		-13.8	0		0		0		20
01/16/09	-11.8		-18.5		-15.2	0		0		0		20
01/17/09	-3		-21		-12	0		12		8.2		20
01/18/09	-3.5		-10.2		-6.9	0		3		1.2		29
01/19/09	-5.5		-8		-6.8	0		0	T	1		32
01/20/09	-8		-13		-10.5	0		0		0		26
01/21/09	-4		-19		-11.5	0		0		0		0
01/22/09	-1.5		-7		-4.3	0		0		0		24
01/23/09	4		-4		0	0		0		0		23
01/24/09	-10		-16.5		-13.3	0		0		0		0
01/25/09	-8		-15.5		-11.8	0		0		0		22
01/26/09	-8		-18		-13	0		0		0		22
01/27/09	-4		-14.4		-9.2	0		6.9		6.9		22
01/28/09	-3		-7.5		-5.3	0		10.1		10.1		24
01/29/09	-3		-11		-7	0		1		1		35
01/30/09	-4.5		-7		-5.8	0		0		0.5		34
01/31/09	1.5		-14.8		-6.7	0		0	T	0	T	34
02/01/09	5.5		-8.5		-1.5	0		0		0		34
02/02/09	3		-6		-1.5	0		0	T	0	T	28
02/03/09	-2.6		-11.2		-6.9	0		3		3		27
02/04/09	-10.8		-14		-12.4	0		0	T	0	T	30
02/05/09	-8.7		-22		-15.4	0		0		30.5		30
02/06/09	4.5		-12.5		-4	0		0		59.5		0
02/07/09	8.5		-9		-0.3	0		0		7		0
02/08/09	4		1		2.5	0		0		6		0
02/09/09	3		-5.5		-1.3	0.7		0		0.7		6
02/10/09	11		0		5.5	0	T	0		0	T	2
02/11/09	8.5		5		6.8	33.3		0		33.3		0
02/12/09	5		3		4	0		0		0		0
02/13/09	1		-6		-2.5	0		0		0		0
02/14/09	-0.6		-7.5		-4.1	0		0		0		0
02/15/09	2.9		-8.5		-2.8	0		0		0		0
02/16/09	2		-6.5		-2.3	0		0		0		0
02/17/09	2		-7		-2.5	0		1		1		0
02/18/09	1		-1		0	0.5		3		6.4		1
02/19/09	-3		-5.5		-4.3	0		0		0		2
02/20/09	-1.3		-7		-4.2	0		0	T	0	T	1
02/21/09	-0.8		-9.5		-5.2	0		5		5.4		0
02/22/09	-2		-5.1		-3.6	0		0		0		6
02/23/09	-4.8		-11		-7.9	0		0		0		5
02/24/09	-1.5		-15		-8.3	0		0		0		4
02/25/09	4		-6.5		-1.3	0.8		0.5		2.6		
02/26/09	9.5		1		5.3	9.2		0		9.2		
02/27/09	9.5		-5		2.3	4		0		4		0
02/28/09	-7.8		-16		-11.9	0		0		0		0
03/01/09	-4		-10.5		-7.3	0		0		0		0
03/02/09	-9		-15		-12	0		0		0		0
03/03/09	-3.5		-15.5		-9.5	0		0		0		0
03/04/09	1.2		-12		-5.4	0		0		0		0
03/05/09	12.5		-7.2		2.7	0		0		0		0
03/06/09	19		2		10.5	0		0		0		0
03/07/09	4.5		-1		1.8	16.2		0		16.2		0
03/08/09	4		1		2.5	11		0	T	22		0
03/09/09	5		0.2		2.6	0.2		0		0.2		0
03/10/09	10.5		0		5.3	13.1		0		13.1		0
03/11/09	6		0		3	0		0		0		0
03/12/09	-1.5		-7		-4.3	0		0		0		0
03/13/09	-0.5		-9.5		-5	0		0		0		0
03/14/09	7		-6		0.5	0		0		0		0
03/15/09	9.5		-3		3.3	0		0		0		0
03/16/09	8		-1.5		3.3	0		0		0		0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
03/17/09	13.2		-0.5		6.4	0		0		0		0
03/18/09	16		8		12	0		0		0		0
03/19/09	5		0		2.5	0		0		0		0
03/20/09	2		-5.2		-1.6	0		0		0		0
03/21/09	6.2		-5.5		0.4	0		0		0		0
03/22/09	5.5		2.5		4	0		0		0		0
03/23/09	2.5		-5.8		-1.7	0		0		0		0
03/24/09	4		-3.5		0.3	0		0		0		0
03/25/09	6.5		0.5		3.5	1.9		0		1.9		0
03/26/09	10.5		3.5		7	0.2		0		0.2		0
03/27/09	12.5		0.5		6.5	0		0		0		0
03/28/09	12		1.5		6.8	0		0		0		0
03/29/09												
03/30/09	6		0.5		3.3	0		0		0		0
03/31/09	5.2		-3.2		1	0.4		0		0.4		0
04/01/09	14.5		-1.2		6.7	1.8		0		1.8		0
04/02/09	15		1		8	13.5		0		13.5		0
04/03/09	9		6		7.5	27.4		0		27.4		0
04/04/09	6.5		3		4.8	0		0		0		0
04/05/09	11		0.5		5.8	4.8		0	T	4.8		0
04/06/09	2		0		1	14		4		36		0
04/07/09	0.5		-4.5		-2	0		0		0		1
04/08/09	10		-3.5		3.3	0		0		0		0
04/09/09	12.5		0		6.3	0		0		0		0
04/10/09	7.8		-0.6		3.6	0		0		0		0
04/11/09	9.5		0.5		5	0		0		0		0
04/12/09	8		-1		3.5	0		0		0		0
04/13/09		M	-1.5			0		0		0		0
04/14/09	10		3		6.5	0		0		0		0
04/15/09	12		4		8	0		0		0		0
04/16/09	14		4.4		9.2	0		0		0		0
04/17/09	21.3		3		12.2	0		0		0		0
04/18/09	22		10		16	0		0		0		0
04/19/09	10		5		7.5	6.2		0		6.2		0
04/20/09	9.2		4		6.6	25.4		0		25.4		0
04/21/09	11.5		4		7.8	1.6		0		1.6		0
04/22/09	8		4		6	0		0		0		0
04/23/09	12.5		3		7.8	0		0		0		0
04/24/09	21		4.5		12.8	0		0		0		0
04/25/09	28		10		19	11.4		0		11.4		0
04/26/09	11		7		9	0.4		0		0.4		0
04/27/09	28		6.5		17.3	11.2		0		11.2		0
04/28/09	12		8.3		10.2	5		0		5		0
04/29/09	11		5		8	0		0		0		0
04/30/09	17.5		6.5		12	22.8		0		22.8		0
05/01/09	20.5		8		14.3	0.1		0		0.1		0
05/02/09	15.5		3		9.3	0.6		0		0.6		0
05/03/09	20		4.5		12.3	0		0		0		0
05/04/09	16.1		6.4		11.3	0		0		0	Prev. 5 days	0
05/05/09	15		7.5		11.3	0		0		0	23.5	0
05/06/09	16		7.5		11.8	4.4		0		4.4		0
05/07/09	20.5		12		16.3	0	T	0		0	T	0
05/08/09	25		12.5		18.8	0		0		0		0
05/09/09	20		9.5		14.8	8		0		8		0
05/10/09	12.5		5.5		9	0		0		0		0
05/11/09	14		1		7.5	0		0		0		0
05/12/09	16.8		4		10.4	0		0		0		0
05/13/09	17		6		11.5	0.6		0		0.6		0
05/14/09	22.5		12		17.3	0.2		0		0.2		0
05/15/09	16		7.1		11.6	6		0		6		0
05/16/09	20.5		9		14.8	2.4		0		2.4		0
05/17/09	13		1.5		7.3	0		0		0		0
05/18/09	15		1.5		8.3	0		0		0		0
05/19/09	22.5		5		13.8	0		0		0		0
05/20/09	27.8		13.2		20.5	0		0		0		0
05/21/09	29		14.5		21.8	0		0		0		0
05/22/09	23		15		19	0		0		0		0
05/23/09	17.4		12		14.7	0	T	0		0	T	0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
05/24/09	23		14.2		18.6	0		0		0		0
05/25/09	18.5		8.5		13.5	0		0		0		0
05/26/09	12		8.5		10.3	1		0		1		0
05/27/09	14.8		9		11.9	11.1		0		11.1		0
05/28/09	16		10.5		13.3	4		0		4	Prev. 5 days	0
05/29/09	23.5		11.5		17.5	4.1		0		4.1	20.2	0
05/30/09	20.5		6.5		13.5	0.6		0		0.6		0
05/31/09	13.5		4		8.8	0		0		0		0
06/01/09	18		8		13	0	T	0		0	T	0
06/02/09	16.5		9		12.8	0		0		0		0
06/03/09	20		7.5		13.8	0		0		0		0
06/04/09	18.5		6		12.3	0		0		0		0
06/05/09	19		9		14	0		0		0		0
06/06/09	24		11		17.5	0.2		0		0.2		0
06/07/09	17		12		14.5	0		0		0		0
06/08/09	16		11.5		13.8	9.2		0		9.2		0
06/09/09	18.5		10.5		14.5	0		0		0		0
06/10/09	19.5		8.9		14.2	0		0		0		0
06/11/09	20		10.9		15.5	1.7		0		1.7		0
06/12/09	23.5		13.5		18.5	0		0		0		0
06/13/09	23.9		13.5		18.7	0		0		0		0
06/14/09	25		10		17.5	0		0		0		0
06/15/09	24		13.5		18.8	0		0		0		0
06/16/09	22.7		14		18.4	0		0		0		0
06/17/09	18.5		16		17.3	14.7		0		14.7	Prev. 5 days	0
06/18/09	18		13		15.5	0.7		0		0.7	15.4	0
06/19/09	24		12.4		18.2	6.2		0		6.2		0
06/20/09	24		14.5		19.3	8.3		0		8.3		0
06/21/09	28		14.5		21.3	0		0		0		0
06/22/09	25.5		17		21.3	0		0		0		0
06/23/09	28.5		17.8		23.2	0		0		0		0
06/24/09	31.5		18		24.8	0		0		0		0
06/25/09	30		20.5		25.3	5		0		5		0
06/26/09	29		19		24	0		0		0		0
06/27/09	29		15.5		22.3	0	T	0		0	T	0
06/28/09	24		16.9		20.5	13.4		0		13.4		0
06/29/09	25.5		14.5		20	7.4		0		7.4		0
06/30/09	22		16		19	15.8		0		15.8		0
07/01/09	23		17.5		20.3	0	T	0		0	T	0
07/02/09	23		16.5		19.8	15		0		15		0
07/03/09	23.2		15		19.1	0		0		0		0
07/04/09	23		12		17.5	0		0		0		0
07/05/09	25		11.5		18.3	0		0		0		0
07/06/09	24		14		19	0		0		0		0
07/07/09	19.2		14		16.6	0		0		0		0
07/08/09	24		12		18	0		0		0		0
07/09/09	22.5		15		18.8	0		0		0		0
07/10/09	26		15		20.5	0		0		0		0
07/11/09	28		18		23	13		0		13		0
07/12/09	23.5		10		16.8	0		0		0		0
07/13/09	23.5		11		17.3	0		0		0		0
07/14/09	26		11		18.5	0		0		0		0
07/15/09	23.5		11.5		17.5	0.8		0		0.8		0
07/16/09	28		15.5		21.8	0		0		0		0
07/17/09	22		15.5		18.8	1		0		1		0
07/18/09	23		11.5		17.3	0		0		0		0
07/19/09	23		12.5		17.8	0		0		0		0
07/20/09	24.5		12.5		18.5	0		0		0		0
07/21/09	21		16		18.5	10.2		0		10.2		0
07/22/09												
07/23/09												
07/24/09	26		17		21.5	5.6		0		5.6		0
07/25/09	23		17.9		20.5	26.8		0		26.8		0
07/26/09	23.4		16.5		20	18.6		0		18.6		0
07/27/09	26.5		16		21.3	1		0		1		0
07/28/09	28		19.5		23.8	12		0		12		0
07/29/09	23		17.5		20.3	0.5		0		0.5		0
07/30/09												
07/31/09												
08/01/09	27.5		14		20.8	0		0		0		0
08/02/09	26		18.4		22.2	0		0		0		0
08/03/09	25.5		12.7		19.1	0		0		0		0
08/04/09	28		20.1		24.1	0		0		0		0
08/05/09	25.5		11		18.3	0		0		0		0
08/06/09	25		14.5		19.8	0		0		0		0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
08/07/09	23		13		18	0		0		0		0
08/08/09												
08/09/09												
08/10/09	31		18		24.5	0		0		0		0
08/11/09	27		18.6		22.8	4.2		0		4.2		0
08/12/09	25.9		12.5		19.2	0		0		0		0
08/13/09	28		18		23	0		0		0		0
08/14/09	28.5		17.5		23	0		0		0		0
08/15/09	30.5		19		24.8	0		0		0		0
08/16/09	31		19		25	0		0		0		0
08/17/09												
08/18/09												
08/19/09												
08/20/09												
08/21/09	27.1		20.5		23.8	0.6		0		0.6		0
08/22/09												
08/23/09	23.5		16		19.8	0		0		0		0
08/24/09	25		14		19.5	0		0		0		0
08/25/09	26.5		14		20.3	3.6		0		3.6		0
08/26/09												
08/27/09												
08/28/09	18.8		15.4		17.1	28.4		0		28.4		0
08/29/09	22		16.1		19.1	0.4		0		0.4		0
08/30/09	19.5		14		16.8	0		0		0		0
08/31/09	21.8		10.2		16	0		0		0		0
09/01/09	22		10		16	0		0		0		0
09/02/09	23		11		17	0		0		0		0
09/03/09	24		12.5		18.3	0		0		0		0
09/04/09	26		14		20	0		0		0		0
09/05/09	23.4		13		18.2	0		0		0		0
09/06/09	23		16		19.5	0		0		0		0
09/07/09	23		17		20	0		0		0		0
09/08/09	23.5		17		20.3	0		0		0		0
09/09/09	23		16.5		19.8	0		0		0		0
09/10/09	23		15		19	0		0		0		0
09/11/09	20		14.5		17.3	0		0		0		0
09/12/09	23.8		13		18.4	0		0		0		0
09/13/09	26.6		12.5		19.6	0		0		0		0
09/14/09	26.2		12.7		19.5	0		0		0		0
09/15/09	24		16		20	0		0		0		0
09/16/09	18.8		9.8		14.3	0		0		0		0
09/17/09	20.3		11.5		15.9	0		0		0		0
09/18/09	21.5		9		15.3	0		0		0		0
09/19/09	17		6.5		11.8	0		0		0		0
09/20/09	20		7		13.5	0		0		0		0
09/21/09	22		15		18.5	3		0		3		0
09/22/09	23.9		19.2		21.6	0	T	0		0	T	0
09/23/09	27.5		18.8		23.2	0	T	0		0	Prev. 5 days	0
09/24/09	22		14		18	0		0		0	3	0
09/25/09	15.9		11		13.5	0		0		0		0
09/26/09												
09/27/09	21		14.5		17.8	8.2		0		8.2		0
09/28/09	18.4		12.8		15.6	3.2		0		3.2		0
09/29/09	17		11		14	0.3		0		0.3		0
09/30/09	12.5		6		9.3	0	T	0		0	T	0
10/01/09	13.7		5.6		9.7	0		0		0		0
10/02/09	12.1		6		9.1	14.9		0		14.9		0
10/03/09	17		7		12	3.2		0		3.2		0
10/04/09	14		7		10.5	1.2		0		1.2		0
10/05/09	16		7		11.5	0.3		0		0.3		0
10/06/09	15		5.1		10.1	7.4		0		7.4		0
10/07/09	13.5		9.5		11.5	0		0		0		0
10/08/09	18		5.5		11.8	4.8		0		4.8		0
10/09/09	11.5		9.5		10.5	19.2		0		19.2		0
10/10/09	14.9		6.5		10.7	0		0		0		0
10/11/09	9.7		0.5		5.1	0		0		0		0
10/12/09	6.5		-0.5		3	0.5		0		0.5		0
10/13/09	11.5		4.5		8	0		0		0		0
10/14/09	7.8		0.5		4.2	0		0		0		0
10/15/09	4.2		0.5		2.4	0		0		0		0
10/16/09	6.3		0.5		3.4	0		0		0		0
10/17/09	8		1		4.5	0		0		0		0
10/18/09	10.5		0		5.3	0		0		0		0
10/19/09	15.3		-1.2		7.1	0		0		0		0
10/20/09	18.8		9.1		14	0		0		0		0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
10/21/09	15		10		12.5	1.4		0		1.4		0
10/22/09	17.5		9		13.3	3		0		3		0
10/23/09	12		3.5		7.8	21.1		0		21.1		0
10/24/09	13.5		6.8		10.2	0		0		0		0
10/25/09	14		4		9	0		0		0		0
10/26/09	10.5		5.5		8	0		0		0		0
10/27/09	16.5		7.5		12	1.5		0		1.5		0
10/28/09	11.8		9.5		10.7	1.6		0		1.6		0
10/29/09	11		9.1		10.1	0.2		0		0.2		0
10/30/09	17		8.5		12.8	8.1		0		8.1		0
10/31/09	12.5		10.5		11.5	0		0		0		0
11/01/09	10.5		5		7.8	0		0		0		0
11/02/09	11		0.5		5.8	1.6		0		1.6		0
11/03/09	10		3		6.5	0	T	0		0	T	0
11/04/09	6.5		-1		2.8	4		0		4		0
11/05/09	7		2.5		4.8	0	T	0		0	T	0
11/06/09	10.9		-1		5	0		0		0		0
11/07/09												
11/08/09											Prev. 5 days	
11/09/09	19.5		5.3		12.4	0		0		0	4	0
11/10/09	14		6		10	0		0		0		0
11/11/09	8		1		4.5	0		0		0		0
11/12/09	9.2		1		5.1	0		0		0		0
11/13/09	9.6		0.5		5.1	0		0		0		0
11/14/09	13		5		9	0		0		0		0
11/15/09	11.1		5.5		8.3	0		0		0		0
11/16/09	8.7		1		4.9	0		0		0		0
11/17/09	7.5		0		3.8	0		0		0	Prev. 5 days	0
11/18/09											0	
11/19/09											Prev. 5 days	
11/20/09											0	
11/21/09												
11/22/09	10		5.8		7.9	0		0		0		0
11/23/09	8.9		4.5		6.7	0	T	0		0	T	0
11/24/09												
11/25/09												
11/26/09	9.5		6		7.8	0.9		0		0.9		0
11/27/09	6.5		0.5		3.5	2.5		0		2.5		0
11/28/09												
11/29/09	7.5		-2		2.8	6.6		0		6.6		0
11/30/09	5.5		-3		1.3	0.5		0.5		1		0
12/01/09	8		0.5		4.3	0		0		0		0
12/02/09	10.5		1.5		6	26.2		0		26.2		0
12/03/09	7.3		6.1		6.7	0		0		0		0
12/04/09	4		-0.5		1.8	0		0		0		0
12/05/09												
12/06/09												
12/07/09												
12/08/09												
12/09/09	6.4		0		3.2	10.2		0		12.2		2
12/10/09												
12/11/09												
12/12/09												
12/13/09												
12/14/09												
12/15/09	2		-6		-2	0		0	T	0.6		0
12/16/09	-3		-6.5		-4.8	0		0.5		0.5		0
12/17/09	-4		-11		-7.5	0		0		0	Prev. 5 days	0
12/18/09	-2.5		-7.5		-5	0		0		0	1.1	0
12/19/09												
12/20/09												
12/21/09	-1.4		-4.9		-3.2	0		0		0		0
12/22/09	-4.4		-10.5		-7.5	0		0	T	0	T	0
12/23/09	-3		-11		-7	0		0		0		0
12/24/09	1.5		-7.5		-3	0		0	T	0	T	0
12/25/09	4		-1		1.5	22.6		0		22.6		0
12/26/09	3		1		2	1		0		1		0
12/27/09												
12/28/09												
12/29/09	-6.4		-14.8		-10.6	0		0		0		0
12/30/09	1		-9.1		-4.1	0		0		0		0
12/31/09	3		-3.5		-0.3	0.7		0	T	0.7		0
01/01/10	-1.5		-4		-2.8	0		0.5		0.8		0
01/02/10	-9.5		-16.5		-13	0		0	T	0.5		0
01/03/10	-7		-13		-10	0		4.6		3.1		0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
01/04/10	-6		-12		-9	0		1		0.5		6
01/05/10	-4		-10		-7	0		1		1.6		6
01/06/10	-1.5		-8		-4.8	0		0	T	0	T	7
01/07/10	-1		-4.2		-2.6	0		2.2		1.6		6
01/08/10	-6.3		-10		-8.2	0		0	T	0	T	5
01/09/10	-6		-14.2		-10.1	0		0		0		4
01/10/10	-2.5		-15.5		-9	0		0		0		0
01/11/10	-4		-7.5		-5.8	0		0	T	0	T	2
01/12/10	-3		-8.5		-5.8	0		0		0		3
01/13/10	0.5		-8.5		-4	0		0		0		2
01/14/10	5.5		-6.5		-0.5	0		0		0		2
01/15/10	4.5		-16.5		-6	0		0		0		0
01/16/10	2		0		1	0		0		0		0
01/17/10	2.1		-1.5		0.3	0	T	0		0	T	0
01/18/10	1.6		-1		0.3	0		0		0		0
01/19/10	2		-4.5		-1.3	0		0	T	0	T	0
01/20/10	-1		-6		-3.5	0		0		0	Prev. 5 days	0
01/21/10	0.9		-8		-3.6	0		0		0	0	0
01/22/10	1.5		-1		0.3	0		0		0		0
01/23/10	3		-2.5		0.3	0		0		0		0
01/24/10	4.5		-0.5		2	19.4		0		19.4		0
01/25/10	6		1		3.5	0		0	T	0	T	0
01/26/10	0.6		-0.5		0.1	0		0	T	4.8		0
01/27/10	-3		-4		-3.5	0		0	T	0	T	0
01/28/10	-6		-10.5		-8.3	0		2		2		0
01/29/10	-9.5		-15		-12.3	0		0		0		1
01/30/10	-8		-19.2		-13.6	0		0	T	0	T	0
01/31/10	-2		-15.5		-8.8	0		0	T	0	T	1
02/01/10	-3		-5		-4	0		0		0		0
02/02/10	-2		-9		-5.5	0		0	T	0	T	0
02/03/10	1		-5.5		-2.3	0	T	0	T	0	T	0
02/04/10	0.9		-10		-4.6	0		0		0		0
02/05/10												
02/06/10												
02/07/10	-1.5		-11		-6.3	0		0		0		0
02/08/10	0		-11.3		-5.7	0		0		0		0
02/09/10	-3.5		-6		-4.8	0		4.5		4.5		0
02/10/10	-2		-5		-3.5	0		0	T	1		4
02/11/10	-0.5		-12		-6.3	0		0		0		4
02/12/10	0		-11		-5.5	0		0		0		0
02/13/10	-0.5		-8.1		-4.3	0		0.5		0.5		1
02/14/10	-0.5		-4		-2.3	0		0		0		1
02/15/10	-1		-3		-2	0		0	T	0	T	1
02/16/10	1		-5		-2	0		0	T	0	T	1
02/17/10	1		-4		-1.5	0		0	T	0	T	0
02/18/10	1.8		-3		-0.6	0		0		0		0
02/19/10	4		0		2	0		0		0		0
02/20/10	3		-4.8		-0.9	0		0		0		0
02/21/10	5.5		-6.5		-0.5	0		0		0		0
02/22/10	0.8		-4.5		-1.9	0.7		8.5		9.4		0
02/23/10	1.1		-0.5		0.3	0		0.5		0.5		8
02/24/10	2.5		-6		-1.8	0		0	T	0.2		9
02/25/10	-3.8		-5.5		-4.7	0		5		5		4
02/26/10	1		-7		-3	0		6		5		9
02/27/10	3		0.5		1.8	0		2.5		3.9		13
02/28/10	5		0.5		2.8	0	T	0	T	0	T	10
03/01/10	4.5		0		2.3	0		0		0		8
03/02/10	4		-2.5		0.8	0		0		0		4
03/03/10	4.8		-2		1.4	0		0		0		0
03/04/10	4.1		-3		0.6	0		0		0		0
03/05/10	4.5		-3		0.8	0		0		0		0
03/06/10	9		-4		2.5	0		0		0		0
03/07/10	11.5		-1		5.3	0		0		0		0
03/08/10	14.4		1		7.7	0		0		0		0
03/09/10	13.4		0.8		7.1	0		0		0		0
03/10/10	7		-1		3	0		0		0		0
03/11/10	9.2		4		6.6	0.4		0		0.4		0
03/12/10	6.1		4		5.1	28.2		0		28.2		0
03/13/10	5.1		4		4.6	34.1		0		34.1		0
03/14/10	6		2		4	3.4		0		3.4		0
03/15/10	11.5		2.5		7	0	T	0		0	T	0
03/16/10	15.5		1.5		8.5	0		0		0		0
03/17/10	18.5		3.5		11	0		0		0		0
03/18/10	19.2		3.5		11.4	0		0		0		0
03/19/10	19.2		3.5		11.4	0		0		0		0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
03/20/10	4.5		2.5		3.5	0		0		0		0
03/21/10	5.4		0.5		3	0		0		0		0
03/22/10	6.1		1.1		3.6	5.7		0		5.7		0
03/23/10	5		3		4	0.5		0		0.5		0
03/24/10	15.5		-1		7.3	0		0		0		0
03/25/10	10		2.5		6.3	0		0		0		0
03/26/10	1		-6		-2.5	0		0		0		0
03/27/10	5.5		-6.5		-0.5	0		0		0		0
03/28/10												
03/29/10												
03/30/10	13		-0.4		6.3	0		0		0		0
03/31/10	15		0.6		7.8	0		0		0		0
04/01/10	15.5		4.5		10	0		0		0		0
04/02/10	27		7		17	0		0		0		0
04/03/10	21		8.5		14.8	0		0		0		0
04/04/10	19		7		13	0.3		0		0.3		0
04/05/10	23.5		8		15.8	9.5		0		9.5		0
04/06/10	16		8		12	2		0		2		0
04/07/10	17		8		12.5	25		0		25		0
04/08/10	12		7		9.5	4.8		0	T	4.8		0
04/09/10	4.1		1.5		2.8	0		0		0		0
04/10/10	13.5		-3		5.3	0		0		0		0
04/11/10	18		4		11	0		0		0		0
04/12/10	14		3		8.5	0		0		0	Prev. 5 days	0
04/13/10	14.5		6.5		10.5	0		0		0	4.8	0
04/14/10	16.5		3		9.8	0		0		0		0
04/15/10	19.5		6.5		13	0		0		0		0
04/16/10	22		8		15	0	T	0		0	T	0
04/17/10												
04/18/10	15		3		9	0		0		0		0
04/19/10	17		5		11	0		0		0		0
04/20/10	18		3		10.5	0		0		0		0
04/21/10	21		5		13	0	T	0		0	T	0
04/22/10	12.5		3.2		7.9	0		0		0		0
04/23/10	14.5		2.5		8.5	0		0		0		0
04/24/10	15.5		4.5		10	0		0		0		0
04/25/10	12		7		9.5	6.8		0		6.8		0
04/26/10	17		7.5		12.3	0		0		0		0
04/27/10	10.5		3.5		7	0		0		0		0
04/28/10	14.5		2.5		8.5	0		0		0		0
04/29/10	20.5		3.5		12	0		0		0		0
04/30/10	18.5		12.5		15.5	0		0		0		0
05/01/10	24		9		16.5	2.4		0		2.4		0
05/02/10	25.5		14.5		20	2.2		0		2.2		0
05/03/10	24.5		15.5		20	0		0		0		0
05/04/10	22		13		17.5	0		0		0		0
05/05/10												
05/06/10	15.5		11.5		13.5	0		0		0		0
05/07/10	12.5		5.5		9	24.6		0		24.6		0
05/08/10	13		5.5		9.3	0.4		0		0.4		0
05/09/10	10.5		1.5		6	0		0		0		0
05/10/10	14.5		1		7.8	0		0		0		0
05/11/10	9		2		5.5	4		0		4		0
05/12/10	11		4.5		7.8	0		0		0		0
05/13/10												
05/14/10	21.8		5.8		13.8	0		0		0		0
05/15/10												
05/16/10	21		7.5		14.3	0		0		0		0
05/17/10	18		9		13.5	0		0		0		0
05/18/10	19		12.2		15.6	0		0		0		0
05/19/10	26		8.5		17.3	0		0		0		0
05/20/10	28		12.5		20.3	0		0		0		0
05/21/10	21		14		17.5	0		0		0		0
05/22/10	19		14.5		16.8	2.3		0		2.3		0
05/23/10	24		13		18.5	0		0		0		0
05/24/10	26.3		13.9		20.1	0		0		0		0
05/25/10	29		14.5		21.8	0		0		0		0
05/26/10	31.5		18		24.8	0		0		0		0
05/27/10	31.5		16		23.8	1		0		1		0
05/28/10	25		18.5		21.8	0		0		0		0
05/29/10	28		16		22	0		0		0		0
05/30/10	29.5		14		21.8	0		0		0		0
05/31/10	24.5		16.5		20.5	14.4		0		14.4		0
06/01/10	27.9		18.5		23.2	0		0		0		0
06/02/10	26.5		14.9		20.7	27		0		27		0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
06/03/10	21		16		18.5	5.4		0		5.4		0
06/04/10	23		15.5		19.3	12.6		0		12.6		0
06/05/10	26		16		21	30.2		0		30.2		0
06/06/10	19.5		11.5		15.5	0		0		0		0
06/07/10	20.2		11		15.6	0		0		0		0
06/08/10												
06/09/10												
06/10/10												
06/11/10	23.5		12.5		18	0		0		0		0
06/12/10	19		15		17	1.2		0		1.2		0
06/13/10	20.5		15.5		18	0.2		0		0.2		0
06/14/10	26.5		17.5		22	0		0		0		0
06/15/10	22.5		15		18.8	4		0		4		0
06/16/10	26.5		14.5		20.5	0	T	0		0	T	0
06/17/10	26		13.5		19.8	0		0		0		0
06/18/10	27		14		20.5	0		0		0		0
06/19/10	29.6		19.5		24.6	0		0		0		0
06/20/10	28.9		18		23.5	0		0		0		0
06/21/10	28		17		22.5	3		0		3		0
06/22/10	25.5		18.5		22	10.5		0		10.5		0
06/23/10	29.5		18		23.8	0.6		0		0.6		0
06/24/10	27.5		21		24.3	0		0		0		0
06/25/10	26		14		20	0		0		0		0
06/26/10	23		17.5		20.3	9.6		0		9.6		0
06/27/10	24.5		17.5		21	20.3		0		20.3		0
06/28/10	29.5		18		23.8	2.8		0		2.8		0
06/29/10	20.5		13.2		16.9	0		0		0		0
06/30/10												
07/01/10	23.5		9.5		16.5	0		0		0		0
07/02/10	25		11		18	0		0		0		0
07/03/10	30		13.5		21.8	0		0		0		0
07/04/10	32.1		17.5		24.8	0		0		0		0
07/05/10	35		22		28.5	0		0		0		0
07/06/10	34		23		28.5	0		0		0		0
07/07/10	33		22		27.5	0	T	0		0	T	0
07/08/10												
07/09/10	25.5		21.5		23.5	12.7		0		12.7		0
07/10/10	29		16		22.5	0		0		0		0
07/11/10	28		16		22	2.6		0		2.6		0
07/12/10												
07/13/10	28		20.5		24.3	0		0		0		0
07/14/10	27		21		24	0		0		0		0
07/15/10	30.5		18.5		24.5	0.3		0		0.3		0
07/16/10	30.5		21.6		26.1	0		0		0		0
07/17/10	30.5		22.5		26.5	5.8		0		5.8		0
07/18/10	28		15.5		21.8	4		0		4		0
07/19/10	28.5		21		24.8	0		0		0		0
07/20/10	27		17.5		22.3	0		0		0		0
07/21/10	30.5		18		24.3	0		0		0		0
07/22/10	29.5		17.5		23.5	37		0		37		0
07/23/10	30		18.5		24.3	0		0		0		0
07/24/10	28.5		23		25.8	34.3		0		34.3		0
07/25/10												
07/26/10												
07/27/10												
07/28/10	31		18		24.5	1.2		0		1.2		0
07/29/10	26		16		21	0		0		0		0
07/30/10	23		14.9		19	0		0		0		0
07/31/10	23.5		15		19.3	1		0		1		0
08/01/10												
08/02/10												
08/03/10	31.5		20		25.8	0		0		0		0
08/04/10	31.5		21		26.3	0		0		0	Prev. 5 days	0
08/05/10	31		22		26.5	0		0		0	1	0
08/06/10	23.5		17		20.3	0		0		0		0
08/07/10	23		10.5		16.8	0		0		0		0
08/08/10	27		18		22.5	0		0		0		0
08/09/10	28		21		24.5	4		0		4		0
08/10/10	31		21		26	0		0		0		0
08/11/10												
08/12/10	24.5		22.3		23.4	0		0		0		0
08/13/10	26		19.5		22.8	0		0		0		0
08/14/10	25		19.5		22.3	0		0		0		0
08/15/10	32.4		23		27.7	0		0		0		0
08/16/10	26.5		18.5		22.5	0		0		0		0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
08/17/10	27		16		21.5	0		0		0		0
08/18/10												
08/19/10	29.5		16		22.8	0		0		0		0
08/20/10	22		15		18.5	0		0		0		0
08/21/10	21.9		19.5		20.7	0		0		0		0
08/22/10	21.5		19.5		20.5	0		0		0		0
08/23/10	19.5		18.5		19	0	T	0		0	T	0
08/24/10	22		16.7		19.4	0		0		0		0
08/25/10	25		15		20	0		0		0		0
08/26/10	23		13		18	0		0		0		0
08/27/10	25		10.5		17.8	0		0		0		0
08/28/10	29.5		13.5		21.5	0		0		0		0
08/29/10												
08/30/10												
08/31/10												
09/01/10	33		21		27	0		0		0		0
09/02/10												
09/03/10												
09/04/10	17		12		14.5	1.4		0		1.4		0
09/05/10	19.5		10		14.8	0	T	0		0	T	0
09/06/10	23		11		17	0	T	0		0	T	0
09/07/10	30.5		16		23.3	0		0		0		0
09/08/10	19.5		14.7		17.1	0	T	0		0	T	0
09/09/10												
09/10/10	20		13		16.5	0		0		0		0
09/11/10	16		9.5		12.8	5.2		0		5.2		0
09/12/10	22.3		13.5		17.9	4.6		0		4.6		0
09/13/10	24.5		12		18.3	0		0		0		0
09/14/10	21		9.5		15.3	0		0		0		0
09/15/10	19		8.5		13.8	0	T	0		0	T	0
09/16/10	14.5		11.5		13	34.2		0		34.2		0
09/17/10	16		9.5		12.8	0		0		0		0
09/18/10	22		10		16	0		0		0		0
09/19/10	18		10		14	0		0		0		0
09/20/10	17.5		8.5		13	0		0		0		0
09/21/10	26.5		9.5		18	0		0		0		0
09/22/10	23		17.5		20.3	0		0		0		0
09/23/10	25.5		10		17.8	0		0		0		0
09/24/10	23.5		15.5		19.5	0		0		0		0
09/25/10	17.4		10		13.7	0		0		0		0
09/26/10	15.3		6		10.7	0		0		0		0
09/27/10	15		9.6		12.3	10.2		0		10.2		0
09/28/10	18.5		13		15.8	26		0		26		0
09/29/10	19.7		10		14.9	0		0		0		0
09/30/10	18.1		11.5		14.8	0	T	0		0	T	0
10/01/10	17		10		13.5	0	T	0		0	T	0
10/02/10	11.5		6		8.8	2.2		0		2.2		0
10/03/10	11.5		6.2		8.9	0		0		0		0
10/04/10	12.2		4.5		8.4	4.6		0		4.6		0
10/05/10	13.8		6.3		10.1	18.7		0		18.7		0
10/06/10	17		8.5		12.8	0	T	0		0	T	0
10/07/10	20.5		9.2		14.9	0		0		0		0
10/08/10	24		7.5		15.8	0		0		0		0
10/09/10	16		11		13.5	0		0		0		0
10/10/10	23		3.5		13.3	0		0		0		0
10/11/10	13.6		12.5		13.1	0.2		0		0.2		0
10/12/10	13.8		6		9.9	0		0		0		0
10/13/10												
10/14/10												
10/15/10												
10/16/10	16		4.4		10.2	0		0		0	T	0
10/17/10	10.5		7.5		9	0		0		0		0
10/18/10	11		4.5		7.8	0		0		0	Prev. 5 days	0
10/19/10	15		3		9	0		0		0	0	0
10/20/10	17		4		10.5	3.5		0		3.5		0
10/21/10	10		5.5		7.8	0.4		0		0.4		0
10/22/10	11		0.6		5.8	0	T	0		0	T	0
10/23/10	13.8		3.5		8.7	15.7		0		15.7		0
10/24/10	11.2		8		9.6	1.7		0		1.7		0
10/25/10	21.1		7.9		14.5	6.2		0		6.2		0
10/26/10	20.8		12.3		16.6	7		0		7		0
10/27/10	19.3		11		15.2	0		0		0		0
10/28/10	12.5		10		11.3	0		0		0		0
10/29/10	9.5		4.5		7	0		0		0		0
10/30/10	14		3.5		8.8	0		0		0		0

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
10/31/10	7		1.5		4.3	0		0		0		0
11/01/10	7.5		-2.5		2.5	0		0		0		0
11/02/10	7.4		-1		3.2	0		0		0		0
11/03/10	10.5		-1		4.8	1.2		0		1.2		0
11/04/10	4.5		4		4.3	0.8		0		0.8		0
11/05/10	5		-1		2	0.8		0		0.8		0
11/06/10	6		-0.5		2.8	0		0		0		0
11/07/10	10.2		0		5.1	0		0		0		0
11/08/10	11		0.2		5.6	0		0		0		0
11/09/10	-3		1		-1	0		0	T	0	T	0
11/10/10	9.7		-10		-0.2	0		0		0		0
11/11/10	8.5		1.6		5.1	0		0		0		0
11/12/10	10.5		0		5.3	0		0		0		0
11/13/10	10.5		-1		4.8	1.2		0		1.2		0
11/14/10	10.7		6.5		8.6	1.4		0		1.4		0
11/15/10	12		0.5		6.3	0		0		0		0
11/16/10	10		1.5		5.8	38		0		38		0
11/17/10	9		6		7.5	0	T	0		0	T	0
11/18/10	8.4		2		5.2	0		0		0		0
11/19/10	6.9		-1.4		2.8	0		0		0		0
11/20/10	7		1.8		4.4	0		0		0		0
11/21/10	13		0.5		6.8	1.6		0		1.6		0
11/22/10	16.1		2		9.1	9.1		0		9.1		0
11/23/10	14		12		13	0	T	0		0	T	0
11/24/10	4		-0.5		1.8	0		0		0		0
11/25/10	7		-0.2		3.4	8		0	T	8		0
11/26/10												
11/27/10												
11/28/10	3.5		-1.3		1.1	0		0		0		0
11/29/10	12.5		-2.3		5.1	9.4		0		9.4		0
11/30/10												
12/01/10												
12/02/10												
12/03/10	3		-3		0	0		0		0		0
12/04/10	-0.8		-5		-2.9	0		2		2		0
12/05/10	0.6		-7.5		-3.5	0		0		0		2
12/06/10	0.6		-5.2		-2.3	0		0	T	0	T	0
12/07/10	-1		-5.2		-3.1	0		0		0		0
12/08/10	-2.5		-8.3		-5.4	0		0		0		0
12/09/10	0		-13		-6.5	0		0		0		0
12/10/10	2.5		-6		-1.8	0	T	0		0	T	0
12/11/10	3.5		-5		-0.8	6		0		6		0
12/12/10	3		1.5		2.3	10		4		26.4		0
12/13/10	-10		-12.5		-11.3	0		1		16.4		4
12/14/10	-6		-12.5		-9.3	0		0	T	0	T	6
12/15/10	-3.4		-11		-7.2	0		0		0		4
12/16/10	-1.6		-8.4		-5	0		0	T	0	T	2
12/17/10	0		-6.5		-3.3	0		0		0	T	2
12/18/10	-5		-8		-6.5	0		0	T	0	T	1
12/19/10	-2.5		-6		-4.3	0		0		0		1
12/20/10	0		-5.5		-2.8	0		0	T	0	T	1
12/21/10	-2		-9.5		-5.8	0		0	T	0	T	1
12/22/10	-2		-7		-4.5	0		0	T	0	T	1
12/23/10	-1		-6		-3.5	0		0	T	0	T	0
12/24/10	-1.8		-5		-3.4	0		0		0		0
12/25/10	-5		-7.2		-6.1	0		0		0		0
12/26/10	-5		-7.5		-6.3	0		0		0	T	0
12/27/10	-1.5		-10		-5.8	0		0		0		0
12/28/10	-0.5		-7		-3.8	0		0		0		0
12/29/10	-1		-5		-3	0		0		0		0
12/30/10	7		-7		0	0	T	0		0	T	0
12/31/10	11		-3.5		3.8	3.8		0		3.8		0
01/01/11	11.8		5.5		8.7	4		0	T	4		0
01/02/11	-4.1		-3.8		-4	0		0		0		0
01/03/11	1		-6.8		-2.9	0		1		1		0
01/04/11	1.6		-5.5		-2	0		0		0		1
01/05/11	-1		-5.5		-3.3	0		0		0		0
01/06/11	-2.5		-9		-5.8	0		0		0		0
01/07/11	-4.5		-9.5		-7	0		9		6.7		5
01/08/11	-5		-8		-6.5	0		6		4.8		14
01/09/11	-4		-13.5		-8.8	0		0		0		14
01/10/11	-2.3		-13		-7.7	0		0		0		12
01/11/11	-5.1		-9		-7.1	0		6.4		6.4		12
01/12/11	-6.7		-9.6		-8.2	0		0		0		18
01/13/11	-5		-12		-8.5	0		0	T	0	T	18

Oakville Town Daily Weather Data

Station Name	OAKVILLE TWN	Legend			
Province	ONTARIO	[Empty]	No Data Available	F	Accumulated and Estimated
Latitude	43.51	M	Missing	N	Temperature Missing but Known to be > 0
Longitude	-79.69	E	Estimated	Y	Temperature Missing but Known to be < 0
Elevation	168	A	Accumulated	S	More Than One Occurrence
Climate Identifier	6155750	C	Precipitation Occurred; Amount Uncertain	T	Trace
Date of Site Visits		L	Precipitation May or May Not Have Occurred	*	Data for this day has undergone only preliminary quality checking.

Date	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)
01/14/11	-1.5		-9.5		-5.5	0		6		6		18
01/15/11	-1		-10		-5.5	0		0		0		23
01/16/11	-9		-10		-9.5	0		6		1.5		18
01/17/11	1.5		-21.5		-10	0		0		0		24
01/18/11	2.2		-13.5		-5.7	2		0	T	2		20
01/19/11	-6.5		-7		-6.8	0		0	T	0	T	17
01/20/11	-5		-14.5		-9.8	0		2.8		2.8		14
01/21/11	-6.3		-11.3		-8.8	0		0		0		16
01/22/11	-9		-16.4		-12.7	0		0		1		16
01/23/11	-14		-18.5		-16.3	0		0	T	0	T	17
01/24/11	-1.6		-20		-10.8	0		6		3.8		17
01/25/11	-0.5		-19.4		-10	0	T	0		0	T	19
01/26/11	0		-2.5		-1.3	0		0		0		17
01/27/11	0		-6		-3	0		0	T	0	T	17
01/28/11	-1.2		-5.5		-3.4	0		0	T	0	T	17
01/29/11	-3.7		-8		-5.9	0		0		0		17
01/30/11	-3		-9.8		-6.4	0		0		0		17
01/31/11	-10.5		-17.3		-13.9	0		0		0		16
02/01/11	-6.5		-14		-10.3	0		8.4		8.4		16
02/02/11	-8		-11		-9.5	0		0		0		27
02/03/11	-3.5		-16		-9.8	0		0		0		24
02/04/11	-3		-10.5		-6.8	0		0		0		17
02/05/11	-0.5		-9		-4.8	0		7		5.5		17
02/06/11	1		-4.5		-1.8	0		1		8		24
02/07/11	1.5		-2		-0.3	0		0	T	0	T	25
02/08/11	-8.5		-13.5		-11	0		0		0		26
02/09/11	-5.5		-14		-9.8	0		0		0		25
02/10/11	-8		-17		-12.5	0		0		25		25
02/11/11	-3		-18		-10.5	0		1.8		18		0
02/12/11	0.5		-13.1		-6.3	0		0.5		0.6		24
02/13/11	7		-7.5		-0.3	0		0		0		24
02/14/11	4.5		0.5		2.5	0		0		0		15
02/15/11	-1		-13		-7	0		0		0		10
02/16/11	5.5		-9.5		-2	2		0		2	**Prev. 5 days**	12
02/17/11	**11.2**		-1.8		4.7	0		0		0	**2.6**	12
02/18/11	**10**		2.5		6.3	0		0.8		0		0
02/19/11	-1		-6		-3.5	0		0		0		1
02/20/11		M	-10									0

Appendix 5.0

5.1 Field Work Chronology
5.2 Wildlife
5.3 Vascular Plant List
5.4 Core #1 and Linkage to Core #2 / Vegetation Community Mapping (Modified from NOCSS)
5.5 ELC Field Data Sheets
5.6 Water Temperature Monitoring Data
5.7 Field Survey Collection Sheets
5.8 Selected Agency Communications
5.9 Technical Memorandum NH#1 – Reach 14W-14A Aquatic Habitat

Appendix 5.1 – Field Work Chronology and Staff List

Appendix 5.1 – Field Work Chronology

Table 5.1.1 Summary of Environmental Fieldwork (Chronology)

Year	Date	Staff	Level of Effort	Task Description
2002	July 31	MC	-	Fish Community Sampling (on-site)
2002	September 25	MC	-	Fish Community Sampling / On-site & Zenon pond
2005	June 6	BD	-	Breeding Amphibian Survey
2005	June 7	BD	-	Breeding Amphibian Survey
2005	July 7	BD	4.0	Breeding Bird Survey
2005	July 12	BD	4.0	Breeding Bird Survey
2009	May 12	SR JS	8.0	Water Quality Monitoring/ Temperature Logger Installation/ Benthic Macroinvertebrate Sampling/Channel Morphology Mapping
2009	May 28	SR	2.5	Water Quality Monitoring / Temperature Logger Download
2009	June 11	SR	2.5	Water Quality Monitoring / Temperature Logger Download
2009	June 28	SR	2.5	Water Quality Monitoring / Temperature Logger Download
2009	July 8	SR AS	7.5	Water Quality Monitoring / Temperature Logger Download / Fish Community Sampling
2009	July 30	SR	2.5	Water Quality Monitoring / Temperature Logger Download
2009	August 18	SD	2.0	Field review of off-site portions of subcatchments – partially completed
2009	August 20	SD	7.0	Field review on-site – (south and west portions of site)
2009	August 21	SD	4.0	Field review on-site – (north and east portions of site)
2009	August 28	SR	6.0	Water Quality Monitoring / Temperature Logger Download / Off-site Fish Habitat review
2009	September 10	SR	2.5	Water Quality Monitoring / Temperature Logger Download

Year	Date	Staff	Level of Effort	Task Description
2009	September 11	SD	4.5	Complete Offsite portions of subcatchments mapping
2009	September 30	SR	2.5	Water Quality Monitoring / Temperature Logger Download
2009	October 19	SR	4.5	Water Quality Monitoring / Temperature Logger Download / On-Site Fish Habitat Review
2009	October 30	SR	4.5	Water Quality Monitoring / Temperature Logger Download / On-site overview characterization
2010	April 21	DG	3.0	Breeding Amphibian Survey
2010	April 22	SD	4.5	Spring vegetation Surveys, focus on forested units
2010	June 7	AW DG	3.0	Breeding Amphibian Survey
2010	June 25	DG	3.0	Breeding Amphibian Survey
2010	July 13	SD	6.0	Wetland/dripline flagging and summer vegetation surveys/incidental wildlife observations.
2010	July 14	SD	6.0	Wetland/dripline flagging and summer vegetation surveys/incidental wildlife observations.
2010	December 10	SR JS	4.5	Watercourse profile / Cross section measurements in 14W-12, 12A, 13 and 14
2011	May 31	JH	4.0	Breeding bird survey and Bobolink Habitat evaluation; Incidental wildlife documentation
2011	July 4	SR AS	4.0	Installation of Temperature loggers (14W-14A); water quality sampling; Secchi depth measurements
2011	July 27	SD		Wetland staking
2011	August 4	MC RR	-	Site condition/stream survey to note flow regime (14W-12); Photo record
2011	August 19	SR	2.5	Water Quality sampling (14W-14A); Secchi Depth measurements; Temperature Logger data retrieval; Habitat mapping (14W-14A)
2011	August 24	SR	2.5	Water Quality sampling (14W-14A); Secchi Depth measurements; Temperature Logger data retrieval
2011	October 6/7	SR	24	Fish Community Sampling (minnow & pot traps) in 14W-14A

Year	Date	Staff	Level of Effort	Task Description
2011	October 7	SR	3.0	Water Quality sampling (14W-14A); Secchi Depth measurements; Temperature Logger data retrieval
2012	June 8	TP	3.0	Bobolink and Eastern Meadowlark Point Count Survey #1
2012	June 20	TP	2.5	Bobolink and Eastern Meadowlark Point Count Survey #2
2012	July 3	TP	2.5	Bobolink and Eastern Meadowlark Point Count Survey #3
2013	May 31	PM	2.5	Bobolink and Eastern Meadowlark Point Count Survey #1
2013	June 11	PM	2.5	Bobolink and Eastern Meadowlark Point Count Survey #2
2013	July 4	PM	2.5	Bobolink and Eastern Meadowlark Point Count Survey #3
2015	June 4	TP	4.0	Bat Exit Surveys
2015	June 11	TP	4.0	Bat Exit Surveys
2015	June 16	TP	4.0	Bat Exit Surveys
2015	July 13	TP	4.0	Bat Exit Surveys
2016	November 18	AS	3.0	Flow Regime Observations
2017	April 4	AS	4.0	Flow Regime Observations
2017	May 10	AS	2.0	Flow Regime Observations

Table 5.1.2 Environmental Technical Staff List

MMM Environmental Technical Staff	Title
Mark Cece, B.Sc.	Senior Fisheries Biologist & Ecology Manager
Sonia Rankin, B.Sc.	Aquatic Biologist
Alex Stettler, B.Sc.	Aquatic Biologist (Fisheries)
Joel Smith, B.Sc.	Aquatic Biologist (Benthics)
Bill Draper, M.Sc.	Senior Ecologist (Botany)
Steven Dinka, M.Sc.	Ecologist (Botany)
Teresa Piraino H.B.A.	Ecologist (Birds, Wildlife, Reptiles, Amphibians)
Prachi Patel, B.Sc.	Biologist (Botany)
Patricia Mohr, B.Sc.	Ecologist (Birds, Wildlife)

Appendix 5.2 – Wildlife

Appendix 5.2 – Wildlife

Table 5.2.1. Avifauna Observed 2005, 2009, 2010, 2011 and 2012

Common Name	Scientific Name	GRANK[1]	SRANK[2]	COSEWIC[3]	MNR[4]	SARA Status[5]	Schedule[5]	Halton Region (1993)[6]	MNR Area Sensitive[7]	Habitat Use[8]	NHIC Tracked	BB1	BB2	BB3	BB4	BB5	BB6	BB7	Incidental Observations
Alder Flycatcher	*Empidonax alnorum*	G5	S5B,SZN							E	N								X
American Crow	*Corvus brachyrhynchos*	G5	S5B,SZN							E	N								X
American Goldfinch	*Spinus tristis*	G5	S5B,SZN							E	N		X				X	X	X
American Robin	*Turdus migratorius*	G5	S5B,SZN							E	N		X		X	X	X		X
American Woodcock	*Scolopax minor*	G5	S5B,SZN							E	N								X
Baltimore Oriole	*Icterus galbula*	G5	S5B,SZN							E	N			X					X
Barn Swallow	*Hirundo rustica*	G5	S5B,SZN	THR	THR	No Status	No Schedule				N	X	X	X					X
Black-capped Chickadee	*Poecile atricapillus*	G5	S5							I/E	N							X	X
Black-crowned Night-heron	*Nycticorax nycticorax*	G5	S3B,SZN					U		S/B M/F	Y								X
Blue Jay	*Cyanocitta cristata*	G5	S5							I/E	N		X	X	X				X
Blue-winged Teal	*Anas discors*	G5	S5B,SZN					U		M/F	N								X

Common Name	Scientific Name	GRANK[1]	SRANK[2]	COSEWIC[3]	MNR[4]	SARA Status[5]	Schedule[5]	Halton Region (1993)[6]	MNR Area Sensitive[7]	Habitat Use[8]	NHIC Tracked	BB1	BB2	BB3	BB4	BB5	BB6	BB7	Incidental Observations
Bobolink	*Dolichonyx oryzivorus*	G5	S4B,SZN	THR	THR	No Status	No schedule			E	N							X	X
Brown-headed Cowbird	*Molothrus ater*	G5	S5B,SZN							E	N				X				X
Canada Goose	*Branta canadensis*	G5	S5B,SZN					I		M/F	N	FY							X
Common Grackle	*Quiscalus quiscula*	G5	S5B,SZN							E	N								X
Common Yellowthroat	*Geothlypis trichas*	G5	S5B,SZN							I/E	N			X					X
Downy Woodpecker	*Picoides pubescens*	G5	S5							I/E	N								X
Eastern Kingbird	*Tyrannus tyrannus*	G5	S5B,SZN							E	N							X	X
Eastern Towhee	*Pipilo erythrophthalmus*	G5	S4B,SZN					U		I/E	N								X
European Starling	*Sturnus vulgaris*	G5	SE					I		E	N		X	X					X
Field Sparrow	*Spizella pusilla*	G5	S5B,SZN							E	N		X			X			X
Gadwall	*Anas strepera*	G5	S4B,SZN					U		M/F	N	FY							
Gray Catbird	*Dumetella carolinensis*	G5	S5B,SZN							I/E	N								X
Great Blue Heron	*Ardea herodias*	G5	S5B,SZN							S/B M/F	N							X	X

Common Name	Scientific Name	GRANK[1]	SRANK[2]	COSEWIC[3]	MNR[4]	SARA Status[5]	Schedule[5]	Halton Region (1993)[6]	MNR Area Sensitive[7]	Habitat Use[8]	NHIC Tracked	BB1	BB2	BB3	BB4	BB5	BB6	BB7	Incidental Observations
Herring Gull	*Larus argentatus*	G5	S5B,SZN								N								X
Horned Lark	*Eremophila alpestris*	G5	S5B,SZN					U			N							X	X
House Sparrow	*Passer domesticus*	G5	SE					I		E	N								X
Indigo Bunting	*Passerina cyanea*	G5	S5B,SZN							E	N					X			X
Killdeer	*Charadrius vociferus*	G5	S5B,SZN								N		X					X	X
Mallard	*Anas platyrhynchos*	G5	S5B,SZN							S/B M/F	N	X							X
Mourning Dove	*Zenaida macroura*	G5	S5B,SZN							E	N	X	X					X	X
Northern Harrier	*Circus cyaneus*	G5	S4B,SZN	NAR	NAR			U	X	M/F	N								X
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	G5	S5B,SZN					U		M/F	N	X	X				X		X
Red-tailed Hawk	*Buteo jamaicensis*	G5	S5B,SZN	NAR	NAR					E	N								X
Red-winged Blackbird	*Agelaius phoeniceus*	G5	S5B,SZN							E	N	X	X	X	X		X	X	X
Ring-billed Gull	*Larus delawarensis*	G5	S5B,SZN								N		X	X					
Rock Dove	*Columba livia*	G5	SE					I			N							X	X
Savannah	*Passerculus*	G5	S5B,SZN						X		N	X	X				X	X	X

Common Name	Scientific Name	GRANK[1]	SRANK[2]	COSEWIC[3]	MNR[4]	SARA Status[5]	Schedule[5]	Halton Region (1993)[6]	MNR Area Sensitive[7]	Habitat Use[8]	NHIC Tracked	BB1	BB2	BB3	BB4	BB5	BB6	BB7	Incidental Observations
Sparrow	*sandwichensis*																		
Song Sparrow	*Melospiza melodia*	G5	S5B,SZN							E	N	X	X	X	X	X	X	X	X
Spotted Sandpiper	*Actitis macularia*	G5	S5B,SZN								N							X	X
Tree Swallow	*Tachycineta bicolor*	G5	S5B,SZN							E	N	X							X
Willow Flycatcher	*Empidonax traillii*	G5	S5B,SZN					U			N							X	
Wilson's Snipe	*Gallinago delicata*	G5	S5B,SZN					U			N								X
Yellow Warbler	*Dendroica petechia*	G5	S5B,SZN							E	N		X	X					X
Total No. of Species:	***44***											**10**	**14**	**9**	**5**	**4**	**6**	**14**	**38**

COSEWIC		***SARA* Schedule**		**Habitat Use**	
THR	2	No Schedule	2	Interior	0
				Interior/Edge	6
MNR		**Halton Region**			
THR	2	U=Uncommon (15-35 stations)	9		
		I=Introduced Species	4		
SARA Status					
No Status	2	**MNR Area Sensitive**	2		

Table 5.2.2 – Anuran Survey Results 2010

Survey #	Date	Station	Observations		
			Spp.	Call Code	Count
1	Apr-21-2010 (20:25-22:00)	1	No Observations		
		2	No Observations		
		3	No Observations		
		4	No Observations		
		5	No Observations		
		6	AMTO	2	4
		7	NLFR	1	1
		8	Not Surveyed		
2	June -7-2010 (21:02-23:00)	1	No Observations		
		2	No Observations		
		3	No Observations		
		4	No Observations		
		5	No Observations		
		6	No Observations		
		7	GRFR	2	4
			GRTR	1	2
		8	GRTR	1	2
3	Jun-25-2010 (20:55-22:05)	1	No Observations		
		2	No Observations		
		3	No Observations		
		4	No Observations		
		5	No Observations		
		6	No Observations		
		7	GRFR	2	5
		8	Not Surveyed		

Table 5.2.3 – Bat Exit Survey Results 2015

Survey #	Building #	Date	# of Exiting Bats	# *Myotis spp.*	# Non *Myotis spp.*	# Unknown HiF	# No Recording
1	Building 1	June 4, 2015	8	2	3	2	1
2	Building 1	July 13, 2015	12	0	11	0	1
1	Building 3	June 11, 2015	1	0	1	0	0
2	Building 3	July 13, 2015	1	0	1	0	0

Legend

[1]G-Rank (global)
Global ranks are assigned by a consensus of the network of Conservation Data Centres (CDCs), scientific experts, and the Nature Conservancy to designate a rarity rank based on the range-wide status of a species, subspecies, or variety.

- G1 Extremely rare - usually 5 or fewer occurrences in the overall range or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.
- G2 Very rare - usually between 5 and 20 occurrences in the overall range or with many individuals in fewer occurrences; or because of some factor(s) making it vulnerable to extinction.
- G3 Rare to uncommon - usually between 20 and 100 occurrences; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances.
- G4 Common - usually more than 100 occurrences; usually not susceptible to immediate threats.
- G5 Very common - demonstrably secure under present conditions.

[2]S-Ranks (provincial)
Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are not legal designations. Provincial ranks are assigned in a manner similar to that described for global ranks, but consider only those factors within the political boundaries of Ontario.

- S1 Critically Imperiled - Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
- S2 Imperiled - Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
- S3 Vulnerable - Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4 Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5 Secure - Common, widespread, and abundant in the nation or state/province.
- S#S# Range Rank - A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
- SAN Non-breeding accidental.
- SE Exotic - not believed to be a native component of Ontario's fauna.
- SZN Non-breeding migrants/vagrants.
- SZB Breeding migrants/vagrants.

[3]COSEWIC (Committee on the Status of Endangered Wildlife in Canada)
(federal status from COSEWIC NOVEMBER 2010)

- EXT Extinct - A species that no longer exists.
- EXP Extirpated - A species no longer existing in the wild in Canada, but occurring elsewhere.
- END Endangered - A species facing imminent extirpation or extinction.
- THR Threatened - A species likely to become endangered if limiting factors are not reversed.

- SC Special Concern (formerly vulnerable) - A species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
- NAR Not At Risk - A species that has been evaluated and found to be not at risk of extinction given the current circumstances.
- DD Data Deficient (formerly Indeterminate) - Available information is insufficient to resolve a species' eligibility for assessment or to permit an assessment of the species' risk of extinction.

[4]OMNR (Ontario Ministry of Natural Resources)
(provincial status from MNR September 29 2010)
The provincial review process is implemented by the MNR's Committee on the Status of Species at Risk in Ontario (COSSARO).

- EXT Extinct - A species that no longer exists anywhere.
- EXP Extirpated - A species that no longer exists in the wild in Ontario but still occurs elsewhere.
- END Endangered - A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's *Endangered Species Act* (*ESA*) (END-R designations are no longer relevant as species are covered under new *ESA* April 2009)
- THR Threatened - A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
- SC Special Concern (formerly Vulnerable) - A species with characteristics that make it sensitive to human activities or natural events.
- NAR Not at Risk - A species that has been evaluated and found to be not at risk.
- DD Data Deficient (formerly Indeterminate) - A species for which there is insufficient information for a provincial status recommendation.

[5]SARA (Species at Risk Act) Status and Schedule
The Act establishes Schedule 1, as the official list of wildlife species at risk. It classifies those species as being either Extirpated, Endangered, Threatened, or a Special Concern. Once listed, the measures to protect and recover a listed wildlife species are implemented. http://www.sararegistry.gc.ca/sar/listing/listing_e.cfm

- EXT Extinct - A wildlife species that no longer exists.
- EXP Extirpated **-** A wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild.
- END Endangered - A wildlife species that is facing imminent extirpation or extinction.
- THR Threatened - A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
- SC Special Concern - A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

Schedule 1: is the official list of species that are classified as extirpated, endangered, threatened, and of special concern.
Schedule 2: species listed in Schedule 2 are species that had been designated as endangered or threatened, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.
Schedule 3: species listed in Schedule 3 are species that had been designated as special concern, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

The Act establishes Schedule 1 as the official list of wildlife species at risk. However, please note that while Schedule 1 lists species that are extirpated, endangered, threatened and of special concern, the prohibitions do not apply to species of special concern.

Species that were designated at risk by COSEWIC prior to October 1999 (Schedule 2 & 3) must be reassessed using revised criteria before they can be considered for addition to Schedule 1 of *SARA*. After they have been assessed, the Governor in Council may on the recommendation of the Minister, decide on whether or not they should be added to the List of Wildlife Species at Risk.

Government of Canada. Species at Risk Public Registry. Website: [http://www.sararegistry.gc.ca/default_e.cfm November 3, 2010]

- Glossary: http://www.sararegistry.gc.ca/about/glossary/default_e.cfm#e
- Species Index A-Z: http://www.sararegistry.gc.ca/sar/index/default_e.cfm
- Species Listing by Schedule: http://www.sararegistry.gc.ca/sar/listing/default_e.cfm

[6] Regional Status

Halton Region
From : Halton Natural Areas Inventory (Dwyer 2006)

- A = Abundant >125 Stations
- C = Common 36-125 Stations
- U = Uncommon 15-35 Stations
- R= Rare < 15 Stations
- E = Extirpated no longer present in Halton Region
- I = Introduced an introduced species not native to Ontario
- Uncertain = Uncertain if species is present in Halton Region
- LS = Locally Significant
- M = Migration

[7] MNR Significant Wildlife Habitat Technical Guide Area Sensitive Species

- Area Sensitivity is defined as species requiring large areas of suitable habitat in order to sustain population numbers
- *From: Ministry of Natural Resources. 2000. Significant Wildlife Habitat Technical Guide. Fish and Wildlife Branch, Wildlife Section. Science Development and Transfer Branch, Southcentral Science Section. 151pp. + appendices.*

[8] Habitat Use
I=interior species, I/E=interior edge species, E=edge species (Freemark and Collins, 1989); M/F=Marsh/Fen, S/B=Treed Swamp/Bog. Interior bird species require habitat which is often found 100m from the forest edge while Interior/Edge species are found within both interior and edge habitat. Often Interior and Interior/Edge are more sensitive to urban encroachment as they require these large, relatively undisturbed forest habitats to support viable populations. The increasing urbanization of rural areas often results in increased parasitism and predation as well as disturbance from human recreational activities (e.g. illegal bike trails, dumping and pets.) (Freemark, K. and Collins, B. 1989. *Landscape ecology of birds breeding in temperate forest fragments*. – In: Hagan III, J. M. and Johnston, D. W. (eds), Ecology and conservation of neotropical migrant landbirds. Smithsonian Inst. Press, pp. 443–454)

[9] Dependancy on Wetlands

- Wetlands are home to many species of birds. Wetland birds are determined by the kind of habitat nad the seasonal movement of migrating species.

- Dependant (D) - These species depend on wetlands for their survival. Most nest within wetlands, a few such as the Great Blue Heron, nest elsewhere but feed extensively in wetlands, and other such as the Wood Duck, nest away from wetlands but rear their young in marshes and fens.
- Partially Dependant (P) - These species use wetlands habitats extensively for breeding or feeding, as well as other types of habitat.

[10, 11, 12] Early Nesting Date, Late Migration Date, Late Nesting Date

LePage, Dennis. 2005. Migration and nesting dates for Ontario bird species. Bird Studies Canada: Ontario Breeding Bird Atlas.

This list was created by Dennis LePage of Bird Studies Canada. Breeding dates were provided by Mark Peck, and Charles Francis provided the migration dates based on Long Point Data. It covers the whole Southern Great Lakes region; thus some species do not occur in the Ottawa district. The early and late dates for nesting define the period during which nesting can be expected to occur. (They are the earliest and latest records known for that species in the Southern Great Lakes region) The late migration date is to show that although most birds move through the area before that date, some can be still passing through at that time. Ex: An Osprey can still be passing through until May 30, although that is unusual. Yet the earliest record for this species is May 1. What this means is, be careful about assigning a potential breeding code (possible, probable, confirmed) until after May 30 unless good evidence indicates that the bird is nesting (ie: mating with another Osprey, sitting on a nest etc.).

Ontario Breeding Bird Atlas - Breeding Evidence Codes

OBSERVED
- X Species observed in its breeding season (no breeding evidence).

POSSIBLE
- H Species observed in its breeding season in suitable nesting habitat.
- S Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season.

PROBABLE
- P Pair observed in suitable nesting habitat in nesting season.
- T Permanent territory presumed through registration of territorial behaviour (song, etc.) on at least two days, a week or more appart, at the same place.
- D Courtship or display, including interaction between a male and a female or two males, including courtship feeding or copulation.
- V Visiting probable nest site
- A Agitated behaviour or anxiety calls of an adult.
- B Brood Patch on adult female or cloacal protuberance on adult male.
- N Nest-building or excavation of nest hole.

CONFIRMED
- DD Distraction display or injury feigning.
- NU Used nest or egg shells found (occupied or laid within the period of the survey).
- FY Recently fledged young (nidicolous species) or downy young (nidifugous species), including incapable of sustained flight.
- AE Adult leaving or entering nest sites in circumstances indicating occupied nest.
- FS Adult carying fecal sac.
- CF Adult carying food for young.
- NE Nest containing eggs.
- NY Nest with young seen or heard.

Appendix 5.3 – Vascular Plant List

Appendix 5.3 – Vascular Plant List

Table 5.3.1 - Summary of Vascular Plant Species

Common Name	Scientific Name	Family	cc[1]	cw[1]	grank[2]	Srank[3]	COSEWIC[4]	MNR[5]	Halton Region[6]	Greater Toronto Area[6]	Site District 7E-4[6]	Unit 1 (Pond)	Unit 2 (Old field and riparian wetlands)	Unit 3 (Lowland deciduous forest)	Unit 4 (North Woodlot)	Unit 5 (Valley Forest and floodplain marsh)	Other (TC, HR)
Allegheny Blackberry	*Rubus allegheniensis*	ROSACEAE	2	2	G5	S5			X	X	X						x
Alternate-leaf Dogwood	*Cornus alternifolia*	CORNACEAE	6	5	G5	S5			X	X	X	x					
American Basswood	*Tilia americana*	TILIACEAE	4	3	G5	S5			X	X	X		x		x	x	x
American Beech	*Fagus grandifolia*	FAGACEAE	6	3	G5	S5			X	X	X				x		
American Bugleweed	*Lycopus americanus*	LAMIACEAE	4	-5	G5	S5			X	X	X	x	x				
American Elm	*Ulmus americana*	ULMACEAE	3	-2	G5?	S5			X	X	X	x	x	x		x	x
Annual Ragweed	*Ambrosia artemisiifolia*	ASTERACEAE	0	3	G5	S5			X	X	X		x				
Bird's-foot Trefoil	*Lotus corniculatus*	FABACEAE			G?	SE5			X	X	X		x				
Black Locust	*Robinia pseudo-acacia*	FABACEAE		0	G5	SE5			X	X	X		x				
Black Walnut	*Juglans nigra*	JUGLANDACEAE	5	3	G5	S4			X	X	X			x			
Blue Vervain	*Verbena hastata*	VERBENACEAE	4	-4	G5	S5			X	X	X	x	x			x	
Broad-leaf Cattail	*Typha latifolia*	TYPHACEAE	3	-5	G5	S5			X	X	X	x	x				
Broad-leaved Water-plantain	*Alisma plantago-aquatica*	ALISMATACEAE	3	-5	G5	S5			X	X	X	x	x	x			
Buckthorn	*Rhamnus cathartica*	RHAMNACEAE		3	G?	SE5			X	X	X	x	x	x	x		x
Bur Oak	*Quercus macrocarpa*	FAGACEAE	5	1	G5	S5			X	X	X				x		x
Canada Anemone	*Anemone canadensis*	RANUNCULACEAE	3	-3	G5	S5			X	X	X				x		
Canada Thistle	*Cirsium arvense*	ASTERACEAE		3	G?	SE5			X	X	X	x	x				
Carolina Rose	*Rosa carolina*	ROSACEAE	6	4	G4G5	S4			X	R	R[4]						x
Chicory	*Cichorium intybus*	ASTERACEAE		5	G?	SE5			X	X	X		x				
Choke Cherry	*Prunus virginiana ssp virginiana*	ROSACEAE	2	1	G5T?	S5			X	X	X				x	x	
Climbing Nightshade	*Solanum dulcamara*	SOLANACEAE		0	G?	SE5			X	X	X	x	x		x		

Common Name	Scientific Name	Family	cc[1]	cw[1]	grank[2]	Srank[3]	COSEWIC[4]	MNR[5]	Halton Region[6]	Greater Toronto Area[6]	Site District 7E-4[6]	Unit 1 (Pond)	Unit 2 (Old field and riparian wetlands)	Unit 3 (Lowland deciduous forest)	Unit 4 (North Woodlot)	Unit 5 (Valley Forest and floodplain marsh)	Other (TC, HR)
Common Apple	*Malus pumila*	ROSACEAE		5	G5	SE 5			X	X	X	x	x				x
Common Boneset	*Eupatorium perfoliatum*	ASTERACEAE	2	-4	G5	S5			X	X	X		x				
Common Dandelion	*Taraxacum officinale*	ASTERACEAE		3	G5	SE 5			X	X	X		x	x			
Common Milkweed	*Asclepias syriaca*	ASCLEPIADACEAE	0	5	G5	S5			X	X	X	x	x				
Common Pear	*Pyrus communis*	ROSACEAE		5	G5	SE 4			X	X	X						x
Common Reed	*Phragmites australis*	POACEAE	0	-4	G5	S5			X	X	X		x				
Common Teasel	*Dipsacus fullonum ssp sylvestris*	DIPSACACEAE		5	G?T?	SE 5			X	X	X	x	x	x			
Corn-marigold	*Chrysanthemum segetum*	ASTERACEAE			G?	SE 1							x				
Crack Willow	*Salix fragilis*	SALICACEAE		-1	G?	SE 5							x	x			
Crested Sedge	*Carex cristatella*	CYPERACEAE	3	-4	G5	S5			X	X	X	x	x				
Cultivated Wheat	*Triticum aestivum*	POACEAE		5	G?	SE 1			X	X	X		x				
Curly Dock	*Rumex crispus*	POLYGONACEAE		-1	G?	SE 5			X	X	X	x	x			x	
Dame's Rocket	*Hesperis matronalis*	BRASSICACEAE		5	G4G5	SE 5			X	X	X			x			
Devil's Beggar's Ticks	*Bidens frondosa*	ASTERACEAE	3	-3	G5	S5			X	X	X	x	x				
Early Meadowrue	*Thalictrum dioicum*	RANUNCULACEAE	5	2	G5	S5			X	X	X				x		
Eastern Cottonwood	*Populus deltoides ssp. deltoides*	SALICACEAE			G5T?	SU										x	
Eastern Helleborine	*Epipactis helleborine*	ORCHIDACEAE		5	G?	SE 5			X	X	X				x		
Eastern Hop-hornbeam	*Ostrya virginiana*	BETULACEAE	4	4	G5	S5			X	X	X				x	x	
Eastern Red Cedar	*Juniperus virginiana*	CUPRESSACEAE	4	3	G5	S5			R[5]	R	R[8]						x
Eastern White Pine	*Pinus strobus*	PINACEAE	4	3	G5	S5			X	X	X						x
False Solomon's Seal	*Maianthemum racemosum ssp racemosum*	LILIACEAE	4	3	G5T	S5			X	X	X				x		
Field Sowthistle	*Sonchus arvensis ssp arvensis*	ASTERACEAE		1	G?T?	SE 5			X	X	X		x				
Fowl Manna Grass	*Glyceria striata*	POACEAE	3	-5	G5	S5			X	X	X				x	x	

Common Name	Scientific Name	Family	cc[1]	cw[1]	grank[2]	Srank[3]	COSEWIC[4]	MNR[5]	Halton Region[6]	Greater Toronto Area[6]	Site District 7E-4[6]	Unit 1 (Pond)	Unit 2 (Old field and riparian wetlands)	Unit 3 (Lowland deciduous forest)	Unit 4 (North Woodlot)	Unit 5 (Valley Forest and floodplain marsh)	Other (TC, HR)
Fox Sedge	*Carex vulpinoidea*	CYPERACEAE	3	-5	G5	S5			X	X	X	x	x	x			
Fringed Sedge	*Carex crinita*	CYPERACEAE	6	-4	G5	S5			X[U]	X	R[6]				x		
Garlic Mustard	*Alliaria petiolata*	BRASSICACEAE		0	G?	SE5			X	X	X			x	x		
Graceful Sedge	*Carex gracillima*	CYPERACEAE	4	3	G5	S5			X	X	X		x		x	x	
Grass-leaved Goldenrod	*Euthamia graminifolia*	ASTERACEAE	2	-2	G5	S5			X	X	X	x	x				
Gray Dogwood	*Cornus foemina ssp racemosa*	CORNACEAE	2	-2	G5	S5			X	X	X	x	x	x	x	x	
Great-hairy Willow-herb	*Epilobium hirsutum*	ONAGRACEAE		-4	G?	SE5			X	X	X		x				
Green Ash	*Fraxinus pennsylvanica*	OLEACEAE	3	-3	G5	S5			X	X	X	x					
Hawthorn Species	*Crataegus sp*	ROSACEAE											x		x	x	x
Heart-leaved Willow	*Salix eriocephala*	SALICACEAE	4	-3	G5	S5			X	X	X	x	x				
Herb-robert	*Geranium robertianum*	GERANIACEAE		5	G5	SE5			X	X	X				x		
Hooked Crowfoot	*Ranunculus recurvatus var. recurvatus*	RANUNCULACEAE	4	-3	G5	S5			X	X	X					x	
Hop Sedge	*Carex lupulina*	CYPERACEAE	6	-5	G5	S5							x			x	
Jack-in-the-pulpit	*Arisaema triphyllum ssp triphyllum*	ARACEAE	5	-2	G5T5	S5			X	X	X				x		
Kentucky Bluegrass	*Poa pratensis ssp pratensis*	POACEAE	0	1	G5T	S5			X	X	X		x				
Kidney-leaved Buttercup	*Ranunculus abortivus*	RANUNCULACEAE	2	-2	G5	S5			X	X	X					x	
Lady's Thumb	*Polygonum persicaria*	POLYGONACEAE		-3	G?	SE5			X	X	X	x	x				
Large-leaved Aster	*Aster macrophyllus*	ASTERACEAE	5	5	G5	S5			X	X	X				x		
Lesser Burdock	*Arctium minus ssp minus*	ASTERACEAE		5	G?T?	SE5			X	X	X		x				
Lesser Duckweed	*Lemna minor*	LEMNACEAE	2	-5	G5	S5			X	X	X	x					
Manitoba Maple	*Acer negundo*	ACERACEAE		-2	G5	S5			X	X	X	x					
May Apple	*Podophyllum peltatum*	BERBERIDACEAE	5	3	G5	S5			X	X	X				x		
Narrow-leaved Cattail	*Typha angustifolia*	TYPHACEAE	3	-5	G5	S5			X	X	X	x	x				

Common Name	Scientific Name	Family	cc[1]	cw[1]	grank[2]	Srank[3]	COSEWIC[4]	MNR[5]	Halton Region[6]	Greater Toronto Area[6]	Site District 7E-4[6]	Unit 1 (Pond)	Unit 2 (Old field and riparian wetlands)	Unit 3 (Lowland deciduous forest)	Unit 4 (North Woodlot)	Unit 5 (Valley Forest and floodplain marsh)	Other (TC, HR)
Narrow-leaved Spring Beauty	*Claytonia virginica*	PORTULACACEAE	5	3	G5	S5			X	X	X				x	x	
New England Aster	*Aster novae-angliae*	ASTERACEAE	2	-3	G5	S5			X	X	X		x				
Nipple-seed Plantain	*Plantago major*	PLANTAGINACEAE		-1	G5	SE5			X	X	X		x				
Northern Red Oak	*Quercus rubra*	FAGACEAE	6	3	G5	S5			X	X	X				x	x	x
Northern White Cedar	*Thuja occidentalis*	CUPRESSACEAE	4	-3	G5	S5			X	X	X						x
Northern Wild-raisin	*Viburnum cassinoides*	CAPRIFOLIACEAE	7	-3	G5	S5				R	E						x
Norway Maple	*Acer platanoides*	ACERACEAE		5	G?	SE5			X	X	X			x			x
Norway Spruce	*Picea abies*	PINACEAE		5	G?	SE3			X[SR]	X	X						x
Orchard Grass	*Dactylis glomerata*	POACEAE		3	G?	SE5			X	X	X		x				
Panicled Aster	*Aster lanceolatus ssp lanceolatus*	ASTERACEAE	3	-3	G5T?	S5			X[U]	X	X		x	x		x	
Purple Loosestrife	*Lythrum salicaria*	LYTHRACEAE		-5	G5	SE5			X	X	X	x	x	x			
Purple-stemmed Aster	*Aster puniceus var puniceus*	ASTERACEAE	6	-5	G5T?	S5							x				
Queen Anne's Lace	*Daucus carota*	APIACEAE			G?	SE5			X	X	X	x	x				
Red Clover	*Trifolium pratense*	FABACEAE		2	G?	SE5			X	X	X		x				
Red Raspberry	*Rubus idaeus ssp idaeus*	ROSACEAE		0	G5T5	SE1			X	X	X			x		x	
Redtop	*Agrostis gigantea*	POACEAE		0	G4G5	SE5			X	X	X		x	x			
Reed Canary Grass	*Phalaris arundinacea*	POACEAE	0	-4	G5	S5			X	X	X	x	x	x		x	
Rice Cutgrass	*Leersia oryzoides*	POACEAE	3	-5	G5	S5			X[U]	X	X		x	x		x	
Riverbank Grape	*Vitis riparia*	VITACEAE	0	-2	G5	S5			X	X	X	x		x			
Running Strawberry-bush	*Euonymus obovata*	CELASTRACEAE	6	5	G5	S5			X	X	X				x		
Sandbar Willow	*Salix exigua*	SALICACEAE	3	-5	G5	S5			X[U]	X	X		x				
Scotch Pine	*Pinus sylvestris*	PINACEAE		5	G?	SE5			X	X	X						x
Sensitive Fern	*Onoclea sensibilis*	DRYOPTERIDACEAE	4	-3	G5	S5			X	X	X				x		

Common Name	Scientific Name	Family	cc[1]	cw[1]	grank[2]	Srank[3]	COSEWIC[4]	MNR[5]	Halton Region[6]	Greater Toronto Area[6]	Site District 7E-4[6]	Unit 1 (Pond)	Unit 2 (Old field and riparian wetlands)	Unit 3 (Lowland deciduous forest)	Unit 4 (North Woodlot)	Unit 5 (Valley Forest and floodplain marsh)	Other (TC, HR)
Shagbark Hickory	*Carya ovata var ovata*	JUGLANDACEAE	6	3	G5	S5			X[U]	X	U	x	x		x	x	x
Silver Maple	*Acer saccharinum*	ACERACEAE	5	-3	G5	S5			X	X	X	x					
Smooth Brome	*Bromus inermis ssp inermis*	POACEAE		5	G4G5T?	SE5			X	X	X		x	x			
Soft Rush	*Juncus effusus ssp solutus*	JUNCACEAE	4	-5	G5T?	S5			X	X	X	x	x			x	
Soy Bean	*Glycine max*	FABACEAE		5	G?	SE2							x				
Spikerush Species	*Eleocharis sp*	CYPERACEAE											x				
Spotted Jewel-weed	*Impatiens capensis*	BALSAMINACEAE	4	-3	G5	S5			X	X	X		x			x	
Staghorn Sumac	*Rhus typhina*	ANACARDIACEAE	1	5	G5	S5			X	X	X		x				
Sugar Maple	*Acer saccharum ssp. saccharum*	ACERACEAE			G5T?	S5			X	X	X				x		
Tall Goldenrod	*Solidago altissima var altissima*	ASTERACEAE	1	3	G?	S5			X	X	X		x				
Tartarian Honeysuckle	*Lonicera tatarica*	CAPRIFOLIACEAE		3	G?	SE5			X	X	X			x		x	
Thicket Creeper	*Parthenocissus inserta*	VITACEAE	3	3	G5	S5			X	X	X			x		x	
Timothy	*Phleum pratense*	POACEAE		3	G?	SE5			X	X	X		x				
Torrey's Rush	*Juncus torreyi*	JUNCACEAE	3	-3	G5	S5			X[U]	X	X		x	x		x	
True Watercress	*Nasturtium officinale*	BRASSICACEAE		-5	G?	SE							x				
Turtlehead	*Chelone glabra*	SCROPHULARIACEAE	7	-5	G5	S5			X[U]	X	X					x	
Velvet-leaf	*Abutilon theophrasti*	MALVACEAE		4	G?	SE5			X	X	X	x					
Virginia Strawberry	*Fragaria virginiana ssp virginiana*	ROSACEAE	2	1	G5T?	SU			X	X	X		x	x	x		
Western Poison Ivy	*Rhus radicans ssp rydbergii*	ANACARDIACEAE		0	G5T	S5			X	X	X				x		
White Ash	*Fraxinus americana*	OLEACEAE	4	3	G5	S5			X	X	X				x	x	
White Avens	*Geum canadense*	ROSACEAE	3	0	G5	S5			X	X	X	x					
White Clover	*Trifolium repens*	FABACEAE		2	G?	SE5			X	X	X		x				
White Goosefoot	*Chenopodium album var album*	CHENOPODIACEAE		1	G5T5	SE5			X	X	X		x				
White Oak	*Quercus alba*	FAGACEAE	6	3	G5	S5			X	X	X				x	x	x

Common Name	Scientific Name	Family	cc[1]	cw[1]	grank[2]	Srank[3]	COSEWIC[4]	MNR[5]	Halton Region[6]	Greater Toronto Area[6]	Site District 7E-4[6]	Unit 1 (Pond)	Unit 2 (Old field and riparian wetlands)	Unit 3 (Lowland deciduous forest)	Unit 4 (North Woodlot)	Unit 5 (Valley Forest and floodplain marsh)	Other (TC, HR)
White Trillium	*Trillium grandiflorum*	LILIACEAE	5	5	G5	S5			X	X	X				x		
Wild Black Cherry	*Prunus serotina*	ROSACEAE	3	3	G5	S5			X	X	X				x	x	
Wild Mock-cucumber	*Echinocystis lobata*	CUCURBITACEAE	3	-2	G5	S5			X	X	X	x	x	x			
Wild-rye Species	*Elymus sp*	POACEAE											x				
Winterberry	*Ilex verticillata*	AQUIFOLIACEAE	5	-4	G5	S5			X	X	R[5]				x		
Wood Anemone	*Anemone quinquefolia var quinquefolia*	RANUNCULACEAE	7	0	G5	S5			X	X	X					x	
Woolgrass Bulrush	*Scirpus atrovirens*	CYPERACEAE	3	-5	G5?	S5			X	X	X		x				
Yellow Rocket	*Barbarea vulgaris*	BRASSICACEAE		0	G?	SE5			X	X	X	x		x			
Yellow Trout-lily	*Erythronium americanum ssp americanum*	LILIACEAE	5	5	G5T5	S5			X	X	X				x	x	

Legend

[1]**Coefficient of Conservatism and Coefficient of Wetness** (Oldham et al., 1995).

- CC = Coefficient of Conservatism. Rank of 0 to 10 based on plants degree of fidelity to a range of synecological parameters: (0-3) Taxa found in a variety of plant communities; (4-6) Taxa typically associated with a specific plant community but tolerate moderate disturbance; (7-8) Taxa associated with a plant community in an advanced successional stage that has undergone minor disturbance; (9-10) Taxa with a high fidelity to a narrow range of synecological parameters.

- CW = Coefficient of Wetness. -Value between 5 and –5. A value of –5 is assigned to Obligate Wetland (OBL) and 5 to Obligate Upland (UPL), with intermediate values assigned to the remaining categories.

[2]G-Rank (global)
Global ranks are assigned by a consensus of the network of Conservation Data Centres (CDCs), scientific experts, and the Nature Conservancy to designate a rarity rank based on the range-wide status of a species, subspecies, or variety.

- G1 Extremely rare—usually 5 or fewer occurrences in the overall range or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.
- G2 Very rare—usually between 5 and 20 occurrences in the overall range or with many individuals in fewer occurrences; or because of some factor(s) making it vulnerable to extinction.

- G3 Rare to uncommon—usually between 20 and 100 occurrences; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances.
- G4 Common—usually more than 100 occurrences; usually not susceptible to immediate threats.
- G5 Very common—demonstrably secure under present conditions.

[3]S-Ranks (provincial)
Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are not legal designations. Provincial ranks are assigned in a manner similar to that described for global ranks, but consider only those factors within the political boundaries of Ontario.

- S1 Critically Imperiled—Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
- S2 Imperiled—Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
- S3 Vulnerable—Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4 Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5 Secure—Common, widespread, and abundant in the nation or state/province.
- S#S# Range Rank —A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
- SX Apparently extirpated from Ontario, with little likelihood of rediscovery. Typically not seen in the province for many decades, despite searches at known historic sites.
- SE Exotic; not believed to be a native component of Ontario's flora.

[4]COSEWIC (Committee on the Status of Endangered Wildlife in Canada)
(federal status from COSEWIC NOVEMBER 2010)

- EXT Extinct - A species that no longer exists.
- EXP Extirpated - A species no longer existing in the wild in Canada, but occurring elsewhere.
- END Endangered - A species facing imminent extirpation or extinction.
- THR Threatened - A species likely to become endangered if limiting factors are not reversed.
- SC Special Concern (formerly vulnerable) - A species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
- NAR Not At Risk - A species that has been evaluated and found to be not at risk of extinction given the current circumstances.
- DD Data Deficient (formerly Indeterminate) - Available information is insufficient to resolve a species' eligibility for assessment or to permit an assessment of the species' risk of extinction.

***** - Species on Schedule 1 of *Species at Risk Act* (*SARA*)

[5]OMNR (Ontario Ministry of Natural Resources)
(*provincial status from MNR September 2010)*
The provincial review process is implemented by the MNR's Committee on the Status of Species at Risk in Ontario (COSSARO).

- EXT Extinct—A species that no longer exists anywhere.
- EXP Extirpated—A species that no longer exists in the wild in Ontario but still occurs elsewhere.
- END Endangered - A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's *Endangered Species Act* (*ESA*).
- THR Threatened—A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
- SC Special Concern (formerly Vulnerable) —A species with characteristics that make it sensitive to human activities or natural events.
- NAR Not at Risk—A species that has been evaluated and found to be not at risk.
- DD Data Deficient (formerly Indeterminate) —A species for which there is insufficient information for a provincial status recommendation.

[6] *SARA* (*Species at Risk Act*) Status and Schedule

The Act establishes Schedule 1, as the official list of species at risk. It classifies those species as being either Extirpated, Endangered, Threatened, or a Special Concern. Once listed, the measures to protect and recover a listed species are implemented. http://www.sararegistry.gc.ca/sar/listing/listing_e.cfm

- EXT Extinct - A species that no longer exists.
- EXP Extirpated **-** A species that no longer exists in the wild in Canada, but exists elsewhere in the wild.
- END Endangered - A species that is facing imminent extirpation or extinction.
- THR Threatened - A species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
- SC Special Concern - A species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

Schedule 1: is the official list of species that are classified as extirpated, endangered, threatened, and of special concern.

Schedule 2: species listed in Schedule 2 are species that had been designated as endangered or threatened, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

Schedule 3: species listed in Schedule 3 are species that had been designated as special concern, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

The Act establishes Schedule 1 as the official list of species at risk. However, please note that while Schedule 1 lists species that are extirpated, endangered, threatened and of special concern, the prohibitions do not apply to species of special concern.

Species that were designated at risk by COSEWIC prior to October 1999 (Schedule 2 & 3) must be reassessed using revised criteria before they can be considered for addition to Schedule 1 of *SARA*. After they have been assessed, the Governor in Council may on the recommendation of the Minister, decide on whether or not they should be added to the List of Species at Risk.

- Government of Canada. Species at Risk Public Registry. Website: [http://www.sararegistry.gc.ca/default_e.cfm November 3, 2010]
- Glossary: http://www.sararegistry.gc.ca/about/glossary/default_e.cfm#e
- Species Index A-Z: http://www.sararegistry.gc.ca/sar/index/default_e.cfm
- Species Listing by Schedule: http://www.sararegistry.gc.ca/sar/listing/default_e.cfm

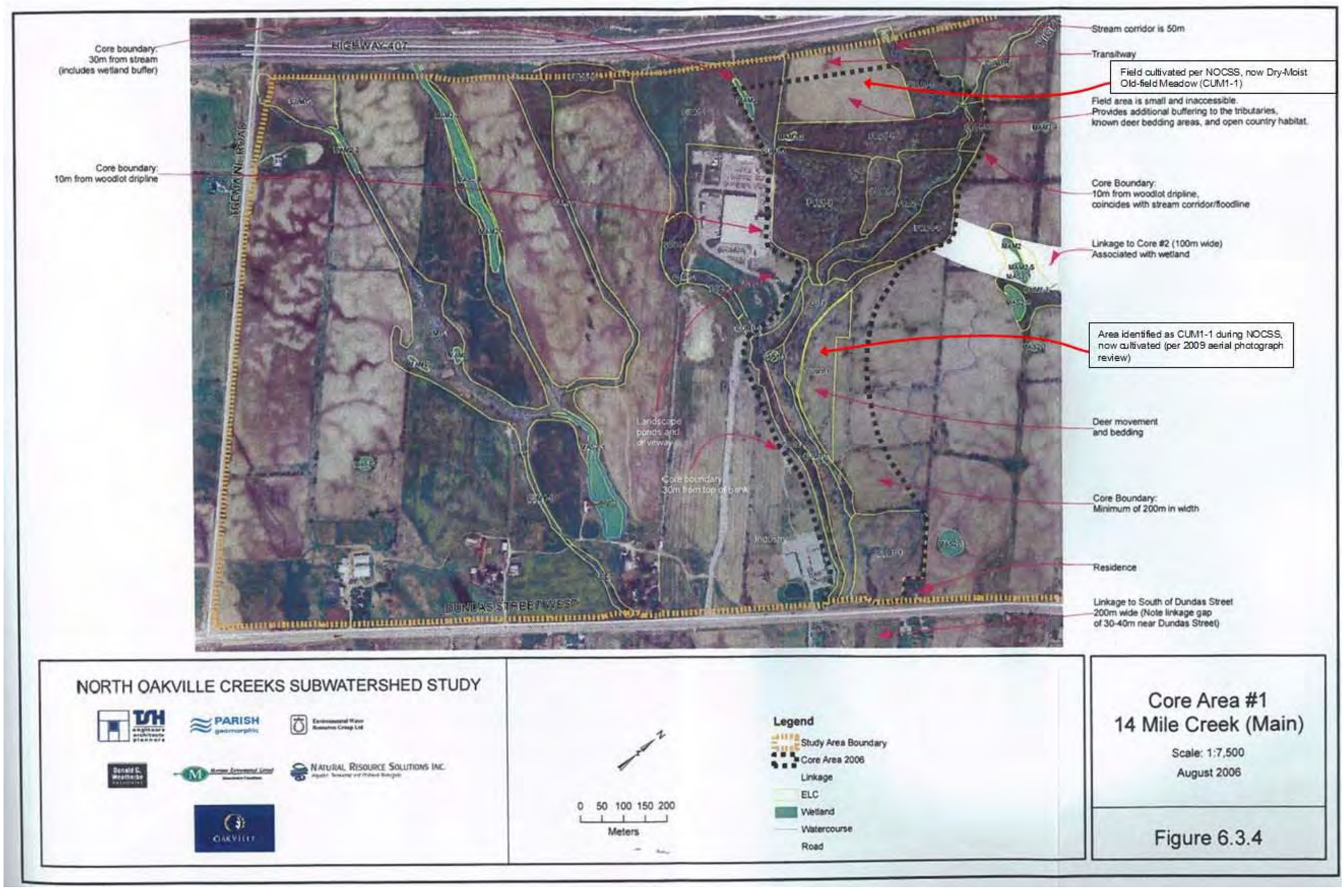
[7] Regional Status

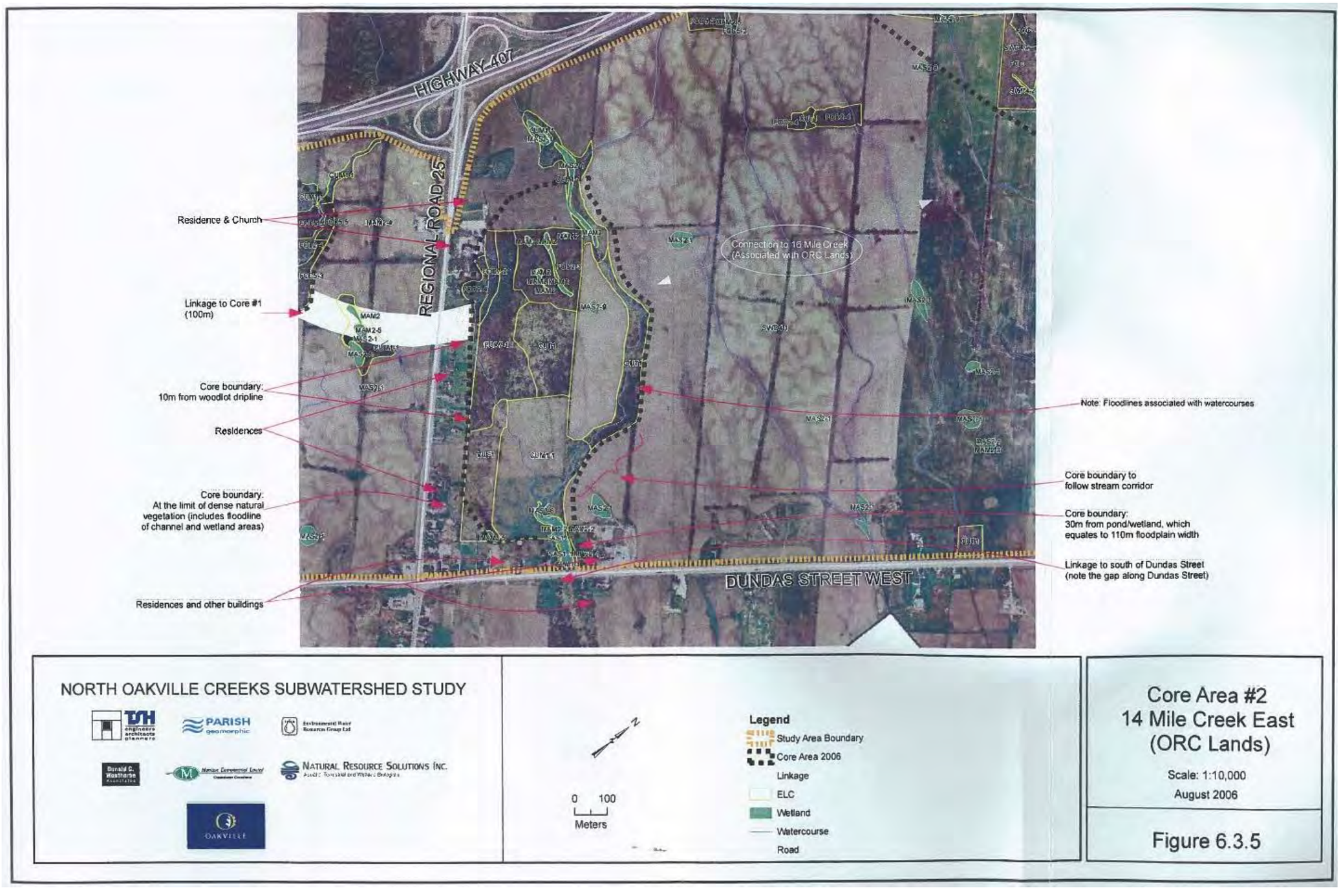
from *The Distribution and Status of the Vascular Plants of the Greater Toronto Area* (Varga et. al. 2000).

"Plant rarity is based on the number of locations for a native plant species" and also takes into account native species restricted to specialized rare habitats. For the Greater Toronto Area column, "A species is considered rare in the Greater Toronto Area if it is rare or uncommon in a least four of... Halton, Peel, Toronto, York, and Durham".

- X - Present
- U - uncommon native species
- R - rare native species
- R# - number of stations for a rare native species
- E - extirpated native species
- + - introduced species
- X+ - introduced in municipality
- SR - sight record
- LR - literature record

Appendix 5.4 – Core #1 and Linkage to Core #2 Vegetation Community Mapping (Modified by MMM from NOCSS)


Core boundary:
30m from stream
(includes wetland buffer)
Core boundary:
10m from woodlot dripline
HIGHWAY 407
TREWAN ROAD
DUNDAS STREET WEST
Landscape ponds and driveway
Core boundary
30m from top of bank
Stream corridor is 50m
Transitway
Field cultivated per NOCSS, now Dry-Moist Old-field Meadow (CUM1-1)
Field area is small and inaccessible.
Provides additional buffering to the tributaries, known deer bedding areas, and open country habitat.
Core Boundary:
10m from woodlot dripline,
coincides with stream corridor/floodline
Linkage to Core #2 (100m wide)
Associated with wetland
Area identified as CUM1-1 during NOCSS, now cultivated (per 2009 aerial photograph review)
Deer movement and bedding
Core Boundary:
Minimum of 200m in width
Residence
Linkage to South of Dundas Street
200m wide (Note linkage gap
of 30-40m near Dundas Street)
NORTH OAKVILLE CREEKS SUBWATERSHED STUDY
PARISH geomorphic
Natural Resource Solutions Inc.
0 50 100 150 200
Meters
Legend
Study Area Boundary
Core Area 2006
Linkage
ELC
Wetland
Watercourse
Road
Core Area #1
14 Mile Creek (Main)
Scale: 1:7,500
August 2006
Figure 6.3.4


HIGHWAY 407
REGIONAL ROAD 25
DUNDAS STREET WEST
Residence & Church
Linkage to Core #1 (100m)
Core boundary: 10m from woodlot dripline
Residences
Core boundary: At the limit of dense natural vegetation (includes floodline of channel and wetland areas)
Residences and other buildings
Connection to 16 Mile Creek (Associated with ORC Lands)
Note: Floodlines associated with watercourses
Core boundary to follow stream corridor
Core boundary: 30m from pond/wetland, which equates to 110m floodplain width
Linkage to south of Dundas Street (note the gap along Dundas Street)
NORTH OAKVILLE CREEKS SUBWATERSHED STUDY
PARISH geomorphic
NATURAL RESOURCE SOLUTIONS INC.
OAKVILLE
0 100
Meters
Legend
Study Area Boundary
Core Area 2006
Linkage
ELC
Wetland
Watercourse
Road
Core Area #2
14 Mile Creek East
(ORC Lands)
Scale: 1:10,000
August 2006
Figure 6.3.5

Appendix 5.5 – ELC Field Data Sheets

- FOD
- Mid-aged.
- Abrupt mature edge.
- 80% canopy cover

ELC
PLANT SPECIES LIST

SITE: Ok Lazy Pat
POLYGON: 01
DATE: Aug. 18 '09
SURVEYOR(S): SDinka

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Pinu str					
Pinu syl					
Jun sp					
Thu occ					
Acer Sacc.					
Acer neg.					
Carya					

SPECIES CODE	LAYER 1	2	3	4	COL.
Rham cat					
Fraxamer.					

M'dagel Mixedwood FoD
disturbed by constructed
trail for Zenon/GE treatment plant employees.
90% canopy cover, generally good health of trees.

ELC PLANT SPECIES LIST

SITE: Lazy Pat
POLYGON: 02
DATE: Aug. 18/09
SURVEYOR(S): S Dinka

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Acer saca	D				
Fraxinus.					
Pinustro.					
Quer alb.					

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of ....

ELC
PLANT SPECIES LIST

SITE: Lacey Pat
POLYGON: 03
DATE: Aug. 18/09
SURVEYOR(S): S Dinka.

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COL.
	1	2	3	4	
Acer saca					
Frax nigr					

ELC
PLANT SPECIES LIST

SITE: Lazy Pat 3460
POLYGON: 04
DATE: Sept 11, 2009
SURVEYOR(S): SD

Mid-aged to Mature FOD

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Quebus sp					
Carya ov.					
Acer sac.					

ELC
PLANT SPECIES LIST

SITE: Lazy Cat 3460
POLYGON: 105
DATE: Sept 11 2009
SURVEYOR(S): SD

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

FOD, Hickory dominant.

SPECIES CODE	LAYER 1	2	3	4	COL.
Carya ov.	A				
Pinu.stro	O				
Frax pen	O				
Acer Sacc.					

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of .....

MAM area ~~dang~~ flows thru middle of forest block, majority is shagbark hickory dominated mid-aged. FOD

ELC
PLANT SPECIES LIST

SITE: Lazy Pat 3460
POLYGON: 06
DATE: Sept. 11, 2009.
SURVEYOR(S): SP

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Corya ov.					
Fraxi sto					
Frax pen					
Acer sac					

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of ....

mid-aged FOD, Hickory dominnt, residential properties cut out of forest block.

ELC
PLANT SPECIES LIST

SITE: Lazy Pat
POLYGON: 07
DATE: Sept. 11, 2009
SURVEYOR(S): SD

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COL.
	1	2	3	4	

ELC
PLANT SPECIES LIST

SITE: Lazy Pat 3460
POLYGON: 28
DATE: Sept. 11 2009
SURVEYOR(S): SD

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Acer Sac.	A				
Pinus Str.	F				
Carya ov.	O				
Quercus sp.	O				

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of ....

mid-aged FOD5, FOM2
moderately large pond on south corner

ELC
PLANT SPECIES LIST

SITE: Lazy Pat 3460
POLYGON: 09
DATE: Sept. 11, 2009
SURVEYOR(S): SD

Mid aged to mature FODS

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Acer saca	A				
Pinu stob.	F				
Carya ov.					
Populus sp					
Fag amer					
Quercus sp					

SPECIES CODE	LAYER 1	2	3	4	COL.

ELC
PLANT SPECIES LIST

SITE: Lazy Pat 3460
POLYGON: 10
DATE: Sept. 11, 2009
SURVEYOR(S): SD

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Pinus spp.					
Pop sp.					
Crataegus.					
Quercus sp					
Carya ov.					
Tilia americ					

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of ....

FOM 2 -
CUS 1-1 – hawthorn cultural savannah.
FOD 5
several watercourse features + ponds.

ELC
PLANT SPECIES LIST

SITE: Lazy Pat 3460
POLYGON: A 11
DATE: Sept. 11, 2009.
SURVEYOR(S): SD

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Acer saca	A				
Carya ov.					
Pinus str					
Quer rub.					
Quer sp.					
Ulm. amer					
Frax amer					

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of ....

Midaged FOD5 transected by watercourse.

ELC
PLANT SPECIES LIST

SITE: Lazy Pat
POLYGON: 12
DATE: Sept. 11, 2009
SURVEYOR(S): SD

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Phalaris arun					
Typha ang					
Typha lat					
Unknown					

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of ....

- MAM2-2/CUM
- 2 ponds with ~~Stuff~~ cattail shallow marsh fringe. near 407 ROW Fence.

ELC
PLANT SPECIES LIST

SITE: Lazy Pat
POLYGON: 13
DATE: Sept. 11 2009
SURVEYOR(S): SD.

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Ulm amer					
Phalar arun					
Lythrum sal					
Acer neg.					
Typha sp.					

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of ....

- MAM/CUM band surrounding watercourse with occasional trees and very small cattail shallow marsh pockets.
- watercourse surrounded by active agriculture.

ELC PLANT SPECIES LIST

SITE: Lucy Pat
POLYGON: Unit 1 wetland
DATE: Aug 20, 2009
SURVEYOR(S): KD

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
(S) Salix sp	O				
Acer sacc.	O				
Frax pen.	O				
Ulmus am.	O				
Malus fus	S				
Rhus cat.		O			
Cornus alt.		S			
Salix eric.			S		
Cornus foem			S		
Vitis sp			O		

SPECIES CODE	LAYER 1	2	3	4	COL.
Typha ang.				D	
Lyth sal.				F	
Phal aru.				F	
lemna minor				A	(1 root)
Spirodela				F	(multi root).
Eddy's thumb				O	(no bristles on achene)
Bidens fron				O	
Rum crisp				O	
(S) Carex vulp.				F	
grass sp.				F	
Taraxacum sp.				O	
Yellow rocket				O	
Lycopus amer				O	
Watercress				O	
Verb hast.				O	
Aster sp.				F	
Echinocystis				O	
Dips ful.				O	
Velvetleaf.				O	
Sola dulc.				O	
small arrowhead				S	→ Alisma plantago-aqu
~~Bur-marigold~~				O	
Grass-like goldenrod.				O	
Juncus effu.				O	
Typha lat.				O	

Page ..... of ....

Description
pond - fringe of cattail MAS + Duckweed floating aquatic
Fring of young trees + shrubs.
- north section beyond MAS appears to include Aster forb meadow marsh with carex vulp (as singles), Alisma sedge, purple loosestrife, grass like goldenrod, + unknown grasses

Wildlife
Black-capped night heron male + female.
Great blue heron
RWBB.
monarch caterpillar (pic), + butterfly.
Barn swallow
Blue jay
Flock of mourning doves

notes
* standing water to ~ 5cm in north channel but no apparent flow

ELC
PLANT SPECIES LIST

SITE: Lazy Pat
POLYGON: ~~X~~ Unit 3 FOD7-3
DATE: Aug 20, 2009
SURVEYOR(S): SDinka.

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Sal. Farg.				D	
Ulmus		O			
Frax nig.		S			
Acer plat.		F			
Forth in.				O	
Ulm sp.				F	
Rubus idae sp. (ilde)				O	
Cornus stolon				O	
Lonicera.				O	
Rhamnus.				O	

SPECIES CODE	LAYER 1	2	3	4	COL.
Carex vulp.				O	
Lyth sal.				F	
Typha lat.				O	
Dipsa full.				O	
Leers ory.				O	
grass				A	
small monocot.				S	
Alli ort				O	
yellow rocket				O	
wild mustard				O	
Carex sp				D	
Thal dun.				O	
Asterisce.				F	
watercress				S	
Brom. inerm				F	
Hesp mat				O	
Dandelion.					
Frax nig.					

Page ..... of ....

near Dundas road only

as sampled unit 1.

as sampled unit 1.

as sampled unit 2.

→ Alisma plantago-aq

Broad leaf in channel.

wildlife American goldfinch. Blue jay, water striders in some pools.

Notes

- no flow at time of survey. but small pools of standing water & algae.
- lots of dumping etc. in channel.
- frequent canopy gaps, trees to 50cm dbh.