Management Plan – Westwold Monitoring Well

Section A – Project Overview

The proposed project is to install a groundwater monitoring well approximately 6 meters south of the TNRD lease area for the Westwold closed landfill (Permit No. PR-3842) and active Westwold transfer station (Lease No. 341854). The closed landfill site is located approximately 3.2 kilometers north of Westwold. The landfill was used to dispose of municipal solid waste (typical domestic refuse excluding toxic wastes) for the community of Westwold and surrounding area from 1974-2003.

The purpose of the project is to create permanent access for collecting groundwater samples to monitor groundwater quality surrounding the old landfill site as part of a post-closure monitoring program. In accordance with the 2008 TNRD *Solid Waste Management Plan* and BC Ministry of Environment *Landfill Criteria for Municipal Solid Waste sec. 8*, all closed landfills must be monitored for a period of 25 years post-closure. The Westwold landfill site was closed in 2003. An assessment done by the TNRD in 2009 recommended installation of a downgradient groundwater monitoring well.

Installing a groundwater monitoring well will enable the TNRD to ensure the site is not having a negative impact on the environment due to landfill leachate. In the event that contaminants are found during monitoring, the TNRD can take appropriate steps to mitigate or eliminate the problem to prevent environmental degradation.

In order to access the proposed groundwater monitoring well a temporary access road will need to be cleared. Most of the path is clear already and only some brush or shrubs around the well site would need to be removed using a small bulldozer or similar land clearing equipment. No gravel will be used for the access road. Total construction time for the access road to installing the groundwater monitoring well will be maximum five days. One day is required for clearing brush, while an additional day would be required for boring and installing the well.

The groundwater monitoring well consists of a screened piece Polyvinyl Chloride (PVC) pipe 2 or 4 inches in diameter. Depth of the well depends on the location of the water table which is determined after boring the hole.

Section B – Project Description

Access plans during construction of the well include clearing a temporary path for equipment to the well site. This can be cleared using a bulldozer or similar land clearing equipment. Once there is access to the proposed groundwater monitoring well location, a borehole will need to be drilled using an auger to access the water table and construct the monitoring well.

Constructing the well would require a work area of approximately 10 meters by 10 meters for equipment allowance. Upon borehole completion the monitoring well will consist of a screened piece of Polyvinyl Chloride (PVC) pipe 2 or 4 inches in diameter. The length of the pipe will be determined by the depth of the water table which is currently not known. Following installation of the monitoring well the site can be accessed on foot.

There are no other pertinent environmental control measures that will be utilized during or after construction of the monitoring well.

Section C – Additional Information

a) Land Impacts
The project will impact land by clearing surface obstacles such as shrubs or trees with a bulldozer or other land clearing equipment. Impacts will be minimal as the land is currently mostly bare of large obstructive objects. Land will also be impacted by drilling the borehole for the well; however, impacts from this activity are minimal. The equipment may also cause some soil compaction in the area. The well will impact the land by being a permanent feature; however, once it is installed there will be no further land impacts.

b) Atmospheric Impacts
During land clearing and borehole drilling there will be noise and fuel emissions from the required equipment. Construction time is very short and atmospheric impacts are minimal.

c) Aquatic Impacts
The proposed well is located hydraulically downgradient of the landfill site. As shown in the site general and specific maps, the landfill is located in a watershed which flows south at the site location. The placement of the monitoring well would monitor groundwater flowing down from the landfill site and would indicate if there is any leachate contamination occuring. The purpose of the monitoring well is to ensure that contaminants are not entering and impacting the surrounding watershed.

d) Fish and Wildlife Habitat
The project will not have an impact on fish habitat. Wildlife in the area may be disturbed by construction noise; however, with the close proximity of the current transfer station, additional disturbance from project construction is minimal and temporary.

ii Socio-Community

a) Land Use

The project will not have an impact on existing land uses in the area. The site is not used by the community as a recreational resource. The land is currently classified as Crown Land.

b) Socio-Community Conditions

The proposed project will not have an impact on existing community services or infrastructure.

c) Public Health

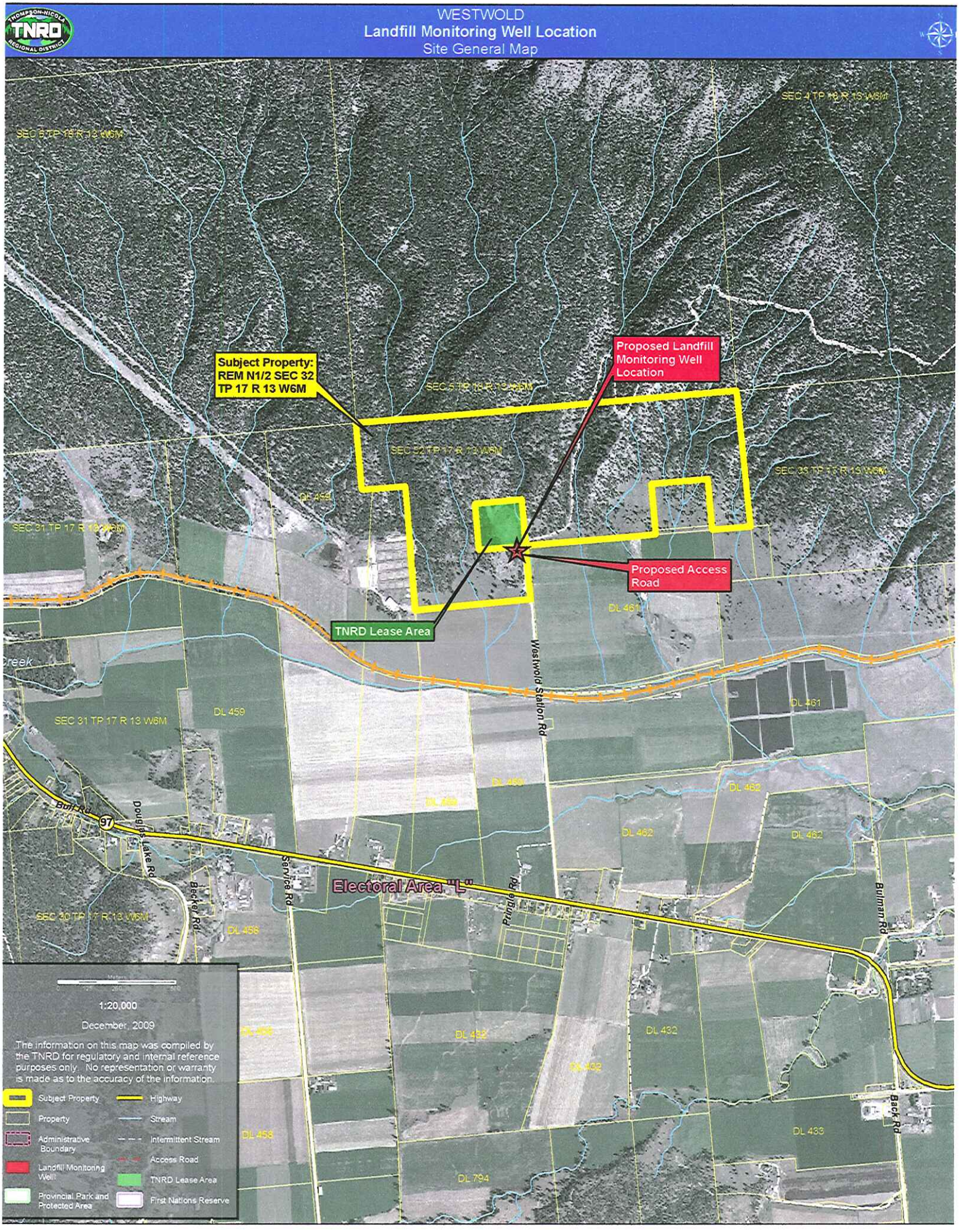
Project is intended to help protect public health by ensuring the water table and watershed are not being impacted by landfill leachate. The proposed project will not have a negative impact on public health.

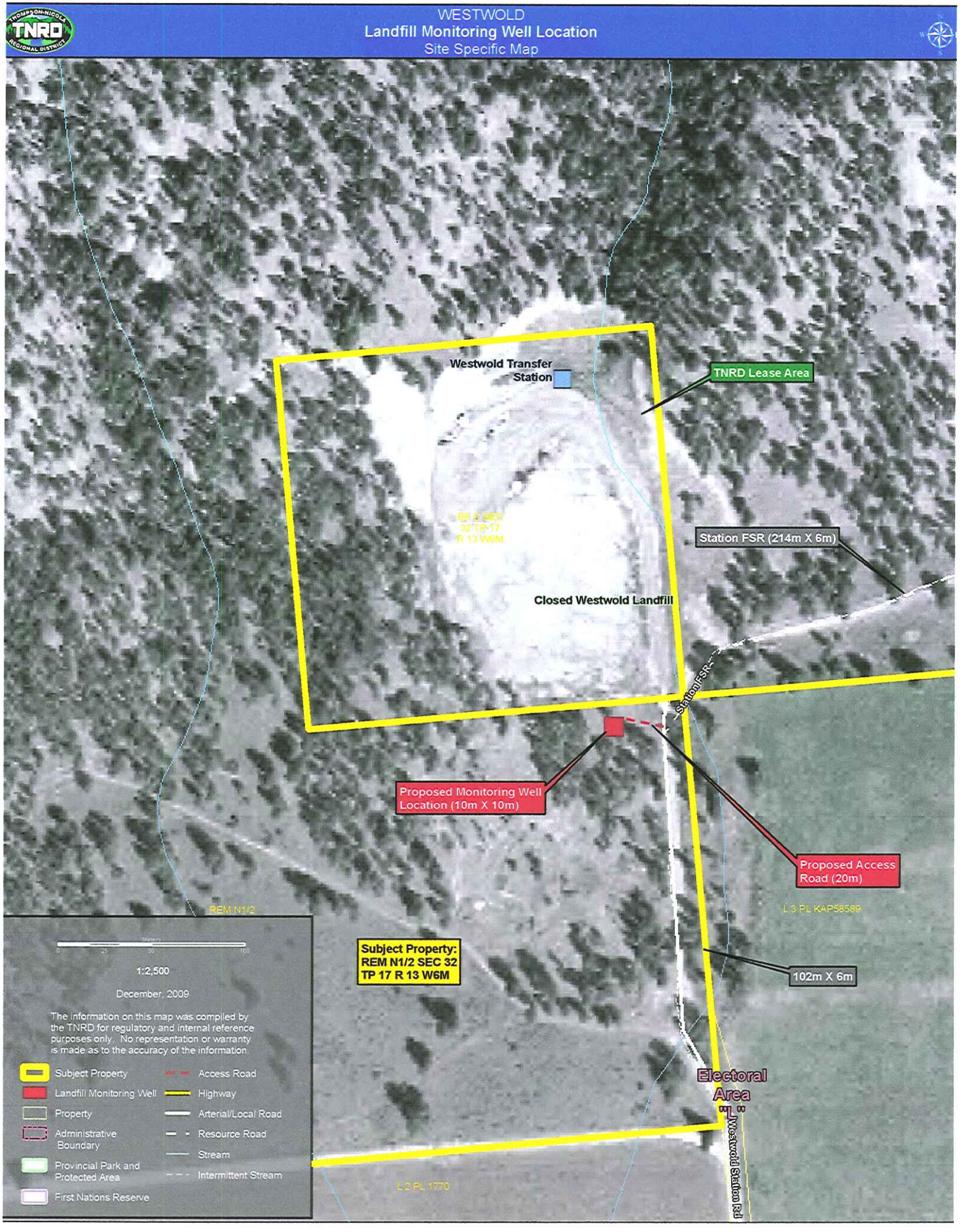
d) First Nations

The proposed project is not on First Nations Reserve Land and will not affect First Nations communities.

Applicant Signature: _____

Date: March 12/2010


WESTWOLD
Landfill Monitoring Well Location
Site General Map
Subject Property:
REM N1/2 SEC 32
TP 17 R 13 W6M
Proposed Landfill
Monitoring Well
Location
Proposed Access
Road
TNRD Lease Area
Westwold Station Rd
Electoral Area "L"
Douglas Lake Rd
Becker Rd
Service Rd
Pringle Rd
Bulman Rd
Back Rd
Bull Rd
97
DL 459
DL 461
DL 462
DL 458
DL 432
DL 433
DL 794
SEC 31 TP 17 R 13 W6M
SEC 32 TP 17 R 13 W6M
SEC 30 TP 17 R 13 W6M
SEC 35 TP 17 R 13 W6M
1:20,000
December, 2009
The information on this map was compiled by the TNRD for regulatory and internal reference purposes only. No representation or warranty is made as to the accuracy of the information.
Subject Property
Property
Administrative Boundary
Landfill Monitoring Well
Provincial Park and Protected Area
Highway
Stream
Intermittent Stream
Access Road
TNRD Lease Area
First Nations Reserve


WESTWOLD
Landfill Monitoring Well Location
Site Specific Map
Westwold Transfer Station
TNRD Lease Area
Station FSR (214m X 6m)
Closed Westwold Landfill
Station FSR
Proposed Monitoring Well Location (10m X 10m)
Proposed Access Road (20m)
REM N1/2
L 3 PL KAP58589
Subject Property: REM N1/2 SEC 32 TP 17 R 13 W6M
102m X 6m
Electoral Area "L"
Westwold Station Rd
L 2 PL 1770
1:2,500
December, 2009
The information on this map was compiled by the TNRD for regulatory and internal reference purposes only. No representation or warranty is made as to the accuracy of the information.
Subject Property
Landfill Monitoring Well
Property
Administrative Boundary
Provincial Park and Protected Area
First Nations Reserve
Access Road
Highway
Arterial/Local Road
Resource Road
Stream
Intermittent Stream

S/S