

Ponoka County

West Gull Lake Overview Plan

The West Gull Lake Area

The area covered by this document is that part of Ponoka County lying south of Highway 53 and north of the Lacombe County border, west of Gull Lake and east of Highway 20. The area is shown on Map 1.

About two miles of the lake shore has been subdivided into half-acre cottage lots at Parkland Beach (189 lots, with more now being developed), Sunnyside (206 lots) and Poulsen's Pasture (141 lots), but this document is more concerned with the future use of land further back from the lake. Much of this land is hilly and tree covered. Its proximity to Gull Lake, and ease of access to Red Deer and Calgary, makes it attractive to buyers. About 110 lots have been or are being created in nine separate multi-lot developments scattered throughout the area, and zoning is in place for more. Map 2 shows the zoning in November 2009.

Need for an overview plan

Large scale development generates taxes for the municipality, but at the same time it may impose significant costs, notably for roads. It may also conflict with other land uses, especially farming. In the new Municipal Development Plan (MDP), the County has therefore adopted the policy that

Before opening up a new area for residential development, Council will require that an "overview plan" for the district is completed, discussed with the public, and formally adopted as an area structure plan so that the interests of all parties may be considered (Policy 17.1).

An overview plan defines the boundaries of the area, looks at possible conflicts with farming and other existing land uses, considers water supply and sewage disposal, proposes necessary road improvements, and sets out a method by which developers pay for off-site costs such as road construction. The present document addresses these issues.

County policies limiting development

Map 3 shows the capability of land for agriculture in the West Gull Lake area according to the Canada Land Inventory (CLI). Policy 1.2 of the County's Municipal Development Plan says that land with a farmland assessment rating of greater than 30% will normally be zoned only for agriculture. This generally means land rated CLI Class 5 or poorer, where 1 is the best as 7 is the worst.



The Canada Land Inventory rates the soil's capability to produce grain crops. It does not do a good job of measuring its ability to produce hay and pasture. Some producers therefore question its value in land use planning. However, it is all we have, and Ponoka County has elected to use it, in combination with farmland assessment ratings, as their measure of soil productivity.

The MDP does not only aim to protect good soil. It also tries to keep incompatible uses away from farming operations. Three cattle operations might suffer from the proximity to residential subdivisions. These are in SW 16-42-1-5, about two miles west of the lake on Parkland Beach Road; in SW 5-43-1-5, on Highway 53 just north of Rim-Crest Hills; and in NW 18-42-1-5. Any future development must leave a sufficient buffer area around these operations. (There are other intensive livestock operations in the area, but they are in areas of better soils, where multi-lot residential subdivisions are not allowed.)

Ponoka County also tries to preserve important wildlife habitat. Policy 15.1 of the MDP requires overview plans to address this issue, and to show that development will not degrade important habitat. CLI maps were consulted to see if there are any areas of particular value on the west side of Gull Lake.

- **Waterfowl:** The CLI shows an area of Class 1 waterfowl habitat along the shore of an unnamed lake in sections 22 and 26-42-1-5, and numerous small lakes provide Class 2 habitat along Highway 53. Most of the rest of the area is rated low (Class 4 and 6), mainly because of the lack of small water bodies. The CLI does not show any part of the study area as important migratory staging areas.
- **Ungulates:** There is an area of Class 2 habitat for deer, moose, or elk in the tree-covered land along Highway 53. Most of the rest of the study area is rated Class 4 or 5. No critical winter range is found in the study area.

Important habitat areas are shown on Map 4.

Provincial policies limiting development

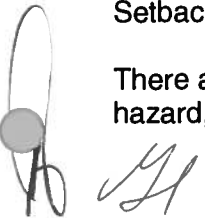
A number of provincial government policies affect the use of land in the West Gull Lake area, and some of these are shown on Map 5.

Setbacks from waste management sites: The Town of Rimbey once operated a landfill on SE 31-42-1-5. Provincial regulations require that residences be set back at least 300 metres from the former fill area, and no water wells are allowed within 500 metres. These distances may be waived by environmental and health authorities, but such waivers are not often granted.

Setbacks from oil and gas operations: Provincial regulations require that residences be set back from oil and gas installations. The distances vary depending on the risk. Generally, houses must be 100 metres or more from an operating or shut in well, and outside the right of way of a pipeline. Sour wells and lines may require larger setbacks.

Setbacks are also recommended from compressor stations and battery sites.

There are several dozen abandoned wells in the area. The ERCB says they do not present any hazard, but an area 10 metres square should be left undeveloped around them to allow to



access by service rigs in case any more work needs to be done in future. If the land is subdivided, the County will normally put the ten metre square into a utility lot or reserve lot, so abandoned wells must be identified on any subdivision application.

Oil and gas facilities must be identified on any subdivision application so that adequate setbacks are built into the design.

Proposed development area

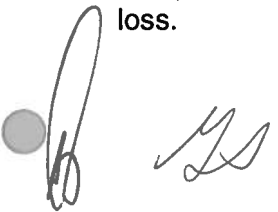
Map 6 shows the area where Council will consider applications for multiple lot residential subdivisions on the east side of Gull Lake. It was defined using the following criteria:

- The soil is generally Class 5. Because the original CLI soil maps were printed at a scale of 1:250,000, showing a quarter section about a quarter of an inch across, there is some room for interpretation. The boundaries of the development area have therefore been adjusted to follow soil, slope, and land use observed on the ground and on air photographs.
- Some better land has been included where the CLI appears to be in error, or where the area of good soil is too small to be worked efficiently with modern equipment, or where proximity to the lake justifies a loss of good farm land.
- Poor soils have been excluded where they appear to be low and wet.
- No development is foreseen within 500 metres of the old Rimbey landfill.
- No Class 1 wildlife habitat is included.
- Although it is included on Map 6, land close to the cattle operation on SW 16-42-1-5 will not be approved for multi-lot residential use as long as the cattle operation remains. The actual separation will be based on (and probably exceed) the minimum distance separation mandated by the Agricultural Operations Practices Act.

Land shown on Map 6 will not automatically be approved for development. Before approval is given, landowners must prepare more detailed plans for their property, showing the general scheme of development, roads and drainage, lot sizes, how water and sewer will be provided to the lots, and how the development will relate to surrounding lands. This detailed plan must be accepted by Council before any of the land is rezoned for residential use. Council may choose to adopt the plan by bylaw as an area structure plan.

Effect of future oil and gas operations

There are at present remarkably few oil and gas installations in the area proposed for development. However, several wells have recently been drilled. Landowners who are approached by oil and gas companies should remember that wells and pipelines, especially if sour, will reduce the development value of the land. Surface rights payments should reflect this loss.

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Subdivision design guidelines

People designing multiple lot subdivisions in the West Gull Lake area should bear in mind the following design guidelines.

Road systems: Multiple lot subdivisions should have more than one entrance so that emergency vehicles have access even if one road is blocked.

Road continuity is encouraged, but the layout should discourage people from using internal subdivision roads as a short cut from one range road to the next.

Drainage: Runoff should normally be retained on site and allowed to soak in to the ground, instead of being channelled into the lake. This will help replenish groundwater.

Lot sizes: The County encourages a mixture of lot sizes. Land with good views of the lake, or which is tree covered, should generally be subdivided into small lots. Open land, or land without views, is better suited to larger lots. Developers are encouraged to consider mixes of zoning to allow this sort of diversity.

Wildlife: The design of subdivisions must bear in mind the needs of wildlife, and should preserve travel corridors and wetlands.

Trails: Developers are encouraged to create systems of walking trails which connect to walkways on adjacent quarters.

Reserves: Where there is no need to take land for wildlife habitat or trails, the County is open to taking money in place of reserves, and will use this money to develop land on the lake shore to provide lake access for use by back lot owners.

Better soils: Areas of better soils should be left as a single large parcel which can continue to be farmed.

Development Density

The area shown on Map 6 covers about 10,650 acres, equivalent to about 65 quarter sections. The number of lots which could be created under various classes of zoning is as follows:

	<u>Lot per quarter</u>	<u>Total lots</u>
Country Residential (CR)	48	3,120
Country Residential Hobby Farm (CRH)	15	975
Watershed Protection (WP)	6	390

In this part of Ponoka County the market seems to prefer larger lots (10+ acres) on tree covered land, and smaller lots (2-5 acres) on open land with a good view. Assuming that 25% of the land is developed to CR density, 50% to CHH density, and 25% is developed to WP density, the total number of lots would be:



	<u>Quarters</u>	<u>Lots</u>
Country Residential	16	768
Country Residential Hobby Farm	33	495
Watershed Protection	16	96
<u>Total lots</u>	65	<u>1,359</u>

Of course, these numbers would only be achieved if all the land in the area was developed. That is unlikely because many owners are not interested in developing. A total of perhaps a thousand lots is more realistic.

Water supply

The west side of Gull Lake is a long way from any municipal water system, and it must be assumed that, in the foreseeable future, all demand will be met from groundwater.

If a multiple lot residential subdivision is to use groundwater, the Water Act requires the developer to provide an engineer's report, certifying that there is enough water for the new lots without depleting the supply to existing farms and residences. Engineers' reports submitted with existing subdivisions show that there is generally a good supply of groundwater in the area, but these tests look only at the effect of the incremental development. They do not consider cumulative effects. The County therefore engaged Hydrogeological Consultants Ltd (HCL), a firm of consulting engineers, to answer three questions:

- o How much groundwater is available, on a sustainable basis, to supply residential development in the study area, without depleting the supply to existing households, licensees, and traditional agricultural users?
- o Will the extraction of this much groundwater affect natural systems such as the state of wetlands, and the quality and quantity of inflows to the lake?
- o Will the change from agriculture to residential use affect infiltration rates, either positively or negatively, and is it possible or desirable to increase infiltration through surface engineering measures, or by control of land cover?

HCL concludes that there is sufficient groundwater to supply another 1,400 lots in the plan area without depleting the supply to existing households, licensees, and traditional agricultural users.

Whether this will affect natural systems depends on which aquifer is used. HCL identified four distinct aquifers in the area. The lowest one, which they call Geo-unit 1, is below the level of Gull Lake and the Blindman River, and extracting water from it will not have any effect on the lake or river. Geo-unit 2, which lies at a higher elevation, feeds Gull Lake. Geo-unit 3, the next one, feeds the Blindman River. Geo-unit 4, the highest of the four, does not connect to lake or river. To avoid reducing the flow of groundwater into the lake and the river, HCL recommends that new wells in the Gull Lake drainage basin utilize Geo-units 1 and 3, while new wells in the Blindman River drainage basin should utilize Geo-units 1 and 2.

Finally, HCL concluded that infiltration rates (and thus groundwater recharge) will not be adversely affected by residential subdivision. In fact, residential lots tend to have higher infiltration rates than farm land.

The County will take this into account when approving new multi-lot subdivisions. In particular, high-yield wells (such as those supplying a communal water system) will be required to use an aquifer that does not feed Gull Lake or the Blindman River.

The HCL study is available at the County office, and it is expected to be available shortly on the County website.

Lake access

The owners of large residential lots, especially those far back from the lake, are not likely to visit the lake shore as much as people in lakeside subdivisions, but they will still want to do so occasionally.

Map 7 shows that there are sizeable tracts of Crown and municipal land along the lake shore, and more is expected to be dedicated when other lakeshore parcels are subdivided. There does not appear to be any need for the County to purchase land for additional lake access. However, it may be necessary to develop County-owned lakeshore reserves to make them more usable. This cost can be met from the County's reserve fund, which is money paid by developers in place of land.

Roads

Highway 771 and the Parkland Beach Road have been built to a high standard and can easily handle the increased volume of traffic. However, as shown on Map 8, a total of 19 miles of roads will require building or upgrading.

The current cost of road construction (gravel surface) is about \$200,000 per mile, so it will take \$3.8 million to build all the roads shown. The work will initially be done by the County, and the cost will be recovered from developers by a levy on each new lot. The amount will be the total cost divided by the number of expected lots. \$3.8 million divided by 1,000 lots gives a per-lot levy of \$3,800.

It will take several years to complete the building program, so the County will decide which roads have highest priority, and will build them first. Proposed subdivisions on low priority roads may have to be delayed, although developers may choose build required roads at their own expense if they are not prepared to wait for the County to do the work. In that case, the County may reimburse part of the developer's construction cost.

All internal subdivision roads will be built at the developers' expense to County standards.

The cost of maintaining roads, once built, will be met from the County's general revenues.



Water and sewer on small lots

Individual water and sewer systems can safely be installed on larger lots, but as lots get smaller, problems may arise with individual systems. Closely spaced wells may interfere with each other, and if a sewer field malfunctions, it may contaminate neighbouring lots. For that reason the County's new land use bylaw sets a maximum of 48 lots per quarter section on land zoned Country residential. That implies an average lot size of about two acres.

Developers may take the view that two acres is too large close to a recreational lake. The County understands this concern. Smaller lots will therefore be allowed close to the lake under Lake Resort or Recreational Vehicle Resort zoning, but they must be served by piped water and sewer systems. The County does not insist on owning and operating them: provided they meet Alberta Environment's standards for municipal systems, they may be owned and operated by a condominium association, a residents' association, or a private company.

Commercial services

If the west side of Gull Lake develops as suggested in this document, there could eventually be a sizeable local population, and these people will need stores and other commercial outlets. There are already two locations with commercial zoning, one at the junction of Highway 771 and Parkland Beach Road, and one inside the summer village boundaries. Rimbey is also close. There does not seem to be a need for another commercial centre in the study area.

Intermunicipal considerations

Before adopting this plan, Ponoka County considered the effect it could have on Lacombe County and the Summer Village of Parkland Beach.

Because there is so much municipal reserve along the lake shore in Ponoka County, people from the study area are not likely to use Lacombe County's lakeshore access points. They are also unlikely to add much to the traffic on Lacombe's roads. Most people coming in from the south will probably access the area using Highways 20 or 771, which are maintained by the province, and by Westlake Road (Township Road 420), which is maintained by Ponoka County.

Some of the best shoreline access on the west side of the lake is a block of reserve land owned by the Summer Village of Parkland Beach. If development proceeds as envisaged by this document, many more people will seek to use it. This will place an unfair burden on the Summer Village. The County will therefore offer to pay part of the cost of upgrading and maintaining the Summer Village's reserve land.

Opportunities for Further Input by Residents

A draft of this document was discussed at an Open House at Crestomere on Monday 7 June 2010, and several changes were made as a result of that public input.

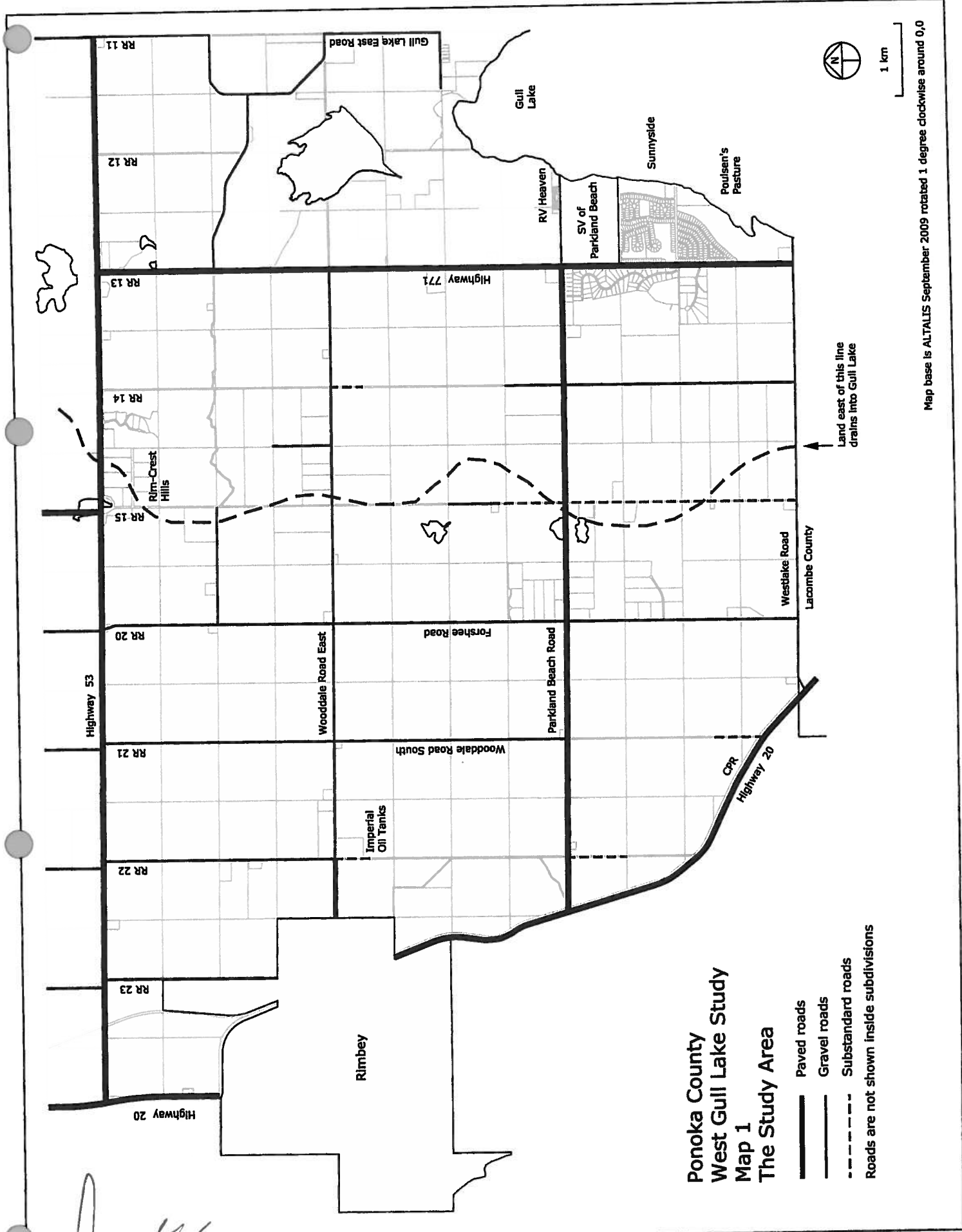
Neighbours will have further opportunity for input on the use of particular quarter sections when landowners bring detailed development proposals to Council.

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References and sources

- Legal base mapping: ALTALIS, September 2009
- Topography and drainage: National Topographic Series, Maps 83A12 (Ponoka) and 83B9 (Rimbey), 1:50,000 (both maps 1975)
- Agricultural capability: Canada Land Inventory: Soil Capability for Agriculture, Maps 83A12 and 83B9, 1:250,000: Department of Regional Economic Expansion, Ottawa (1970)
- Ungulate capability: Canada Land Inventory: Land Capability for Ungulates, Maps 83A (Red Deer) and 83B9 (Rocky Mountain House), 1:250,000: Department of Regional Economic Expansion, Ottawa (1970)
- Waterfowl capability: Canada Land Inventory: Land Capability for Waterfowl, Maps 83A (Red Deer) and 83B (Rocky Mountain House), 1:250,000: Department of Regional Economic Expansion, Ottawa (1970)
- (NTS and CLI maps listed above may be downloaded as PDF files from www.geogratis.ca, a website maintained by Natural Resources Canada, www.nrccan.gc.ca)*
- County documents: The Municipal Development Plan, Ponoka County, Bylaw 6-08-MDP (2008)
- The Land Use Bylaw, Ponoka County, Bylaw 7-07-LUB (2008)
- Development setbacks: Subdivision and Development Regulation, AR 43/2002
- Oil and gas installations: sections 10 and 11
 - Waste water treatment facility: section 12
 - Landfill sites: section 13
- Abandoned wells: Advisory Land Use Planning Notes: Abandoned oil and Gas Wells: Energy Resources Conservation Board, Calgary (2009)
- Water testing: The requirement for proof of water supply is in section 23(3) of the Water Act.
- Regional water model: Groundwater Supply at Gull Lake: Hydrogeological Consultants Ltd, file 10-136.00 (April 2009)

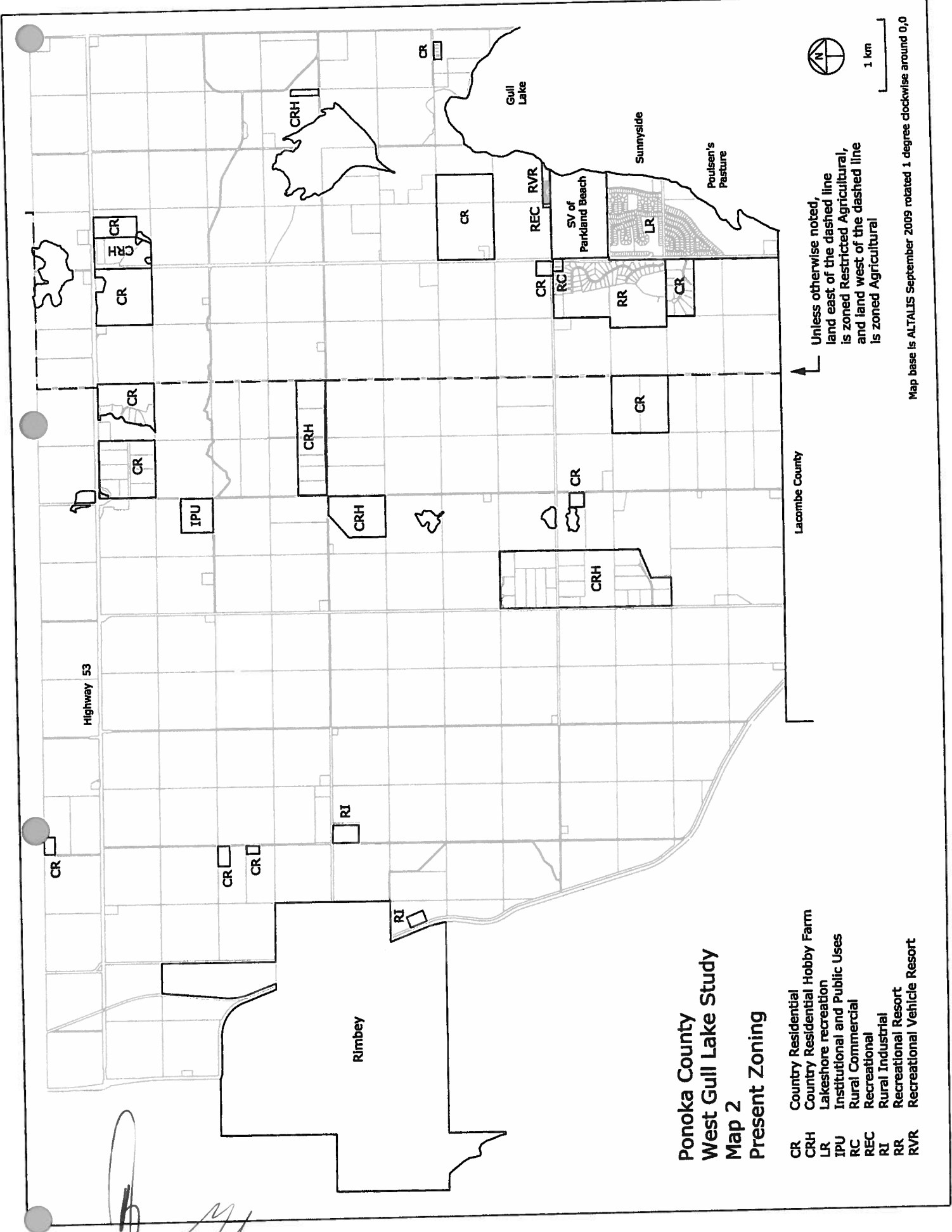




**Ponoka County
West Gull Lake Study
Map 1
The Study Area**

- Paved roads
- Gravel roads
- - -** Substandard roads
- Roads are not shown inside subdivisions

Map base is ALTALIS September 2009 rotated 1 degree clockwise around 0,0



**Ponoka County
West Gull Lake Study
Map 2
Present Zoning**

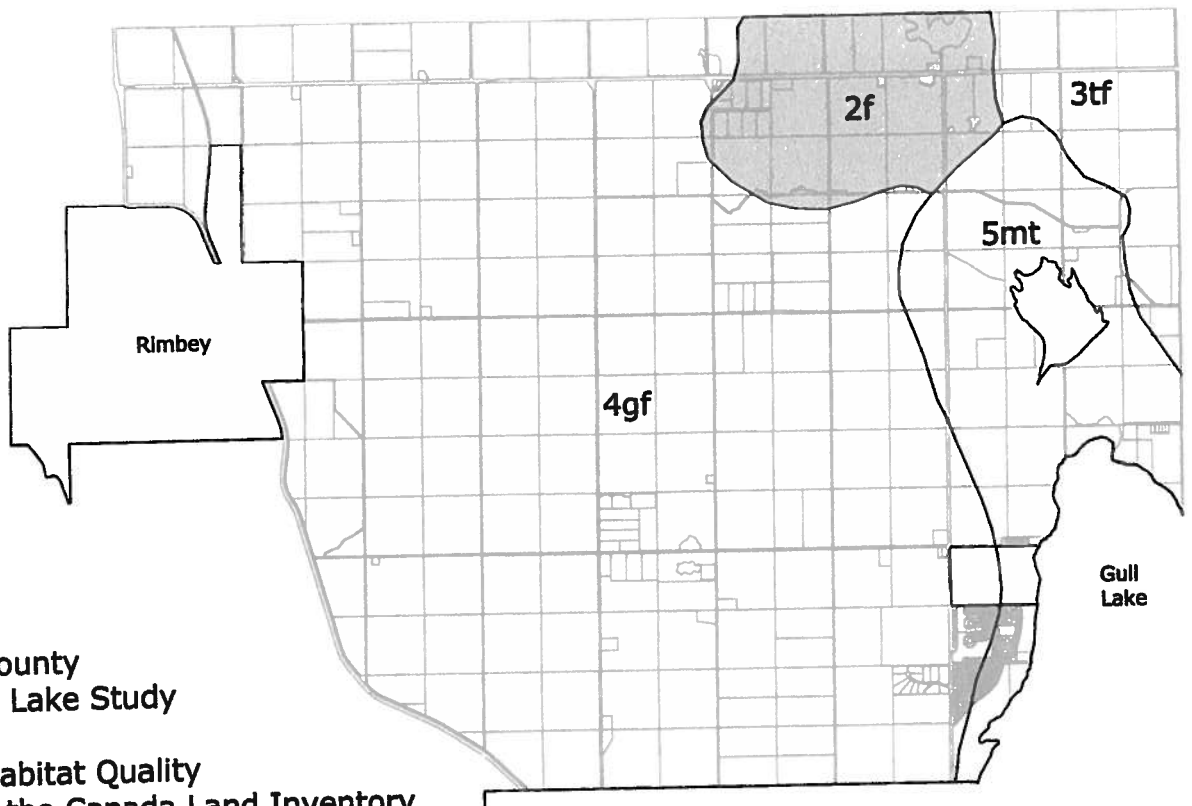
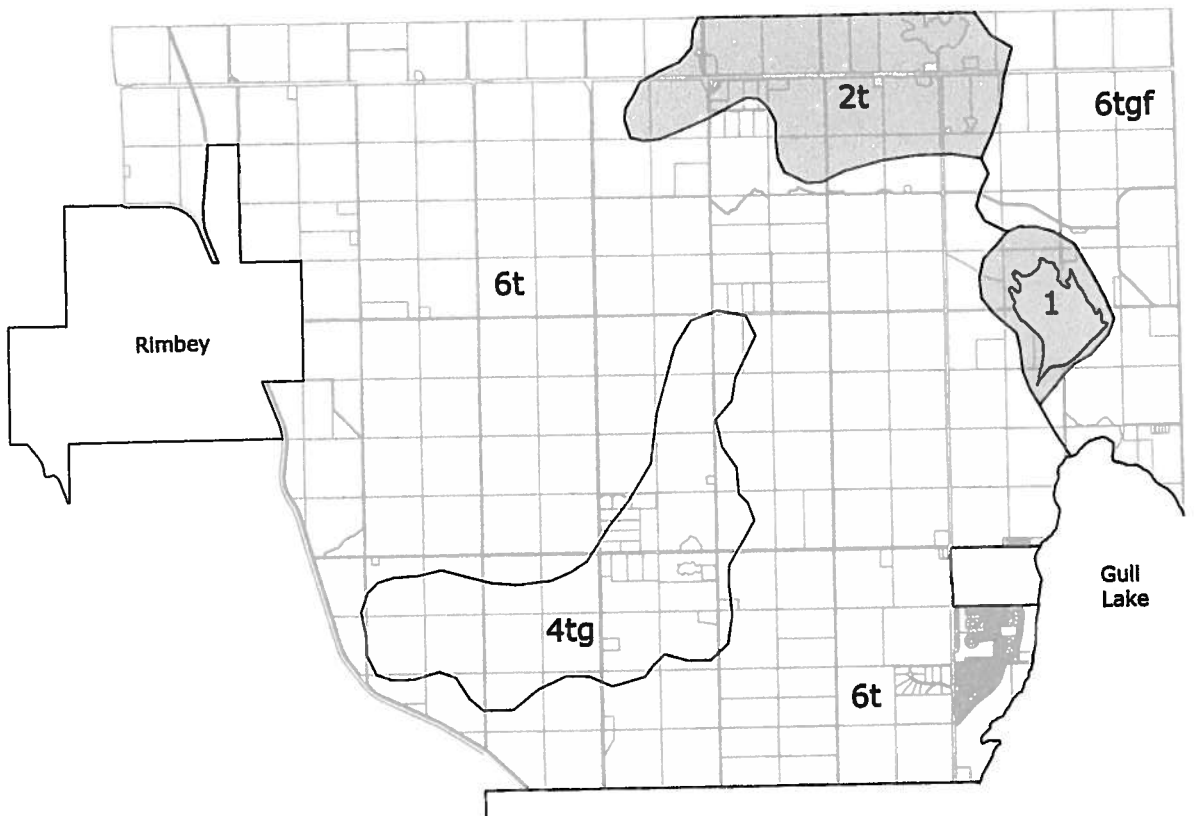
- CR Country Residential
- CRH Country Residential Hobby Farm
- LR Lakeshore recreation
- IPU Institutional and Public Uses
- RC Rural Commercial
- REC Recreational
- RI Rural Industrial
- RR Recreational Resort
- RVR Recreational Vehicle Resort



1 km

Unless otherwise noted,
land east of the dashed line
is zoned Restricted Agricultural,
and land west of the dashed line
is zoned Agricultural

Map base is ALTALIS September 2009 rotated 1 degree clockwise around 0,0



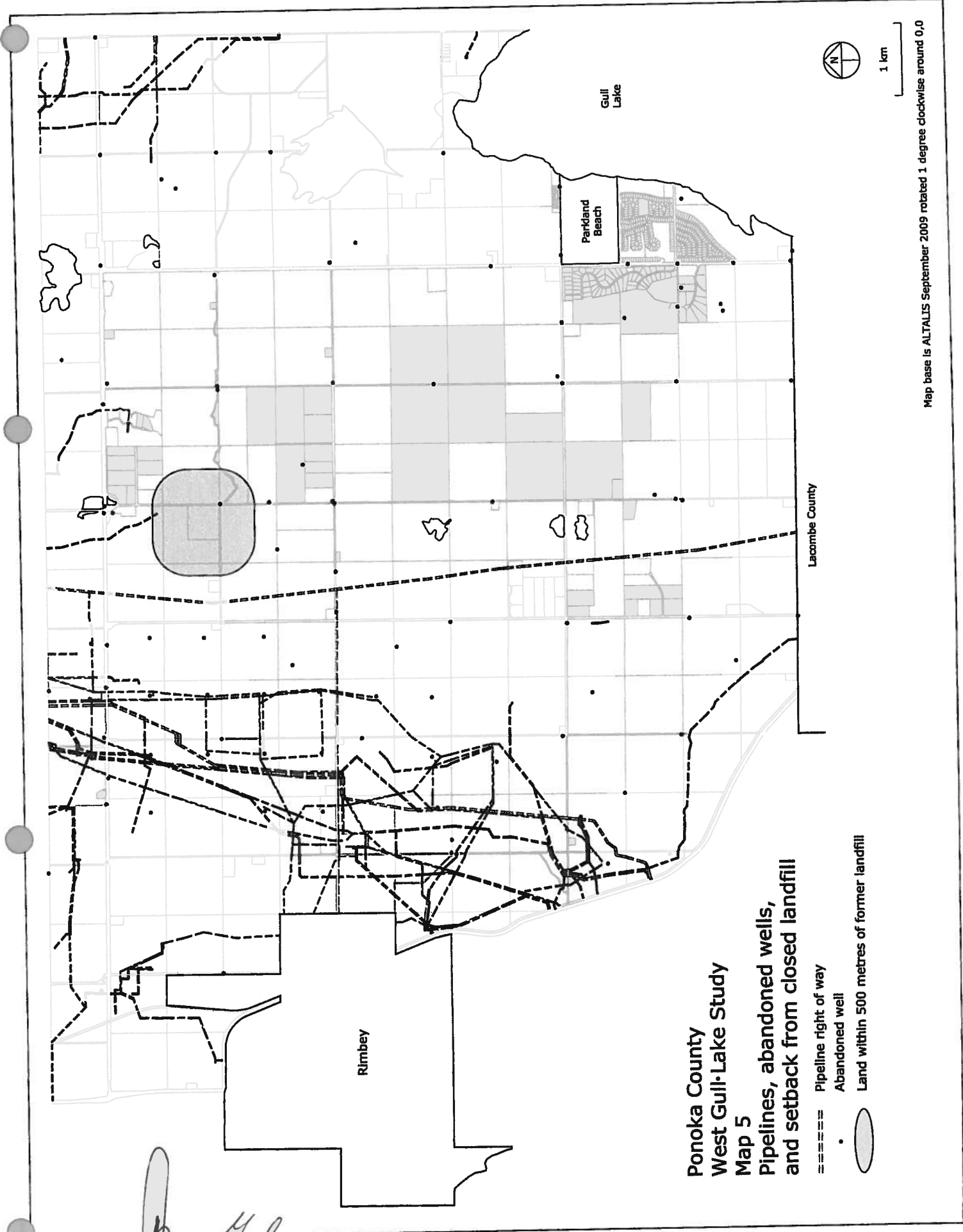
Ponoka County
 West Gull Lake Study
 Map 4
 Wildlife Habitat Quality
 Based on the Canada Land Inventory
 Top: Waterfowl
 Bottom: Ungulates
 Better quality habitat is shown shaded



1 km

Map base is ALTALIS April 2008 rotated 1 degree clockwise around 0,0

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**Ponoka County
West Gull-Lake Study
Map 5
Pipelines, abandoned wells,
and setback from closed landfill**

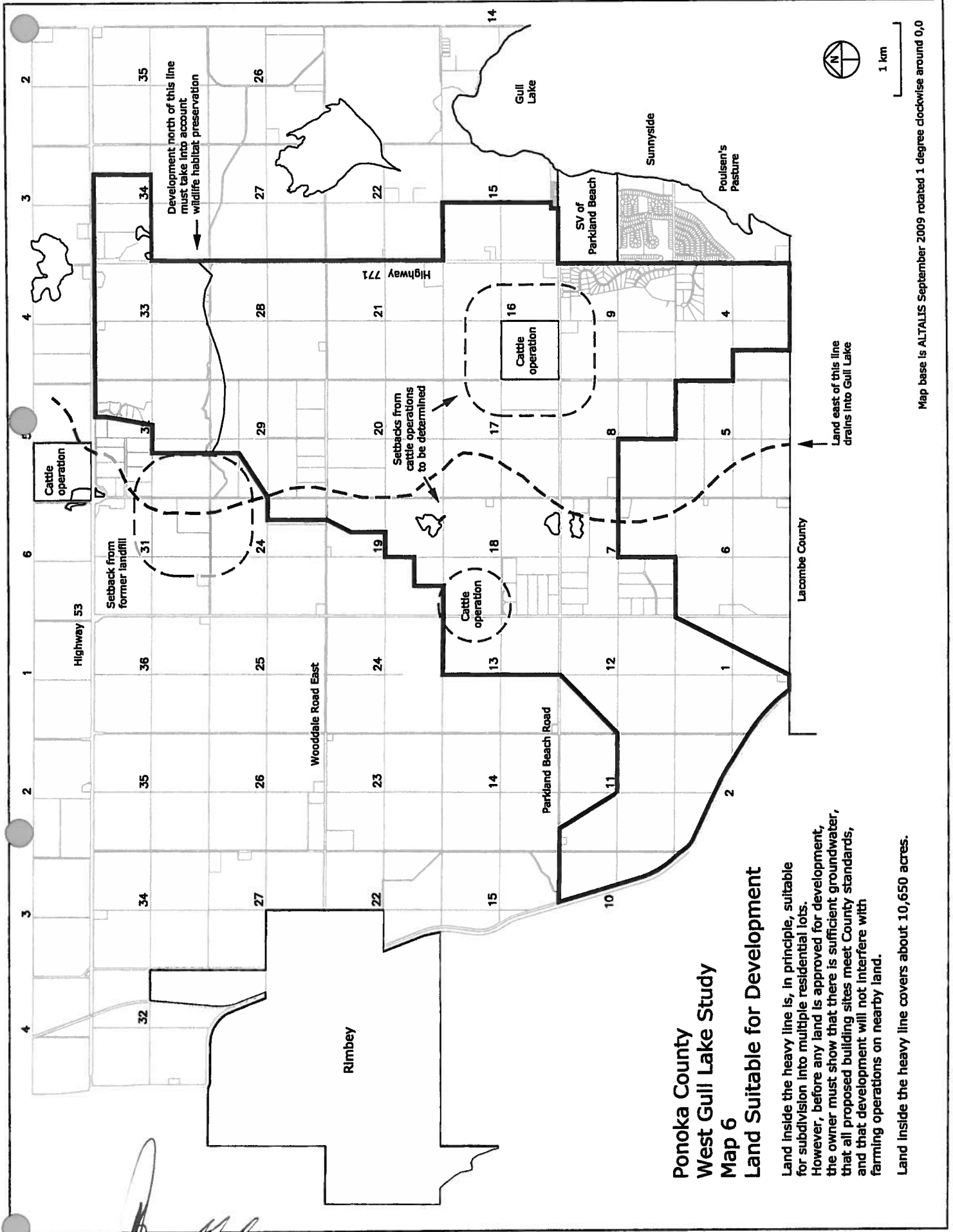
- ===== Pipeline right of way
- Abandoned well
- Land within 500 metres of former landfill



1 km

Map base is ALTALIS September 2009 rotated 1 degree clockwise around 0,0

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Highway 771

Parkland Beach

Sunnyside

Poulsen's Pasture

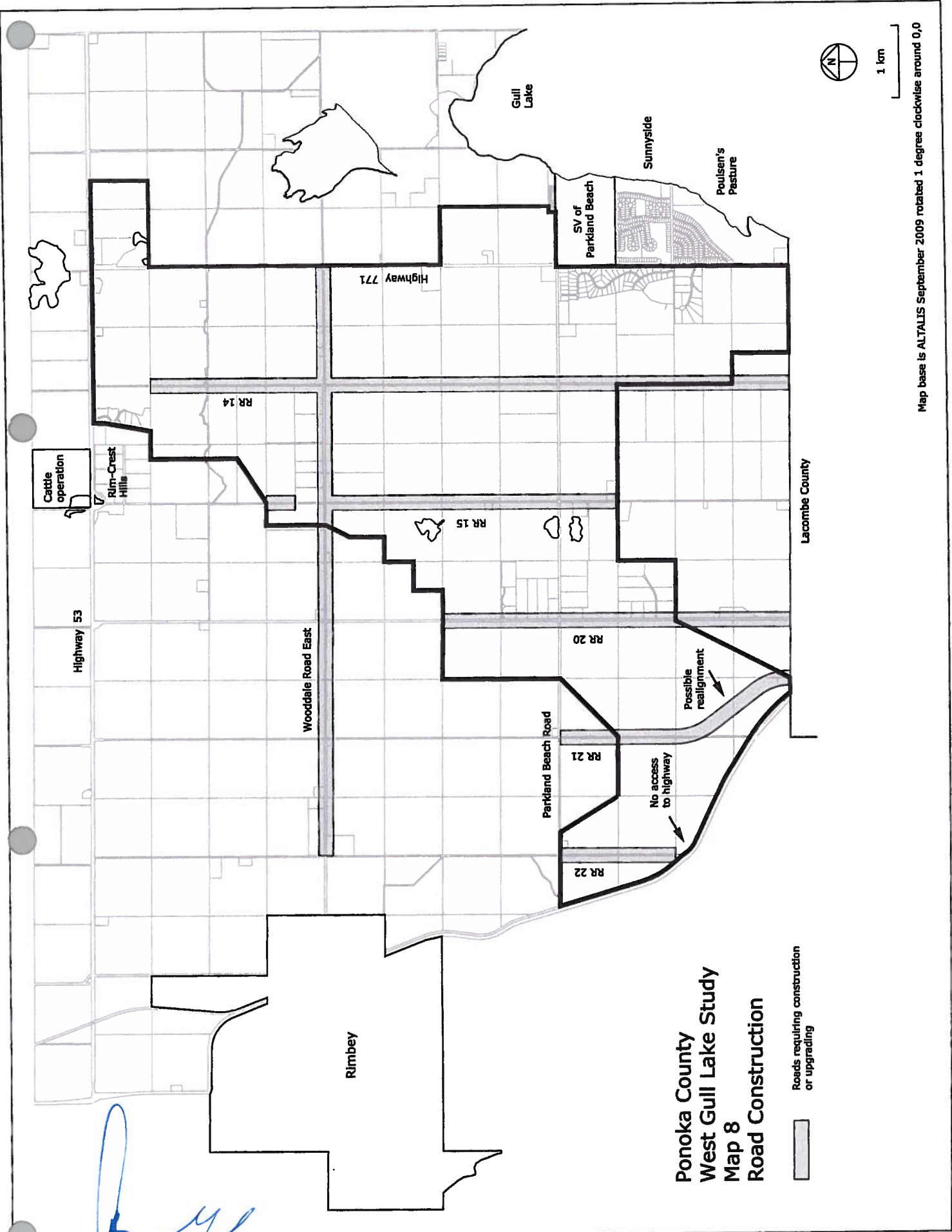
Ponoka County
West Gull Lake Study
Map 7
Shaded areas indicate
municipal and Crown parcels
with shoreline access

Road allowances
also give access

500m



Lacombe County



**Ponoka County
West Gull Lake Study
Map 8
Road Construction**

█ Roads requiring construction or upgrading