

LEGEND

Areas of Potable Water

Unconfined Aquifers

Silt, sand and gravel: alluvium in river meanders; mostly glacial outwash deposits and ground moraine. Dug, driven, or bored wells 6-50 feet deep. Yield from 50 gpd in very shallow wells to 50 gpm in the deeper ones. Water very hard (461 ppm). High nitrates (140 ppm). Supply depending directly on precipitation, which affects the water table. Sand points are advisable especially where aquifer is sandy.

Confined Aquifers

Clayey till with sand and gravel: glacial deposits, principally ground moraine. Drilled and bored wells 90-90 feet deep. Yield 500 gpd to 5 gpm. Water level can be subartesian or flowing artesian. Water hardness (569 ppm). Supply is sufficient for domestic and stock needs on a farm. Usage of screens is advisable for better yield and all around efficiency of wells

Dolomite and limestone: Interlake Group. Drilled wells 25-100 feet deep. Area is small and little is known about aquifer. Water is considered as fair (total dissolved solids 1,600 ppm). Quality improves northward

Dolomite and shale: Stony Mountain Formation. Drilled wells 25-100 feet deep. Yield 1,000 gpd. Very hard water (600 ppm). Supply sufficient for farm needs. Quality of water improves northward

Limestone and dolomite: Red River Formation. Largest of the aquifers in the Winnipeg area. Drilled wells 45-300 feet in depth. Yield 100,000 gpd. Water can be either soft (52 ppm) or hard (176 ppm) depending on location. High iron (Fe) (over 1.0 ppm) and high fluoride (F) (over 1.5 ppm) values are not uncommon. Supply is sufficient for farm, municipal, and some industrial uses. In some cases usage of water for irrigation is prohibited by high percentage of sodium (Na). Best aquifer in the entire Winnipeg area.

Sandstone and shale: Winnipeg Formation. Drilled wells 350-450 feet deep. Little is known about the aquifer, but large yields (100,000 gpd) of fairly soft water (100 ppm) can be predicted.

Note: In the case of unconfined aquifers the zones shown as area of potable water approximate the total area of the aquifer. For confined aquifers, the zones shown as area of potable water are part of the total area of the aquifer in question. Outside these potable zones the aquifers do exist, but the water is usually too salty for human consumption.

Area of artesian water flow
Area with no known source of potable water

Types of Wells

Dug or driven
Drilled for oil
Drilled or bored
Drilled for sewage disposal
Flowing artesian
Dry well

Note: Number beside well denotes total depth of well. Letter A beside well denotes that complete chemical analysis of water is available in Table I. Any well with a stroke (e.g. ✕) is abandoned.

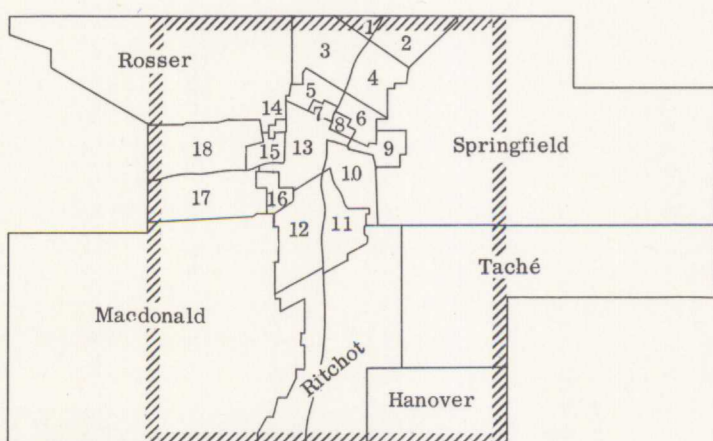
Groundwater data by J. E. Charron, 1963

Geological cartography by the Geological Survey of Canada, 1964

- Main highway
- Roads, all weather
- Roads, dry weather
- Railway
- Township boundary, section line
- Settlement or parish boundary, lot number
- Post office, town or village
- Aqueduct
- Proposed route of Greater Winnipeg Floodway
- Main drainage ditch
- Perennial stream
- Intermittent stream

Base-map cartography by the Geological Survey of Canada, 1964 from maps produced by the Surveys and Mapping Branch, 1953, 1960 and 1961 with revisions by the Geological Survey of Canada

Approximate magnetic declination 9° 03' East, decreasing 0.9' annually



MUNICIPALITIES COVERED BY THIS MAP

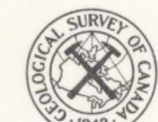
- 1 - St. Andrews
- 2 - St. Clements
- 3 - W. St. Paul
- 4 - E. St. Paul
- 5 - Old Kildonan
- 6 - N. Kildonan
- 7 - W. Kildonan
- 8 - E. Kildonan
- 9 - Transcona
- 10 - St. Boniface
- 11 - St. Vital
- 12 - Fort Garry
- 13 - Winnipeg
- 14 - Brooklands
- 15 - St. James
- 16 - Tuxedo
- 17 - Charleswood
- 18 - Assiniboia

DIAGRAM OF TOWNSHIP SHOWING NUMBERING OF SECTIONS

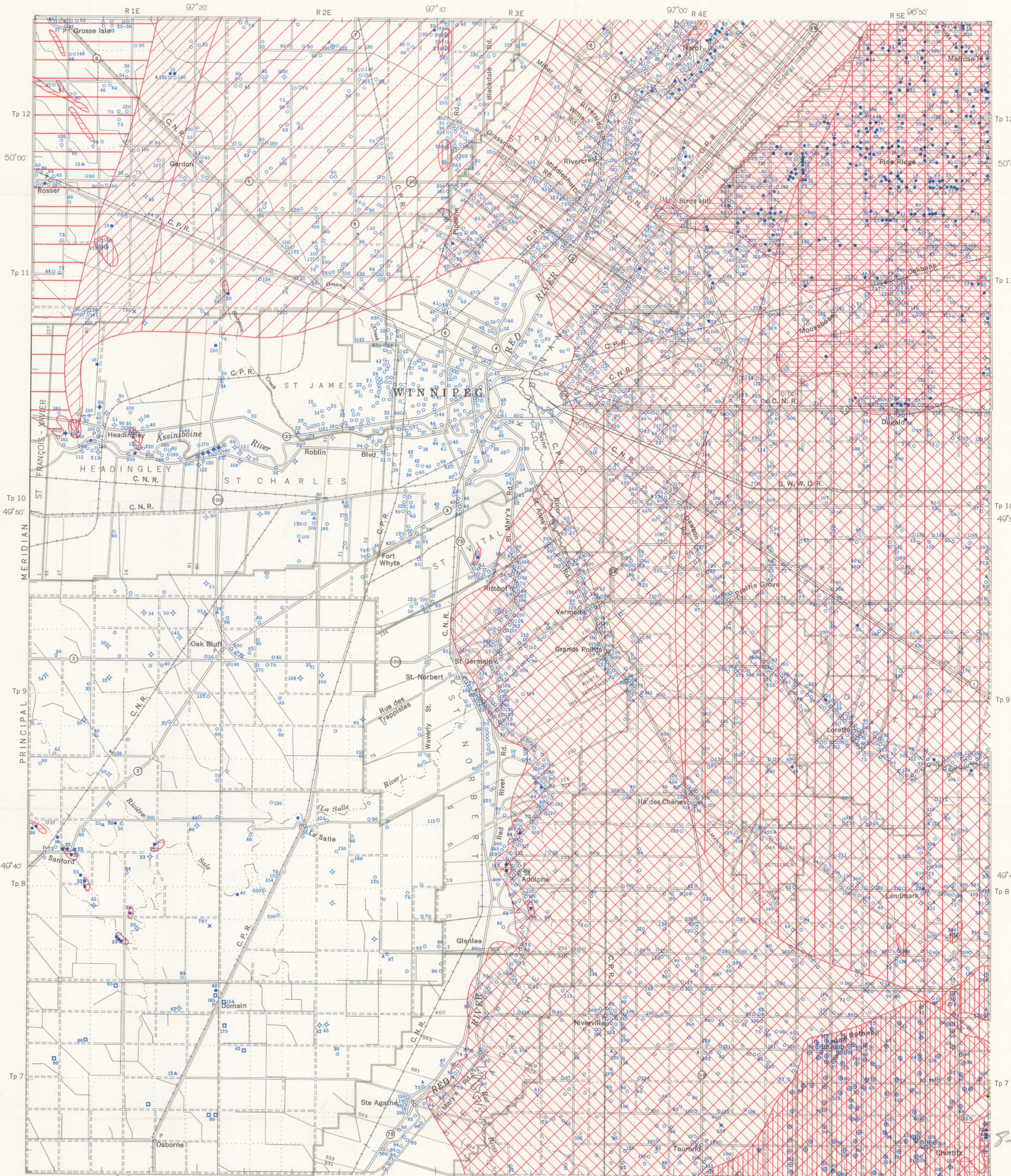
31	32	33	34	35	36
30	29	28	27	26	25
19	20	21	22	23	24
18	17	16	15	14	13
7	8	9	10	11	12
6	5	4	3	2	1

ESIC CIST
OCT 8 1996
Earth Sciences Sector / Secteur des sciences de la Terre

MAP LIBRARY / CARTOTHEQUE



GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS



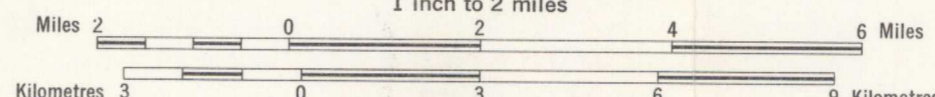
Published, 1965

MAP-8 1964
PAPER 64-23

POTABLE GROUNDWATER RESOURCES
WINNIPEG AREA

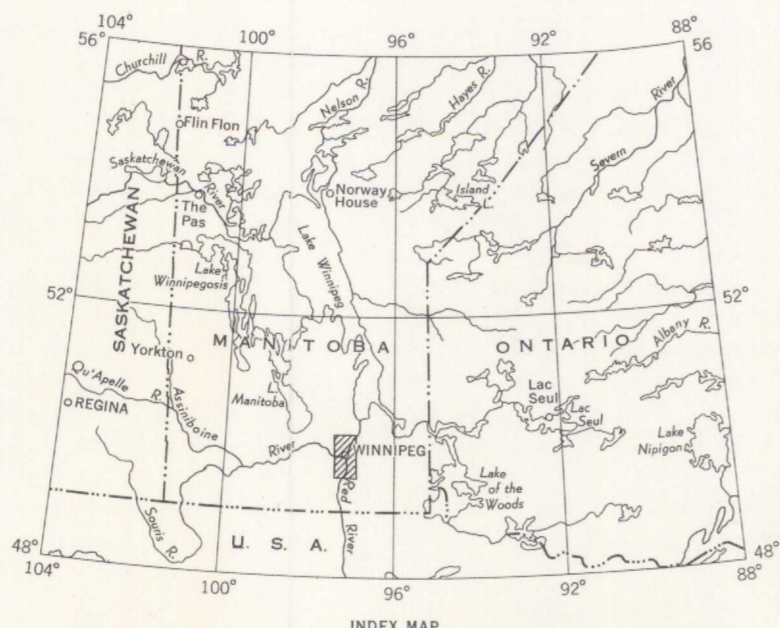
EAST OF PRINCIPAL MERIDIAN
MANITOBA

Scale 1:126,720
1 inch to 2 miles



62 1/2 E	62 1/2 SW	62 1/2 SE
62 1/2 NE	62 1/2 NW	62 1/2 N/E
62 1/2 SE	62 1/2 SW	62 1/2 SE

WINNIPEG
MANITOBA



INDEX MAP

8-1964
G
3401
.05
1956
G4
omvfc

612 C89 55C