



Date: **Mar 21, 2025**

To: **Urban Planning and Economy, City of Edmonton**

From: **Fire Rescue Services (Engineering), City of Edmonton**

Subject: **Priority Growth Area Rezoning - Firefighting Water Supply Overview**

Purpose

The purpose of this document is to provide additional and clarifying information regarding firefighting water supply within the City of Edmonton as it pertains to meeting the needs of new development. It is anticipated that this document be reviewed in conjunction with the Technical Studies provided by EPCOR Water.

Firefighting Water Supply - Brief Overview

Firefighting water capacity (termed Available Fire Flow, "AFF") is a parcel-level metric that is not broadly measured or published, but is assessed by Edmonton Fire Rescue Services Engineering (EFRS) during development permit reviews. This assessment, called an Infill Fire Protection Assessment ("IFPA"), has shown that 80-90% of infill developments over the past six years have sufficient firefighting water supplies provided by existing infrastructure. As such, any upgrades that might be required to support developments within the proposed rezoning sites are appropriately assessed when firm development details are available to conduct the assessment (eg: Development Permit); via comparison of AFF and Required Fire Flow ("RFF").

The AFF is based on nearby hydrant locations, the distances from hydrants to the site, and the pressure in the local water mains. Whereas, the RFF is based entirely on development design factors such as building area, occupancy type, construction type, inclusion of sprinklers, and proximity to adjacent structures.

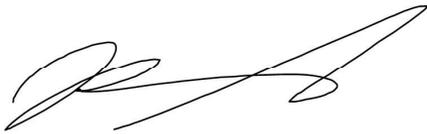
It is important to note the distinct difference between "water network performance" as supplied by EPCOR Water and the AFF as determined by EFRS. These two assessments are fundamentally different, but are often confused to be one in the same. EPCOR Water assessments refer to water network performance, meaning approximate volume of water moving through the municipal network at a single specific location at a single specific pressure; whereas AFF assessments consider multiple sources of

water (hydrants), emergency response and equipment characteristics, and varying pressures. As such, it is common that the AFF can be higher or lower than the stated water network performance metric.

The EPCOR reports indicate the current condition of the water infrastructure as it relates to the modern requirements for fire protection within the Volume 4 Standard (Water) and provide insight on the approximate level of water network upgrades *potentially* needed. The reports also recommend that prior to planning new infrastructure, a site-specific analysis (ie: IFPA) be conducted to confirm if upgrades are necessary. Where the IFPA concludes that upgrades are necessary to support the proposed development, there are two infill infrastructure funding mechanisms currently available: one administered by EPCOR Water, and the other by the City of Edmonton.

For any questions or concerns with the content of this document, please contact the undersigned.

Sincerely,



Kael Griswold P.Eng.
SENIOR FIRE PROTECTION ENGINEER
FIRE RESCUE SERVICES
COMMUNITY SERVICES

[587-589-0291](tel:587-589-0291) OFFICE

City of Edmonton
10351 96 St NW, Fire Station No. 1
Edmonton AB T5H 2H5

Version	Description
Rev 0	Original issue.



DATE: March 11, 2025

TO: Urban Planning and Economy, City of Edmonton

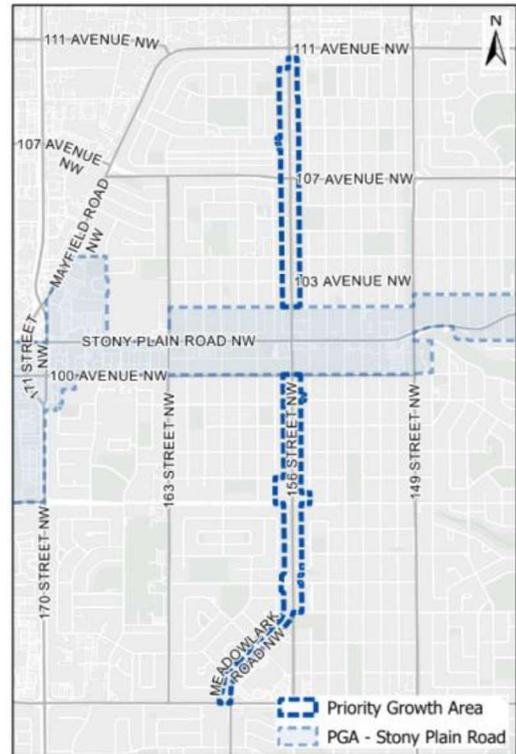
FROM: One Water Planning, EPCOR Water Services (EWS)

SUBJECT: Priority Growth Area Rezoning – 156 Street Corridor PGA

Overview:

The below was provided by the Urban Planning and Economy team at the City of Edmonton regarding the 156 Street Corridor PGA:

The 156 Street Priority Growth Area (PGA) is identified as a Secondary Corridor in the City Plan and anticipates that an additional 200 to 1,000 dwelling units will be added by the time the City reaches 1.25 million. This corridor crosses the Stony Plain Road PGA, which includes the 156 Street Corridor between 100 and 103 Avenue. North and south of the Stony Plain Road PGA is mainly low rise apartments and single family homes with commercial development along major intersections, including a larger big box-style commercial development at the Meadowlark Health and Shopping Centre. The 2019 population was 2,095 with a density of 100 people per net residential hectare (ha), compared to the City Plan desired density of 75 people and jobs per ha. As of 2023, there were 60 dwelling units per net residential hectare. The node can anticipate the development of low-rise and mid-rise buildings. The PGA has a designated activation approach of Invest to 1.25 million.



One Water Planning is providing the below high-level assessment of the water, wastewater and stormwater systems that support development in this priority growth area. All outcomes are accurate based on the information available at the date identified above.

In parallel to the City’s PGA initiative, EPCOR is undertaking a number of ongoing initiatives, primarily related to the implementation of the various water cycle integrated resource plans which will have an impact on the results assessed herein. Examples of these initiatives include: ongoing efficiencies gained in water consumption and sanitary generation, inflow and infiltration mitigation (maintenance hole and pipe sealing), low impact development and dry pond installation), among others. Additionally ongoing City of Edmonton capital projects such as the Valley Line West LRT may have an impact on future site servicing.

These assessments represent a “snapshot in time” site specific information will need to be re-assessed at detailed development stages to confirm results. EPCOR recommends that developers reach out to EPCOR early in the development process to discuss specific site servicing requirements (boundaryconditions@epcor.com and wass.drainage@epcor.com).

Water:

Domestic Water Supply:

There are no limitations for domestic water supply in the 156 Street PGA corridor. Customers can coordinate new service connections from: [Service Connections | EPCOR Edmonton](#)

Fire Protection:

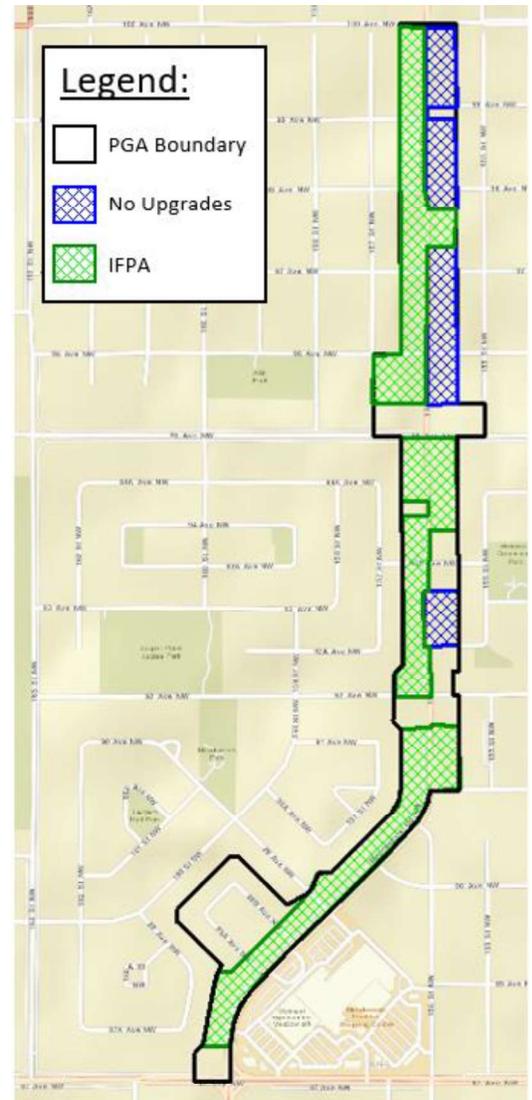
The water network is assessed for fire protection in the 156 Street PGA corridor and results for the rezoning focus areas are grouped as per the following:

- **Meets Volume 4:** Water network capacity is greater than or equal to 300 L/s and hydrant spacing is reasonably close to 90m.
- **Infill Fire Protection Assessment (IFPA):** Water network capacity is greater than or equal to 200 L/s and water mains are available to meet hydrant spacing requirements. This assumes the existing IFPA process and the Infill Fire Protection Program (IFPP) will adequately support development.

The 156 Street Corridor has sufficient capacity to support any proposed development. The LRT alignment along 156 Street may limit the availability of hydrants at some development locations. Site specific assessment will be required at locations directly adjacent to LRT tracks to ensure adequate fire protection is available.

There are no suggested improvements for the 156 Street Corridor PGA.

In addition to the above, EPCOR provides hydraulic model outputs of Water Network Capacity to City of Edmonton Open Data in 200mx200m hexagons to support the infill development community. This information can be found here: [Map View: Average Water Network Capacity by Hexagon Area | Edmonton - Open Data Portal](#)



Wastewater:

Dry Weather Flows:

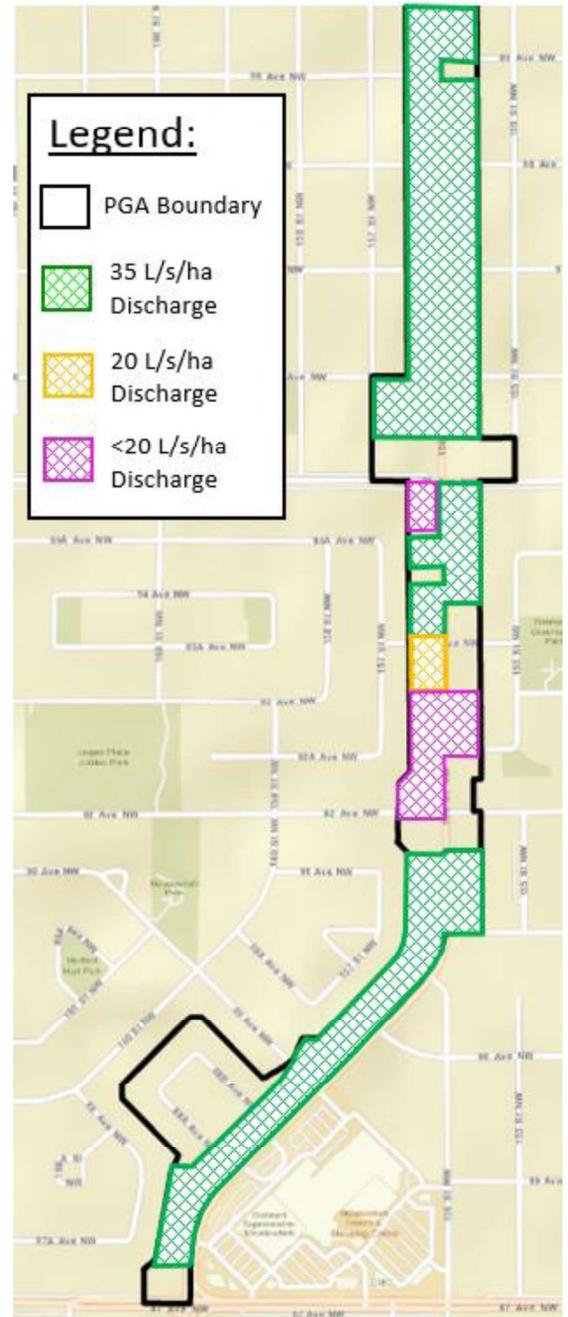
Wastewater servicing in the 156 Street Corridor PGA is provided by separate sanitary system. No issues are identified for the peak dry weather flow condition.

Wet Weather Flows:

Storm servicing in the 156 Street Corridor PGA is through a network of separate storm sewers which eventually drain to the North Saskatchewan River directly or via the MacKenzie and MacKinnon Ravines. These older neighbourhoods were developed to a 1:2 yr level of service.

Based on the current level of service in the 156 Street PGA, development can be supported with on-site stormwater management restrictions, which will be dictated by the size and scope of the development. Re-development of these areas will have a tendency to improve the systems performance as it transitions from single family residential (no stormwater control) to higher density built forms. These restrictions may include stormwater storage and regulated discharge into the public system, and/or the incorporation of low impact development (LID) into the site design. In general, on-site storage to the standard 35 L/s/ha that is regularly used for multi-family and commercial developments will improve the level of service that is currently provided. Locations indicated in green on the map above can be developed to this standard without any impact to the system. In some areas of the PGA more stringent on-site storage requirements (such as regulating discharge to a < 35 L/s/ha discharge rate or additional LID) may be assigned on a development-by-development basis. Locations shown in orange on the map on the right can be developed with on-site storage with a discharge controlled to 20 L/s/ha without impact to the system. In some areas, further on lot control may be required (< 20 L/s/ha). These locations are indicated on the map to the right.

Once particular projects are proposed for the 156 Street PGA, EPCOR can do a more detailed investigation into priority areas to determine site servicing requirements.



Sanitary and Storm Network Upgrades:

The following table provides high level cost estimates (planning only), for design and construction of sanitary and storm pipes. Sewer upgrades or off-site sewer construction may be required to support storm servicing for developments allowed under the proposed zones. These considerations are more likely to be required in areas identified as requiring less than a 20 L/s/ha stormwater discharge rate. Details of any required sewer construction would be reviewed at the Development Permit stage.

Mainline Pipe Install Cost \$/m				
Pipe Diameter	Pipe Depth 3 - 5 m		Pipe Depth 5 - 7 m	
	Pipe Length (< 10 m)	Pipe Length (>=10m)	Pipe Length (< 10 m)	Pipe Length (>=10m)
200-350 mm	\$6200/m	\$3700/m	\$ 9200/m	\$7200/m
375 mm	\$6750/m	\$4000/m	\$ 9750/m	\$7500/m
450 mm	\$7500/m	\$4400/m	\$10000/m	\$7900/m
525 mm	\$8200/m	\$4800/m	\$10200/m	\$8300/m
600 mm	\$9100/m	\$5300/m	\$10500/m	\$8500/m
CB Lead Install Cost \$/m				
Pipe Diameter	Pipe Length (< 10 m)	Pipe Length (>=10m)		
200-375 mm	\$3100/m	\$2500/m		
MH Install (Cost \$/m)	\$7500/m	Vertical Depth		
CB Install (Cost \$/m)	\$5500/m			

EPCOR Water Services has provided this document as a way to support the Housing Accelerator Fund (HAF) with high-level capacity assessments for the requested Priority Growth Area (PGA). These outcomes shall be used for information purposes only. Specific development plans can be submitted to boundaryconditions@epcor.com for detailed assessment.

If you have any questions or concerns, please contact the below.

Sincerely,

Filip Dundur

Filip Dundur, P.Eng.

Manager, Water Pipe Strategies

EPCOR Water Services - One Water Planning





DATE: March 11, 2025

TO: Urban Planning and Economy, City of Edmonton

FROM: One Water Planning, EPCOR Water Services (EWS)

SUBJECT: Priority Growth Area Rezoning – Stony Plain Road Corridor PGA

Overview:

The below was provided by the Urban Planning and Economy team at the City of Edmonton regarding the Stony Plain Road Corridor PGA:

The City Plan identifies the Stony Plain Road Priority Growth Area (PGA) as a Primary Corridor and anticipates between 1,001 to 2,500 dwelling units will be added by the time the City reaches a population of 1.25 million. Stony Plain Road is largely commercial in nature, with more residential development occurring east of 149 Street. The 2019 population was 6,278 with a population density of 80 people per net residential hectare (ha), compared to the City Plan desired density of 150 people and jobs per hectare. As of 2023, there were 50 dwelling units per net residential hectare. To achieve higher density, mostly mid rise and some high rise will be required. The PGA has a designated activation approach of Invest to 1.25 million.



One Water Planning is providing the below high-level assessment of the water, wastewater and stormwater systems that support development in this priority growth area. All outcomes are accurate based on the information available at the date identified above.

In parallel to the City's PGA initiative, EPCOR is undertaking a number of ongoing initiatives, primarily related to the implementation of the various water cycle integrated resource plans which will have an impact on the results assessed herein. Examples of these initiatives include: ongoing efficiencies gained in water consumption and sanitary generation, inflow and infiltration mitigation (maintenance hole and pipe sealing), low impact development and dry pond installation), among others. Additionally

The Stony Plain Road Corridor PGA has locations where water infrastructure was constructed within alleyways limiting hydrant spacing along building frontage. Proactive investment in water infrastructure where water infrastructure is not available on street frontage will improve fire protection for future development.

In addition to the above, EPCOR provides hydraulic model outputs of Water Network Capacity to City of Edmonton Open Data in 200mx200m hexagons to support the infill development community. This information can be found here: [Map View: Average Water Network Capacity by Hexagon Area | Edmonton - Open Data Portal](#)

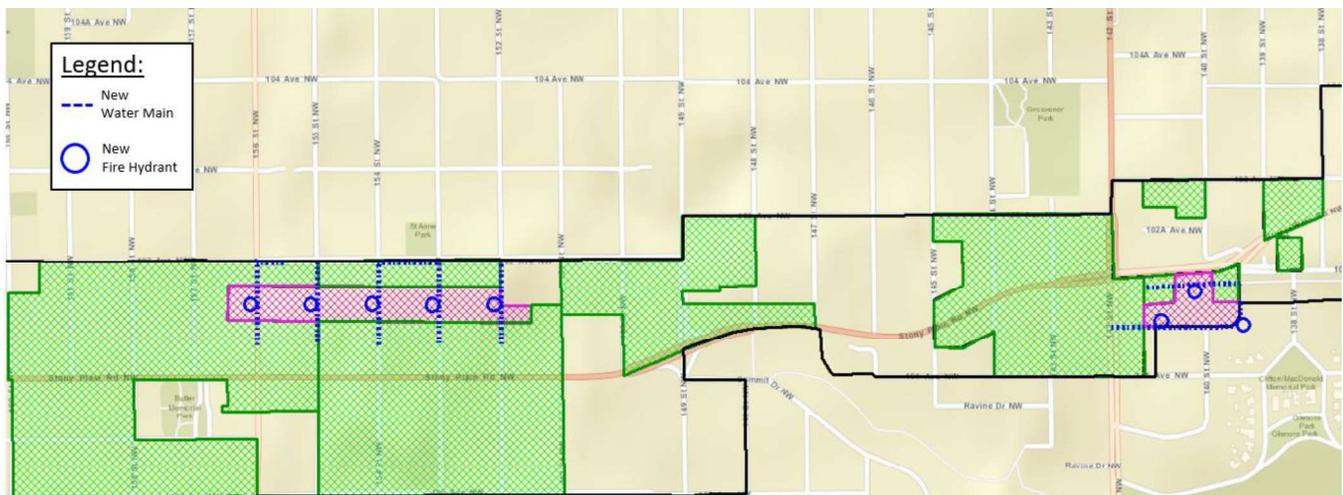
Water Network Upgrades:

Prior to considering water network improvements, assessment of the site-specific development is recommended to ensure existing infrastructure is insufficient to support the development.

The figure below shows water main alignment and hydrant locations for consideration in areas where existing fire protection can be improved.

Cost estimates for water main improvements can range from \$3200 to \$4900/m depending on required levels of road restoration. A hydrant installation may cost ~\$30,000/hydrant.

The cost(s) above are based on 2024 projects and are only suitable for high-level planning.



Wastewater:

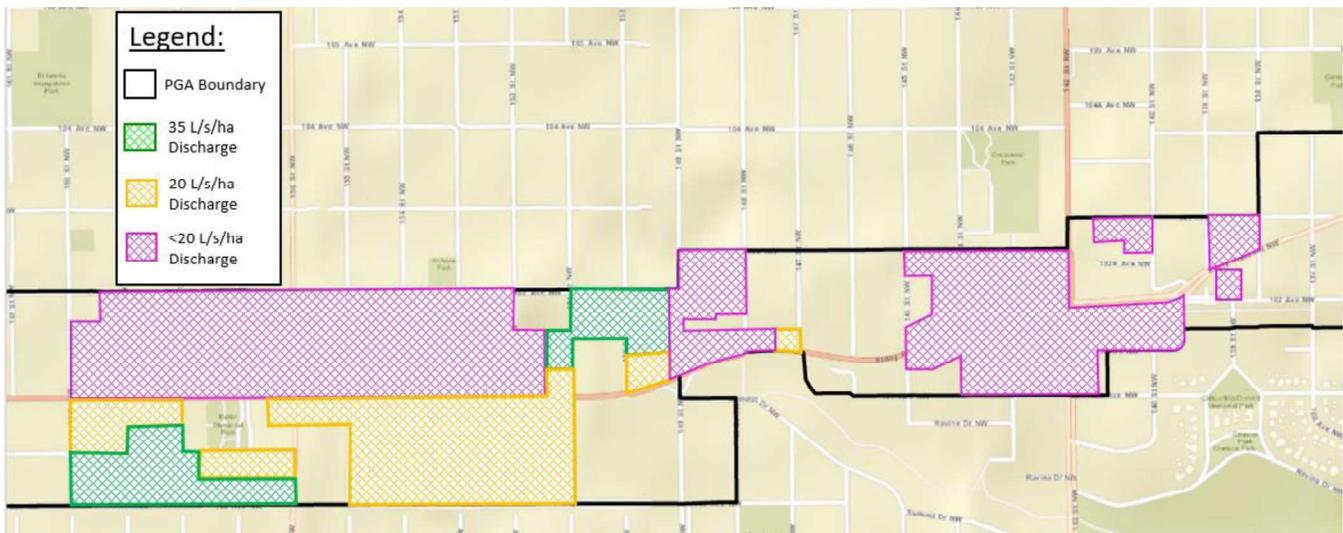
Wastewater Network Overview:

Wastewater servicing in the Stony Plain Corridor PGA is provided by both combined and separate sanitary systems. No issues are identified for the peak dry weather flow condition.

Wet Weather Flows:

Storm servicing in the Stony Plain Road PGA is through a network of separate storm sewers throughout the western portion of the PGA (west of 149 Street), while the eastern portion of the basin has combined sewers and partially separated storm sewers, which eventually drains to the North Saskatchewan River directly or via the MacKenzie and MacKinnon Ravines.

Based on the current level of service in the Stony Plain Road PGA, development can be supported with on-site stormwater management restrictions, which will be dictated by the size and scope of the development. These restrictions may include stormwater storage and regulated discharge into the public system, and/or the incorporation of low impact development (LID) into the site design. In general, on-site storage to the standard 35 L/s/ha that is regularly used for multi-family and commercial developments will improve the level of service that is currently provided. Locations indicated in green on the map above can be developed to this standard without any impact to the system. In some areas of the PGA more stringent on-site storage requirements (such as regulating discharge to a < 35 L/s/ha discharge rate or additional LID) may be assigned on a development-by-development basis. Locations shown in orange on the map below can be developed with on-site storage with a discharge controlled to 20 L/s/ha without impact to the system. In some areas, further on lot control may be required (< 20 L/s/ha). These locations are indicated the map below.



Once particular projects are proposed for the Stony Plain Road PGA, EPCOR can do a more detailed investigation into the properties to determine site servicing requirements.

Once particular projects are proposed for the Stony Plain Road PGA, EPCOR can do a more detailed investigation into priority areas to determine site servicing requirements.

Sanitary and Storm Network Upgrades:

The following table provides high level cost estimates (planning only), for design and construction of sanitary and storm pipes. Sewer upgrades or off-site sewer construction may be required to support storm servicing for developments allowed under the proposed zones. These considerations are more likely to be required in areas identified as requiring less than a 20 L/s/ha stormwater discharge rate. Details of any required sewer construction would be reviewed at the Development Permit stage.

Mainline Pipe Install Cost \$/m				
Pipe Diameter	Pipe Depth 3 - 5 m		Pipe Depth 5 - 7 m	
	Pipe Length (< 10 m)	Pipe Length (>=10m)	Pipe Length (< 10 m)	Pipe Length (>=10m)
200-350 mm	\$6200/m	\$3700/m	\$ 9200/m	\$7200/m
375 mm	\$6750/m	\$4000/m	\$ 9750/m	\$7500/m
450 mm	\$7500/m	\$4400/m	\$10000/m	\$7900/m
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CB Lead Install Cost \$/m				
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If you have any questions or concerns, please contact the below.

Sincerely,

Filip Dundur

Filip Dundur, P.Eng.

Manager, Water Pipe Strategies

EPCOR Water Services - One Water Planning



ongoing City of Edmonton or University of Alberta capital projects may have an impact on future site servicing.

These assessments represent a “snapshot in time” site specific information will need to be re-assessed at detailed development stages to confirm results. EPCOR recommends that developers reach out to EPCOR early in the development process to discuss specific site servicing requirements (boundaryconditions@epcor.com and wass.drainage@epcor.com).

Water:

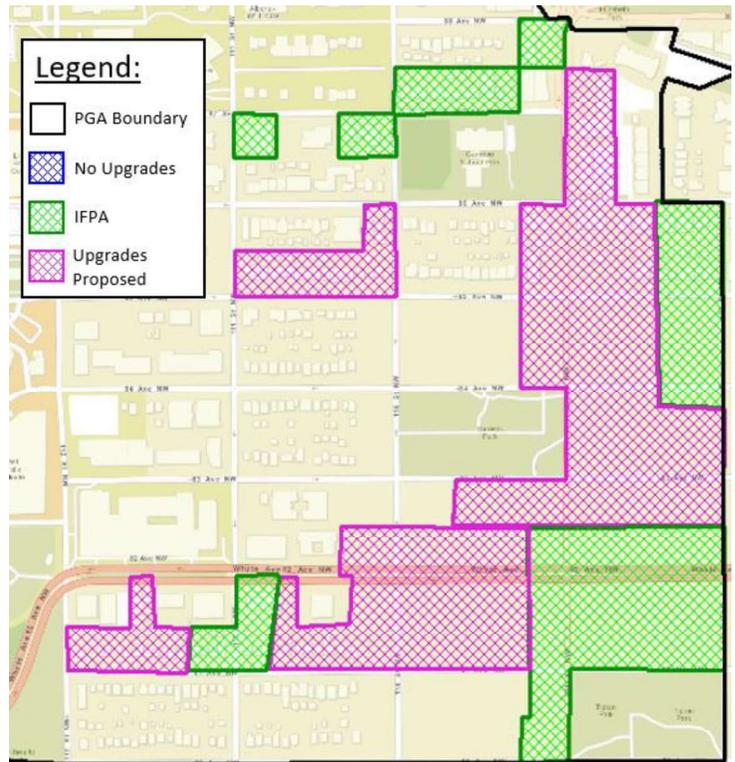
Domestic Water Supply:

There are no limitations for domestic water supply in the University-Garneau Node PGA. Customers can coordinate new service connections from: [Service Connections | EPCOR Edmonton](#)

Fire Protection:

The water network is assessed for fire protection in the University-Garneau Node PGA and results for the rezoning focus areas are grouped as per the following:

- **Meets Volume 4:** Water network capacity is greater than or equal to 300 L/s and hydrant spacing is reasonably close to 90m.
- **Infill Fire Protection Assessment (IFPA):** Water network capacity is greater than or equal to 200 L/s and water mains are available to meet hydrant spacing requirements. This assumes the existing IFPA process and the Infill Fire Protection Program (IFPP) will adequately support development.
- **Upgrades Proposed:** Water network capacity is less than 200 L/s and/or water mains are not available to meet hydrant spacing requirements. Improvements can be focused on these areas to provide additional fire protection to support more diverse development.



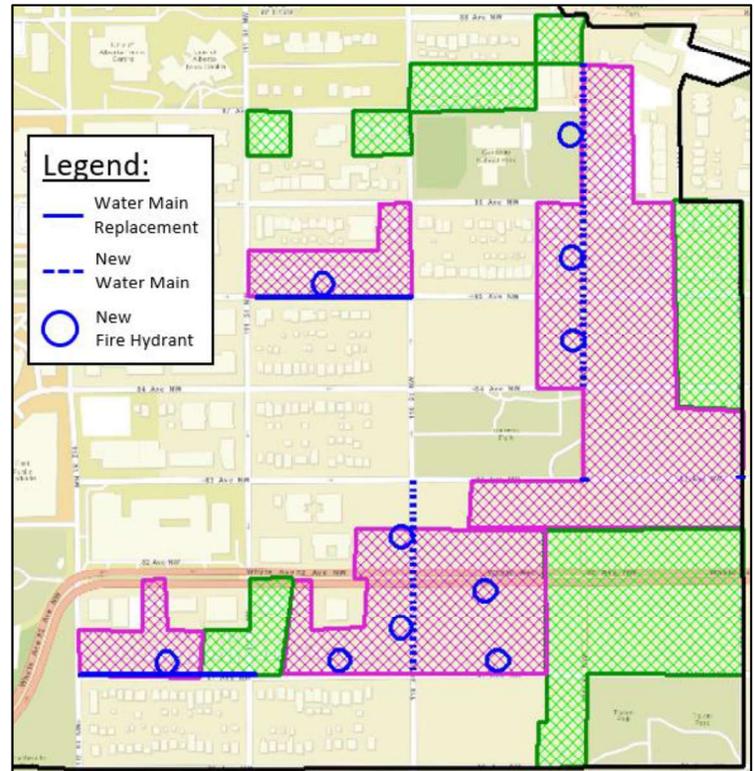
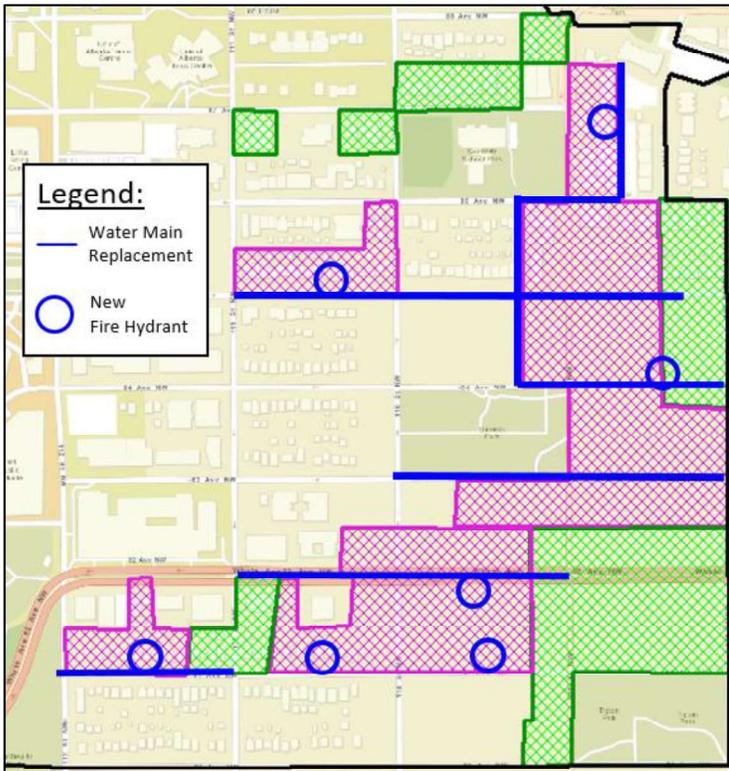
The University-Garneau Node PGA contains cast iron water mains and limited north/south connections which limit fire protection in some areas. Water main replacement of cast iron water mains to PVC will increase fire protection capacity.

In addition to the above, EPCOR provides hydraulic model outputs of Water Network Capacity to City of Edmonton Open Data in 200mx200m hexagons to support the infill development community. This information can be found here: [Map View: Average Water Network Capacity by Hexagon Area | Edmonton - Open Data Portal](#)

Water Network Upgrades:

Prior to considering water network improvements, assessment of the site-specific development is recommended to ensure existing infrastructure is insufficient to support the development. The figures below show two opportunities for water infrastructure improvements. The figure on the left shows a replacement-only approach; as cast iron mains are replaced the area fire protection will be improved organically. The figure on the right shows a combination of new infrastructure and water main replacement; this approach can be utilized if development proceeds faster than water main replacement to improve existing fire protection.

Cost estimates for water main improvements can range from \$3200 to \$4900/m depending on required levels of road restoration. A hydrant installation may cost ~ \$30,000/hydrant. The cost(s) above are based on 2024 projects and are only suitable for high-level planning.



Wastewater:

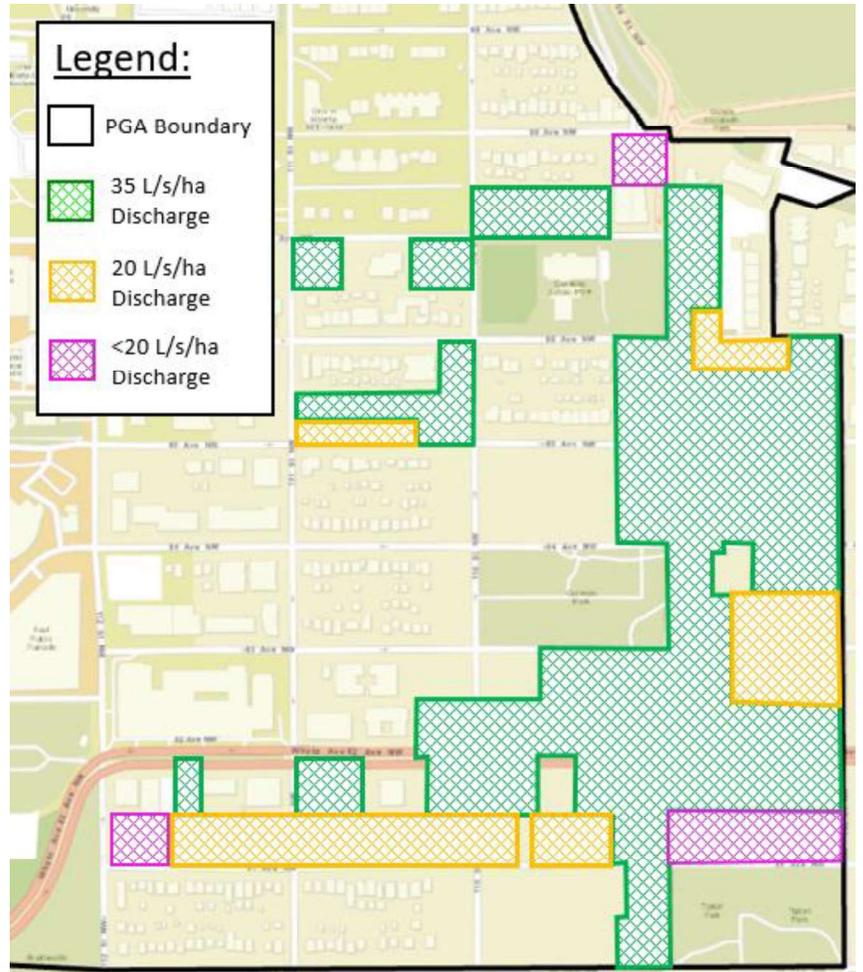
Dry Weather Flows:

Wastewater servicing in the University Garneau Node PGA is provided by both separate sanitary and combined sewer systems. No issues are identified for the peak dry weather flow condition.

Wet Weather Flows:

Storm servicing in the University Garneau PGA is through a network of combined sewers and separate storm sewers. Generally, the hydraulic model of the sewer system indicates that capacity constraints are local in nature and located at the upstream end of the system (individual pipes as opposed to the system backing up).

Based on the current level of service in the University Garneau PGA, development can be supported with on-site stormwater management restrictions, which will be dictated by the size and scope of the development. These restrictions may include stormwater storage and regulated discharge into the public system, and/or the incorporation of low impact development (LID) into the site design. In general, on-site storage to the standard 35 L/s/ha that is regularly used for multi-family and commercial developments will improve the level of service that is currently provided. Locations indicated in green on the map above can be developed to this standard without any impact to the system. In some areas of the PGA more stringent on-site storage requirements (such as regulating discharge to a < 35 L/s/ha discharge rate or additional LID) may be assigned on a development-by-development basis. Locations shown in orange on the map on the right can be developed with on-site storage with a discharge controlled to 20 L/s/ha without impact to the system. In some areas, further on lot control may be required (< 20 L/s/ha). These locations are indicated on the map to the right.



Once particular projects are proposed for the University Garneau PGA, EPCOR can do a more detailed investigation into the properties to determine site servicing requirements.

Sanitary and Storm Network Upgrades:

The following table provides high level cost estimates (planning only), for design and construction of sanitary and storm pipes. Sewer upgrades or off-site sewer construction may be required to support storm servicing for developments allowed under the proposed zones. These considerations are more likely to be required in areas identified as requiring less than a 20 L/s/ha stormwater discharge rate. Details of any required sewer construction would be reviewed at the Development Permit stage.

Mainline Pipe Install Cost \$/m				
	Pipe Depth 3 - 5 m		Pipe Depth 5 - 7 m	
Pipe Diameter	Pipe Length (< 10 m)	Pipe Length (>=10m)	Pipe Length (< 10 m)	Pipe Length (>=10m)
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If you have any questions or concerns, please contact the below.

Sincerely,

Filip Dundur

Filip Dundur, P.Eng.

Manager, Water Pipe Strategies

EPCOR Water Services - One Water Planning



DATE: March 11, 2025

TO: Urban Planning and Economy, City of Edmonton

FROM: One Water Planning, EPCOR Water Services (EWS)

SUBJECT: Priority Growth Area Rezoning – Centre City-Wihkwêntôwin Node PGA

Overview:

The below was provided by the Urban Planning and Economy team at the City of Edmonton regarding the Centre City-Wihkwêntôwin Node PGA:

The Centre City - Wihkwêntôwin Node is part of the Centre City in City Plan and anticipates that more than 2,501 units will be added by the time the City reaches a population of 1.25 million. Wihkwêntôwin is a densely populated neighbourhood with a variety of housing types including a range of low to high rise apartment buildings. Residents enjoy unique open spaces throughout the neighbourhood as well as diverse commercial development along Jasper Avenue and 104 Avenue, including the Brewery District which has become a popular destination for retail in the area. The 2019 population was 16,770 with a density of 290 people per net residential hectare (ha), compared to the City Plan desired density of 450 people and jobs per ha. As of 2023, there were 250 dwelling units per net residential ha. In order to achieve increased density, the node can anticipate more mid and high rise buildings. The PGA has a designated activation approach of Strategize to 1.25 million.



One Water Planning is providing the below high-level assessment of the water, wastewater and stormwater systems that support development in this priority growth area. All outcomes are accurate based on the information available at the date identified above.

In parallel to the City's PGA initiative, EPCOR is undertaking a number of ongoing initiatives, primarily related to the implementation of the various water cycle integrated resource plans which will have an impact on the results assessed herein. Examples of these initiatives include: ongoing efficiencies gained in water consumption and sanitary generation, inflow and infiltration mitigation (maintenance hole and pipe sealing), low impact development and dry pond installation), among others. Additionally ongoing City of Edmonton capital projects such as the Valley Line West LRT may have an impact on future site servicing.

These assessments represent a “snapshot in time” site specific information will need to be re-assessed at detailed development stages to confirm results. EPCOR recommends that developers reach out to EPCOR early in the development process to discuss specific site servicing requirements (boundaryconditions@epcor.com and wass.drainage@epcor.com).

Water:

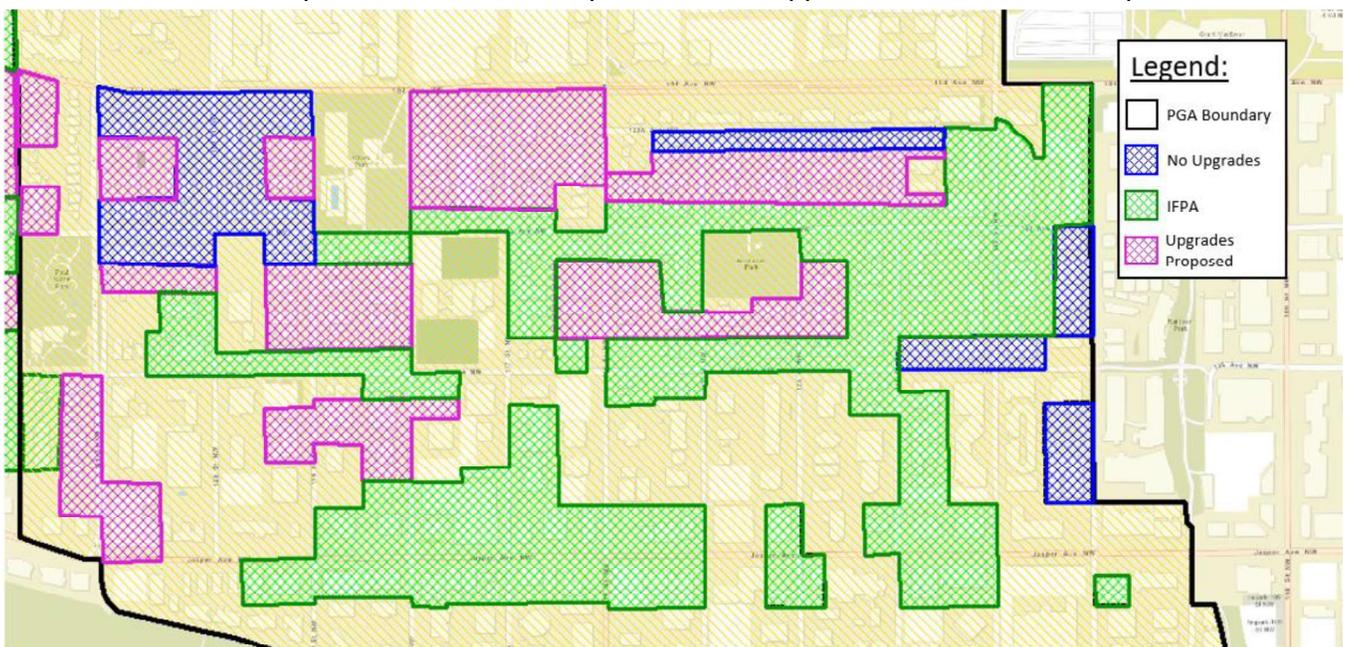
Domestic Water Supply:

There are no limitations for domestic water supply in the Centre City-Wîhkwêntôwin Node PGA. Customers can coordinate new service connections from: [Service Connections | EPCOR Edmonton](#)

Fire Protection:

The water network is assessed in the Centre City-Wîhkwêntôwin PGA node and results are grouped as per the following:

- **Meets Volume 4:** Water network capacity is greater than or equal to 300 L/s and hydrant spacing is reasonably close to 90m.
- **Infill Fire Protection Assessment (IFPA):** Water network capacity is greater than or equal to 200 L/s and water mains are available to meet hydrant spacing requirements. This assumes the existing IFPA process and the Infill Fire Protection Program (IFPP) will adequately support development.
- **Upgrades Proposed:** Water network capacity is less than 200 L/s and/or water mains are not available to meet hydrant spacing requirements. Proactive improvements can be focused on these areas to provide additional fire protection to support more diverse development.



The Centre City-Wîhkwêntôwin PGA Node contains a combination of older cast iron water mains along with renewed PVC water mains. In addition to older infrastructure, there are many locations where water mains are installed within alleyways. Proactive investment in water infrastructure where water infrastructure is not available on street frontage will improve fire protection for future development.

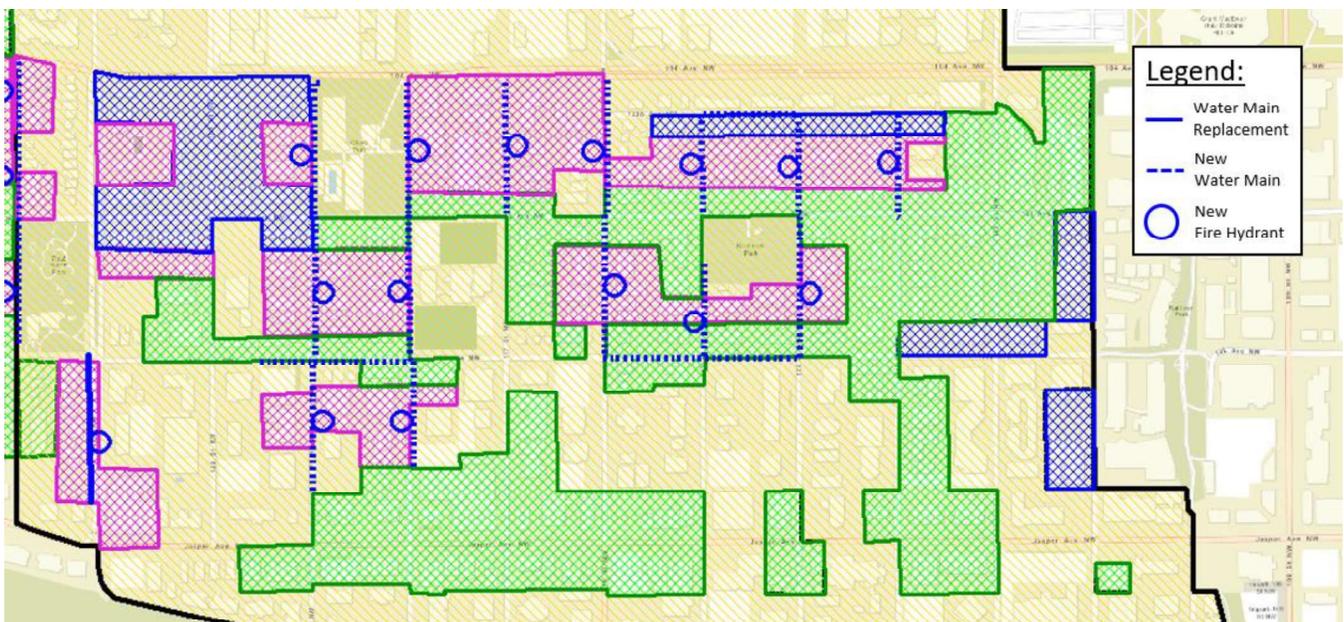
Water Network Upgrades:

Prior to considering water network improvements, assessment of the site-specific development is recommended to ensure existing infrastructure is insufficient to support the development.

The figure below shows water main alignment and hydrant locations for consideration in areas where existing fire protection can be improved.

Cost estimates for water main improvements can range from \$3200 to \$4900/m depending on required levels of road restoration. A hydrant installation may cost ~\$30,000/hydrant.

The cost(s) above are based on 2024 projects and are only suitable for high-level planning.



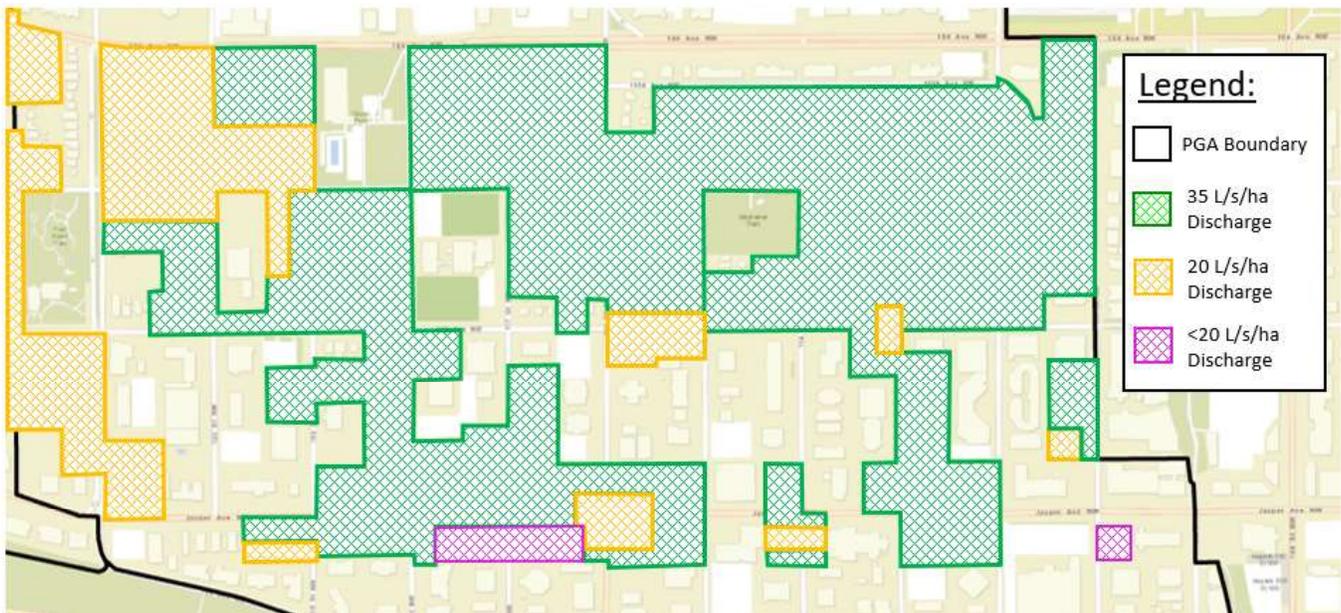
Wastewater:

Dry Weather Flows:

Wastewater servicing in the Centre City-Wîhkwêntôwin PGA is provided mostly by combined sanitary system and small sections of separate sanitary system. No issues are identified for the peak dry weather flow condition.

Wet Weather Flows:

Storm servicing in the City Centre - Wîhkwêntôwin PGA is through a network of combined sewers with some local sewer separation. Generally, the hydraulic model of the sewer system indicates that capacity constraints are local in nature and located at the upstream end of the system (individual pipes as opposed to the system backing up). Based on the current level of service in the City Centre - Wîhkwêntôwin PGA, development can be supported with on-site stormwater management restrictions, which will be dictated by the size and scope of the development. These restrictions may include stormwater storage and regulated discharge into the public system, and/or the incorporation of low impact development (LID) into the site design. In general, on-site storage to the standard 35 L/s/ha that is regularly used for multi-family and commercial developments will improve the level of service that is currently provided. Locations indicated in green on the map above can be developed to this standard without any impact to the system. In some areas of the PGA more stringent on-site storage requirements (such as regulating discharge to a < 35 L/s/ha discharge rate or additional LID) may be assigned on a development-by-development basis. Locations shown in orange on the map below can be developed with on-site storage with a discharge controlled to 20 L/s/ha without impact to the system. In some areas, further on lot control may be required (< 20 L/s/ha). These locations are indicated on the map below.



Once particular projects are proposed for the City Centre - Wihkwentôwin PGA, EPCOR can do a more detailed investigation into priority areas to determine site servicing requirements.

Sanitary and Storm Network Upgrades:

The following table provides high level cost estimates (planning only), for design and construction of sanitary and storm pipes. Sewer upgrades or off-site sewer construction may be required to support storm servicing for developments allowed under the proposed zones. These considerations are more likely to be required in areas identified as requiring less than a 20 L/s/ha stormwater discharge rate. Details of any required sewer construction would be reviewed at the Development Permit stage.

Mainline Pipe Install Cost \$/m				
Pipe Diameter	Pipe Depth 3 - 5 m		Pipe Depth 5 - 7 m	
	Pipe Length (< 10 m)	Pipe Length (>=10m)	Pipe Length (< 10 m)	Pipe Length (>=10m)
200-350 mm	\$6200/m	\$3700/m	\$ 9200/m	\$7200/m
375 mm	\$6750/m	\$4000/m	\$ 9750/m	\$7500/m
450 mm	\$7500/m	\$4400/m	\$10000/m	\$7900/m
525 mm	\$8200/m	\$4800/m	\$10200/m	\$8300/m
600 mm	\$9100/m	\$5300/m	\$10500/m	\$8500/m
CB Lead Install Cost \$/m				
Pipe Diameter	Pipe Length (< 10 m)	Pipe Length (>=10m)		
200-375 mm	\$3100/m	\$2500/m		
MH Install (Cost \$/m)	\$7500/m	Vertical Depth		
CB Install (Cost \$/m)	\$5500/m			

EPCOR Water Services has provided this document as a way to support the Housing Accelerator Fund (HAF) with high-level capacity assessments for the requested Priority Growth Area (PGA). These outcomes shall be used for information purposes only. Specific development plans can be submitted to boundaryconditions@epcor.com for detailed assessment.

If you have any questions or concerns, please contact the below.

Sincerely,

Filip Dundur

Filip Dundur, P.Eng.

Manager, Water Pipe Strategies

EPCOR Water Services - One Water Planning





DATE: March 11, 2025

TO: Urban Planning and Economy, City of Edmonton

FROM: One Water Planning, EPCOR Water Services

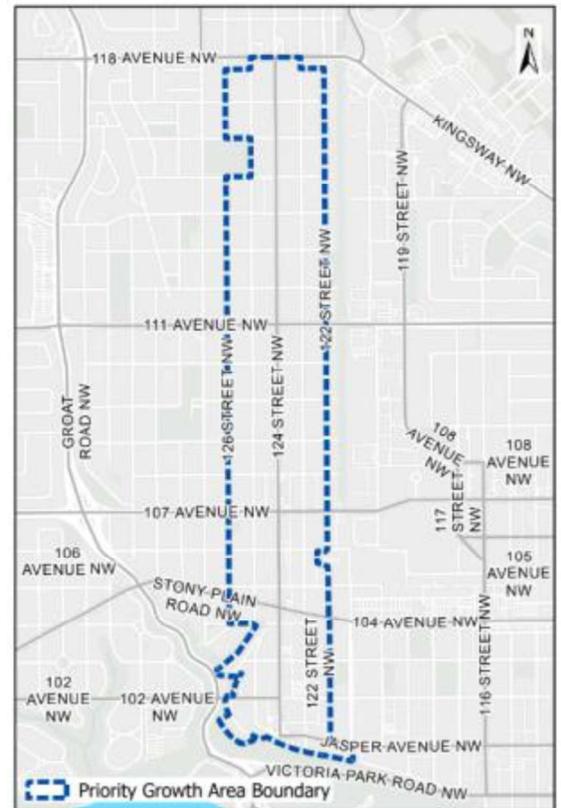
SUBJECT: Priority Growth Area Rezoning – 124 Street Corridor PGA

Overview:

The below was provided by the Urban Planning and Economy team at the City of Edmonton regarding the 124 Street Corridor PGA:

The City Plan identifies the 124 Street PGA as a Primary Corridor and anticipates an additional 500 units will be added by the time the City reaches a population of 1.25 million. 124 Street has become an important hub for the City characterized by local restaurants, art galleries, boutiques and services. It also serves as a significant destination for markets, events and celebrations to bring people together from across the City to experience the area. The 2019 population for this PGA was 7,448 residents with a density of 100 people per net residential hectare (ha) compared to the City Plan desired density of 150 people and jobs per ha. As of 2023, there were 80 dwelling units per net residential hectare. Mid rise with some high rise is required to achieve this density. The PGA has a designated activation approach of Nurture to 1.25 million.

One Water Planning is providing the below high-level assessment of the water, wastewater and stormwater systems that support development in this priority growth area. All outcomes are accurate based on the information available at the date identified above.



In parallel to the City’s PGA initiative, EPCOR is undertaking a number of ongoing initiatives, primarily related to the implementation of the various water cycle integrated resource plans which will have an impact on the results assessed herein. Examples of these initiatives include: ongoing efficiencies gained in water consumption and sanitary generation, inflow and infiltration mitigation (maintenance hole and pipe sealing), low impact development and dry pond installation), among others. Additionally ongoing City of Edmonton capital projects such as the Valley Line West LRT may have an impact on future site servicing.

These assessments represent a “snapshot in time” site specific information will need to be re-assessed at detailed development stages to confirm results. EPCOR recommends that developers reach out to EPCOR early in the development process to discuss specific site servicing requirements (boundaryconditions@epcor.com and wass.drainage@epcor.com).

Water:

Domestic Water Supply:

There are no limitations for domestic water supply in the 124 Street PGA corridor. Customers can coordinate new service connections from: [Service Connections | EPCOR Edmonton](#)

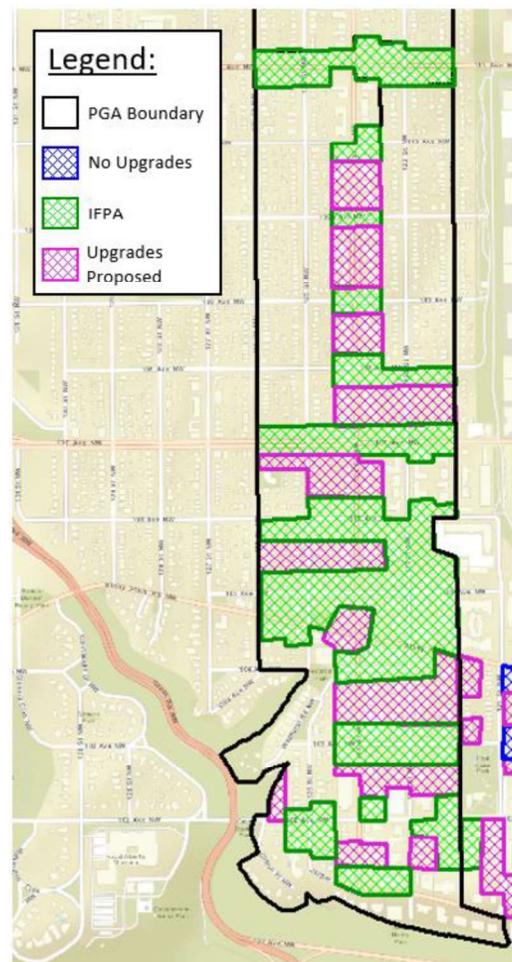
Fire Protection:

The water network is assessed for fire protection in the 124 Street PGA corridor and results for the rezoning focus areas are grouped as per the following:

- **No Upgrades:** Water network capacity is greater than or equal to 300 L/s and hydrant spacing is reasonably close to 90m.
- **Infill Fire Protection Assessment (IFPA):** Water network capacity is greater than or equal to 200 L/s and water mains are available to meet hydrant spacing requirements. This assumes the existing IFPA process and the Infill Fire Protection Program (IFPP) will adequately support development.
- **Upgrades Proposed:** Water network capacity is less than 200 L/s and/or water mains are not available to meet hydrant spacing requirements. Improvements can be focused on these areas to provide additional fire protection to support more diverse development.

The 124 Street PGA corridor has water infrastructure within alleyways limiting hydrant spacing along building frontage. Proactive investment in water infrastructure where water infrastructure is not available on street frontage will improve fire protection for future development.

In addition to the above, EPCOR provides hydraulic model outputs of Water Network Capacity to City of Edmonton Open Data in 200mx200m hexagons to support the infill development community. This information can be found here: [Map View: Average Water Network Capacity by Hexagon Area | Edmonton - Open Data Portal](#)



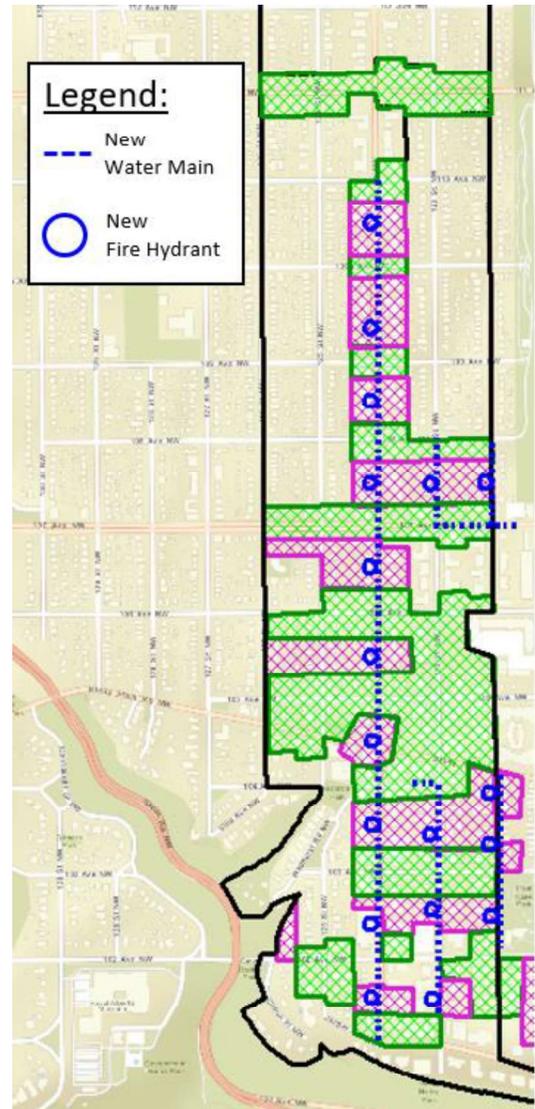
Water Network Upgrades:

Prior to considering water network improvements, assessment of the site-specific development is recommended to ensure existing infrastructure is insufficient to support the development.

The figure to the right shows water main alignment and hydrant locations for consideration in areas where existing fire protection can be improved.

Cost estimates for water main improvements can range from \$3200 to \$4900/m depending on required levels of road restoration. A hydrant installation may cost ~\$30,000/hydrant.

The cost(s) above are based on 2024 projects and are only suitable for high-level planning.



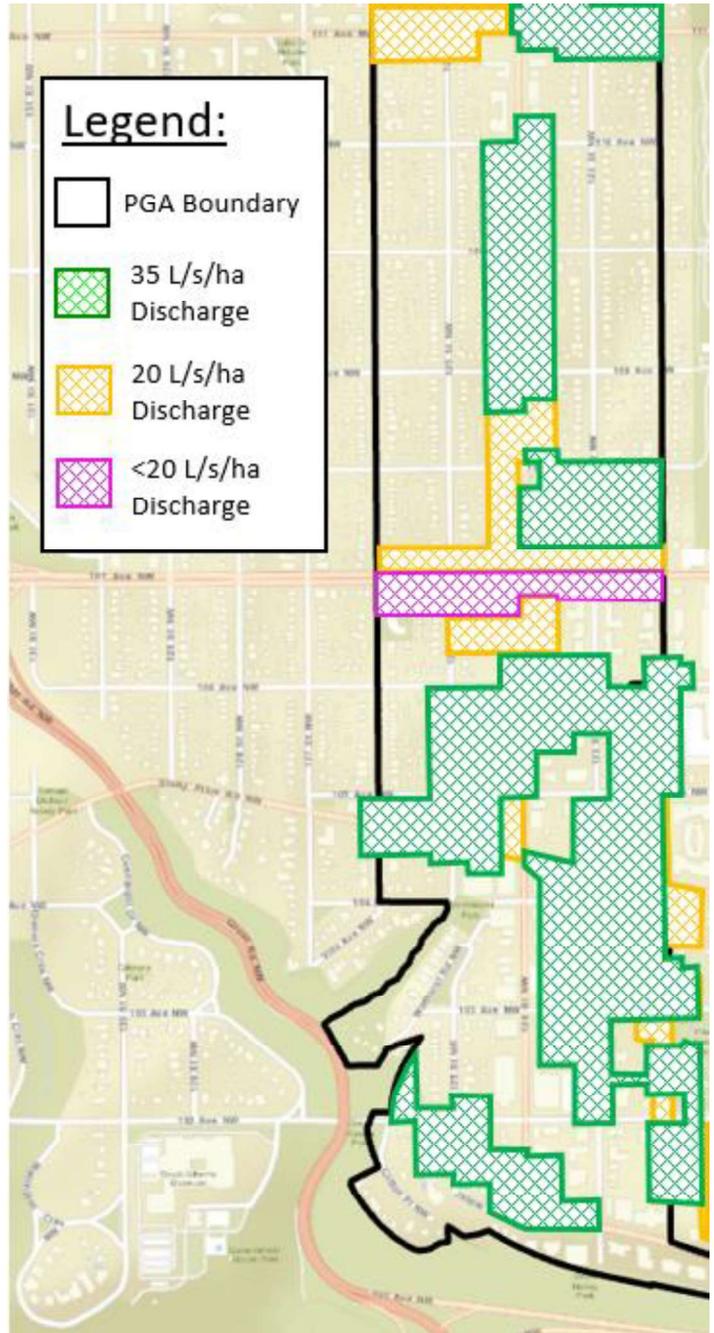
Wastewater:

Dry Weather Flows:

Wastewater servicing in the 124 Street Corridor PGA is provided by both separate sanitary and combined sewer systems. No issues are identified for the peak dry weather flow condition.

Wet Weather Flows:

Storm servicing in the 124 Street PGA is primarily through a network of storm sewers and some combined sewers. Generally, the hydraulic model of the sewer system indicates that capacity constraints are local in nature and located at the upstream end of the system (individual pipes as opposed to the system backing up). Based on the current level of service in the 124 Street PGA, development can be supported with on-site stormwater management restrictions, which will be dictated by the size and scope of the development. These restrictions may include stormwater storage and regulated discharge into the public system, and/or the incorporation of low impact development (LID) into the site design. In general, on-site storage to the standard 35 L/s/ha that is regularly used for multi-family and commercial developments will improve the level of service that is currently provided. Locations indicated in green on the map to the right can be developed to this standard without impact to the system. In some areas of the PGA more stringent on-site storage requirements (such as regulating discharge to a < 35 L/s/ha discharge rate or additional LID) may be assigned on a development-by-development basis. Locations shown in orange on the map on the right can be developed with on-site storage with a discharge controlled to 20 L/s/ha without impact to the system. In some areas, further on lot control may be required (< 20 L/s/ha). These locations are indicated on the map to the right.



Once particular projects are proposed for the 124 Street PGA, EPCOR can do a more detailed investigation into priority areas to determine site servicing requirements.

Sanitary and Storm Network Upgrades:

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