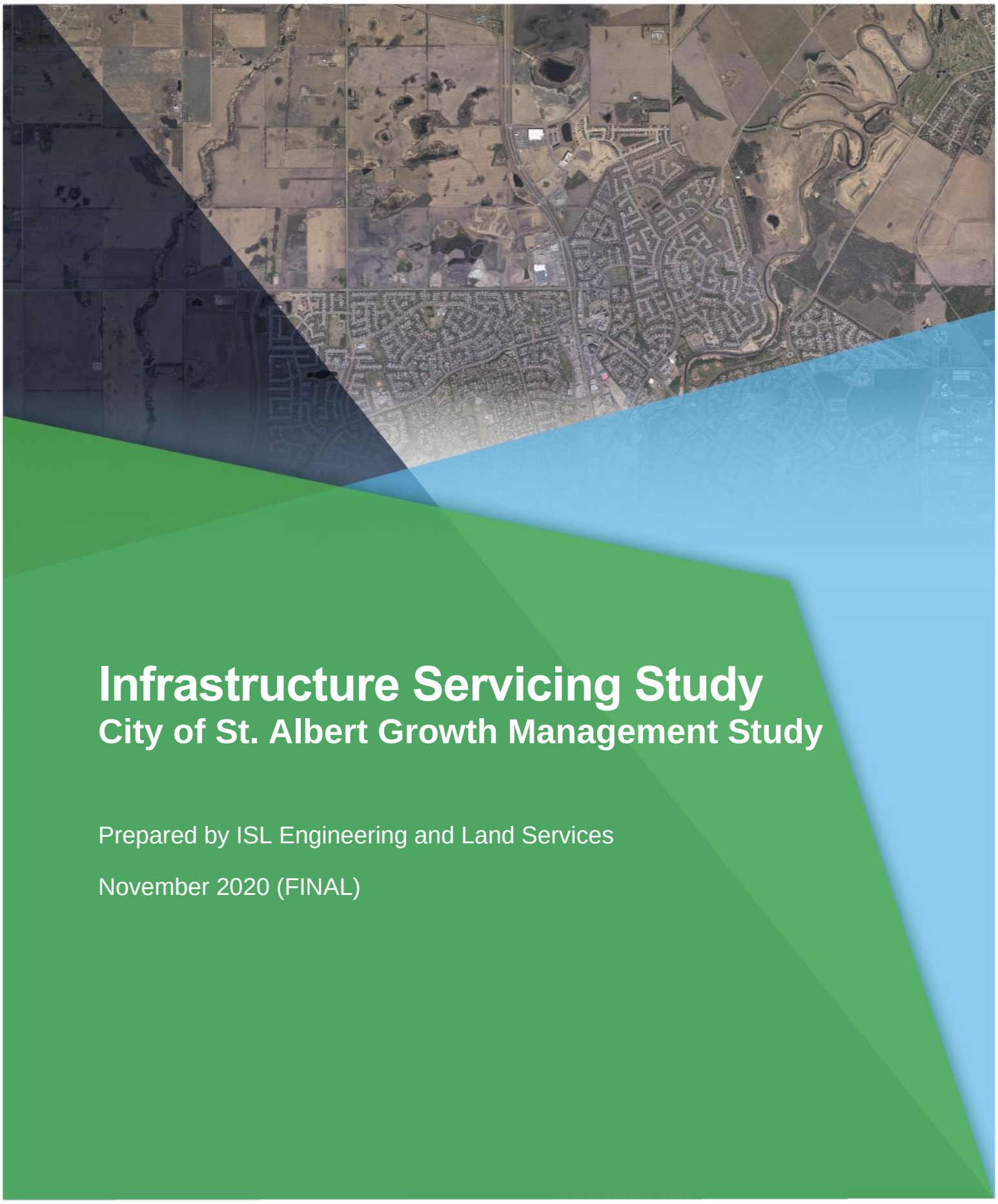
APPENDIX G
2020 Infrastructure Servicing Study

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Infrastructure Servicing Study
City of St. Albert Growth Management Study

Prepared by ISL Engineering and Land Services

November 2020 (FINAL)

Corporate Authorization

This document entitled “Growth Management Study – Infrastructure Servicing Study” has been prepared by ISL Engineering and Land Services Ltd. (ISL) for the use of the City of St. Albert. The information and data provided herein represent ISL’s professional judgment at the time of preparation. ISL denies any liability whatsoever to any other parties who may obtain this report and use it, or any of its contents, without prior written consent from ISL.

Barry Raynard, M.Eng., P.Eng.
Manager, Municipal/Water Resources Engineering

See Standalone Digital Report for Signature and Permit to Practice

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1.0 Executive Summary

1.1 Introduction

This report summarizes the opportunities and constraints for extending the City of St. Albert's water, wastewater, and stormwater systems into the Maximum Potential Annexation Area (MPAA). It also presents an overarching servicing plan in support of the overall City of St. Albert Growth Management Study. It also includes an evaluation of the MPAA to assess which sub-areas will be easiest and most cost effective to service, and to inform selection of a recommended annexation area.

1.2 Water Servicing

There are three existing reservoirs in the City of St. Albert with two additional reservoirs currently planned for future construction. The Lacombe Park, Oakmont and Sturgeon Heights Reservoirs currently service the City. The City needs additional storage capacity and the Southwest and North Reservoirs will be constructed to meet demands within the current City boundary and for anticipated annexation areas. The Southwest Reservoir will service growth in the southwest and west-central areas, while the North Reservoir will service the northwest, north and northeast areas. An additional reservoir (Northwest Reservoir) would be constructed outside the current City boundary to service annexation lands.

The entire MPAA can easily be serviced with the planned and proposed water reservoirs.

1.3 Wastewater Servicing

The City of St. Albert is serviced by the Alberta Capital Region Wastewater Commission (ACRWC) St. Albert Pump Station. The City conveys its wastewater flows to this pump station through a series a local, sub-trunk and trunk sewers.

New development areas in the north-central and northeast parts of the City are serviced by existing trunks through Erin Ridge on an interim basis. They will ultimately be serviced via the proposed Erin Ridge or Jensen Lakes Lift Stations, both of which will connect to the Northeast Lift Station, which will discharge wastewater to the ACRWC St. Albert Pump Station. Portions of the trunks connecting the Erin Ridge and Jensen Lakes Lift Stations to the Northeast Lift Station have been constructed as part of interim servicing. These lift stations are proposed to be oversized to provide wastewater servicing for the MPAA's north sub-area.

The North Interceptor Trunk is being constructed in stages through the north-central part of the City. It is being designed as a combination storage / conveyance facility to intercept wastewater flows in the northwest part of the City and discharge them to the ACRWC St. Albert Pump Station. The far west section will be constructed as needed to service development between Ray Gibbon Drive and Carrot Creek. The North Interceptor Trunk has capacity for wastewater flows from the MPAA west and northwest sub-areas west of Carrot Creek.

The entire MPAA can be serviced through the existing and planned wastewater infrastructure.

1.4 Stormwater Servicing

There is limited existing stormwater infrastructure available in the north and west parts of the City for servicing new development areas within the current City boundary and the MPAA.

The north area is proposed to be serviced via a gravity trunk to the Sturgeon River through Sturgeon County. Part of this area requires a stormwater pump station due to the flat topography and constructability challenges with deep sewer installations in poor subsoil conditions.

There are two concepts for servicing lands east and west of Carrot Creek: 1) constructing storm trunks parallel to the creek; and 2) utilize the creek for stormwater discharges and construct extensive erosion protection works in the creek. The City has not formally adopted either concept, and further study is needed to determine the preferred concept.

While these are servicing challenges, the entire MPAA can be serviced through the planned or alternate stormwater infrastructure.

1.5 Discussion

The servicing plans shown in this report are based on the available background reports, master plans and discussions with the City of St. Albert. In some cases, the servicing constraints have not been finalized. It is anticipated that the servicing plans will be refined over time based on more detailed technical analyses.

The servicing rankings presented herein represent the relative ease of servicing for water, wastewater, and stormwater. These maps should be used as input in the selection of the recommended annexation area.

2.0 Introduction

2.1 Preamble

This report summarizes the opportunities and constraints for extending the City of St. Albert's water, wastewater, and stormwater systems into the Maximum Potential Annexation Area (MPAA). It also presents an overarching servicing plan in support of the overall City of St. Albert Growth Management Study. It also includes an evaluation of the MPAA to assess which sub-areas will be easiest and most cost effective to service, and to inform selection of a recommended annexation area.

2.2 Approach

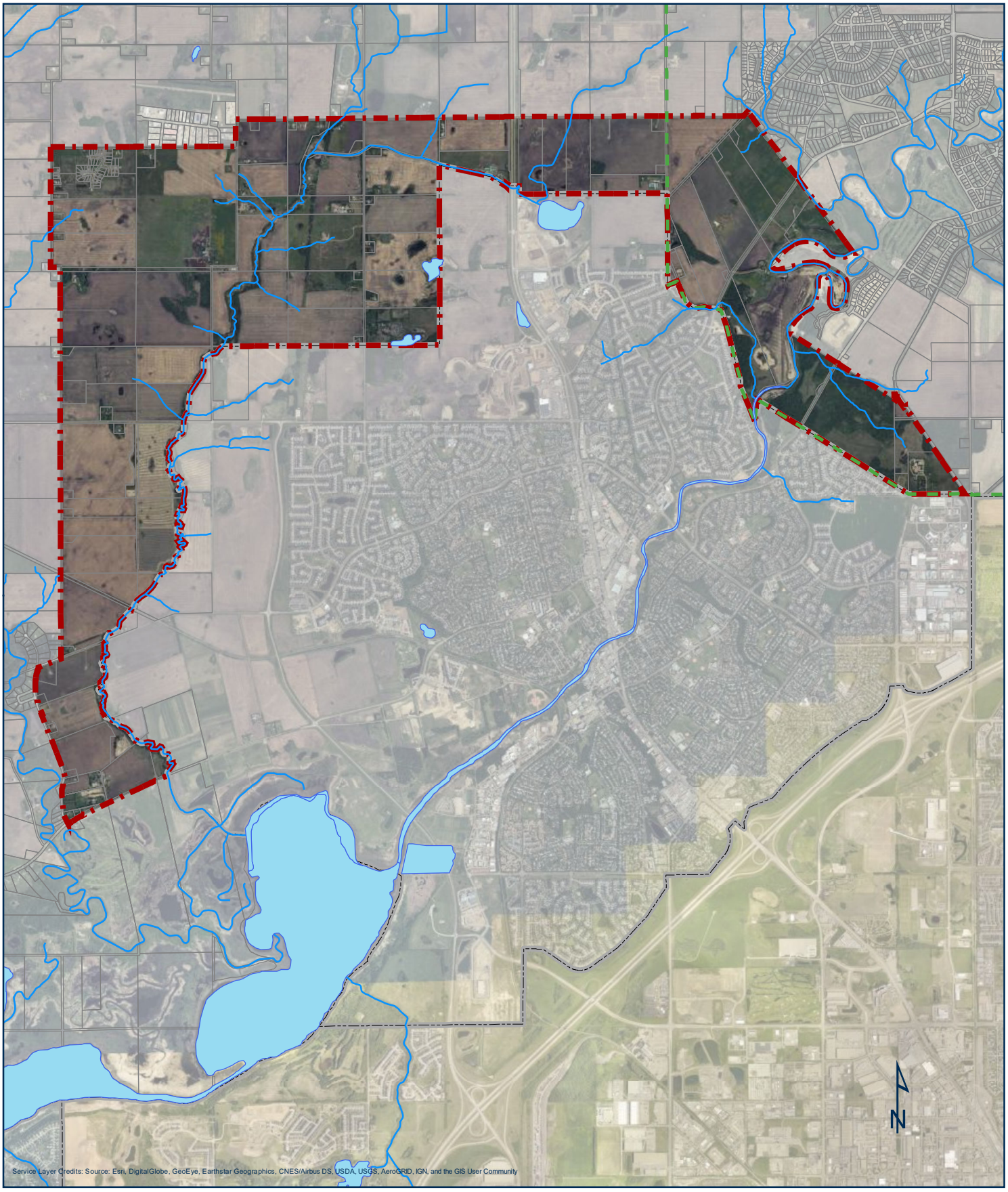
The scope of work for this study included the following:

- Review of previous water, wastewater, and stormwater servicing studies within the City of St. Albert and the MPAA;
- Review of existing water, wastewater, and stormwater infrastructure within the City of St. Albert and Sturgeon County;
- Identify major servicing opportunities and constraints in the MPAA;
- Identify intermunicipal servicing opportunities;
- Develop an overall water, wastewater, and stormwater servicing plan for the MPAA and remaining undeveloped areas in the City; and
- Assess the ease and cost of servicing within the MPAA and develop a ranking system that can be used as part of the overall evaluation process to select a recommended annexation area from the MPAA.

2.3 Study Area

The study area includes the lands within the existing City of St. Albert boundary plus the MPAA, as shown in Map G.1. The MPAA comprises approximately 2,180 ha and includes lands to the northeast (on either side of the Sturgeon River), north (on either side of Highway 2), northwest (west of Carrot Creek), and west (also west of Carrot Creek).

Topography is a significant factor in developing servicing concepts for water, wastewater, and stormwater systems. The existing topography within the study area is shown in Map G.2.



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City of St. Albert Cultivate Life

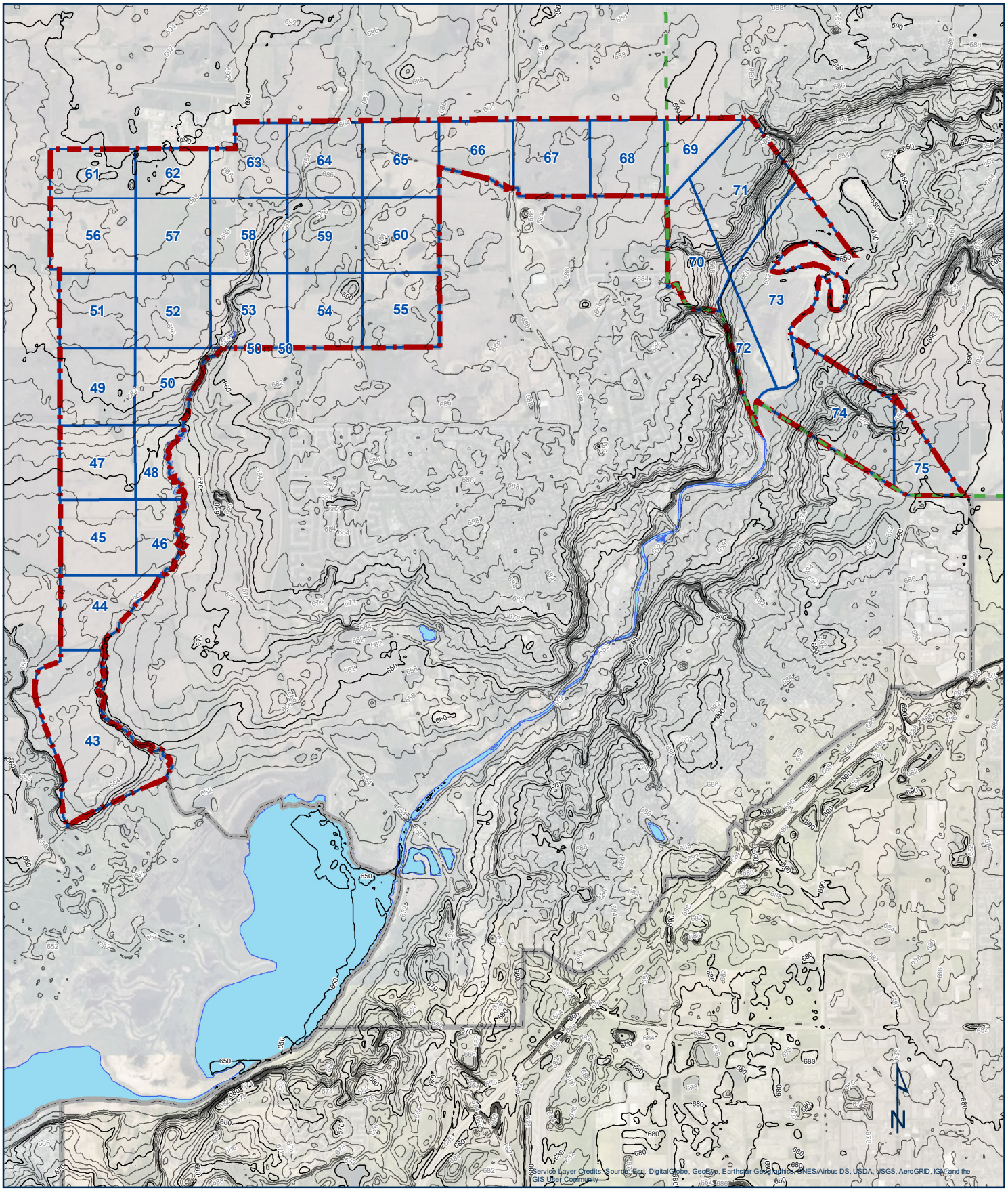
- Municipal Boundary
- Maximum Potential Annexation Area
- Sturgeon Valley Area Structure Plan
- Parcel
- Watercourse
- Water Body

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ST. ALBERT GROWTH MANAGEMENT STUDY: INFRASTRUCTURE SERVICING STUDY

MAP G.1:
MAXIMUM POTENTIAL ANNEXATION AREA



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City of St. Albert Cultivate Life

- Municipal Boundary
- Maximum Potential Annexation Area
- Sturgeon Valley Area Structure Plan
- MPAA Analysis Area
- 2 m Contour
- 10 m Contour

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ST. ALBERT GROWTH MANAGEMENT STUDY: INFRASTRUCTURE SERVICING STUDY

MAP G.2: TOPOGRAPHY

3.0 Utility Serviceability Ranking Criteria

To assist the City of St. Albert select the optimal lands for annexation, consideration needs to be given to the ease and costs of servicing the MPAA. Lands with significant servicing constraints can have a negative impact of future servicing costs that need to be borne by the development industry and/or the City. These constraints typically involve proximity to existing servicing, but can also include topographic limitations, physical barriers (e.g. creeks) or capacity constraints within existing infrastructure.

To provide an objective evaluation of the serviceability of the MPAA for water, wastewater, and stormwater, it was divided into units of land (typically the size of a quarter section) and a standard set of criteria was developed to evaluate each unit. The criteria are shown in Table G.1 which consider the following:

- Proximity to existing development;
- Degree to which the existing system needs to be upgraded; and
- Need for offsite infrastructure.

These criteria were used to evaluate serviceability as presented in the following sections.

Table G.1: Utility Serviceability Coding Criteria

Rank	Criteria Description	Adjacent to Serviced Existing Development?	Service Requires:	
			Existing System Upgrades?	Offsite Infrastructure
1	Immediate servicing possible, no existing system upgrades required	✓		
2	Immediate servicing possible, minor existing system upgrades required	✓	✓	
3	Servicing possible once adjacent quarter-sections are serviced, minor (or no) existing system upgrades and/or offsite infrastructure required (likely already completed to enable servicing of the adjacent area) OR Immediate servicing possible, but requires higher cost servicing (e.g. trenchless rail crossing, lift station)		~	~

Rank	Criteria Description	Adjacent to Serviced Existing Development?	Service Requires:	
			Existing System Upgrades?	Offsite Infrastructure
4	Servicing possible once adjacent quarter-sections are serviced, substantial offsite infrastructure or existing system upgrades required in advance (to be completed as part of servicing of the adjacent/downstream areas)		✓	✓
5	Long-term development potential; Major existing system upgrades required before servicing / major constraints AND/OR 1st mile of long-term development	~	✓	✓
6	Long-term development potential; Major existing system upgrades required before servicing / major constraints AND/OR 2nd mile of long-term development	~	✓	✓
7	Long-term development potential; Major existing system upgrades required before servicing / major constraints AND/OR 3rd mile of long-term development	~	✓	✓
8	Long-term development potential; Major existing system upgrades required before servicing / major constraints AND/OR 4th mile of long-term development	~	✓	✓
9	Long-term development potential; Major existing system upgrades required before servicing / major constraints AND/OR 5th mile of long-term development	~	✓	✓
10	Long-term development potential; Major existing system upgrades required before servicing / major constraints AND/OR 6th mile of long-term development	~	✓	✓

Notes:

~ Denotes "may or may not be required depending on the area or other factors"

✓ Denotes "required for the area"

4.0 Water Servicing

4.1 Existing and Planned Water Infrastructure

There are three existing reservoirs in the City of St. Albert with two additional reservoirs currently planned for future construction. The Lacombe Park, Oakmont[1] and Sturgeon Heights Reservoirs (refer to Map G.3) currently service the City. The City needs additional storage capacity and the Southwest and North Reservoirs will be constructed to meet that demand. The Southwest Reservoir will service growth in the southwest and west-central areas, while the North Reservoir will service the northwest, north and northeast areas. Map G.3 also shows the general alignment of the fill lines to these reservoirs.

The water distribution system consists of one primary pressure zone servicing most of the City, with pressure reducing valves (PRVs) used to create separate pressure zones in the low-lying lands next to the Sturgeon River and Big Lake.

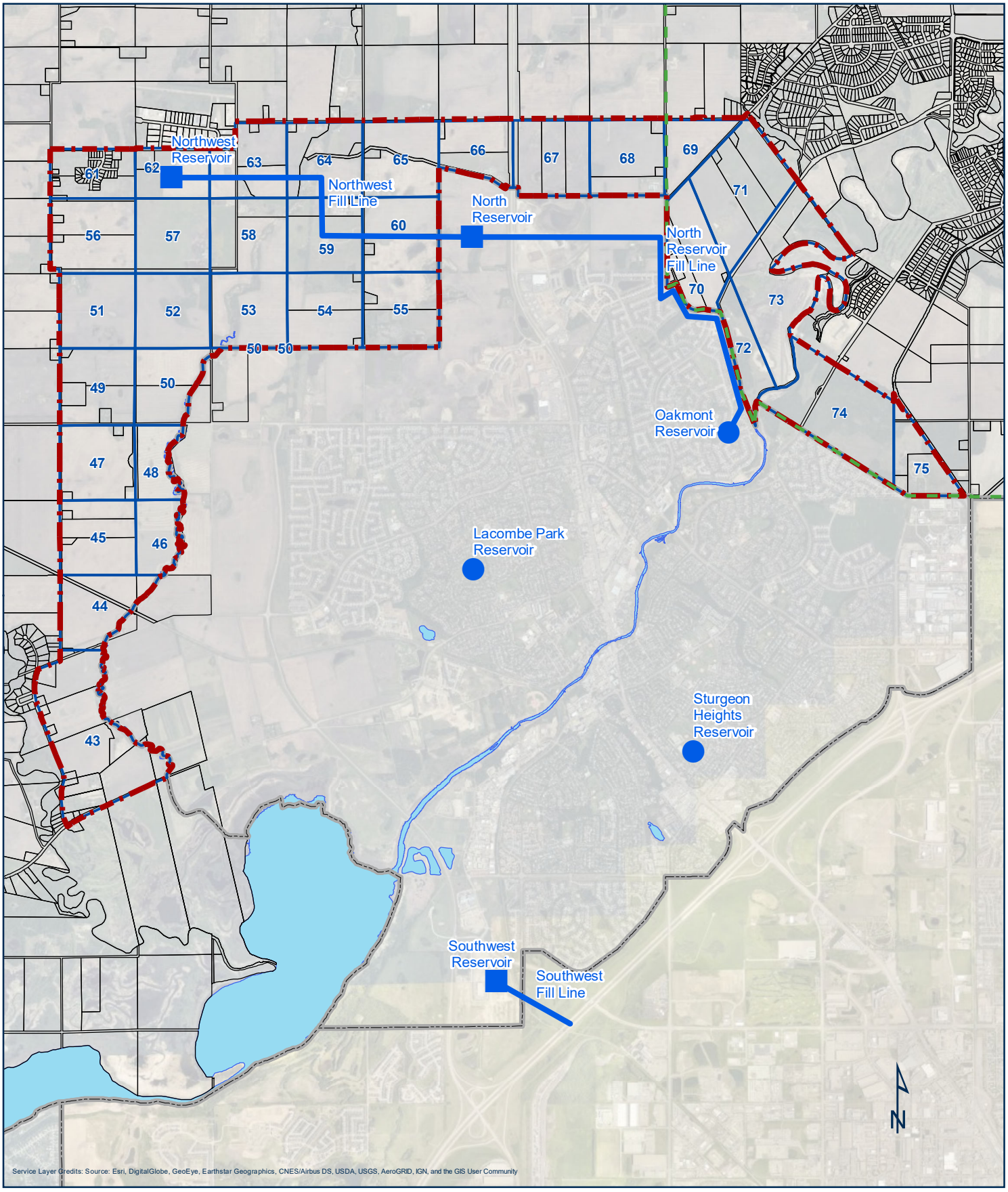
An additional reservoir (Northwest Reservoir) has been identified in previous studies for long-term servicing of the City and potentially joint servicing with Sturgeon County. This reservoir is outside the current City boundary and would only be needed to service annexation lands.

4.2 Opportunities

The Southwest and North Reservoirs can be oversized to service annexation lands. These reservoirs have been included in offsite levy calculations with a portion of their storage volumes assigned for growth (annexation) areas. As these reservoirs have not been designed, there is opportunity to refine their storage volumes as needed to optimize servicing of a recommended annexation area.

Existing Sturgeon County infrastructure was reviewed to assess the potential opportunities for joint intermunicipal servicing. Unfortunately, the County reservoirs and transmission mains are relatively small and thus are not suitable for use as part of a long-term servicing strategy. The 300 mm Villeneuve water supply line running along Township Road 544 could potentially be used for limited interim servicing in the MPAA's extreme northwest sub-area. The water infrastructure within Sturgeon Valley does not have surplus capacity to service the City even on an interim basis.

[1] The Morinville Line Booster Station, which is an inline booster station, is housed within the Oakmont Reservoir structure. The inline capacity within the Morinville Line's transmission system is legally delineated within the Regional Water Customers Group, of which Sturgeon County is a member, while the full capacity of the Oakmont Reservoir is owned by the City of St. Albert.



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City of St. Albert Cultivate Life

Municipal Boundary
Maximum Potential Annexation Area
Sturgeon Valley Area Structure Plan
MPAA Analysis Area

Parcel
Existing Reservoir
Proposed Reservoir
Proposed Supply Line

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ST. ALBERT GROWTH MANAGEMENT STUDY: INFRASTRUCTURE SERVICING STUDY

MAP G.3: WATER SERVICING CONCEPT

As the lands in the north part of the City are relatively flat, there is flexibility in the location of a future Northwest Reservoir. Thus, the reservoir could be shifted as needed depending on the recommended annexation lands.

4.3 Constraints

There are no particularly challenging constraints associated with water servicing to the MPAA. Some upgrading of the existing distribution system will be needed to supply large fire flows to new development areas, particularly in the far west area. Carrot Creek is a minor constraint as it will limit the number of connections within the grid and crossings will generally require trenchless construction.

4.4 Servicing Plan for the MPAA

The servicing concept for the MPAA is shown in Map G.3. The Southwest Reservoir is needed to support the west sub-area as it augments the overall storage volume and it strengthens the distribution system by augmenting the Lacombe Park Reservoir pumping capacity. The North Reservoir will be oversized to facilitate servicing of the northwest, north and northeast sub-areas.

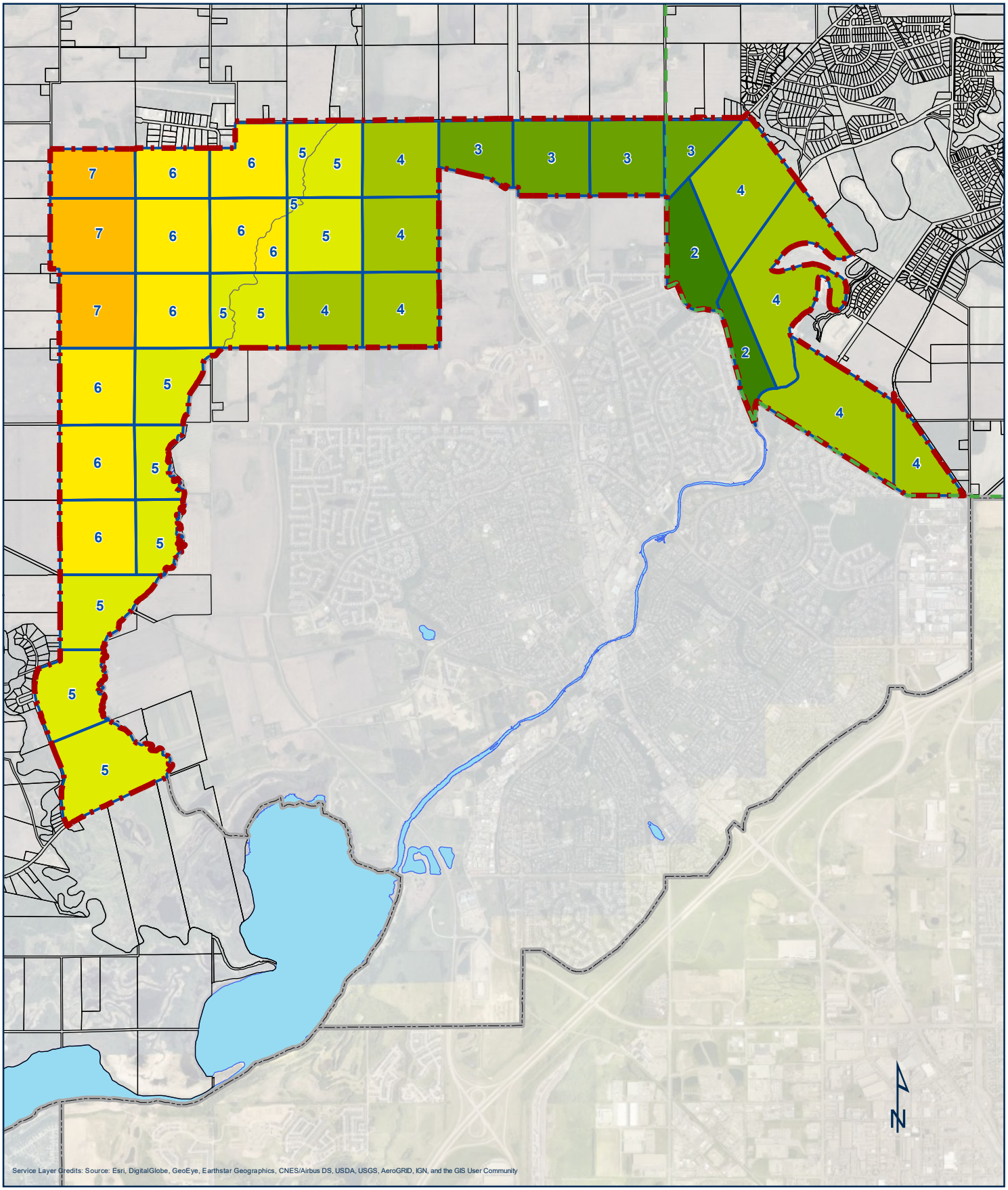
The Northwest Reservoir can be added to provide additional storage volume and pumping capacity to service the northwest and west sub-areas. This reservoir would be sized for the selected annexation area considering the potential for a mix of residential and non-residential land uses.

4.5 Ranking

The serviceability criteria listed in Table G.1 was applied to the water servicing within the MPAA. An illustration of the results is provided in Map G.4.

Based on the analysis, the lands immediately east of Oakmont and Erin Ridge are easiest to service as they only require an extension to the existing water distribution system. Lands north and west of Erin Ridge North and Jensen Lakes are relatively easy to service but require the existing neighbourhoods to develop. These areas will eventually require the Northern Reservoir to be commissioned due to a combination of storage volume and pumping capacity.

The lands west of Carrot Creek will require the lands west of Ray Gibbon Drive to be developed before the water distribution system can be extended west of the creek. Lands in the far northwest are likely going to require the future Northwest Reservoir to be commissioned to provide water servicing.



ST. ALBERT GROWTH MANAGEMENT STUDY: INFRASTRUCTURE SERVICING STUDY

MAP G.4: WATER SERVICING RANKING

5.0 Wastewater Servicing

5.1 Existing and Planned Wastewater Infrastructure

The City of St. Albert is serviced by the Alberta Capital Region Wastewater Commission (ACRWC) St. Albert Pump Station. The City conveys its wastewater flows to this pump station through a series a local, sub-trunk and trunk sewers.

New development areas in the north-central and northeast parts of the City are serviced by existing trunks through Erin Ridge on an interim basis. They will ultimately be serviced via the proposed Erin Ridge or Jensen Lakes Lift Stations, both of which will connect to the Northeast Lift Station, which will discharge wastewater to the ACRWC St. Albert Pump Station. Portions of the trunks connecting the Erin Ridge and Jensen Lakes Lift Stations to the Northeast Lift Station have been constructed as part of interim servicing. These lift stations are proposed to be oversized to provide wastewater servicing for the MPAA's north sub-area.

The North Interceptor Trunk is being constructed in stages through the north-central part of the City. It is being designed as a combination storage / conveyance facility to intercept wastewater flows in the northwest part of the City and discharge them at a controlled rate to the ACRWC St. Albert Pump Station. The central and part of the west section of this trunk are in operation, and the east section is currently being constructed. The far west section will be constructed as needed to service development between Ray Gibbon Drive and Carrot Creek.

The Southwest Lift Station is proposed to service the low-lying lands generally south of Giroux Avenue. It will discharge to the west end of the North Interceptor Trunk.

5.2 Opportunities

The Erin Ridge, Jensen Lakes and Northeast Lift Stations can be designed to accommodate wastewater servicing of north-central and northeast sub-areas.

The North Interceptor Trunk has some capacity for wastewater flows from the west and northwest sub-areas west of Carrot Creek. The lands that can be serviced through this trunk can be maximized if the connecting trunk is oversized to provide wastewater storage and thereby minimize the peak flows into the North Interceptor Trunk.

In terms of intermunicipal servicing, there are limited opportunities within the existing and planned Sturgeon County wastewater infrastructure. The ProNorth / Northern Lights Estates developments are serviced by a low-pressure sewer system to the County's Sturgeon Valley system. This system has very limited capacity and should not be considered for City servicing. The Rivers Gate Lift Station is located approximately 1 km northeast of the ACRWC St. Albert Pump Station and was designed for future growth within Sturgeon Valley, which may include some of the northeast sub-area. A future wastewater syphon crossing the Sturgeon River has

been planned by the County to service growth on the north side of the river. There may be potential to use a portion of this syphon's capacity to service the northeast sub-area.

5.3 Constraints

As some of the gravity trunks within Erin Ridge North have been constructed, there is a limitation on the total wastewater flows that it can accept. As shown in Map G.5, the anticipated western extent of servicing via Jensen Lakes / Erin Ridge North is the Ray Gibbon Drive extension / Carrot Creek. This boundary may need to be revised if the land use is revised from the presumed residential to non-residential due to the higher design wastewater flow generation potential from non-residential land uses.

The North Interceptor Trunk has limited capacity to accept wastewater flows from west of Carrot Creek. As previously mentioned, the amount of lands west of Carrot Creek that can be serviced to this trunk can be maximized through the use of a wastewater storage trunk. The north-south trunk west of the creek shown in Map G.5 is assumed to be a storage trunk.

Due to the limitations within the existing North Interceptor Trunk and sections of the North Erin Ridge Trunk, it may not be possible to servicing all of the lands within the MPAA with the trunk system shown in Map G.5. This is not considered to be a serious constraint as the City is not expected to require all lands within the MPAA in the medium to long-term annexation horizon.

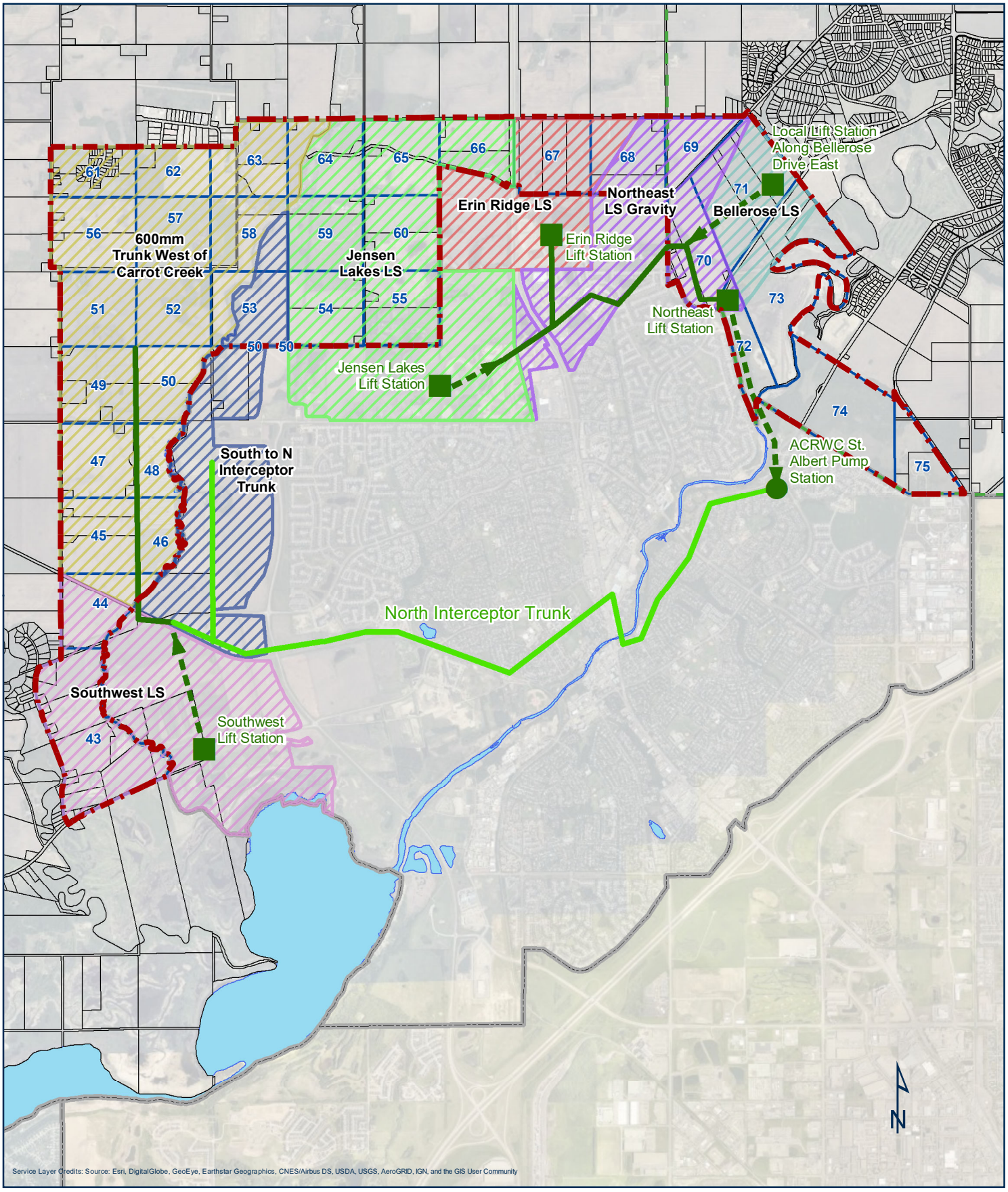
Another minor constraint is servicing the far southwest sub-area west of Carrot Creek. This area can be serviced to the Southwest Lift Station but may require the lift station to be a few metres lower to accommodate the creek crossing. The depth of the creek crossing has not been determined and could be mitigated with the use of a syphon (subject to sufficient self-cleansing velocities). An additional lift station west of the creek may be required.

5.4 Servicing Plan for the MPAA

The servicing concept for the MPAA is shown in Map G.5. It includes servicing of the north-central and northeast sub-areas through the Erin Ridge North, Jensen Lakes and Northeast Lift Stations with a forcemain connecting to the ACRWC St. Albert Pump Station. The western service area boundary is expected to be the Ray Gibbon Drive extension / Carrot Creek, but it may need to be modified if a large area of non-residential development is proposed due to the potential for high wastewater flow generation.

The northeast sub-area is assumed to be serviced via a local lift station along Bellerose Drive, which would connect to the proposed Northeast Lift Station. A potential alternate servicing concept would be integrated servicing through the proposed future Sturgeon River syphon within Sturgeon County's future Sturgeon Valley development.

The southwest sub-area is proposed to be serviced to the North Interceptor Trunk via the Southwest Lift Station. As previously noted, this may require the Southwest Lift Station to be lowered. Alternately, a new lift station could be used.



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City of St. Albert Cultivate Life

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- Municipal Boundary
- Maximum Potential Annexation Area
- Sturgeon Valley Area Structure Plan
- MPAA Analysis Area
- Parcel
- Service Area
- Existing Pump Station
- Proposed Pump Station
- Proposed Trunk
- Proposed Force Main
- North Interceptor Trunk

ST. ALBERT GROWTH MANAGEMENT STUDY: INFRASTRUCTURE SERVICING STUDY

MAP G.5: WASTEWATER SERVICING CONCEPT

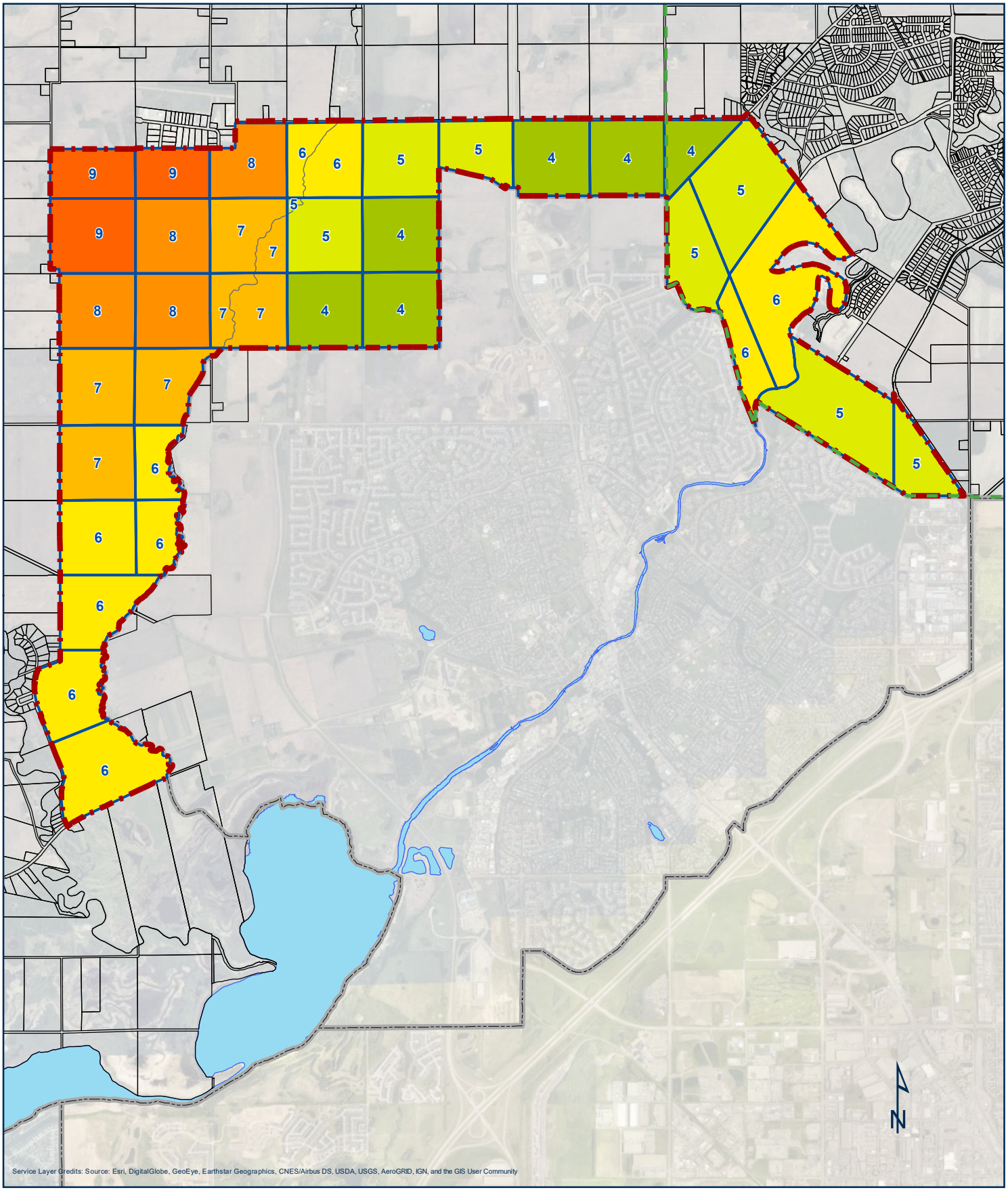
The west and northwest sub-area can be serviced to the North Interceptor Trunk via a new storage trunk west of Carrot Creek. A detailed analysis would be required to determine the how much of the MPAA west of the creek can be accommodated in the North Interceptor Trunk.

5.5 Ranking

The serviceability criteria listed in Table G.1 was also applied to the wastewater servicing within the MPAA. An illustration of the results is provided in Map G.6.

Based on the analysis, none of the lands within the MPAA are particularly easy to service. The lands in proximity to the Erin Ridge North and Jensen Lakes Lift Stations can be serviced when the adjacent lands are serviced including the commissioning of these lift stations and likely the Northeast Lift Station as well.

The lands west of Carrot Creek will require the west end of the North Interceptor Trunk to be extended, along with the Southwest Lift Station and forcemain and/or the proposed storage trunk west of the creek. The lands in the far northwest sub-area are the most difficult to service based on the length of trunk needed.



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City of St. Albert Cultivate Life

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- Municipal Boundary
- Maximum Potential Annexation Area
- Sturgeon Valley Area Structure Plan
- MPAA Analysis Area
- Parcel

Serviceability Rank

1	6
2	7
3	8
4	9
5	10

ST. ALBERT GROWTH MANAGEMENT STUDY: INFRASTRUCTURE SERVICING STUDY

MAP G.6: WASTEWATER SERVICING RANKING

6.0 Stormwater Servicing

6.1 Existing and Planned Stormwater Infrastructure

There is limited existing stormwater infrastructure available in the north and west parts of the City for servicing new development areas within the current City boundary and the MPAA. Portions of the ultimate storm system in the Erin Ridge North area have been constructed with interim connections to the Erin Ridge and Oakmont systems. The storm drainage system within Deer Ridge has limited capacity to service new growth areas.

There is no existing stormwater infrastructure that has the potential to service the MPAA's northeast, northwest or west sub-areas. It is noted that the Ray Gibbon Drive storm drainage system was designed for roadway drainage only.

Previous studies have looked at alternate ways to service the north and west sub-areas. The north-central sub-area is proposed to be serviced via a gravity trunk to the Sturgeon River through Sturgeon County (potentially the northeast sub-area). Part of this area requires a stormwater pump station due to the flat topography and constructability challenges with deep sewer installations in poor subsoil conditions. The City plans to commence design of the outfall trunk to the river in 2019 including acquiring a right-of-way.

Previous studies have proposed two concepts for servicing lands east and west of Carrot Creek to address erosion and sedimentation concerns in the creek: 1) constructing storm trunks parallel to the creek; and 2) utilize the creek for stormwater discharges and construct extensive erosion protection works in the creek. The first concept is relatively expensive and if difficult to stage, while the second concept may or may not be technically viable. The City has not formally adopted either concept, however, the first concept is considered to be the most likely as it is known to be technically viable.

6.2 Opportunities

The proposed Northeast Trunk outfall to the Sturgeon River provides an excellent opportunity to service the north-central and northeast sub-area. The previously mentioned Erin Ridge North stormwater pump station can be used to service the low-lying lands in the north-central sub-area.

The available capacity in the Deer Ridge storm drainage system provides a limited opportunity to service lands in the north-central sub-area (tentatively one quarter section).

Carrot Creek may be used for a very limited amount of interim servicing. However, even a small amount of additional flows may exacerbate the current erosion concerns.

6.3 Constraints

The MPAA's major stormwater servicing constraint is the erosion risk within Carrot Creek. Constructing a storm trunk parallel to the creek results in relatively high storm servicing costs. Also, due to the approximate 6 km distance from the northwest sub-area, staging of the trunk will be a significant constraint to servicing in the northwest.

Expanding the servicing concept for the north-central sub-area to include the adjacent northwest sub-area will be challenging due to topographic constraints and poor sub-soil conditions. This may require a second stormwater pump station, which would add to both the upfront capital costs but also the long-term operation and maintenance costs.

6.4 Servicing Plan for the MPAA

The servicing concept for the MPAA is shown in Map G.7. It includes the following:

- Servicing most of the north-central sub-area to the Erin Ridge North Stormwater Pump Station, discharging to the Sturgeon River via the proposed Northeast Trunk;
- Servicing the northeast sub-area by gravity via the Northeast Trunk;
- Servicing approximately one quarter section of the north-central sub-area through Jensen Lakes and Deer Ridge; and
- Servicing the northwest and west annexation areas to Big Lake via storm trunks running parallel to Carrot Creek.

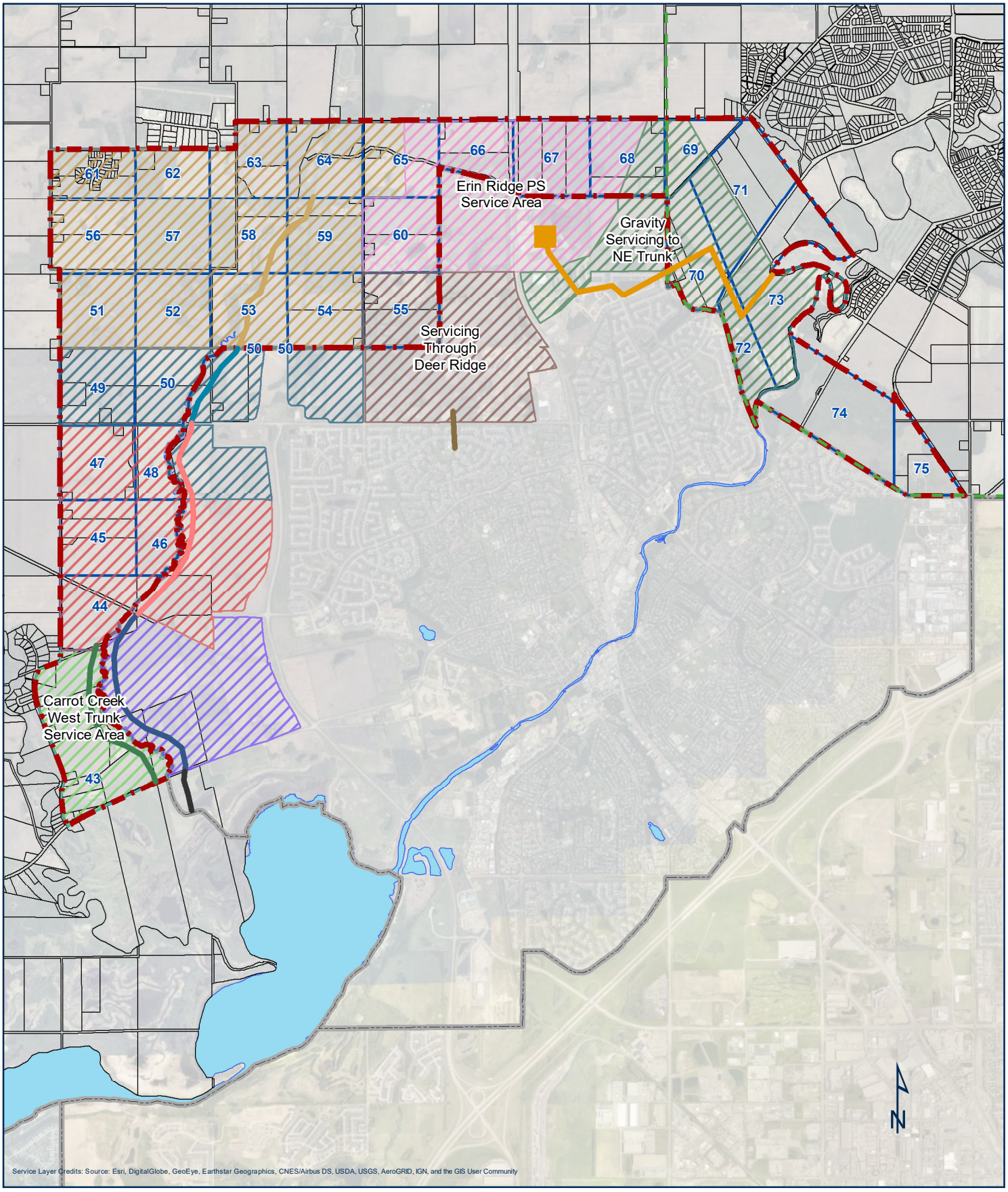
There is a trunk tentatively proposed for the planned future City growth area on the east side of the creek. It is assumed that this trunk would be oversized and extended north. It is also assumed that the lands west of the creek would connect to the trunk with a series of connections beneath Carrot Creek. A separate trunk will likely be required west of the creek at the south end due to topographic constraints (not possible to cross beneath the creek and still discharge to Big Lake via gravity).

All new developments will be required to provide their own stormwater management facility (SWMF). Conceptual locations of SWMFs are not omitted from Map G.7 to maintain legibility.

6.5 Ranking

The serviceability criteria listed in Table G.1 was applied to the stormwater servicing within the MPAA. An illustration of the results is provided in Map G.8.

Based on the analysis, the lands closest to Big Lake and the Sturgeon River are easiest to service, along with the quarter section that can be serviced through Deer Ridge. The lands adjacent to the Erin Ridge North Stormwater Pump Station are also relatively easy to service once the pump station is commissioned. The remainder of the lands in the north-central and northeast sub-areas can then be serviced.



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City of St. Albert Cultivate Life

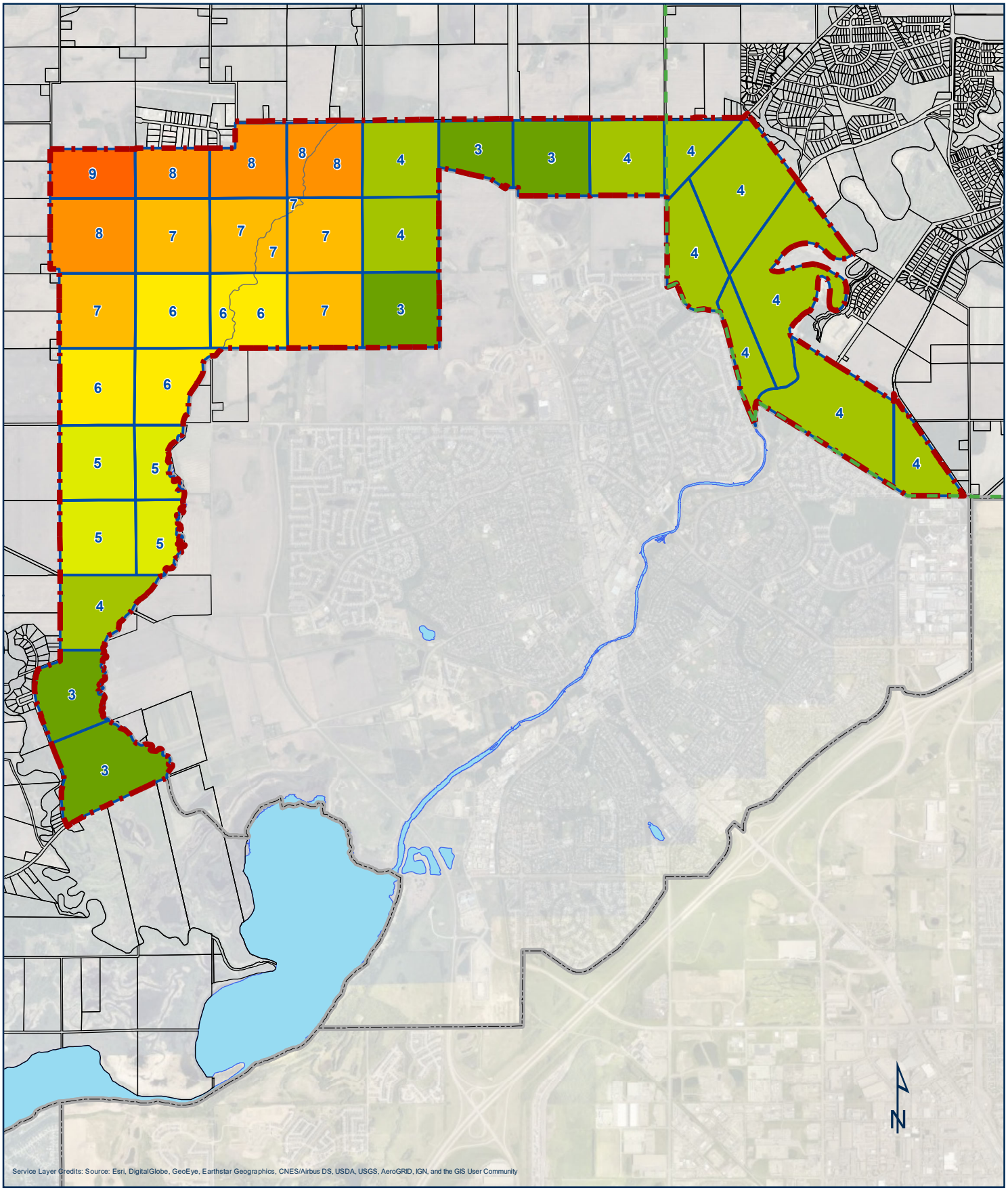
0 0.2 0.4 0.8 1.2 1.6 km

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- Municipal Boundary
- Maximum Potential Annexation Area
- Sturgeon Valley ASP
- MPAA Analysis Area
- Parcel
- Service Area
- Carrot Creek West Trunk
- Carrot Creek East Trunk 1
- Carrot Creek East Trunk 2
- Carrot Creek East Trunk 3
- Carrot Creek East Trunk 4
- Carrot Creek East Trunk 5
- Deer Ridge Line
- Northeast Trunk
- Storm Pump Station

ST. ALBERT GROWTH MANAGEMENT STUDY: INFRASTRUCTURE SERVICING STUDY

MAP G.7: STORMWATER SERVICING CONCEPT



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City of St. Albert Cultivate Life

Municipal Boundary
Maximum Potential Annexation Area
Sturgeon Valley Area Structure Plan
MPAA Analysis Area
Parcel

Serviceability Rank

1	6
2	7
3	8
4	9
5	10

0 0.2 0.4 0.8 1.2 1.6 km

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ST. ALBERT GROWTH MANAGEMENT STUDY: INFRASTRUCTURE SERVICING STUDY

MAP G.8: STORMWATER SERVICING RANKING

The west and northwest sub-areas are more difficult to service and require the outfall trunk to Big Lake to be constructed, starting at the south end. Thus, the lands in the far northwest sub-area are the most difficult to service.

7.0 Discussion

The servicing plans shown in the above sections are based on the available background reports, master plans and discussions with the City of St. Albert. In some cases, the servicing constraints have not been finalized, such as the available capacity in the North Interceptor Trunk to service the MPAA's western sub-areas. In these cases, the servicing concepts presented are based on the current understanding as per the available reports and discussions with the City. It is anticipated that the servicing plans will be refined over time based on more detailed technical analyses.

The servicing rankings presented in Maps G.4, G.6 and G.8 represent the relative ease of servicing for water, wastewater, and stormwater. These maps should be used as input in the selection of the recommended annexation area.