

# ENVIRONMENTAL ASSESSMENT WORKSHEET

Project: Rush Hollow  
Location: City of Maple Grove, MN

April 5, 2022

## Table of Contents

- 1. Project title: *Rush Hollow* ..... 3
- 2. Proposer: Pulte Homes of Minnesota, LLC ..... 3
- 3. RGU: City of Maple Grove ..... 3
- 4. Reason for EAW Preparation: (check one): ..... 3
- 5. Project Location: ..... 4
- 6. Project Description: ..... [45](#)
  - Table 1: Rush Hollow Project Existing Parcel Areas** ..... [56](#)
  - Table 2: Rush Hollow Development Summary Yield and Description** ..... [67](#)
  - Table 3: Anticipated Project Schedule Summary** ..... 9
  - Table 4: Project Magnitude** ..... 9
- 7. Cover types: ..... [1041](#)
  - Table 5: Cover Type** ..... [1041](#)
- 8. Permits and approvals required: ..... [1044](#)
  - Table 6: Required Permits and Status** ..... 11
- 9. Land use: ..... 12
  - Table 7: Rush Hollows Parcel Zoning** ..... [1345](#)
- 10. Geology, soils and topography/land forms: ..... [1416](#)
  - Table 8: NRCS Soil Classifications; Rush Hollow Project Parcels** ..... [1517](#)
- 11. Water resources: ..... [1648](#)
  - Table 9: PWI in Proximity to Project** ..... [1649](#)

<b>Table 10: Estimated Sanitary Sewer Flow Rates (SAC)</b> .....	<b><u>1920</u></b>
<b>Table 11: Estimated Water Supply – GPD</b> .....	<b><u>2223</u></b>
12. Contamination/Hazardous Materials/Wastes: .....	<u>2325</u>
<b>Table 12: Estimated Municipal Waste</b> .....	<b><u>2425</u></b>
13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features): .....	<u>2527</u>
<b>Table 13: NHIS Rare Species or Significant Natural Features within ~1 Mile of Project Area ....</b>	<b><u>2628</u></b>
14. Historic properties:.....	<u>2931</u>
15. Visual:.....	<u>2932</u>
16. Air: .....	<u>2932</u>
17. Noise .....	<u>3033</u>
18. Transportation .....	<u>3134</u>
20. Other potential environmental effects: .....	<u>3537</u>
RGU CERTIFICATION. ....	<u>3537</u>

Attachments

Appendix A: Figures

- Figure 1: Project Location in Hennepin County
- Figure 2: USGS Topography Location Map
- Figure 3: Project Parcels
- Figure 4: Existing Conditions
- Figure 5: City of Maple Grove Master Plan Concepts
- Figure 6: Concept Sketch Plan
- Figure 7: Existing Land Use/Future Land Use
- Figure 8: NCRS Soil Classifications Map
- Figure 9a and 9b: Wetland Delineation
- Figure 10: Well Site Locations (MDH)
- Figure 11: MPCA “What’s in my Neighborhood?” Map
- Figure 12: Minnesota Land Cover Classification System

Appendix B: Agency Correspondence

Appendix C: Traffic Impact Study (TIS)

# Environmental Assessment Worksheet

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at:

**Cumulative potential effects** can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

**Note to reviewers:** Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

- 1. Project title** Rush Hollow
  
- 2. Proposer** Pulte Homes of Minnesota, LLC  
  
Contact person: Paul Heuer  
Title: Director of Land Planning and Entitlement  
Pulte Homes of Minnesota, LLC ("Pulte")  
Address: 7500 Flying Cloud Drive, Suite 670  
City, State, ZIP: Eden Prairie, MN 55344  
Phone: 952.229.0722  
Fax: N/A  
Email: paul.heuer@pultegroup.com
  
- 3. RGU**  
Contact person: Joe Hogeboom  
Title: Director of Community and Economic Development  
City of Maple Grove  
Address: 12800 Arbor Lakes Parkway North  
City, State, ZIP: Maple Grove, MN 55369  
Phone: 763.494.6040  
Fax: N/A  
Email: communitydevelopment@maplegrovern.gov
  
- 4. Reason for EAW Preparation (check one)**

<u>Required:</u>	<u>Discretionary:</u>
<input type="checkbox"/> EIS Scoping	<input type="checkbox"/> Citizen petition
<input checked="" type="checkbox"/> Mandatory EAW	<input type="checkbox"/> RGU discretion
	<input type="checkbox"/> Proposer initiated

*If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):*  
EAW, Minnesota Rules 4410.4300, Subp. 19. Residential Development.

## 5. Project Location

County: Hennepin County

City/Township: City of Maple Grove

PLS Location (1/4, 1/4, Section, Township, Range): (NE, 4, 119, 22), (NE, SE, 4, 119, 22)

GPS Coordinates: 45.146313, -93.466557

Watershed (81 major watershed scale): Elm Creek Watershed

Tax Parcel Numbers: See below

The Project comprises four existing parcels that will be platted and subdivided for development. Existing Parcels and addresses are provided below. Figures 1 and 2 locate the Project within Hennepin County and on a USGS topography map. Figure 3 illustrates the Project Area's existing surveyed parcels and identifies parcels within the development Project Area. Figure 4 shows the existing conditions of the Project Area. All Figures are found in Appendix A.

### **Parcel 1:**

*PID:* 0411922120003

*Existing address:* 15024 Territorial Road

### **Parcel 2:**

*PID:* 0411922140004

*Existing address:* 14300 Territorial Road

### **Parcel 3:**

*PID:* 0411922410001

*Existing address:* 14301 Territorial Road

### **Parcel 4:**

*PID:* 0411922420009

*Existing address:* 14768 Territorial Road

### ***Attachments:***

Three appendices are attached that support the information and analysis contained in the following Items of this EAW.

Appendix A: Figures

Appendix B: Agency Correspondence

Appendix C: Traffic Impact Study (TIS)

## 6. Project Description

- a. *Provide the brief project summary to be published in the EQB Monitor, (approximately 50 words).*

The Project is a new neighborhood in Maple Grove that is planned for a mix of market rate single-family attached and detached homes, senior living opportunities, parks and open space. Located adjacent and west of the Elm Creek Park Reserve on the northern border of the City, the neighborhood will provide up to 243 new detached single-family homes, 230 attached townhomes, and a 110-unit Senior Living building. There will be a network of private open space areas and parks within the neighborhood along with a trail along Rush Creek that is planned as part of the future Rush Creek Regional Trail.

- b. *Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.*

Pulte Homes (“Project Proposer”) is proposing to develop approximately 161-acres of existing agricultural and rural residential land into a new neighborhood, to be called Rush Hollow, in the City of Maple Grove, Minnesota. The Proposed Project (“Project”) will develop the site into a new mixed-residential neighborhood with approximately 243 single-family detached homes, 230-attached townhomes, 110-attached senior living units and a network of private parks and open space. The Project Area is generally bound by the City of Dayton on the north, County Road 81 on the south, Fernbook Lane on the east and Orchid Lane North on the western border. The site includes gently rolling topography, and Rush Creek crosses the northern quarter of the site from east to west. The site is located in an area that Maple Grove has planned for development.

**Project Area Development**

The Project will develop the existing agriculture parcels with a mix of market rate single-family detached homes, attached townhomes, a senior living building, public and private open space, roadways and surface water management ponds. The existing site is generally undeveloped and will require extensive infrastructure improvements to support the Proposed Project. The Project is located on four individual parcels that will be replatted as part of the proposed development. The Parcels contained within the Project Area are identified in Table 1 and the portion/acreage of each Parcel contained within the Project Area are identified.

**Table 1: Rush Hollow Project Existing Parcel Areas**

Parcel	PID	Address	Total Parcel
Parcel 1	0411922120003	15024 Territorial Road	76.4
Parcel 2	0411922140004	14300 Territorial Road	48.7

Parcel 3	0411922410001	14301 Territorial Road	17.9
Parcel 4	0411922420009	14768 Territorial Road	5.1
<b>TOTAL</b>			<b>148.1</b>

\*Acres are based on Hennepin County Parcel Data.

### **Territorial Road Master Plan**

The City is in the process of completing a Master Plan process for this area of the City which is identified as the Territorial Road Master Plan (“Master Plan”) area. The City’s adopted 2040 Comprehensive Plan identifies the Territorial Road Master Plan area for future growth and expansion of the City’s infrastructure and urbanized uses and requires the preparation of a Master Plan prior to any land use or development approval being granted.

The City has completed a draft of the Master Plan and the public and policy-makers have reviewed the initial draft. The draft Master Plan identifies four concepts for potential development within the Area. (Figure 5) The concepts developed are intended to provide a guide for future development, and the City requires all development within the Master Plan area to be consistent with the adopted Master Plan. The City anticipates that the Territorial Road Master Plan will be adopted in April 2022.

### **Concept Plan (Figure 6)**

The Project Proposer’s preferred Concept Plan for the Rush Hollow neighborhood is provided in Figure 6. The Concept Plan is consistent with the concepts prepared in the draft Master Plan. Table 2 provides the development summary of the proposed Project.

**Table 2: Rush Hollow Development Summary Yield and Description**

USE	AREA/LOT SIZE	# OF LOTS/UNITS	DESCRIPTION
Attached Townhome	24'	230 Lots	Multi-level attached townhomes will provide market rate options. The building increments range from three to six attached units.
Single-Family Detached	50', 65', 75', 80'	243 Lots	The single-family detached lots will provide a wide range of options for single-family home buyers. All single-family detached lots are market-rate.
Senior Living Attached	5.15 Ac.	110 units	Attached senior living building. Product and design to be determined.
Ponding/ open space/ wetland	42.4 Ac.	N/A	Open space, ponding and wetland areas are dispersed around the proposed development area.

### **Infrastructure and Project Area Improvements**

The existing parcel area is generally undeveloped and significant infrastructure improvements include roadways, sanitary sewer, water supply and stormwater infrastructure will be constructed to serve the Project. A summary of each is provided:

#### Road Improvements

- The proposed Project will extend Maple Grove Parkway through the southeast quadrant of the site and provide connections to both Territorial Road and Fernbrook Lane.
- The Concept Plan identifies the construction of a roundabout at the Maple Grove Parkway and Territorial Road intersection.
- Territorial Road is planned for realignment, as shown on both the Concept Plan and the Master Plan, but the final alignment will be determined during the land use application process.
- Access and crossing of CSAH-81 as well as improvements to Maple Grove Parkway and Territorial Road will require coordination with Hennepin County given their access jurisdiction.
- New local roads will be installed internal to the development to serve the new homes, and local road right-of-way will be extended to the property borders along the northeast Project Area to allow for extension of the road network into adjacent properties.
- There are approximately 43 single-family lots planned in the northwest quarter of the Project Area that are north of Rush Creek and are not contiguous to the remainder of the development. This enclave of homes will be served by the extension of a local road that will loop through the development area and stub to the north property line to provide future connections (note, properties lying north of the Project are located in the City of Dayton).

#### Sanitary Sewer Improvements

- The Project will be served by the regional sanitary sewer system ~~and is located within the City's estimated 2030-2040 MUSA boundary.~~
- The MCES Elm Creek Interceptor is located in the CSAH-81 right-of-way adjacent to the southern border of the site. To serve the Project development south of Rush Creek, the Project Proposer will be required to install the necessary infrastructure to connect to the system. Improvements will include the installation of a sewer with adequate capacity to serve the new homes.
- The area north of Rush Creek will connect to the existing single-family development directly west of the Project Area. This area connects to an existing lift station that connects south into the MCES Elm Creek Interceptor. Connection into the existing system and capacity of the lift station are adequate to support the Proposed Project.

#### Water Improvements

- The Project will be served by the City's Municipal Water System and extension of the supply into the site is required.
- The City's trunk water main is located in the right-of-way of existing Territorial Road and utilities will be extended into the site.

#### Stormwater Management

- The development will be constructed with curb and gutter, stormwater management ponds and other natural drainage ways.
- The final stormwater plan must demonstrate compliance with all City and watershed rules and regulations.
- ~~A final wetland delineation must be reviewed and approved, and if required, a~~ wetland replacement plan, if applicable, must be approved by the City. All final wetland classifications and buffers must be reviewed and approved by the City and Watershed as part of the land use application process.

#### Small Utilities

- Extension of gas, electric, phone, internet and other small utilities will be extended into the Project Area to serve the new homes. The extension of the small utilities is the responsibility of the Project Proposer

#### **Construction and Timing of Site Development Activities**

The Project site will be mass graded for efficiency due to the extensive required infrastructure improvements. Roadways will be constructed to provide direct access into the Project, which includes the extension of Maple Grove Parkway and the construction of a roundabout. Sanitary sewer and water supply infrastructure will be installed concurrent with road improvements. The Project is planned to be constructed in three phases. The Project Proposer will establish the phasing boundaries through the Preliminary Plat process. Generally, the Project Proposer will develop the site in three phases, and the anticipated activities and schedule are summarized in Table 3.



**Table 3: Anticipated Project Schedule Summary**

Phases	Anticipated Dates	Activity
Phase I	2022	Full site grading including grading of all stormwater management ponds. Site development of Phase I local roads and associated utilities.
City road project	2023	City constructs the southern half of Maple Grove Parkway and all of Territorial Road through the Project.
Phase II	2023	Site development of Phase II local roads and associated utilities.
Phase III	2024	Site development of Phase III local roads and associated utilities.
County road project	Unknown	County constructs the northern half of Maple Grove Parkway.

*Project magnitude:*

**Table 4: Project Magnitude**

Total Project Acreage	162 acres*
Linear project length	N/A
Number and type of residential units	Up to 243 detached single-family homes, 230 attached townhomes, and 110-unit attached senior living building
Commercial building area (in square feet)	N/A
Industrial building area (in square feet)	N/A
Institutional building area (in square feet)	N/A
Other uses – specify (in square feet)	N/A
Structure height(s)	Single-family homes will be one and two stories, and the attached townhomes are anticipated to be two story. The Senior Living Building height is to be determined.

*\*Includes right-of-way easements; GIS records show approximately 140-acres excluding ROW.*

- c. *Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.*

The Project will provide a diverse mix of housing types within the City and will help meet current and future demand for housing as established within the City's 2040 Comprehensive Plan. The project will allow for the development of up to 582 units, allow for the extension and realignment of major roadways, while protecting the important natural resources on the property. The proposed project is consistent with the City's Master Plan that identifies a mix of housing and recreational opportunities near Rush Creek. This project will allow for generous buffers from Rush Creek and will allow for the development of the Rush Creek Regional Trail Corridor through the site.

- d. *Are future stages of this development including development on any other property planned or likely to happen?*  Yes  No

*If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.*

The City's adopted 2040 Comprehensive Plan includes the Future Land Use Plan that guides land for planned or anticipated land uses and development. The Project Area is guided for High, Medium, and Low Density Residential uses on the Future Land Use Plan which is consistent with the Project. Undeveloped properties surrounding the Project Area are required to follow the land use guiding identified on the Future Land Use Plan. As the adjacent properties develop, the City will require the preparation of an EAW for any future phase or project that meets the mandatory thresholds or upon valid petition. This EAW covers the full known Project Area currently planned for development in three phases by the Project Proposer.

- e. *Is this project a subsequent stage of an earlier project?*  Yes  No

*If yes, briefly describe the past development, timeline and any past environmental review.*

N/A

## 7. Cover types

*Estimate the acreage of the site with each of the following cover types before and after development:*

**Table 5: Cover Type**

	Acres Before Development	Acres After Development		Acres Before Development	Acres After Development
<b>Wetlands/Ponding</b>	10.3*	14.6	<b>Agricultural</b>	88.6	0
<b>Wooded/forest</b>	46.7	25.0	<b>Impervious surface</b> (including structures)	12.8	60.1
<b>Parks/Open Space</b>	0	2.8	<b>Manicured Lawn</b>	0	45.6
			<b>TOTAL</b>	<b>148.1**</b>	<b>148.1**</b>

*\*Per National Wetland Inventory*

*\*\*Excluding right-of-way easements*

## 8. Permits and approvals required

*List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

**Table 6: Required Permits and Status**

Units of Government	Type of application	Status
<b>Federal</b>		
US Army Corps of Engineers (USACE)	Section 404 Clean Waters Act – Wetland Permit	To be applied for
<b>State</b>		
Minnesota Pollution Control Agency (MPCA)	National Pollutant Discharge Elimination System (NPDES) Stormwater Construction Permit	To be applied for
	Sanitary Sewer Extension Permit	To be applied for
	Stormwater Pollution Prevention Plan (SWPPP)	
Minnesota Department of Natural Resources	MN Natural Heritage Database Review	Submitted
	Dewatering permit	To be applied for, if needed
Minnesota Department of Health (MDH)	Water main plan review and water supply connection	To be applied for
	Well abandonment	To be applied for
<b>Regional</b>		
Metropolitan Council	Sanitary Sewer Connection Comprehensive Plan Amendment	To be applied for, if needed
<b>Local</b>		
Hennepin County	Road Access Permit for Road Realignment of Territorial Road, Fernbrook Lane and Maple Grove Parkway	To be applied for
City of Maple Grove	PUD Concept Plan, Development Stage Plan, Preliminary Plat, and Comprehensive Plan Amendment	To be applied for, if needed
	Grading Permit	To be applied for
	SWPPP	To be applied for
	Wetland Conservation Act	<u>NOD complete: any other permit <del>to</del> to be applied for</u>
	Demolition Permit	To be applied for

Units of Government	Type of application	Status
	Building Permits	To be applied for
	Sign Permits	To be applied for
	HVAC, Plumbing, Electrical Permits	To be applied for
	Fire sprinkler and alarm permits	To be applied for
Elm Creek Watershed Management Commission	Stormwater permit and Wetland Replacement Plan Review	To be applied for
<b>Other</b>		
NuStar	Road Crossing (permit or other approval) – gas line	To be applied for

*Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19.*

## 9. Land use

### a. Describe:

- i. *Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.*

The Project Area has predominately been used for agriculture, rural residential and natural areas for the past several decades. The City of Maple Grove's Existing Land Use map in the 2040 Comprehensive Plan shows the area as undeveloped land. (Figure 7) Surrounding the site is a mix of residential uses, vacant land, and the Elm Creek Park Reserve that borders the site east of Fernbrook Lane. Bordering a small area on the west of the site is the Rush Creek Cemetery and a residential development. North of the site is vacant land and a residential development. The north border of the site is the municipal border between the City of Maple Grove and the City of Dayton.

- ii. *Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.*

The 2040 Comprehensive Plan ("2040 Plan") guides the Project Area for Low-Medium Density Residential, Medium Density Residential, and High Density Residential uses (See Figure 7). The

2040 Plan identifies the Project Area ~~for MUSA expansion with estimated staging between 2030 and 2040, or earlier if as a future development area once a developer initiated and a Master Plan process is has been~~ completed. The ultimate sanitary sewer and water supply 2040 Plan components assume the development of the Project Area with residential uses and have accounted for the unit increase to the systems. As previously stated, the City is in the final stages of completing the Territorial Road Master Plan which encompasses the subject Project. The Master Plan is intended to provide direction to any developer within the Master Plan area regarding land uses, road connections and infrastructure, and guidance regarding open spaces, parks and natural resources protection.

The Master Plan includes four Concept Plans, and the Proposed Project is generally consistent with the Concepts developed as part of the process (See Figure 5). The Concept Plans guides a mix of residential densities for the subject property including low, medium and high density land uses and concentrates medium and high density uses in the southeast quadrant of the site. The Proposed Project identifies high density uses near the CSAH-81 and Maple Grove Parkway extension and the attached townhome product east of the Maple Grove Parkway extension, which is generally consistent with the Master Plan Concept 1.

Three Rivers Park District is planning for a regional trail corridor to run within the Rush Creek corridor. A conceptual Regional Trail alignment is shown on Figure 6: Concept Plan, and generally runs south of Rush Creek. As shown, on the far west side of the Project Area, the trail will enter the property north of Rush Creek for approximately 300-feet before crossing the creek and then running south of Rush Creek for the remainder of the Project site. This alignment is consistent with the Three Rivers Park District regional trail plan and is designed to connect with the adjacent trail corridor. However, the final trail alignment will be determined in the future.

- iii. *Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.*

The Project Area is currently zoned Rural Single-family Residential (R-A) and must be rezoned to accommodate the Proposed Project. Table 7 identifies the proposed Zoning. The applicable overlay zoning standards will remain applicable with rezoning.

**Table 7: Rush Hollow Project Parcel Zoning**

Parcel	Current Zoning	Overlay?	Proposed Use for Rezoning Consideration
Parcel 1	R-A (Rural Single-Family Residential)	Floodplain, Shoreland	PUD
Parcel 2	R-A (Rural Single-Family Residential)	None	PUD
Parcel 3	R-A (Rural Single-Family Residential)	None	PUD
Parcel 4	R-A (Rural Single-Family Residential)	None	PUD

- b. *Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.*

The Project includes a mix of attached and detached single-family market rate uses, a senior living building and a network of open spaces and parks with connections to the planned Rush Creek Regional Trail. As designed, the Project is consistent with adjacent land uses which include single-family uses and protected parks and open spaces. ~~The Proposed Project will require a Comprehensive Plan Amendment to accelerate the MUSA staging period since the property was initially guided for development between 2030 and 2040.~~ The draft Master Plan reinforces the 2040 Plan's mix of residential land uses, provides further direction regarding road extension and realignments on the site, and identifies parks, open space and natural resource areas. As shown on the Concept Plan (Figure 6), the Proposed Project includes: the guided mix of residential uses; provides for the realignment of Territorial Road and the extension of Maple Grove Parkway; includes connection of local roadways to adjacent sites to provide a more complete road network; and protects the Rush Creek Corridor and surrounding natural area in the corridor. The Three Rivers Park District Rush Creek Regional Trail Plan identifies the location of the trail through the site, and the Concept includes the preferred alignment. The Proposed Project is consistent with the 2040 Plan, the draft Master Plan Concepts, and the Three Rivers Park District Regional Trail Plan for the Rush Creek alignment.

- c. *Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.*

The Project is consistent with the plans identified and discussed in 9b.

## 10. **Geology, soils and topography/land forms**

- a. *Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.*

A Preliminary Geotechnical Evaluation Report<sup>1</sup> was prepared by the Project Proposer for the Project Area. The Project Area is generally flat to hilly. A significant portion of the site slopes downward to Rush Creek. The Project Area was previously used for agricultural purposes and contains several depressional areas.

The subsurface exploration included 23 test boring locations that were identified across the extents of the Project Area. Topsoil was found across the entire Project Area and the thickness of the topsoil ranged from ½ foot to 4 feet. Under the topsoil is primarily silts, sands, and clays. The borings did not encounter any bedrock.

---

<sup>3</sup> Geotechnical Report was prepared by Braun Intertec dated February 11, 2021

Groundwater was encountered between 5-20 feet below the surface in nine of the test borings and was not encountered within the depth of the test borings at 14 locations. Perched water within soil layers or less permeable silts or clay should be anticipated during construction. Dewatering may be required during construction. Seasonal and annual fluctuations in the groundwater level should be expected. There are no known active karst locations located on or near the property.

- b. *Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.*

Table 8 identifies soils found at the Project Area, as determined by the NRCS web soil survey. The site is relatively flat with some areas of rolling/hilly topography near Rush Creek. As shown on Figure 8: NRCS Soil Classification the area mapped as Angus loam, 2 to 6 percent slopes (L37B) is the predominate soil on the site.

**Table 8: NRCS Soil Classifications; Dunes Project Parcels**

Soil Classification	Name	Acres	% of Total Project Area
L19B	Moon loamy fine sand, 2 to 5 percent slopes	2.8	1.9%
L22C2	Lester loam, 6 to 10 percent slopes, moderately eroded	1.2	0.8%
L22E	Lester loam, 10 to 22 percent slopes	7.4	5.0%
L22F	Lester loam, morainic, 25 to 35 percent slopes	1.4	0.9%
L23A	Cordova loam, 0 to 2 percent slopes	34.9	23.6%
L24A	Glencoe clay loam, 0 to 1 percent slopes	4.0	2.7%
L27A	Suckercreek loam, 0 to 2 percent slopes, frequently flooded	18.1	12.3%
L37B	Angus loam, 2 to 6 percent slopes	39.7	26.8%
L40B	Angus-Kilkenny complex, 2 to 6 percent slopes	3.0	2.0%
L44A	Nessel loam, 1 to 3 percent slopes	21.5	14.5%
L45A	Dundas-Cordova complex, 0 to 3 percent slopes	14.0	9.5%
<b>Total Area of Interest (AOI)</b>		<b>148.0</b>	<b>100.00%</b>

As described in the Preliminary Geotechnical Evaluation Report, the Project Area will need typical subgrade preparation including removal of existing vegetation, topsoil or organic soils and any soft/very loose soils identified as part of the subsurface exploration and evaluation. During the site work, Best Management Practices (BMPs) will be used as specified within the Stormwater Pollution Prevention Plan (SWPPP) that will be developed as a required condition of the NPDES permit. At this time, it is unknown how much soil

correction will be required as part of the construction process, but it is anticipated that earthwork will balance.

*NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 11 must be consistent with the geology, soils and topography/land forms and potential effects described in EAW Item 10.*

## 11. Water resources

- a. *Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.*
- i. *Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the Project. Include DNR Public Waters Inventory number(s), if any.*

Within a mile of the Project Area there are 16 Public Waterbodies. The associated PWI numbers and names (if applicable) are provided in the table below:

**Table 9: PWI in Proximity to Project**

Public Water Name	Type	303d Impaired Waters	PWI Number(s)
Rush Creek	Public Watercourse	Impaired	M-062-004
Elm Creek	Public Watercourse	Impaired	M-062-
Mud Lake	Public Water Basin		27-112P
Powers Lake	Public Water Basin		27-130P
Rice – Outlet Bay	Public Water Basin		27-116P
Unnamed	Public Water Basin		27-246P
Unnamed	Public Water Basin		27-264P
Unnamed	Public Water Wetland		27-244W
Unnamed	Public Water Basin		27-245P
Unnamed	Public Water Wetland		27-273W
Unnamed	Public Water Wetland		27-274W
Unnamed	Public Water Wetland		27-265W
Unnamed	Public Water Basin		27-263P
Unnamed	Public Water Wetland		27-243W
Unnamed	Public Water Wetland		27-266W



Unnamed	Public Water Wetland		27-269W
---------	-------------------------	--	---------

As shown on Table 9, there are two impaired waters on, or within proximity to the site. Rush Creek runs through the north portion of the site and is impaired for dissolved oxygen, E. coli and biologically impaired for fisheries and invertebrates. Elm Creek is not on the site but is within 1-mile of the site and is impaired for benthic macroinvertebrates bioassessments, chloride, dissolved oxygen, fish bioassessments, and Escherichia coli. As described in subsection b.ii. of this item, the Project will be required to prepare a SWPPP. The SWPPP must include all additional stormwater Best Management Practices (BMPs) for discharges to impaired waters since the runoff from the Project Area ultimately drains to an impaired water. To ensure protection of the receiving water and to meet the City's ordinance requirements, the stormwater management plan will be developed to meet standards for rate control, water quantity, and water quality.

The City has a variety of chloride management practices in place, including, but not limited to the following:

- Pre-treat collectors and arterial roadways with brine, which uses less salt and allows ice and snow to separate from the pavement. This result in greater quantities of snow being plowed and removed rather than melting due to salt applications.
- The City uses treated salt for temperatures less than 15-degrees which is more expensive but is more efficient, since regular salt is not effective when the temperature is below 15-degrees.
- All trucks are equipped with spill shields.
- The truck gauges used to measure salt usage are calibrated on an annual basis. All trucks are tracked using GPS so that the City has an accurate record of how much salt is used per lane mile and can calibrate the equipment to minimize use.
- All City operations are Level 1 Smart Salt certified.

A wetland delineation report for the area south of Rush Creek was prepared February 23, 2022, and the site inspection was completed on May 26, 2021<sup>2</sup>. The report identifies nine (9) delineated wetlands with the site boundary south of Rush Creek, and ~~at the~~ Notice of Decision (NOD) ~~has not been issued for the wetlands in this area~~ ~~was issued on March 25, 2022~~. A wetland delineation for the area north of Rush Creek was prepared on April 23, 2021 and a Notice of Decision (NOD) was issued on May 28, 2021. None of the identified wetlands are public waters, and only Rush Creek is identified as a public watercourse.

**Table 10. Wetland on Project Site (See Figure 9a and 9b: Wetland Delineation)**

Wetland ID	Classification	Acres in Project Area
<i>South of Rush Creek</i>		
Wetland 1	Type 1, PEM1Af	0.07
Wetland 2	Type 1, PEM1C/PEM1Af	0.23
Wetland 3	Type 1, PEM1Af	0.12

<sup>2</sup> The Wetland Delineation Report, and corresponding replacement permits, are subject to the review and approval of the City of Maple Grove. The Wetland Delineation Reports are available on the City's website.

Wetland 4	Type 1, PEM1Af/Af	0.58
Wetland 5	Type 1, PEM1Af	0.08
Wetland 6	Type 1, PEM1Af/Af	0.09
Wetland 7	Type 1, PEM1Afd	0.22
Wetland 8	Type 1, PEM1Afd	0.45
Wetland 9	Type 1, PEM1Afd	1.28
<i>North of Rush Creek</i>		
Wetland 1	Type 1, PEMA	0.09
Wetland 2	Type 1, PEMA	0.12
Wetland 3	Type 1, PEMA/PSS1A	0.31
Wetland 4	Type 1/PEMA	0.02
<b>Total Acres</b>		<b>3.66</b>

The Proposed Project is anticipated to impact wetlands on site and will be required to obtain all necessary approvals for wetland impact and replacement.

- ii. *Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.*

The Project site is not located within a wellhead protection area. Review of the Minnesota Department of Health Well Index there are three existing wells on site (See Figure 10). No new groundwater wells are planned for the Proposed Project and water will be supplied to the development from the municipal water system. As part of the site development process the three onsite wells will be properly abandoned and sealed following MDH guidelines. If any other undocumented wells are found during site construction activities, they will also be sealed and abandoned following all MDH guidelines. All well sealing activities will be properly documented and appropriate notification to the MDH will be provided for public record.

- b. *Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.*

- i. *Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.*
- 1) *If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.*

The City's Wastewater is conveyed by the City sewer system which is connected to the Metropolitan Council Environmental Services (MCES) interceptor. The 42" Elm Creek Interceptor is adjacent to the site in the right-of-way of CSAH-81, and the Project Area will

connect into the system. The wastewater in the Elm Creek Interceptor is transported to the MCES Metropolitan Wastewater Treatment Plant (Metro Plant) which is located in Saint Paul. The Metro Plant has a designed treatment capacity of 251 million gallons of wastewater per day and is the largest treatment plant in the state. The Proposed Project will produce wastewater that is typical of residential development. The estimated increase in wastewater flow was calculated utilizing the Sewer Availability Charge Procedure Manual 2019, Metropolitan Council Environmental Services. The following table provides estimated flows based upon the Concept Sketch Plan attached in Figure 6.

**Table 11: Estimated Sanitary Sewer Flow Rates (SAC)**

Land Use	Household (HH)/Units	Rate (Gallons per Day)	SAC Units	Total Gallons per Day (gpd)
Single-Family Detached Homes	243 HH	274	1 SAC per HH	66,582
Attached Townhomes	230 HH	274	1 SAC per HH	63,020
Senior Living Building	110 Units	274	1 SAC per Unit	30,140
<b>Total Maximum</b>				<b>159,742 GPD</b>

The wastewater generated from the Project will not need to be pretreated prior to entering the system and will be conveyed by a gravity sanitary sewer system to the Metropolitan Council's Interceptor trunk line where it will eventually be discharged to the Metro Plant. The wastewater flows from the development of the Project have been accounted for in the Metropolitan Council's long-term trunk sewer and treatment plant capacities.

- 2) *If the wastewater discharge is to a subsurface sewage treatment system (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.*

There are no SSTS proposed as part of the Project. Any existing SSTS on site will be properly abandoned and removed as part of the site development process.

- 3) *If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.*

The Project will not discharge wastewater to a surface water body.

- ii. *Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control,*

*sedimentation control or stabilization measures to address soil limitations during and after project construction.*

### **Existing Conditions**

The existing conditions and uses on the Project Area include agricultural land and single-family rural residential. Currently there is no onsite stormwater management. Agricultural uses typically include irrigation and apply fertilizers that commonly include nitrogen, phosphorus and potassium. In storm events where runoff exceeds infiltration capacity, runoff likely enters the wetlands on site, ditches, existing natural depressions and Rush Creek. The topography on the site is sloped from an elevation of 940 ft MSL in the north and central portion of the site to a low of 882 ft MSL along the edge of Rush Creek. The topography of the site naturally slopes towards Rush Creek and other depressional areas on site.

### **Post Construction Conditions**

The Proposed Project will increase the amount of impervious surface on the site through development of the homes, sidewalks and roadways. The development of the site will include the construction of stormwater management facilities including curb and gutter, catch basins, collection systems, stormwater ponds and other facilities to meet all applicable rules of the City of Maple Grove and the Elm Creek Watershed Management Commission (Watershed). The Stormwater Management facilities are generally shown on Figure 6: Concept Plan. The full details of the stormwater plan and associated improvements will be developed and approved as part of the land use application and entitlement process.

The stormwater requirements for the Proposed Project will follow the Elm Creek Watershed Management Commission rules and regulations. The Watershed stormwater rate and volume control standards require that new post development conditions not exceed the existing runoff rates for the 2-, 10-, or 100-year 24-hour storm events, the capacity of downstream conveyance facilities, or contribute to flooding. An impervious surface runoff of 1.1 inches must be abstracted on site by methods such as infiltration (within 48 hours), evaporation, transpiration by vegetation, or capture and reuse. Compensating storage is required to mitigate any fill in the 100-year floodplain. The Watershed further requires that no net increase in total phosphorus (TP) or total suspended solids (TSS) be generated from pre-development land cover to post-development land cover. As part of the land use application process the Project Proposer will be required to submit the appropriate permit applications to the Watershed and obtain all approvals prior to the commencement of any site work.

Given the proximity of the Proposed Project to Rush Creek and the presence of wetlands, additional standards of both the City and Watershed are applicable. The City is in the process of updating its Wetland Ordinance and the changes are anticipated to be effective at the time of preliminary plat for the Proposed Project. The following Table identifies the proposed buffer widths from wetlands and creeks in the City.

### **Table 12: Proposed Buffer Widths**

MNRAM Classification	Maple Grove Classification	Minimum Buffer Width	Average Buffer Width
Preserve	Protect	25'	40'
Manage 1	Manage Preserve	20'	30'
Manage 2	Manage Flexible	20'	30'
Manage 3	Manage Restore	20'	30'
NA	Creeks – Elm, Rush, North Fork Rush, Diamond	25'	50'

The City and Watershed's current regulations require ~~V~~ vegetated buffer strips that average 50-foot wide (minimum 25-foot) adjacent to Rush Creek are required, and. ~~A~~ All wetlands are required to provide an average of a 25-foot wide buffer, with a minimum of 10-foot. Per the City's Wetland Map dated 2018 all wetlands located on the Project site are MNRAM classification Manage 2 or Manage 3. If the new ordinance is applied during the land use application process the standards in Table 12 will be applicable. The final wetland replacement and mitigation plan for wetlands on site will be required to meet the City's -minimum identified requirements, and any other requirements as stipulated within the replacement plan approval.

A SWPPP must be prepared as part of the NPDES Construction Permit required for the Project. The SWPPP will include all additional stormwater Best Management Practices (BMPs) as required above. To ensure protection of the receiving water and to meet the City's ordinance requirements, the stormwater management plan will be developed to meet standards for rate control, quantity and quality as described. During construction, BMPs must be utilized and will include, but are not limited to: bio-rolls as sediment control along swales, silt fence as down gradient perimeter control, rock entrance and berm to prevent off-site vehicle sediment tracking, inlet protection devices to prevent sediment from entering the storm sewer system, wood-fiber blanket to prevent erosion along slopes, proper restoration in accordance with MPCA regulations, and a seed mix as directed by the City. A complete list of BMPs will be described in the SWPPP.

- iii. *Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.*

As noted in Item 11a.ii. there are three wells located on site, and all will be appropriately sealed according to MDH guidelines. The Project will be served by the City's municipal water supply. As

documented in the City's Local Water Supply Plan, the average total gallons per capita demand (GPCD) between 2010 and 2015 is approximate 129 GPCD. Table 12 provides the estimated water supply use based on the unit mix planned for the development.

**Table 13: Estimated Water Supply – GPD**

Use	Households/ Units	Rate (gal/capita/day)	Persons-per- household (SAC equivalent)	GPD (Gallons Per Day)
Single-Family Detached Residential (Market Rate)	243 HH	129	2.35	73,665
Single-Family Attached (Town Homes)	230 HH	129	2.35	69,725
Senior Living Building	110 Units	129	2.0	28,380
<b>Total Maximum</b>				<b>171,770 GPD</b>

As discussed in Item 10, the soil borings indicate that groundwater will likely be encountered during construction particularly as infrastructure and utilities are installed. Temporary dewatering will likely be necessary for some of the Project Area construction activities, but it is unclear to what extent based on the significant variation in depth to groundwater across the Project Area. If it is determined at any time that dewatering during construction is approaching or will exceed the regulatory thresholds, the Project Proposer will be required to obtain all necessary permits.

iv. *Surface Waters*

a) *Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.*

As shown on Table 10, there is approximately 3.66 acres of wetlands in the Project Area. The final Notice of Decision (NOD) regarding the Wetland Delineation Report for the area South of Rush Creek was issued on March 25, 2022 ~~has not been issued for the area south of Rush Creek~~, and the NOD for the area north of Rush Creek was issued on May 21, 2021. As shown on Figure 6: Concept Plan, some impacts to the wetlands on site are anticipated. ~~Since this EAW is prepared during the winter months, the NOD regarding the wetlands south of Rush Creek cannot be obtained until the Spring growing season begins. The NOD for the area south of Rush Creek is anticipated as part of the land use application process, and t~~The NOD for ~~both reports the area north of Rush Creek~~ remains valid for five (5) years from the date of the determination. The Project will be required to comply with all wetland conservation act rules for replacement and mitigation.

Figure 6: Concept Plan also shows extensive stormwater management areas and ponds, several which are located in areas with existing natural depressions. These stormwater features will be graded and revegetated during the site construction process and will become part of the surface water features onsite. Replacement surface water features used as part of the mitigation plan must follow the Watershed's rules and regulations, including required vegetative buffers. The City of Maple Grove is the LGU for the Wetland Conservation Act and the Project Proposer must obtain all necessary permits for proposed wetland impacts prior to the commencement of site work.

- b) *Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.*

As previously noted, Rush Creek crosses the northern quarter of the Project Area. The existing conditions do not include any surface water or stormwater management. All of the planned lots are setback a minimum of 70-feet from the creek, with most setback more than 100-feet from the creek. The construction of stormwater and surface water features will improve the surface water conditions as the facilities are design to treat and manage water onsite before reaching surface water features, including the creek.

## **12. Contamination/Hazardous Materials/Wastes**

- a. *Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or groundwater contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.*

A query of the Minnesota Pollution Control Agency's (MPCA) "What's in my Neighborhood" data search identified one record on the Project site:

- One stormwater site on Parcel 2 on the southwest edge (assumed to be the existing right-of-way, end date identified as March 22, 2022).

All other records are shown on Figure 11: MPCA What's in my neighborhood?

- b. *Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.*

The Project is a residential development and should primarily generate municipal solid waste and household hazardous waste. The Seven-County Waste Coordinating Board estimates municipal solid waste generation of approximately 1.8 pounds per person per day. The following analysis provides a calculation based on the number of units shown on the Concept Sketch Plan.

**Table 14: Estimated Municipal Waste**

Land Use	Concept Sketch Plan	Rate (lbs/per capita/day)	Persons Per Household	Concept Sketch Plan Total (lbs./day)
Single-Family Detached Homes	243 HH	1.8	2.35	1,028
Attached Townhomes	230 HH	1.8	2.0	828
Senior Living Building	110 Units	1.8	2.0	396
<b>TOTAL</b>	<b>583</b>			<b>2,252</b>

The single-family homes will contract individually for solid waste management and are required to contract with one of the City's licensed haulers and are required to participate in recycling services. The homeowners' association for the townhomes will contract collectively for solid waste management and are required to participate in recycling services. Management of the Senior Living building will contract with waste services for the whole building. The Project is consistent with existing neighborhoods and services and will not negatively impact or alter the current system.

- c. *Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.*

As identified within the description, development of the Project and related site work will be required to adhere to all City, NPDES, and other regulatory permits necessary to complete the work. Storage of hazardous materials on the Project Area during construction will be limited to construction vehicles and machinery. This equipment may be left onsite through the duration of construction depending on phasing and activity, as well as temporary storage tanks, such as for diesel fuel or hydraulic fluids. Construction vehicles, as well as associated storage of their fuels, will be required to follow a spill prevention plan, if required. All demolition shall follow proper protocol for storage and disposal of waste as regulated by the MPCA, if applicable, the City, or any other agency.



- d. *Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.*

The Project development process should not create or generate any hazardous waste. During the construction process, compliance with the NPDES permit and the City's ordinances shall be required. The Project Proposer shall follow proper processes and standards for disposal of any toxic or hazardous materials, such as gas, oil, etc., present on the construction site. Once residents are living on the property, generation of household hazardous waste may occur. Hennepin County provides recycling and disposal of hazardous wastes convenient to Maple Grove residents at their drop-off location in Brooklyn Park.

### **13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features)**

- a. *Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.*

The Majority of the Project Area has been used as agricultural production for the past several decades. The remaining acreage of the Project Area has been used for rural residential uses. This acreage is developed with single-family residential uses or farmsteads with agricultural fields.

As shown on Figure 12: Minnesota Land Cover Classification System (MLCCS) the site's coverage is predominantly classified as agricultural land and forest, consistent with the existing land use. Additionally, there are pockets of impervious surface coverage, grassland and wetland shrubs. Plants and wildlife typically found in agricultural settings include small mammals such as rabbits, squirrels, deer, birds, etc.

Adjacent to the easterly border of the Project Area, and across Fernbrook Lane, is the Elm Creek Park Reserve. As shown on Figure 12, the vegetation in the Elm Creek Park Preserve has a distinct and different quality of natural vegetation than the Project Area, and the natural area is separated by a highly traveled right-of-way. The Elm Creek Park Reserve is approximately 4,900 acres and includes a mix of land cover and vegetation that is suitable for wildlife, plant communities and other park uses. Per the Three Rivers Park District information regarding the Elm Creek Park Reserve sightings of eagles, sandhill cranes, deer, bluebirds, beavers, loons trumpeter swans and hawks are common on the property due to the high-quality vegetation and habitat.

Rush Creek runs through the north portion of the Project Area. The Rush Creek corridor has been master planned by the Three Rivers Park District to develop a multi-use trail following the creek. The Minnesota County Biological Survey does not identify any natural communities and rare species in the Project Area.

- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-1025) and/or correspondence number (ERDB #20220044) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

The Natural Heritage Review (NHIS) query identifies rare species or other significant natural features within an approximately one-mile radius of the Project. A request for NHIS review has been submitted, but not provided as of this preparation. The following species and identified habitats were found within an approximately one-mile radius of the Project site, they were provided in a March 9, 2022 memo from Alliant Engineering using NHIS data (license #181676). (Appendix B).

**Table 15: NHIS Rare Species or Significant Natural Features within ~1 Mile of Project Area**

Name	Summary of Suitable Habitat; Conservation/Management Description <sup>3</sup>
Blandings Turtle <i>Emydoidea blandingii</i>	Shallow, slow-moving waters with abundant vegetation, such as grassy marshes, mesic prairies, slow-moving rivers, and shallow lakes and ponds
Acadian Flycatcher <i>Empidonax vireescens</i>	Forested areas on varied terrain, near small wetland openings
Trumpeter Swan <i>Cygnus buccinator</i>	Small ponds and lakes or bays on larger water bodies with extensive beds of emergent vegetation
Big Brown Bat <i>Eptesicus fuscus</i>	<i>Winter habitat:</i> caves and mines, also buildings, cellars, tunnels <i>Summer habitat:</i> forested habitat with trees that are hollow, have crevices, loose bark, and cavities. Can also consist of human structures such as buildings and bridges
Little Brown Bat <i>Myotis lucifugus</i>	<i>Winter habitat:</i> caves and mines, also buildings, cellars, tunnels. <i>Summer habitat:</i> forested habitat with trees that are hollow, have crevices, loose bark, and cavities. Can also consist of human structures such as buildings and bridges
Rusty-patched Bumble bee <i>Bombus affinis</i>	Provide nectar and pollen, rodent cavities and clumps of grass for underground nesting, and an undisturbed soil for overwintering sites

In addition to the species and features identified in Table 15, the US Fish & Wildlife Services (USFWS) Information of Planning and Consultation (IPAC) identifies the Northern Long Eared Bat (NLEB) as a Threatened Species in the vicinity of the Project Area. The NLEB roosts underneath bark, in cavities or in crevices of both live and dead trees. The Project Area is not located within a township containing any documented NLEB maternity roost trees or hibernacula entrances.<sup>4</sup>

Additionally, the USFWS IPAC Identified the potential for the Rusty-patched Bumble Bee within the Project Area. The Monarch Butterfly is listed as a candidate species and is identified as potentially within the Project Area. The Project Area is entirely within a high potential zone of the Rusty-patched Bumble Bee<sup>5</sup>. See description in Table 15 for summary habitat description.

<sup>3</sup> Summary of data from MnDNR. Additional data can be found at <https://www.dnr.state.mn.us/rsg/index.html>

<sup>4</sup> Townships Containing Documented Northern Long-Eared Bat Maternity Roost Trees and/or Hibernacula Entrances in Minnesota. DNR and USFS June 7, 2021.

[https://files.dnr.state.mn.us/eco/ereview/minnesota\\_nleb\\_township\\_list\\_and\\_map.pdf](https://files.dnr.state.mn.us/eco/ereview/minnesota_nleb_township_list_and_map.pdf)

<sup>5</sup> Rusty Patched Bumble Bee Map Available at:

<https://www.fws.gov/midwest/endangered/insects/rpbb/rpbbmap.html>

- c. *Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.*

As described in Table 15, the Blandings Turtle, Acadian Flycatcher, and Trumpeter Swan prefer habitats with shallow wetlands, slow moving waters, and forested areas. The summer habitat of the Big Brown Bat and Little Brown Bat are forested areas with hollowed out trees and other crevices. Given the site conditions, the most desirable habitat is adjacent and around the Rush Creek corridor. As shown on Figure 6: Concept Plan, the Rush Creek corridor and existing vegetation is planned to remain intact and will not be disturbed as a result of the project. Site clearing is anticipated to begin in the Spring with mowing and vegetation disturbance occurring prior to the primary growing season which is prior to the active season for the Rusty-patched bumble bee and Monarch butterfly. Given the anticipated schedule, and the Project Proposer's plan to revegetate portions of the site with native seed mixes there is no long-term adverse impacts to the rusty patched bumble bee anticipated because of the Project

The Project should not introduce any new invasive species to the Project Area during construction. Post construction the Project will include a landscape and planting plan to revegetate the stormwater facilities in the Project Area with native/non-invasive species that are desirable habitat for several of the species and features identified on Table [15]. The Project Proposer will use the BWSR or MnDOT native seed mixes around stormwater features, with specific attention on any feature adjacent to, or within, the Rush Creek corridor.

Construction contractors will be directed to properly manage onsite equipment to ensure development does not spread noxious weeds through construction vehicle traffic. If any invasive species are encountered during the grading/site grubbing process, they will be removed, and proper mitigation implemented to remove them from the Project Area.

- d. *Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.*

The Project Proposer has developed a site plan that protects the Rush Creek corridor and surrounding buffer area. Minimal grading and disturbance is expected within the area. This will provide long-term protection of any sensitive ecological resources that may existing within proximity to Rush Creek.

The MnDNR provides specific guidance regarding the following species during construction and site development activities. The Project Proposer shall comply with the following mitigation plan:

- Products used for erosion control will be selected that have biodegradable netting.
- The Project Proposer will only use weed-free mulch, topsoil, and seed mixes for restoration of the site.
- Stormwater pond areas will be revegetated using native seed mixes (MnDNR or BWSR seed mix are both suitable) to reintroduce habitats supportive of those species identified in Table 15.

The Project Site is identified as an area that may be in the vicinity of the NLEB, and is in the "High Potential Zone" for the Rust Patched Bumble Bee. The following mitigation will be followed based on the findings:

- The site is not located within ¼-mile of a known roosting site of the Northern Long-Eared Bat, therefore no specific mitigation is necessary and there is no anticipated adverse impact.
- Heavy pesticide use is associated with depletion of the Rusty Patch Bumble Bee. Conversion from the agricultural use to a residential use will likely reduce the use of pesticides in the area. The Project Proposer should consider alternative solutions for homeowners' post-construction.
- Native planting around stormwater features on site will introduce plant types that are supportive of the Rusty Patched Bumble Bee and other species identified on Table 15.
- Homeowners will be encouraged to landscape lots using native pollinator-friendly plants that provide additional habitat opportunities on site.

#### **14. Historic properties**

*Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.*

As provided in the attached correspondence dated February 10, 2022 from the Minnesota State Historic Preservation Office, there are two historical structures in the Project Area, the Balvin Farmstead located in the northwest portion of the Project Area and the Martin Farmstead located in the southeast portion of the Project Area. These farmsteads are not listed on any local, state, or national historic registry and are planned to be removed as part of the Proposed Project.

There are three archaeological sites located in the Project Area per the MNSHPO correspondence, which are identified as Meloche I, II and II. Per the records all three records are located near Rush Creek on the westerly parcel.

There are other historical structures and archeological sites in the area but none will be adversely impacted by the Project. (See Appendix B for MNSHPO correspondence).

#### **15. Visual**

*Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.*

The transition of the Project Area from rural residential, agricultural and open space to a residential neighborhood will impact the visual appearance of the site. The Proposed Project is consistent with the 2040 Comprehensive Plan, and therefore the visual impacts are anticipated. There are existing residential neighborhoods near the Project Area that may be impacted by light pollution and construction activities. Site construction is anticipated to occur during daylight hours, and therefore there is no anticipated glare or intense light that will be generated during the site construction process. Post construction, the Project Area will be developed with uses compatible to surrounding suburban development. All proposed lighting associated with the development will be required to follow City regulations for light fixture intensity and design.

#### **16. Air**

- a. *Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment.*

*Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.*

There are no industrial or light industrial users or generators of hazardous air pollutants proposed as part of this Project. Heating and cooling systems will be a source of stationary source air emissions once the residences are occupied on the site. The systems are anticipated to be operated by natural gas and electricity, which will result in direct or indirect sources of stationary greenhouse gas (GHG) emissions. Emissions from heating and cooling units are expected to be similar to other residential developments adjacent and near the site. The Project is not expected to cause potential for significant environmental effects related to GHG emissions and does not cause the Project to qualify for any other mandatory EAW review thresholds. The Proposed Project will not include station source emissions.

- b. *Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.*

The Project will develop a mixed-density residential neighborhood that will generate an increase in carbon monoxide levels due to an increase in passenger vehicle trips to the area beyond the existing agricultural and rural residential use. The Project does not require an indirect source permit. No baseline air quality monitoring or modeling is proposed and no measures to mitigate for the increase in vehicle related emissions are being considered.

- c. *Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.*

Limited dust and odors consistent with the development of a residential project will be generated during the construction process on the Project Area. Construction BMPs will be used throughout the construction process. BMPs such as controlling dust by using watering trucks or other methods as agreed to with the City to protect adjacent neighborhoods will be implemented. The adjacent residential neighborhoods are the nearest receptors of the dust and odors, which should be monitored throughout the construction process by the Project Proposer.

## **17. Noise**

*Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.*

During construction of the Project there will be additional noise generated beyond existing conditions. The existing area is primarily developed with residential and agricultural uses that generate typical noise levels associated with these land uses. The nearest noise receptors to the Project Area are residential homes to the west and north of the Project Area and the Elm Creek Park Reserve located east of the Project Area. Site work and grading will produce the most noticeable increase in noise generated and grading may occur through the duration of the project on a phase-by-phase basis. Noise typical of heavy equipment operation would also occur during site development. However, construction noise would be required to comply with Maple Grove City Code Section 20-85 which is limited to 7:00 am to 9:00 pm on weekdays and 8:00 am to 9:00 pm on public holidays, Saturdays and Sundays. Construction noise impacts may have a temporary nuisance effect on neighboring residents. Upon completion of development, noise levels are anticipated to be consistent with residential noise levels. Mitigation of the short-term impacts can be managed through proper coordination and construction planning.

Post construction, the Project will be used for low, medium and high-density residential uses and is not anticipated to generate noise that exceeds the MPCA's noise standards for residential areas.

## 18. Transportation

- a. *Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.*

The Proposed Project is a mixed-residential neighborhood with single-family detached homes, townhomes, and a senior multi-family building. The total number of units associated with the project is approximately 583 units, and given the number daily trips anticipated a full Traffic Impact Study (TIS) was completed and is attached in Appendix B. There are no existing dedicated parking spaces or paved parking areas or lots. Existing users have typical rural residential and agricultural parking areas to serve the property. Post-development, each single-family lot and townhome will include attached two or three car garages and guest parking will be available on driveways. The estimated number parking spaces available to support the single-family and townhomes is approximately 946 spaces. Overflow parking will be permitted on new local public roadways and in the allocated parking areas in the townhome neighborhood. The senior building is planned to include a parking lot with 28 parking spaces to serve the new building.

The Proposed Project is planned to be developed with up to 583 new housing units, and the following table provides the estimated Trip Generation from the new development.

**Table 16: Project Trip Generation Estimates (To be filled out when full TIS is available)**

Land Use	ITE Code	No. of Units	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
				In	Out	Total	In	Out	Total
Single-family detached housing	210	200	1,888	36	104	140	119	69	188
Single-family attached housing	215	273	2,062	42	98	140	100	71	171
Senior Adult Housing – Multifamily	252	110	356	7	15	22	15	13	28
<b>Full Build Out Total Trips</b>			<b>4,306</b>	<b>85</b>	<b>217</b>	<b>302</b>	<b>234</b>	<b>153</b>	<b>387</b>

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11<sup>th</sup> Edition

The Project Area is not currently served by any high frequency or scheduled transit routes. The Project Area is served by Metro Mobility and Transit Link which are shared ride, curb-to-curb minibus or van services. Maple Grove Transit operates express bus services (Routes 781 and 789) from the Maple Grove Transit Center to downtown Minneapolis and to the University of Minnesota. The Transit Center is approximately 5 miles south of the development site. Additionally, the Parkway Station is less than one mile from the site and the Zachary Park and Ride is approximately two miles from the site, and both provide express bus services.

Alternative transportation options include an existing multi-use trail that is located within the right-of-way of Fernbrook Lane and CSAH 81. Connections to regional trails through the Elm Creek Trail System existing near the development site and will provide bicycle/pedestrian connections to the larger region. Trail and sidewalks will be included in the Maple Grove Parkway extension and alignment and will connect into the planned Rush Creek Regional Trail corridor located on and beyond the Project site. Sidewalk connections will be provided within the Proposed Project to connect with the larger regional trail system.

- b. *Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance).*

The anticipated vehicular trip generation for the proposed development does not exceed 250 peak hour trips but does exceed 2,500 daily trips. Since the daily trips exceed the threshold a traffic impact study was prepared for the Proposed Project and is attached in Appendix B.

The Rush Hollow development is proposed to be constructed on approximately 161 acres of agricultural and rural residential land located northwest of the Fernbrook Lane and CSAH 81 intersection. The traffic impacts as a result of the Proposed Project on surrounding intersection were analyzed through 2043. The following observations are identified in the TIS:

- Results of the existing traffic operations analysis indicate that all study intersections current operate at overall LOS C or better during weekday AM and PM peak hours. The northbound approach at the Fernbrook Lake and CSAH 81 intersection currently operate near capacity at an approach LOS E but does not experience queueing issues. No other side street delay or queueing issues were observed in the field or in traffic simulations.



- Results of the year 2043 no build traffic operations analysis indicate that all study intersections are expected to operate at overall LOS C or better during the weekday AM and PM peak hours. In addition, no side-street delay or queuing issues were observed in traffic simulations.
- Results of the year 2043 build traffic operations analysis, including the realignment of Fernbrook Lane to connect with Maple Grove Parkway, indicate that all study intersections are expected to operate at overall LOS B or better during the weekday AM and PM peak hours. In addition, no side-street delay or queuing issues were observed in traffic simulations.
- Generally, the proposed development is expected to have minimal impact on study area traffic operations or the regional transportation system. The base geometric changes associated with the realignment of Fernbrook lane to Maple Grove Parkway is expected to provide sufficient traffic operations for the rerouted traffic and anticipated site trips. The base geometric changes evaluated are as follows:
  - CSAH 81 & Maple Grove Parkway
    - Convert the existing CSAH 81/Maple Grove Parkway intersection from a T-intersection (3 approaches) to a full intersection (4 approaches) adding a north leg.
    - Add dedicated eastbound left-turn lanes on CSAH 81 providing access to the new north leg.
    - The existing northbound approach of Maple Grove Parkway has two left-turn lanes and one right-turn lane. Convert one of the existing left-turn lanes to a through lane to accommodate the proposed realignment.
    - The new north leg at Maple Grove Parkway should include a minimum of one southbound through lane, one dedicated right-turn lane, one dedicated left-turn lane, and one northbound through lane.
  - CSAH 81 & Fernbrook Lake
    - Convert the existing CSAH 81/Fernbrook Lane geometry from a full intersection (4 approaches) to a T-intersection (3 approaches) removing the north leg.
    - Remove the existing CSAH 81 eastbound left-turn lane and westbound right-turn lane.
    - The existing northbound approach of Fernbrook Lane has a northbound through lane, right-turn lane and left-turn lane. Convert the existing northbound through lane to an additional northbound left-turn lane.
  - New Maple Grove Parkway Alignment
    - The new Maple Grove Parkway roadway was analyzed with a cross section including one through lane and dedicated left and right turn lanes at intersections. This configuration would provide the minimum required capacity for acceptable operations, and any additional lanes would be anticipated to provide acceptable operations.
    - The traffic analysis indicates that the ne Maple Grove Parkway/Territorial Road intersection would operate acceptable with side-street stop control on the Territorial Road approaches with dedicated left-turn lanes on all approaches and dedicated right-turn lanes on the Maple Grove Parkway approaches.

- The traffic analysis indicates that a single-lane roundabout also operates acceptably. A roundabout may provide additional flexibility for construction phasing as the Maple Grove Parkway connection is constructed and Fernbrook Lane approach to CSAH 81 is severed.

Additional analysis and supporting data is provided in Appendix B: TIS.

- c. *Identify measures that will be taken to minimize or mitigate project related transportation effects.*

While roadway improvements are not required from a traffic operations or regional transportation system perspective, the following recommendations are provided:

- The roundabout, as shown in Figure 6: Concept Plan, at the Maple Grove Parkway/Territorial Road intersection will provide additional roadway phasing flexibility and would be expected to provide a safety benefit in minimizing the potential for crashes and slowing traffic through the intersections.
- Caution should be exercised when placing development signs and/or other landscaping near proposed site accesses to not create a new sight obstruction for motorists.
- Turning movements should be reviewed to ensure large vehicles such as school buses and garbage trucks have adequate accommodations to negotiate internal development roadways.
- Establish appropriate traffic control at internal roadway intersections consistent with local jurisdiction policies to minimize driver confusion and the potential for conflicts.

Additional analysis and supporting data to these recommendations can be found in Appendix B: TIS.

## **19. Cumulative potential effect**

*(Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)*

- a. *Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.*

The Project is located in the City of Maple Grove's northwestern developing area of the community. The City has planned for future residential growth in and adjacent to the Project Area. The City has planned that this area would include a mix of residential housing types and the subject Project is consistent with those expectations. Given the City's extensive study in the 2040 Comprehensive Plan and the supplemental Territorial Road Master Plan efforts, there are no other anticipated cumulative potential effects as a result of the Project.

- b. *Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.*

As stated in previous items, the City recently adopted its 2040 Comprehensive Plan which identifies the Project Area and surrounding properties within its future growth area. At this time, there are no known projects that will further compound environmental effects of the Project, and any future development in the area will follow the requirements of the environmental review process, if required.

- c. *Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.*

Based on available information, and existing planning efforts completed by the City, there are no anticipated or known cumulative environmental impacts that cannot be effectively mitigated if proper permitting and development processes are followed.

Any required mitigation identified as part of the Environmental Site Assessment Phase I or Limited Phase II and other assessments will be implemented as part of the development and land use permit approval process.

**20. Other potential environmental effects**

*If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.*

The Project will increase greenhouse gas emissions as a result of the development. The increase is anticipated to be minimal and will not impact emissions on a regional scale. There are no other known potential environmental impacts anticipated as a result of the Project.

**RGU CERTIFICATION**

*(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

**I hereby certify that:**

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature \_\_\_\_\_

Date \_\_\_\_\_

Title \_\_\_\_\_