

County of Beaver No. 9

Part of the North Saskatchewan River Basin
Parts of Tp 046 to 052, R 10 to 21, W4M
Revised Regional Groundwater Assessment

Prepared for



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The Association of Professional Engineers,
Geologists and Geophysicists of Alberta

TABLE OF CONTENTS

1	PROJECT OVERVIEW	1
1.1	About This Report	1
1.2	The Project	2
1.3	Purpose	2
2	INTRODUCTION	3
2.1	Setting	3
2.2	Climate	3
2.3	Background Information	3
3	TERMS	7
4	METHODOLOGY	8
4.1	Data Collection and Synthesis	8
4.2	Spatial Distribution of Aquifers	9
4.3	Hydrogeological Parameters	10
4.3.1	Risk Criteria	10
4.4	Maps and Cross-Sections	11
4.5	Software	11
5	AQUIFERS	12
5.1	Background	12
5.1.1	Surficial Aquifers	12
5.1.2	Bedrock Aquifers	13
5.2	Aquifers in Surficial Deposits	14
5.2.1	Geological Characteristics of Surficial Deposits	14
5.2.2	Sand and Gravel Aquifer(s)	16
5.2.2.1	Chemical Quality of Groundwater from Surficial Deposits	17
5.3	Bedrock	18
5.3.1	Geological Characteristics	18
5.3.2	Aquifers	19
5.3.3	Chemical Quality of Groundwater	21
5.3.4	Lower Horseshoe Canyon Aquifer	22
5.3.4.1	Depth to Top	22
5.3.4.2	Apparent Yield	22
5.3.4.3	Quality	22
5.3.5	Bearpaw Aquifer	23
5.3.5.1	Depth to Top	23
5.3.5.2	Apparent Yield	23

5.3.5.3	Quality	23
5.3.6	Oldman Aquifer	24
5.3.6.1	Depth to Top.....	24
5.3.6.2	Apparent Yield.....	24
5.3.6.3	Quality	24
5.3.7	<i>continental</i> Foremost Aquifer	25
5.3.7.1	Depth to Top.....	25
5.3.7.2	Apparent Yield.....	25
5.3.7.3	Quality	25
5.3.7.4	C1.....	26
5.3.8	<i>marine</i> Foremost Aquifer	27
5.3.8.1	Depth to Top.....	27
5.3.8.2	Apparent Yield.....	27
5.3.8.3	Quality	27
5.3.9	Basal Belly River Sandstone Aquifer	28
5.3.10	Lea Park Aquitard	28
6	GROUNDWATER BUDGET	29
6.1	Hydrographs.....	29
6.2	Groundwater Flow.....	30
6.3	Quantity of Groundwater	31
6.4	Recharge/Discharge	31
6.4.1.1	Surficial Deposits/Upper Bedrock Aquifer(s)	31
6.4.1.2	Bedrock Aquifers	32
7	POTENTIAL FOR GROUNDWATER CONTAMINATION	33
7.1.1	Risk of Contamination Map.....	34
8	RECOMMENDATIONS	35
9	REFERENCES	37
10	GLOSSARY	38

LIST OF FIGURES

Figure 1. Index Map	3
Figure 2. Surface Casing Types Used in Drilled Water Wells	4
Figure 3. Location of Water Wells	4
Figure 4. Depth to Base of Groundwater Protection.....	5
Figure 5. Generalized Cross-Section (for terminology only).....	7
Figure 6. Geologic Column.....	7
Figure 7. Cross-Section A - A'	12
Figure 8. Cross-Section B - B'	13
Figure 9. Bedrock Topography.....	14
Figure 10. Amount of Sand and Gravel in Surficial Deposits.....	15
Figure 11. Water Wells Completed in Surficial Deposits	16
Figure 12. Apparent Yield for Water Wells Completed in Sand and Gravel Aquifer(s).....	16
Figure 13. Total Dissolved Solids in Groundwater from Surficial Deposits.....	17
Figure 14. Bedrock Geology.....	18
Figure 15. Apparent Yield for Water Wells Completed in Upper Bedrock Aquifer(s).....	20
Figure 16. Total Dissolved Solids in Groundwater from Upper Bedrock Aquifer(s).....	21
Figure 17. Apparent Yield for Water Wells Completed through Lower Horseshoe Canyon Aquifer	22
Figure 18. Apparent Yield for Water Wells Completed through Bearpaw Aquifer	23
Figure 19. Apparent Yield for Water Wells Completed through Oldman Aquifer	24
Figure 20. Apparent Yield for Water Wells Completed through continental Foremost Aquifer	25
Figure 21. Thickness of C1	26
Figure 22. Apparent Yield for Water Wells Completed through marine Foremost Aquifer	27
Figure 23. Type of Fluid Encountered in Basal Belly River Sandstone	28
Figure 24. Hydrographs - AEP Observation Water Wells.....	29
Figure 25. Non-Pumping Water-Level Surface in Surficial Deposits	31
Figure 26. Recharge/Discharge Areas between Surficial Deposits and Upper Bedrock Aquifer(s).....	32
Figure 27. Recharge/Discharge Areas between Surficial Deposits and Bearpaw Aquifer.....	32
Figure 28. Risk of Groundwater Contamination	34

LIST OF TABLES

Table 1. Licensed Groundwater Diversions.....	5
Table 2. Completion Aquifer.....	19
Table 3. Apparent Yields of Bedrock Aquifers.....	20
Table 4. Risk of Groundwater Contamination Criteria	34

APPENDICES

- A HYDROGEOLOGICAL MAPS AND FIGURES
- B MAPS AND FIGURES ON CD-ROM
- C GENERAL WATER WELL INFORMATION
- D MAPS AND FIGURES INCLUDED AS LARGE PLOTS
- E WATER WELLS RECOMMENDED FOR FIELD VERIFICATION

1 PROJECT OVERVIEW

“Water is the lifeblood of the earth.” - Anonymous

How a County takes care of one of its most precious resources - groundwater - reflects the future wealth and health of its people. Good environmental practices are not an accident. They must include genuine foresight with knowledgeable planning. Implementation of strong practices not only commits to a better quality of life for future generations, but also creates a solid base for increased economic activity. **This report, even though it is regional in nature, is the first step in fulfilling a commitment by the County of Beaver No. 9 toward the management of the groundwater resource, which is a key component toward the well-being of the County, and is a guide for future groundwater-related projects.**

1.1 About This Report

This report provides an overview of (a) the groundwater resources of the County of Beaver No. 9, (b) the processes used for the present project and (c) the groundwater characteristics in the County.

Additional technical details are available from files on the CD-ROM to be provided with the final version of this report. The files include the geo-referenced electronic groundwater database, maps showing distribution of various hydrogeological parameters, the groundwater query, and ArcView files. Likewise, all of the illustrations and maps from the present report, plus additional maps, figures and cross-sections, are available on the CD-ROM. For convenience, poster-size maps and cross-sections have been prepared as a visual summary of the results presented in this report. Copies of these poster-size drawings have been forwarded with this report, and are included as page-size drawings in Appendix D.

Appendix A features page-size copies of the figures within the report plus additional maps. An index of the page-size maps and figures is given at the beginning of Appendix A.

Appendix B provides a complete list of maps and figures included on the CD-ROM.

Appendix C includes the following:

- 1) a procedure for conducting aquifer tests with water wells;
- 2) a table of contents for the Water Well Regulation under the Environmental Protection and Enhancement Act;
- 3) a flow chart showing the licensing of a groundwater diversion under the new Water Act; and
- 4) additional information.

The Water Well Regulation deals with the wellhead completion requirement (no more water-well pits), the proper procedure for abandoning unused water wells and the correct procedure for installing a pump in a water well. The new Water Act was proclaimed 10 Jan 1999.

Appendix E provides a list of water wells recommended for field verification.