

## 2.0 GROUNDWATER CONDITONS

A summary of the groundwater levels measured at each site is shown in Table 1 below. This information is submitted to supplement the groundwater information included in our original July 20, 2005 letter reports.

**TABLE 1**  
**SUMMARY OF MEASURED GROUNDWATER LEVELS**  
**2005 OUTFALL GATE CHAMBER UPGRADING PROGRAM**

SITE	Rowandale Crescent	LeMaire Street	Rue Notre Dame	Kavanagh Street	Evans Street	Falconer Bay	Blackmore Avenue
TEST HOLE	TH-01A	TH-02A	TH-04A	TH-06A	TH-09A	TH-10A	TH-11A
STRATUM	Till	Till	Till	Till	Till	Till	Till
DATE	Measured Groundwater Level (m) <sup>(1)</sup>						
26-Jul-05	-	-	10.67	-	-	-	-
2-Aug-05	4.88	6.72	11.55	5.44	Dry	7.31	4.67

**Notes:**

"-" = No Data

1. All measured groundwater levels are below existing grade at test hole locations.

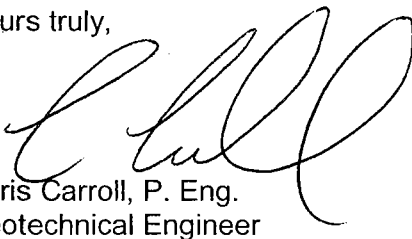
Groundwater levels vary seasonally and in response to precipitation such that future groundwater conditions at the site may vary from those reported herein.

## 3.0 SUMMARY

Standpipe piezometer installations and groundwater level monitoring has been performed at seven (7) sites for the 2005 Gate Chamber Upgrading Program. Measured groundwater levels are reported herein and supplement our original geotechnical letter reports dated July 20, 2005.

We thank you for the opportunity to provide engineering services on this project. If you have any questions please contact the undersigned at 896-1209 or Dr. Rob Kenyon, P. Eng. of our office.

Yours truly,



Chris Carroll, P. Eng.  
Geotechnical Engineer


CC/jr  
Attachment

cc: Mr. Kas Zurek, P. Eng., Design and Construction Engineer

**CLIENT** CITY OF WINNIPEG  
**PROJECT** 2005 OUTFALL GATE CHAMBER UPGRADES - GEOTECHNICAL INVESTIGATIONS  
**SITE** FALCONER BAY  
**LOCATION** ±3 m from centreline of existing manhole  
**DRILLING METHOD** 125 mm ø Solid Stem Auger (Truck Mounted)

**JOB NO.** 05-107-07.02.1000  
**GROUND ELEV.**  
**WATER ELEV.**  
**DATE DRILLED** 29-Jul-05  
**UTM** N 5521437  
 E 634368

ELEVATION (m)	DEPTH (m) (ft)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	PIEZ. LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.30 m ▲	Cu TORVANE (kPa) ◆			
									20	40	60	80
			<b>CLAY FILL</b> - Brownish-grey, damp, firm, low to intermediate plasticity, trace coarse grained sand, trace silt nodules, pockets and seams, trace rootlets.  - Light brown below 1.22 m.  - Tan below 1.98 m.		0.3							
			<b>SILTY CLAY (CH)</b> - Mottled grey and brown (mostly grey), damp, stiff, high plasticity, trace gypsum pockets, trace silt pockets and seams, trace rootlets.  - Increased silt and fine grained gravel between 3.05 and 3.35 m.  - Brownish-grey, damp to moist, firm, trace gypsum pockets, trace fine grained sand, trace silt pockets below 3.35 m.									
			- Damp, soft to firm, trace silt pockets below 6.10 m.									
			- Grey, with silt pockets below 8.84 m.									

SAMPLE TYPE  Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **B. P. ARPIN**

APPROVED 

DATE **09-08-05**

ELEVATION (m)	DEPTH (m) (ft)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	PIEZ. LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.30 m ▲	Cu TORVANE (kPa) ◆			
									PL	MC	LL	
35	11		- Increased larger silt pockets (~15 mm in size) below 10.36 m.									
40	12		- Decreased larger silt pockets (~15 mm in size) below 11.89 m.									
45	13											
50	14											
55	15		<b>TILL</b> - Mixture of silt, clay, and fine to coarse grained sand and gravel. Tan, saturated, very soft, low plasticity.									
60	16				16.0							
65	16				16.2							
70	16				16.3							
75	16				16.6							
80	16				16.8							
85	17		<b>AUGER REFUSAL AT 16.76 m</b>									
90	18		Notes: 1. Soil stratigraphy from 0 to 6.10 m depth based on previous TH-10 completed on June 17, 2005. 2. Installed Casagrande standpipe to a depth of 16.46 m. Top of pipe is 0.16 m below ground surface elevation. 3. Water level measured at 7.15 m below top of pipe when monitored on August 2, 2005.									
95	19											
100	20											
105	21											

SPT & TORVANE P:\PROJECTS\2005\05-01\07-07\GEOLOGS\05-107-07 LOGS (EXPANDED).GPJ

SAMPLE TYPE  Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **B. P. ARPIN**

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