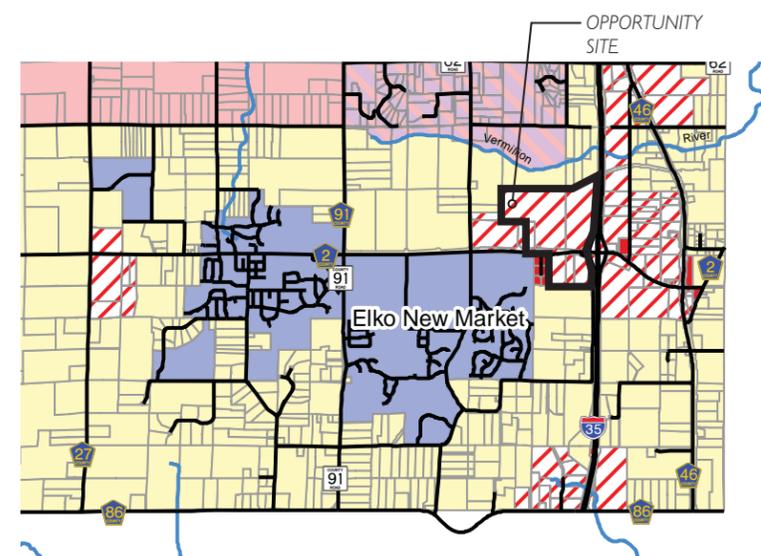


# APPENDIX A - INVENTORY + ANALYSIS

## LAND USE

**INTRODUCTION** The Property is conveniently located North and South of County Road 2 and adjacent to Interstate 35. Due to the proximity to Interstate 35, the property aligns with a sub area that Scott County has designated as a Highway Commercial Corridor. Four Major roadway corridors fall within the indicated sub area, and are highly visible entrance points into the county. Design standards are stricter within the Commercial Corridor and the County's Comprehensive Plan indicates that any sites within should encompass a clean and visually appealing atmosphere and encourage higher architectural standards for commercial and industrial developments. The number of billboards should also be reduced, according to guidelines placed by the *Scott County 2030 Comprehensive Plan Update, Chapter V – Land Use & Growth Management*. Land use of the Property will be evaluated not only by the county designations, but also the City of Elko New Market specified land use(s).



Scott County 2030 Proposed Land Use Plan, Source: Scott County Comprehensive Plan, March, 2009

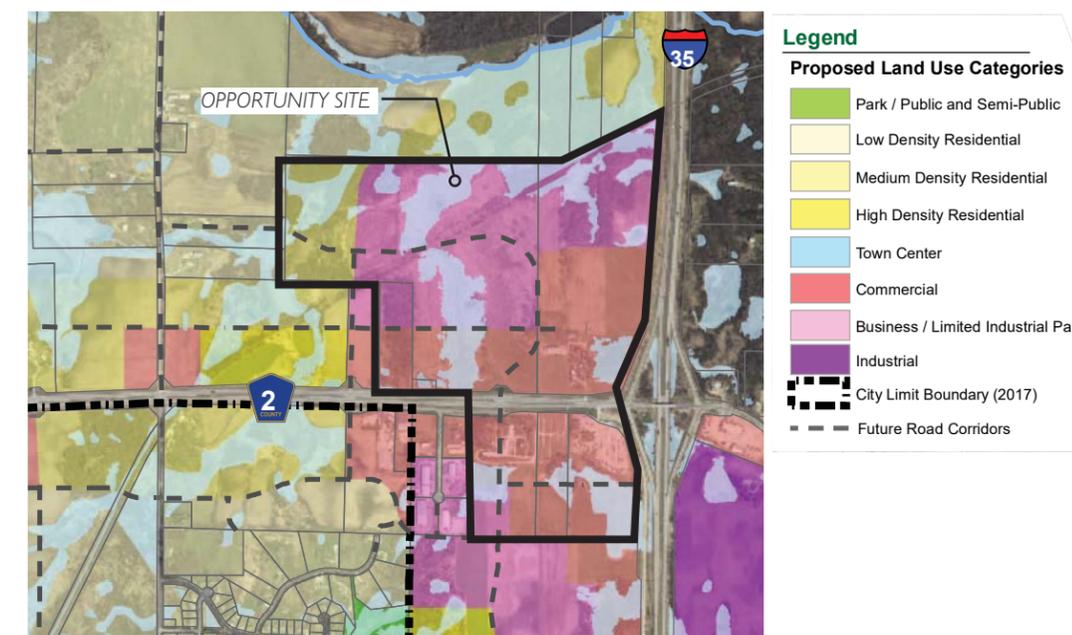
### SCOTT COUNTY 2030 PROPOSED LAND USE PLAN

The following land use types and descriptions are those that are applied to the Property as part of the above noted plan and are intended to guide future development.

- 
**URBAN EXPANSION**  
 These areas anticipated municipal services within the next 40 years. As such, the 2020 Plan recommended low-density "one unit per 40 acre" residential development in these areas to facilitate logical, orderly, and efficient urban expansion in the future"  
  
 Typical Uses: Larger-scale farms and related agricultural uses; small-parcel farms for local food production; single-family detached dwellings; cluster residential developments with buildable land area preserved for future sewered development; institutional uses; and limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies)
- 
**COMMERCIAL RESERVE**  
 The purpose of this planning category is to reserve land for future commercial and/or industrial development with urban services. The land will be limited to residential development at a very low density until urban services are provided  
  
 Typical Uses: Agricultural and related uses; single family detached dwellings
- 
**COMMERCIAL INDUSTRIAL**  
 This category is intended to provide land for uses with limited traffic and water usage, outdoor storage, and other uses that may not be appropriate in the urbanized areas. New development will be allowed provided all necessary infrastructure (septic, storm water treatment, interconnected road system, public safety, etc.) is available.  
  
 Typical Uses: General commercial and retail uses; contractor yards; warehousing; offices; manufacturing and processing; outdoor sales and display uses; agricultural and related uses

### HIGHWAY COMMERCIAL CORRIDORS - OVERLAY

Four major roadway corridors pass through Scott County (U.S. Highway 169, MN Highway 13, MN Highway 19, and Interstate 35), making these roadways highly visible entrance points into the county. These entrance points should be cleaned up to visually show the quality atmosphere Scott County offers. This can be done by encouraging higher architectural standards for commercial and industrial development and reducing the number of billboard signs along these Scott County 2030 Comprehensive Plan Update Chapter V - Land Use & Growth Management Page V-48 roadways. The County could also promote quality design, such as monument signage, brick facades, or adding architectural features to the exterior of the building.

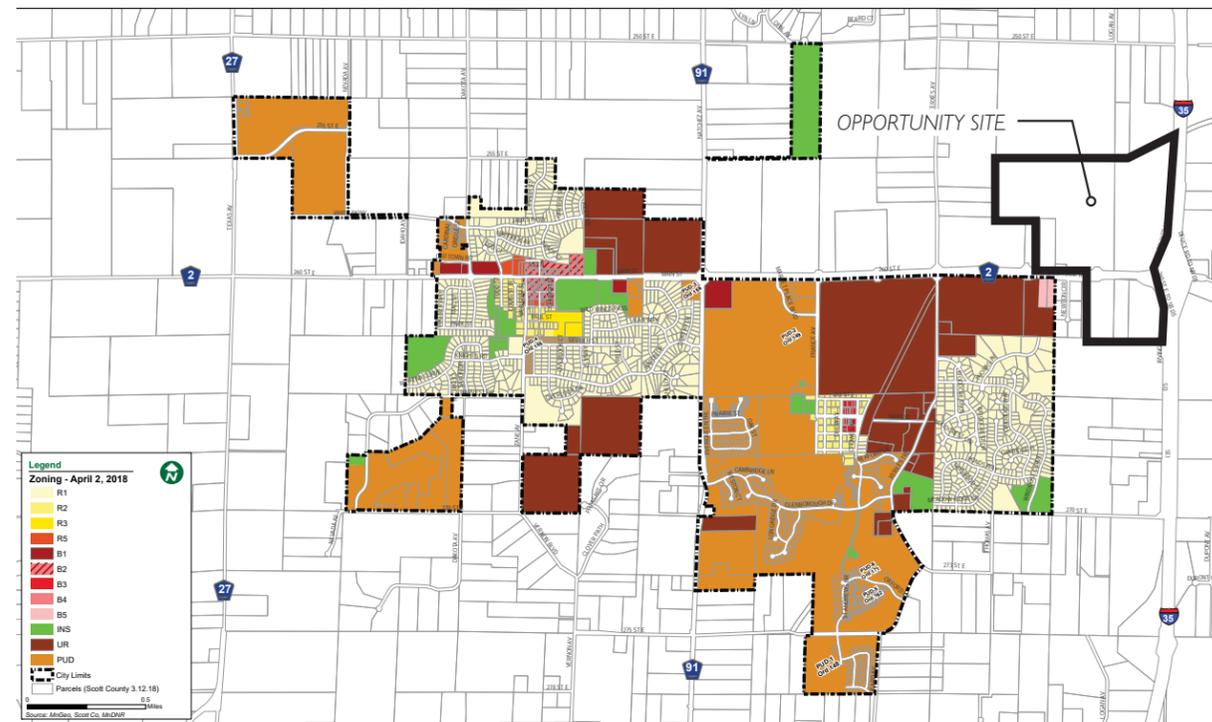


Elko New Market Draft 2040 Proposed Land Use Plan, December 2017, Source: City of Elko New Market

### ELKO NEW MARKET PROPOSED LAND USE PLAN

The following land use designations and descriptions are those that apply to the Opportunity Site and are intended to guide future development.

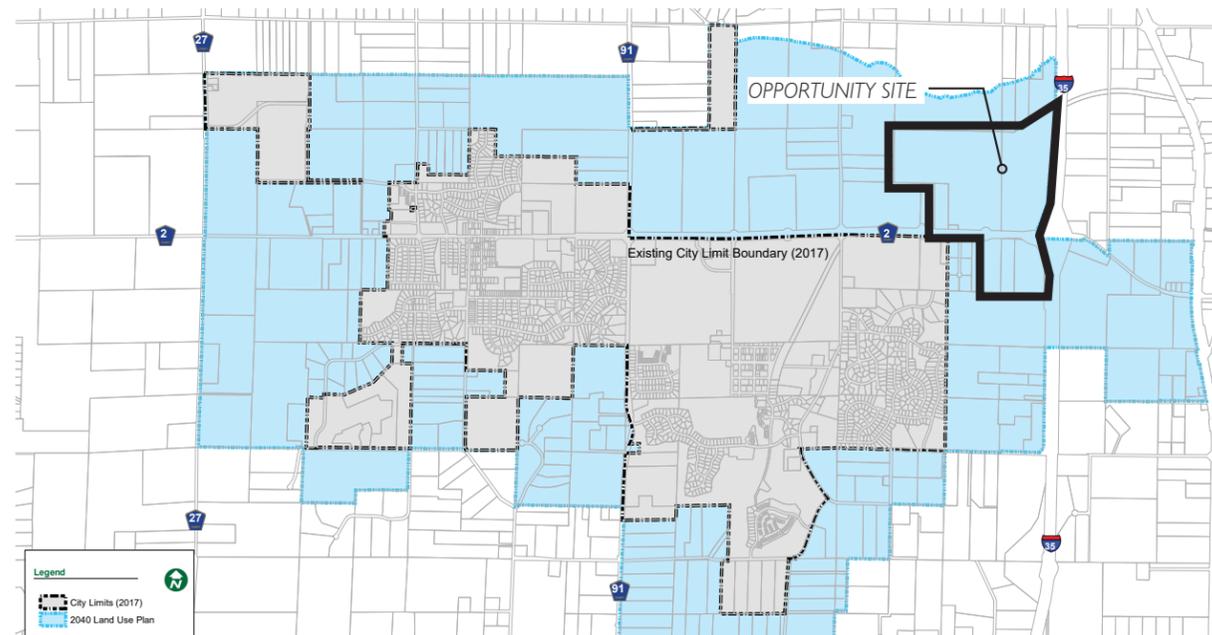
- MEDIUM DENSITY RESIDENTIAL**  
 Intent: Provide an opportunity to create population centers and to accommodate the demand for life-cycle and affordable housing located near activity areas and transportation corridors.  
  
 Uses: Two-family dwellings, three-plexes, four-plexes, and townhouses/condominiums which do not exceed eight units per building are considered permitted uses. Manufactured home parks may also be allowed by conditional use permit.  
  
 Density: Residential densities with a range between 5 and 10 units per net acre.
- COMMERCIAL**  
 Intent: Provide a location for services, goods, and employment opportunities related to the continued dependence upon the automobile for high mobility and to the growth of leisure and recreational activities in the area.  
  
 Uses: Various retail, service, office, entertainment, restaurant, and motor fuel facilities and accessory uses that are clearly incidental are common permitted uses.
- BUSINESS / LIMITED INDUSTRIAL PARK**  
  
 Intent: Serve small professional services in a group setting whereas such uses might otherwise be located in retail centers or in scattered freestanding buildings.  
  
 Uses: High quality business offices, wholesale showrooms, limited light industrial, and light manufacturing.



Elko New Market Zoning Map, April 2, 2018, Source: City of Elko New Market

### ELKO NEW MARKET EXISTING ZONING MAP

The Opportunity Site does not fall within the City of Elko New Market currently, but is within the City's annexation area. Until such time as the land is annexed, the County Land Use and Zoning designations prevail. The City of Elko New Market is designated as a Rural Center Planning Area in the Metropolitan Council's 2040 Regional Development Framework. The development framework will allow the city to grow and allocate development in the rural area. These plans are reflected in the Elko New Market Proposed Land Use Plan, and includes the Site.



2040 Undesignated MUSA Reserve Boundary. Source: Elko New Market Draft 2040 Comprehensive Plan, January 4, 2018 Planning Commission Meeting. Note: provided information is based on a draft portion of the Elko New Market 2040 Comprehensive Plan. Information is subject to change until document is formally published and released.

### UNDESIGNATED METROPOLITAN URBAN SERVICE AREAS (MUSA) RESERVE BOUNDARY

The Property falls within the Undesignated MUSA Reserve and as such, urban services will not be provided to the area until the land has been annexed by the City.

The MUSA Composite dataset depicts current and future boundaries of the Urban Service Areas (sewer service areas) based on communities' comprehensive plans for the seven-county metropolitan area of the Twin Cities of Minneapolis and Saint Paul. The dataset does not depict the precise location of current urban services (Sewer service). In other words, the Urban Service Areas designate areas that might be serviced, it does not represent the urban areas that are serviced.

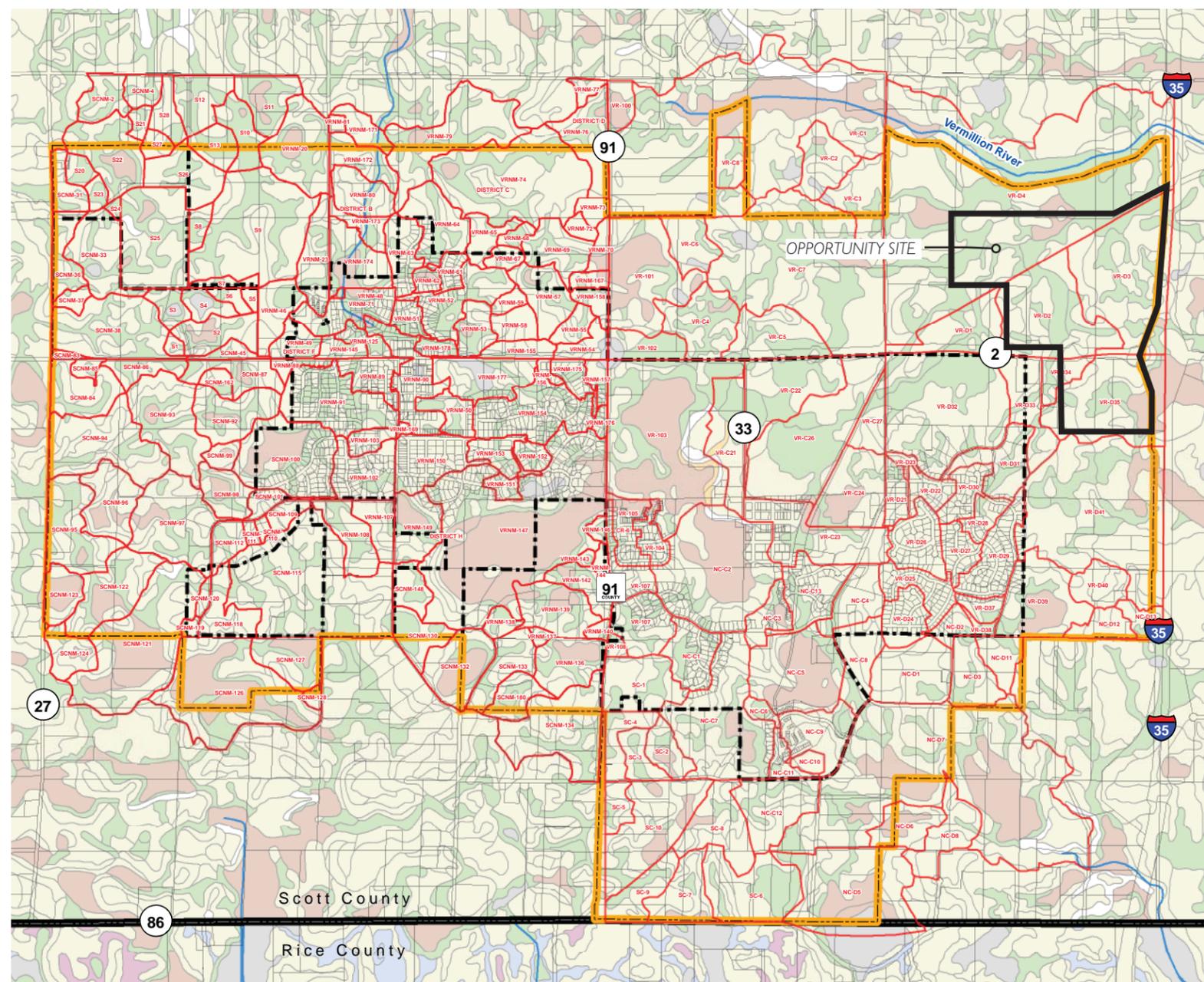
As of March 2011, a new designation area was created specifically to address the agreed upon development plan for southeastern Scott County between the county, the city of Elko New Market and the town of New Market: 'Undesignated MUSA Reserve.' Similar to 'Undesignated MUSA,' this is an area where an agreed upon acreage of urban sewer service can be added to the current MUSA by 2040 and as community's complete their 2018 Comprehensive Plans, Undesignated MUSA can represent areas to be added to the current MUSA by 2040. The distinction between 'Undesignated MUSA' and 'Undesignated MUSA Reserve' is that 'Undesignated MUSA' is an area within a municipal boundary defined by that municipality's comprehensive plan, whereas, 'Undesignated MUSA Reserve' is an area beyond the current municipal boundary (i.e., surrounding township) that is designated in a joint agreement by the city, town, and county to accommodate future municipal growth.

# ENVIRONMENTAL RESOURCES . SOILS

**INTRODUCTION** Scott County, like other portions of the metropolitan area, fall within three basic geologic units – glacial deposits, bedrock formed in shallow marine sediments deposited between 480 million and 950 million years ago, and bedrock of volcanic or metamorphic origin. Each contribute to the unique topography within the county and the Property.

## SCOTT COUNTY SOILS MAP / MUSA ENLARGEMENT AREA

The following map shows the Hydrological Soils within Scott County, and the 2030 Undesignated MUSA Reserve Boundary. The Property has a strong presence of B/D, B and a small amount of A/D Hydrological Soils. Hydrological soils are classified by the Natural Resource Conservation Service into four groups based on the soil's runoff potential. The four Hydrological Soils Groups are A, B, C, and D. Combined soil groups designate a blend of the soil group characteristics.



*Group A is sand, loamy sand or sandy loam types of soils. It has low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravels and have a high rate of water transmission.*

*Group B is silt loam or loam. It has a moderate infiltration rate when thoroughly wetted and consists chiefly or moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures.*

*Group C soils are sandy clay loam. They have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine structure.*

*Group D soils are clay loam, silty clay loam, sandy clay, silty clay or clay. This HSG has the highest runoff potential. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface and shallow soils over nearly impervious material.*

### Legend

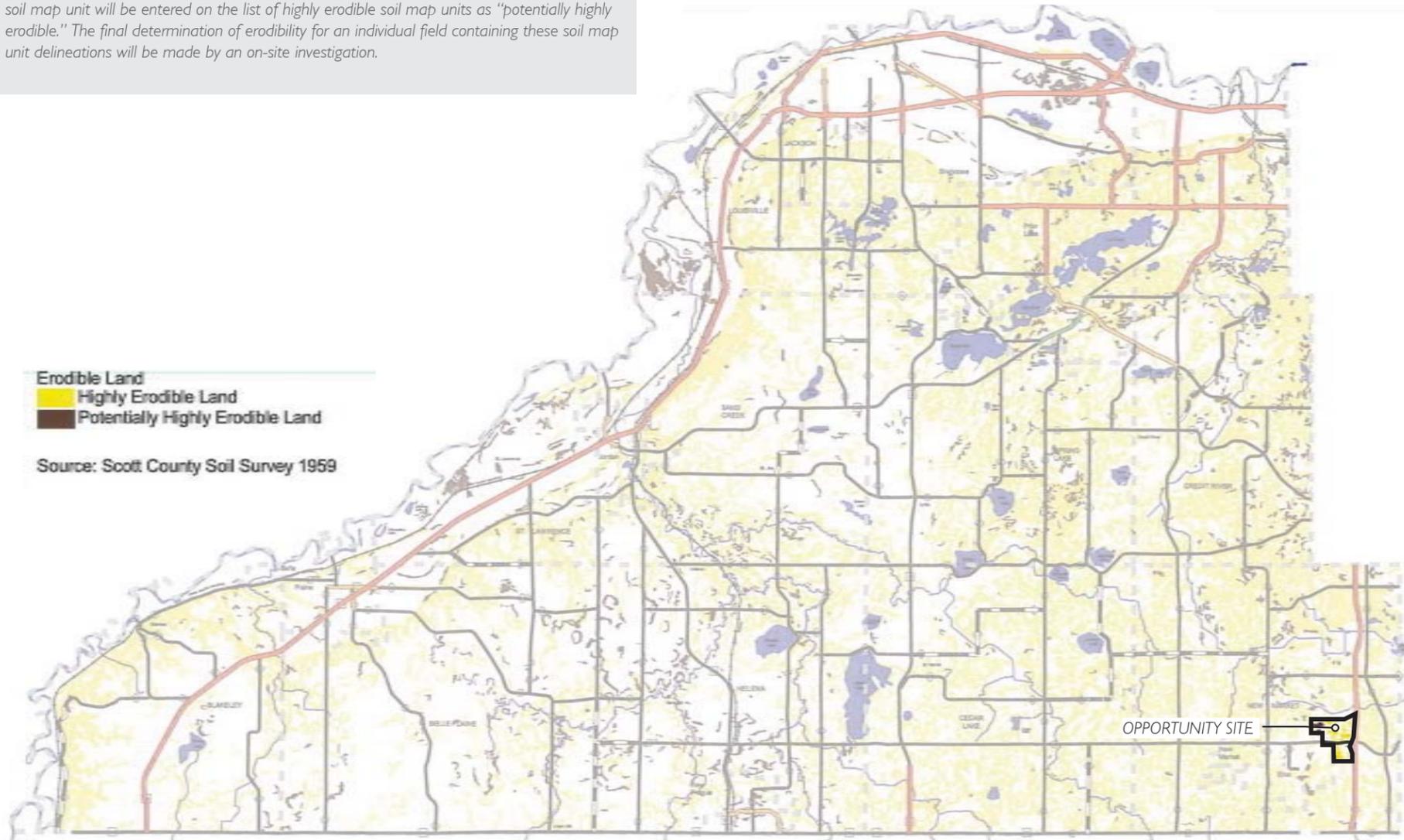
- Watersheds
- 2030 Undesignated MUSA Reserve Boundary
- Elko New Market City Limits
- County Boundary
- ~ Streams
- ⊕ Lakes
- Hydrologic Soils**
- No Data
- A
- A/D
- B
- B/D
- C
- C/D
- D

### SCOTT COUNTY HIGHLY ERODIBLE LAND

The following map indicates areas within Scott County that contain highly erodible land. Highly erodible land (HEL) is cropland, hayland, or pasture that can erode at, as defined by the Natural Resource Conservation Service (NRCS), excessive rates. This information is utilized by farmers that have fields on highly erodible land. If a producer has a field identified as highly erodible land, that producer is required to maintain a conservation system of practices that keep erosion rates at a substantial reduction of soil loss. Like the City of Elko New Market, the Property has a rich history of farming. The land/soil may have experienced erosion over time.

*Highly erodible land: A soil map with an erodibility of 8 or greater is highly erodible land (HEL)*

*Potentially highly erodible land: Whenever a soil map unit description contains a range of a slope length and steepness characteristics that produce quotients both above and below 8, the soil map unit will be entered on the list of highly erodible soil map units as "potentially highly erodible." The final determination of erodibility for an individual field containing these soil map unit delineations will be made by an on-site investigation.*



Elko New Market Comprehensive Surface Water Management Plan, Scott County Highly Erodible Land, Source: 2030 City of Elko New Market 2030 Storm Water Management Plan, Appendix E 2008 Elko New Market Comprehensive Plan

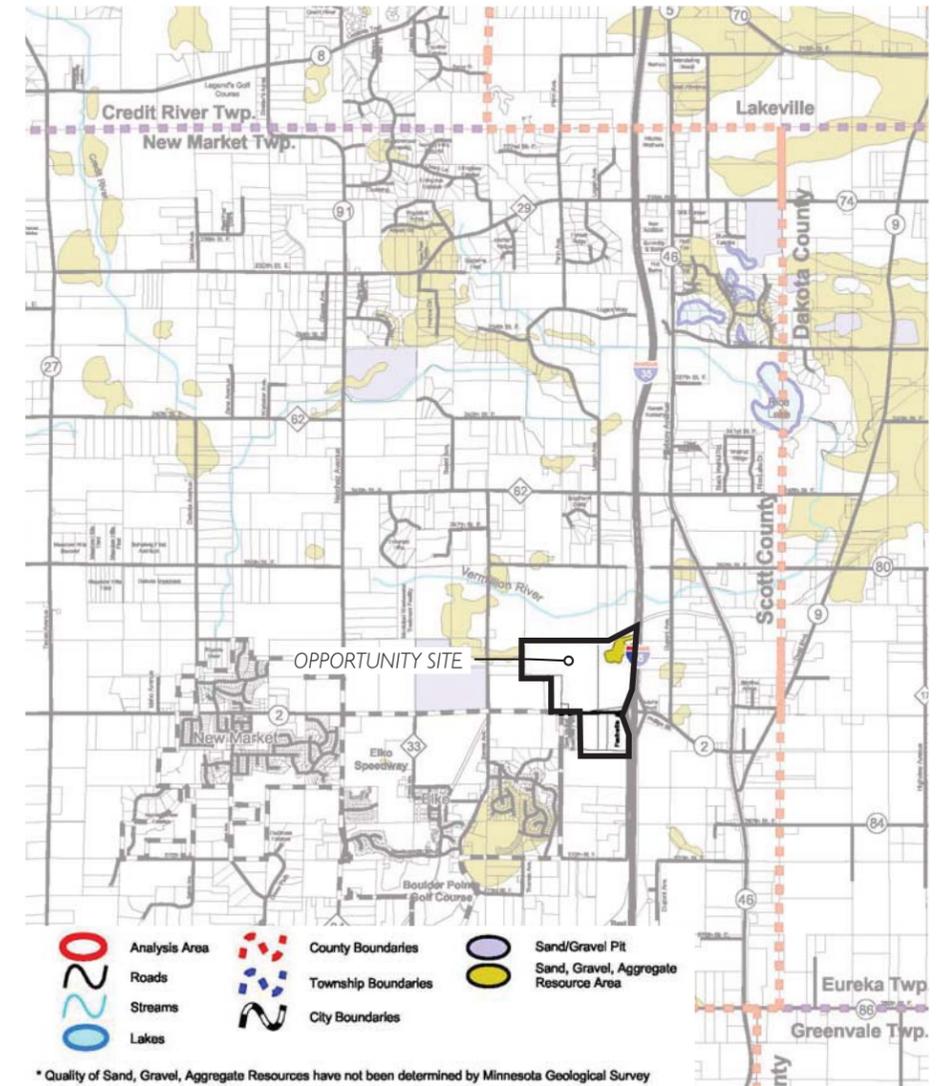
### AGGREGATE RESOURCES

The following indicates locations of aggregate resources found within the project property. Aggregate (sand, gravel, and crushed rock) has been identified as a resource vital to the area. This is because regional transportation systems and the building industry need large volumes of aggregate for construction and maintenance. Despite the importance of the resource, the Metropolitan Area is losing access to its aggregate resources and rapidly depleting the supply.

Based on the mandate of State Statute 473.859, the City of Elko New Market derived the following goal to address the removal of aggregate within the City:

- Preserve And Protect Non-Metallic Mineral Deposits – Identify significant deposits of non-metallic minerals (sand, gravel, and aggregate), and where appropriate, consider preservation and protection for future access and resource based activities that provide for a diverse, regional, and sustainable economy and environment.

The City of Elko New Market acknowledges that inherent conflicts may occur between the need for extracting this aggregate resource, the rights of private property owners to develop their land, and the need for the orderly extension of public utilities.



Aggregate Resources Map, Source: SE Scott County Comprehensive Plan Update, 2008 Elko New Market Comprehensive Plan

### SCOTT COUNTY BEDROCK FORMATIONS

Below Scott County glacial deposits lies a series of layered sedimentary rocks. The youngest layers are on top and the oldest at the bottom. Beneath the sedimentary rock is volcanic (igneous) rock. Below, Scott County as identified the Property's bedrock type as Prairie du Chien. The bedrock is comprised of dolomite with some sandstone and shale. The Prairie du Chien bedrock was formed of carbonate deposits and was later impacted by the shallow sea retreating. This now leaves the Prairie du Chien bedrock with a major erosional surface and varying thicknesses.

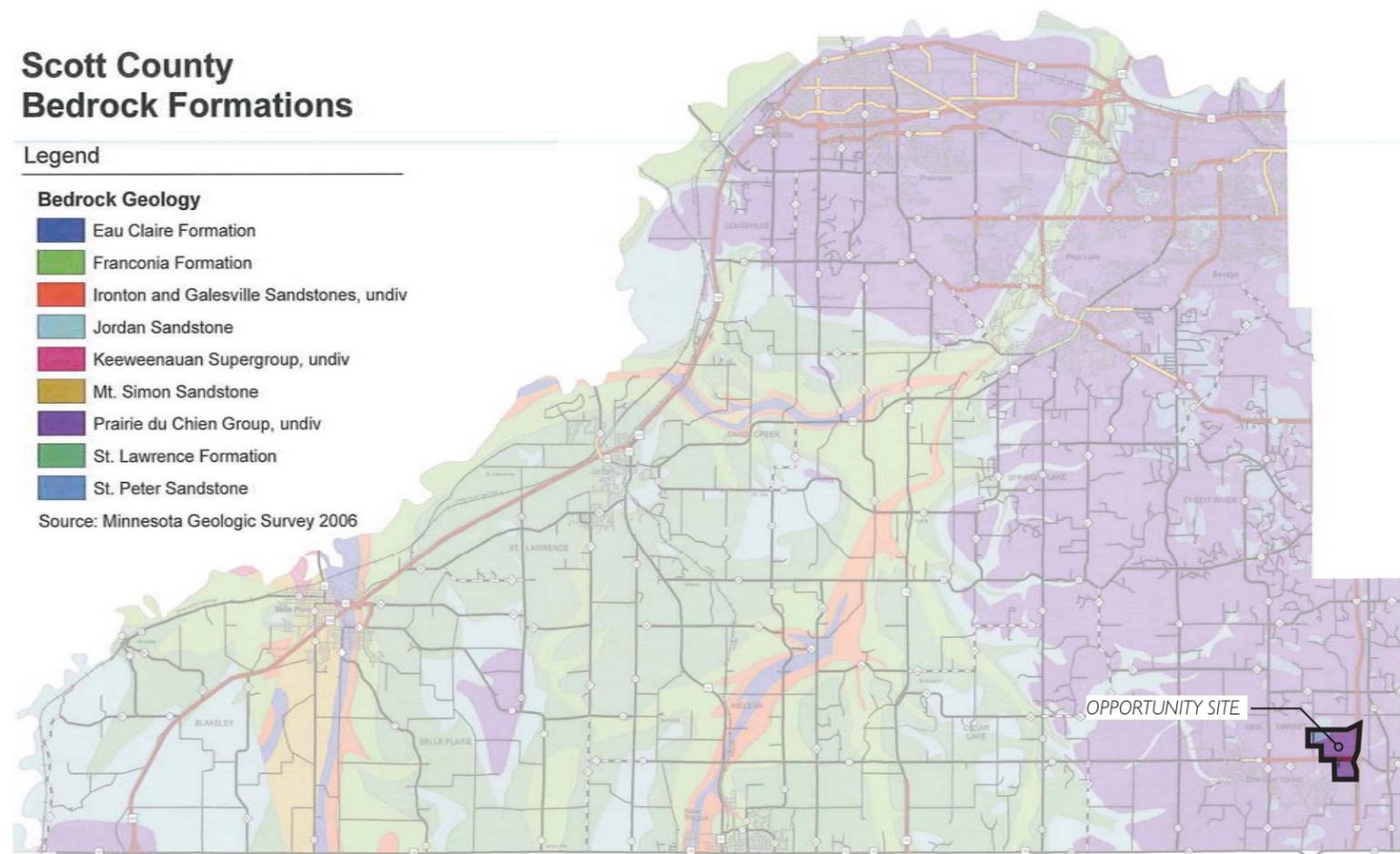
### Scott County Bedrock Formations

Legend

Bedrock Geology

- Eau Claire Formation
- Franconia Formation
- Ironston and Galesville Sandstones, undiv
- Jordan Sandstone
- Keeweenauan Supergroup, undiv
- Mt. Simon Sandstone
- Prairie du Chien Group, undiv
- St. Lawrence Formation
- St. Peter Sandstone

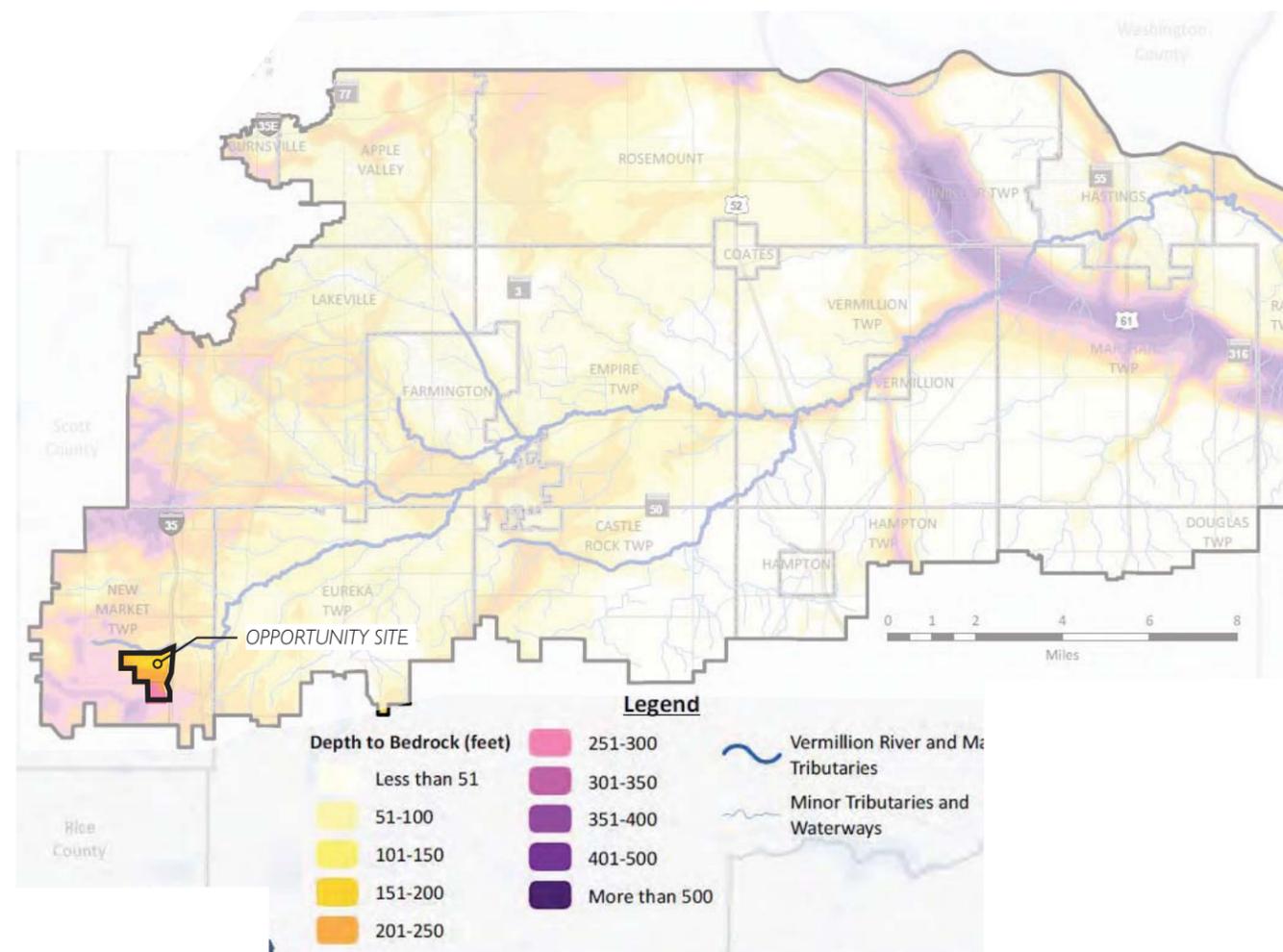
Source: Minnesota Geologic Survey 2006



Elko New Market Comprehensive Surface Water Management Plan, Scott County Highly Erodible Land, Source: 2030 City of Elko New Market 2030 Storm Water Management Plan, Appendix E. 2008 Elko New Market Comprehensive Plan

### VERMILLION RIVER WATERSHED DEPTH TO BEDROCK

The following describes the depth to bedrock for the Property, which is within the range of 101-150 feet.



Vermillion River Watershed Depth to Bedrock, Source: Comprehensive Water Resource Management Plan 2009-2018, Scott County Watershed Management Organization

## ENVIRONMENTAL RESOURCES . WATER

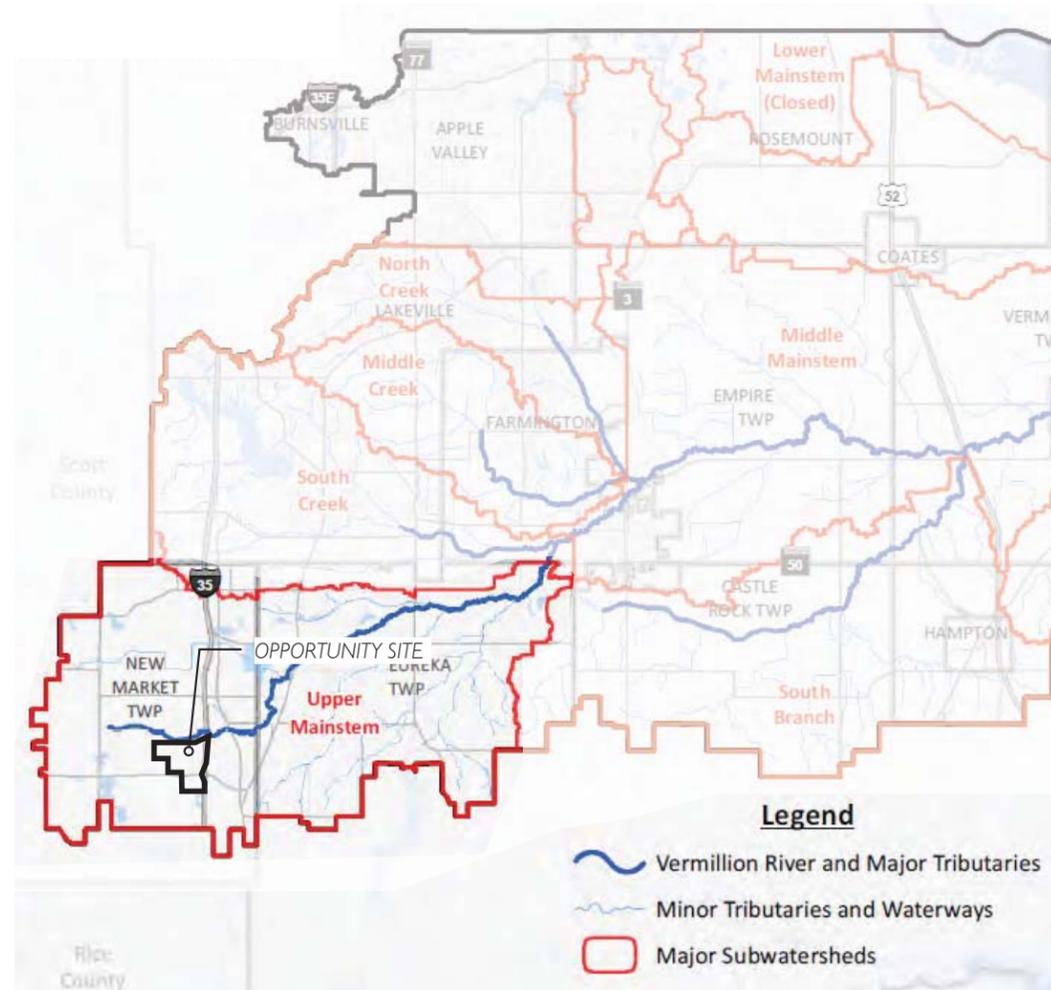
**INTRODUCTION** The Property falls within the Vermillion River's Watershed which includes the main stream of the Vermillion River; four major tributaries, many unnamed streams, and several lakes. The main stream of the Vermillion River runs directly north of The Property. The Property falls within the Scott County Watershed jurisdiction and as such will need to meet their development criteria for permitting.

### SCOTT COUNTY WATERSHED JURISDICTION

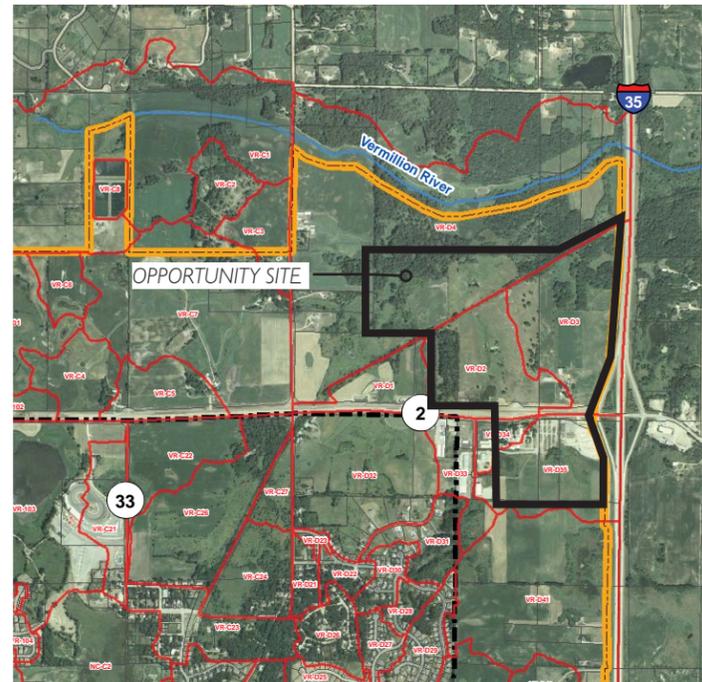
The Property falls under the Scott County Vermillion Joint Powers Organization (VRMJO). VRMJO is governed by the Vermillion River Watershed Joint Powers Board (VRWJPB).

### VERMILLION RIVER'S MAJOR SUBWATERSHEDS

Large watersheds, like the Vermillion River Watershed, can have identified subwatersheds that indicate drainage patterns into a larger body of water. The Property belongs to the Upper Mainstem subwatershed of the Vermillion River as shown in the following map.



Vermillion River's Major Subwatersheds, Source: Vermillion Watershed Comprehensive Water Resource Management Plan 2009-2018, Scott County Watershed Management Organization



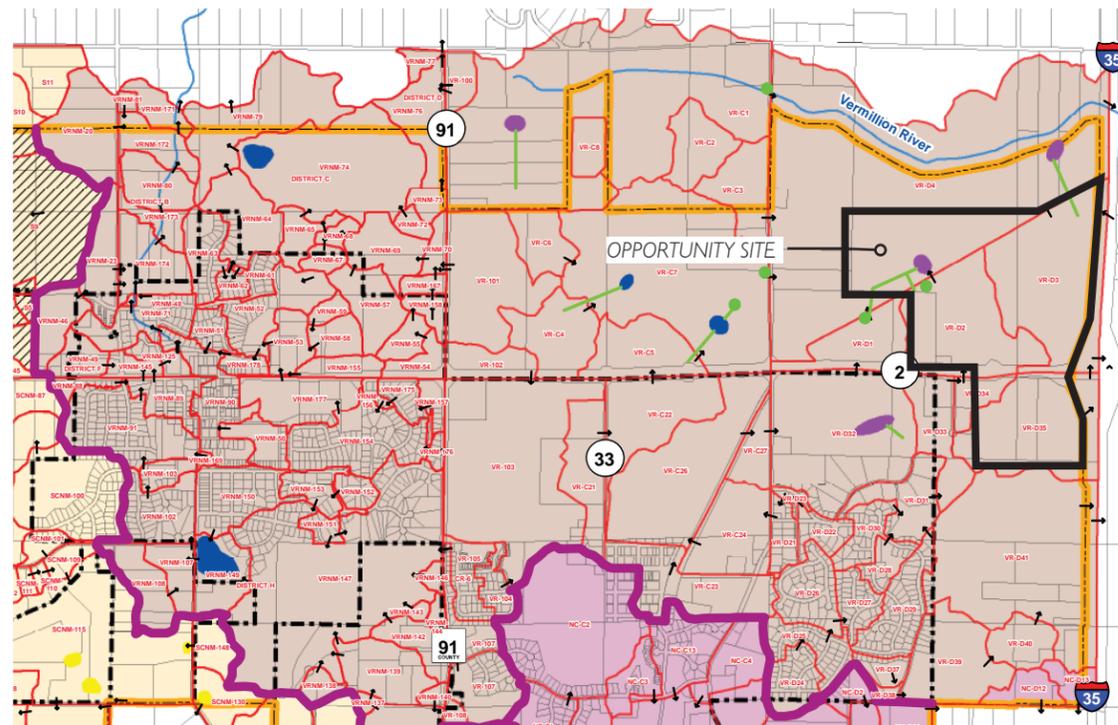
Elko New Market Watershed 2006 Aerial Photo, Source: 2030 City of Elko New Market 2030 Storm Water Management Plan, Appendix E 2008 Elko New Market Comprehensive Plan

### ELKO NEW MARKET WATERSHED 2006 AERIAL PHOTO

The map below provides the boundary lines of the subwatersheds within The Property. Each with their own drainage patterns, which can be seen on the Elko New Market Watershed Drainage District Map.

#### Legend

- Watersheds
- 2030 Undesignated MUSA Reserve Boundary
- Elko New Market City Limits
- County Boundary
- ~ Streams
- ~ Lakes



Elko New Market Watershed Drainage District Map, Source: 2030 City of Elko New Market 2030 Storm Water Management Plan, Appendix E 2008 Elko New Market Comprehensive Plan.

### ELKO NEW MARKET WATERSHED DRAINAGE DISTRICT MAP

The Property drains northwest towards the Vermillion River, while the southern section of The Property drains to be northeast. The map also indicated proposed regional NURP locations.

NURP: Nationwide Urban Runoff Plan is a research project conducted by the United States Environmental Protection Agency (EPA) between 1979 and 1989. It was the first comprehensive study of urban stormwater pollution across the United States. NURP ponds refer to retention basins that capture sediment from stormwater runoff as it is detained.

#### Legend

##### Watershed Districts

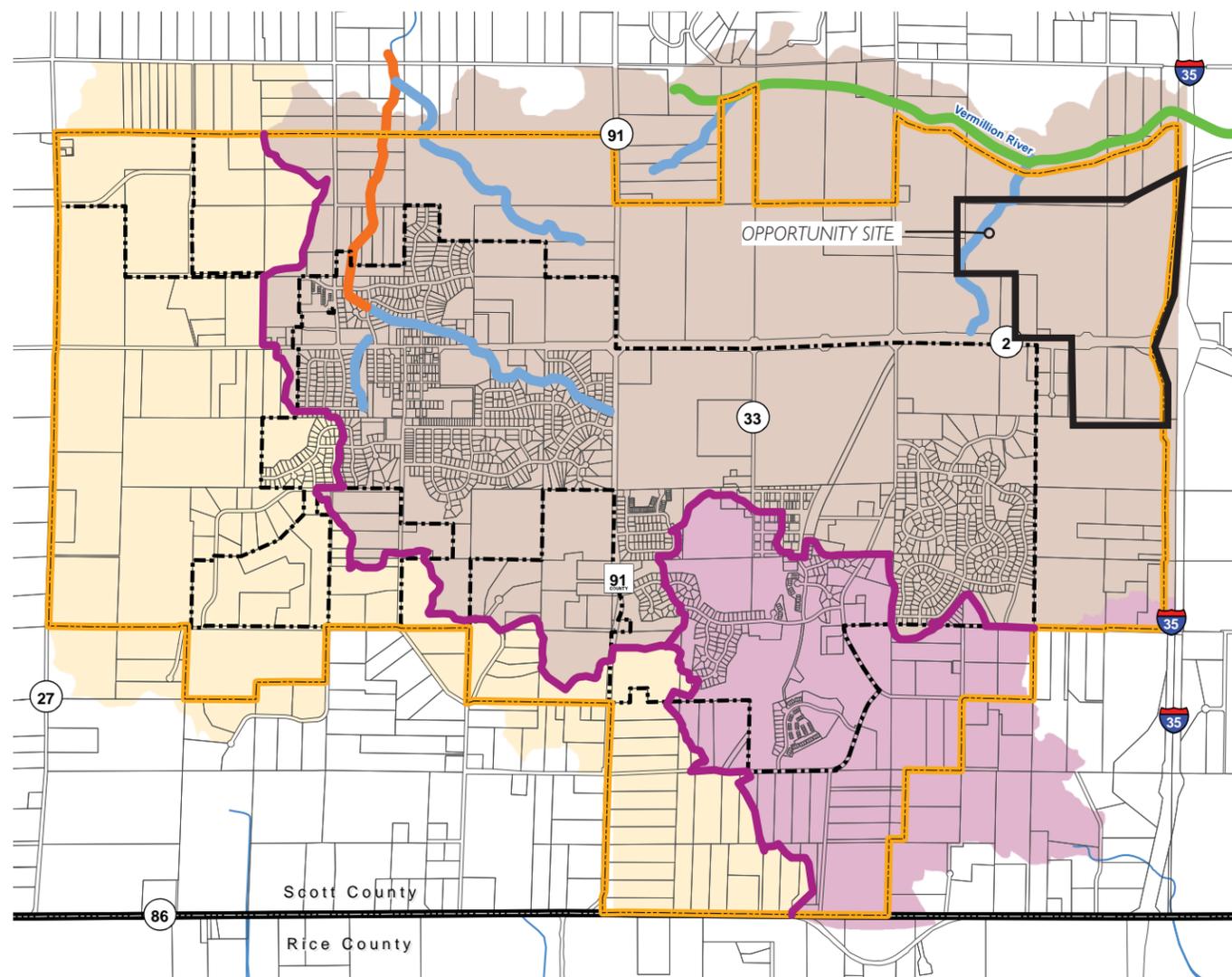
- Vermillion River
- North Cannon
- Sand Creek
- Major Watershed Boundary
- Watersheds
- Section 20 With Flow Restrictions (See App.B)
- Drainage Flow Arrows
- Proposed Regional Ponds
- Proposed Development Ponds
- Proposed Regional Nurb
- 2030 Undesignated MUSA Reserve Boundary
- Elko New Market City Limits
- County Boundary
- ~ Streams
- ~ Lakes

### WATERWAY CORRIDOR CLASSIFICATION MAP

The map indicates a Water Quality Corridor from the Vermillion River is located in the northwest corner of The Property. A required buffer shall be protected as outlots or with conservation easements as indicated by the water quality policy 2.13 and is address in the City of Elko New Market Environmental Protection Ordinance.

It should be noted that the waterway is not a Protected Waters Inventory (PWI), as seen in the following map, thus being placed under the jurisdiction of VRWJPO. Under VRWJPO buffer width standards for waterway corridors, the buffer width is an average of 30-feet, minimum of 20-feet where there is a flow path for concentrated surface runoff measured from the centerline of the flow path per section 6.3 Buffer Standards (Standards for VMWJPO).

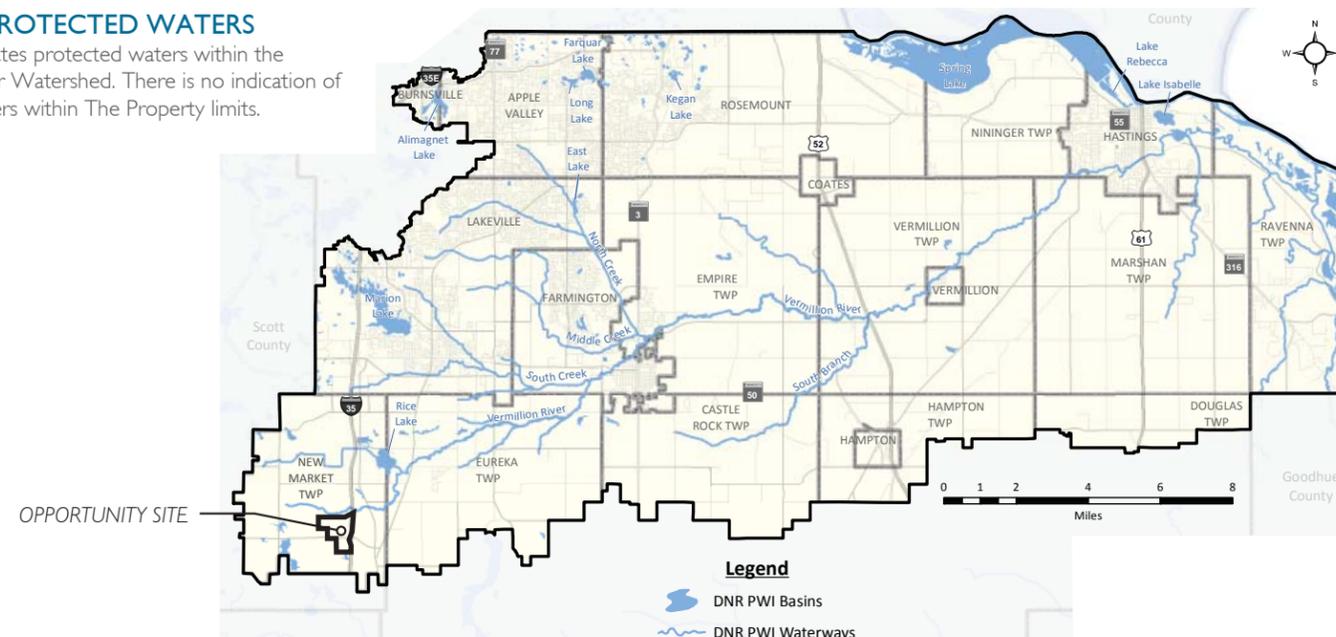
- Legend**
- Stream Classification**
    - Conservation Corridors
      - Upper Reach - 150' Buffer Width
    - Aquatic Corridors
      - Tributary Connector - 50' Buffer Width
    - Water Quality Corridors
      - 20' Buffer Width
  - Watershed Districts**
    - Vermillion River
    - North Cannon
    - Sand Creek
    - Major Watershed Boundary
    - 2030 Undesignated MUSA Reserve Boundary
  - Elko New Market City Limits
  - County Boundary
  - Streams
  - Lakes



Elko New Market Comprehensive Surface Water Management Plan, Waterway Corridor Classification Map, Source: 2030 City of Elko New Market 2030 Storm Water Management Plan, Appendix E 2008 Elko New Market Comprehensive Plan

### MN DNR PROTECTED WATERS

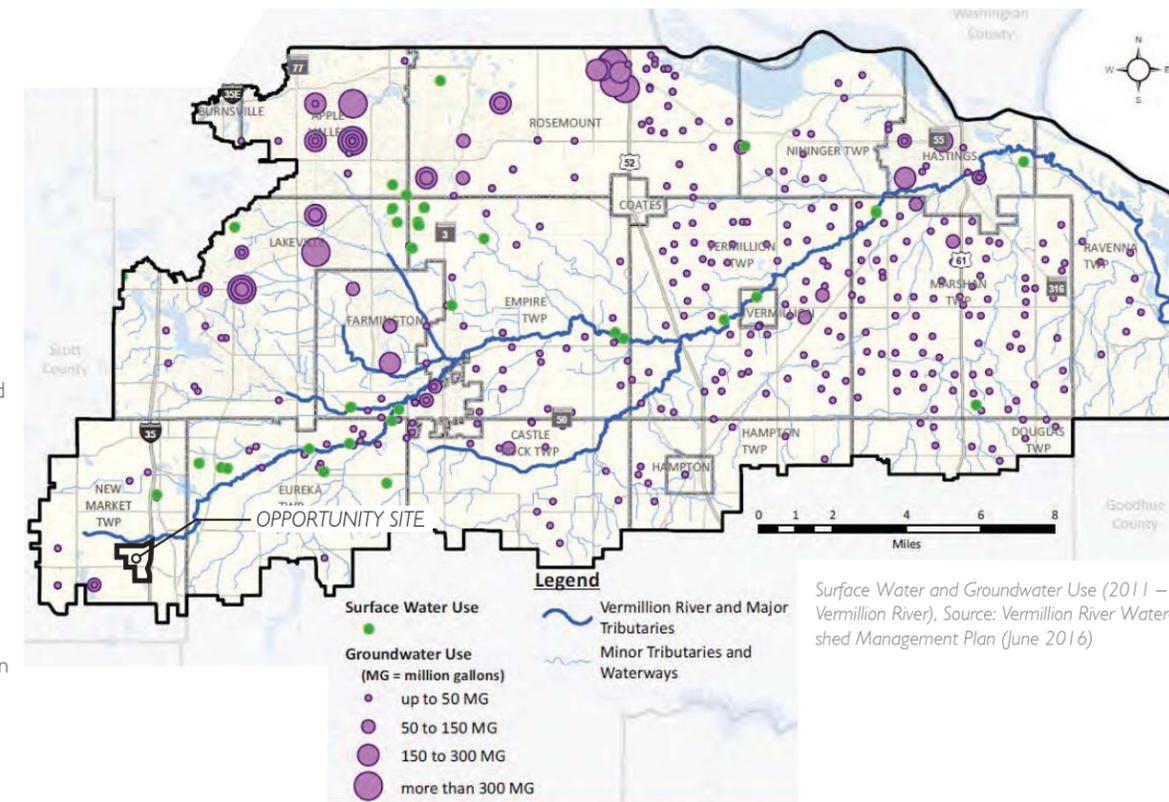
The map indicates protected waters within the Vermillion River Watershed. There is no indication of protected waters within The Property limits.



MN DNR Protected Waters (2011 Vermillion River), Source: Vermillion River Watershed Management Plan (June 2016)

### VERMILLION RIVER SURFACE WATER AND GROUNDWATER USE

The Vermillion River Watershed Joint Powers Organization (VRWJPO) is a watershed management organization as defined in the Metropolitan Surface Water Management Act (Minn. Statutes Chapter 103B). This Act provides the VRWJPO with the power to accomplish its statutory purpose—to protect, preserve, and manage surface and groundwater systems within the Vermillion River Watershed. The map displays that there is not a significant amount of surface or groundwater use within the City extent. The City of Elko New Market current water system is comprised of 4 wells, 2 elevated water reservoirs, and 2 water treatment facilities which pump an average daily amount of 300,000 gallons.



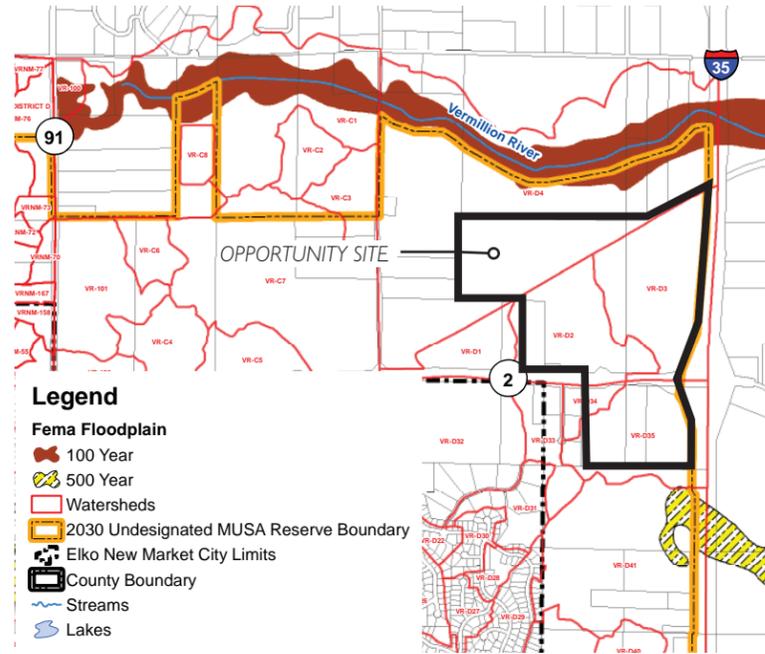
Surface Water and Groundwater Use (2011 - Vermillion River), Source: Vermillion River Watershed Management Plan (June 2016)

*Surface Water:* water in the nation's rivers, streams, creeks, lakes, and reservoirs. The main uses of surface water includes drinking water and other public uses, irrigation uses, and by the thermoelectric-power industry to cool electricity-generating equipment.

*Groundwater:* water present beneath Earth's surface in soil pore spaces and in the fractures of rock formations primarily used for irrigation purposes. A unit of rock or unconsolidated deposit is called an aquifer when it can yield a usable quantity of water. Local city and county water departments withdraw groundwater for public uses, such as delivery to homes, businesses, and industries, as well as for community firefighting.

### FEMA FLOODPLAIN MAP

The map displays that The Property is not located within a FEMA floodplain. The closest floodplain is to the north, where the Vermillion River is indicated as a 100 year FEMA floodplain.



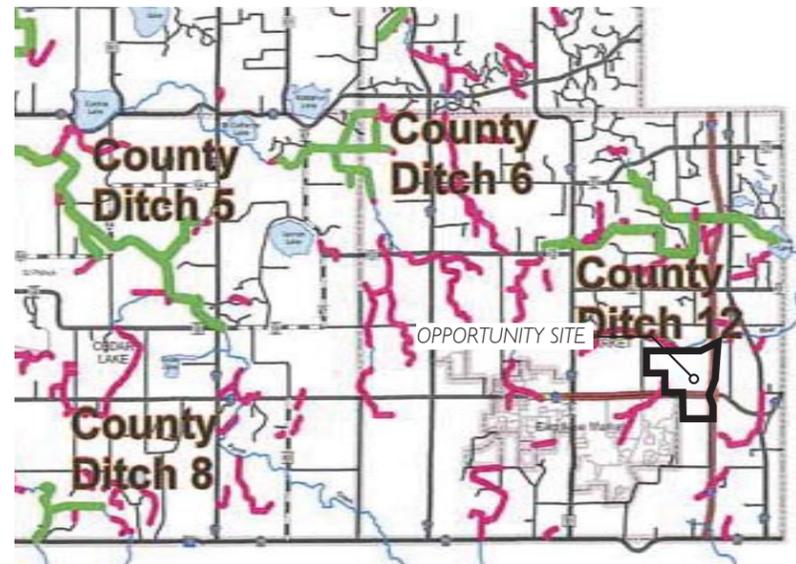
**100 Year Floodplain:** an area that will be inundated by a flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood.

**500 Year Floodplain:** areas area that will be inundated by a flood event having a 0.2- percent chance of being equaled or exceeded in any given year. The 0.2-percent annual chance flood is also referred to as the 500-year flood.

Elko New Market Comprehensive Surface Water Management Plan, FEMA Floodplain Map, Source: 2030 City of Elko New Market 2030 Storm Water Management Plan, Appendix E 2008 Elko New Market Comprehensive Plan

### SCOTT COUNTY DITCHES

The map displays that there is no private or county ditches within The Property limits. The map does indicate private ditches located to the north and south of the northern section of The Property.



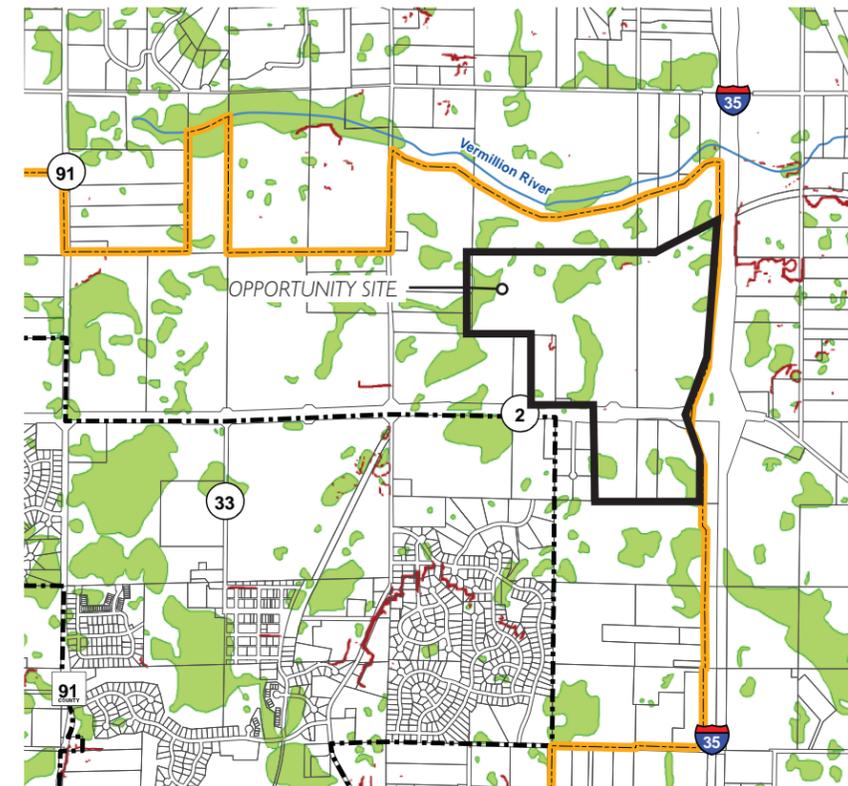
**Ditch Inventory**  
 County Ditch  
 Private Ditch

Source: Scott County GIS Department 2008

Scott County Ditches, Source: Scott County Comprehensive Water Resource Management Plan 2009-2018.

### SCOTT COUNTY WETLAND & BLUFF AREAS MAP

The Property has wetlands and few bluffs as defined by Scott County.



Elko New Market Comprehensive Surface Water Management Plan, Scott County Wetland & Bluff Areas Map, Source: 2030 City of Elko New Market 2030 Storm Water Management Plan, Appendix E 2008 Elko New Market Comprehensive Plan

**Wetland:** Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this definition, wetlands must have the following three attributes:

- Have a predominance of hydric soils
- Are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions
- Under normal circumstances support a prevalence of such vegetation

**Bluff:** A topographic feature such as a hill, cliff, or embankment having the following characteristics (an area with an average slope of less than 18-percent over a distance for 50-feet or more shall not be considered:

- The slope rises at least 25-ft
- The grade of the slope from the toe of the bluff to the top of the bluff averages 30-percent or greater.

### Legend

- Scott County Wetlands
- Scott County Bluffs (Per Ordinance)
- 2030 Undesignated MUSA Reserve Boundary
- Elko New Market City Limits
- County Boundary
- Streams
- Lakes

### NATIONAL WETLAND INVENTORY AND ISG FIELD REVIEW

Due to the dominant land form of “dead ice moraine”, which refers to the remnants of the last of the glacier as it retreated The Property includes a series of connected and isolated wetlands with few organized streams. The Property has large wetlands located on both the north and south sides of County State Aid Highway 2. The map shows the National Wetlands Inventory (NWI) with ISG’s field review of the wetlands on The Property. The NWI source map is based on 2010-2011 aerial photography and the time period for content is from March 20th, 2017. ISG field review was conducted on June 20th, 2017.

The US Fish and Wildlife Service (FWS) is the principal US Federal agency tasked with providing information to the public on the status and trends of our Nation’s wetlands. The US FWS National Wetland Inventory (NWI) is a publically available resource that provides detailed information on the abundance, characteristics, and distribution of US wetlands. Wetland classification were determined from the NWI Wetlands and Deepwater Map Code System (Cowardin Classification). The NWI indicated wetlands that belonged to the Palustrine System, Emergent or Forested Classification, and belong to the Persistent Subclass.

*Palustrine System (P): includes all nontidal wetlands dominated by trees, shrubs, persistent emergent, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5-percent. It also includes wetlands lacking such vegetation, but with all of the following four characteristics:*

- Area less than 8 ha (20 acres)
- Active wave-formed or bedrock shoreline features lacking
- Water depth in the deepest part of basin less than 2 m at low water
- Salinity due to ocean-derived salts less than 0.5-percent

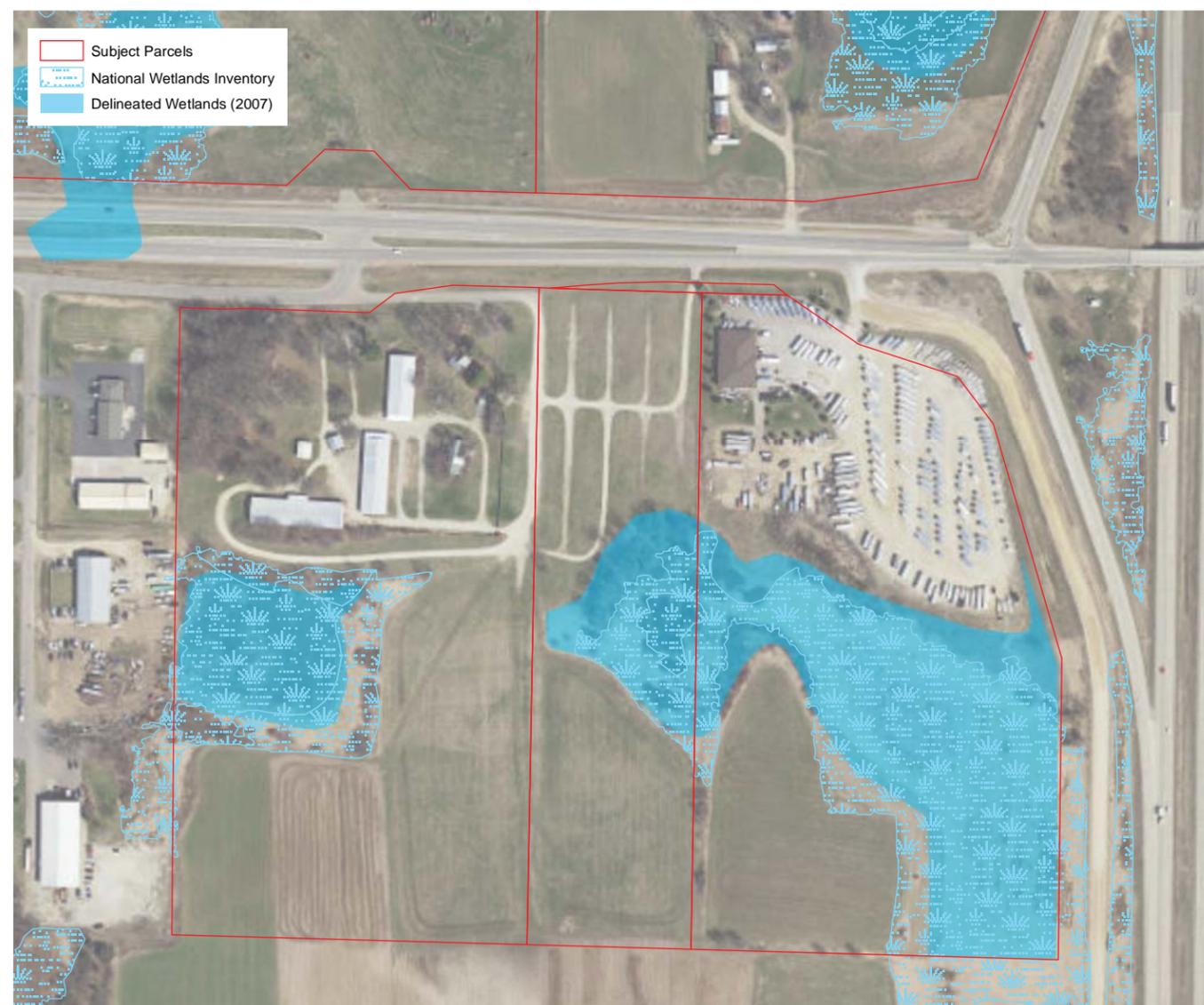
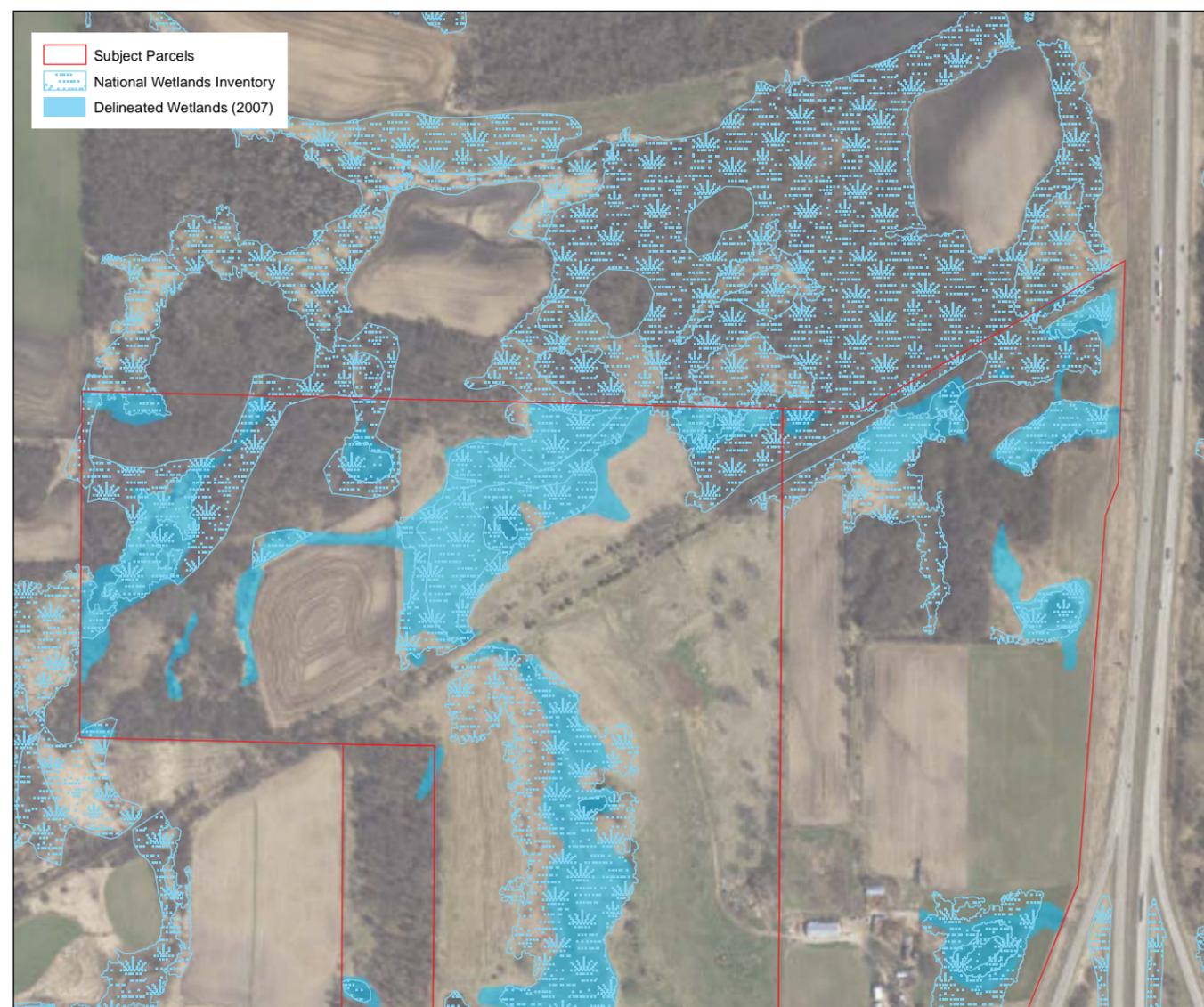
*Emergent (EM): Wetland characterized by rooted herbaceous and grass like plants which stand erect above the water or ground surface (excluding mosses or lichens). Vegetation is present for most of the growing season in most years. Emergent wetlands include marshes, meadows, and fens.*

*Emergent (EM): Wetland characterized by rooted herbaceous and grass like plants which stand erect above the water or ground surface (excluding mosses or lichens). Vegetation is present for most of the growing season in most years. Emergent wetlands include marshes, meadows, and fens.*

*Forested (FQ): Wetland dominated by woody vegetation 20 feet or taller. Forested wetlands, e.g. forested swamps, generally include an overstory of trees, an understory of young trees and shrubs, and a herbaceous layer.*

*Persistent (I): Plant species that normally remain standing until the beginning of the next growing season in most years, e.g. cattails, bulrushes, reeds.*

Definitions from Classification of Wetlands and Deepwater Habitats of the United States Appendix F – The Cowardin System of Wetland Classification (1979) and the National Wetlands Inventory (NWI)



# ENVIRONMENTAL RESOURCES . VEGETATION

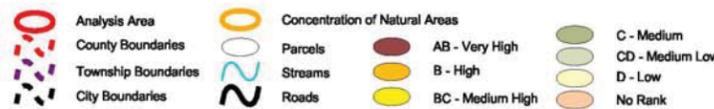
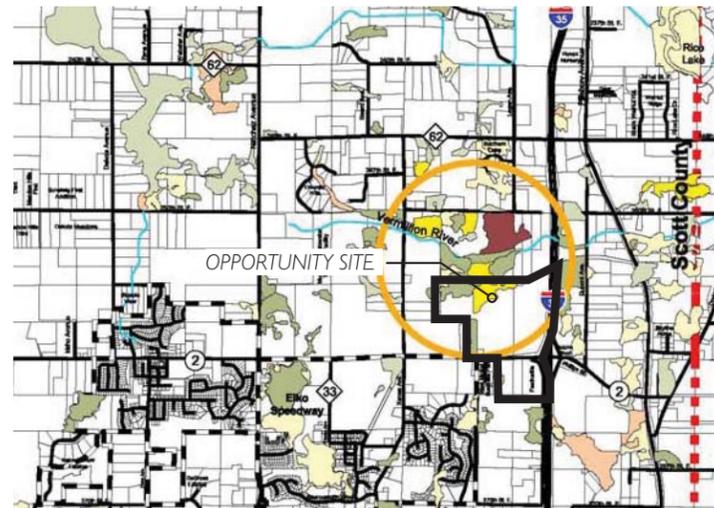
**INTRODUCTION** Elko New Market is home to headwaters of four watersheds, the Vermillion River, Credit River, Sand Creek, and a portion of the North Cannon River. The Property lies within the Vermillion River Watershed which encompasses a community of high quality oak forest, oak woodland, and several types of wetland communities. The Natural Resources and vegetation of the Vermillion River Watershed directly impart of The Property providing an abundance of natural resources and history to the land.

## NATURAL RESOURCE INVENTORY QUALITY RANKINGS + SIGNIFICANT CONCENTRATIONS

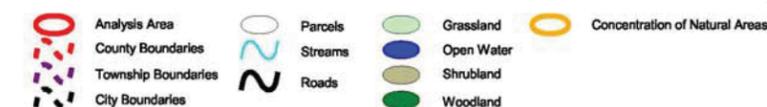
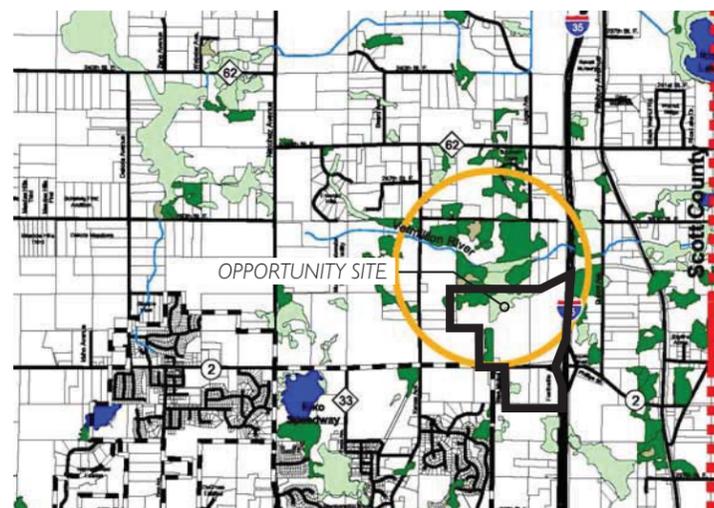
Elko New Market identified three level of priority of natural areas for protection and management within the Township. The Property has four zones of natural resources, three listed at a medium level of priority and one at a medium high level of priority. The two medium level of priority located to the north of County Road 2 are both woodland areas. The remaining two areas, one medium high priority to the north of County Road 2 and one medium are both grassland areas. All of the identified areas contribute to the complex community of the Vermillion River.

Elko New Market belongs to the Big Wood Subsection of the U.S. Forest Service's Ecological Classification System. The subsection coincides with a large block of deciduous forest that was present at the time of Euro-American settlement. Topography is gently to moderately rolling. Soils are formed in thick deposits of gray limy glacial till left by the Des Moines lobe. Northern red oak, sugar maple, basswood, and American elm were most common in this dominantly forested region. More than 75 percent of the subsection is currently cropland, with an additional 5 to 10 percent pasture. The remaining 10 to 15 percent is either upland forest or wetland. Big Woods habitats feature woodland birds, such as red-shouldered hawks and warblers, savanna species such as Blanding's turtles and redheaded woodpeckers, and wetland species such as turtles, ospreys, Forster's terns, and black terns.

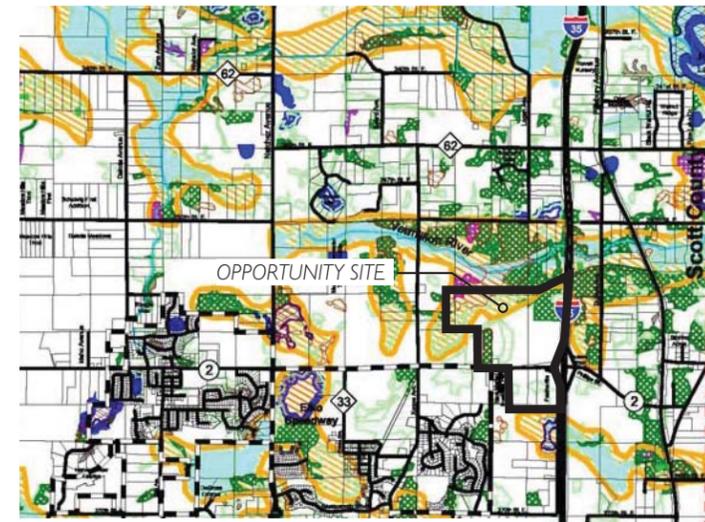
Definition from Vermillion River Watershed Management Plan



Natural Resource Inventory Quality Rankings, Source: Elko New Market Comprehensive Plan 2008



Significant Concentrations of Natural Resources, Sources: Elko New Market Comprehensive Plan 2008



Natural Resource Corridors, SE Scott County Comprehensive Plan Update, Source: Elko New Market Comprehensive Plan 2008

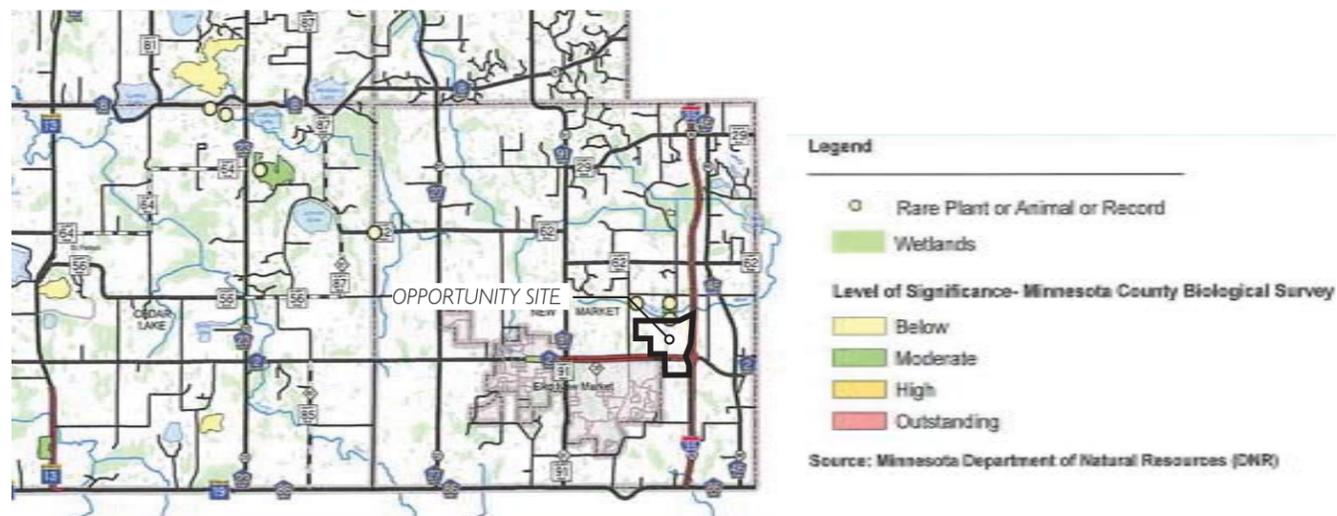
## NATURAL RESOURCE CORRIDORS

The Property lies within the Vermillion River natural resource corridor as seen in the map below. When a property within a mapped corridor is proposed for development, the County must evaluate the proposal alongside the following statements and make decisions related to implementing corridor purposes to shape the pattern of development desired:

- Determine if the property (or portion of the property) proposed for development is within or adjacent to a Natural Area Corridor
- Identify what types of resources are present within the corridor (e.g. wetland, woodland)
- Identify the purpose of the corridor (as outlined above)
- Determine whether preservation of the resource(s) within the corridor is appropriate
- Determine what levels of resource protection already exist for the area in question (for example: if the area is a wetland in a corridor, then there is already some existing protection through the State of Minnesota Wetland Conservation Act)
- Based on purpose, determine the appropriate implementation method(s) or options

### SCOTT COUNTY RARE FEATURES AND BIOLOGICAL SIGNIFICANCE AREAS

The county map depicts areas of rare features and biological significance. This could include rare plants, rare animals, native plant communities, geologic features, or animal aggregations. There are three areas adjacent to The Property to be evaluated.

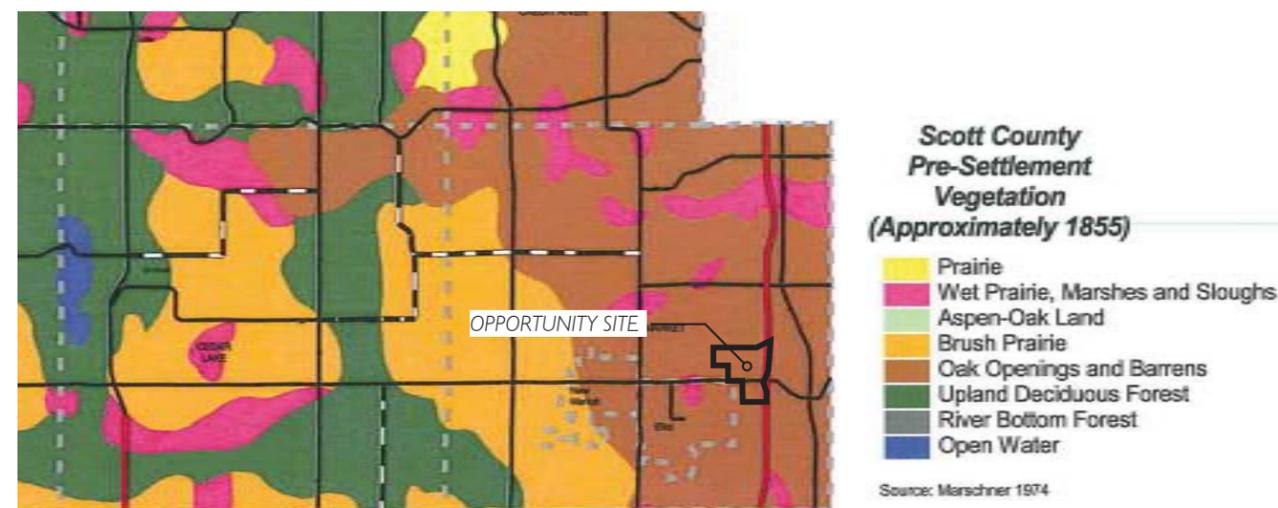


Scott County Rare Features and Biological Significance Areas, Sources: Scott County Comprehensive Water Resource Management Plan 2009-2018

### SCOTT COUNTY PRE-SETTLEMENT VEGETATION

Pre-settlement Minnesota contained an array of ecosystems and supported over 2,500 species of plants and animals. The diversity developed Minnesota into three biomes. Today, after more than a century of European settlement, nearly all the biotic communities have been altered. The Property, according to Marschner 1974, pre-settlement vegetation is Oak Openings and Barrens.

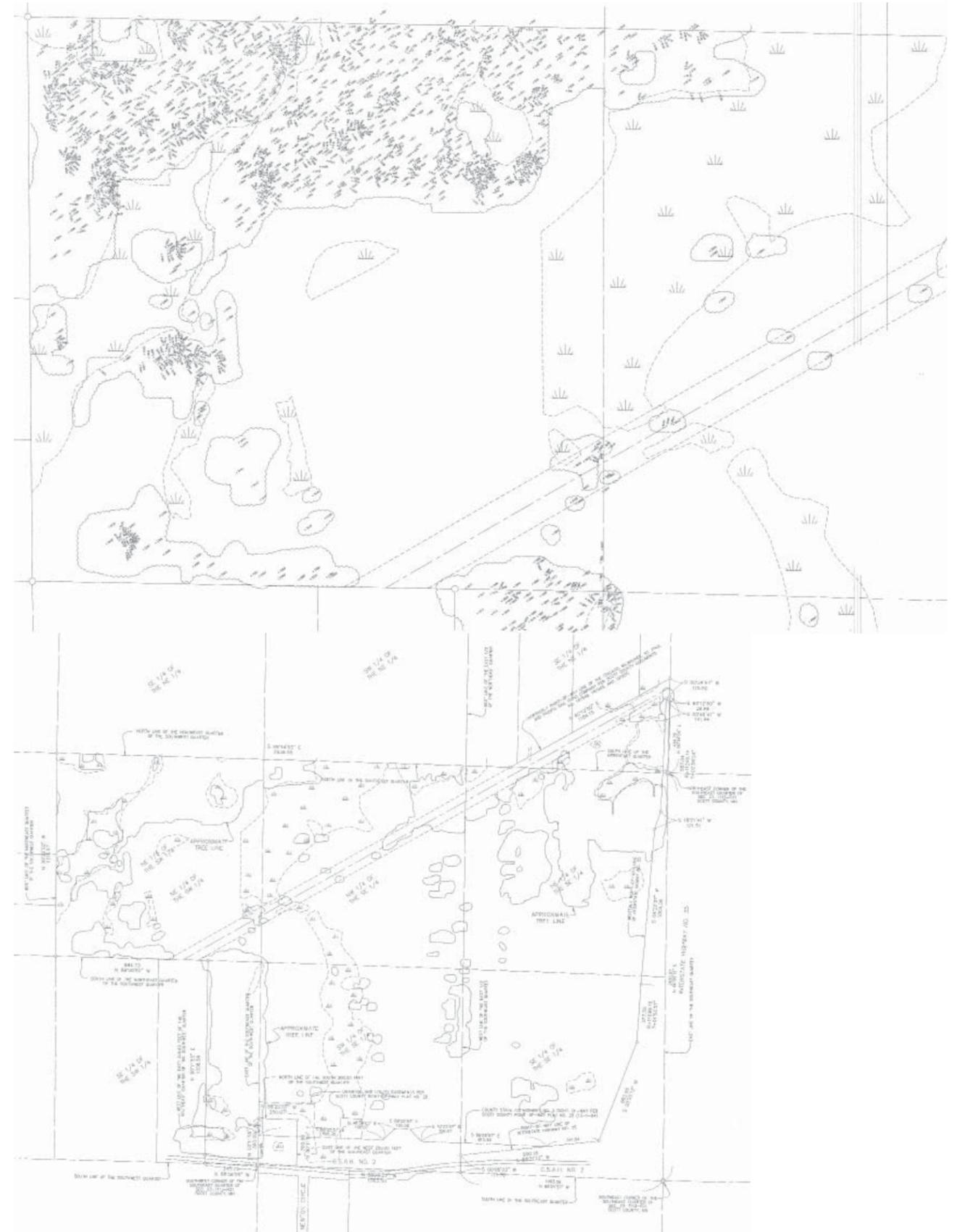
Oak Openings and Barrens: usually occurred as a buffer between the Prairies and Big Woods. Sandy, droughty soils, such as those of the Anoka Sandplain (Anoka, Isanti, and Chisago Counties), were often associated with it. It consisted of oak groves or single trees (most bur oak – *Quercus macrocarpa*) in a matrix of xeric tall-grass prairie. Other important species were: big bluestem, little bluestem, indian grass, panic grass (*Panicum leigergii*), porcupine grass (*Stipa spartea*), hazel, rose, and many herbs. Kichler (1964) called this type Oak Savanna (*Quercus-Andropogon*) and followed Marschner's boundaries closely. Curtis (1959) recognized Oak Opening and Oak Barrens as two distinct types. His data provided rich detail, and both types are probably close analogues of Marschner's type, especially for southeastern and south-central Minnesota. Toward the north the Oak Openings and Barrens integrated with Jack Pine Barrens and Openings.



Scott County Pre-Settlement Vegetation (Approx. 1855), Source: Scott County Comprehensive Water Resource Management Plan 2009-2018

TREE INVENTORY MAPS

The maps below show the tree inventory maps completed by Jacobson Engineers on October 4th, 2004 of Elko New Market.

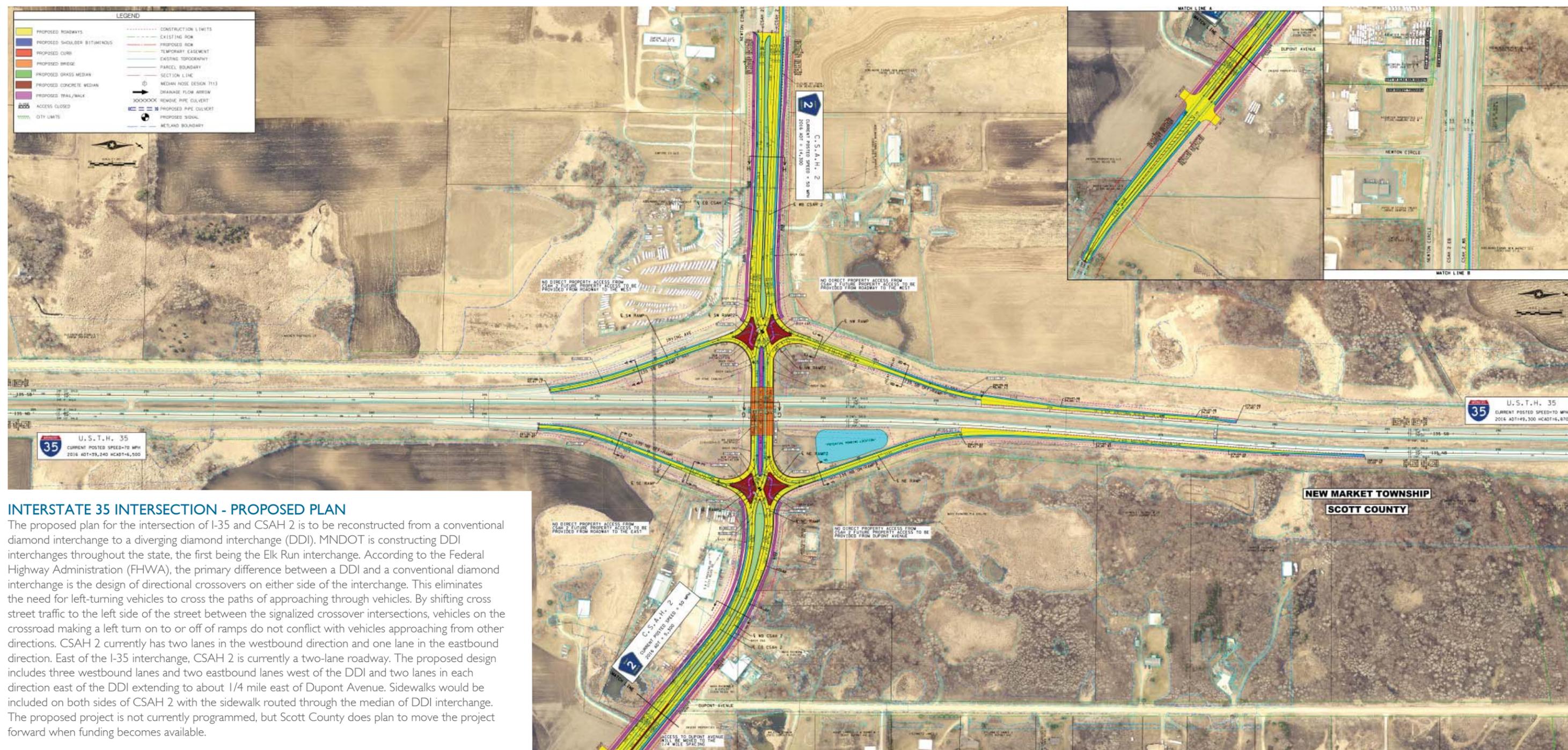


South Tree Inventory Map, North West Tree Inventory Map, Tree Inventory Map, Source: Jacobson Engineers Surveyors (10/4/04)

# TRANSPORTATION

## INTRODUCTION

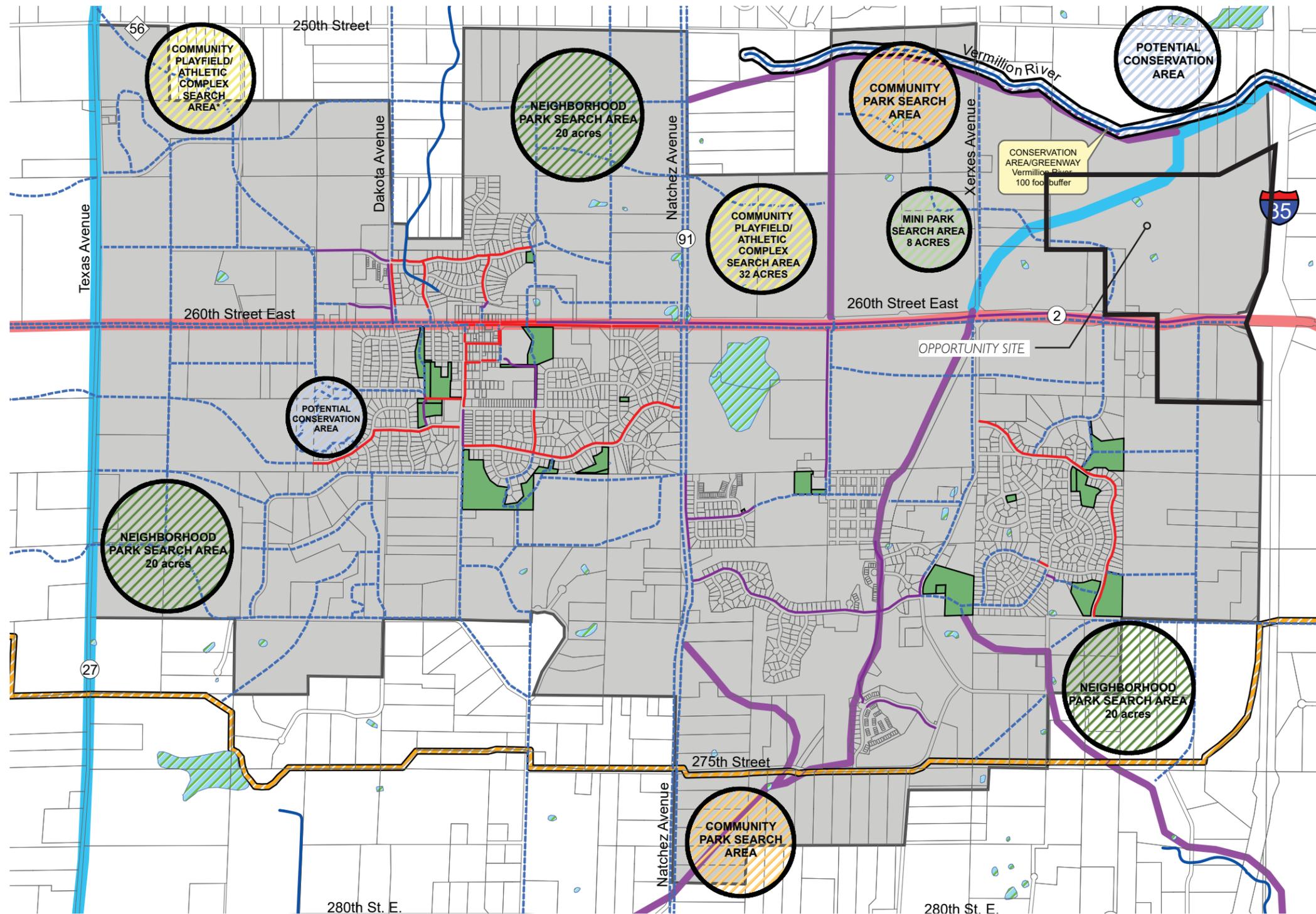
The Property is located directly off of the I-35 and County State Aid-Highway 2 (CSAH 2). The Property currently has one established roadway to the south property, Irving Ave. Due to the proximity of I-35 interchange, this access will most likely be removed and an access further west will be constructed for the southern property. The northern property will also be designed to connect to Xerxes, to the west and connect to a future access to CSAH 2, along with a direct access onto CSAH 2. The city of Elko New Market is also has designated trail corridors and part of the county trail corridor. The county trail corridor is located in the upper northwest section of The Property. The trail corridor will be integrated within the proposed transportation plan of The Property.



### INTERSTATE 35 INTERSECTION - PROPOSED PLAN

The proposed plan for the intersection of I-35 and CSAH 2 is to be reconstructed from a conventional diamond interchange to a diverging diamond interchange (DDI). MNDOT is constructing DDI interchanges throughout the state, the first being the Elk Run interchange. According to the Federal Highway Administration (FHWA), the primary difference between a DDI and a conventional diamond interchange is the design of directional crossovers on either side of the interchange. This eliminates the need for left-turning vehicles to cross the paths of approaching vehicles. By shifting cross street traffic to the left side of the street between the signalized crossover intersections, vehicles on the crossroad making a left turn on to or off of ramps do not conflict with vehicles approaching from other directions. CSAH 2 currently has two lanes in the westbound direction and one lane in the eastbound direction. East of the I-35 interchange, CSAH 2 is currently a two-lane roadway. The proposed design includes three westbound lanes and two eastbound lanes west of the DDI and two lanes in each direction east of the DDI extending to about 1/4 mile east of Dupont Avenue. Sidewalks would be included on both sides of CSAH 2 with the sidewalk routed through the median of DDI interchange. The proposed project is not currently programmed, but Scott County does plan to move the project forward when funding becomes available.

Interstate 35 Intersection, Source: Scott County Plan Sheets – partnered with MNDOT, Scott County, Elko New Market, Kimley-Horn



### CITY OF ELKO NEW MARKET 2030 PARK & TRAIL PLAN

The map below shows a proposed County Trailway Corridor through the northwestern corner of The Property and a proposed City Trails / Sidewalks through western portion of The Property. The County Trailway Corridors are intended to connect trail users to regional parks, open spaces, and recreational areas located throughout Scott County. The proposed County Trailway Corridor extends to the northeast from Elko New Market along the Vermillion River and connects to Dakota County. City Trails and Sidewalks supplement the aforementioned county and City Trailway Corridors, connecting these larger trail networks to local neighborhoods, commercial nodes, school facilities and other parks within the network. Where the city trails/sidewalks are proposed along county roads. There is also existing sidewalks along the westbound and eastbound roadways of CSAH 2.

- 2030 Elko New Market City Boundary
- Streams
- Lakes
- Wetlands
- Existing Elko New Market Park
- Existing City Trail
- Existing City Sidewalk
- MinnCan Pipeline Route (Potential Trail)
- CapX 2020 Route (Potential Trail)
- Proposed City Trails / Sidewalks
- Proposed City Trailway Corridor
- Proposed County Trailway Corridor
- Proposed Trailway Corridor\*

\*Scott County will seek regional status from the Metropolitan Council.

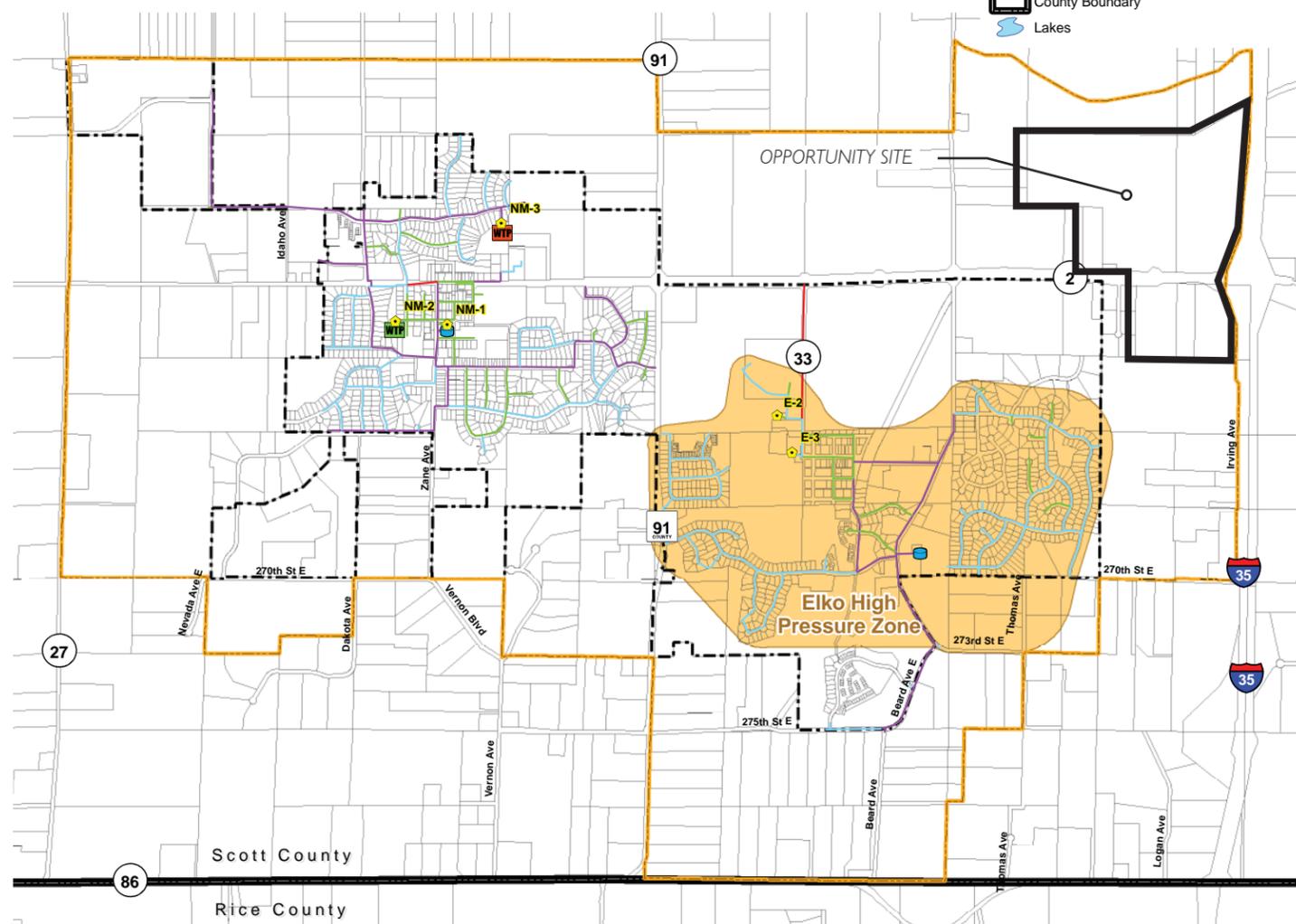
# INFRASTRUCTURE

## INTRODUCTION

The Property does not currently fall within the Elko New Market city limits and as such city utilities do not yet serve the site. As the property is guided for annexation by the City and has been designated in the Future Land Use Plan future utility extensions are expected. The following plans are based on 2008 population projections. The 2018 Comprehensive Plan (underway) identifies a comparable projected population and so it is reasonable to expect a similar proposed water system plan.

### ELKO NEW MARKET WATER DISTRIBUTION PLAN EXISTING WATER SYSTEM, 2008

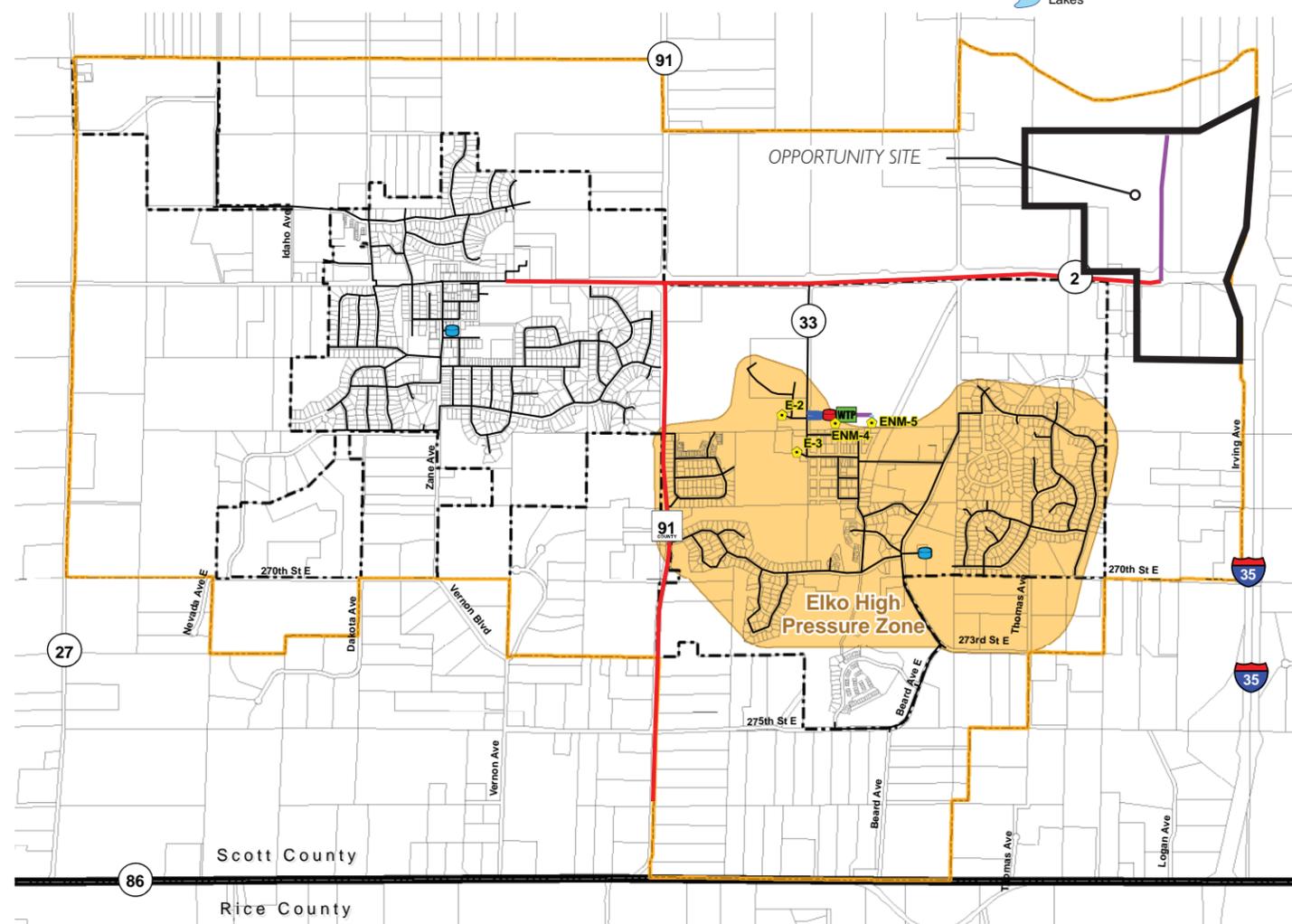
The existing water system of Elko New Market currently extends to the city limits. The property is not currently within the city limits and has no current watermain extending to the property. The map from 2008 below shows five wells and still operates on the primary four wells. Before the city merger of Elko and New Market, the City of Elko obtained water from two wells named Elko 2 and Elko 3. The City of New Market also draws water from two wells named New Market 2 and New Market 3. New Market maintains an older low capacity well, New Market 1, as an emergency backup well. The total pumping capacity of the existing wells is 1300 gpm, producing 1.56 million gallons per day (MGD). There is also two existing water towers in the City of Elko New Market with existing storage capacity of 150,000 gallons (Tower No. 1) and 250,000 gallons (Tower No. 2).



Elko New Market Water Distribution Plan Existing Water System, Source: 2030 Water Plan, Appendix C of the 2008 Elko New Market Comprehensive Plan

### ELKO NEW MARKET WATER DISTRIBUTION PLAN PROPOSED SYSTEM, 2008

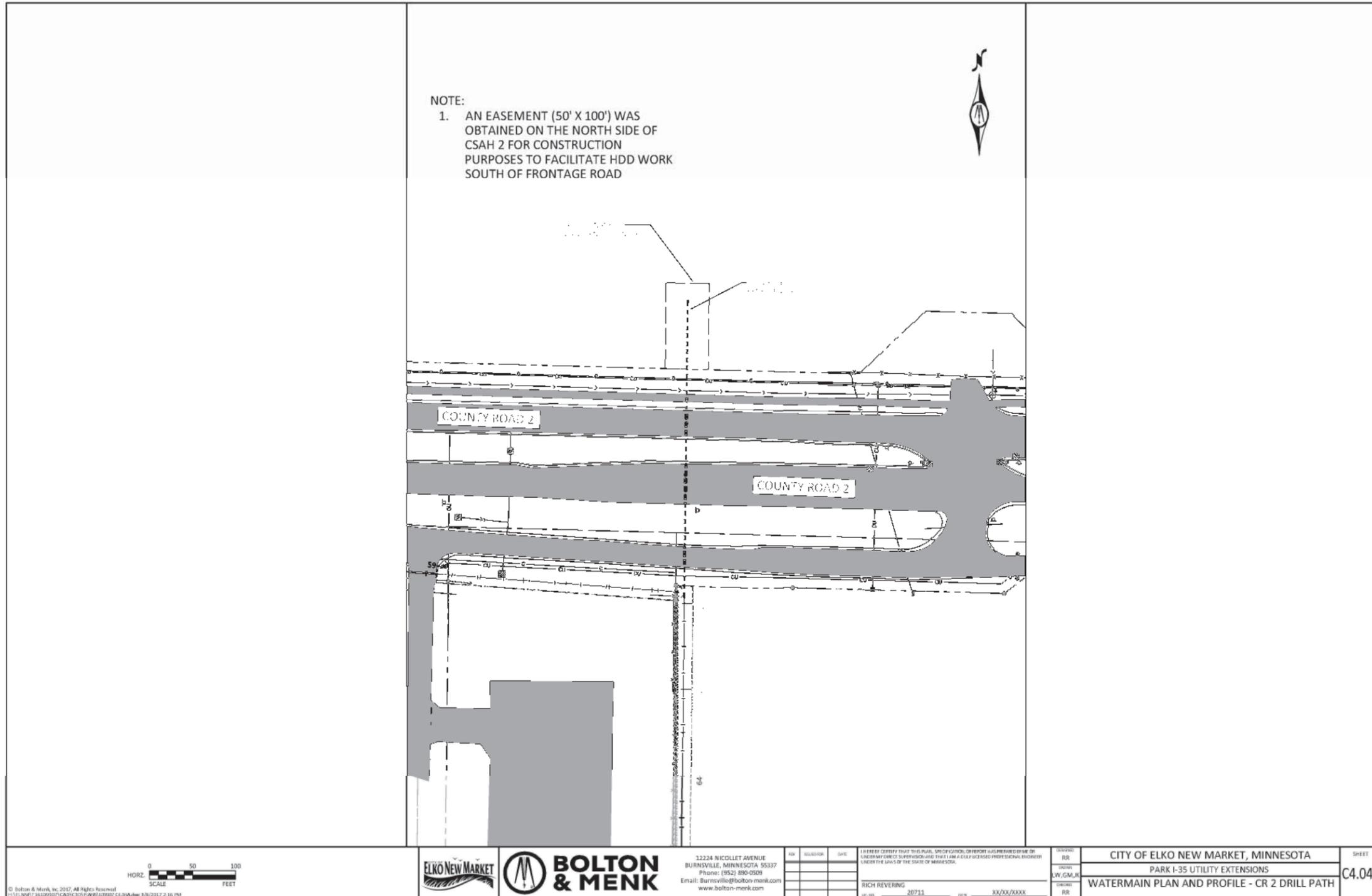
The proposed water distribution plan indicates the extension of the existing 109,000 feet of watermain. The 16" pipeline extension is proposed to run east along County State Aid Highway 2 and south along county road 91. The eastern extension will reach the proposed roadway access of The Property and continue north to the edge of The Property as a 12" pipeline. It should be noted that this proposed water distribution plan was based on previous census data where it was projected that the City of Elko New Market would see exponential growth trends by 2030, increasing the total capacity to 7.68 MGD. Based on those projections in 2008, five new wells would be required along with a new water treatment facility. The projected wells would also need an increase of storage which was projected in 2008 to be 1,000,000 gallons by 2030.

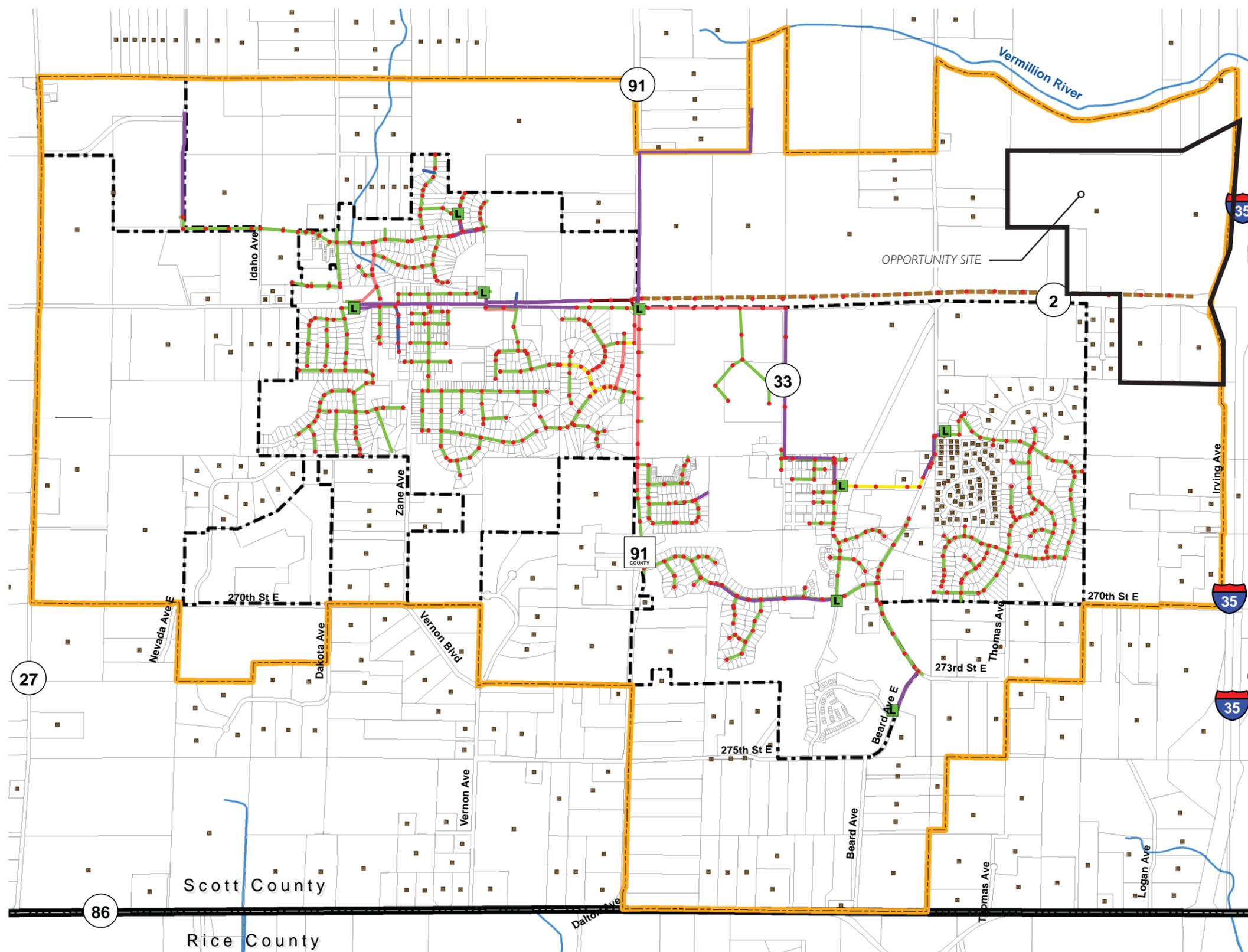


Elko New Market Water Distribution Plan Proposed System, Source: 2030 Water Plan, Appendix C of the 2008 Elko New Market Comprehensive Plan

**ELKO NEW MARKET WATERMAIN LAYOUT MAP**

Elko New Market has a proposed utility extension along CSAH 2 to I-35 drafted by Bolton & Menk. The preliminary plans show the watermain connecting at France Avenue and running east, along CSAH 2, with a proposed stub located west of the site's access along CSAH 2.





**EXISTING SANITARY SEWER PLAN, 2008**

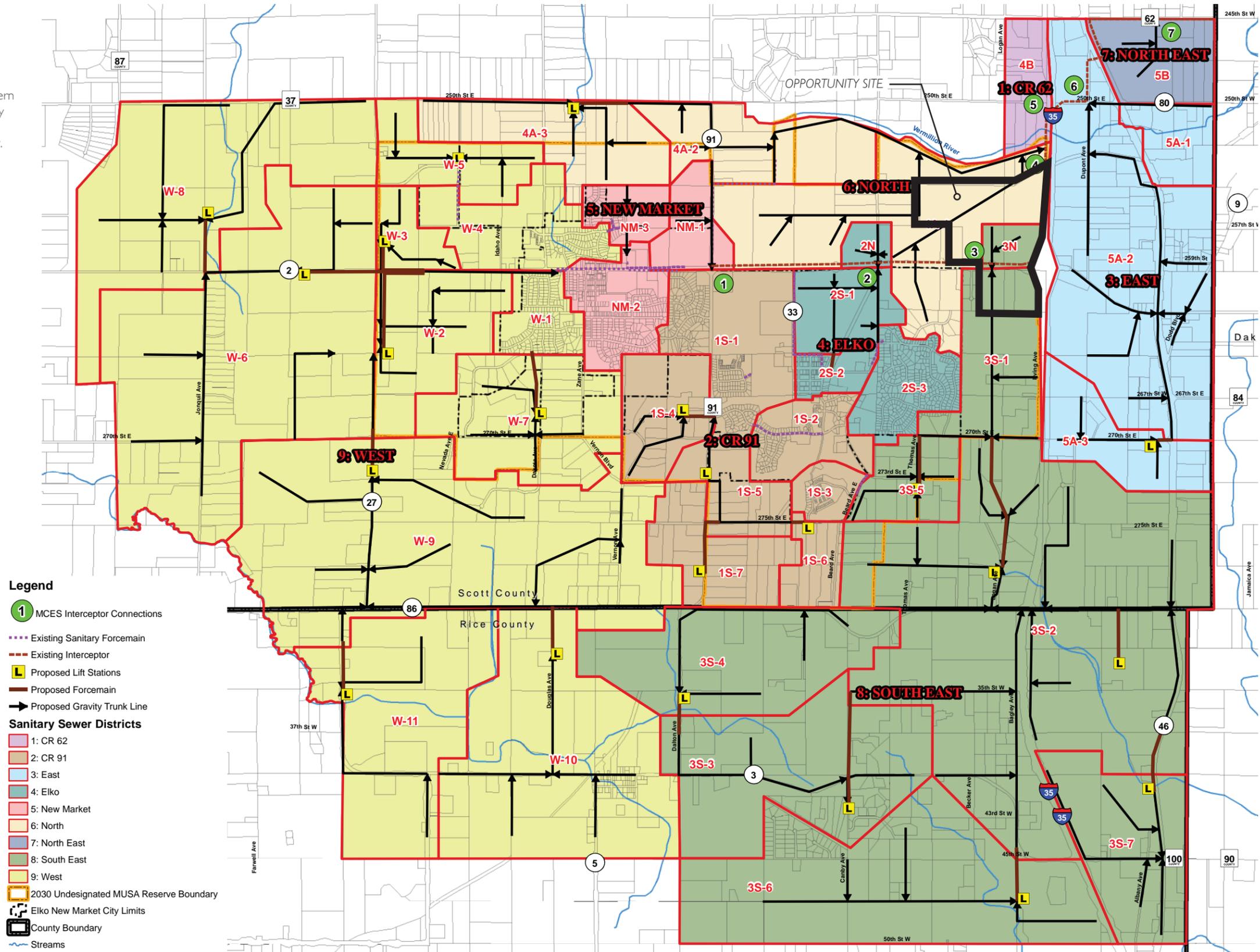
Metropolitan Council Environmental Services (MCES) constructed a 42" interceptor sewer to serve the City. The City of Elko New Market existing wastewater treatment facility retired when the interceptor went online. Connection to the MCES interceptor will be able to facilitate the City, and projected growth.

**Legend**

- Scott County Parcels with Septic Systems
- Lift Station
- Sanitary Manhole
- Sanitary Pipes**
- 6"
- 8"
- 10"
- 12"
- 18"
- Sanitary Forcemain
- MCES Interceptor
- ▭ 2030 Undesignated MUSA Reserve Boundary
- ▭ Elko New Market City Limits
- ▭ County Boundary
- Streams

**PROPOSED SANITARY SEWER PLAN, 2008**

The Property is capable of connecting to the 42" MCEs interceptor as shown in the map. The lower section of The Property to the north of CSAH 2 is indicated to connect to the interceptor at connection 3, while the upper section will be capable of connecting to connection 4. The entire southern section of The Property can be served by a proposed gravity service line connecting to connection 3. There are also no proposed lift stations within the boundaries of The Property.

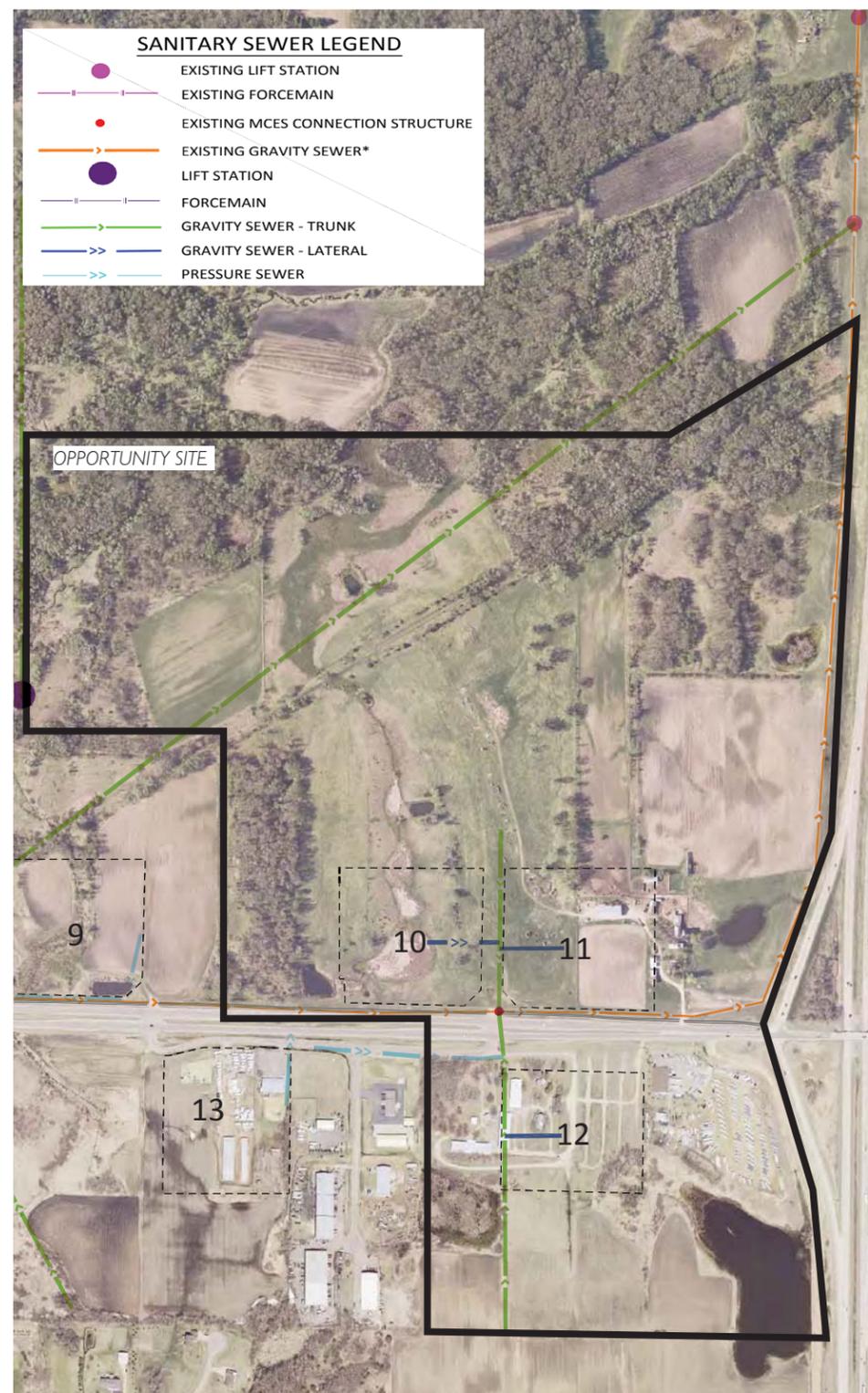


**Legend**

- ① MCEs Interceptor Connections
- Existing Sanitary Forcemain
- Existing Interceptor
- L Proposed Lift Stations
- Proposed Forcemain
- Proposed Gravity Trunk Line
- Sanitary Sewer Districts**
- 1: CR 62
- 2: CR 91
- 3: East
- 4: Elko
- 5: New Market
- 6: North
- 7: North East
- 8: South East
- 9: West
- 2030 Undesignated MUSA Reserve Boundary
- Elko New Market City Limits
- County Boundary
- Streams

Elko New Market Future Sanitary Sewer Systems, Source: 2030 Sanitary Sewer Plan-June 19, 2009, Appendix D 2008 Elko New Market Comprehensive Plan

PROPOSED SANITARY SEWER PLAN, 2016



Elko New Market Sanitary Sewer Layout Map, 2016, Source: CSAH 2 Development Infrastructure Needs Study, Bolton & Menk, Inc. Project No. T16.110497

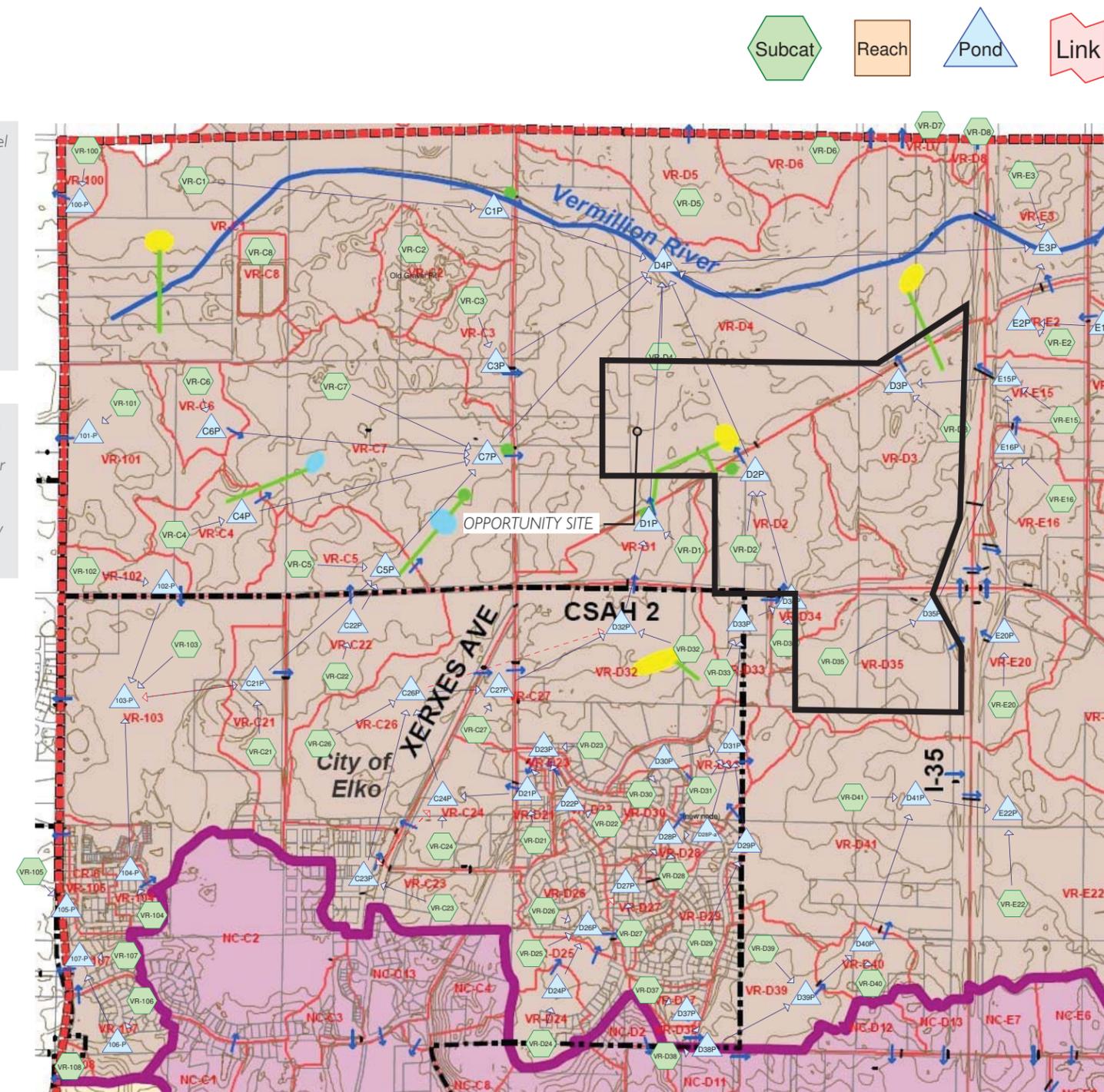
DRAINAGE DIAGRAM OF ELKO NEW MARKET WATERSHED, 2008

In 2008 a drainage model was completed for the city of Elko New Market. The watersheds can also be seen in the Environmental Resources Water section. The Property has four watersheds within the boundaries noted as VR-D2, VR-D3, VR-D34, and VR-D35. From the indicated map there are five ponds (D3P, D2P, D33P, D34P, D35P) within The Property boundaries and four subcatchments which correspond to the watersheds. The drainage system of The Property is not isolated and is connected to surrounding ponds. The findings of the subcatchments and ponds from the model can be found in the City of Elko New Market 2030 Storm Water Management Plan, Appendix E 2008 Elko New Market Comprehensive Plan.

**Subcatchment:** A subcatchment is used to model the runoff from a given area of land. Each subcatchment generates a runoff hydrograph, which is typically routed into a downstream reach or pond. A subcatchment can also be used to account for the rain falling directly on the surface of a pond. A subcatchment cannot be used to route an inflow hydrograph. Instead, use a subcatchment to calculate the runoff and a separate reach to perform the routing.

**Pond:** A pond is used to model a reservoir, dam, catch basin, manhole, drywell, storage chamber, vault, or other impoundment that fills with water from one or more sources and empties in a manner determined by a weir, culvert, orifice, or other outlet devices. "Zero storage ponds" may also be used to model certain storm sewers.

Definitions from hydrocad.net



Insert Source / Title