

County of Wetaskiwin

Pigeon Lake Watershed Area Concept Plan

February 6, 2014

1 Introduction

1.1 Background

The Pigeon Lake area continues to attract significant attention from landowners wanting to pursue a mixture of residential, recreational and commercial development. With this demand expected to increase over time, concerns have been raised about the lake's ability to support an increase in development and ultimately the added growth pressures. There are also concerns regarding whether there is sufficient infrastructure to support existing and future developments, and the potential for adverse environmental impacts on the lake and surrounding lands. The County of Wetaskiwin recognizes that increased development and growth pressures need to be addressed on a cooperative basis to ensure the long-term protection and sustainability of Pigeon Lake.

Through the County's strategic planning process, Council recognized the need for long range plans in areas experiencing growth pressures. The 2010 Municipal Development Plan draws specific attention to areas in the County meriting special attention for administration to develop plans to better guide future development, and Pigeon Lake is named as one of these areas.

The *Municipal Government Act* is the provincial legislation which empowers municipalities to govern the development of lands within their boundaries in a manner that is logical, timely, economic and environmentally responsible. The planning and development process is based on the cooperation of public and private goals and objectives to achieve harmony.

1.2 Plan Area

Figure 1 shows Pigeon Lake's location in Central Alberta. The study area, as depicted in Figure 2, inexactly follows the Pigeon Lake Watershed. Some allowances were made to include selected growth nodes. Within the plan boundaries are multiple jurisdictional holders. Located on the south side of the lake are the summer villages of Grandview, Crystal Springs, Norris Beach, Ma-Me-O Beach and Poplar Bay. While on the north side of the Lake the summer villages of Silver Beach and Argentia Beach are also within the boundary of the plan. Pigeon Lake Provincial Park, administered by Alberta Tourism, Parks and

Recreation, is located on the west shores of the lake. The Pigeon Lake Indian Reserve is located on the east side of the lake. Although not within the study area, Leduc County and the summer villages of Sundance Beach, Itaska Beach and Golden Days are located on the north side of Pigeon Lake.

1.3 Purpose

The purpose of the Pigeon Lake Area Concept Plan (PLACP) is to set out principles and policies to act as a guideline for new development and redeveloped areas. This will help minimize land use conflicts, mitigate environmental pressure and reduce overall impacts in areas currently experiencing, or those areas forecasted to experience development pressure. This plan helps direct subdivision and development authorities when making decisions on subdivision and development within the PLACP boundary. The PLACP is a long-range planning document that will remain in effect until repealed or amended.

Areas where new development may be considered will be identified. However, no defined limits for new development are set as the County intends to rely on further site-specific analysis; Area Structure Plans and pertinent studies, to determine the level or density of development that can be supported at any particular location.

1.4 What is an Area Concept Plan?

An Area Concept Plan is a non-statutory planning document, adopted by Council through resolution. Although Council intends to follow the policies and strategies outlined in the plan, they are not bound by the content and may exercise discretion.

2 POLICY CONTEXT

2.1 Provincial legislation regulating development

2.1.1 The Water Act

For the subdivision of six or more residential lots per quarter section, the Water Act requires that a detailed Groundwater Assessment be conducted by a professional engineer, geologist or geophysicist, verifying that the current Alberta Environment standard of 1,250 cubic metres of water per year are available for each individual lot. This ensures that there is sufficient water for the proposed development without compromising or depleting the existing water supply. The

County, as part of the Area Structure Plan process, requires a certified engineer's report commenting on the water supply.

2.1.2 Subdivision and Development Regulation

The Subdivision and Development Regulation is a regulatory document outlining the specific rules and regulations relating to the subdivision and development of land in Alberta. This includes the subdivision and development process, the appeal process and mandatory setbacks from certain land uses.

There are a wide variety of land uses within the PLACP boundary (see Section 4.1); as a result it is important to consult the Subdivision and Development Regulation in order to determine what development limitations exist due to mandatory setbacks. Some of the most pertinent legislation includes:

- **Setbacks from sewer lagoons:** The PLACP area includes the Mulhurst Sewage Lagoon. A development permit cannot be issued and construction cannot occur for a school, hospital, food establishment or residence within 300 metres of the working area of an operating wastewater treatment plant. A subdivision of land for these uses will also not be allowed unless there is a building site more than 300 metres away from the wastewater treatment plant. Setbacks will also be applied to other wastewater containment, storage or treatment facilities including, communal waste water treatment systems.
- **Setbacks from waste management sites:** Waste management sites with the PLACP boundaries include inactive landfills and waste transfer stations. For an inactive landfill development is restricted within 300 metres from the site. For a waste transfer station, a facility that receives waste materials from a community where it is consolidated by transferring it to a larger vehicle for more efficient and economical transport to a distant waste disposal facility, development is restricted within 300 metres of the site. For an active landfill development is restricted within 450 metres of the site.
- **Setbacks from oil and gas operations:** There are numerous oil and gas wells within the area. Subdivision or development applications will not be approved if it would result in overnight accommodation or a public facility being within 100 metres of a gas or oil well, although lesser distances may be approved in writing by the Energy Resource Conservation Board (ERCB). Sour gas facilities may require larger setbacks.
- **Setbacks from highways:** Highways 13, 13A, 771 and 616 pass through the PLACP area. These are within the jurisdiction of Alberta Transportation. Subdivision of land is restricted within 0.8 kilometres of the centre line of a highway where the posted speed limit is 80 kilometres per

hour or greater, unless you meet the conditions laid out. This is within the jurisdiction of Alberta Transportation.

- Other requirements: The provincial regulations also require the municipality to consider soils, topography, water supply, and waste water disposal.

2.2 County policies regulating development

County documents may be divided into two types: statutory and non-statutory.

Statutory Plans A Statutory Plan is a legal document that must have a public hearing and three readings before being adopted by bylaw. Once adopted, there is a legal obligation on part of both the municipality and the landowners to adhere to the plan. Examples of these plans are the County's Municipal Development Plan and Area Structure Plans adopted by Council.

Non-Statutory Plans Non-statutory plans are passed by Council through resolution and do not require a public hearing before being adopted, although, it is at Council's discretion to hold a non-statutory public hearing. They are often developed to help encourage a certain direction for development or growth in a particular area. Because these plans are non-statutory they can be less prescriptive, and Council can adapt to changing circumstances. The PLACP falls under this category as a non-statutory plan.

2.2.1 Municipal Development Plan (MDP)

The MDP is a long-range statutory plan that guides land use in the County. In the MDP Council identified the Pigeon Lake area as one that needs careful study and guidance so that development can continue in a sustainable manner; the PLACP addresses this need.

Along with outlining key areas where analysis and specific plans are needed, the MDP influences day to day development through its policies and objectives. These objectives focus on the protection of agricultural land where agriculture is seen as the predominant land use, the development of land in an efficient and sustainable manner, the protection of environmentally sensitive areas, and ensure that development respects existing community character. The Area Concept Plan must comply with the MDP and so these objectives play an important role in guiding development within the plans area and directing the

content of the PLACP. Additionally, when an application for subdivision, development or rezoning is submitted within the area concept plan boundaries, the PLACP in addition to the Municipal Development Plan will be examined to ensure the development, subdivision or rezoning is in compliance and ultimately within the County's long range planning vision.

The MDP provides guidance for land use in the County and is a long-range statutory plan adopted as a bylaw, which directs decision making for everyday development matters.

2.2.2 Land Use-Bylaw (LUB)

The purpose of the LUB is to regulate and control the use and development within the municipality to achieve the orderly, economic and beneficial development of land. To achieve this goal, this Bylaw, among other things:

- (a) divides the municipality into districts;
- (b) prescribes and regulates for each district, other than Direct Control districts, purposes for which land and buildings may be used;
- (c) prescribes and regulates for each district, other than Direct Control districts, subdivision and development standards;
- (d) establishes a process for making decisions on development permit applications and the issuance of development permits; and
- (e) establishes a process for notification of landowners affected by development permits issued.

2.2.3 Requirements for Area Structure Plans: Policy #6606

In addition to statutory and non-statutory plans, the County ensures sustainable development through a number of policies, specifically Policy #6606, Requirements for Area Structure Plans (ASPs). An ASP maybe required for any development that creates three or more lots in a quarter section, with the exception of those lots created under the Second Yard Subdivision Policy #6607. The purpose of these requirements is to provide the County with comprehensive information about the proposed subdivision and allow stakeholders to comment and provide input. Through the ASP process administration and Council can make informed decisions and identify the impact, whether positive or negative, it may have on the surrounding community.

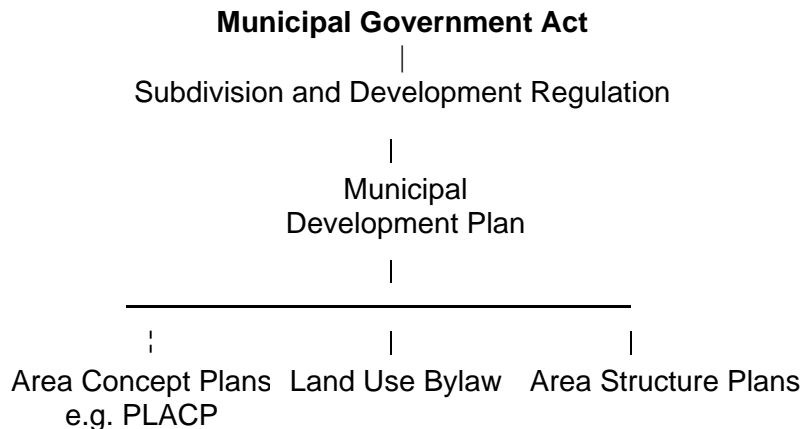
Some pertinent studies and plans that maybe required as part of Policy #6606, Requirements for Area Structure Plans include, but are not limited to:

- Geotechnical report;
- Groundwater Percolation report;
- Storm water management plan;
- Detailed information relating to waste water treatment;
- Water supply (must be in compliance with the *Water Act*);
- Environmental Assessment;
- A traffic impact assessment;
- Public consultation.

The required studies and plans allow for careful consideration of applications to help protect the environment and ensure that development is compatible with the surrounding community.

The Municipal Development Plan, Land Use Bylaw and County Policies, including Policy #6606, Requirements for Area Structure Plans, all work together and play an integral role to support Area Concept Plans.

Figure 3: How the PLACP aligns with other documents



Note: the dashed line represents non-statutory plans

3 Public Engagement in the Planning Process

Public engagement was a recognized, pertinent aspect of the concept plan. Nine varying stakeholder groups were consulted throughout the entirety of developing the PLACP through the use of a focus group. In addition to multiple focus group meetings, an open house was held and the general public was invited to share their opinions and/or concerns. It was important that the plan reflected the broad interests of all the residents, interest groups and adjacent Municipalities alike.

Two different methods of public consultation were used to gather the public's views regarding the PLACP. A focus group with representation of nine varying stakeholder groups was created. The focus group was made up of volunteers representing Summer Villages, Pigeon Lake Watershed Association, agriculture sector, including intensive livestock operations, County of Wetaskiwin, County of Leduc, commercial representation, residential developers, First Nations, Alberta Environment and Alberta Sustainable Resource Development. The focus group played a vital role in the development of the concept plan.

Focus group participants volunteered to partake in the planning process. Advertising for focus group members was publicized concurrently in the Pipestone paper and on the County's website for two consecutive weeks and open to the general public.

4 The Study Area

4.1 Present Land Uses

Present land uses within the plan area are extremely diverse, ranging from agricultural to industrial (oil and gas) to residential to recreational. Agriculture has always been the backbone of the economy with grazing also being a prominent use. The Canada Land Inventory System ranks soil quality, with the highest quality soil as Class 1 and the poorest as Class 7. The soil within the PLACP is mostly ranked Class 3 with poorer soil existing in certain areas (see Figure 4.0).

The oil and gas industry is significant in the area, with numerous oil and gas wells and pipelines located within the PLACP's boundary (see Figures 5.0 & 6.0). Recreation is also important, with facilities like campsites, boat launches, golf courses and hotels located around Pigeon Lake. Recreation draws people into the area during the summer months to enjoy the numerous amenities offered. The range of zoning classification within the area allows for a wide variety of uses and parcel sizes. The Land Use Bylaw 95/54 should be consulted for an explanation of the different land classifications within the PLACP boundaries and the permitted and discretionary uses.

4.2 Present and Future land Use Conflicts

Due to the wide variety of land uses within the PLACP land use conflict is inevitable. As development pressure within the area increases there is the potential for even more conflict. The creation of thorough planning policy and long term plans helps to mitigate some of these conflicts.

Of particular importance is the conflict between residential, agriculture and in some instances, recreational uses in the area, three of the most important land uses. Within the plan boundary are many agricultural operations, ranging in size and type. The policies of the MDP set out as a priority conserving farmland and protecting it from uncontrolled development. However, accepted farming practices can result in dust, odours, and noise which may hamper the enjoyment for those who use the area for recreational purposes. These recreational opportunities are also important to the community and the Province as a whole. It is important that these uses are also protected. Through careful planning and development the needs of these groups and others can be nurtured to create a thriving area based around recreation while still supporting agriculture and reducing land use conflicts.

4.3 Constraints

Pigeon Lake and its surrounding area do not fall under just one jurisdiction, making inter-jurisdictional communication and planning essential. The ten summer villages control land use within their boundaries. Outside the summer villages, the north part of Pigeon Lake falls under Leduc County and their North Pigeon Lake Area Structure Plan, 2010. The Pigeon Lake Indian Reserve is also located within the study area. Additionally, Pigeon Lake itself falls under provincial and federal jurisdiction. These different jurisdictions limit what the County of Wetaskiwin is able to carry out and demands cooperation amongst different stakeholders.

5 Policies

5.1 A Vision for the Watershed and Lake

Our vision for the Pigeon Lake watershed is a healthy natural environment supporting sustainable development coexisting with the recreational value of the lake.

5.2 Goals

In support of this vision, the concept plan adopts the following goals:

- Maintain the quality of the watershed around the lake.
- Protect fish and wildlife habitat and, where possible, restore damaged habitat to a productive natural condition.

- Ensure groundwater will be protected and its use will not exceed sustainable levels.
- Maintain/enhance a visually appealing landscape with ample tree cover.
- Support the types of agriculture that are compatible with the watershed.
- Carefully plan residential and recreational development and redevelopment to be consistent with these goals, using cluster development wherever possible.
- Provide necessary municipal services.
- Involve residents and landowners in all decisions.

The County, acting alone, does not have the power to achieve all these goals, but in areas where municipalities have jurisdiction, these goals will guide the County's decisions.

5.3 Economic drivers

The County benefits from the oil and gas industry for a large part of its tax base. In 2010, linear assessment (mostly pipelines) paid \$9.68m to the County in taxes, and machinery and equipment (which includes above-ground oil and gas facilities) paid \$2.59m, for a total of \$12.27m. This was 53% of the County's total tax revenue.

The oil and gas industry in this part of Alberta has matured, and older facilities and lines are being taken out of service. It is likely that the oil and gas industry will pay less in taxes in future. The County needs to replace this revenue. Residential and recreational development is one of the most promising sources, and Pigeon Lake is the most promising location. This concept plan therefore supports sustainable residential and recreational development in the Pigeon Lake watershed, provided that this development is consistent with a healthy environment that will help support a good economic outlook for the region.

5.4 Reconciling economic and environmental goals

In a recreational lake, good water quality means safe levels of pathogens, and low levels of nutrients. This will result in clear water with minimal algae and plant growth (although too low a level will reduce fish populations).

Pathogens can be minimized by public health education and enforcement, by the installation of municipal sewer systems, and by keeping livestock away from surface water and groundwater recharge areas. These issues are addressed later in the document.

Plant growth is limited by the supply of nutrients, light and temperature in lake water. Although many nutrients are required for plant growth, phosphorus is the limiting factor in most Alberta lakes. Phosphorus may enter the water from various sources: atmospheric deposition, release from bottom sediments, or runoff from the land through streams or groundwater. The first two are outside our control, but surface runoff is, in part, controllable.

The amount of phosphorus entering a lake from the land depends mainly on the use of that land. Forested land contributes about 10 kg/km²/year. Farm land contributes 20 to 50 kg/km²/yr (less from hay land, and more from crops). Urban areas contribute about 100 kg/km²/yr from surface runoff, plus 0.1 to 0.9 kg per person depending on how sewage is treated. (Figures are taken from the 1998 *Pigeon Lake Water Quality Study* by Lilley Environmental Consulting and Dr. Chris Earle of Concordia University College.)

The County's municipal development plan (MDP) gives a very high priority to agriculture. "As a rural municipality with an agricultural base, the County will take responsibility to maintain the farmland for viable agricultural production" (MDP, page 7), however, the Statement of Purpose at the beginning of the MDP says that its first goal is to "maintain a clean environment (with) no negative impact on air, natural resources, water, or soil quality" (page 3). In this regard, the County supports farmers using "best agriculture practices."

The figures quoted above show that properly designed recreational and residential development can have less of an impact on the environment, and especially water quality, than traditional types of agriculture. For this reason, plus the gains in taxation noted above, the concept plan welcomes properly designed recreational and residential development, ***even on soils which, elsewhere in the municipality, would be protected for agriculture.***

To assist with the restoration of lands back to natural conditions, thereby assisting water quality, the County at its discretion will use its right during the subdivision process to secure Environmental and Municipal Reserves within those lands that most benefit the watershed.

Having said that, we must be clear that no farmer will be forced to sell his land, or to convert it to non-agricultural uses, and he will not be forced to curtail legitimate farm operations because of objections by his neighbours. He must be able to carry on farming responsibly for as long as he wants, and, when the time comes, to pass it on to the next generation or to sell it to another farmer. Any conversion from agricultural to other uses must be voluntary.

5.5 Planning principles

In order to achieve the goals set out above, the County will be guided by the following policies when evaluating a proposal to develop land in the watershed.

5.5.1 Presumption of development approval

Pigeon Lake is seen as primarily a recreational lake, however, standard residential and agriculture remain as predominant land uses in the surrounding watershed. Development is expected, and will be welcome as long as it does not conflict with the planning policies set out here.

5.5.2 Agriculture

Large-scale confined animal operations are not appropriate in the Pigeon Lake watershed.

Recreational and residential development must not diminish the right of neighbouring farmers to manage their land using generally acceptable agricultural practices. This is guaranteed by provincial law (Agricultural Operations Practices Act, section 2).

Farm land will be reserved for agriculture, or released for other uses, depending in part on its assessment rating.

The County's normal policy is to reserve better farm land for agriculture. Section 1.2.1 of the MDP defines this as land with a farmland assessment rating of 30% or more, but because of the recreational value of land near Pigeon Lake, the County may allow residential subdivision on land with a farmland assessment rating up to 50%. Figure 7 shows the location of such land.

Note that this applies only in the Pigeon Lake watershed. The cut-off remains 30% in other parts of the County.

Soil quality does not change at property boundaries. Most quarters have a mixture of good and poor soil. On these mixed quarters, development must normally be clustered on the poorer soil, leaving better soil for agriculture, although small or odd-shaped areas of good soil may be included in the developed area.

5.5.3 Protection of environmentally sensitive areas

Area structure plans for land within the Pigeon Lake watershed must include an environmental impact assessment (EIA) prepared by a professional biologist.

This assessment must identify areas of environmental significance or value such as a Wetland Assessment. It must also address the changes that will be caused by the proposed development, especially loss of habitat and the effect on ground and surface water, and must propose ways of offsetting any losses. The requirement for an EIA may be waived by the County if the land to be developed contains no native habitat or wetlands.

Wetlands, including sloughs, must be left in a natural state, and must not be drained or filled unless there is no alternative. In that case, the developer will be required to construct substitute wetlands as close as possible to the one that has been destroyed. The County may protect the substitute wetland through a conservation easement or other registration on title.

Through referral input by Alberta Sustainable Resource Development and the reserve dedication options under the County's subdivision authority, lake shoreline tributaries and wetlands may be protected by a buffer strip wide enough to prevent damage to these water features.

Land adjacent to creeks, including seasonal flows, must be dedicated as environmental reserve when land is subdivided into small lots. On large lots, the County may take environmental reserve easements instead of land where the circumstances justify it. This decision will be made by council at the time of subdivision. The area to be protected -- the setback -- will be determined with input from professional biologists.

If a development area contains a damaged or dried-up creek, it must, as far as practical, be brought back to its natural state, and included in environmental reserve.

On quarters that are only partly tree covered, recreational and residential development must not result in a net loss of tree cover. Where trees must be removed, they must be replaced in such a way as to fill a similar role in the local ecosystem. Normally the lost trees must be replaced within the parcel being developed. However, in special cases, and acting on the advice of professional biologists, the County may allow the replacements at other locations within the Pigeon Lake watershed.

Where a quarter section is partly tree covered and partly cleared, new development must normally be restricted to the cleared areas. Note: That restrictions on the removal of tree cover apply on parcels of land under the Watershed and Rural Conservation districts. Lands under an Agriculture district are allowed clearing for agricultural purposes, however, it would be a disadvantage for the owner of an Agriculturally districted property to clear tree cover if another use for the land were contemplated that would benefit from the attractiveness that tree cover provides to a property. The tree covered areas must be left in their natural state. They may be:

- dedicated as reserve, or
- transferred to a conservation organization (which attracts an income tax credit), or
- registered as the common property of the private lots, or
- retained by a single individual.

In the last two cases, the County will register a conservation easement or similar encumbrance on title to restrict land clearance in perpetuity.

When development is proposed on a quarter which is mostly tree covered, the loss of trees must be minimized, and the County may require the loss to be offset by planting elsewhere in the watershed.

5.5.4 Cleaning up inflows

New development must be laid out in such a way that the surface runoff does not contaminate watercourses or the lake. This will be accomplished through setbacks (see policy 2.5.3 above) and controls, where appropriate, by directing runoff through a treatment wetland (artificial marsh) or storm water ponds where solids will settle out and nutrients will be absorbed by water plants. (Those interested can look at the Olds College website to see the work being done by the College's School of Innovation.)

5.5.5 Sewer service

Subject to the sewage treatment provisions under Sections 5.6 “Land Near the Lake”, all new lots in multi-lot subdivisions under 5 acres in size must be served by a sewage gathering system. (Anything over about two acres is too large to service economically, so developers will be driven to create lots that are small enough to service economically.) On the north side of the lake this will require hooking up to the existing NEPL line. Around the rest of the lake, because there is no line in place at present, on-site holding tanks may be allowed as an interim measure, provided they are designed and constructed to connect to the municipal line in future. This imposes a higher standard but is otherwise consistent with County Policy 6611.

There may be cases where a proposed multi-lot development is so far from a sewer line that building a connecting line is prohibitively expensive. In that case,

the County may allow the developer to install a mechanical treatment system serving that development. The County will investigate amendments to Policy 6611 to require systems to remove phosphorous if the development is within one mile of the lake. These systems will require the approval and regulatory consistency with both the County and Provincial regulators.

In multi-lot subdivisions more than half a mile from the lake, lots over 5 acres in size may continue to use individual sewer systems provided that site conditions are suitable. The area structure plan must include evidence that the land is suitable for such systems which shall include compliance with Provincial regulations that do not allow open discharge systems unless the discharge point is a minimum of 90 metres (295 ft) from all property lines. Along with several site and design pre-requisites, this generally requires a parcel to be a minimum of 3.4 hectares (8.5 acres) in order for the system to comply with property line setbacks (parcels this size are rarely approved in Lakeshore or other districts adjacent to a lake).

Subject to Section 5.6.6, yard site subdivisions (existing first parcel from a quarter section), may continue to use individual sewer systems that conform to the Alberta Private Sewage Treatment Systems Standard of Practice in effect at the time.

In addition to the provisions above, where private sewage treatment systems are proposed in a multi-lot development, the Alberta Association of Municipal Districts and Counties "The Model Process for Subdivision Approval and Private Sewage" should be consulted as a guideline.

5.5.6 Efficient servicing

Multi-lot residential development will be encouraged to locate close to existing services such as present and future water and sewer lines, recreation, and paved roads.

Where the existing road in to a subdivision does not meet current municipal standards, the developer will be required to upgrade it at his own expense.

Multiple lot residential subdivisions will also be subject to the County's Policy 6615, which sets standards for road paving.

5.5.7 Access to recreational opportunities

In order to reduce pressure on lake access points, developers will be required to provide on-site recreation. This may be passive (such as walking and equestrian

trails), conserved natural areas with trails and opportunities for wildlife viewing or social (club houses).

5.5.8 A trail system

Municipal and environmental reserves must be laid out to facilitate the creation of a regional trail system. Developers will normally be required to build the trail within their developments.

5.6 Land near the lake

The planning policies set out above will apply to all new development in the Pigeon Lake watershed. On land within half a mile of the lake, additional policies will apply:

5.6.1 Environmental and Municipal Reserve required

(NOTE: County Council may designate either one under subdivision approval.)

The County will require a strip of environmental and/or municipal reserve between subdivided lots and the lake shore. The width of this strip will be determined by council, bearing in mind section 664 of the Municipal Government Act and the recommendations of professional biologists. Council may also consult the following:

- a) *Riparian Setback Matrix Model* endorsed by the Alberta Lake Management Society; and
- b) *Stepping Back from the Water* completed by Alberta Environment and Water which can assist with determining standards for setbacks and buffers;
- c) Provincial Departments including Alberta Sustainable Resource Development.

5.6.2 High densities preferred

Land close to the lake shore is in high demand. In order to meet this demand, the County will encourage high density development provided it meets the other policies in this document.

5.6.3 Demonstrate access

Within half a mile of the lake shore (Figure 8), developments will not be approved unless people living there will have adequate, legal access to the lake. The rule of ten linear feet of lake front per back lot, which has been in effect since the 1970s, will continue to guide but not bind the County.

5.6.4 Limited development in the riparian area

The lake shoreline must be protected by a buffer strip wide enough to prevent damage to the shoreline. The width of the buffer in each case will be determined by the County after consulting independent professionals. Within this buffer area, the land must normally be left in its natural state, and remediated if necessary, although small areas may be developed for public access. Any lost habitat must be replaced to the satisfaction of provincial regulators.

5.6.5 Walking trails

The County will require developers to build a walking trail on reserve land adjacent to private lots. These trails not only have a value in themselves; they will also help define the edge of public land and prevent encroachment by private landowners.

5.6.6 Sewage treatment

Once a municipal sewer line has been built outside the NEPL area, all new developments within half a mile of the lake, regardless of lot size, will be required to connect at the developer's cost.

The only exception to this rule is where an isolated house is being constructed so far from the sewer line that it is impractical to connect to sewer. In this case, a holding tank will be acceptable but not a septic field. This will be determined by council on a case-by-case basis. Section 5.5.5 should be referred to for more detail.

5.6.7 Stormwater Management

Storm water management facilities are to be designed in accordance with the principles and strategies of low impact development.

5.7 Upland areas

Upland areas are defined as land more than half a mile from the lake. Both large and small lots will be acceptable in these areas.

5.7.1 Small lots

The County will encourage the development of lots which are smaller than the traditional three to five acres. Lots under two acres are preferred. This will make it economic to serve them with piped sewer. However, no more than 48 lots will be approved per quarter section [*this is the limit under CR zoning in the present land use bylaw*]. This means that large areas will be left undeveloped to create a rural feel to the development, and to preserve tree cover and better farm land. These large areas may be dedicated as reserve, transferred to a conservation organization, registered as the common property of the private lots, or retained by a single individual. In the last two cases, the County will register a conservation easement or similar encumbrance on title to guarantee future use.

5.7.2 Large lots

The County will be open to requests to zone land in the Pigeon Lake watershed to Rural Conservation. This allows lots of ten acres or more to be created on tree covered land. Sixty per cent of the lot must remain tree covered, and the County may register a conservation easement to guarantee this. (In practice, most owners keep much more of their land in trees.) Detailed requirements are set out in Bylaw 95/54, Schedule B, section 8.

5.7.3 Hobby farms

The County will encourage small-scale agriculture such as horse breeding and training, exotic animal breeding, greenhouses, market gardens, tree farms, and horticulture. Lots of an appropriate size are allowed under Agricultural zoning, but subdivision approval is granted only if the applicant proves his bona fides and his ability to run the proposed operation. Detailed requirements are set out in Bylaw 95/54, Schedule B, section 1.4(b). Alternatively, the County may establish a new district in the land use bylaw to regulate hobby farms.

Applicants will be reminded that it may be difficult to get a water licence to irrigate their land, so they should consider other options, such as trapping and managing on-site surface water.

5.7.4 Severed parcels

The County's land use bylaw allows agricultural land to be subdivided where it is severed by natural features such as creeks and ravines (Bylaw 95/64, Schedule B, section 21). Normally, zoning and subdivision are only granted if the creek flows year round, or the ravine is deep or steep enough to be a real barrier to farming. In the Pigeon Lake area, the County will accept seasonal streams and shallower ravines, but these streams and ravines must be dedicated as environmental reserve and fenced so that the natural vegetation will grow back.

Some of these policies for reconciling conservation and development in upland areas are illustrated in Figure 9.

5.8 Policies for existing developments

5.8.1 Sewage treatment

The County will continue to work with the summer villages and senior governments to establish a municipal sewage gathering and treatment system outside the NEPL area.

Once a municipal sewer system has been built on the south and west side of the lake, the County will encourage the owners of existing lots to connect to it and abandon their existing systems. Connection to the Municipal sewer system will be required if a private existing system requires maintenance and repair, the land is subdivided or a Development Permit is issued to rebuild or replace an existing house. Upon completion of the regional sewer collection system any existing system which has not already connected to the regional system shall upon the passing of supporting bylaws, be required to connect no later than 5 years from the date of completion of the regional system. One way of covering the cost is to consider, where appropriate, re-subdivision of existing lots on condition that they abandon their existing individual systems and connect to the municipal system.

5.8.2 Protecting creeks

The County will encourage farmers and ranchers to keep cattle out of the creeks that flow into Pigeon Lake. This may be achieved by installing off-creek waterers. Construction funds will be sought from senior governments and from conservation organizations. The County's Agricultural Services Board may provide technical help.

5.8.3 Rehabilitating damaged lands

The County will support efforts by landowners and third parties to remediate damaged creeks and other areas of environmental value. This support may include direct assistance from the County's parks department.

If a parcel of municipal reserve has been cleared, but is not being used for active recreation, the County may re-establish native tree cover with the advice of conservation organizations.

5.8.4 Redevelopment

Where an existing parcel is being developed, the County will use its development control powers to bring the lot into conformity with the policies set out elsewhere in this Area Concept plan. This will apply particularly to

- setting buildings and other improvements back from water bodies,
- treating waste water in a manner that does not damage the environment,
- protecting and/or restoring tree cover, and
- remediating damaged wetlands.

5.8.5 Testing the water entering the lake

The County will encourage qualified third parties to test the nutrient content of water in the creeks and streams that enter Pigeon Lake. Where a problem is identified, and it is under municipal jurisdiction, the County will take appropriate action.

5.8.6 Fertilizer near Lake

Many newer subdivisions often have restrictive covenants imposed by the developer to limit the application of phosphorus-rich fertilizer on residential lots near the lake. The County will support this and is keen to work with Leduc County and the 10 Summer Villages adjacent to Pigeon Lake to implement a total ban on cosmetic lawn fertilizers.

5.8.7 Groundwater supply

Where a subdivision will result in there being six or more lots on a quarter section, and those lots will use groundwater, the Water Act requires the developer to prove that there is enough groundwater to serve the new lots without depleting the supply to farms and other residences in the area. However, these tests look at each development separately; they do not consider cumulative effects: how much development, in total, can safely be accommodated in the Pigeon Lake watershed.

Much of the necessary background material has already been assembled in the Regional Groundwater Assessment Study undertaken for the County in 2008 by Hydrogeological Consultants Ltd.

When Ponoka County commissioned two cumulative impact studies in the Gull Lake area, it found ample water for all proposed development. There were four separate aquifers at different depths. One of these fed the lake through springs.

Ponoka now requires that new high-capacity wells use a deeper aquifer that is not hydraulically connected to the lake. Wetaskiwin may do the same.

Depending on the results of the cumulative impact analysis, the County may set a cap on the amount of development allowed in the watershed. If any such cap is contemplated, it will be subject to public hearings.

The costs of the regional groundwater study may be recaptured by placing a per-lot levy on new development in the watershed.

6 Implementation

6.1 Changes proposed to the Municipal Development Plan

There is a potential conflict between this Area Concept Plan (ACP) and the policies set out in the Municipal Development Plan. The MDP, in section 1.2.1, defines productive agricultural land as:

- (a) land in production with a farmland assessment value of 30% or more;
- (b) grey wooded soil producing hay, forage, or other crops; and
- (c) land currently used for grazing.

The next section of the MDP says that

- 1.2.2 Area structure plan[s] or rezoning will not be considered if the land is classified as productive agricultural land as defined above except as allowed elsewhere in the Municipal Development Plan.

In order to bring the ACP into conformity with the MDP, section 1.2.2 of the MDP should be amended by adding the underlined words:

- 1.2.2 Area structure plans or rezoning will not be considered if the land is classified as productive agricultural land as defined above except as allowed elsewhere in the Municipal Development Plan or an Area Concept Plan.

6.2 Changes proposed to the Land Use Bylaw

The County's land use bylaw is being reviewed, and this is a good time to draft new requirements that will support the policies set out in this Area Concept Plan.

6.2.1 Change the definition of good agricultural land

The present land use bylaw says, in section 1.2:

Good agricultural land means:

- (a) *land with a farmland assessment value of 30% or more;*
- (b) *grey wooded soil producing hay, forage, or other crops; and*
- (c) *bush-covered land with agricultural potential (where potential is determined on the basis of the farmland assessment value the land would have if cleared).*

In order to allow the sort of subdivision proposed in this Area Concept Plan, the definition should be re-written as follows:

Good agricultural land is defined as follows.

- (a) *Where an Area Concept Plan has been adopted by council, good agricultural land has the meaning set out in that plan.*
- (b) *Where there is no Area Concept Plan in place, good agricultural land means*
 - (i) *land with a farmland assessment value of 30% or more;*
 - (ii) *grey wooded soil producing hay, forage, or other crops; and*
 - (iii) *bush-covered land with agricultural potential (where potential is determined on the basis of the farmland assessment value the land would have if cleared).*

6.2.2 Establish an Agricultural Smallholding district

The following wording from Ponoka County's land use bylaw may act as a model, although some wording may have to be changed to fit the Wetaskiwin situation:

704 Agricultural Smallholding (AS) District

704.1 Purpose

The purpose of the Agricultural Smallholding District is to provide land for commercial agriculture on parcels smaller than would otherwise be allowed. At the request of the owner, Council may classify land to this

district if it is convinced that the proposed parcel will support a viable agricultural operation.

704.2 Permitted Uses

Permitted uses are the same as those in the Agricultural District.

704.3 Discretionary Uses

Discretionary uses are the same as those in the Agricultural District.

704.4 Lot Size

The minimum lot size shall be at the discretion of the Municipal Planning and shall be based on the land requirements of the agricultural operation proposed for the site.

703.4 Other regulations

The other regulations for the Restricted Agricultural district are identical to those in the Agricultural District.

6.2.3 Establish a Watershed Remediation district

Part 5 of this Area Concept Plan establishes a goal of remediating creeks that have been damaged by the removal of natural vegetation. As always, incentives work better than regulation, so it is proposed that the County create a new district in the land use bylaw under which these damaged creeks are taken into municipal ownership as environmental reserves, with the upland areas subdivided into private lots. The incentive to the landowner is that, by giving up the damaged creek valley, he obtains saleable lots. A possible wording for the new district is as follows:

Watershed Remediation District

1 Purpose

The purpose of the watershed remediation district is to reduce flooding, improve water quality, and maintain or rebuild wildlife habitat by allowing a pattern of subdivision in which damaged watercourses are taken into municipal ownership as environmental reserves, fenced to exclude livestock and negative human impacts, and managed so that the natural vegetation will regenerate, and the upland areas between those watercourses are subdivided into private lots.

2 Approval Process

- 2.1 *No land shall be classified to Watershed Remediation until an area structure plan or conceptual scheme for that land has been adopted, and in this regard "conceptual scheme" has the meaning given in section 653(4.4)(b) of the Municipal Government Act [and includes an Area Concept Plan].*
- 2.2 *An area structure plan or conceptual scheme shall show, among other things, all watercourses and the valleys in which they run, and all wetlands, and shall indicate that the watercourses and valleys and wetlands are to be dedicated as environmental reserve.*
- 2.3 *The Subdivision Authority may require the developer to fence all reserve land as a condition of subdivision approval.*

3 Permitted Uses

The following uses are permitted:

- 3.1 *Extensive agriculture, subject to the restrictions on land clearance set out in section 8*
- 3.2 *Single detached houses, including new manufactured and modular houses*
- 3.3 *Parks, recreation areas, and conservation projects*
- 3.4 *Public utilities*
- 3.5 *Buildings and uses accessory to the above*

4 Discretionary Uses

The following uses may be allowed at the discretion of the Development Authority:

- 4.1 *Home occupations*
- 4.2 *Bed and breakfast operations*
- 4.3 *Extensive recreational uses*
- 4.4 *Non-new manufactured and modular houses*
- 4.5 *Buildings and uses accessory to the above*

5 Number of dwellings on a lot

No more than one dwelling shall be placed on a lot, except where a development permit has been issued under section 8 of Schedule A, Number of Dwellings on a Lot.

6 Lot Sizes

- 6.1 *Lots shall have an area of no less than 8 hectares (20 acres).*
- 6.2 *Despite the preceding section,*
- (a) *the area of a lot may be reduced if that is necessary to follow natural boundaries, and*
 - (b) *a smaller size may be allowed for a lot containing an existing farm yard site, using the standards of the Rural Residential district, and*
 - (c) *the size of lots for utilities, reserves and other public uses shall be as required by the Subdivision Authority.*

7 Building locations

Buildings must be set back the following distances from property lines and other features:

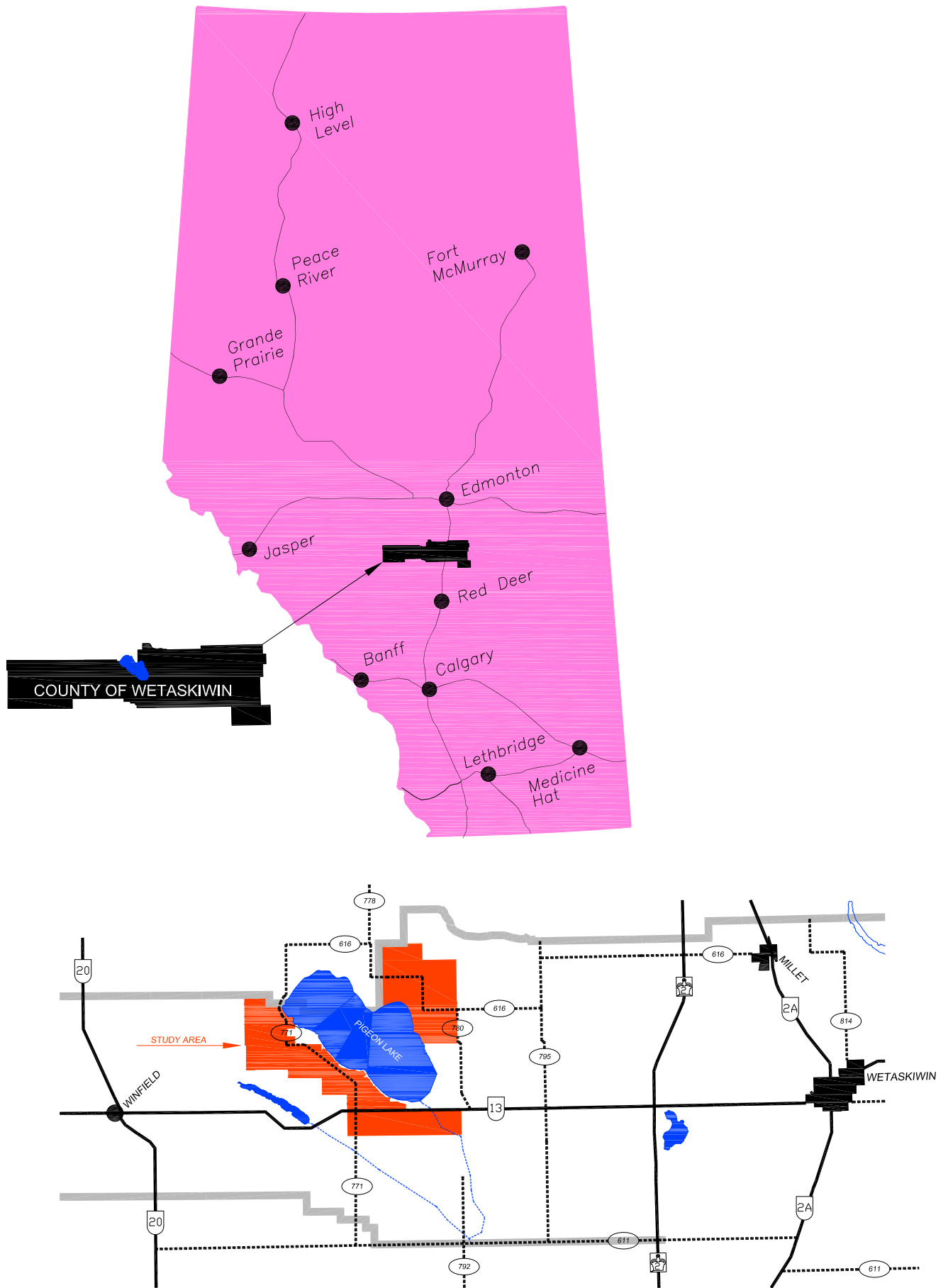
- 7.1 *From a road* *by the distances set out in section 9 of Schedule A, and illustrated by Figure 1*
- 7.2 *From a side property line* *by 5 metres*
- 7.3 *From a rear property line* *by 10 metres*
- 7.4 *From a creek, stream, or ravine* *by 30 metres*

8 Maintenance of Natural Vegetation

When a lot is created by subdivision after being rezoned to Watershed Remediation ,

- 8.1 *no more than 20% of its natural vegetation shall be cleared or removed, and*
- 8.2 *the Subdivision Authority may require, as a condition of subdivision approval, that a restrictive covenant, conservation easement, or other agreement be registered on the title to enforce restrictions on the clearance of natural vegetation.*

Figure 1.0
PIGEON LAKE CONCEPT PLAN LOCATION



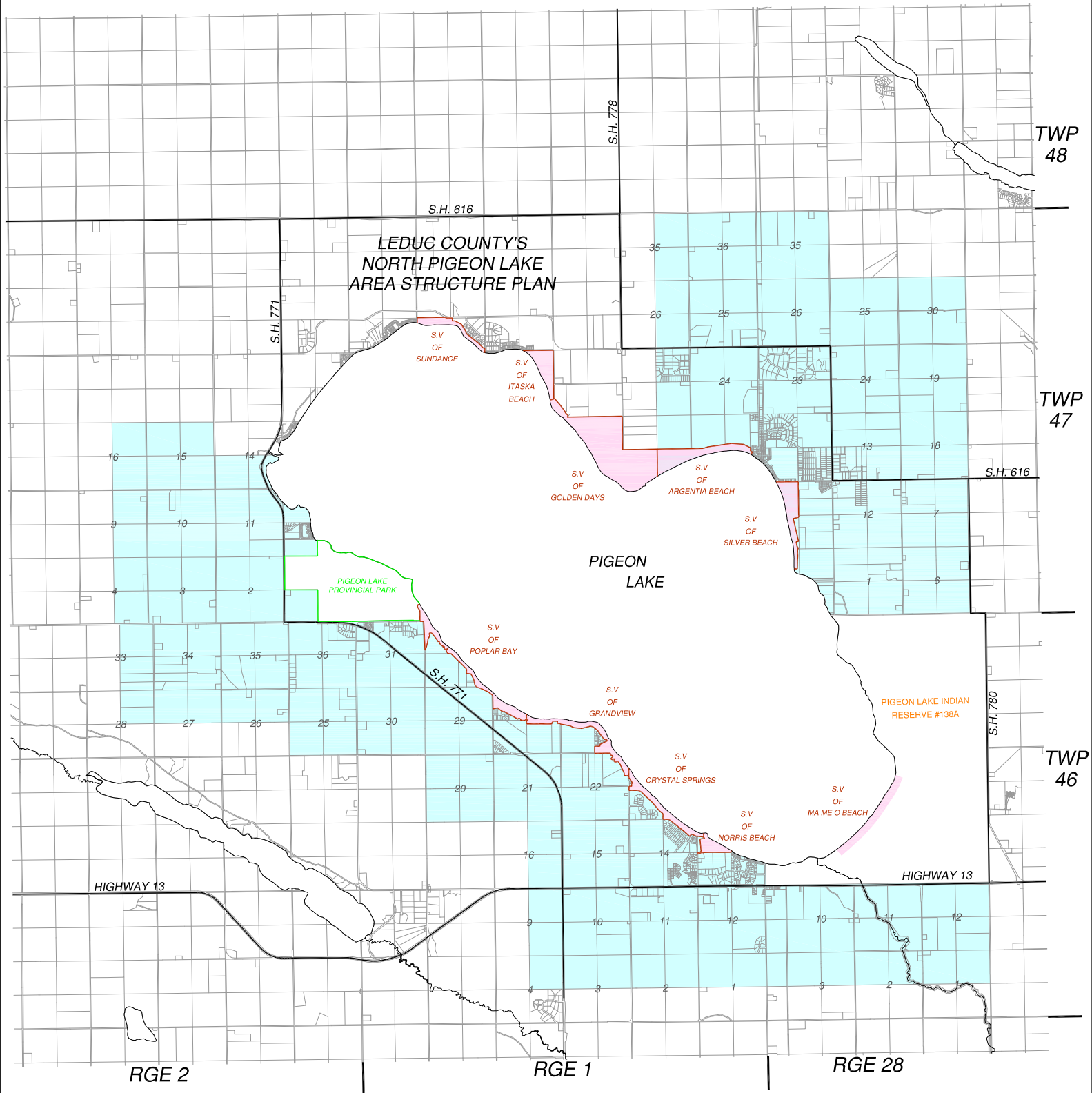


FIGURE 2.0
PIGEON LAKE AREA CONCEPT PLAN
STUDY AREA

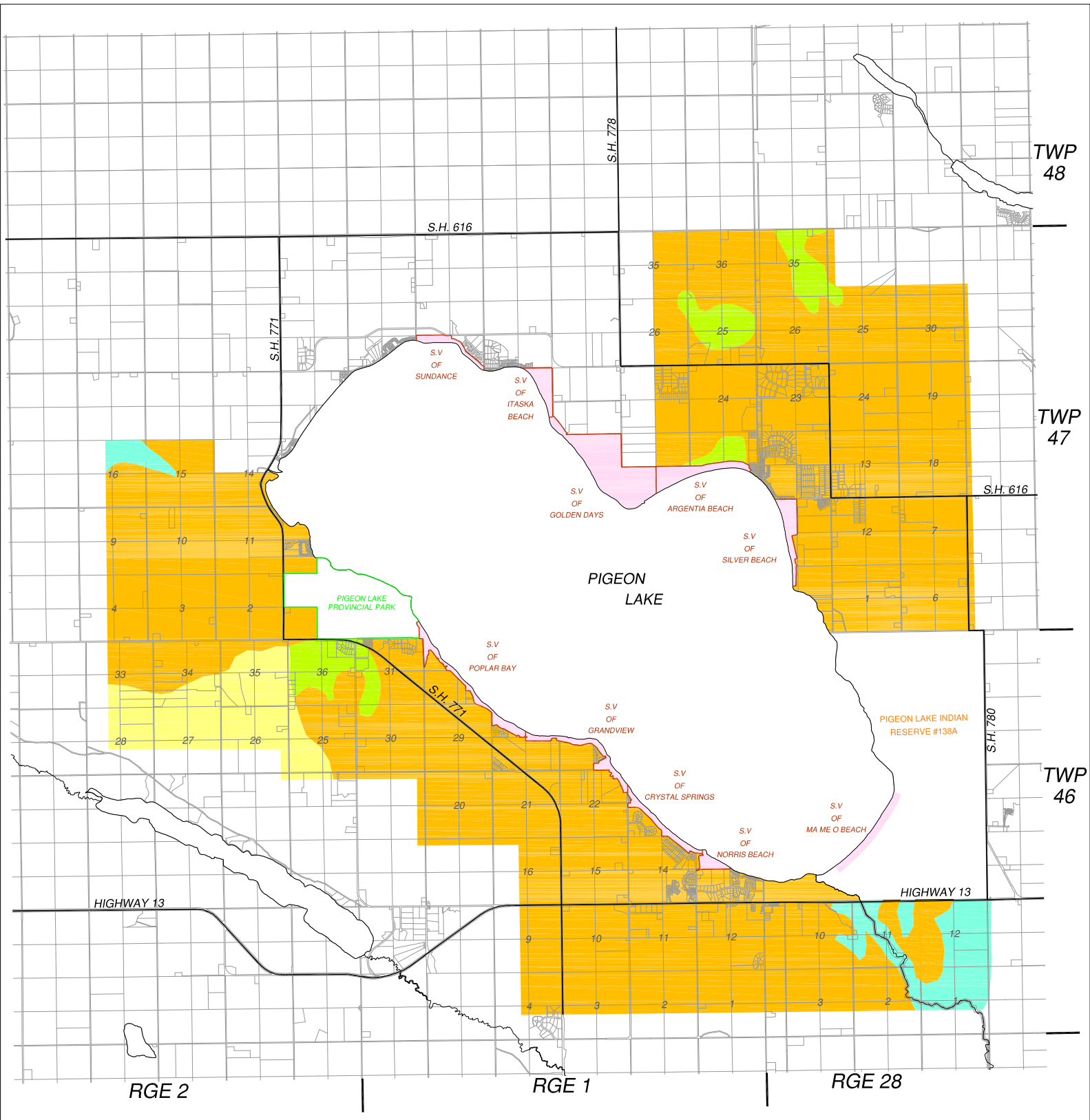


FIGURE 4.0
PIGEON LAKE AREA CONCEPT PLAN
SOIL CLASSIFICATIONS

- CLASS 2
- CLASS 3
- CLASS 4
- CLASS 5
- CLASS 0

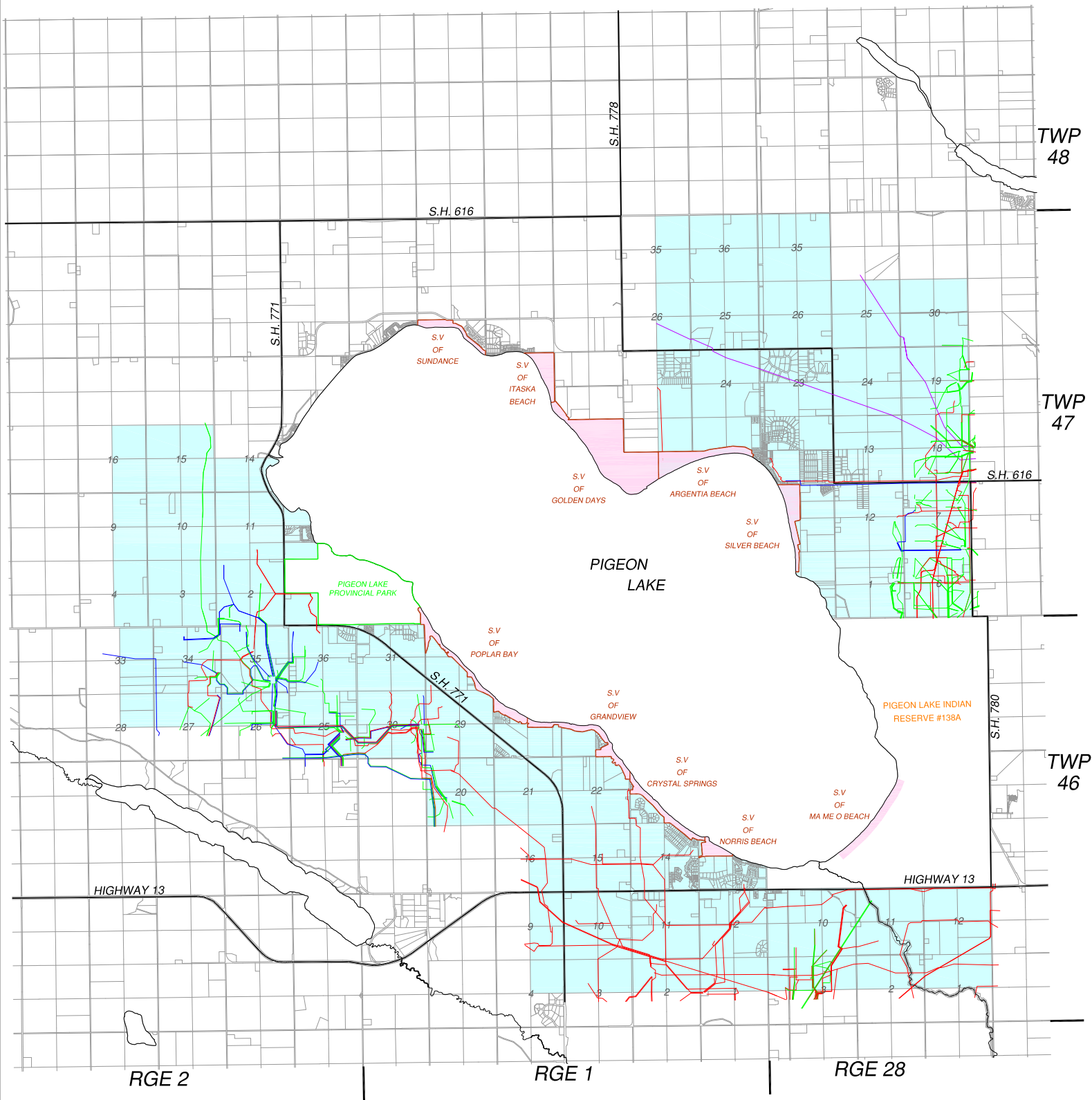
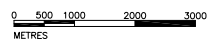


FIGURE 5.0
PIGEON LAKE AREA CONCEPT PLAN
OIL & GAS PIPELINES

- GAS PIPELINE
- OIL PIPELINE
- WATER PIPELINE
- LVPHVP PIPELINE

Note: In addition to these registered pipelines
 unregistered pipelines may exist.



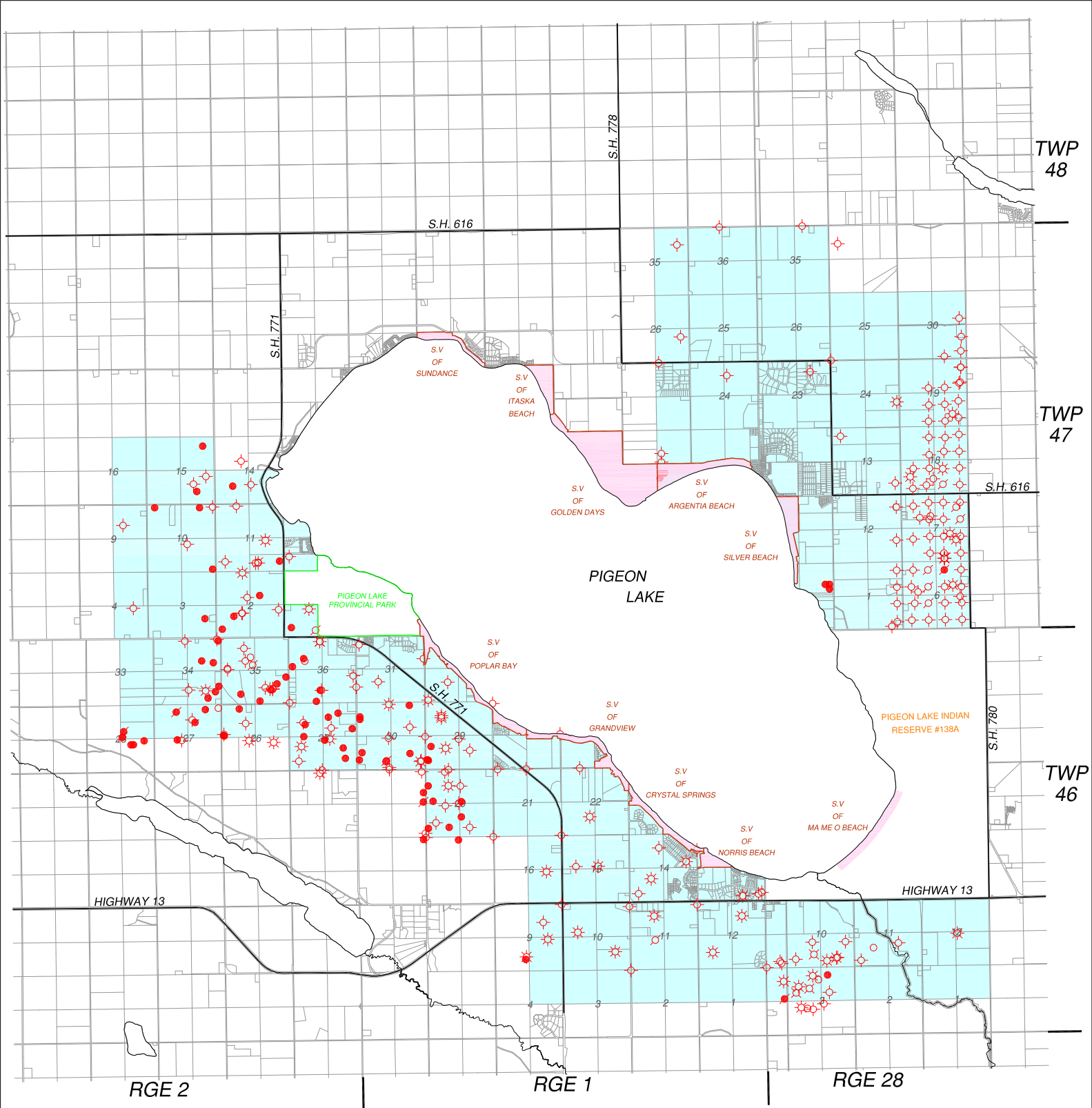







FIGURE 6.0
PIGEON LAKE AREA CONCEPT PLAN
OIL & GAS WELLS

-  ABANDONED WELLHEAD
-  SUSPENDED GAS WELLHEAD
-  SUSPENDED OIL WELLHEAD
-  FLOWING GAS WELLHEAD
-  FLOWING OIL WELLHEAD

0 500 1000 2000 3000
 METRES



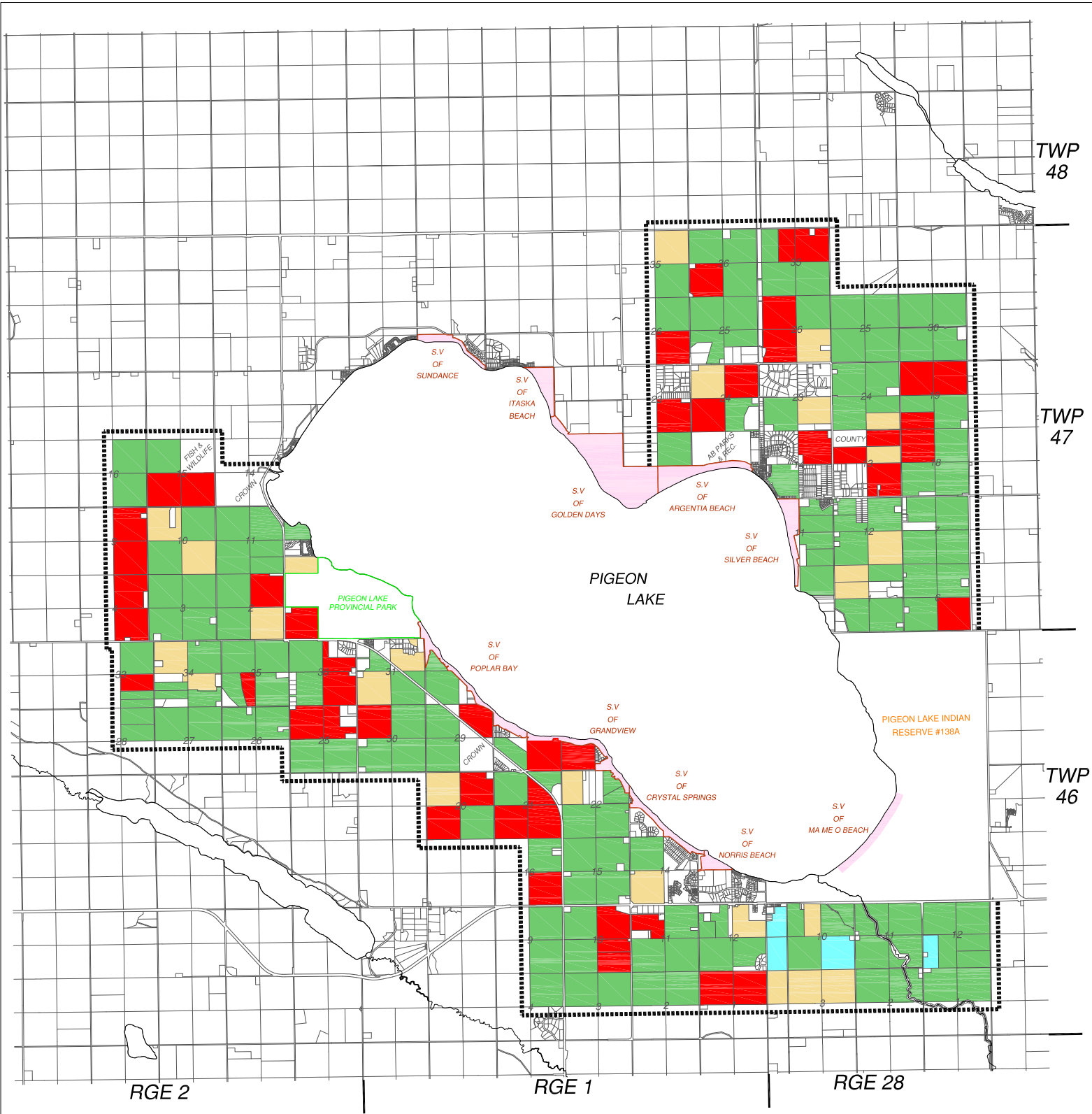


FIGURE 7.0
PIGEON LAKE
FARMLAND ASSESSMENT MAP

Land with at least 40 acres assessed at 30% or less



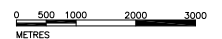
Land with at least 40 acres assessed at 40% or less



Land with at least 40 acres assessed at 50% or less



Land with less than 40 acres assessed at 50% or less



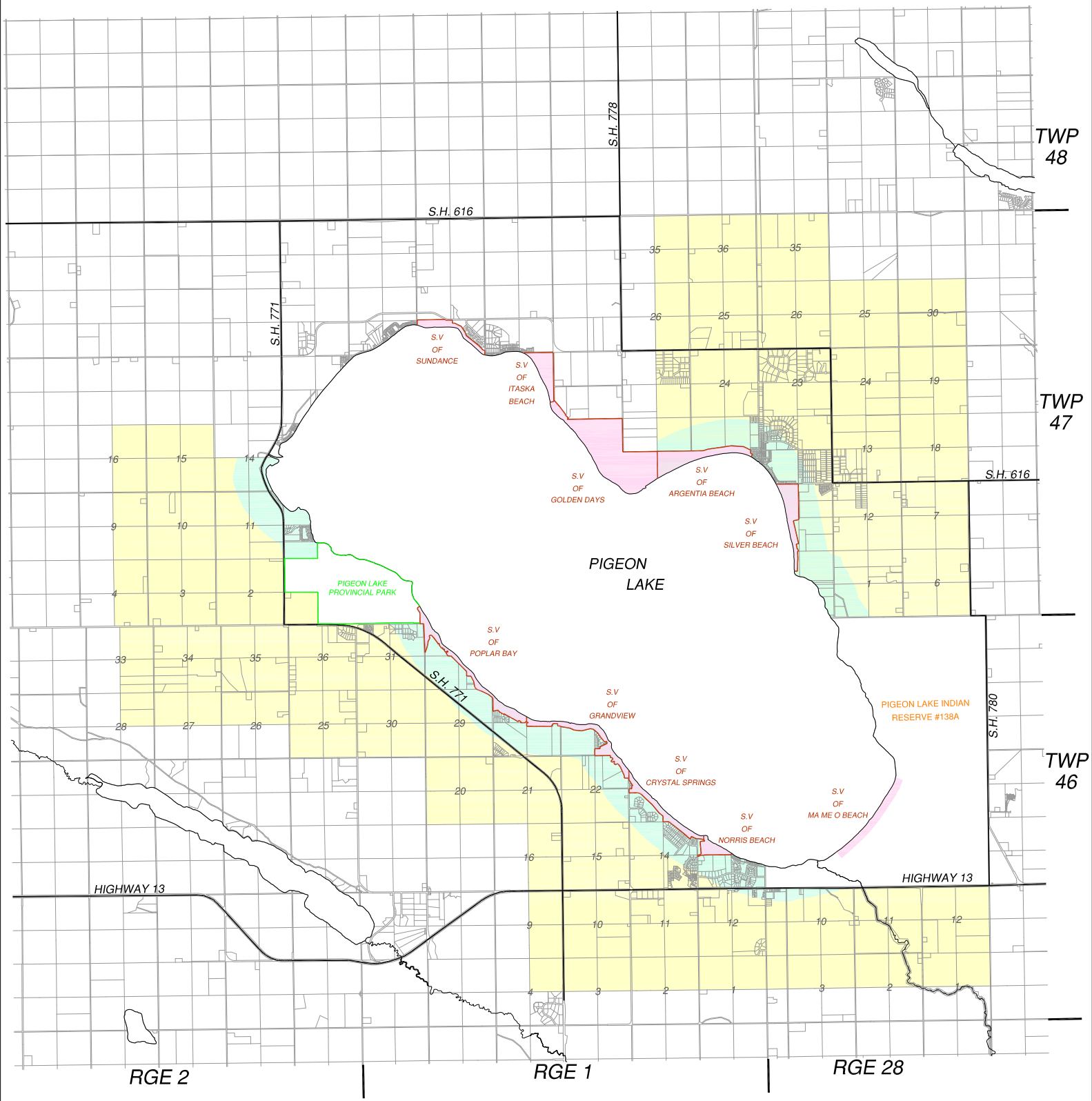


FIGURE 8.0
PIGEON LAKE AREA CONCEPT PLAN
LAND USE MAP

Lake shore land (800m from
 bed and shore of lake)



Mixed Use

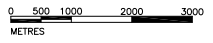


FIGURE 9
PIGEON LAKE
STUDY AREA

Lake shore land (800m from bed and shore of lake) is shown by shaded area

