



Friesen Drillers Ltd.

Appendix A

Existing Water Rights Licenses

**Licence to Use Water for
Municipal-Distribution System
Purposes**



Issued in accordance with the provisions of
The Water Rights Act and regulations made thereunder.

Licence No.: 2009-030

U.T.M.: Zone 14 643276 E
5536586 N

Know all men by these presents that in consideration of and subject to the provisos, conditions and restrictions hereinafter contained, the Minister of Water Stewardship for the Province of Manitoba does by these presents give full right and liberty, leave and licence to **The Rural Municipality of East St. Paul** in the Province of Manitoba (hereinafter called "the LICENSEE") to divert water from a **fractured limestone** aquifer by means of a water well, pump, pipeline(s) and other appurtenances (hereinafter called "the WORKS"), located on the following described lands:

Parcel A Plan 35858 WLTO on OTM Lot 101 Parish of St. Paul,

and more particularly shown on a plan filed in the office of the Executive Director, Regulatory and Operational Services Division, a copy of which plan is hereto attached and marked Exhibit "A" for **municipal-distribution system** purposes on the following described lands:

River Lots 60 to 199, In the Parish of St. Paul.

This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulations and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **municipal-distribution system** purposes.
2. The WORKS shall be operated in accordance with the terms herein contained.
3. a) The maximum rate at which water may be diverted pursuant hereto shall not exceed **0.019 cubic metres per second (0.7 cubic feet per second)**.
b) The total quantity of water diverted in any one year shall not exceed **612 cubic decametres (496.15 acre feet)**.
4. Water shall not be diverted during any period when the water level in the aquifer as measured at the well is more than **16.46 metres (54.0 feet)** beneath the surface of the ground.
5. The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for **municipal-distribution system** purposes.
6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.
7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Executive Director, Regulatory and Operational Services Division, for cancellation on behalf of the Minister.
8. Upon the execution of this Licence the LICENSEE hereby grants the Minister or the Minister's agents the right of ingress and egress to and from the lands on which the WORKS are located for the purpose of inspection of the WORKS and the LICENSEE shall at all times comply with such directions and/or orders that may be given by the Minister or the Minister's agents in writing from time to time with regard to the operation and maintenance of the WORKS.
9. This Licence may be amended, suspended or cancelled by the Minister in accordance with The Water Rights Act by letter addressed to the LICENSEE at **3021 Birds Hill Road, East St. Paul, MB, R2E 1A7, Canada** and thereafter this Licence shall be determined to be at an end.
10. Notwithstanding anything preceding in this Licence, the LICENSEE must have legal control, by ownership or by rental, lease, or other agreement, of the lands on which the WORKS shall be placed and the water shall be used.
11. The term of this Licence shall be **twenty (20) years** and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Water Stewardship. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.
12. This Licence expires automatically upon the loss of the legal control of any of the lands on which the WORKS are located or on which water is used, unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.

13. The LICENSEE shall keep records of daily and annual water use and shall provide a copy of such records to the Executive Director, Regulatory and Operational Services Division, not later than February 1st of the following year.
14. A flow meter must be installed, positioned to accurately measure instantaneous pumping rate and accumulative withdrawals from the water source.
15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to other currently existing wells, dugouts, or other forms of supply, which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.
16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

In witness whereof I the undersigned hereby agree to accept the aforesaid Licence on the terms and conditions set forth therein and hereby set my hand and seal this 10 day of JULY A.D. 20 09.

SIGNED, SEALED AND DELIVERED
in the presence of

_____ } [Signature] (Seal)
Witness Licensee

Canada, PROVINCE OF MANITOBA To Wit:

I, _____ of the _____
of _____ in the Province of Manitoba, MAKE OATH AND SAY:

1. That I was personally present and did see _____, the within named party, execute the within Instrument.
2. That I know the said _____ and am satisfied that he/she is of the full age of eighteen years.
3. That the said Instrument was executed at _____ aforesaid and that I am subscribing witness thereto.

SWORN BEFORE me at the _____
in the Province of Manitoba this _____ day of _____ A.D. 20 _____.

_____ } _____
A COMMISSIONER FOR OATHS Witness
in and for the Province of Manitoba

My Commission expires _____

Issued at the City of Winnipeg, in the Province of Manitoba, this 22 day of July A.D. 20 09.

[Signature]
The Honourable the Minister of Water Stewardship

MEASUREMENTS TO WELLS
ARE APPROXIMATE
NTS

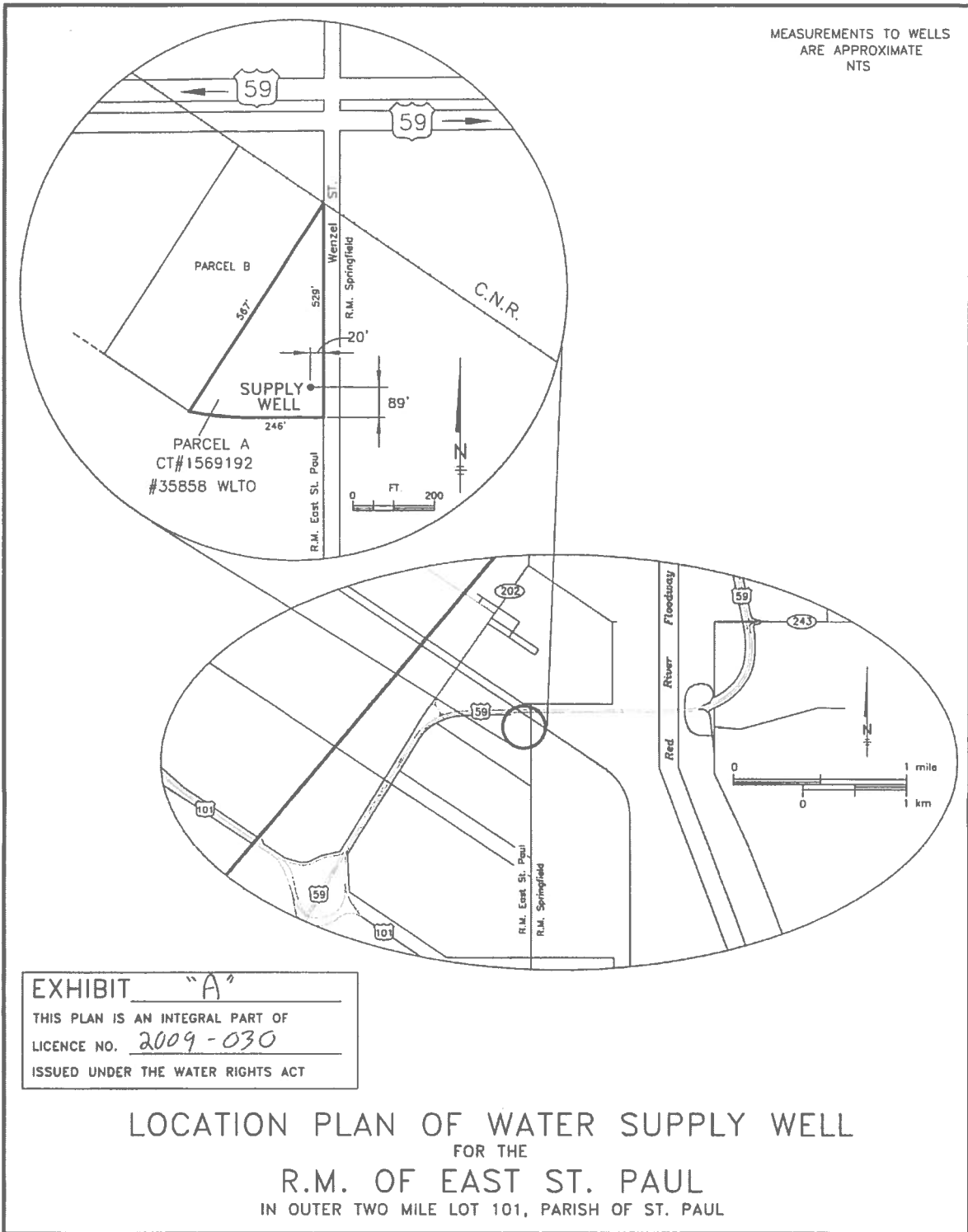


EXHIBIT "A"
THIS PLAN IS AN INTEGRAL PART OF
LICENCE NO. 2009-030
ISSUED UNDER THE WATER RIGHTS ACT

LOCATION PLAN OF WATER SUPPLY WELL
FOR THE
R.M. OF EAST ST. PAUL
IN OUTER TWO MILE LOT 101, PARISH OF ST. PAUL

Licence to Use Water for Municipal-Distribution System Purposes

Manitoba Water Stewardship
Infrastructure and Operations Division
200 Saulteaux Cresc.
Winnipeg, Manitoba
R3J 3W3



Issued in accordance with the provisions of
The Water Rights Act and regulations made thereunder.

Licence No.: **2005-060**

U.T.M.: Zone 14 644572 E
5536474 N

Know all men by these presents that in consideration of and subject to the provisos, conditions and restrictions hereinafter contained, the Minister of Water Stewardship for the Province of Manitoba does by these presents give full right and liberty, leave and licence to **The Rural Municipality of East St. Paul** in the Province of Manitoba (hereinafter called "the LICENSEE") to divert water from a **fractured limestone** aquifer by means of a water well, pump, pipeline(s) and other appurtenances (hereinafter called "the WORKS"), located on the following described lands:

the Southeast Quarter of Section 33, in Township 11 and Range 4, East of the Principal Meridian in Manitoba,

and more particularly shown on a plan filed in the office of the Executive Director, Infrastructure and Operations Division, a copy of which plan is hereto attached and marked Exhibit "A" for **municipal-distribution system** purposes on the following described lands:

River Lots 60 to 119, in the Parish of East St. Paul.

This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulations and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **municipal-distribution system** purposes.
2. The WORKS shall be operated in accordance with the terms herein contained.
3. a) The maximum rate at which water may be diverted pursuant hereto shall not exceed **0.020 cubic metres per second**
(0.7 cubic feet per second) *20 L/S 264 L/Sec*
- b) The total quantity of water diverted in any one year shall not exceed **195 cubic decametres (158.09 acre feet)**
4. The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for **municipal-distribution system** purposes.
5. Without limiting condition 4 of this Licence, the LICENSEE, on behalf of itself and its employees and agents, hereby releases Her Majesty the Queen in right of the Province of Manitoba and the Manitoba Floodway Authority from all claims, liabilities or demands relating to:
 - a) any effects of surface water entering the well, including any claims, liabilities or demands resulting from the operation of the Red River Floodway (including any expansion of the Red River Floodway); and
 - b) any effects to water quality resulting from or relating to the operation of the Red River Floodway (including any expansion of the Red River Floodway).
6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.
7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Executive Director, Infrastructure and Operations Division, for cancellation on behalf of the Minister.

... of this Licence the LICENSEE hereby grants the Minister or the Minister's agents the right of ingress and

11. The term of this Licence shall be **twenty (20) years** and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Water Stewardship. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.
12. This Licence expires automatically upon the loss of the legal control of the land on which the WORKS are located unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.
13. The LICENSEE shall keep records of daily and annual water use and shall provide a copy of such records to the Executive Director, Infrastructure and Operations Division, not later than February 1st of the following year.
14. A flow meter must be installed, positioned to accurately measure instantaneous pumping rate and accumulative withdrawals from the water source.
15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to other currently existing wells, dugouts, or other forms of supply, which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.
16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

In witness whereof I the undersigned hereby agree to accept the aforesaid Licence on the terms and conditions set forth therein and hereby set my hand and seal this 8TH day of JULY A.D. 2005.

SIGNED, SEALED AND DELIVERED
in the presence of

[Signature]
Witness

} [Signature] (Seal)
Licensee **CHIEF ADMINISTRATIVE OFFICER
RM OF EAST ST. PAUL**

Canada, PROVINCE OF MANITOBA To Wit:

I, _____ of the _____
of _____ in the Province of Manitoba, MAKE OATH AND SAY:

1. That I was personally present and did see _____ the within named party, execute the within Instrument.
2. That I know the said _____ and am satisfied that he/she is of the full age of eighteen years.
3. That the said Instrument was executed at _____ aforesaid and that I am subscribing witness thereto.

SWORN BEFORE me at the _____
in the Province of Manitoba this _____ day of _____ A.D. 20 _____.



N.T.S.

EXHIBIT "A"
 THIS PLAN IS AN INTEGRAL PART OF
 LICENSE NO. 2005-060
 ISSUED UNDER THE WATER RIGHTS ACT

LOCATION PLAN OF PRODUCTION WELL
 FOR
THE R. M. OF EAST ST. PAUL
 IN S.E. 1/4 SEC. 33 - 11 - 4E

**Licence to Use Water for
 Municipal-Distribution System**

Purposes

Issued in accordance with the provisions of
The Water Rights Act and regulations made thereunder.

Licence No.: **2007-074**

U.T.M.: Zone 14 644560 E
 5536458 N

Know all men by these presents that in consideration of and subject to the provisos, conditions and restrictions hereinafter contained, the Minister of Water Stewardship for the Province of Manitoba does by these presents give full right and liberty, leave and licence to **The Rural Municipality of East St. Paul** in the Province of Manitoba (hereinafter called "the LICENSEE") to divert water from a **sand and gravel** aquifer by means of four water wells, pumps, pipeline(s) and other appurtenances (hereinafter called "the WORKS"), located on the following described lands:

the Southeast Quarter of Section 33, in Township 11 and Range 4, East of the Principal Meridian in Manitoba,

and more particularly shown on a plan filed in the office of the Executive Director, Regulatory and Operational Services Division, a copy of which plan is hereto attached and marked Exhibit "A" for **municipal-distribution system** purposes on the following described lands:

River Lots 60 to 199, in the Parish of East St. Paul.


This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulations and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **municipal-distribution system** purposes.
2. The WORKS shall be operated in accordance with the terms herein contained.
3. a) The maximum rate at which water may be diverted pursuant hereto shall not exceed **0.0114 cubic metres per second (0.4 cubic feet per second)**.
 b) The total quantity of water diverted in any one year shall not exceed **358 cubic decametres (290.23 acre feet)**.
4. Without limiting condition 5 of this Licence, the LICENSEE, on behalf of itself and its employees and agents, hereby releases Her Majesty the Queen in right of the Province of Manitoba and the Manitoba Floodway Authority from all claims, liabilities or demands relating to:
 - a) any effects of surface water entering the wells, including any claims, liabilities or demands resulting from the operation of the Red River Floodway (including any expansion of the Red River Floodway); and
 - b) any effects to water quality resulting from or relating to the operation of the Red River Floodway (including any expansion of the Red River Floodway).
5. The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for **municipal-distribution system** purposes.
6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.
7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Executive Director, Regulatory and Operational Services Division, for cancellation on behalf of the Minister.

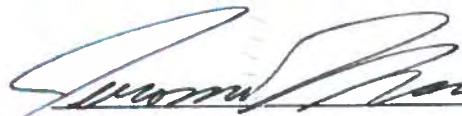
11. The term of this Licence shall be **twenty (20) years** and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Water Stewardship. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.
12. This Licence expires automatically upon the loss of the legal control of any of the lands on which the WORKS are located or on which water is used, unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.
13. The LICENSEE shall keep records of daily and annual water use and shall provide a copy of such records to the Executive Director, Regulatory and Operational Services Division, not later than February 1st of the following year.
14. A flow meter must be installed, positioned to accurately measure Instantaneous pumping rate and accumulative withdrawals from the water source.
15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to other currently existing wells, dugouts, or other forms of supply, which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.
16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

In witness whereof I the undersigned hereby agree to accept the aforesaid Licence on the terms and conditions set forth therein and hereby set my hand and seal this 20 day of AUGUST A.D. 20 07.

SIGNED, SEALED AND DELIVERED
in the presence of



Witness **CAROL RUTH OPPERMANN**
A COMMISSIONER FOR OATHS
Canada, PROVINCE OF MANITOBA
MY COMMISSION EXPIRES NOVEMBER 13, 2007

} 

Licensee **CAO, RM OF EAST ST. PAUL** (Seal)

I, _____ of the _____

of _____ in the Province of Manitoba, MAKE OATH AND SAY:

1. That I was personally present and did see _____ the within named party, execute the within Instrument.
2. That I know the said _____ and am satisfied that he/she is of the full age of eighteen years.
3. That the said Instrument was executed at _____ aforesaid and that I am subscribing witness thereto.

SWORN BEFORE me at the _____

in the Province of Manitoba this _____ day of _____ A.D. 20 _____.

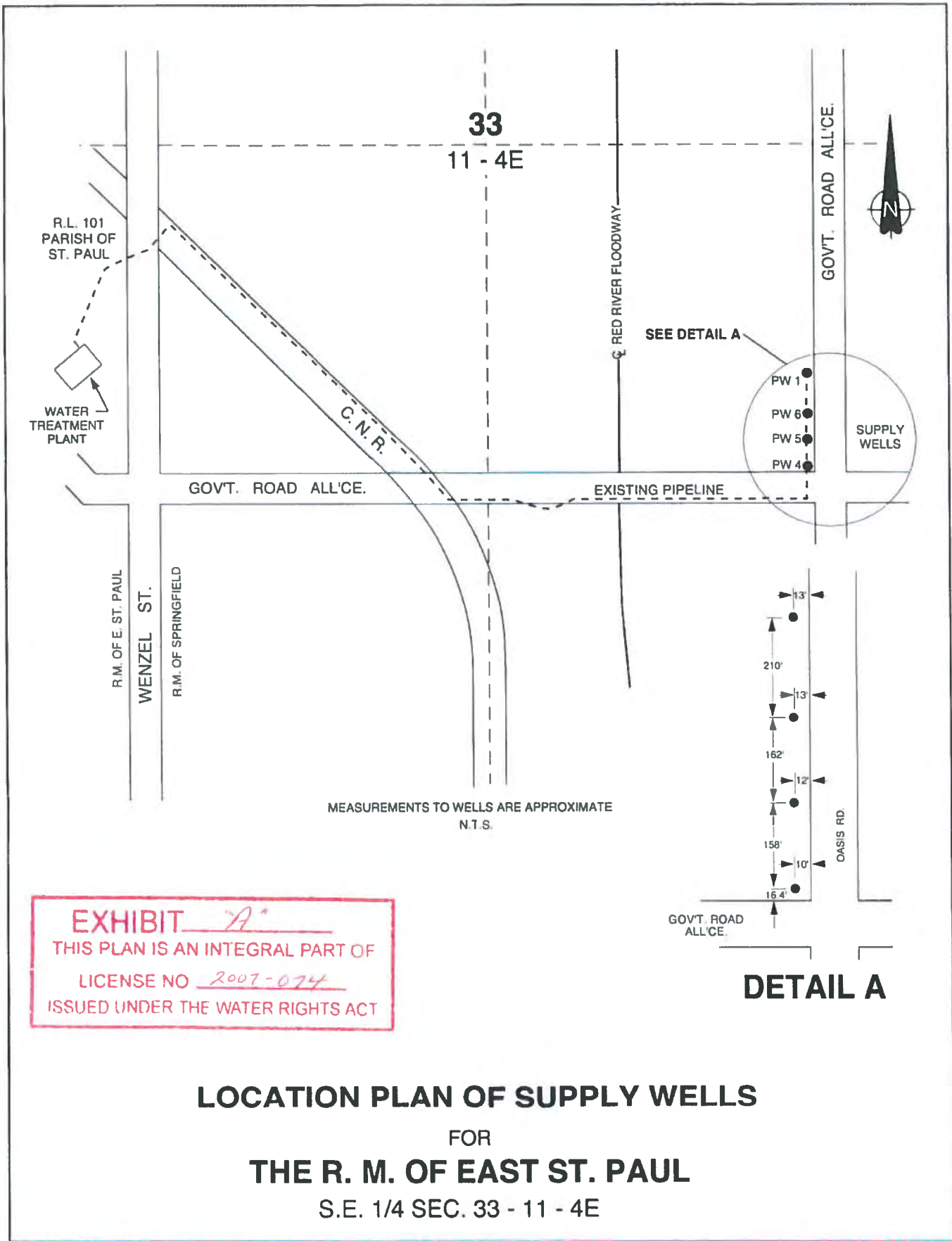


EXHIBIT A
 THIS PLAN IS AN INTEGRAL PART OF
 LICENSE NO 2007-074
 ISSUED UNDER THE WATER RIGHTS ACT

LOCATION PLAN OF SUPPLY WELLS
 FOR
THE R. M. OF EAST ST. PAUL
 S.E. 1/4 SEC. 33 - 11 - 4E



Appendix B

MIT Land Use Agreement



Infrastructure and Transportation

Engineering & Operations Divisions
Highway Regional Operations
Eastern Region
316-323 Main Street
Steinbach, Manitoba R5G 1Z2
T 204 346-6286 F 204 326-4852
www.manitoba.ca

June 15, 2011

Mr. Jerome Mauws, C.A.O.
Rural Municipality of East St Paul
3021 Birds Hill Road
East St. Paul, MB
R2E 1A7

Re: Conditional Approval to Install Ground Water Monitoring Well within PR 202 Right-Of-Way (Road Plan 5830 WLTO), in the vicinity of OTM 70, in the Parish of St Paul, R.M. of East St. Paul.

This is in reply to a May 30, 2011 email from Brett Ransom of Stantec, requesting permission for the temporary installation of 200mm – 250mm well casing and ground water monitoring well on the above noted location (herein after referred to as the Works) on Department's controlled Crown Land within PR 202 right-of-way. Intended purpose of these works is to drill boreholes, install monitoring wells and perform soil, ground water, environmental or other tests, measurements or surveys in, on, or under the Department's right-of-way.

Permission is hereby granted for the proposed temporary works, at the locations indicated on the attached sketches referred to as Schedule "A", subject to the following conditions:

1. The Department receives a copy of this permit duly signed by the RM of East St. Paul authorized representative agreeing to comply with the conditions and recommendations as stated herein;
2. The Permit shall remain in effect for a maximum period of 5 years commencing from date of this permit. The Department may grant an extension upon receipt of written request from the RM of East St. Paul;
3. The RM of East St. Paul shall arrange for the safe movement of highway traffic and pedestrians during installation of the Works, by providing and maintaining the necessary signs, barricades, channelling, and other devices which are generally required by the Province's "Workzone Signing Procedures for Utility Operations";
4. The RM of East St. Paul shall contact Mr. Roger Sutyla, Maintenance Superintendent in Hoka office at (204) 945-0058 and Mr. Rick Faryon, Health and Safety Officer in Steinbach at (204) 346-6270 to confirm signing requirements at least 48 hours in advance of any work taking place;
5. The RM of East St. Paul's construction, installation and maintenance operations of the Works shall be accomplished with minimum interference of the use, operation and maintenance of the Department's right-of-way and shall at all times in no way endanger the general public in its authorized/legal use of the right-of-way;
6. The costs associated with removal, relocation or decommissioning of these Works and restoration of land and right-of-way to a condition acceptable to the Department, will be the responsibility of the RM of East St. Paul;
7. The RM of East St. Paul shall be responsible for all costs that may occur because of damage the RM of East St. Paul causes to the Road, utilities or underground services within the right-of-way of the Road while constructing or maintaining the Works. In the case of damage to or interference with any public or privately owned installations, The RM of East St. Paul shall immediately notify the owner and the Director of Regional Operations of the location and details of such damage or interference;



8. The RM of East St. Paul shall indemnify and save harmless the Department from and against all claims arising from the construction, operation and maintenance of the Works by the RM of East St. Paul, its authorize representative or agents;
9. The RM of East St. Paul hereby releases the Department from any and all liability for damage to the Works or any related property by reason of any work carried out on the Road by the Department, its servants or agents;
10. The RM of East St. Paul shall not use the Road location for any purpose other than the construction, operation and maintenance of the Works;
11. The RM of East St. Paul shall comply with all applicable municipal by-laws, and other laws and regulations in construction, operating and maintaining the Works;
12. The RM of East St. Paul shall not assign or transfer any of the rights authorized by this permit except upon notification and approval by the Department;
13. The RM of East St. Paul will be responsible for obtaining any necessary environmental approvals; If a permit or license is required from Manitoba Water Stewardship, a copy shall be forwarded to this office.
14. The applicant is responsible for the accuracy of all information provided. Manitoba Infrastructure and Transportation assumes no liability or responsibility for any such errors, omissions or inaccuracies;
15. The RM of East St. Paul will be required to provide proof of a \$2million (minimum) public liability insurance coverage naming the Manitoba Infrastructure and Transportation (MIT), in writing, as additional insured and further that the owner shall maintain said coverage for so long as this Agreement remains in effect;
16. The RM of East St. Paul will be responsible to correct settlement, erosion or poor vegetation for a two year period from either following completion of operations, restore the sites to a satisfactory condition and be responsible for any future settlement for a period of 2 years from either the date of installation or the date of maintenance of previously installed "works" whichever is applicable;
17. If any changes in the location or use of the permitted structures are necessary to accommodate the use of this right-of-way by the Department for highway upgrading or improvements, all costs associated with the removal, relocation or decommissioning of these structures and restoration of the right-of-way to a condition acceptable to the Department, will be the responsibility of the RM of East St. Paul;
18. The Department will provide the RM of East St. Paul with a minimum of sixty (60) days notification of the requirement to remove, relocate or decommission the permitted structures;
19. The RM of East St. Paul shall give the Department's Director of Regional Operations, Manitoba Infrastructure and Transportation, ten (10) days prior written notice, unless otherwise agreed, to enter upon the right-of-way for the purpose of major maintenance, alteration, reconstruction or removal of the permitted Works;
20. The owner of "The Works" will be required to install and maintain sign markers as shown on attached "Appurtenance Detailed Drawing", for all appurtenances 100mm or more above ground (ie. Water valves, hydrants or manholes) within Highway right-of-way. This will help ensure that the appurtenances are not struck by off-road vehicles or during maintenance operations.

For your information, the Department's latest version of "Work Zone Traffic Control Manual" revised March 2002, can be found on the internet at:
<http://www.gov.mb.ca/tgs/contracts/workzone/index.html>

Permission comes into effect when the Department receives a signed copy of this letter from the RM of East St. Paul agreeing to all the conditions contained or implied in this letter.

Thank you for your co-operation.

Yours truly,



Warren Borgford, P. Eng.
Technical Services Engineer

g/att.
cc: B.Wareham/ M. Chomoboy/G.Toews/ file
R.Crang / M.Irvine
R.Sutyla
R. Faryon
Brett Ransom - Stantec

ACKNOWLEDGEMENT:

Date: June 22/11.

I, Rhiana Condon of The Rural Municipality of East St Paul
agree to comply with the conditions and recommendations outlined in this letter.

Manitoba
spirited energy

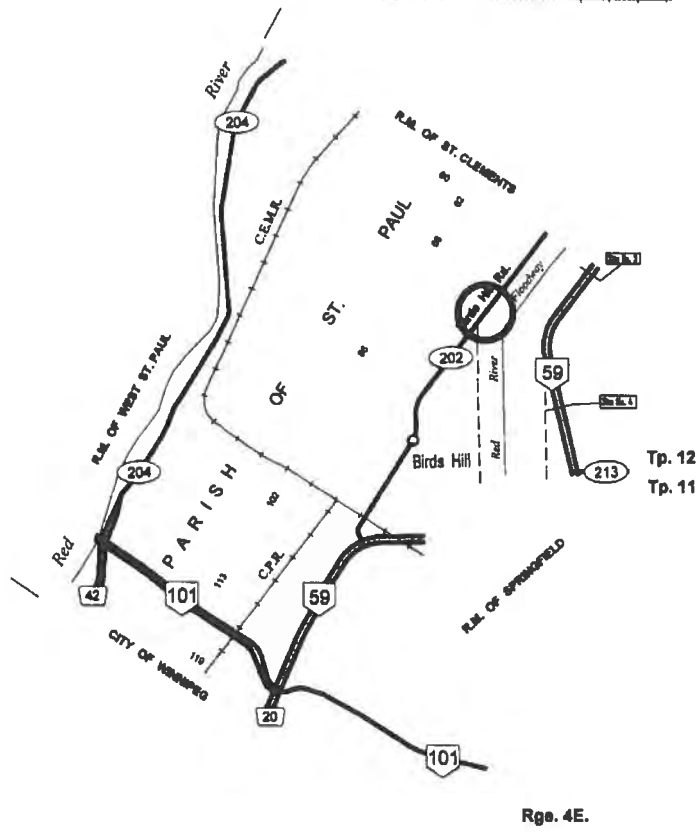
R.M. OF EAST ST. PAUL

MANITOBA
TRANSPORTATION AND GOVERNMENT SERVICES
HIGHWAY PLANNING AND DESIGN BRANCH
DRAFTING SECTION
WINNIPEG
DECEMBER 2001



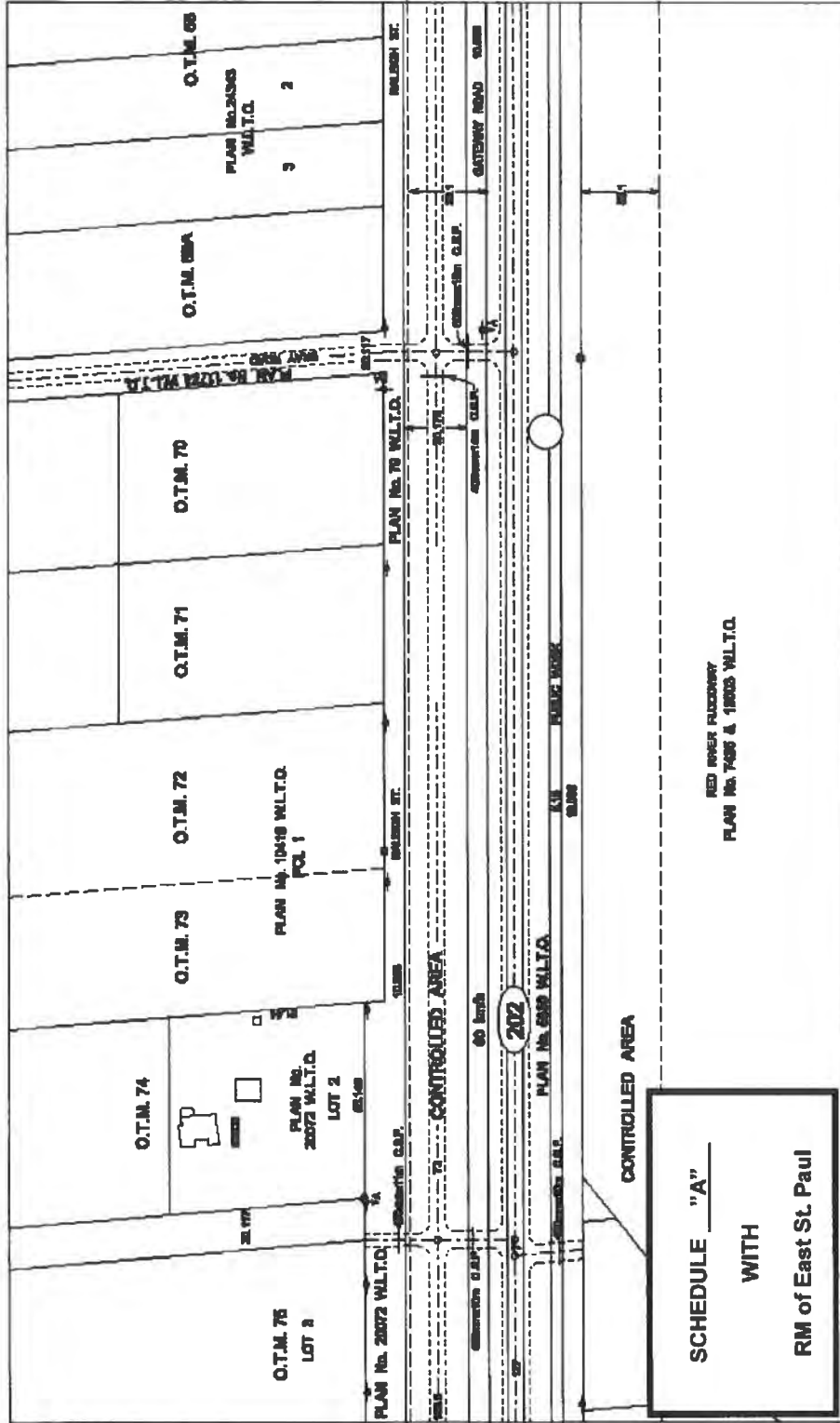
LEGEND

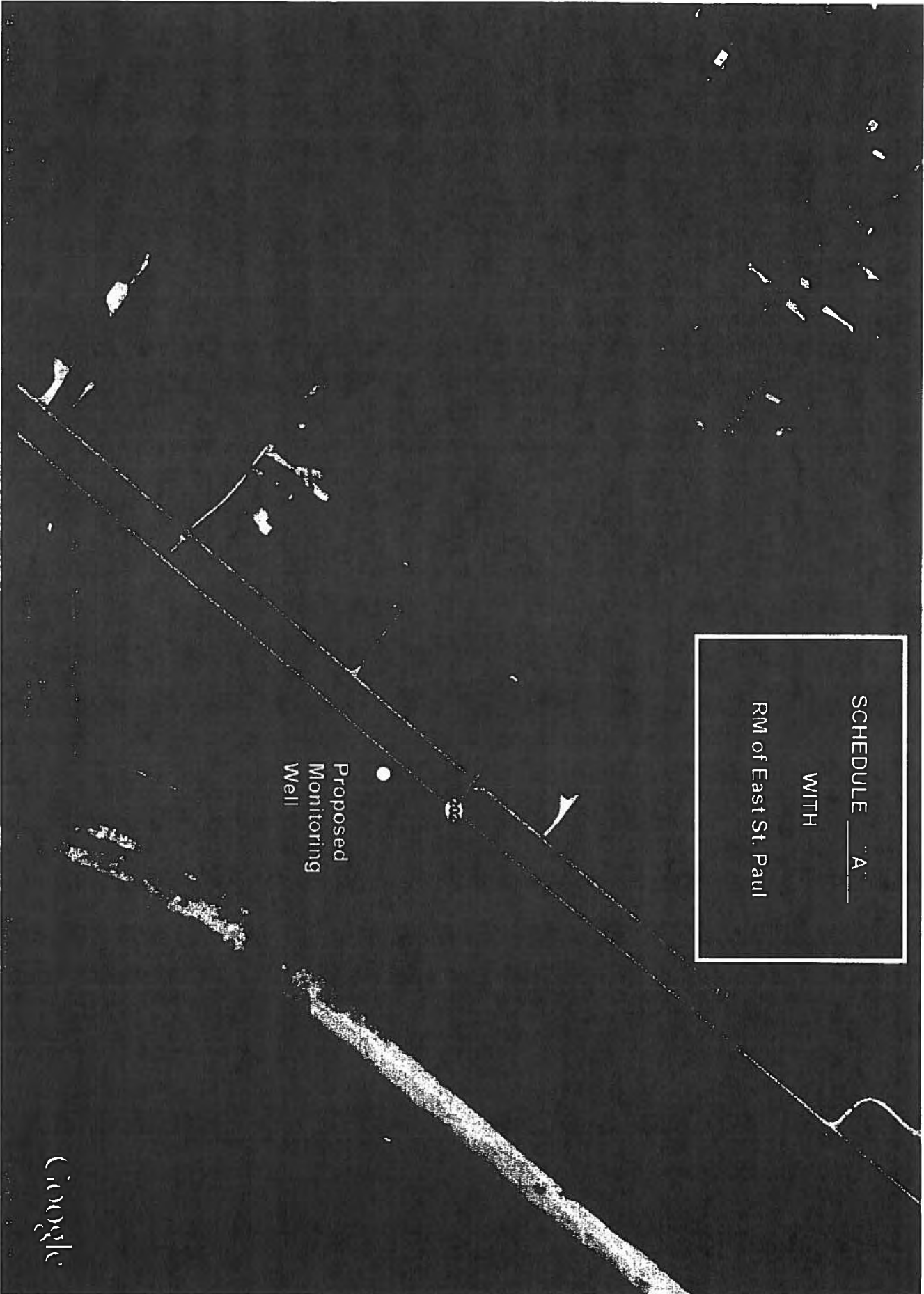
- PROVINCIAL TRUNK HIGHWAYS
- PROVINCIAL ROADS
- METRO ROUTES
- RAILWAYS



SCHEDULE "A"
WITH
RM of East St. Paul

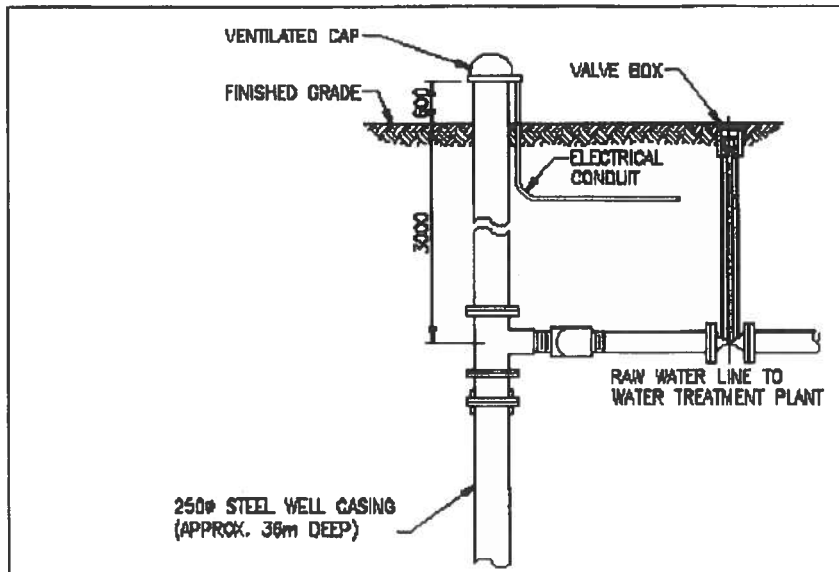






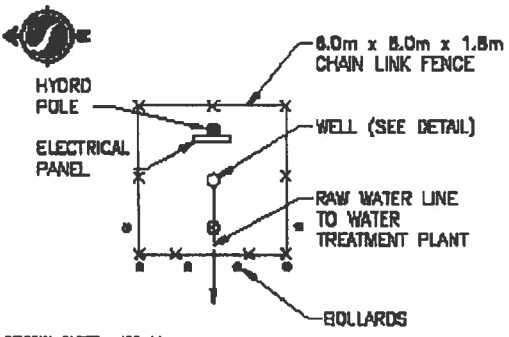
SCHEDULE "A"
WITH
RM of East St. Paul

Proposed
Monitoring
Well



1 WATER WELL
C-101 DETAIL
SCALE: N.T.S.

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 2011/01/15 10:54 AM By: Ransary, Brent



ORIGINAL SHEET - 199 AA

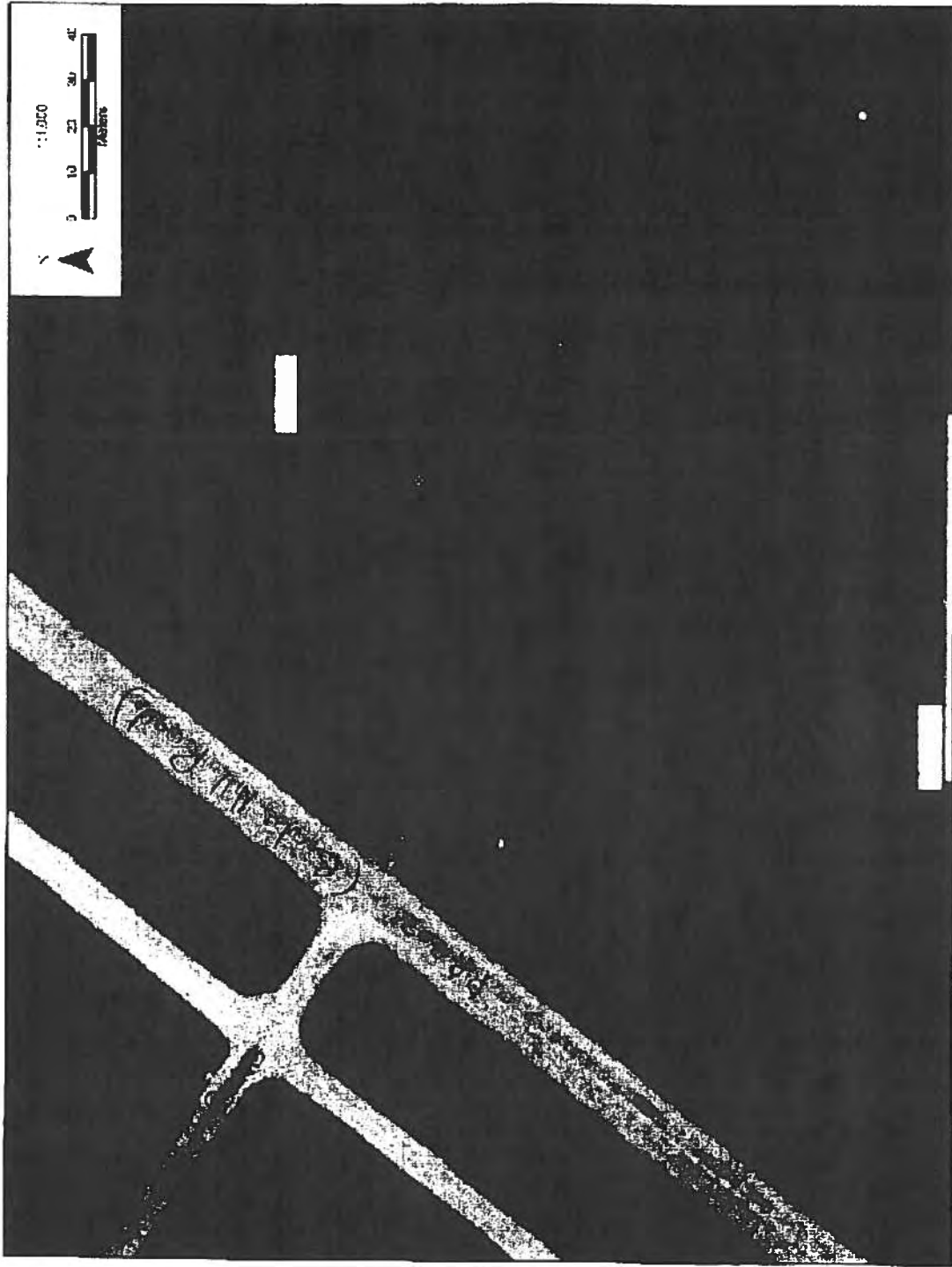
1/13/11 8:36



Stanlec Consulting Ltd.
 905 Waverley Street
 Winnipeg, MB Canada
 R3T 5P4
 Tel. 204.489.5900
 Fax. 204.453.8012
 www.stanlec.com

Client/Project
 R.M. of EAST ST. PAUL
 GRAY ROAD WATER SUPPLY WELL
 GROUNDWATER INVESTIGATION
 Figure No.
FIGURE 1.A
 Title
**PRELIMINARY SITE PLAN
 MIT APPROVAL REQUEST**

SCHEDULE " A " TO
 AGREEMENT NO. —
 WITH
R.M. OF
EAST ST. PAUL





Appendix C

MCWS Exploration Permits



Friesen Drillers Ltd.

307 PTH 12 N Steinbach, MB. R5G 1T8 Phone 204-326-2485 Fax 204-326-2483 Toll Free-1-888-794-9355

July 5, 2011

Ms. Kristina Anderson, P.Geo.
Groundwater Licensing Section
Manitoba Water Stewardship
200 Saulteaux Crescent
Winnipeg, MB R3J 3W2

Dear Kristina

**Subject Groundwater Investigation for Municipal Groundwater Supply
PR 202 and Bray Road – (Road Plan 5830 WLTO in OTM 70 of the Parish of St. Paul)
Rural Municipality of East St. Paul, Manitoba**

Friesen Drillers Ltd. has been retained by the Rural Municipality (RM) of East St. Paul, Manitoba to undertake a groundwater investigation for additional water supply. The RM of East St. Paul has selected a location where a previous test hole was constructed at the junction of PR 202 and Bray Road. This test hole was constructed in the highway right of way, along the east side of PR 202 in 2005.

The RM of East St. Paul would like to develop this source as a future water supply to meet their 20 year population and development projections. Studies and analysis conducted to date indicate a requirement of 700 dam³/year for municipal use. The project would also include extensive pipeline construction, and alterations/modifications to the water treatment plant. The well site is located on the Manitoba Infrastructure and Transportation right of way. In order to provide access for the well, a legal agreement has been drafted and accepted by the RM. A copy is attached.

Friesen Drillers will be working on this project for the RM of East St. Paul with Stantec Consulting Limited. Through Stantec, we have developed the following scope of services that have been proposed for this project:

- The RM of East St. Paul will develop a public awareness campaign, with assistance from Friesen Drillers and Stantec. The information campaign will provide details to the residents on the project, requirements, testing, and analysis. It is our understanding that the RM will also provide some additional details regarding their existing water supply on their website. An individual letter would also be sent to each resident within a 1,250 m radius of the proposed test well location.
- A house to house well inventory would be undertaken within a 1,250 m radius of the existing Bray Road test well. This would involve an individual visit and assessment of each private well. This assessment would be undertaken by staff from the RM of East St. Paul, with technical assistance from Friesen Drillers and Stantec.
- It is planned that 5 to 10 observation wells will be equipped with data recording pressure transducers to monitor water levels. Detailed sampling will also be conducted at some residences. This sampling is planned to include routine chemistry and environmental isotopes.
- The existing test well will be monitored with data recording pressure transducers for the summer of 2011.
- The existing well is planned to be over drilled to a 10 inch diameter PVC cased well. The well would then be developed using compressed air.
- A geodetic survey would be undertaken on the monitoring well network.
- Once the drilling is complete, a 72 hour pumping test is planned on the newly constructed supply well. During the testing, water quality sampling would be conducted at regular intervals. The existing monitoring well network would be expanded to include additional observation wells as needed. Wells that may pose a risk to have water supply issues during the testing would be identified during the well inventory, and the RM would have a plan in place to provide supplies to the affected residents. The RM would also utilize their groundwater interference plan, if required.
- It is also planned to utilize part of the floodway monitoring network in the area for water sampling and analysis.

water... the lifeblood of the land

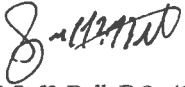
July 5, 2011

- Stantec also plans to develop a comprehensive, integrated water supply study for the RM in the future.
- The information collected in this study would be compiled into a comprehensive report detailing the aspects of the project.

Should you require anything further or have any additional questions, please call me at (204) 326-2485.

Sincerely

Friesen Drillers Limited



J.J.(Jeff) Bell, B.Sc.(G.E.), P.Eng.
Hydrogeological Engineer

Attachments



Application for Licence to Construct A Well and Divert Groundwater

Manitoba Conservation
Water Branch
200 Saulteaux Crescent
Winnipeg MB R3J 3W3



Pursuant to The Water Rights Act

APPLICANT'S NAME: <u>RURAL MUNICIPALITY OF EAST ST. PAUL ATT. BRUCE SCHMIDT</u>						TELEPHONE: <u>1-204-668-8336</u>	
POST OFFICE ADDRESS: <u>3021 BIRDS HILL ROAD EAST ST. PAUL, MANITOBA R2E 1A7</u>							
hereby applies for authority to construct a water well on the following described lands:							
<u>PR 202 RIGHT OF WAY ROAD PLAN 5830</u>		<u>W/20</u>	<u>IN</u>	<u>0TH</u>	<u>70</u>	<u>PARISH</u>	<u>OF ST. PAUL</u>
<u>LSD</u>	<u>OR QUARTER</u>			<u>SECTION</u>		<u>TOWNSHIP</u>	<u>RANGE</u>
<u>E OR W</u>							
or otherwise described as <u>GRAY ROAD / P.R. 202 JUNCTION TEST WELL</u>							
and divert groundwater for <u>MUNICIPAL</u> purposes on the following described land: (domestic, municipal, agricultural, industrial, irrigation, other)							
<u>PR 202 RIGHT OF WAY ROAD PLAN 5830</u>		<u>W/20</u>	<u>IN</u>	<u>0TH</u>	<u>70</u>	<u>PARISH</u>	<u>OF ST. PAUL</u>
<u>LSD</u>	<u>OR QUARTER</u>			<u>SECTION</u>		<u>TOWNSHIP</u>	<u>RANGE</u>
<u>E OR W</u>							
or otherwise described as <u>GRAY ROAD / P.R. 202 JUNCTION TEST WELL</u>							
at the following rates:							
_____ cubic metres per second							
_____ cubic decametres per day							
<u>700</u> cubic decametres per year							
Number of hectares to be irrigated _____ (If applicable)							
The above described lands are held as follows: (check applicable box)							
<input type="checkbox"/> Registered owner		<input type="checkbox"/> purchased under agreement for sale			<input type="checkbox"/> lessee		
<input checked="" type="checkbox"/> to be negotiated							
Copy(s) of Certificate(s) of Title or Title Numbers must be included.							
Date: <u>July 5,</u> _____ 20 <u>11</u>				 (signature of applicant)			

<p>FOR OFFICE USE ONLY</p> <p>Application filed with the Director, Water Branch, at Winnipeg, Manitoba on _____, 20____</p> <p>_____ (Signature of Director)</p>	<p>** PLEASE NOTE **</p> <p>FEE OF \$50.00 MUST ACCOMPANY THIS APPLICATION, CHEQUE AND APPLICATION TO BE MAILED TO:</p> <p>MANITOBA CONSERVATION CASHIER'S OFFICE BOX 42, 200 SAULTEAUX CRESCENT WINNIPEG MB R3J 3W3</p>
---	--



Infrastructure and Transportation

Engineering & Operations Divisions
Highway Regional Operations
Eastern Region
316-323 Main Street
Steinbach, Manitoba R5G 1Z2
T 204 346-6286 F 204 326-4852
www.manitoba.ca

June 15, 2011

Mr. Jerome Mauws, C.A.O.
Rural Municipality of East St Paul
3021 Birds Hill Road
East St. Paul, MB
R2E 1A7

Re: Conditional Approval to Install Ground Water Monitoring Well within PR 202 Right-Of-Way (Road Plan 5830 WLTO), in the vicinity of OTM 70, in the Parish of St Paul, R.M. of East St. Paul.

This is in reply to a May 30, 2011 email from Brett Ransom of Stantec, requesting permission for the temporary installation of 200mm – 250mm well casing and ground water monitoring well on the above noted location (herein after referred to as the Works) on Department's controlled Crown Land within PR 202 right-of-way. Intended purpose of these works is to drill boreholes, install monitoring wells and perform soil, ground water, environmental or other tests, measurements or surveys in, on, or under the Department's right-of-way.

Permission is hereby granted for the proposed temporary works, at the locations indicated on the attached sketches referred to as Schedule "A", subject to the following conditions:

1. The Department receives a copy of this permit duly signed by the RM of East St. Paul authorized representative agreeing to comply with the conditions and recommendations as stated herein;
2. The Permit shall remain in effect for a maximum period of 5 years commencing from date of this permit. The Department may grant an extension upon receipt of written request from the RM of East St. Paul;
3. The RM of East St. Paul shall arrange for the safe movement of highway traffic and pedestrians during installation of the Works, by providing and maintaining the necessary signs, barricades, channelling, and other devices which are generally required by the Province's "Workzone Signing Procedures for Utility Operations";
4. The RM of East St. Paul shall contact Mr. Roger Sutyla, Maintenance Superintendent in Hoka office at (204) 945-0058 and Mr. Rick Faryon, Health and Safety Officer in Steinbach at (204) 346-6270 to confirm signing requirements at least 48 hours in advance of any work taking place;
5. The RM of East St. Paul's construction, installation and maintenance operations of the Works shall be accomplished with minimum interference of the use, operation and maintenance of the Department's right-of-way and shall at all times in no way endanger the general public in its authorized/legal use of the right-of-way;
6. The costs associated with removal, relocation or decommissioning of these Works and restoration of land and right-of-way to a condition acceptable to the Department, will be the responsibility of the RM of East St. Paul;
7. The RM of East St. Paul shall be responsible for all costs that may occur because of damage the RM of East St. Paul causes to the Road, utilities or underground services within the right-of-way of the Road while constructing or maintaining the Works. In the case of damage to or interference with any public or privately owned installations, The RM of East St. Paul shall immediately notify the owner and the Director of Regional Operations of the location and details of such damage or interference;



8. The RM of East St. Paul shall indemnify and save harmless the Department from and against all claims arising from the construction, operation and maintenance of the Works by the RM of East St. Paul, its authorize representative or agents;
9. The RM of East St. Paul hereby releases the Department from any and all liability for damage to the Works or any related property by reason of any work carried out on the Road by the Department, its servants or agents;
10. The RM of East St. Paul shall not use the Road location for any purpose other than the construction, operation and maintenance of the Works;
11. The RM of East St. Paul shall comply with all applicable municipal by-laws, and other laws and regulations in construction, operating and maintaining the Works;
12. The RM of East St. Paul shall not assign or transfer any of the rights authorized by this permit except upon notification and approval by the Department;
13. The RM of East St. Paul will be responsible for obtaining any necessary environmental approvals; If a permit or license is required from Manitoba Water Stewardship, a copy shall be forwarded to this office.
14. The applicant is responsible for the accuracy of all information provided. Manitoba Infrastructure and Transportation assumes no liability or responsibility for any such errors, omissions or inaccuracies;
15. The RM of East St. Paul will be required to provide proof of a \$2million (minimum) public liability insurance coverage naming the Manitoba Infrastructure and Transportation (MIT), in writing, as additional insured and further that the owner shall maintain said coverage for so long as this Agreement remains in effect;
16. The RM of East St. Paul will be responsible to correct settlement, erosion or poor vegetation for a two year period from either following completion of operations, restore the sites to a satisfactory condition and be responsible for any future settlement for a period of 2 years from either the date of installation or the date of maintenance of previously installed "works" whichever is applicable;
17. If any changes in the location or use of the permitted structures are necessary to accommodate the use of this right-of-way by the Department for highway upgrading or improvements, all costs associated with the removal, relocation or decommissioning of these structures and restoration of the right-of-way to a condition acceptable to the Department, will be the responsibility of the RM of East St. Paul;
18. The Department will provide the RM of East St. Paul with a minimum of sixty (60) days notification of the requirement to remove, relocate or decommission the permitted structures;
19. The RM of East St. Paul shall give the Department's Director of Regional Operations, Manitoba Infrastructure and Transportation, ten (10) days prior written notice, unless otherwise agreed, to enter upon the right-of-way for the purpose of major maintenance, alteration, reconstruction or removal of the permitted Works;
20. The owner of "The Works" will be required to install and maintain sign markers as shown on attached "Appurtenance Detailed Drawing", for all appurtenances 100mm or more above ground (ie. Water valves, hydrants or manholes) within Highway right-of-way. This will help ensure that the appurtenances are not struck by off-road vehicles or during maintenance operations.

For your information, the Department's latest version of "Work Zone Traffic Control Manual" revised March 2002, can be found on the internet at:
<http://www.gov.mb.ca/tgs/contracts/workzone/index.html>

Permission comes into effect when the Department receives a signed copy of this letter from the RM of East St. Paul agreeing to all the conditions contained or implied in this letter.

Thank you for your co-operation.

Yours truly,



Warren Borgford, P. Eng.
Technical Services Engineer

gt/att.
cc: B.Wareham/ M. Chomoboy/G.Toews/ file
R.Crang / M.Irvine
R.Sutyla
R. Faryon
Brett Ransom - Stantec

ACKNOWLEDGEMENT:

Date: June 22/11.

I, Rhiana Condon of The Rural Municipality of East St. Paul
agree to comply with the conditions and recommendations outlined in this letter.

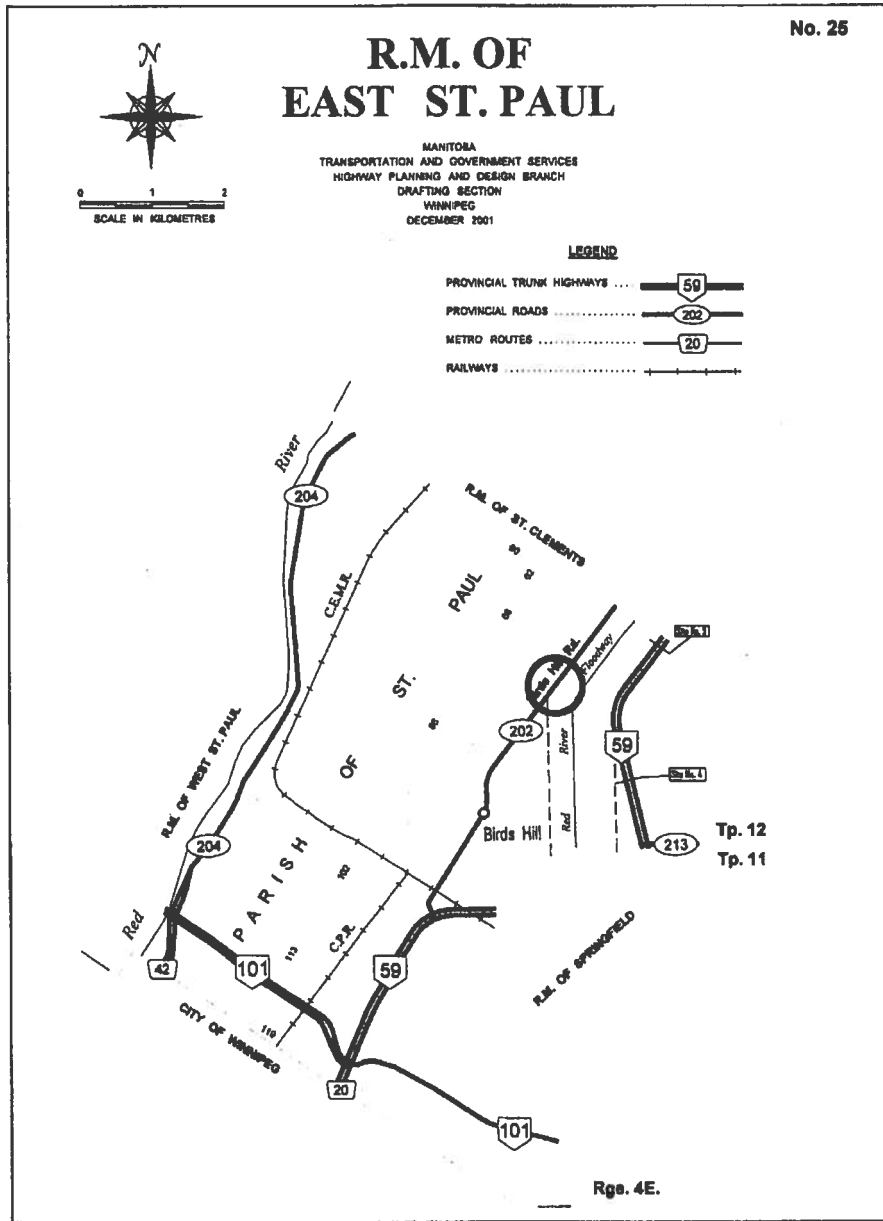
R.M. OF EAST ST. PAUL

MANITOBA
TRANSPORTATION AND GOVERNMENT SERVICES
HIGHWAY PLANNING AND DESIGN BRANCH
DRAFTING SECTION
WINNIPEG
DECEMBER 2001



LEGEND

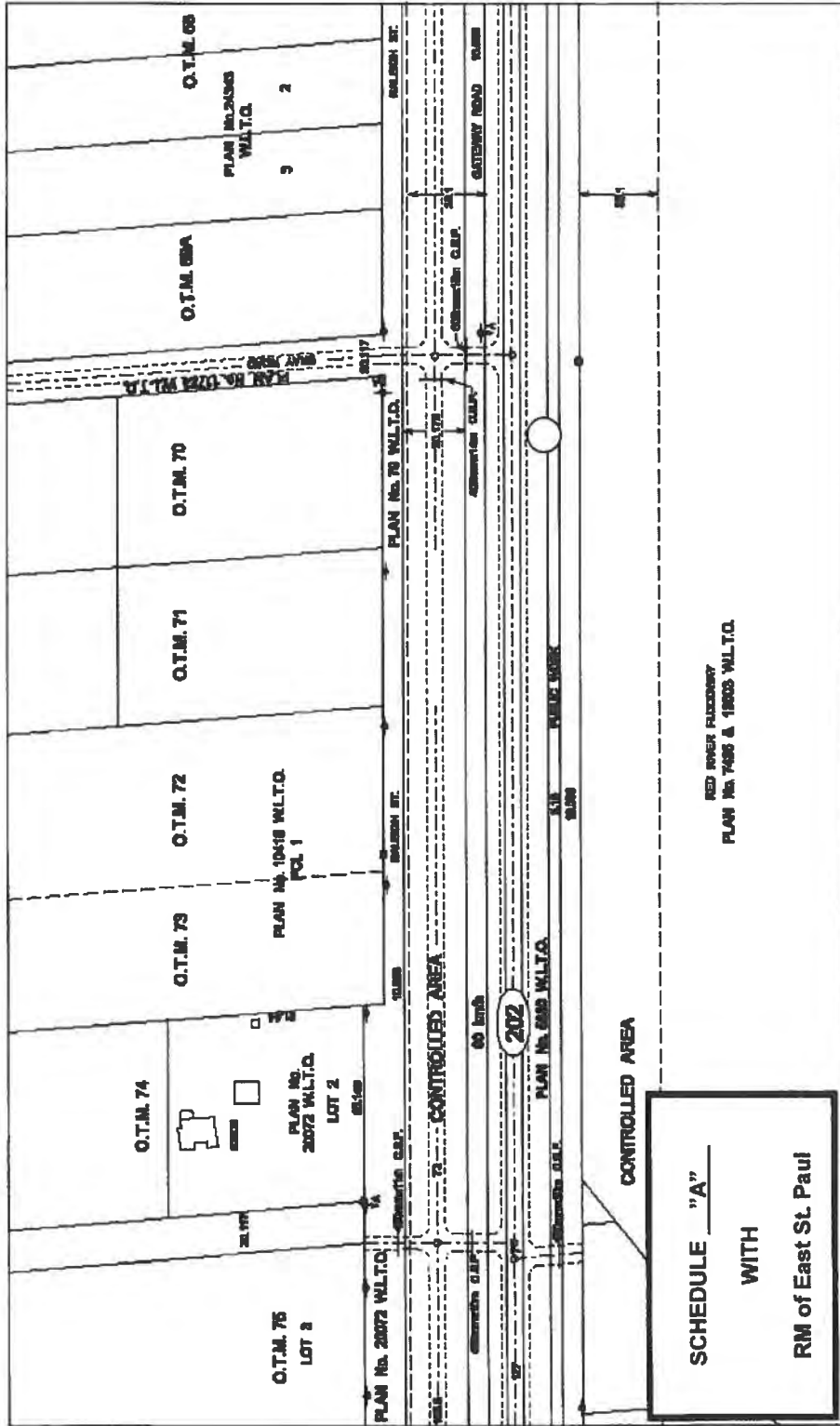
- PROVINCIAL TRUNK HIGHWAYS ...
- PROVINCIAL ROADS ...
- METRO ROUTES ...
- RAILWAYS ...



Rgs. 4E.

SCHEDULE "A"
WITH
RM of East St. Paul





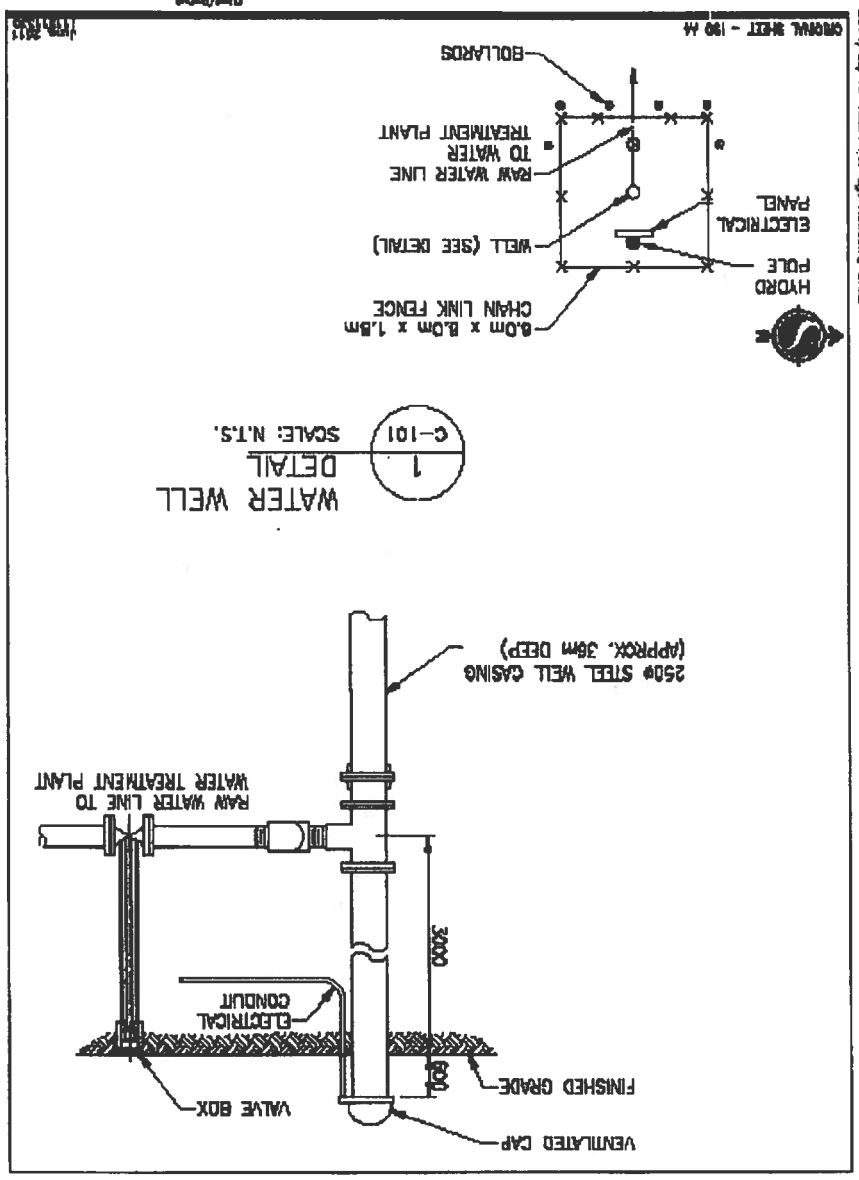
SCHEDULE "A"
WITH
RM of East St. Paul

Proposed
Monitoring
Well

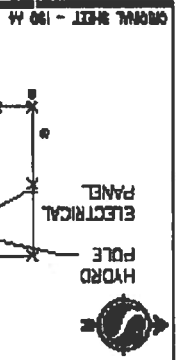
SCHEDULE "A" TO
AGREEMENT NO. _____
WITH
P.L.M. of _____
East St. Paul

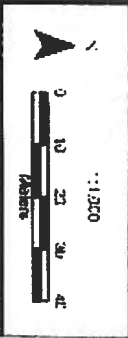
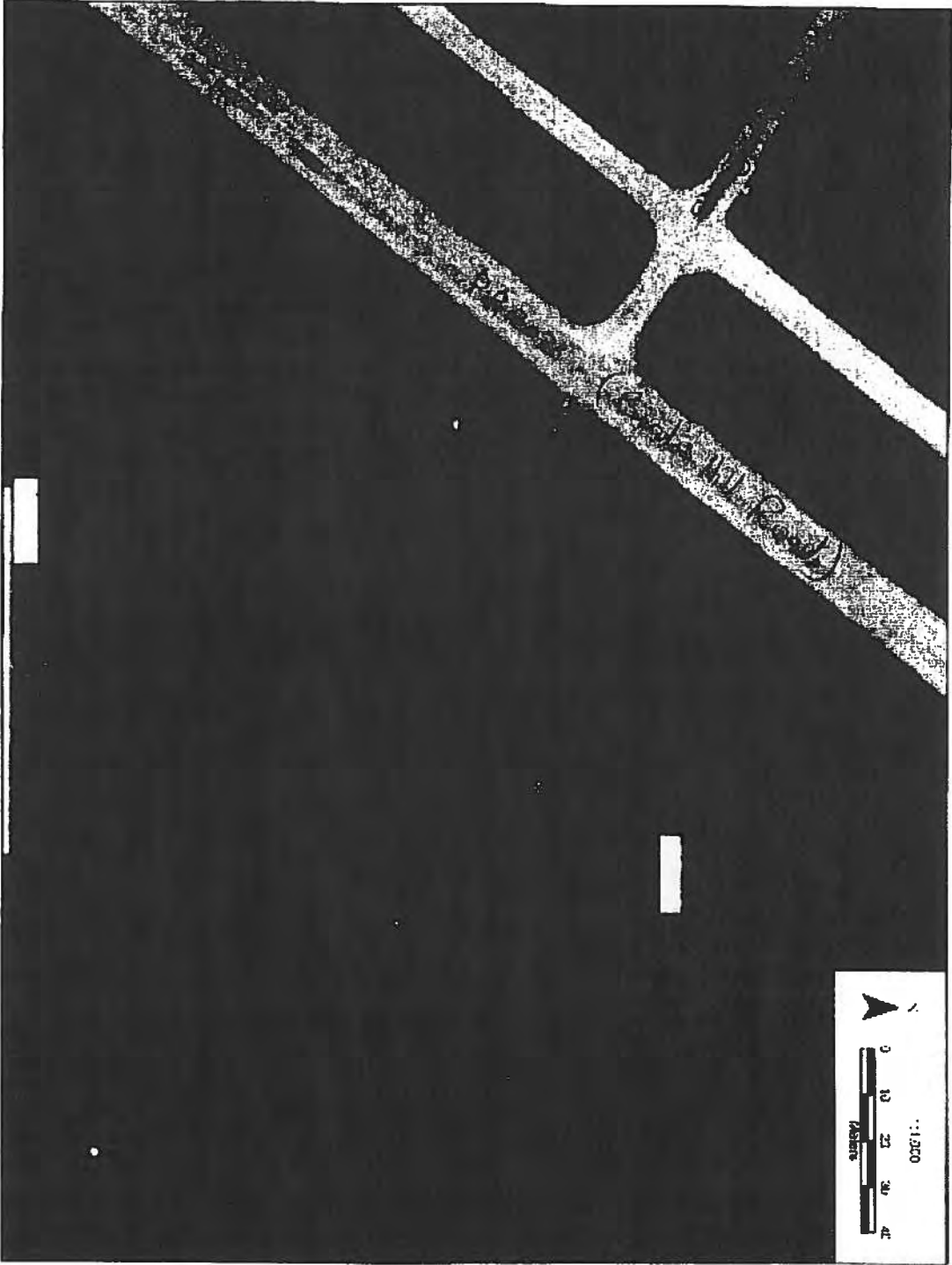
DWG/2024
PLAN OF EAST ST. PAUL,
GRAND ROAD WATER SUPPLY & WELL
ENLARGEMENT INVESTIGATION
Figure No. _____
FIGURE 1A
PRELIMINARY SITE PLAN
FOR APPROVAL REQUEST

Sinclair Consulting Ltd.
905 Waverly Street
Winnipeg, MB Canada
R2T 6P4
Tel. 204.489.5900
Fax. 204.483.8012
www.sinclair.com



X:\112\2024\20241121\SIN\Drawing\Site Plan.dwg
2024/02/15 10:54 AM By: Reservoir_Sinc







Water Stewardship

Water Use Licensing Section
Regulatory and Operational Services
Box 16, 200 Saulteaux Crescent
Winnipeg, Manitoba, Canada R3J 3W3
T 204-945-6118 F 204-945-7419
Rob.Matthews@gov.mb.ca

August 9, 2011

File: East St. Paul, R.M. (-5)

Bruce Schmidt
Rural Municipality of East St. Paul
3021 Birds Hill Road
East St. Paul MB R2E1A7

Dear Mr. Schmidt:

Attached herewith is a **Groundwater Exploration Permit** issued in response to the Rural Municipality of East St. Paul's application registered July 18, 2011 to construct well(s) and divert groundwater in Road Plan 5830 in OTM 70 of the Parish of St. Paul in Manitoba for municipal purposes.

The Groundwater Exploration Permit authorizes the Rural Municipality of East St. Paul to carry out exploration test drilling, construct supply and return wells, and conduct aquifer pump testing. The purpose of the pump testing is to determine if sufficient water is available from the wells and from the aquifer to support the project and to determine water level impacts on existing local wells and/or registered projects with earlier precedence dates than the proposed project. Please familiarize yourself with the terms and conditions of the Groundwater Exploration Permit.

A licensing decision on this project will be held pending submission of the required information. Please note that diversion of water without a Water Rights Licence or written authorization would constitute a violation of *The Water Rights Act* and may be subject to enforcement.

One important condition of any licence that may be issued for this project, in due course, is that a flow meter must be installed on the pipeline from the supply well(s), positioned to accurately measure instantaneous pumping rate and accumulative withdrawals

Please contact Lorraine Thibert, directly at 204-945-6693 should you have any questions regarding the requirements outlined in this letter and the attached permit or the water rights licensing aspects of this project.

Yours truly,

ORIGINAL SIGNED BY:
ROB MATTHEWS

Rob Matthews, P. Geo.
Manager, Water Use Licensing Section
Regulatory and Operational Services

cc. Lorraine Thibert
Jeff Bell, Friesen Drillers Ltd. ✓
Jim Welbourne, District Manager, Cooks Creek Conservation District
Attachment - Form H / Permit

Groundwater Exploration Permit

Pursuant to The Water Rights Act

Rural Municipality of East St. Paul

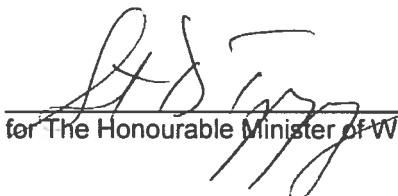
is hereby permitted to construct a water well or wells on the following described lands to explore for groundwater.

Road Plan 5830 WLTO, in OTM 70 of the Parish of St. Paul for **municipal** purposes, subject, however, to the following conditions:

1. The permittee must have legal access to the site where the exploration work and project wells are to be located.
2. Prior to undertaking any work or construction of any works authorized by this permit the permittee is required to retain the services of a hydrogeologist registered with Association of Professional Engineers and Geoscientists of Manitoba, who would be required to:
 - Plan and supervise the drilling of boreholes, test wells, production wells, observation wells, and aquifer and well pump testing as authorized by this permit. The number and location of observation wells to be used as monitoring wells shall be subject to approval by Manitoba Water Stewardship.
 - Conduct a constant rate aquifer pumping test on the proposed production well in accordance with Form H (attached), for a period of 72 hours and at least 90% recovery. The constant rate aquifer pump test must be conducted at a rate of not less than the anticipated peak daily demand pumping rate of the proposed municipal supply well(s).
 - Carry out a desktop and field inventory of private and commercial wells within a 1250 m radius of the project well site.
 - Prepare and submit to the Water Use Licensing Section a technical report on the drilling of boreholes and wells, pump testing of wells, and well inventory. The report would contain, but not be limited to, such things as: well driller's reports for test wells, production wells and observation wells, a plan showing the location of these wells on the property and/or GPS locations of the wells, an analysis of aquifer pumping tests, calculations of transmissivity and storativity, and a description of the amount of water level interference that would be expected to occur at existing local wells or proposed projects with an earlier precedence date that are located within a 1250 m radius of the project well site. The report would also indicate if any local wells are expected to be adversely affected by the proposed use of water and where these wells are located. Two copies of the report shall be submitted, one hardcopy and one digital copy.
3. During any pumping tests that may be conducted, pumping must cease immediately if any local water supplies are negatively impacted as a result of the tests. The permittee is also responsible to correct any water supply problems or provide temporary water supply to anyone whose water supplies are negatively impacted as a result of the tests.
4. This permit expires within twelve (12) months of the date of issuance.
5. Please note that diversion of water without a Water Rights Licence or written authorization would constitute a violation of The Water Rights Act and may be subject to enforcement.

Issued at the City of Winnipeg in the Province of Manitoba, this 8 day of August, A.D. 2011

Rm 11/08/04


for The Honourable Minister of Water Stewardship



Appendix D

Estimated Water Supply Requirements

Memo



Stantec

To: File

From: Brett Ransom

File: 111214240

Date: November 16, 2012

Reference: East St. Paul WTP Master Plan – Water Supply Requirements

Historical Water Demands

Daily water usage records provided by the RM were analyzed as part of Stantec's Water Distribution Master Plan (2007) and Water Treatment Plant Assessment (2010). The most recent 10 years of data is summarized below. Water demands from commercial, institutional and industrial users have been converted to equivalent residential units (ERUs) based on the typical water demand for a residential dwelling. The total number of ERUs includes all residential, commercial, institutional and industrial consumers.

Year	ERUs	New ERUs	Average Day [m ³]	Daily Per Capita [L]	Maximum Day [m ³]	Peaking Factor
2003	608	-	563	290	2519	4.5
2004	705	97	530	235	1744	3.3
2005	770	65	579	235	1491	2.6
2006	802	32	882	344	2526	2.9
2007	818	16	654	250	2246	3.4
2008	833	25	664	249	1708	2.6
2009	859	26	647	235	1757	2.7
2010	878	19	665	237	1613	2.4
2011	902	24	856	297	2690	3.1
2012	910	8	838	288	2563	3.1

- 10-year average = 266 litres per capita per day
- 5-year average = 261 litres per capita per day
- Use 270 litres per capita per day for planning purposes with maximum day factor of 3.0 (assumes denser development will use less water over the long-term)

One Team. Infinite Solutions.

rb v:11112\active\111214240\0200_correspondence\mem_file_water_supply_20121116.docx

Stantec

November 16, 2012

File

Page 2 of 3

Reference: East St. Paul WTP Master Plan – Water Supply Requirements

Raw Water Supply

The existing Water Rights Licenses' withdrawal rates are summarized as follows.

License Number	Annual Withdrawal Rate [m ³ /year]	Annual Withdrawal Rate [m ³ /s]	Maximum Instantaneous Withdrawal Rate [m ³ /s]
2005-060 (well #8)	195,000	0.0062	0.020
2007-074 (wells #1,4,5,6)	358,000	0.0114	0.019
2009-030 (well #7)	612,000	0.0194	0.0114
Existing License Sub-total	1,165,000	0.0369	0.0504
Proposed Bray Road Well	700,000	0.0222	0.0222
TOTAL	1,865,000	0.0591	0.0726

The limiting criterion with respect to the raw water supplies' ability to support development is the maximum instantaneous withdrawal rate since the required maximum day factor is 3.0 and the Licensed withdrawal rate is less than 3.0 times the average day withdrawal rate.

- The estimated number of equivalent residential units (ERUs) than can be supplied by existing raw water sources is calculated as follows.

$$50.4 \text{ L/s} \div 3.0 \div 270 \text{ lpcpd} \times 24 \text{ hours/day} \times 3600 \text{ s/hour} \div 3.2 \text{ people/ERU} = 1680$$

- $1680 - 910 = 770$ new ERUs

- Assuming a per capita daily demand of 300 litres and a maximum day factor of 3.1, the estimated number of new ERUs that the existing water supply can accommodate drops to approximately 550.

Historical records have shown that there can be significant changes in water usage from year to year in the RM. Short-term planning should consider this fact, however, for long-term (20-year) planning it is expected that these peaks would be less pronounced as the population grows.

One Team. Infinite Solutions.

Stantec

November 16, 2012

File

Page 3 of 3

Reference: East St. Paul WTP Master Plan – Water Supply Requirements

Projected 20-year Water Demands

There are approximately 910 existing ERUs connected to the municipal water system and approximately 860 new ERUs that are anticipated to be connected through subdivision applications that are already approved or are known to be in the planning process. A Development Plan amendment is expected to occur within the next year or two and it is likely that additional serviced residential land such as the Fahr property will be added to the Development Plan. With new ERUs expected to be added to the municipal water system at an average annual rate of 80 ERUs per year, the **projected 20-year population is approximately 2500 ERUs** which will be utilized for planning and design purposes. The projected water demands for the design population of 2500 ERUs are as follows.

- Average daily demand = 25 L/s
- Average Annual Withdrawal Rate = 788,400 m³
- Maximum Withdrawal Rate = 75 L/s

Other Considerations

1. There are also approximately 1600 existing ERUs that are currently connected to the municipal wastewater collection system but receive water from private well sources. It is possible that these areas may connect to the municipal water system as their private well systems reach their service lives.
2. The raw water quality of the proposed Bray Road supply well is such that it will likely require some level of treatment whereas the current supplies do not. The addition of a treatment train could mean that up to 30% more raw water will be required from the Bray well to meet the potable water demands due to the amount of reject wastewater generated through the treatment process.

STANTEC CONSULTING LTD.



Brett Ransom, P. Eng.
Project Manager
brett.ransom@stantec.com

Attachment:

c.

One Team. Infinite Solutions.

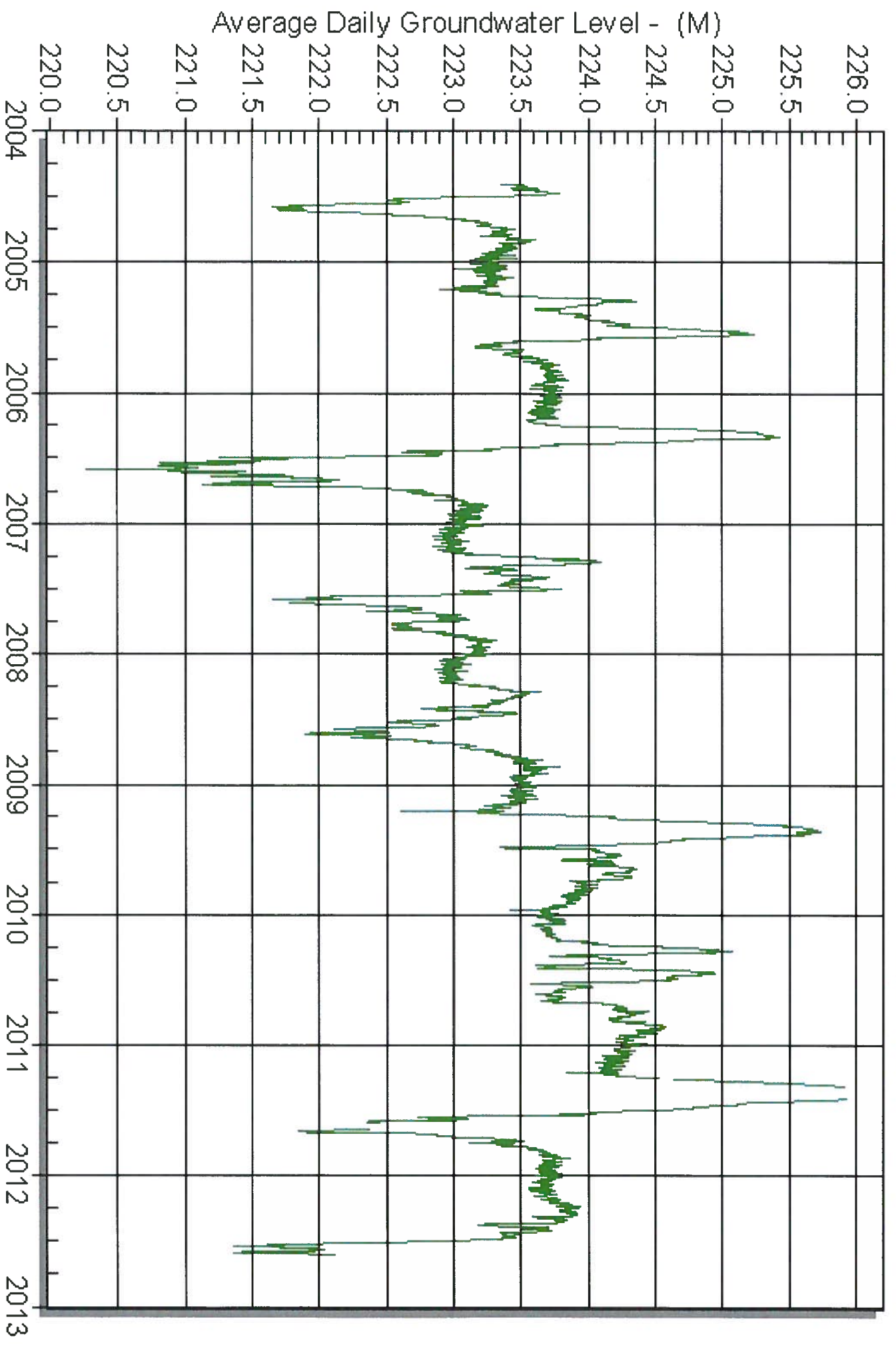
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Appendix E

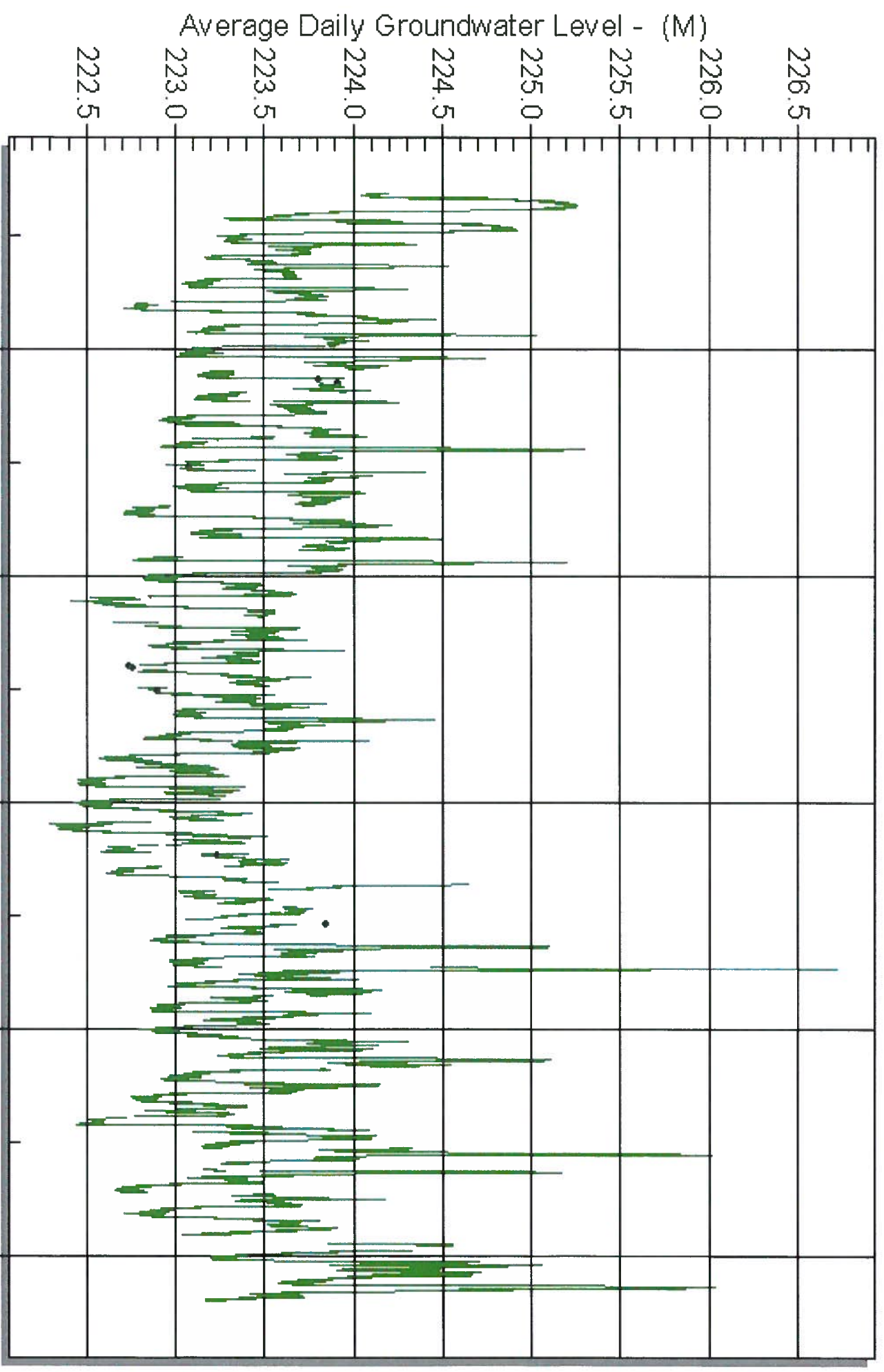
MCWS Hydrograph Stations

GUJULI/S EAST ST. PAUL #3 RL 101 ST. PAUL
GROUND LEVEL ELEVATION IS 232.628 METRES (763.22 FEET)



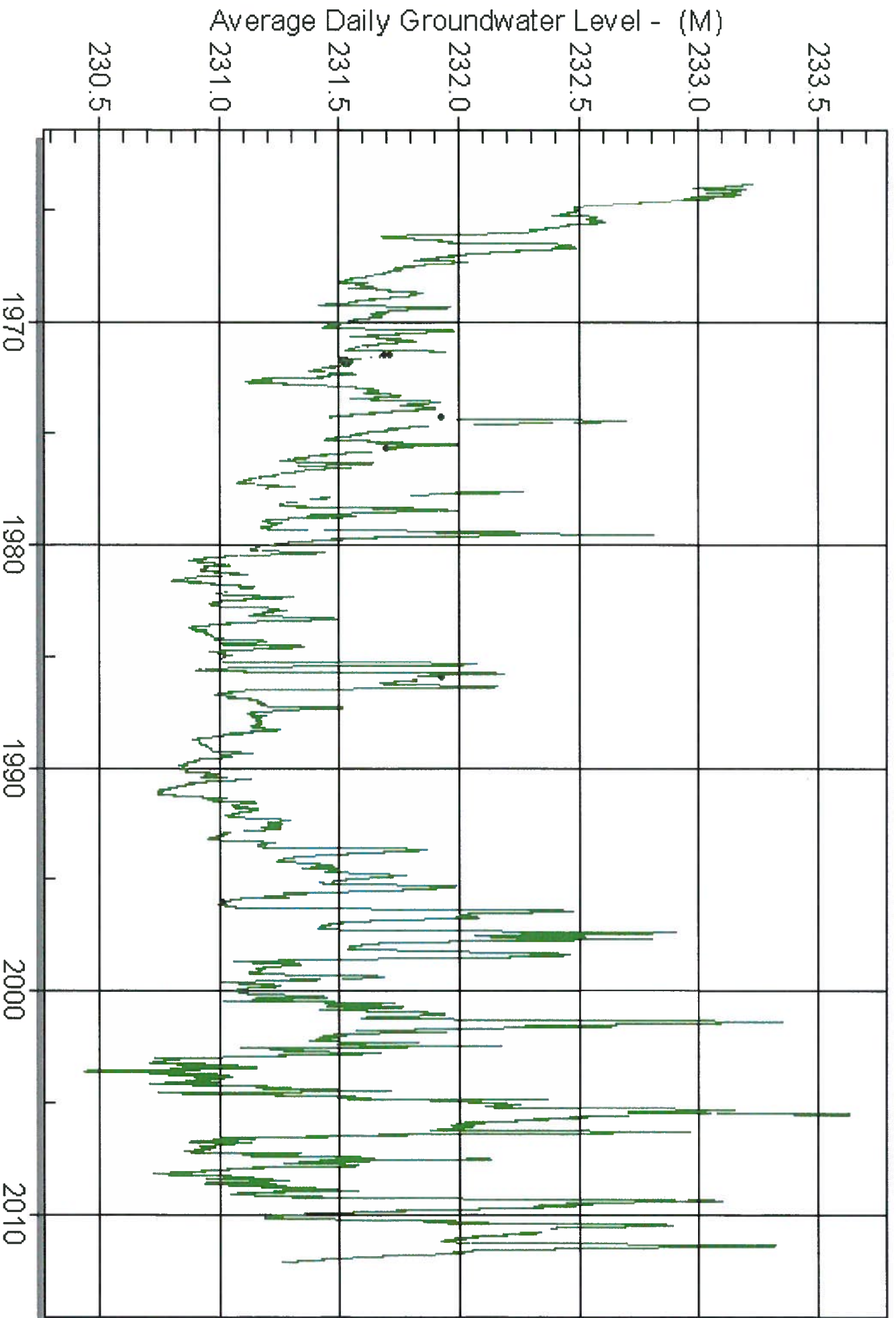
Prepared by Manitoba Water Stewardship 15 Oct 2012

GUSOUJUZ KEU R FLOUJWAY U54 2/1 51 ANDREWS GROUND LEVEL ELEVATION 231.633 METRES (759.95 FEET)



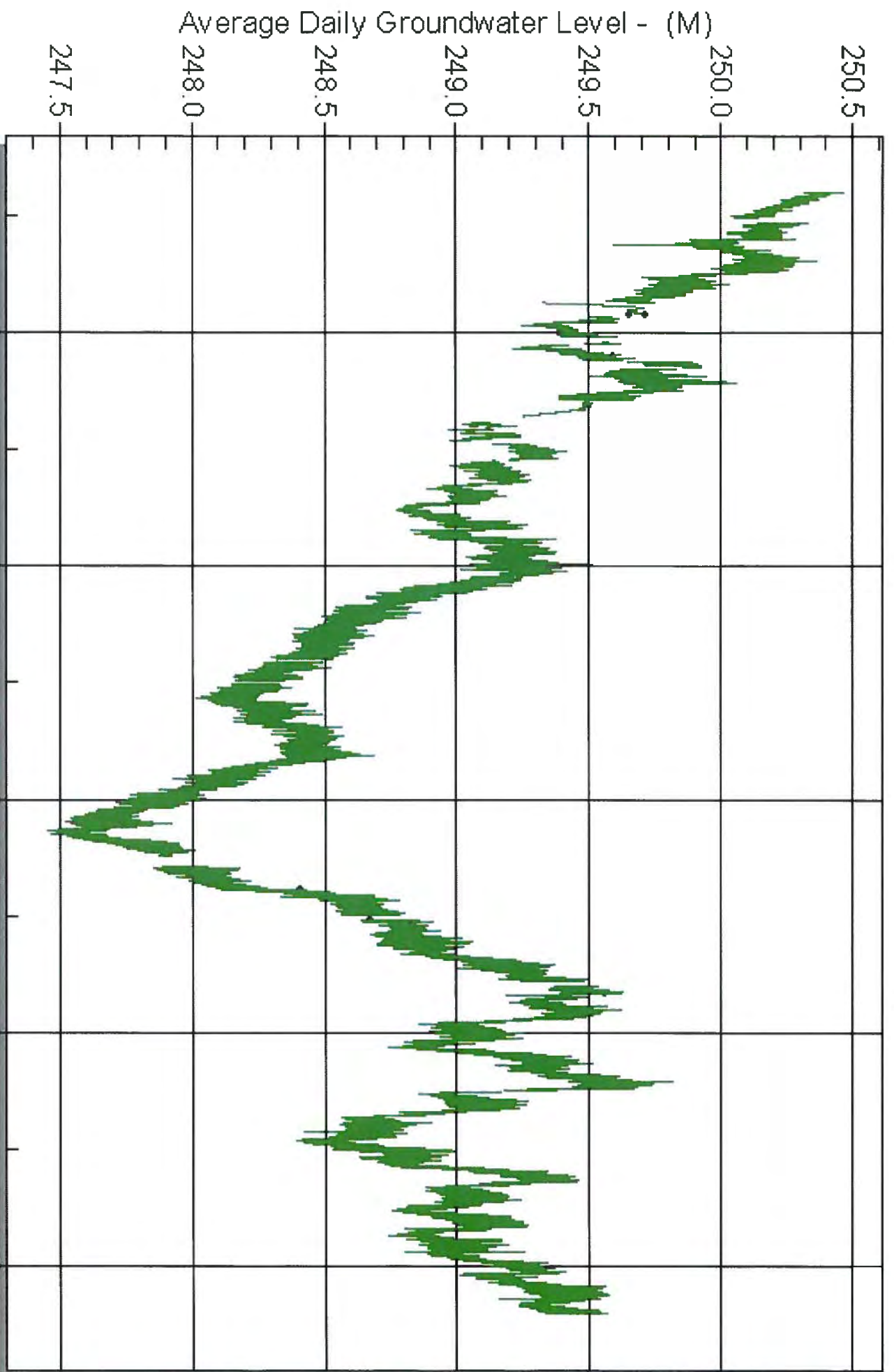
Prepared by Manitoba Water Stewardship 15 Oct 2012

GROUNDWATER LEVEL KELLER FLOWLINE W48 SW 34-11-04E
GROUND LEVEL ELEVATION 242.030 METRES (794.06 FEET)



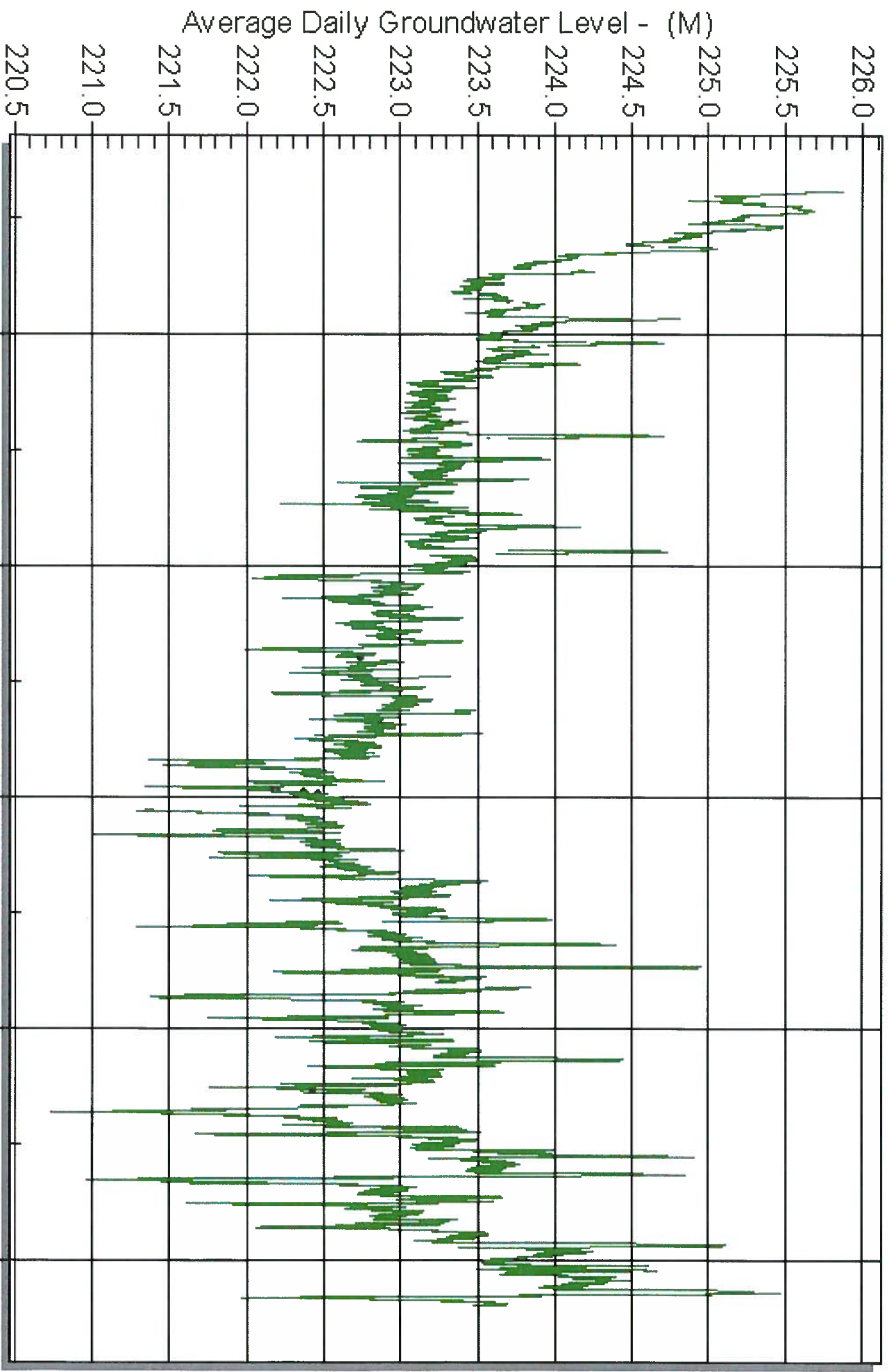
Prepared by Manitoba Water Stewardship 15 Oct 2012

GUSOUUS KED K-HLOUJWAY U44 NW17-12-05E
GROUND LEVEL ELEVATION 251.606 METRES (825.48 FEET)



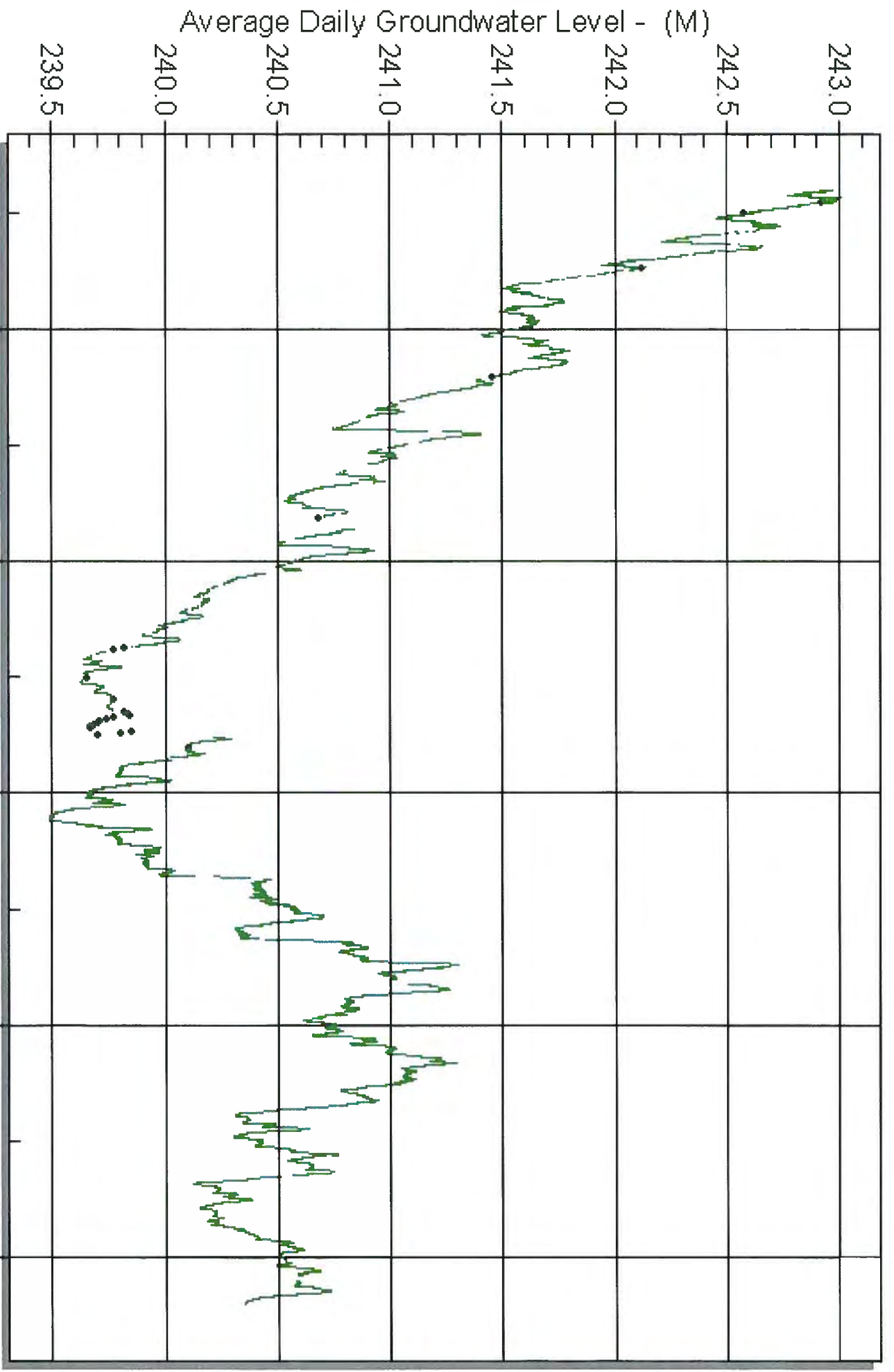
Prepared by Manitoba Water Stewardship 15 Oct 2012

GROUNDWATER LEVEL ELEVATION 231.285 METRES (758.81 FEET)



Prepared by Manitoba Water Stewardship 15 Oct 2012

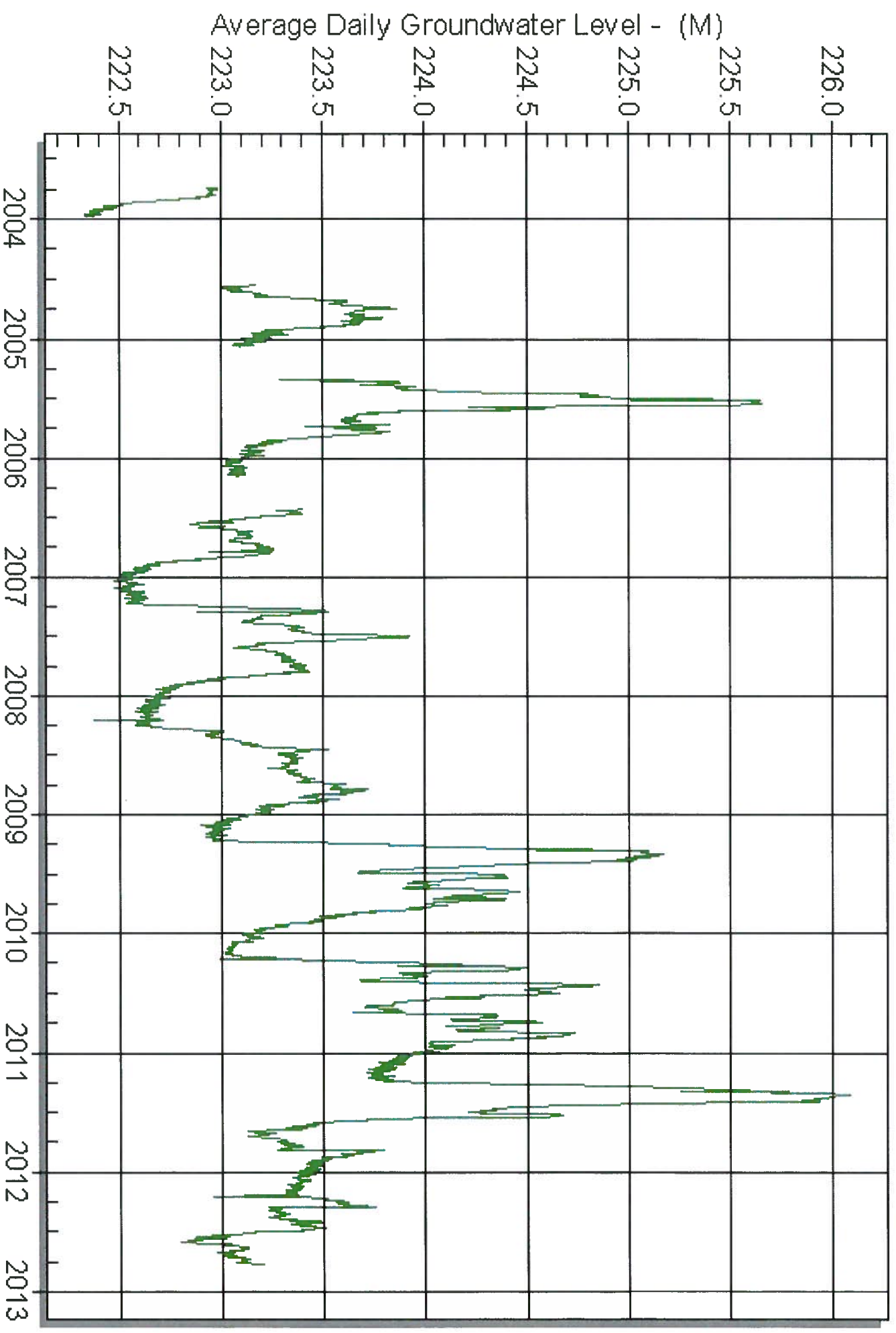
GUSOUJIS KEUK FLOODWAY U49 SWV30-11-U4E
GROUND LEVEL ELEVATION 251.914 METRES (826.49 FEET)



Prepared by Manitoba Water Stewardship 15 Oct 2012

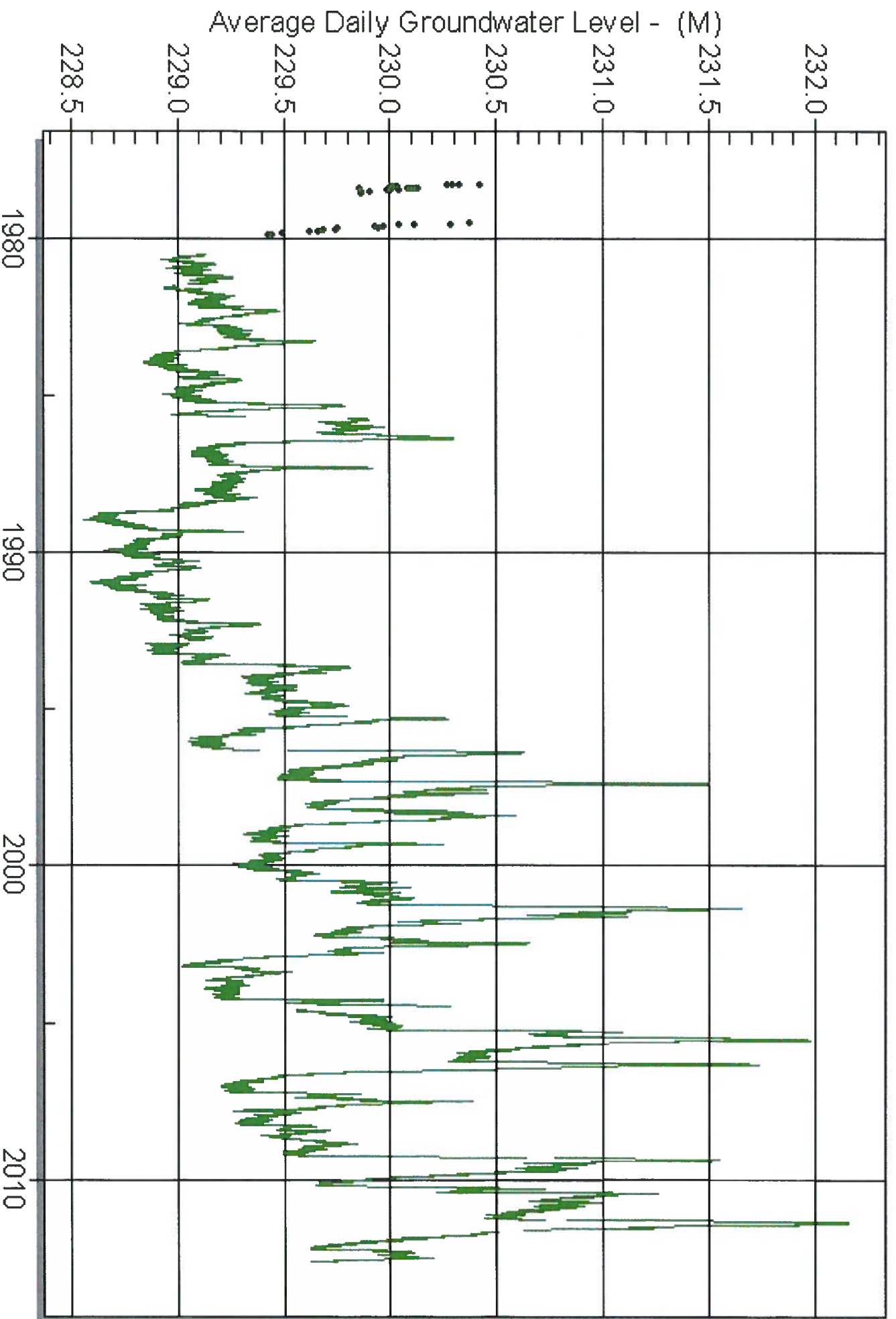
GROUNDWATER LEVEL ELEVATION IS

KEUR FLOODWAY UZ1 / 151 PAUL



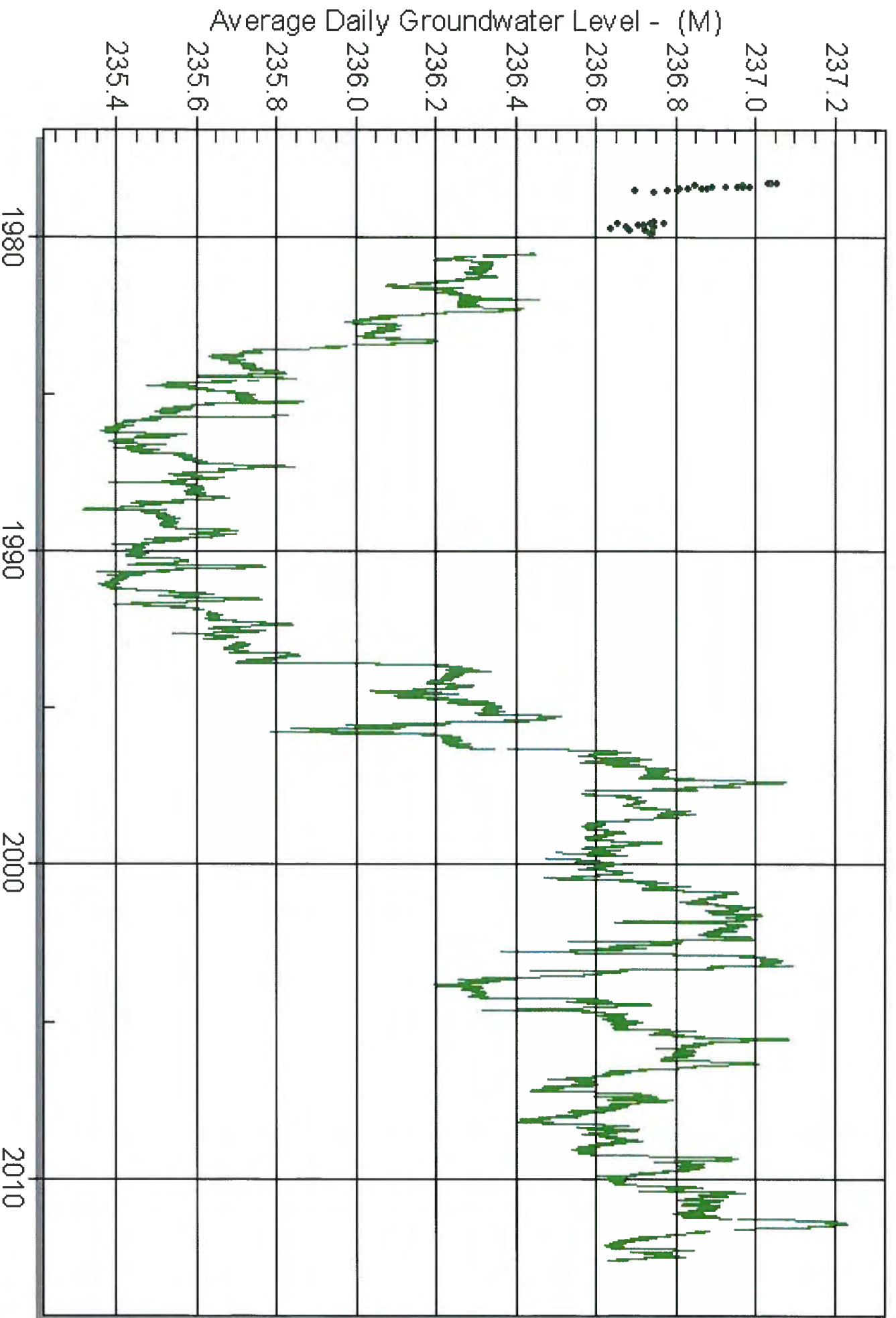
Prepared by Manitoba Water Stewardship 15 Oct 2012

GUOJUU/S KEEK FLOODWAY U / SW 54-11-U4E
GROUND LEVEL ELEVATION 240.788 METRES (789.99 FEET)



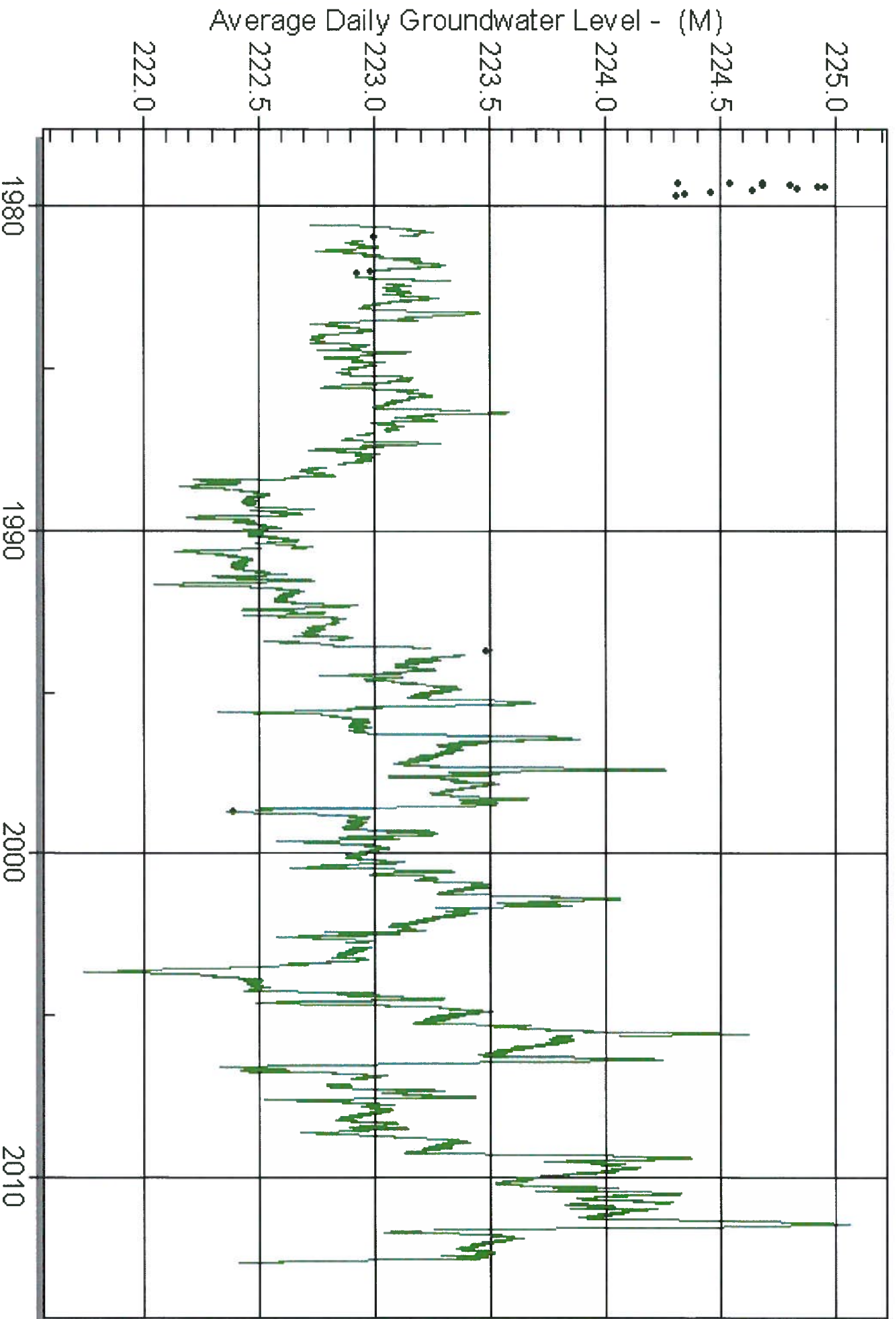
Prepared by Manitoba Water Stewardship 15 Oct 2012

GROUNDWATER LEVEL ELEVATION 248.369 METRES (814.86 FEET)



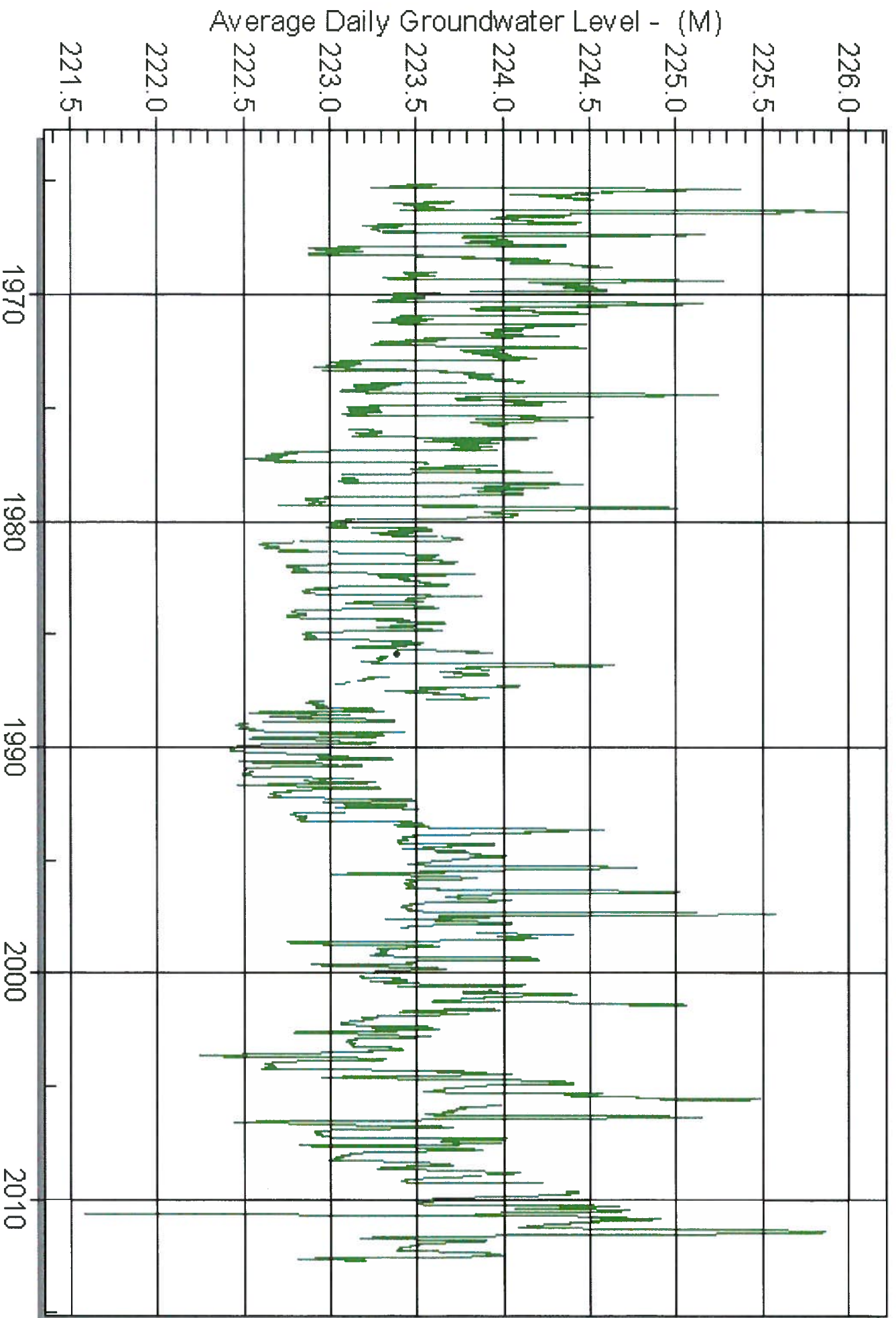
Prepared by Manitoba Water Stewardship 15 Oct 2012

GUSOU062 BIRKUS HILL #13 94 S1 PAUL
GROUND LEVEL ELEVATION 234.357 METRES (768.89 FEET)



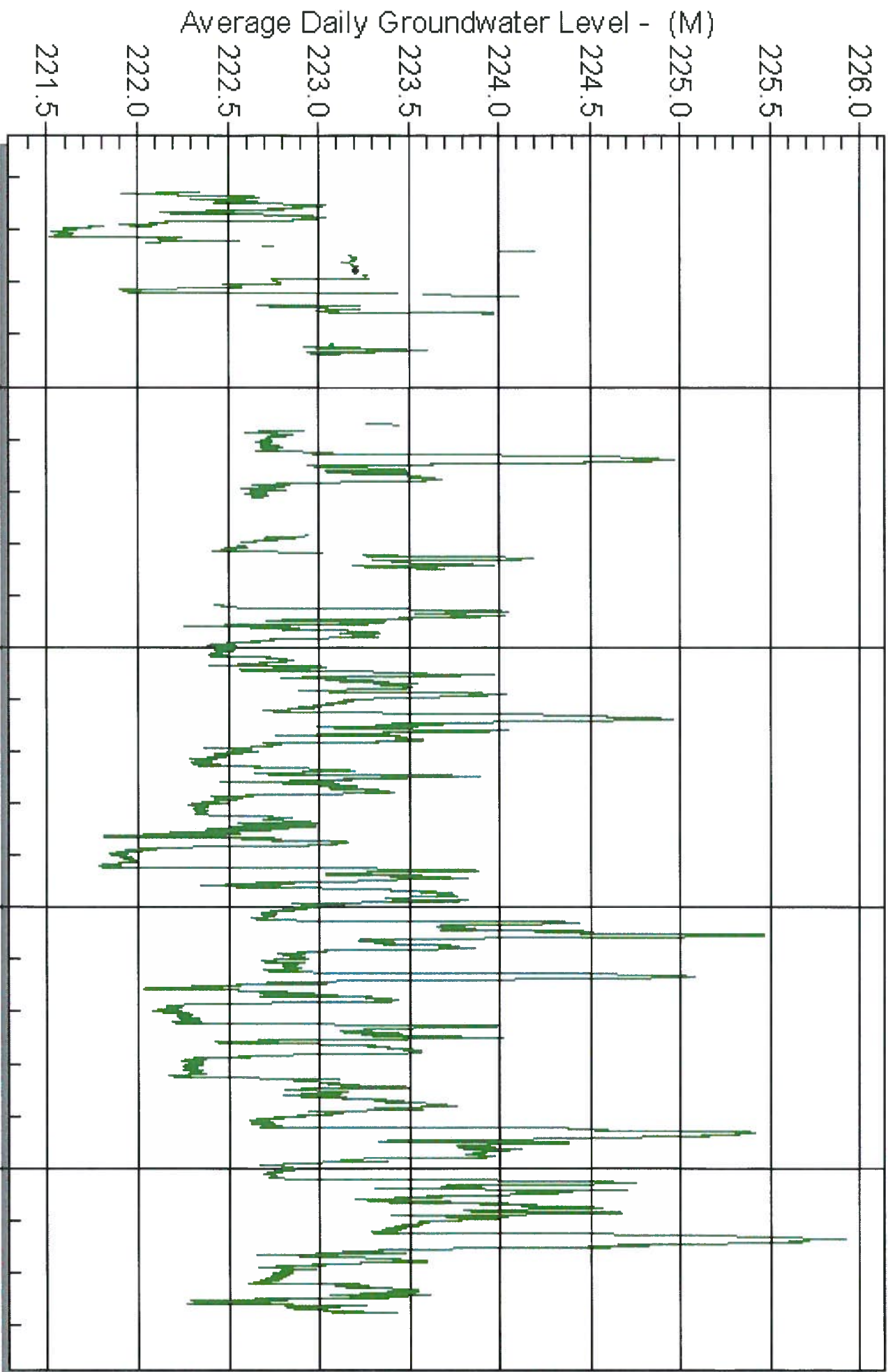
Prepared by Manitoba Water Stewardship 15 Oct 2012

GROUNDWATER MONITORING WELL 151 PAUL
GROUND LEVEL ELEVATION: 231.035 METRES (759.02 FEET)



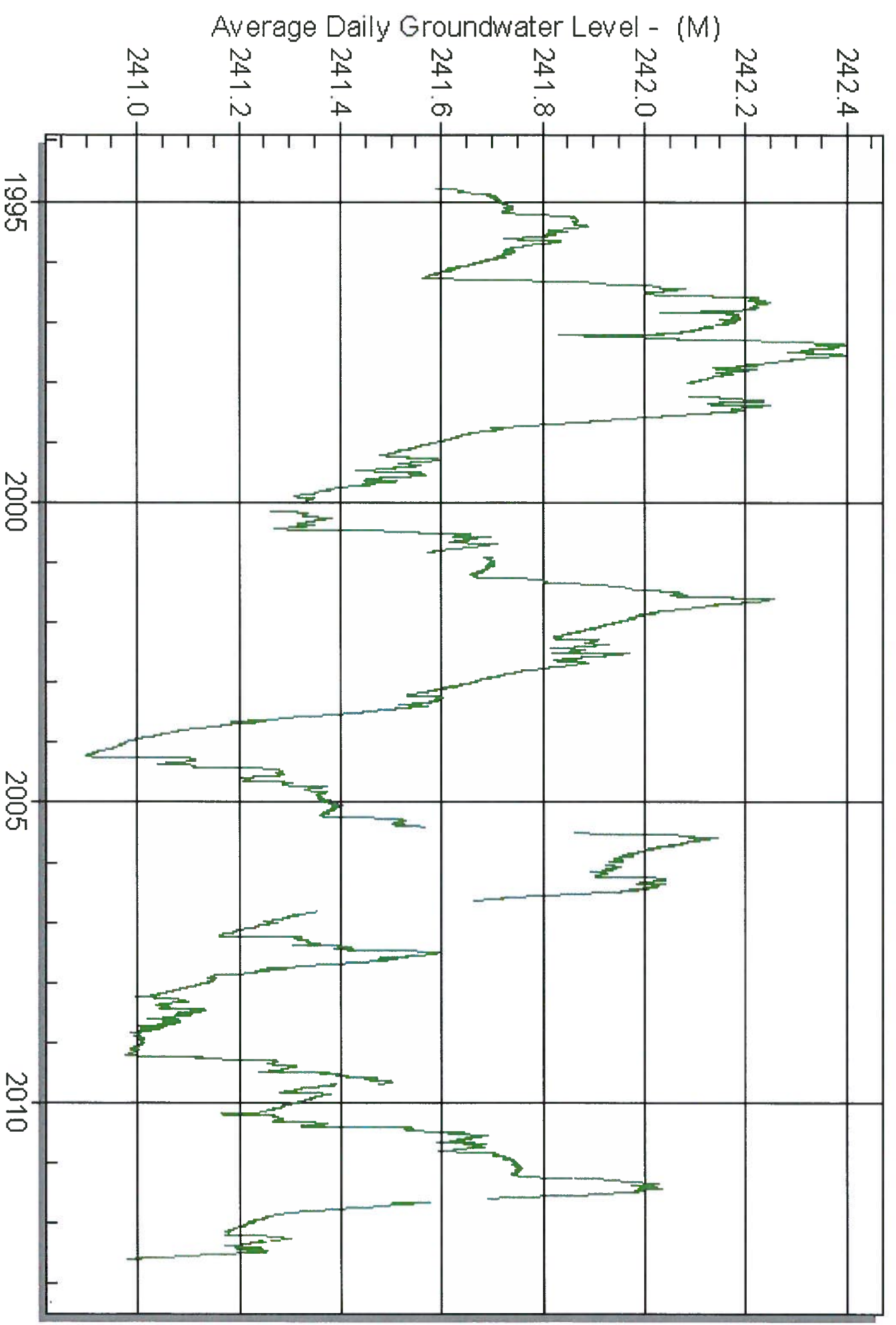
Prepared by Manitoba Water Stewardship 15 Oct 2012

GUSOU 128 WEST 31 PAUL #1 21 31 PAUL
CASING HEIGHT IS



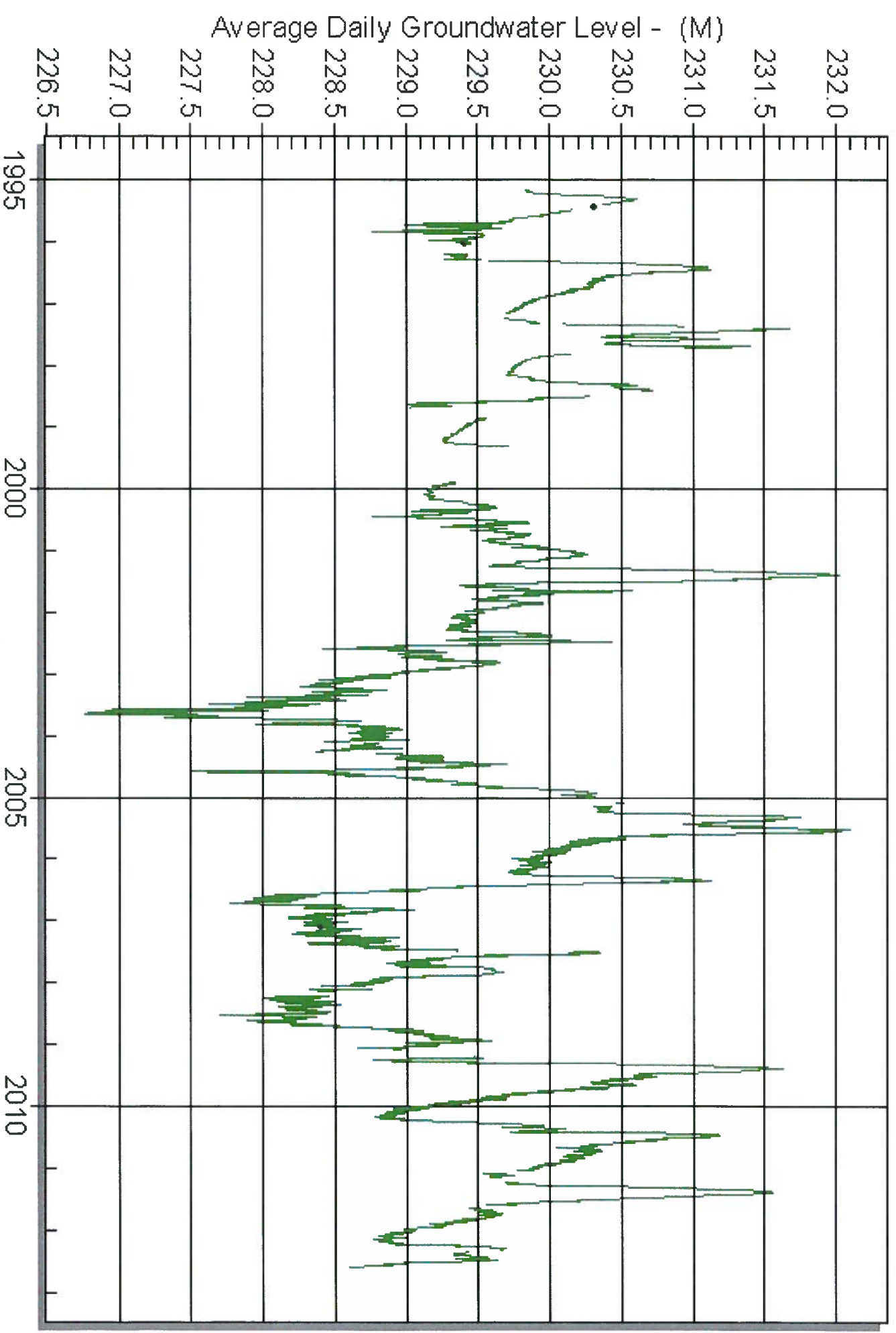
1995 2000 2005 2010
Prepared by Manitoba Water Stewardship 15 Oct 2012

GU3UJ14/ BHU3 IN3U-11-U3E
CASING HEIGHT IS ABOVE GROUND LEVEL



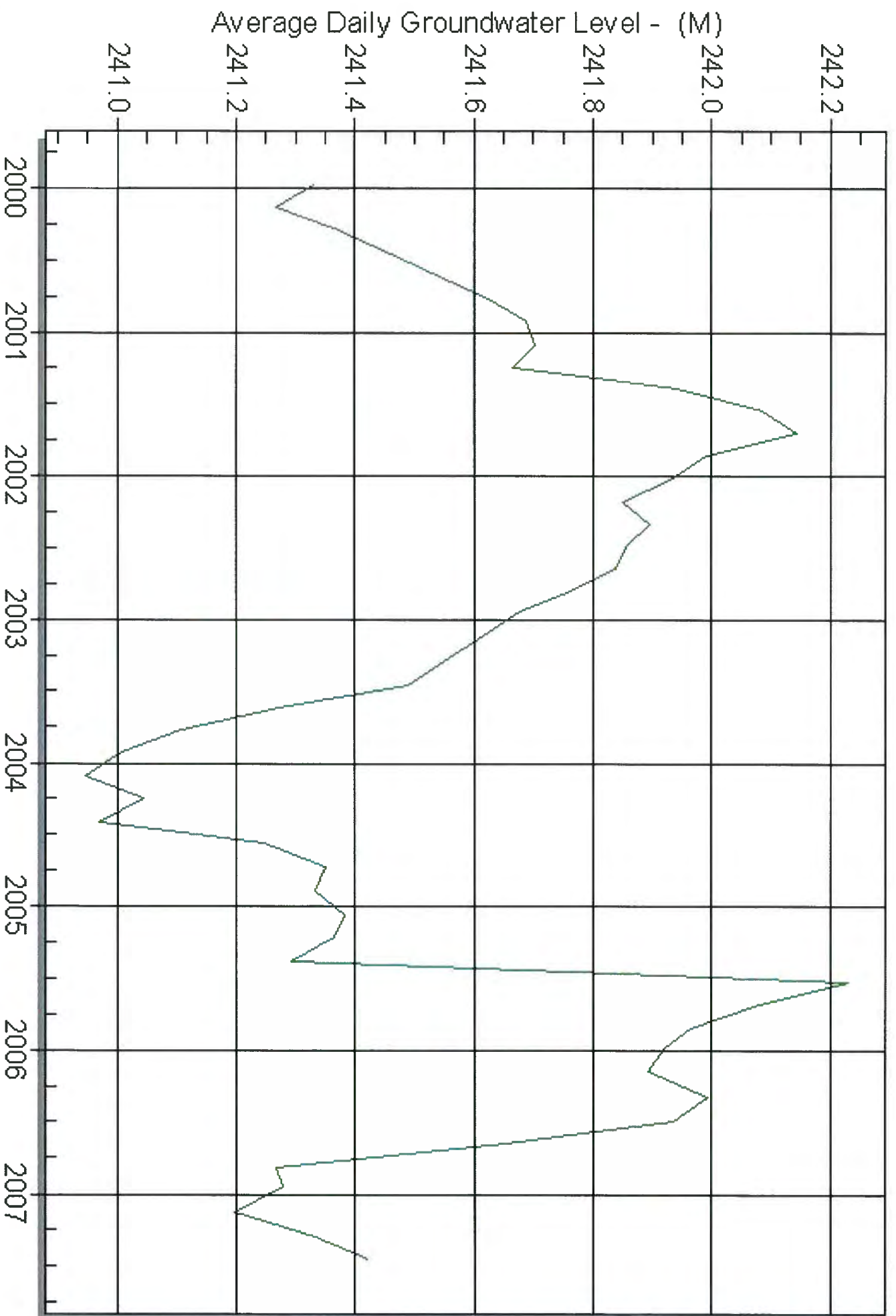
Prepared by Manitoba Water Stewardship 15 Oct 2012

GU50J148 SKI HILL #1 SE35--11-U4E
GROUND LEVEL ELEVATION 242.577 METRES (795.86 FEET)



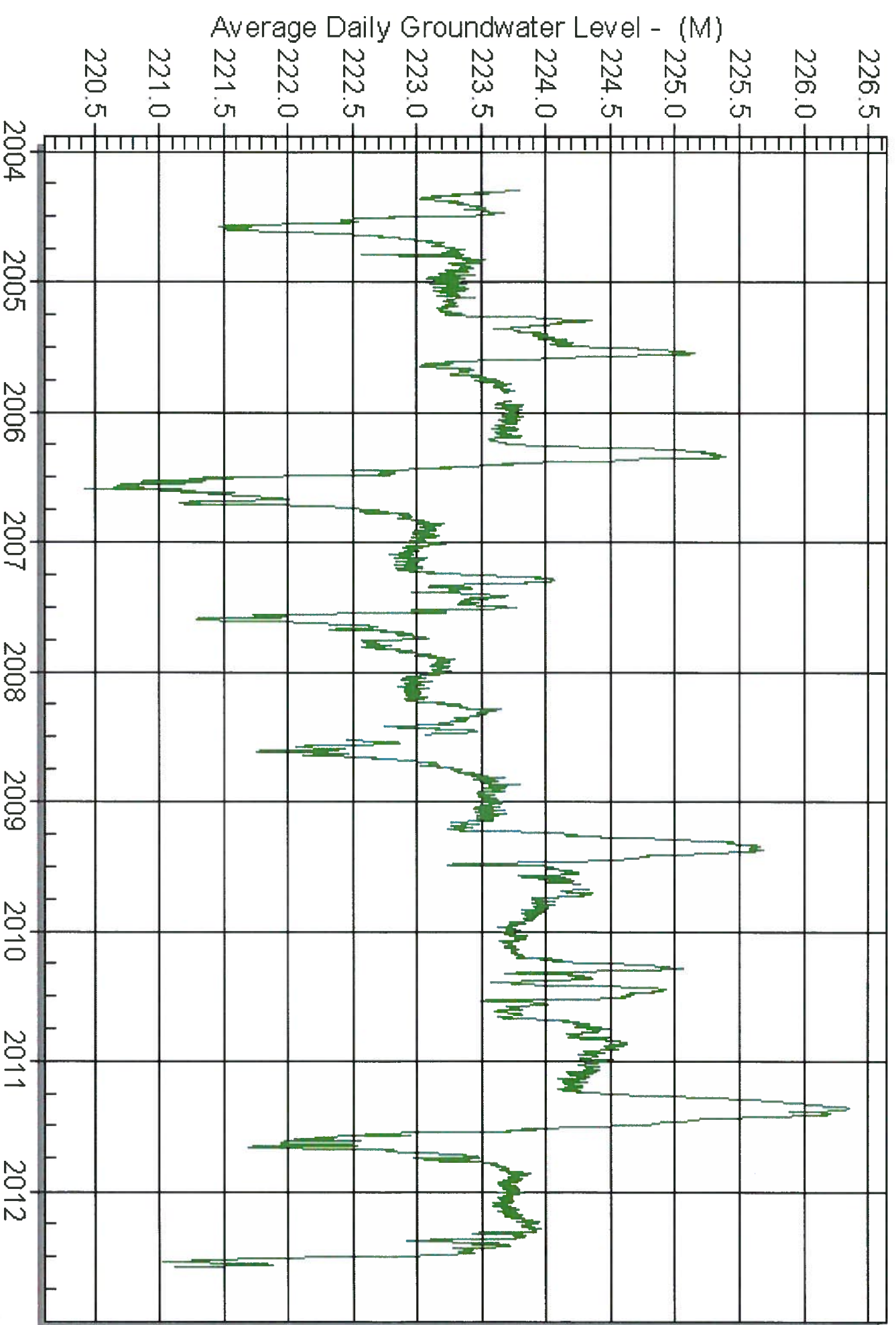
Prepared by Manitoba Water Stewardship 15 Oct 2012

GROUNDWATER LEVEL ELEVATION IS 250.376 METRES (821.44 FEET)



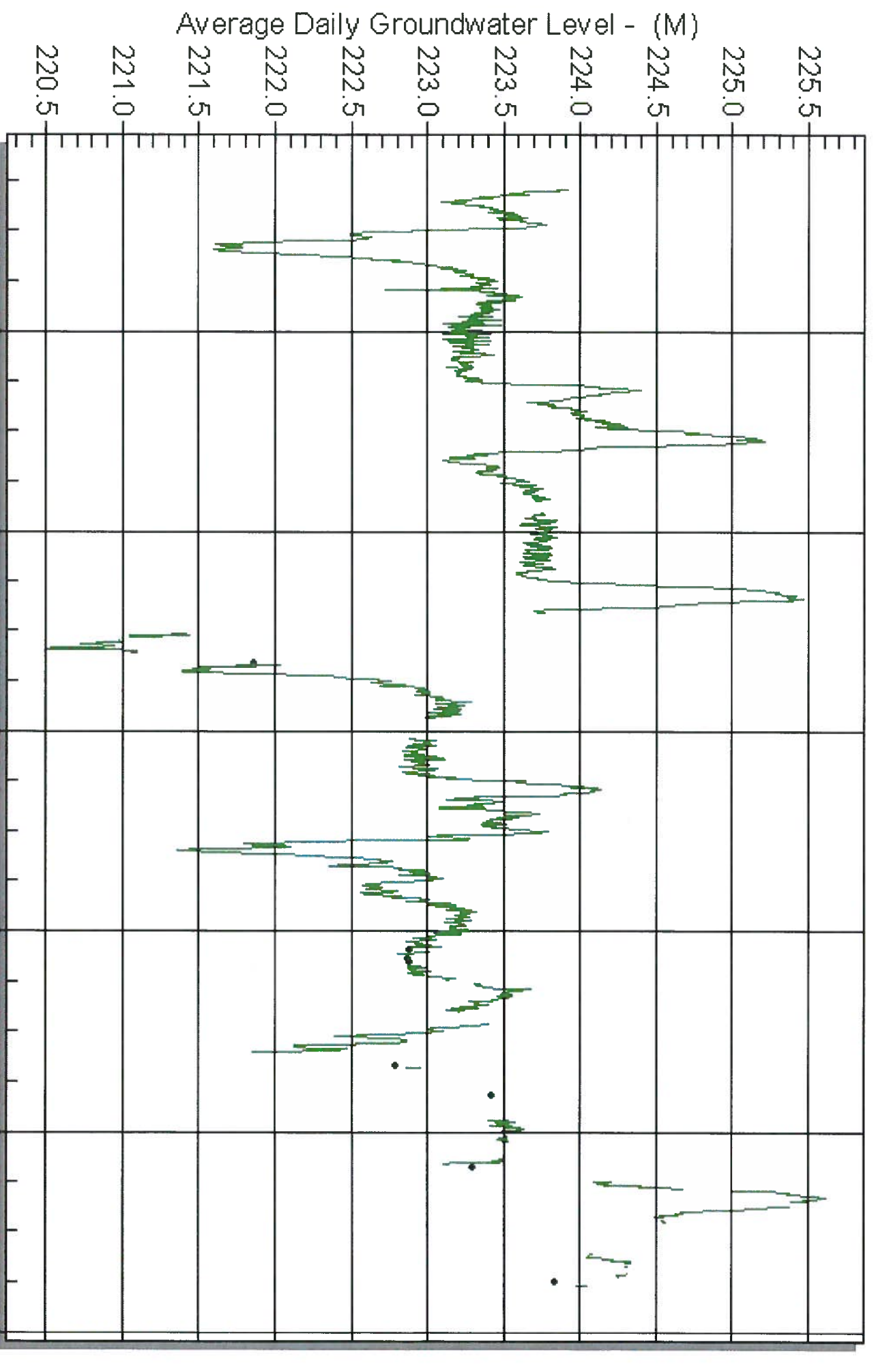
Prepared by Manitoba Water Stewardship 15 Oct 2012

GU50J1/1 ESP #1 113 SI. PAUL'S
GROUND LEVEL ELEVATION 232.315 METRES (762.19 FEET)



Prepared by Manitoba Water Stewardship 15 Oct 2012

GUSBUJ 1/2 ESP #2 106 S1. PAUL'S
GROUND LEVEL ELEVATION IS 233.106 METRES (764.78 FEET)

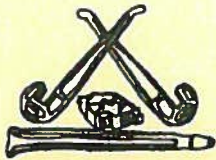


Prepared by Manitoba Water Stewardship 15 Oct 2012



Appendix F

Rebeck Road Saline Issue



Manitoba 

Water Stewardship

Manitoba Water Well Association

Box 1648
WINNIPEG MB R3C 2Z4
Phone: (204)667-6643

Groundwater Management Section

Box 18 – 200 Saulteaux Crescent
WINNIPEG MB R3J 3W3
Phone: (204)945-7420
Fax: (204)945-7419

May 5, 2006
FILE: 5.7.1

SENT TO ATTACHED LIST

Dear Sir/Madam:

RE: Shallow Saline Groundwater in the Vicinity of Rebeck Road, R. M. of St. Clement

For a number of years water well drillers have reported encountering saline groundwater at a relatively shallow depth in the Carbonate aquifer in the vicinity of the north end of Rebeck Road in the R. M. of St. Clement. Investigation of this issue by the Groundwater Management Section has been unsuccessful in determining whether this is a natural occurrence or may be related to an unknown deep well into the sandstone in the area.

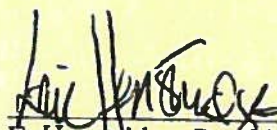
Consequently, in conjunction with the Manitoba Water Well Association, we recommend that drillers not construct wells to a depth greater than 120 feet in the area shown on the attached map. Due to the potential that much of the bedrock to 120 feet is unfractured, wells should be constructed so that fractures encountered in the upper part of the bedrock are not shut off with casing. While drilling in this area it would be worthwhile to measure the fluid conductivity of the water produced at each water-bearing zone to ensure that saline water has not been encountered. Should high salinities be observed, the saline zone should be grouted off with sulfate resistant cement so that movement of saline waters to adjacent wells does not occur.

In cases where sufficient water is not encountered by a depth of 120 feet, please contact Richard Tattersall with the Groundwater Management Section (phone 945-7418; cell 794-7723) or other staff in the Section for advice or assistance. If saline water is encountered, please note that on your well log.

Sincerely,



R. N. Betcher, Manager
Groundwater Management Section
Manitoba Water Stewardship

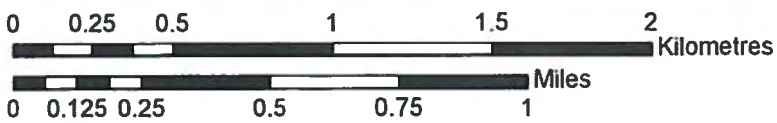
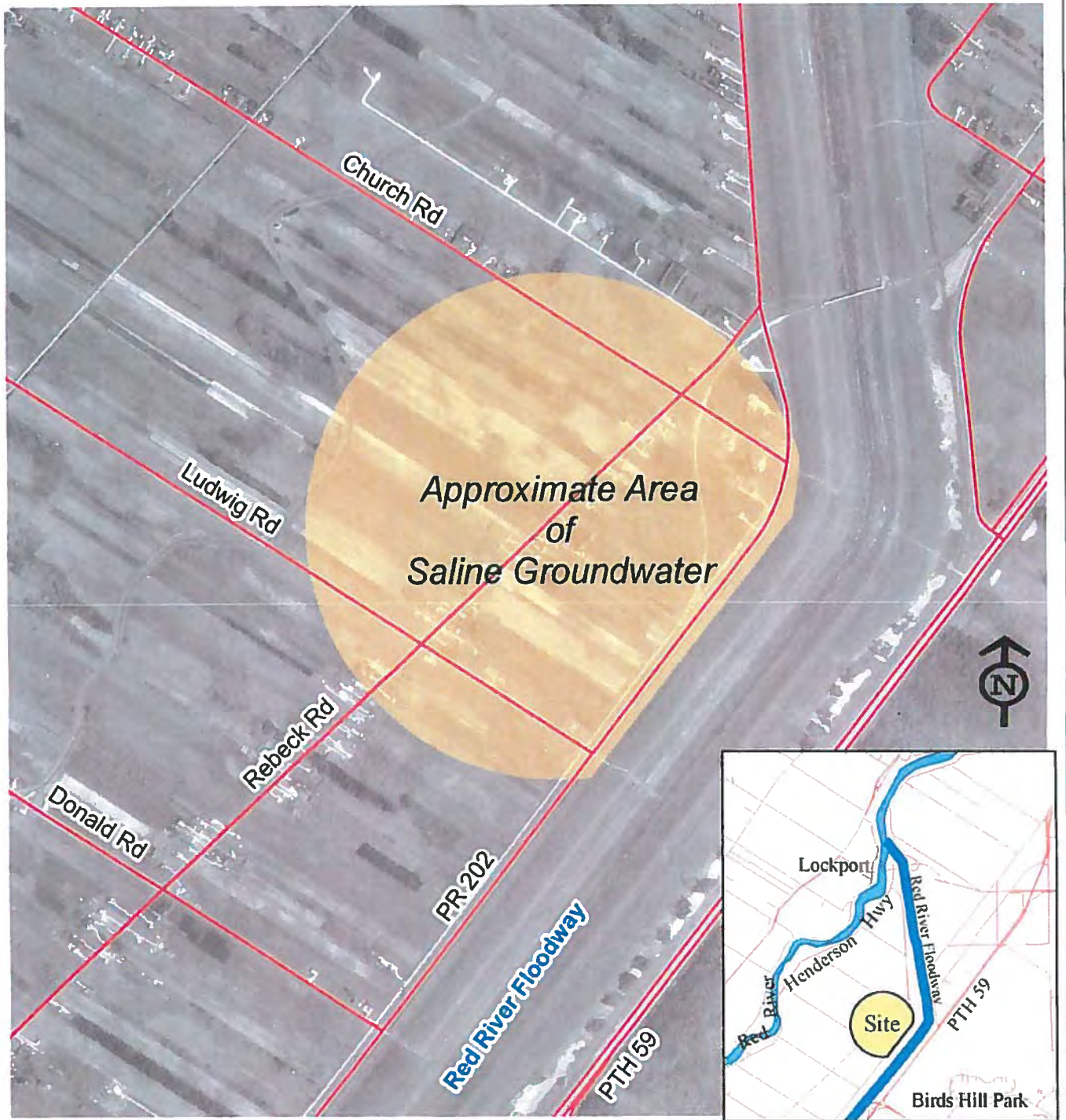


E. Henstridge, President
Manitoba Water Well Association

Attachment

Cc: R. Tattersall

Rebeck Road Saline Groundwater Area



Manitoba Water Stewardship
Groundwater Management Section
April 2007

UTM Nad83 Zone 14N

Manitoba 
Water Stewardship

Office_Address_List

5/8/2007

Company Name	Address Line 1	ZIP Code
A & S Drilling	Box 5	SAN CLARA MB R0L 1T0
A. M. Bruce Drilling	Box 303	ASHERN MB R0C 0E0
Echo Drilling Ltd.	Box 1, Group 15, R. R. #1	STEINBACH MB R5G 1L9
Ford Drilling & Dredging Ltd.	Box 54	MATLOCK MB R0C 2B0
Formation Drilling Ltd.	R. R. #4	DAUPHIN MB R7N 2T7
Friesen Drillers Ltd.	Box 1, Group 15, R. R. #1	STEINBACH MB R0A 2A0
Hopper's Water Well Service Ltd.	Site 175, Box 7, R. R. #1	BRANDON MB R7A 5Y1
Interlake Water Supply	Box 40	INWOOD MB R0C 1P0
Kiansky Bros. Ltd.	Box 159	VITA MB R0A 2K0
K.D.E. Drilling Ltd.	P. O. Box 42	MEDORA MB R0M 1K0
L. Mondor Drilling	Box 144-A	LORETTE MB R0A 0Y0
M & M Drilling Rivers Limited	Box 508	RIVERS MB R0K 1X0
Maple Leaf Enterprises Ltd.	2-165 Norris Road	WINNIPEG MB R2G 4C1
Paddock Drilling Ltd.	1701 Moreland Avenue	BRANDON MB R7C 1A6
Perimeter Drilling Ltd.	R. R. #2, Box 12A	WINNIPEG MB R3C 2E6
Ransom Drilling Ltd.	Box 86	BOISSEVAIN MB R0K 0E0
Selkirk Drillers	Box 6	SELKIRK MB R1A 2B1
Stonewall Drilling	Box 496	STONY MOUNTAIN MB R0C 3A0
Watkins & Argue Cons. Co. Ltd.	P. O. Box 129	CLEARWATER MB R0K 0M0
Wescan Drilling Ltd.	Box 681	DAUPHIN MB R7N 3B3
Fred Zavislak Ltd.	Site 145, Box 5, R. R. #1	BRANDON MB R7A 5Y1
Bodnar Drilling	Box 538	STE. ROSE DU LAC MB R0L 1S0
Central Drilling Ltd.	Box 983	WADENA SK S0A 4J0
Glenwell Drilling Ltd.	50 Milner Bay	YORKTON SK S3N 3Z8
Heron Drilling Ltd.	Box 1687	MELFORT SK S0E 1A0
Hygaard's Well Drilling	Box 6	SELKIRK MB R1A 2B1
Kletke Enviro Drilling Ltd.	883 Parkview Place	MORDEN MB R6M 1K6
Jacques Whitford - AXYS	103 - 611 Corydon Avenue	WINNIPEG MB R3L 0P3
Turtle Mountain Geothermal	Box 772	BOISSEVAIN MB R0K 0E0

BUSINESS