



## 6. Description

- a. Provide a project summary of 50 words or less to be published in the *EQB Monitor*.  
A proposed Residential Development (THE ENCLAVE) located on a 109 acre site in Medina, Minnesota. The proposed development consists of 140 single-family detached homes, 42 attached townhomes, and an association owned Community Park with a pool and pool house. Site construction is proposed to begin during the 2010 construction season, with construction completion to occur over the next 3-6 years.
- b. Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.

The proposed residential subdivision, THE ENCLAVE, consisting of 140 single-family detached homes and 42 attached townhome units, is located in Medina, Minnesota. The site is adjacent to and east of Hunter Drive. Adjacent to the west, at the main entry off of Hunter Drive, is Hamel Legion Park, to the east/northeast is Hamel Community Park. The other surrounding land uses are varying densities of residential developments.

(see attached site plan and development exhibits)

### Site Characteristics –

The property is located in Medina, Minnesota, Hennepin County (3212 Hunter Drive) in Sections 12 and 13 of Township 118, Range 23, and consists of a farmstead with various buildings located along the west side, closer to the north end. The site is approximately 109 acres, of which an estimated 7 acres contain the existing homestead and out buildings, 47 acres have been used for agricultural purposes, about 31.5 acres are wetland areas (with a larger complex on the south end of the site), and about 22.3 acres of tree cover exist on the eastern side of the site.

The topography of the site slopes mainly from the north (1012-1014) to the south (995-1000). There are smaller drainage areas in the northwest corner that drain to the west and a small drainage area in the northeast corner that drains to the east. Most of the site runoff eventually drains to the west to Elm Creek. Soil boring have been completed on the site by Braun Intertec (March 2007 – Project No. BL-07-0186). The soils encountered generally consist of 1.5 to 4 feet of clayey topsoil, above glacial till soils consisting of silty sand, clayey sand, sandy lean clay, and lean clay. Based on the Hennepin County Soils Survey the site consists mostly of Group B/D soils and A/D soils. The A soils group represents the sandy well-drained soils with the D soils representing the clayey soils that have a very slow infiltration rate. The depth to bedrock in this area is estimated at 151 feet to 250 feet below the ground surface. The groundwater elevation for this area is estimated at 980. The soil borings showed the water elevations ranging from 990 to 1000. This may be due to perched water conditions. Braun Intertec also did water level monitoring during the summer and fall of 2008, verifying the water elevations of 990 to 1000.

The existing site has fourteen (14) jurisdictional wetland basins, based on the report prepared by Svoboda Ecological Resources in August of 2006 (Project No. 2006-80-03). Several of the wetlands are located in the wooded area directly to the east of the farmstead. The wetlands include a complex of several Palustrine (P) Forested (FO) Type 7 wetland (PFO1A) interspersed with upland islands. Deciduous (1) trees, herbs, and shrubs inhabit these temporarily flooded (A) wetlands. Other wetlands on the site are Type 3 PEMC/PEMCd (P=Palustrine; EM=Emergent Vegetation; C=Seasonally Flooded; d=drained or ditched) wetlands, and a single Type 3 PUBF (UB=unconsolidated bottom;

F=semi permanently flooded) wetland.

The project will be a traditional residential subdivision with City owned streets and utilities for the single-family residences and the attached townhome residences will have public utilities and private streets. Municipal trunk sanitary sewer, water, and storm sewer will be available to this project. As platting and construction occur, the private underground utilities: gas, electric, cable TV and telephone services will be installed to each platted lot.

Amenities of note to this project are tree preservation areas, wetlands, proposed ponds, proposed enhanced wetlands and wetland mitigation areas, an on-site community park with a pool house and pool, and the sidewalks and trail systems. The trail system will connect the development to the community association park, the Hamel Lions Park and the Hamel Community Park.

The site grading is proposed to begin during the fall construction season of 2010. The project will take several years to complete, it is estimated that 18 home sites will be developed in 2010/2011, with an additional 67 home sites in 2011, and the remaining 97 home sites over the next two years (2012-2013). The actual timing and phase size will be a function of market demand, construction season, and availability of infrastructure. The grading, utility, private utility, and builders will be required to perform their work in conformance with the required specifications, city approvals, and permits required by State and local construction codes.

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 residential subdivision is proposed to be completed by a private developer (Lennar Corp.). The project will have several different housing products meeting different price points. This project is being proposed to meet some of the current and future housing needs in the City of Medina.

d. Are future stages of this development including development on any outlots planned or likely to happen?

Yes  No

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

There is a proposed outlot (26.7 acres) on the very southern portion of the site, to the south of the large wetland complex (wetland #14). This outlot is approximately 26.7 acres with 5.4 acres of upland that is guided in the Comprehensive Plan for rural residential densities.

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.

**7. Project magnitude data**

Total project acreage 109.04 acres

Number of residential units: unattached 140 single-family  
attached 42 attached townhomes

maximum units per building 5 units/building

Commercial, industrial or institutional building area (gross floor space): total square feet N/A

Indicate areas of specific uses (in square feet):

Office N/A

Manufacturing N/A

Retail N/A

Other industrial N/A

Warehouse N/A  
 Light industrial N/A  
 Other commercial (specify) N/A  
 Building height N/A

Institutional N/A  
 Agricultural N/A

If over 2 stories, compare to heights of nearby buildings

8. **Permits and approvals required.** List all known local, state and federal permits, approvals 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.

<u>Unit of government</u>	<u>Type of application</u>	<u>Status</u>
City of Medina	Preliminary Plat	Pending
	Zoning Map Amendment	Pending
	Comp Plan Amendment	Pending
	Wetland Alteration Permit	Pending
	Grading Permit	To be submitted
	Final Plat	To be submitted
Watershed District Permit	Building Permits	To be submitted
	Stormwater Permit	To be submitted
MnDNR	Wetland Alteration Permit	To be submitted
MN Pollution Control Agency	Sanitary Sewer Extension	To be submitted
	NPDES Stormwater Permit	To be submitted
MN Dept. of Health	Water Supply Connection	To be submitted
	To Seal Private Wells	To be submitted
U.S. Army Corps of Engineers	Section 404 Clean Water Act	To be submitted
	Wetland Alteration Permit	To be submitted
Federal Emergence Management Agency	Letter of Map Revision	To be submitted
Metropolitan Council	Permit to Connect to Sewer	To be submitted
Hennepin County	Abandon of Septic Systems	To be submitted

9. **Land use.** Describe current and recent past land use and development on the site and on adjacent lands. Discuss project compatibility with adjacent and nearby land uses. Indicate whether any potential conflicts involve environmental matters. Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.

This site has been primarily used for agricultural purposes, except for portions of the wetlands and the heavily wooded areas. Some of the wooded areas have been used for storage areas, and dirt bike trails. Currently, some of the open land is used for farming purposes. Based on aerial photos the farming of this land began prior to 1937. Since farming has been occurring on this site for the past 70 plus years we must assume the use of pesticides, herbicides, and fertilizers have been used on all the cropland. Residential developments of varying density and lot types have occurred on all sides of the project. Parks and athletic fields are located to the east and west of the property. The density of the proposed development would be consistent with the City's Comprehensive Plan.

A Phase 1 Environment Site Assessment (ESA) was performed to determine if there are potential land use conflicts that involve environmental manners. – According to the Phase I ESA

(Section 1.1 Findings) –

- Two above ground fuel storage tanks and associated dispensers are currently present.
- Stains on the concrete floor within the shop area
- Stains on the wood floors in the two sheds and the dirt floors of the Quonset and pole shed.
- Noted farm equipment, tires, drums, containers, automobile parts, metal, tin, cables, wire, wood, plastic tanks, concrete blocks, bricks, lead acid batteries and other items are located in the onsite structures and throughout the site.
- A floor drain is present in the former milk house, oil products are reportedly stored in this area.
- A well is present on the site, not considered an environmental condition, also there is an on-site septic system for the southern house, there may be a system associated with the north house.

(Section 1.3 Conclusions) – Recognized environmental conditions -

- Fuel AST (above ground storage tanks) at the property.
- Stained wood and dirt floors in the out structures.
- Drums and containers, equipment, tanks, lead acid batteries present
- Former milk house drain

(Section 5.0 Records) –

The Phase 1 ESA made note of 4 registered leaking storage tanks within a half mile of the site. According to the MPCA there is no underground contamination associated with these 4 sites and the files pertaining to these tanks have been closed.

One voluntary investigation and clean up program site and two brown field program sites were identified within one-half mile of the site. There were no underground petroleum pipelines in the vicinity of the property.

(Section 6.3 Hazardous/Unidentified Substance & Petroleum Product Containers) –

### **Containers**

Various sized containers of lubricants, petroleum products, vehicle maintenance products, fuel conditioner, antifreeze, and unidentifiable projects were observed within many of the buildings and in the wooded area east of the pole shed.

We consider the presence of containers of lubricants, petroleum products, vehicle maintenance/service products, fuel conditioner, antifreeze, and unidentifiable products in the buildings and the lead acid batteries within the shed a suspect environmental condition.

No herbicide/pesticide containers were noted at the site. However, normal crop production often includes the use of numerous chemicals. These chemicals can only be confirmed to be present or absent through soils and groundwater analysis.

### **Storage Tanks**

We observed two above ground fuel storage tanks along the east side of the steel bins that are located south of the west end of the pole shed. One of the tanks is about 300 gallons in size and used to store diesel fuel. The other tank is about 1000 gallons in size and used to store gasoline. Both tanks are connected to fuel dispensing pumps.

We observed four above ground tanks east of the pole shed. These tanks are 1000 to 2000 gallons in size and are used to store liquid fertilizer. At least two of the tanks contained product.

The presence of the above ground fuel storage tanks and fertilizer tanks at the property is considered a suspect environmental condition.

Various drums and containers (labeled and un-labeled) are present on the site.

A Phase I Environmental Site Assessment has been completed by American Engineering Testing, Inc. (AET Project No. 03-03574) and the report is attached as Attachment 11. The site assessment was completed in conformance with the scope of limitations of ASTM Practice E1527-97.

A Phase II Environmental Site Assessment Report was prepared by Braun Intertec Corporation (Project BL-10-06413) on June 1, 2010. The report is attached as Attachment 11 – Phase II. The report outlines many of the items listed above. In addition fourteen new soil borings and a test pit were completed as part of the Phase II. No groundwater was encountered during the Phase II investigation.

### **Section E.2. Field Screening Results –**

Elevated PID (photo ionization detector) readings ranging from 10 ppm to 1,665 ppm (parts per million) were observed in 2.5 feet and 8.0 feet depths in ST-2. ST-2 was a deep soil boring located adjacent to the two fuel tanks (AST, above ground storage tanks) and related pump. No other elevated PID readings, above background concentrations, odors or staining were observed in the soil borings or test pit. Debris consisting of asphalt, concrete, brick and trace amounts of plastic and wood were observed in the test pit completed. A small mound of ash, estimated at 5 to 10 cubic yards, was observed behind a horse trailer in the surface storage area. Soil sampling was not conducted as part of this Phase II, however, prior to redevelopment the ash should be sampled to determine the appropriate management of the material. Soil samples taken were tested and are summarized in Table 1 of the Phase II Report.

## Section F. Summary and Conclusions -

Results from the assessment indicate that:

Topsoil was encountered to approximately 2.5 feet bgs, followed by alluvium to generally 7.5 feet bgs. The alluvium was underlain by glacial till to the termination depth of the soil borings. Groundwater was not encountered within 40 feet of the ground surface during the investigation.

Based on the analytical testing results, soil contamination is associated with the area near the AST and associated pump and in the soil berm located northeast of the pole barn in the motocross area. Elevated concentrations of petroleum related VOCs, DRO, and/or GRO were detected in these areas. A clean soil sample [ST-2 (12.5')] was obtained below the impacts in the area of the ASTs and pump.

A mound of ash was observed behind a brown horse trailer in the storage area.

Based on the results of the Phase II ESA, petroleum impacted soil is present at the Site. According to Minnesota Statute 115.061, the property owners and/or responsible parties associated with this release may have a duty to notify the MPCA via the Minnesota Department of Public Safety, Division of Emergency Management (DEM) Duty Officer. This will be conducted by the property owner or developer prior to ground disturbing activities.

It is recommended that the ash mound be sampled prior to redevelopment to determine appropriate management options. In addition, prior to demolition, we recommend that oil stained floors in the garage and sheds be tested to identify proper disposal option for this material.

It is also recommend that prior to redevelopment, the Site be enrolled in the MPCA Petroleum Brownfields Program to obtain applicable approvals regarding management, onsite-re-use and/or offsite disposal of impacted soil from the MPCA. To obtain approvals, a Response Action Plan and Construction Contingency Plan (RAP/CCP) will need to be prepared and approved by the MPCA for future redevelopment plans at the Site. The RAP/CCP will describe how soils at the Site will be screened during construction activities for the presence of contamination and outline the provisions for the proper management, onsite reuse and/or offsite disposal of contaminated soil, or other materials that might be encountered during the construction activities.

The MPCA PBP typically allows onsite reuse of petroleum impacted soil that is generally free of debris and has a PID reading less than 100 ppm. Using these criteria, the impacts soil identified in the soil berm is not acceptable for onsite reuse because of the concrete and other debris mixed into the soil. In addition, the impacted soil near the ASTs is not acceptable for onsite reuse because PID readings greater than 100 ppm are present.

The MPCA established recommendations for offsite use of fill soil specify that in order to be acceptable for offsite re-use, fill soil should be free of debris and field indications of contamination, should not have contaminant concentrations greater than the Residential SRVs and SLVs, and if petroleum impacts are present, should not have detectable concentrations of DRO or GRO. Following the MPCA recommendations, the identified impacted soil from this parcel (soil berm and near the ASTs and associated pump) could not be re-used onsite or offsite. Therefore, excess contaminated soil, which was identified by the Phase II ESA, will need to be disposed of offsite at a permitted landfill.

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

	<b>Before</b>	<b>After</b>		<b>Before</b>	<b>After</b>
Types 1-8 wetlands	(31.5)	(32.4)	Lawn/landscaping	(2.5)	(34.9)
Wooded/forest	(22.3)	(11.2)	Impervious surfaces	(2.2)	(22.1)
Brush/Grassland	(3.5)	(1.2)	Other (Stormwater basins)	None	(2.8)
Cropland	(47.0)	(4.4)	Open Space (Park)	None	None
			<b>TOTAL</b>	(109.0)	(109.0)

If **Before** and **After** totals are not equal, explain why: N/A

11. **Fish, wildlife and ecologically sensitive resources**

a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

Since the site has mainly been used for agricultural purposes, except for the existing wetlands and wooded areas, the wildlife consists mainly of typical hardwood forest mammals, birds and wetland fauna populations as well as small mammals typically found in agricultural areas. No large open water areas (lakes or ponds) are located on this site or in the near vicinity so there are no fish within the project. The site includes 31.5 acres of wetland and 22.3 acres of wooded upland and after the project is completed will have approximately 32.4 acres of wetland, 2.8 acres of ponds and 11.2 acres of wooded upland. Some temporary relocation of the existing wildlife can be expected during the construction of this site. Once the site and homes have been established the wildlife typical to wooded and wetland areas may return to the site or may be permanently displaced.

The wooded upland area of the site will be reduced by the proposed development; however, the planting of more diverse native tree species, together with landscaping, will help recreate an urban forest environment.

b. Are any state-listed (endangered, threatened or special concern) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site? Yes No

If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the resources has been conducted and describe the results. If the DNR Natural Heritage and Nongame Research program has been contacted give the correspondence reference number: ERDB 20100638 . Describe measures to minimize or avoid adverse impacts

According to the DNR Report ERDB 20100638, the Blandings Turtle may be present on this site. In an effort to minimize or avoid impacts to the Blandings Turtle, the developer plans to do the following, per the recommended methods from the DNR:

- ◆ Install surmountable curb in all the single-family areas of the site to allow the turtles to cross the roads.
- ◆ Provide a flyer on Blandings Turtle to the residents of this development.
- ◆ A note shall be placed on the utility plans instructing the contractors to inspect utility trenches prior to backfilling.
- ◆ Graded areas shall be vegetated with native grasses and forbs.
- ◆ Vegetation management in infrequently mowed areas shall be done mechanically instead of with chemicals.

- ◆ Buffers will be provided around the wetlands.
- ◆ Silt fencing will be installed around wetlands to keep turtles out of the construction areas and will be removed after the completion of the construction and vegetation establishment.

Silt fence will be installed as part of the development. The silt fence will be installed around all wetlands prior to construction activities and will be removed after the vegetation has been established. The development will require the installation of biodegradable erosion control blankets to minimize the impacts to the small animals of this area.

12. **Physical impacts on water resources.** Will the project involve the physical or hydrologic alteration — dredging, filling, stream diversion, outfall structure, diking, and impoundment — of any surface waters such as a lake, pond, wetland, stream or drainage ditch?  Yes  No  
 If yes, identify water resource affected and give the DNR Protected Waters Inventory number(s) if the water resources affected are on the PWI: . Describe alternatives considered and proposed mitigation measures to minimize impacts.

There are 14 wetland basins that exist within the property that total 32.36 acres. The wetlands within the project site are subject to the U.S. Army Corps of Engineers Section 404 permit, Wetland Conservation Act and Section 828.43 (Wetland Conservation) of the City Code. There are no DNR protected water waterbodies located within the property. The Wetland Conservation section of the City Code requires upland buffers around all wetlands based on the Wetland Management Classification as documented in the 2007 Functional Assessment Report. The table below provides a summary of the wetlands that exist on-site and their associated Wetland Management Classification, required upland buffer width, acres and proposed fill acres.

Wetland ID Develop ment Plan	Wetland ID City Inventory	Cowardin Classification (field verified)	City Wetland Management Classification	City Ordinance Buffer Width Require- ment	Wetland Size (Approx. acres)	Proposed Fill (acres)
1	12-024	PEMA	Manage 2	25	0.21	0
2	12-036	PEM1A	Manage 1	30	0.60	0.03
3	12-030	PEMB	Manage 1	30	1.00	0
4	12-029	PEMCd	Manage 2	25	2.02	2.02
5	Not Inventoried	PF01A	To be classified	To be determined	0.05	0
6	13-012	PF01A	To be classified	To be determined	0.13	0
7	13-012	PFO1A	To be classified	To be determined	0.28	0
8	13-013	PFO1A	Preserve	35	0.23	0

9	13-012	PFO1A	Preserve	35	0.58	0
10		PFO1A	Manage 1	30	0.19	0
11	13-012	PEMC, PFO1A	Preserve	35	3.60	0
12	Not Inventoried	PEMB	Manage 2	25	0.54	0
13	13-12	PEMCd	Preserve	35	0.12	0
14	13-012	PEMC	Preserve	35	22.78	0

Given the site layout, number of wetlands, and minimum unit requirements, some wetland impact may be necessary. The original plan proposed considerably more wetland impact. However, by adding a number of townhomes and reducing the number of buildable single-family lots the wetland impacts were reduced. The applicant for the development proposes to impact 89,332 ft<sup>2</sup> (2.05 acres) of Type 1/2, Fresh Wet Meadow wetland, dominated by reed canary grass (*Phalaris arundinacea*). Based on Feedback at a Wetland Conservation Act Technical Evaluation Panel (WCA TEP) meeting held on June 8, 2010 it is anticipated the wetland impact will be further reduced as part of the permitting process. Under the current proposal the applicant is responsible for 178,664 ft<sup>2</sup> (4.10 acres) of wetland mitigation at a 2:1 ratio.

To satisfy the Wetland Conservation Act requirements 2.15 acres of wetland replacement are proposed on-site and the remaining 1.95 acres of mitigation will come from purchase of wetland bank credits from within Medina. Wetlands will be created on-site by expanding existing wetland by excavation into adjacent upland areas. Based on the initial WCA TEP meeting feedback, restoration opportunities will be further explored for wetlands that are partially drained.

13. **Water use.** Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)?  X  Yes   No

If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.

During the construction process some dewatering will be required to install the public utility system. It is not anticipated that the project will require a Minnesota DNR Water Appropriations Permit to conduct the construction dewatering. If it is determined the dewatering will exceed the design threshold of 10,000 gallons / day or 1,000,000 gallons / year, the developer or contractor will apply for the necessary construction permits.

The existing farmstead well will be abandoned when development occurs in that area of the site. The project will connect to a municipal water supply, the City of Medina (PWS# 1270023). Each home will have an individual 1" water service off the public watermain line. The watermain will be looped throughout the project. The estimated water usage would be 182 sf x 2.7 people per unit = 492 people x 85 gallons per person per day = 41,820 gallons per day.

Homes within the development are not allowed to use city water for irrigation. The proposed irrigation system will utilize storm water ponds as its primary water source. The storm water ponds will be supplemented by agricultural wells on an as-needed basis.

The irrigation water usage information is detailed below.

Single-Family = 139 units

Average Zone Flow = 15 gpm

Average System Runtime = 2.5 hrs (ave 6 zones at 25 minutes per zone)

Flow for one Single-Family Unit pre cycle = 15 gpm x 60 minutes x 2.5 hr = 2,250 gal

Average 3 cycles per week = 3 x 2,250 gal = 6,750 gallons per week

Average 4 weeks per month = 4 x 6,750 = 27,000 gallons per month

Total Single Family Flow per Month = 139 x 27,000 = 3,753,000 gallons per month

Assume 5 wells at 420 gpm at 75 to 80 psi (w/vfd pumps and a pressure tank)

Townhome Site – 9 buildings

Assume 3 zones per building= 27 zones

Average Zone Flow = 40 gpm

Average Zone Runtime = 13.5 hrs (30 minutes per zone)

Flow for the month ( 3 cycles per week 4 weeks per month)

= 27 zones x 30 minutes/zone x 40 gpm x 3 x 4 = 388,800 gallons per month

Total Estimated Irrigation Flow per Month = 3,753,000 + 388,800 = 4,141,800 gallons for the entire development.

14. **Water-related land use management district.** Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district?  Yes  No

If yes, identify the district and discuss project compatibility with district land use restrictions.

There is no shoreland zoning or state or federally designated wild or scenic river land use on the property. MFRA (engineering and surveying company) has recently completed a Letter of Map Amendment for the property (attachment 9 of the EAW). The report establishes a 100 year flood plain elevation of 1000.3 for the large wetland complex on the south end of the property. Portions of Lots 13 through 17, Block 9 in the Third Phase encroach into the 100 year flood plain. We plan to prepare Certified Letters of Map Revisions Fill (CLOMR\_F) and Letter of Map Revision (LOMR-F) as part of the third phase of The Enclave.

15. **Water surface use.** Will the project change the number or type of watercraft on any water body?  Yes  No

If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.

16. **Erosion and sedimentation.** Give the acreage to be graded or excavated and the cubic yards of soil to be moved:  
acres 60; cubic yards 150,000. Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

As can be seen from the existing condition plan, the site is relatively flat, ranging in elevation above sea level from 995 feet in the wetland area on the south end of the site to a high point of the site of 1014 feet, on the north end of the site. The project site is susceptible to erosion due to the soil composition. The topsoil averages 1½ feet and is a lean clay and/or a sandy lean clay with a lean clay and sandy lean clay underneath.

Due to the larger scale of this project care will be taken to ensure erosion and sediment control measures are maintained during the entire construction process. The developer has submitted a Preliminary Grading, Drainage, and Erosion Control Plan and will be working with the City of Medina to design a final grading, drainage and erosion control plan that incorporates (BMP's) Best Management Practices (i.e. Silt fence, Sediment basins, timely re-vegetation, and other erosion control measures) for protecting water quality in urban areas.

The project developer will prepare a Stormwater Pollution Prevention Plan (SWPPP) and apply for and obtain an NPDES permit prior to beginning any site grading work. All appropriate BMP's will be installed in the open areas prior to any grading operations. The silt fence in the treed areas will be installed once the trees are removed and there is access to this area of the site. The site grading will then commence with the construction of the stormwater ponds and the sediment basins. Within 72 hours of the completion of site grading or as noted on the final construction plans the restoration work will begin.

17. **Water quality: surface water runoff**

- a. Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any stormwater pollution prevention plans.

Storm water runoff quality and quantity will be designed to meet the requirements for the City of Medina and the Elm Creek Watershed District. This requires quantity control to existing peak rates of discharge for the 1-, 2-, 10-, and 100-year storm events. It also requires NURP ponding, a 20% reduction in Total Phosphorus loading over existing conditions, and an Extended Detention Storage Time to meet quality specifications. Soil Classification for on-site soil is primarily Type-D. This yields a very low infiltration rate. In order to meet quantity and quality requirements, storm water ponds have been designed to outlet in series, so water landing near the middle of the site will flow through 3 storm water ponds and a wetland prior to leaving the site. Since infiltration rates are low, a filtration shelf will be constructed in most of the ponds to slowly draw the pond down below the outlet elevation of the outlet structure. The filtration shelves will primarily be constructed using either sand or compost media and a draintile outlet. Outlet structures with submerged inlets will prevent any floatables from leaving the site. Notched weir walls within the outlet structures will be used for rate control when necessary. Other infiltration/filtration areas will be constructed throughout the site to provide treatment and promote infiltration, prior to runoff leaving the site.

Other on-site storm water Best Management Practices (BMPs) include but are not limited to: narrower streets and sidewalk on one side of the street to reduce impervious surface, bio-rolls as sediment control along swales, silt fence as down-gradient perimeter control, rock entrance berm to prevent off-site vehicle 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 the MPCA, phosphorus-free fertilizer, and a seed mix as directed by the City to promote vegetation. A complete list of BMPs will be described in the Storm Water Pollution Prevention Plan (SWPPP).

- b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

Proposed drainage routes are designed to mimic existing drainage routes. Runoff is discharged either east or west from the site. The vast majority of runoff discharges to the west through a series of wetlands, ditches and culverts that lead to Elm Creek. The Minnesota Pollution Control Agency (MPCA) has Elm Creek listed as an impaired water. Because the site's discharge point is within one mile of Elm Creek, additional Best Management Practices (BMPs) are required for construction activity. Necessary BMPs will be used on site to meet all MPCA requirements to ensure all storm water runoff is clean. Wetland buffers and setbacks will also be provided in accordance with the City of Medina's wetland ordinance.

#### 18. **Water quality: wastewaters**

- a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

The estimated sanitary sewer flow from this proposed residential development is 260 gallons per day per unit, which equals 182 single-family x 260 gal/day/unit = 47,320 gallons per day. No on-site treatment is proposed.

- b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies, and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

As stated above, no on-site treatment is proposed.

- c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility's ability to handle the volume and composition of wastes, identifying any improvements necessary.

There will be no pre-treatment of the waste water; it will be conveyed by a gravity sanitary sewer system to the Elm Creek Interceptor, then to the Metro Wastewater Treatment Plant.

- d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.

Not applicable.

#### 19. **Geologic hazards and soil conditions**

- a. Approximate depth (in feet) to –  
to ground water: 4 feet (perched) minimum      15 feet average  
to bedrock: 150 feet minimum      200 feet average

Describe any of the following geologic site hazards to ground water and also identify them on the site

map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

Geological site hazards, sinkholes, or other conditions are not known to exist on this property.

- c. Describe the soils on the site, giving NRCS (SCS) classifications, if known. Discuss soil granularity and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

The main soil types evident on the site are Cordova Loam (39%), Houghton and Muskego soils (19.4%), Hamel-Glencoe(10.5%) and Glencoe Loam(10.0%). These soils belong to the Hydric Soils Group D. The Type D soils have a very slow infiltration rate and high runoff potential. They are typically clay. These soils can act as a barrier so that contaminants do not reach the groundwater. Potential for surface water runoff contamination will be addressed in the Storm Water Pollution Prevention Plan (SWPPP)

## 20. Solid wastes, hazardous wastes, storage tanks

- a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

The proposed project is a residential subdivision and should only generate municipal solid wastes and household hazardous wastes. The Seven-County Waste Coordinating Board approximates municipal solid waste generation at approximately 1.8 pound per person per day. Therefore the fully developed project would result in roughly 182 units x 3 people per unit x 1.8 lbs/person = 982.8 lbs/day = 179.4 tons per year.

The City of Medina participates in recycling programs and encourages waste reduction efforts in the community. Residents and businesses contract individually for recycling and solid waste management services. The details of the City of Medina's recycling plan can be found at <http://www.ci.medina.mn.us/recycle/recycle.htm>. The proposed project will not create any impacts on the current system.

- b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

Only the generation of household hazardous materials should result from the proposed development. The City of Medina participates in countywide programs regarding household hazardous waste management and education.

- c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

N/A

21. **Traffic.** Parking spaces added Parking is proposed on one side of the public streets and 15 additional parking stalls are proposed near the attached townhome sites.

Existing spaces (if project involves expansion) 0

Estimated total average daily traffic generated 1584 trips. Estimated maximum peak hour traffic generated (if known) and time of occurrence 29 inbound trips and 94 outbound trips (a.m. hours); 104 inbound trips and 59 outbound trips (p.m. hours).

Provide an estimate of the impact on traffic congestion on affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system.

The proposed development THE ENCLAVE will have 140 single-family detached and 42 townhome dwelling units. The number of trips generated by these homes can be estimated using "Trip Generation", Institute of Transportation Engineers, 8<sup>th</sup> Edition. Using the trip rates for single-family residential development, the estimated traffic volumes for THE ENCLAVE are provided above. The Medina Map Exhibit depicts the roadways in the vicinity of the site. The proposed roads within the development are shown on the Preliminary Site Plan Exhibit.

The increased traffic volumes that will be generated from this site have been incorporated into the overall City of Medina Transportation Plan. The City of Medina is considering improvements to Hunter Drive which serves as the project's access road. Detailed information on the traffic issues can be found in the attached Traffic Impact Study prepared by Spack Consulting.

22. **Vehicle-related air emissions.** Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.

The proposed project will generate an increase in carbon monoxide levels associated with a typical increase in passenger vehicle trips. 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.

23. **Stationary source air emissions.** Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult *EAW Guidelines* for a listing) and any greenhouse gases (such as carbon dioxide, methane, nitrous oxide) and ozone-depleting chemicals (chloro-fluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.

The proposed residential subdivision will not create any stationary air source emissions.

24. **Odors, noise and dust.** Will the project generate odors, noise or dust during construction or during operation? X Yes    No  
If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

Dust and noise will be generated during the construction process on the site. The contractors will be required to control dust by using watering trucks. The contractors will work only during the allowable working hours established by the City of Medina. The nearest receptors of the dust and noise will be the scattered residents on the adjacent residential parcels to the north, east, and west of the proposed project. The residential house construction is not anticipated to cause any noticeable noise or dust impacts on the surrounding neighborhoods.

**25. Nearby resources.** Are any of the following resources on or in proximity to the site?

Archaeological, historical or architectural resources?  Yes  No

Prime or unique farmlands or land within an agricultural preserve?  Yes  No

Designated parks, recreation areas or trails?  Yes  No

Scenic views and vistas?  Yes  No

Other unique resources?  Yes  No

If yes, describe the resource and identify any project-related impacts on the resource. Describe any measures to minimize or avoid adverse impacts.

The State Historical Preservation Office (SHPO) database was queried for the subject property and no resources were identified.

Hamel Legion Park is adjacent to this property and is almost 40 acres in size. It is the largest park in the City's system and is located south of Uptown Hamel on the east boundary of the City. Hamel Legion Park continues to be developed. Hamel Legion Park has several baseball fields, softball fields, tennis courts, soccer fields and other recreational facilities. Access to this park will be provided by a bituminous trail.

Hamel Lions Park is 6.8 acres in size and is on the west side of Hamel Road. It has a small ball diamond, a tennis court, and a basketball court. Hunter Drive provides a buffer from the development, while still providing access to the park.

**26. Visual impacts.** Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks?  Yes  No

If yes, explain.

**27. Compatibility with plans and land use regulations.** Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency?

Yes  No. If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.

The project site is located inside the City limits of Medina. The proposed residential development is generally consistent with the City of Medina's Comprehensive Plan. Re-zoning is required because the current zoning of PUD2 does not match the recently adopted comprehensive plan. The proposed development is requesting re-zoning to R3, R2, & R1 to meet the density goals of the City and provide transitional zoning of the property. The proposed residential uses would be consistent with this proposed zoning.

A Comprehensive Plan Amendment is required due to a small expansion of the MUSA (metropolitan urban service area). A proposed MUSA line adjustment would extend the line south to add 6.5 net acres to include the proposed homes just north of the wetland complex and to reguide this 6.5 acre portion to Low Density Residential from Rural Residential. The proposed R1 zoning within this 6.5

acres of the development will then be consistent with the low density land use guidance. This 6.5 acre MUSA line adjustment extends an area planned for urban services within the 2001-2010 time periods. In return for adding the 6.5 net acres into the MUSA and reguiding to Low Density Residential, the developer is proposing to protect 6.5 net acres of wooded and wetland area along the eastern edge of the site. This land is currently guided as Low Density and will be reguided to Public thus an equal trade of net buildable land and related units will be removed from the MUSA as is being included with this expansion. Thus, due to this swap in land, no buildable area is being added to the MUSA and a significant number of trees and wetlands are being protected and preserved in their natural state. The proposed residential use is compatible with the future land use described in the City's Comprehensive Plan.

The proposed development is compatible with the City of Medina's overall sewer and water plans.

The proposed project will also be consistent with the City's goals for storm water management. Storm water runoff from the development will be routed through a series of basins prior to discharging to the Wetlands and then to Elm Creek. The stormwater basins will be designed to meet the NURP standards with outlet structures limiting the developed runoff rate to below the existing rate of runoff. The quality of storm water runoff from the site after development is not anticipated to have a negative impact on Elm Creek.

28. **Impact on infrastructure and public services.** Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project?  Yes  No. If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see *EAW Guidelines* for details.)

The reconstruction of Hunter Drive from Hamel Road to Medina Road will be triggered by this project. The reconstructed road will generally have the same alignment and width as the existing roadway. The internal residential roads will be constructed as a part of this project to provide access to and from the development and are addressed as part of the project within this EAW.

City sewer and water facilities will be extended south from Hamel Road along Hunter Drive. A 12-inch watermain will replace and extend an existing 8-inch main along the west side of Hunter Drive. Deeper 8-inch sanitary sewer will replace and extend the existing 8-inch line along the east side of Hunter Drive.

Fire department and police service will be required for the development area. This development alone is not expected to significantly tax the existing systems.

A development of this type will bring more children into the City who will attend schools. This development is expected to have approximately 200 to 300 children of various ages after all 182 units are constructed. The property is located in the Wayzata School District #284. The existing school systems should be able to accommodate this increase.

Potential impacts from the irrigation wells on the city's adjacent well field have been examined. Worst-case groundwater modeling shows no significant impacts to the current or future wells located in Hamel Legion Park. The modeling scenario is based on no usage of stormwater for irrigation and extended city and irrigation well run times.

29. **Cumulative impacts.** Minnesota Rule part 4410.1700, subpart 7, item B requires that the RGU consider the "cumulative potential effects of related or anticipated future projects" when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause

cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (*or discuss each cumulative impact under appropriate item(s) elsewhere on this form*).

Cumulative impacts of this project include the reconstruction of Hunter Drive within the same general alignment and width. Improvements will also be made to water and sewer utility services to support new development. A relatively small area will be added to the MUSA boundary, however, the City recently completed a Comprehensive Plan that addresses the cumulative impacts of development on a city wide basis. The addition of MUSA land was reviewed and determined not to cause impacts beyond what was planned in the Comprehensive plan. An equal amount of the extended MUSA area (6.5 acres) is being reguided to Public thus there is no additional net acreage of development that will occur beyond what was planned for in the Comprehensive Plan and utility planning. There are no other future known projects that may interact with this proposed project to cause cumulative impacts. As the adjoining undeveloped parcels develop there will be connections to the trunk utilities and the proposed public streets. This development will install the utilities and provide connection points for the existing neighborhoods and the undeveloped parcels.

30. **Other potential environmental impacts.** If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

Environmental impacts, other than those previously addressed in this EAW, are not anticipated.

31. **Summary of issues.** *Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW.* List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

This residential development project (THE ENCLAVE) is proposing an amendment to the current Comprehensive Plan for the City of Medina. The request by the private developer is to extend the MUSA line south to add 6.5 acres of upland to the proposed R-1 zoning area, in conjunction with the preliminary plat and re-zoning application. In return for adding the proposed 6.5 acres of upland into the MUSA, the developer is proposing to protect 6.5 net acres of wooded and wetland area (currently within the MUSA and guided Low Density) along the eastern edge of the proposed development. This land will be reguided Public. Because of this swap, no buildable acreage is proposed to be added to what was guided and designated for sewer residential development in the Comprehensive Plan.

The Phase I and Phase II Environmental Site Assessments recognized the environmental conditions of the property, including the fuel AST, the stains on the wood and concrete floors and the dirt floor of the Quonset and pole sheds, the storage of farm equipment, tires, drums, containers and other items currently present on the site, and soil contamination near the AST and associated pumps and the mound of ash on the site. Due to the results of the Phase II and findings of petroleum impacted soil on the site mitigation efforts will be required to be conducted prior to any ground disturbing activities. This will include the developer or other responsible party to address the situation in accordance with MPCA rules. This includes working with the MPCA to remove impacted soil. This will require that the site be enrolled in the MPCA Petroleum Brownfields Program to obtain applicable approval. A Response Action Plan (RAP) and Construction Contingency Plan (CCP) will need to be prepared and approved by the MPCA prior to any activities. If additional contamination (beyond what is identified in the Phase II) is found it shall be reported to the State Duty Officer and follow-up work must be

coordinated with the Minnesota Pollution Control Agency.

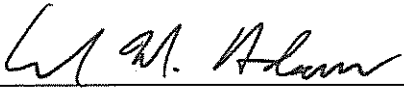
Stormwater rates, quality, and volume will be managed to the City of Medina and Elm Creek Watershed standards. As a large portion of the site contains soils with very low infiltration rates, most ponds will be provided with a biofiltration bench to slowly draw down and treat the stormwater.

The applicant for the development proposes to impact 89,332 ft<sup>2</sup> (2.05 acres) of Type 1/2, Fresh Wet Meadow wetland, dominated by reed canary grass (*Phalaris arundinacea*). Based on Feedback at a Wetland Conservation Act Technical Evaluation Panel (WCA TEP) meeting held on June 8, 2010 it is anticipated the wetland impact will be further reduced as part of the permitting process.

**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 9b and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature   
Chad M. Adams

Date 6-17-2010

Title City Administrator

**Environmental Assessment Worksheet** was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253.  
[www.mnplan.state.mn.us](http://www.mnplan.state.mn.us)