

## Watershed Community Profiles

- History
- Population Trends
- Economic
- Development & Water Issues

Obtained from Planning Districts background reports

## Regional History



- Assiniboine watersheds were once buried by ice
- 1st colonists - Assiniboine, Cree, Ojibwa and Sioux

## Regional History con't



- 1st European settlers - 1872
- land acquired through homesteading.
- Western Manitoba opened to commercial agriculture.

## Regional History con't

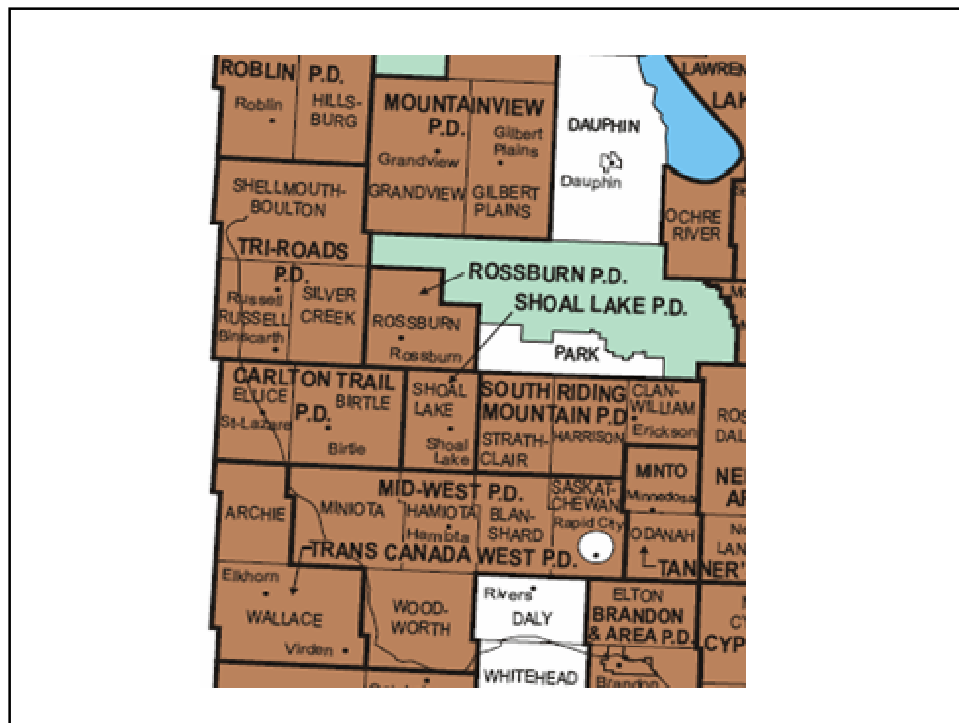
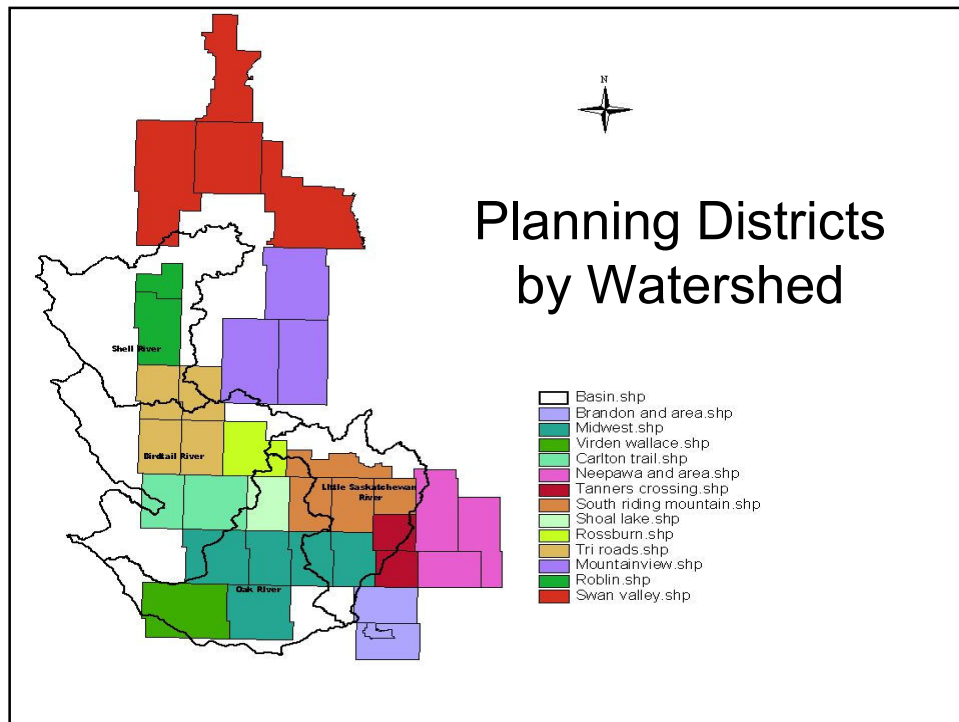
- 1<sup>st</sup> survey in 1878.
- Construction of rail line in 1880's
- Municipalities grew



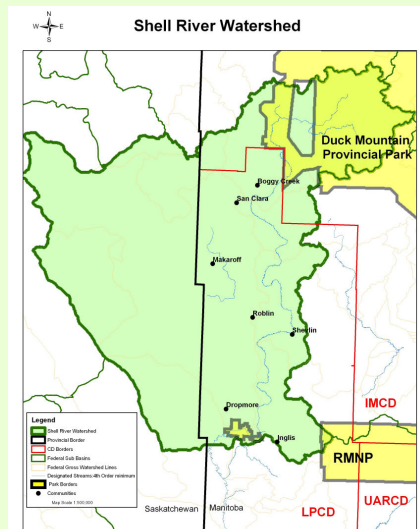
## Regional History con't.

- Rural populations began to decline.
- By the 1950s urban centres favoured over small towns.
- Rail system and settlement system had been overbuilt.
- Automobile primary mode of transportation.
- Continued trends of rural population decline today.





# Shell River Watershed



- 3 Planning Districts:  
Over 50% in Roblin PD,  
also Tri-Roads PD
- 2 Parks
- 5 Rural Municipalities

Park

Shell River

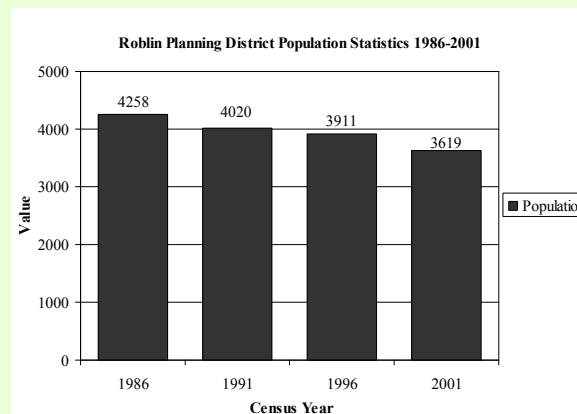
Shellmouth-Boulton\*

Hillsburg^

Swan River^

## SR Population

- Population at 2001 census approx. 9000
- Downward trend, average -17%



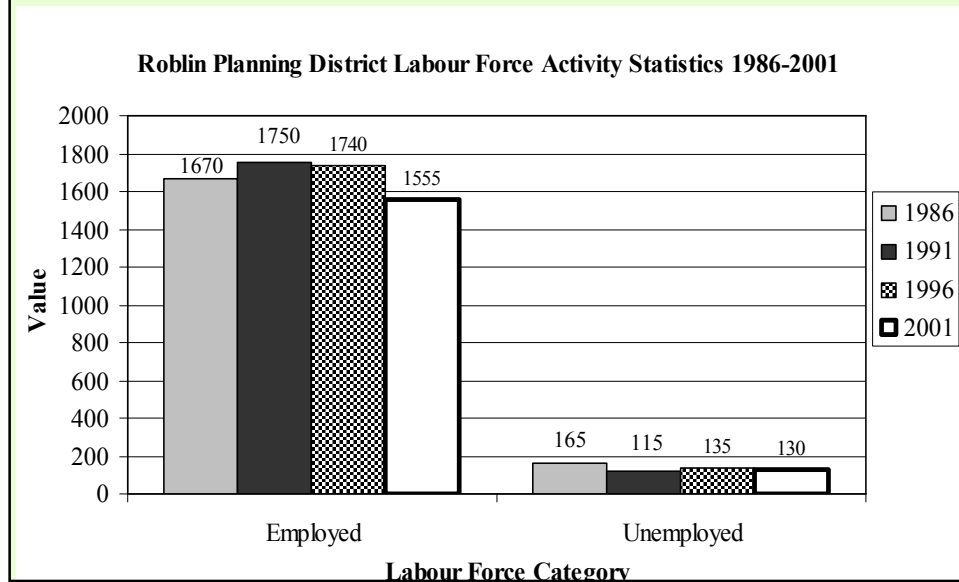
## SR Economic

- Agriculture & related industries employed 32.1%  
Retail trade industries employed 10.6%.
- Agriculture dominates land use activity.
- Recreation-based land use development.
- The Duck Mountains and Riding Mountain Park.

### Roblin Planning District Farming Area in the RM's of Shell River, Park North and Hillsburg 1986-2001

Census Year	Number of Farms Reporting	Total Area of Farming Operations		Average Area of Farming Operations		Farming Area as a Percentage of the Total Land Base <sup>[1]</sup>
		Hectares (Acres)	% Change	Hectares (Acres)	% Change	
1991	438	141,564 (349,801)	(1.3)	323 (799)	5.9	79
2001	333	136,669 (337,703)	0.2	410 (1,014)	22.0	76

## SR Economic con't



## SR Issues-Roblin PD

- Groundwater adequate for domestic and agricultural use; water quality ranging from poor to excellent.
- LPO's - potential impacts to groundwater.
- Abandoned and uncapped wells.
- Balance economic with environmental and residential
- Abandoned landfill in the Town of Roblin.

## Community Water Service

- Except the Town of Roblin, there are no large-scale water treatment or distribution systems in the RM's of Shell River, Park North and Hillsburg.
- Campgrounds use chlorinated well water; other property owners use wells or from Roblin Water and Septic, which draws from groundwater.

### San Clara

- Sewage collection system and lagoon were built recently. It may be that in the future a water treatment plant and water distribution system may also be constructed to service San Clara.

## SR Issues-Tri-Roads PD

- > 600 recreation lots around Lake of the Prairies.
- Proposal to raise the max. lake water level 6 feet.
- Discharge from impoundment - negative impact.
- Water quality.
- Buffer zone around the Lake.

## SR Issues-Tri-Roads

- Septic holding tanks, no local discharge.
- R.M. of Shellmouth-Boulton- septic fields, lagoons, LPO's and waste disposal site=groundwater hazards
- LPO's - potential impacts to groundwater.
- Gravel extraction, discharge into ground-water.
- Limit development near residential areas.

## Community Water Service

- Inglis and Angusville use treated groundwater & serviced by piped distribution systems.
- Residents living outside the towns use wells or truck water in from the municipal truck fills.

## Community Water Service

### Village of Angusville

- The water distribution system is in good condition.
- The water treatment plant was built in 1981 and upgraded in 1997 with new distribution pumps.
- All wastewater collection piping and the lagoon are in good condition.

### Village of Inglis

- The water distribution system is in fair to good condition.
- The water treatment plant upgraded for the Asessippi ski hill complex & for several rural connections.
- The lagoon was expanded in 2000

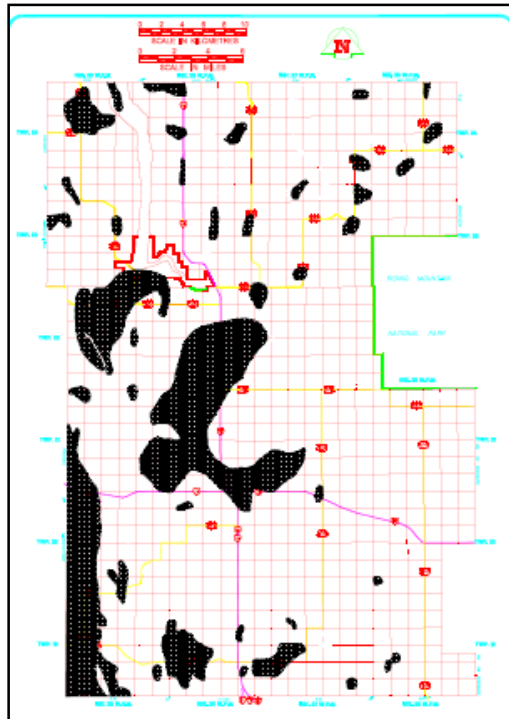
## SR Water Issues Maps Available

### Tri-Roads PD Report

- Potable Groundwater Quality (CON)
- Groundwater Sensitive Hazard Areas (CON)
- Flood Risk Assessment (PFRA)
- Surface Drainage and Waste Disposal Site
- Water systems and wastewater systems for Russell, Binscarth, Inglis and Angusville.

### Roblin PD Report

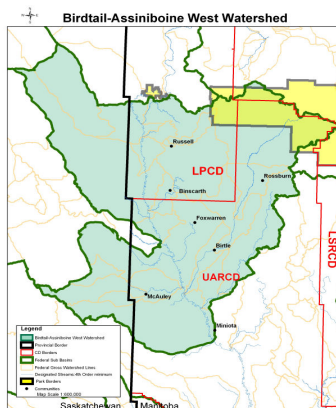
- Groundwater pollution sensitivity areas



Tri-Roads PD

Groundwater  
Sensitivity Areas

## Birdtail Assiniboine Watershed



- 6 Planning Districts:

Primarily Carleton Trail.  
Trans-Canada, Tri-Roads  
PD's

- 10 Rural  
Municipalities->

- 3 FN's:

- Waywayseecappo
- The Corners
- Birdtail Sioux

Shellmouth-  
Boulton\*

Russell

Silver Creek

Shoal Lake\*

Ellice

Birtle

Archie\*

Miniota\*

Wallace\*

Rossburn\*

## BA Population

- Watershed population (excluding FN Reserves)  
– 3.6 % **decline** on average
- Total FN population – average increase 23.4%.
- In 1991, total population 8261 persons.
- 46% of residents - urban  
54% living - rural

## BA Economic

- Agricultural & related industries employed 32.1%
- Retail trade industries are a distant second, employing 10.6%

## BA Development Issues

### RM of Shellmouth-Boulton

- 200 lots developed in Rossburn near lakes.
- Re-stocking of sport fishing on many lakes.
- septic fields, lagoons, LPO's and waste disposal = groundwater risk.
- Asessippi ski hill development, demand for water for snow making operations.

## BA Development Issues

### RM of Silver Creek

- Rec area development - environmental impact concerns.
- Potential impact of LPO's on water supplies.
- Impact of leaking septic tanks on groundwater.
- Drainage issues.

## BA Regional Development Issues

- Environmental impact of existing and future large LPOs.
- Environmental protection of areas subject to a high water table and surface water.
- Addressing increased interest in large hog production operations.
- Identification of areas for new LPO's with minimum negative impacts on residents & environment

## BA Water Issues

- Groundwater supplies are adequate.
- Groundwater obtained from the sand and gravel aquifer.
- Groundwater quality - fair to poor quality
- Groundwater resources are under-developed.
- Hazards include septic fields, lagoons, ILO's and waste disposal, mostly in the RM of Ellice where deposits located at or near the surface.

## Community Water Service

### Town of Russell

- The water distribution system appears to be good condition
- The water treatment plant is running satisfactorily
- The lagoon was expanded in 1982, but short on capacity and the south dyke may be **leaking**.

### Village of Binscarth

- A watermain renewal program should be considered for replacement of **worn water mains**.
- The lagoon was originally constructed in 1965 and is **leaking**. Studies have been completed for upgrading of the facility.

## Community Water Service

- Except the of Town of Birtle and St. Lazare, all other communities in the district are serviced by individual wells.

### The Town of Birtle

- Uses treated groundwater and is serviced by a piped distribution system.
- The water distribution system appears to be in fair to good condition.
- The water treatment plant is running satisfactorily.
- The lagoon is **at capacity**. An additional secondary cell is needed to accommodate any increase in population.

# Community Water Service

## Village of Foxwarren

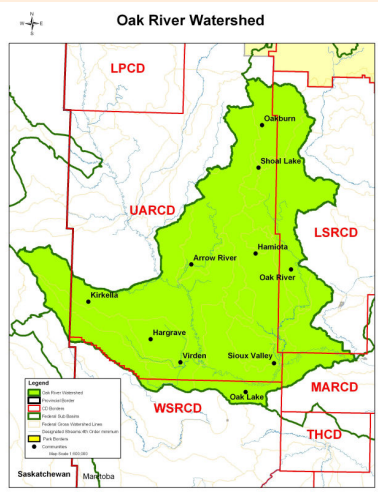
- Although private wells are presently suitable, the installation of an underground distribution system and **treatment plant is recommended**.
- Low pressure sewer system and lagoon that were originally constructed in 1979 are **overloaded** due to the high water table and weeping tiles being directed to septic tanks.
- The lagoon is presently meeting the needs of the community.

# Water Issues Maps Available

## Carleton Trail PD Report:

- Potable Groundwater Quality
- Groundwater Pollution Hazard Areas
- Flood Risk Assessment
- Aggregate Deposits and Quarry Sites
- Surface Drainage and Waste Disposal Site

# Arrow-Oak Watershed



- 7 Planning Districts:  
Over 50% in Mid-West PD
- 15 Rural Municipalities->
- 1 FN:  
Sioux Valley  
Dakota Nation

Shoal Lake\*

Birtle

Hamiota

Archie\*

Miniota\*

Wallace\*

Rosburn\*

Park\*

Woodworth

Strathclair\*

Blanchard\*

Daly\*

Pipestone

Sifton

Whitehead

## AO Population

- Watershed population (excluding FN reserves) -3.6% decline
- urban based population + 0.5% increase,  
rural - 5.1% decrease
- FN Reserve population +11.9 % increase
- 1996 - highest combined population of 13,138 persons
- The urban / rural split  
1991 urban was 41.1%  
2001 urban increased to 44.2%

## AO Economic

- 45 % of the labour force involved in Agriculture and related services.

1996 Total Labour Force 15 Years and Over by Industry and Percentage of Total Labour Force	Mid-West Planning District		Mid-Western Region	
	Total	Percentage	Total	Percentage
Agricultural and related service	1080	44.4	3215	28.9
Health and social service	225	9.3	1130	10.1
Retail trade	195	8.0	970	8.7
Transportation and storage	155	6.4	595	5.3
Government service	115	4.7	670	6.0
Other service	110	4.5	785	7.0

## AO Water Issues

- With the exception of RM of Miniota, surface runoff and ponding is a major concern for other RMs in the MWPDP.
- RM of Miniota  
Availability of groundwater, water quantity and water quality varies widely.
- RM's of Hamiota and Blanshard  
Groundwater obtained between 6 and 44 metres below grade. Water quality is **poor to very poor**.
- RM of Woodworth  
Groundwater quality is variable.  
Most common aquifers are pockets of sand & gravel.

## AO Water Issues

- Sand and gravel deposits are major groundwater recharge supply in western MWPDP.
- The sand and gravel aquifer is adequate for industrial use (high capacity wells).
- Groundwater pollution sensitivity - where deposits are at or near the surface. Majority are in the RMs of Miniota, Hamiota and Woodworth.
- The depth to bedrock may protect the shale aquifer from pollution.

## Community Water Supply

- The majority of the lands in the MWPDP are serviced by either individual wells or haul treated groundwater from standpipes located in Hamiota, Kenton and Oak River.

### Hamiota

- Upgraded in 1998, the water treatment plant can accommodate an increase in population.
- The original concrete sewers, installed in 1962, are **deteriorating** and require a replacement program.
- The existing lagoon is in good condition and has sufficient capacity to meet the needs of the present community.

## Community Water Supply

### Miniota

- Although individual wells are presently suitable, installation of an underground distribution system and **treatment plant is recommended.**
- The lagoon is presently meeting the needs of the community. However, based on discharge records and estimated in-flow, there is reason to believe that the lagoon may be **leaking.**

### Oak River

- The water treatment plant was recently upgraded in 1996 and supply is adequate.
- The lagoon is of adequate capacity to meet current demands. However, based on discharge reloads and estimated in-flows, there is reason to believe that the lagoon may be **leaking.**

## Community Water Supply

### Kenton

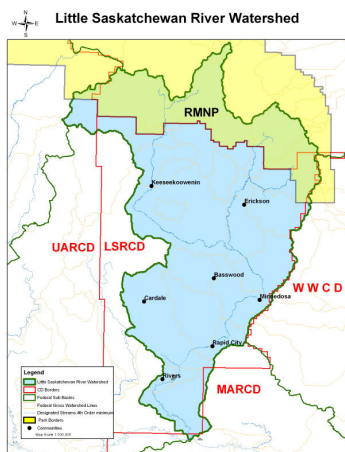
- Water main lines are near the **end of their life** cycle and need to be replaced.
- The emergency standby pump at the water treatment plant was installed in 1968 and is under sized. The underground storage reservoir is also **undersized**
- The water treatment plant also supplies water to the rural areas through a network of around 80 km's of pipeline.
- The lagoon is adequate to meet current demand. However, there is reason to believe that the lagoon may be **leaking.**

# AO Water Issues Maps Available

## Mid-West PD Report

- Potable Water Quality
- Groundwater Sensitivity Areas
- Flood Risk Assessment
- Aggregate Deposits
- Surface Drainage
- Rural Water Pipelines and Waste Disposal Sites

## Little Saskatchewan River Watershed



- 6 Planning Districts: Over 50% in S. Riding Mountain, TC
- 13 Rural Municipalities->
- RMNP
- 2 FN's
  - Keeseekoowenin
  - Rolling River

Park\*

Strathclair\*

Blanshard\*

Daly\*

Harrison

Rosburn

Whitehead

Rosedale

Elton

Odanah

Clanwilliam

Minto

Saskatchewan

## LSR Population

- Watershed population (excluding FN Reserves)
  - 1.8 % decline
- FN population + 27.3 % increase
- 1996 - highest native / non-native population of 9,773 persons.
- Urban / rural split
  - 1991 47.1 % urban
  - 2001 45.9% urban

## LSR Economic

- 40 % of labour force involved in agriculture and related services.
- RM of Odanah (48%) and RM of Minto (33 %).
- RMNP recreation and tourism, primarily private cottage developments
- Unemployment rate for TCPD in 1996 was 3.4%

## LSR Development Issues

- Potential expansion to LPO's & potential impacts.
- Suitability of existing and proposed infrastructure.
- Lake Minnedosa - development patterns and servicing issues.

## LSR Water Issues

- Groundwater is principal source of domestic & farm water supply-adequate supply.
- Municipal water systems of Erickson and Strathclair use groundwater.
- Water quality is **poor** in south-west of the district.
- Water quality is good along northern boundary of the district, however it has extensive groundwater pollution hazard areas.

## LSR Water Issues

- Shale aquifers in western half of district
- Sand & gravel in eastern half=greater **groundwater risk**.
- Proximity to RMNP=high demand for rec. development.
- Low areas near surface water bodies subject to **flooding**.
- Development on sloping land=**erosion & bank instability**.
- Proposed development policies to address these issues.

## LSR Water Issues

### RM of Saskatchewan

- Odanah shale is the major aquifer and groundwater recharge area.
- Water quality is **poor to very poor**
- A small portion of the RM of Saskatchewan is serviced by a pipeline supplying treated groundwater from RM of Odanah.

## Community Water Supply

### Erickson

- Well supply and treatment plant **near capacity**.
- Lagoon is also operating **near capacity**.

### Strathclair

- Supplied by groundwater near town.
- Treatment plant operates **near capacity** in the summer.
- Lagoon operates efficiently.

## Community Water Supply

### Newdale

- Water supply from 14 wells, **none with fire fighting capacity**.
- Lagoon capacity is sufficient in case of growth.

### Sandy Lake

- Well water supply and treatment is adequate.
- Some cottages use the village water system.
- There is some **question as to the adequacy of the lagoon**.

## Community Water Supply

### Onanole and area

- No municipal sewer or water system in the area.
- Water supplied by common or individual well.
- Sewage generally pumped out.

### Elphinstone

- Same as above

## LSR Water Issues Maps Available

### Tanners Crossing PD Report

- Groundwater Resources
- Groundwater Sensitivity Areas
- Surface Drainage
- Slope Limitations Assessment
- Natural Resource Sensitivity Areas
- Animal Production Operations
- Rural Water Pipelines and Waste Disposal Sites

## Questions/Comments?

“One generation plants the trees;



another gets the shade.”