

# **G** Appendix G - Saskatchewan Watershed Authority Surface Water Approval Fact Sheet





## *Fact Sheet*

---

### ***Right to Use Ground Water Relating to Construction and/or Operation of Ground Water Diversion Works***

The Saskatchewan Watershed Authority is a provincial Crown corporation that has been established to manage, administer, develop, control and protect the water, watersheds and related land resources of Saskatchewan. Included in this mandate, the Saskatchewan Watershed Authority has the responsibility for administering the approval process for construction and operation of wells and other ground water works and the right to use ground water. This authority is derived from *The Saskatchewan Watershed Authority Act, 2005* and the *Ground Water Regulations* under that *Act*.

### ***Use of Ground Water Requires an Approval***

Under the *Act*, all ground water use **except domestic** requires an Approval. Examples of works which require approval are: municipal, industrial (including ground water de-watering), intensive livestock operations, commercial, public institutions and irrigation. The intent of the Saskatchewan Watershed Authority's approval process for ground water projects is to ensure the sustainable and environmentally sound development of the province's ground water resources. (See Fact Sheet FS-315 for more information on domestic water use.)

### ***Approval Process***

The Saskatchewan Watershed Authority's regulatory approval process for development of a ground water source project has two parts. The proponent of a proposed ground water development is required to obtain:

- (1) Ground Water Investigation Permit; and
- (2) Approval to Construct and Operate Works and Water Rights Licence to Use Ground Water.

### **PART I - GROUND WATER INVESTIGATION PERMIT**

The purpose of a ground water investigation is to ensure that the ground water source can sustain the proposed development, without any adverse impacts on the source or existing ground water users and it is the primary source of information on which the Approval to Operate and Water Rights Licence is based. The following outlines the requirements and procedures of the Ground Water Investigation Permit process.

- Application for Permit to Conduct Ground Water Investigation is to be submitted on a prescribed form (RG-122) along with a \$10.00 fee. The applicant must identify the land location of proposed investigation, the intended use of the water, the estimated annual quantity required and the estimated pumping rate.
- The Saskatchewan Watershed Authority will review the application and if no potential conflicts are apparent, a Permit to Conduct Ground Water Investigation will be issued. Included with the permit will be any hydrogeological information we have on file, together with general guidelines covering the detail and type of information which should be collected during the investigation. A qualified hydrogeologist is required to supervise/conduct the investigation.
- At the conclusion of the ground water investigation, regardless if the investigation was successful in identifying/developing a suitable ground water source, the consultant/proponent is required to submit two copies of the Ground Water Investigation Report to the Saskatchewan Watershed Authority within 60 days of the completion of the investigation.
- The Ground Water Investigation Report should contain the following information:

**General Requirements**

- A map or plan showing the extent and location of the project including ancillary works (pumping wells, observation wells, pipelines, test holes, all surveyed from legal boundaries), and surrounding well users in the same aquifer.
- A field verified inventory of all wells within a 3.2 km radius of the project, the inventory should include:
  - (a) owners name;
  - (b) land location;
  - (c) type of well and depth; and
  - (d) depth to the non-pumping water level.

If the anticipated draw down in the aquifer is expected to exceed the 3.2 km radius, the inventory shall be expanded to cover the expected area of influence.
- At least two geological cross-sections defining the target aquifer. All test drilling and evaluation should be supervised by a qualified hydrogeologist.
- Copies of any surface lease, easement or purchase agreements for the access or use of the land affected by the project, the easements should also include any pipeline routes.
- At least two permanent observation wells (piezometer) completed and sealed in the target aquifer.
- An estimate of the maximum pumping rate and annual quantity required.
- Construction dates of works if in place already.

### **Well Information**

- Original borehole geophysical logs and descriptive logs of all test holes.
- Copies of well and observation well completion records.
- A minimum 24 hour pump test showing:
  - (a) casing elevation of pumping well and observation wells;
  - (b) depth to static water level in pumping and observation wells;
  - (c) draw downs in pumping and observation wells;
  - (d) time and pumping rate; and
  - (e) recovery measurements in pumping and observation wells after pumping has stopped, the recovery period shall be of the same duration as the pump test or until the aquifer has recovered to pre-pumping level.

### **Aquifer Information**

- An evaluation of the pump test and recovery data with estimates of the well yield, aquifer yield and basin yield stating the method of analysis and assumptions used.
- A water chemistry analysis, detailing the major ions, for municipal projects an analysis for metals will also be required.
- An evaluation of the affects of the project on surrounding users.
- When ground water models (computer) are used for aquifer evaluation, the following information shall be supplied:
  - (a) the name and type of model used;
  - (b) the input data;
  - (c) the boundary conditions;
  - (d) a sensitivity analysis;
  - (e) all assumptions made;
  - (f) the results; and
  - (g) a discussion of the validity of the results.

## **PART II - APPROVAL TO CONSTRUCT AND OPERATE WORKS AND WATER RIGHTS LICENCE TO USE GROUND WATER**

If the ground water investigation was successful, the project proponent is required to file an Application for Water Rights Licence and Approval to Construct and Operate Works under *The Saskatchewan Watershed Authority Act, 2005*. The following outlines the requirements and procedures of the Water Rights Licence & Approval to Construct and Operate Works process.

- Application for Water Rights Licence and Approval to Construct and Operate Works shall be submitted on prescribed form (RG-103) along with a non-refundable application fee (\$125 - \$400) (see application instructions Form RG-108) and a general plan showing the proposed works and location relative to legal boundaries.

- The Ground Water Investigation Report is used as base documentation to support the Application for Water Rights Licence & Approval to Construct and Operate Works. The report should identify any potential adverse impacts and present mitigation measures for the impacts, if required.
- The Saskatchewan Watershed Authority will review the application and conduct a technical evaluation of the Investigation Report to ensure its' completeness and adherence to accepted scientific practice. The Saskatchewan Watershed Authority will then advise of any other requirements such as land control from other land owners or consents from rural municipalities, Department of Highways and others should they be affected by your works.
- If there is a potential for conflicts with other water users, or it is determined that effects will be significant, the Saskatchewan Watershed Authority may require public consultation (advertisement or a public meeting). The Saskatchewan Watershed Authority will deal with and discuss with you any concerns or objection as a result of the public consultation which may result in additional investigation, special terms or conditions added to the Approval, development of mitigative plans or denial of Approval.
- Once all regulatory and procedural requirements have been met, the Saskatchewan Watershed Authority may issue an Approval to Construct Works if appropriate; or
- When the construction of the works is complete, the Saskatchewan Watershed Authority may inspect the works and if all is in order issue a Water Rights Licence and an Approval to Operate works subject to any terms and conditions required.
- Immediately after the issuance of an Approval, the Saskatchewan Watershed Authority will register a Notice against the appropriate land title which will tie the Approval to the land. A fee of \$60/title will be assessed for each Notice registered on land titles.
- It should be noted, that the Water Rights Licence is not a guarantee that the quantity and quality of ground water allocated will be constant. The Licence only grants the proponent access to the ground water should it be available.

### ***Ground Water Data***

The Saskatchewan Watershed Authority maintains a ground water data base which is an inventory of over 110,000 records of wells and test holes throughout the province. Each record contains 191 variables or fields of information which is updated continuously. The entire data base is available on CD Rom at a cost of \$350.00 or data is available for specific smaller areas (custom made report) on hard copy or digital at \$50.00 per report.

## ***Registered Water Well Drilling Machine***

Legislation requires that all water well drilling machines operating in the province must be registered annually with the Saskatchewan Watershed Authority. A listing of all the companies with registered drilling machines is available from our head office. The listing contains the company name, address, phone number and the type of drilling rig.

***All inquiries and requests for assistance regarding ground water availability should be directed to Head Office in Moose Jaw or to the nearest Regional Office.***

### **Saskatchewan Watershed Authority Head Office**

Victoria Place  
111 Fairford Street East  
Moose Jaw, SK S6H 7X9  
Phone: (306) 694-3980  
Fax: (306) 694-3944  
E-mail: [comm@swa.ca](mailto:comm@swa.ca)

### **Saskatchewan Watershed Authority Yorkton Regional Office**

2<sup>nd</sup> Floor, 120 Smith Street East  
Yorkton, SK S3N 3V3  
Ph: (306) 786-1490  
Fax: (306) 786-1495  
E-mail: [comm@swa.ca](mailto:comm@swa.ca)

### **Saskatchewan Watershed Authority Swift Current Regional Office**

Box 5000  
3<sup>rd</sup> Floor, E.I. Wood Building  
350 Cheadle Street West  
Swift Current, SK S9H 4G3  
Ph: (306) 778-8257  
Fax: (306) 778-8271  
E-mail: [comm@swa.ca](mailto:comm@swa.ca)

### **Saskatchewan Watershed Authority Nipawin Regional Office**

Box 2133  
201 – 1<sup>st</sup> Avenue East  
Nipawin, SK S0E 1E0  
Ph: (306) 862-1750  
Fax: (306) 862-1771  
E-mail: [comm@swa.ca](mailto:comm@swa.ca)

### **Saskatchewan Watershed Authority Weyburn Regional Office**

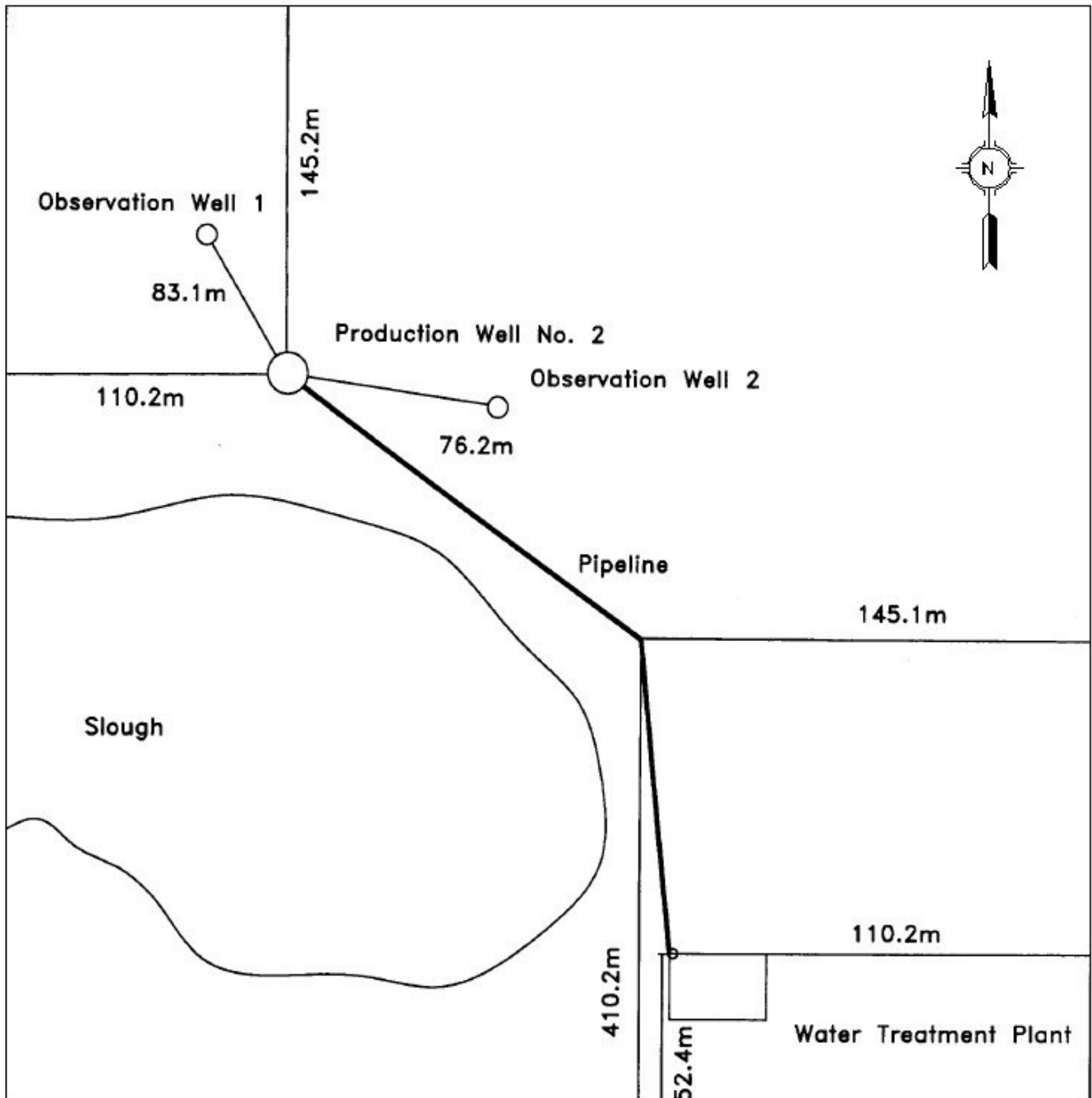
Box 2003  
3<sup>rd</sup> Floor, City Centre Mall  
110 Souris Avenue  
Weyburn, SK S4H 2Z9  
Ph: (306) 848-2345  
Fax: (306) 848-2356  
E-mail: [comm@swa.ca](mailto:comm@swa.ca)

### **Saskatchewan Watershed Authority North Battleford Office**

402 Royal Bank Tower  
1101 – 101st Street  
North Battleford, SK S9A 0Z5  
Ph: (306) 446-7450  
Fax: (306) 4467461  
E-mail: [comm@swa.ca](mailto:comm@swa.ca)

General information about the Saskatchewan Watershed Authority, our programs, Fact Sheets and forms can be found on our website at [www.swa.ca](http://www.swa.ca).

# Ground Water Example Plan



*Using Ink – trace roadways, streams, legal boundaries, etc., and accurately show the location of the well, observation wells, pipelines and other works measured from legal boundaries.*

Lot \_\_\_\_\_ Block \_\_\_\_\_ Registered Plan No. \_\_\_\_\_  
(if applicable)

LSD \_\_\_\_\_ ¼ \_\_\_\_\_ Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ West \_\_\_\_\_ M  
(if applicable)

### Equipment Specifications

**Pump:**

Goulds	70FG	60 Igpm
<i>Make</i>	<i>Model</i>	<i>Discharge</i>

**Pipeline: (if applicable)**

PVC	75 mm	2.75 m
<i>Material</i>	<i>Size</i>	<i>Buried Depth</i>

**Pipeline length:** 521.2 m

*Name of Applicant(s)* Village of Happy Valley

*Address* Box 12

Happy Valley, SK Postal Code

*Project Name* Well No. 2

I/We hereby agree:

1. The project is/will be constructed according to this plan.
2. Not to make any alterations to the works without authorization under *The Saskatchewan Watershed Authority Act, 2005*.

Applicant Signature

Date

Applicant Signature

Date

**Saskatchewan Watershed Authority Use Only**

Filed under provisions of *The Saskatchewan Watershed Authority Act, 2005*.

\_\_\_\_\_ for Saskatchewan Watershed Authority

\_\_\_\_\_ Date