City of Ramsey
Agenda
Comprehensive Plan Steering Committee
Monday, May 8, 2017
6:00 pm
Lake Itasca Room, 7550 Sunwood Drive NW

1. Call to Order

2. Committee Business

  1. Review Feedback from April 10 Comprehensive Plan Workshop (Transportation; Parks and Recreation)

  2. Review Goals and Strategies of the Environmental Protection/Resource Management Chapter

  3. Review Materials for Economic Development Chapter

  4. Review Next Steps for Comprehensive Plan Update

3. Adjournment

Comp Plan Steering Committee **2. 1.**

Meeting Date: 05/08/2017

By: Tim Gladhill, Community Development

Information

Title:

Review Feedback from April 10 Comprehensive Plan Workshop (Transportation; Parks and Recreation)

Purpose/Background:

The purpose of this case is to review feedback provided by the public from the April 10 Workshop. Photos and videos from the meeting are available online at www.facebook.com/ramsey2040.

Observations/Alternatives:

Staff is compiling feedback into single map documents. This process will be completed in the next two (2) weeks. In the meantime, the raw data can be found online through a link at www.cityoframsey.com/ramsey2040.

Staff will package this information in the form of updated Goals and Strategies and a Draft Chapter. Staff will be forwarding these items to the July Steering Committee Meeting. General policy direction this evening will be very helpful in preparation of these drafts.

Staff also met with the Anoka County Highway Department Transportation Plan Team. Staff will provide a brief update at this meeting, with a broader update at the July Meeting.

Recommendation:

Provide general feedback and direction from the input at the April 10 Workshop.

Action:

Provide general feedback and direction from the input at the April 10 Workshop.

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	Tim Gladhill	05/04/2017 04:35 PM
Form Started By: Tim Gladhill		Started On: 05/04/2017 03:08 PM
Final Approval Date: 05/04/2017		

Comp Plan Steering Committee **2. 2.**

Meeting Date: 05/08/2017

By: Chris Anderson, Community Development

Information

Title:

Review Goals and Strategies of the Environmental Protection/Resource Management Chapter

Purpose/Background:

The purpose of this case is to review the materials to be available and/or presented at the June 12 Workshop related to Environmental Protection. related to environmental protection and to discuss the current goals and strategies in the Environmental Protection/Resource Management Chapter of the 2030 Comprehensive Plan.

Observations/Alternatives:

Attached is the existing Environmental Protection/Resource Management Chapter of the 2030 Comprehensive Plan. The focus of this case is on the current Goals and Strategies, not the full draft, much like previous reviews by the Steering Committee. Some files were too large to attached to the case, so these are available at www.cityoframsey.com/environment.

Recommendation:

Provide feedback on the content to be presented.

Action:

Provide feedback on the content to be presented.

Attachments

Environmental Policy Board 2017-2019 Work Plan

Mississippi River Shoreline Inventory Executive Summary

Resilience Checklist

Existing Environmental Protection Chapter

Wetland Inventory Report

Results from a Joint EPB and Planning Commission Review of the Goals and Strategies from April 20, 2015

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	Tim Gladhill	05/04/2017 04:54 PM
Form Started By: Chris Anderson		Started On: 05/04/2017 03:14 PM
Final Approval Date: 05/04/2017		

Environmental Policy Board Work Plan 2017 – 2019

STATEMENT OF PURPOSE

The Environmental Policy Board (EPB) will promote environmental awareness and conservation practice by citizens by advising the City Council on policy issues, review of new development proposals, communication and education. Through careful review, the EPB will present multiple perspectives, ideas, and new technologies that promote both discovery and accountability.

Initiative	Department	Tactics	Initiation Date	Completion Date	Additional Resources Required	Additional Tools Required	Responsible Party	Key Outcome Indicators/Metrics
Enhance Protection of Natural Resources	Community Development/ Parks	EPB 1.1 – Ensure sustainability of food supply and food web by promoting pollinator friendly practices and initiatives.	2017	2018	0.25 FTE	TBD	Anderson/ Riverblood	• Create polices to maintain and expand pollinator friendly landscapes on public lands through collaboration with the Parks & Recreation Commission • Improve communications and resources regarding pollinators to residents and businesses
	Community Development	EPB 1.2 – Protect water quality of Mississippi River from additional sediment loading due to shoreline erosion	2017	2019	0.25 FTE	TBD	Anderson	• Identify impacted properties owners interested in participating in bank stabilization projects • Identify applicable grant programs as source of funding for projects
	Community Development/ Public Works	EPB 1.3 – Extend the longevity of drinking water supply by reducing demand on groundwater	2017	2018	0.25 FTE	TBD	Anderson	• Develop incentives and or programs to promote water conservation throughout community • Develop resources and establish means to distribute the information to the general public
	Community Development	EPB 1.4 – Reduce amount of material entering waste stream and explore more reuse options	2017	2017	0.25 FTE	None	Anderson	• Implement an organics recycling pilot program to divert largest component of trash (organics) to reusable product (compost) • Improve communications and resources regarding composting to residents and businesses

Executive Summary

The City of Ramsey contracted the Anoka Conservation District to complete an inventory of riverbank condition along the entire 5.8 miles of City that border the Mississippi River. The inventory provides the City with a comprehensive record of bank condition. Ten stretches of riverbank with severe or very severe erosion were identified, which if stabilized, would reduce sediment loading to the river by 5,148 tons per year.

The inventory is structured as this report as well as an atlas. The report provides details on the methodology used to estimate bank erosion severity and potential benefits provided by stabilizing the most severely eroding sections of riverbank. The 10 most severely eroding sections of riverbank are also detailed in the report with individual site profiles to highlight additional information and potential solutions. The atlas is presented in Appendix A and provides a complete record of aerial photographs with the corresponding erosion severity categorizations and key pictures collected during the field work portion of this effort. As not all pictures are presented in the atlas, the final deliverables also include the complete picture inventory collected in early December 2015.

Methods

Field Work

The project scope was determined to be the entire 5.8 miles of City that border the Mississippi River. An atlas of the target area was printed prior to conducting the field work to serve as a navigation tool on the river and ensure complete coverage of the riverbank.

The inventory was conducted on December 10th and 11th, 2015. The timing was optimal because the river level was relatively low, bank vegetation was dormant, and snow had not yet fallen to obscure the bank. Other times of the year were considered for the inventory, but frequent high water levels in the spring, dense bank vegetation in the summer, and river ice and snow on the bank in the winter all prevented the collection of a useful picture inventory.

The inventory crew consisted of two Anoka Conservation District (ACD) staff members. A small boat was used to navigate the river and take geotagged pictures using a handheld GPS. These pictures can be viewed similar to pictures taken on a standard camera, but they also contain spatial information (i.e. X and Y coordinates). This feature allows them to be accurately mapped in GIS software. In order to take high quality photos, the boat navigated at idle speed typically between 50 and 100 feet from shore depending on water depth.

Wisconsin NRCS Direct Volume Method – Bank Recession Rate Categorizations

The picture inventory was used to digitize a polyline in GIS along the entire riverbank. Using the Wisconsin NRCS Direct Volume Method, the polyline was classified as slight, moderate, severe, or very severe with respect to erosion severity (Table 1). These erosion categorizations were then converted to lateral recession rates using the table below for use in soil loss calculations.

Table 1: Erosion severity categories.

Symbol	Category	Lateral Recession Rate (ft/yr)	Description
	Slight	0.01—0.05	Some bare bank but active erosion not readily apparent. Some rills but no vegetative overhang. No exposed tree roots.
	Moderate	0.06—0.2	Bank is predominantly bare with some rills and vegetative overhang. Some exposed tree roots but no slumps or slips.
	Severe	0.3—0.5	Bank is bare with rills and severe vegetative overhang. Many exposed tree roots and some fallen trees and slumps or slips. Some changes in cultural features such as fence corners missing and realignment of roads or trails. Channel cross section becomes U-shaped as opposed to V-shaped.
	Very Severe	>0.5	Bank is bare with gullies and severe vegetative overhang. Many fallen trees, drains, and culverts eroding out and changes in cultural features as above. Massive slips and washouts common. Channel cross section is U-shaped and stream course may be meandering.

Soil Loss Estimation

Any section of riverbank identified as either severe or very severe was included in a site profile for more detailed analysis. The analysis consisted of calculating the following variables for every section of severe or very severe erosion (Appendix B).

- ***Depth (D)***: horizontal distance from the toe to the top of the bank; calculated using GIS
- ***Height (H)***: vertical height; measured with November 2011 LiDAR elevation data using GIS
- ***Slope Length (SL)***: length of diagonal slope; calculated using depth and height measurements
- ***Recession Rate (RR)***: annual lateral recession of bank (0.4 ft/yr for severe erosion and 0.75 ft/yr for very severe erosion)
- ***Length (L)***: length of the erosion along the river; calculated using GIS

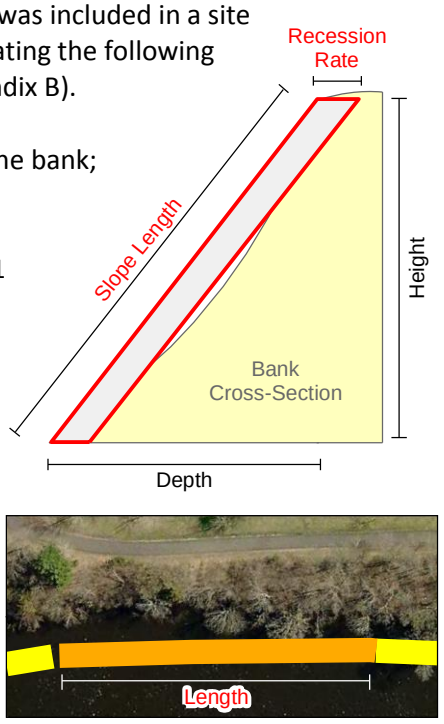


Figure 1: Diagrams of variables used for soil loss estimation.

These variables (Figure 1) were used in the equation below to estimate the annual soil loss. Sandy soil weighs approximately 100 pounds per cubic foot.

$$\frac{SL(ft) * RR(ft/yr) * L(ft) * 100(lb/ft^3)}{2000(lb/ton)} = \textbf{Estimated Soil Loss (tons/year)} \qquad \text{Equation 1}$$

Atlas Generation

All of this information was used to create an inventory atlas of the pool which can be found in Appendix A. The atlas contains erosion severity and photos of the shoreline.

Results

Erosion Severity

Most of the riverbank inventoried had limited erosion (Table 2). Approximately 78% of the riverbank was categorized as either slight (40%) or moderate (38%) erosion severity. This corresponds to a lateral recession rate of 0.0 – 0.2 ft/yr.

Table 2: Summary of erosion severity.

Erosion Severity	Length (miles)	%
Slight	2.32	40%
Moderate	2.21	38%
Severe	0.64	11%
Very Severe	0.60	10%
Total	5.78	100%

In contrast, 11% of the shoreline was categorized as severe and 10% as very severe (Table 2). These categories have lateral recession rates of 0.3 – >0.5 ft/yr.

Table 3: Severe and very severe erosion on public and private lands.

	Severe		Very Severe	
Ownership	Length (miles)	%	Length (miles)	%
Public	0.27	42%	0.37	61%
Private	0.37	58%	0.24	39%
Total	0.64	100%	0.60	100%

Overall, shoreline categorized as either severe or very severe is distributed relatively evenly between public and private ownership (51% and 49%, respectively). However, when looking at the severe and very severe categories individually, the breakdown is not as evenly balanced (Table 3). Public land has a lower percentage of the total severe sections (42%) and a higher percentage of the total very severe sections (61%).

Estimated Soil Loss

The total length of riverbank categorized with severe or very severe erosion is relatively equal between the two categories (Table 4). However, because of the higher lateral recession rate in the very severe sections (i.e. 0.75 ft/yr), those sections represent the majority (77%) of the estimated soil loss.

Table 4: Estimated soil loss by erosion severity.

Erosion Severity	Length (miles)	Estimated Soil Loss (tons/yr)	%
Severe	0.64	1174	23%
Very Severe	0.60	3974	77%
Total	1.24	5148	100%

Stabilization Considerations

The goal of most riverbank projects is to correct or prevent excessive erosion or undercutting through bank stabilization. Stabilization of eroding riverbanks is highly site-specific; there is not a simple solution that can be applied across all sites. For example, factors such as position along the river (e.g. outside bend), river dynamics (e.g. flow and flood elevations), and site accessibility must be considered individually for each project. That being said, stabilization approaches generally fall into two categories: hard armoring and bioengineering.

Hard armoring uses physical structures to protect the riverbank; riprap is used commonly for hard armoring. Riprap does not necessarily need to extend to the top of the slope to be effective and can be inter-planted with native species to soften its appearance. Often times, hard armoring the toe of the slope (i.e. the very bottom) up to a moderate height (e.g. the 2-year flood elevation) is sufficient for stabilizing the rest of the bank.

Bioengineering approaches combine engineering techniques with ecological principles to stabilize the bank. They rely heavily on deep-rooted native plants along with a variety of other natural materials to reinforce and stabilize eroding riverbanks. Bioengineering also incorporates the goals of fish and wildlife habitat restoration, maintenance of water quality, and aesthetic considerations. In addition to bank stabilization, many benefits are achieved through bioengineering:

- Improved aquatic and terrestrial habitat,
- Increased connectivity among habitats along the riverbank,
- Decreased water temperatures through shading, and
- Improved soil and water quality.

The stabilization solution for an eroding riverbank could certainly use a combination of hard armoring and bioengineering. In fact, ACD often recommends this combination on large river systems such as the Mississippi River because of the benefits provided by both approaches.

Possible Stabilization Approaches

Stabilization of riverbanks can be achieved through many different approaches. Below is a list of some common stabilization approaches (both bioengineering and hard armoring) to correct erosion issues. Again, a combination of approaches is often specified as the most effective solution.

- Restoration of Native Vegetation – Deep-rooted, native vegetation creates a buffer along the riverbank that can provide stabilization and minimize erosion. Furthermore, if the bank is damaged, the vegetation has the ability to self-heal with additional growth.
- Cedar Tree Revetment – Anchoring Eastern Red Cedar trees to the toe of the slope reduces water velocities near the bank to protect against erosion. Furthermore, the reduced water velocities promote sedimentation and can actually help rebuild the bank. This provides a cost-effective bioengineering option for moderate to severely eroding riverbanks.
- Live Staking – Dormant, live stakes of native species (e.g. Sandbar Willow) can be installed to establish a dense plant community with high stem density that will stabilize the riverbank.
- Hard Armoring – Hard armoring of the bank may be necessary along riverbanks on large systems that experience the greatest erosive forces (e.g. outside bends). However, it is often not necessary to hard armor the entire bank from the toe of the slope to the top of the bank. Rather, the hard armoring can extend to a predetermined elevation (e.g. 2-year or 5-year flood elevation), above which could be stabilized using the establishment of native vegetation. Furthermore, the sections that are hard armored can often be live staked to provide additional stabilization value, wildlife habitat, and improved shoreline aesthetics.

- Bank Reshaping – Reshaping a severely eroding riverbank may be necessary in order to stabilize vertical, bare banks. This approach must be coupled with other stabilization techniques because in and of itself it does not provide any stabilization benefits. It only creates a bank with suitable slopes for other stabilization approaches.

Favorable Practices for Riverbank Property Owners

Managing a riverbank can present a difficult challenge for property owners. Often times, a misunderstanding of factors that contribute to erosion can actually exacerbate the issue. Below is a list of practices that should be followed by property owners adjacent to rivers in order to minimize erosion and protect their property.

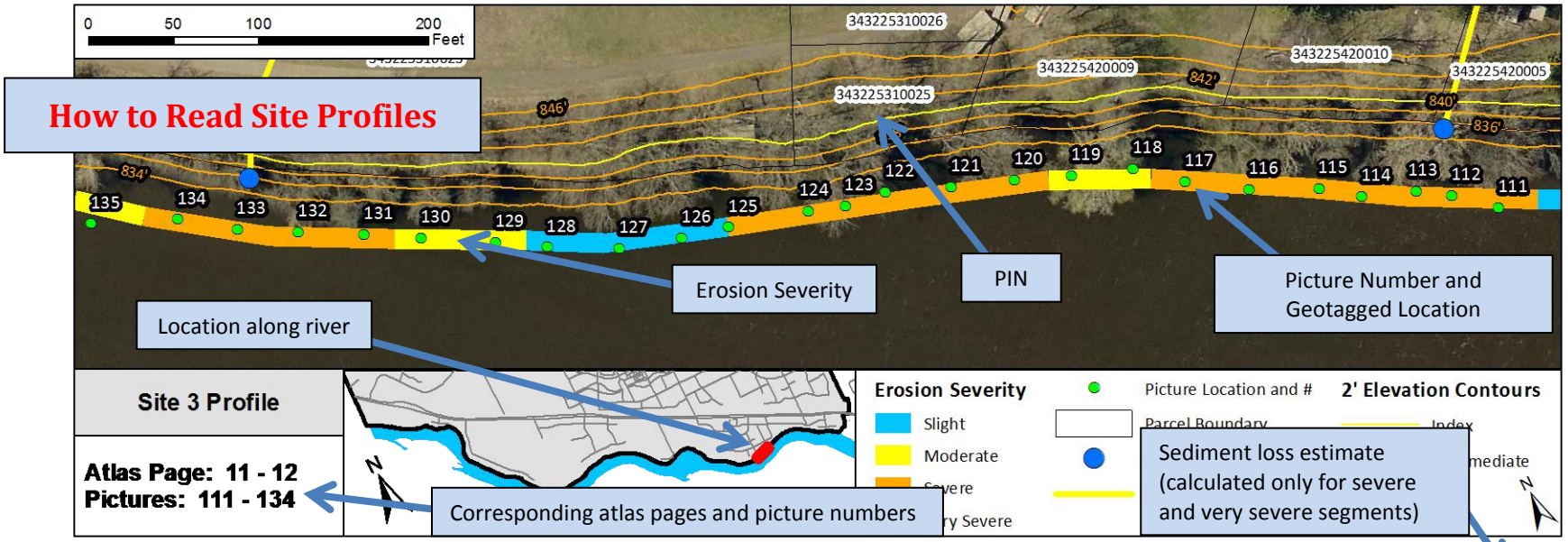
- Avoid mowing near the edge of the bluff or riverbank. Turf grasses have very shallow root systems, providing little soil stability. Deeper rooted species are also better at filtering out excess nutrients and sediments in runoff.
- Control runoff from downspouts and other hard surfaces at the top of the slope to prevent it from flowing over the riverbank. Promote infiltration of rain water into the soil but away from the riverbank where possible, or provide a pipe conduit down to the water's edge to transport water if necessary.
- Dispose of yard waste properly to avoid smothering riverbank vegetation and contributing nutrients to the river, which commonly occurs when leaves and grass clippings are thrown over the riverbank.
- Plant desirable species with preference for multi-stemmed plants with deep, dense, fibrous root systems. However, ensure the species are well suited to the soil type, moisture level, and available sunlight or they will not thrive.
- Prune lower branches on trees to increase the amount of light that penetrates to the ground. This will increase plant growth at ground level where the stems, roots, and foliage will help keep soil in place.
- Remove buckthorn, which is an invasive plant that is believed to release a natural herbicide that suppresses nearby plant growth.
- Remove fallen trees because they can redirect water toward the bank and exacerbate erosive river forces.
- Remove grapevines, which smother trees, shade out understory species, and provide little soil stabilization benefits.

Site Profiles

Detailed site profiles were created for stretches of riverbank throughout which severe or very severe erosion was documented. Table 5 below summarizes key information for each of the 10 site profiles. Following the table are the detailed site profiles that include a map of the site, a general description of the problem, and potential practices to address the erosion. Please note that potential solutions are speculative, and formal designs would need to be prepared prior to completing any stabilization work.

Table 5: Summary of site profiles.

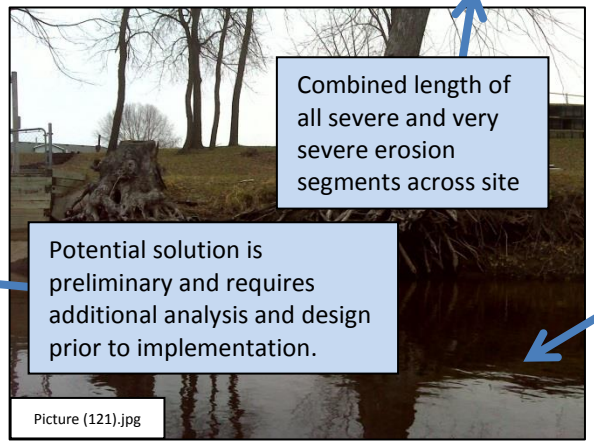
PROPERTY INFORMATION			ERODING FACE INFORMATION					
Site Profile #	**Ownership**	**PIN**	**Length (ft)**	**Height (ft)**	**Depth (ft)**	**Slope (H:V)**	**Recession Rate (ft/yr)**	**Soil Loss (tons/yr)**
1	Private	353225320005	111	12	25	2.1:1	0.4	61.6
2	Private	343225410004	116	22	36	1.6:1	0.4 - 0.75	123.0
3	Private/Anoka County (5 properties)	343225420005 343225420010 343225420009 343225310025 343225310023	566	6 - 10	22 - 40	3.7 - 4.2:1	0.4	323.7
4	Anoka County (3 properties)	343225320001 343225230003 333225110003	1227	4 - 16	7 - 30	1.8 - 2.5:1	0.4 - 0.75	821.0
5	Anoka County (4 properties)	333225110003 333225110002 333225120001 333225120005	1920	4 - 20	8 - 33	1.5 - 2.0:1	0.4 - 0.75	1869.6
6	Private (4 properties)	283225330011 283225330010 283225330009 293225440001	412	6	15 - 24	2.5 - 4.0:1	0.4	152.0
7	Private (2 properties)	293225340001 293225330005	653	4 - 12	7 - 24	1.7 - 2.5:1	0.4 - 0.75	280.4
8	Private (8 properties)	293225330003 293225330002 293225330001 293225320007 293225320006 293225320005 293225320003 303225410012	589	8 - 22	12 - 33	1.5 - 1.9:1	0.4 - 0.75	653.5
9	Private (7 properties)	303225110030 303225110010 303225110013 303225110011 303225110012 193225430014 193225430015	639	6 - 24	11 - 35	1.5 - 2.1:1	0.4 - 0.75	770.9
10	Private (4 properties)	193225430017 193225430018 193225430021 193225430003	325	6 - 8	11 - 14	1.8:1	0.4	92.4

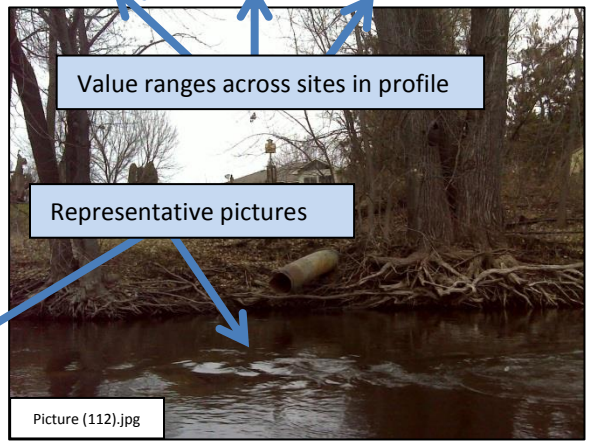


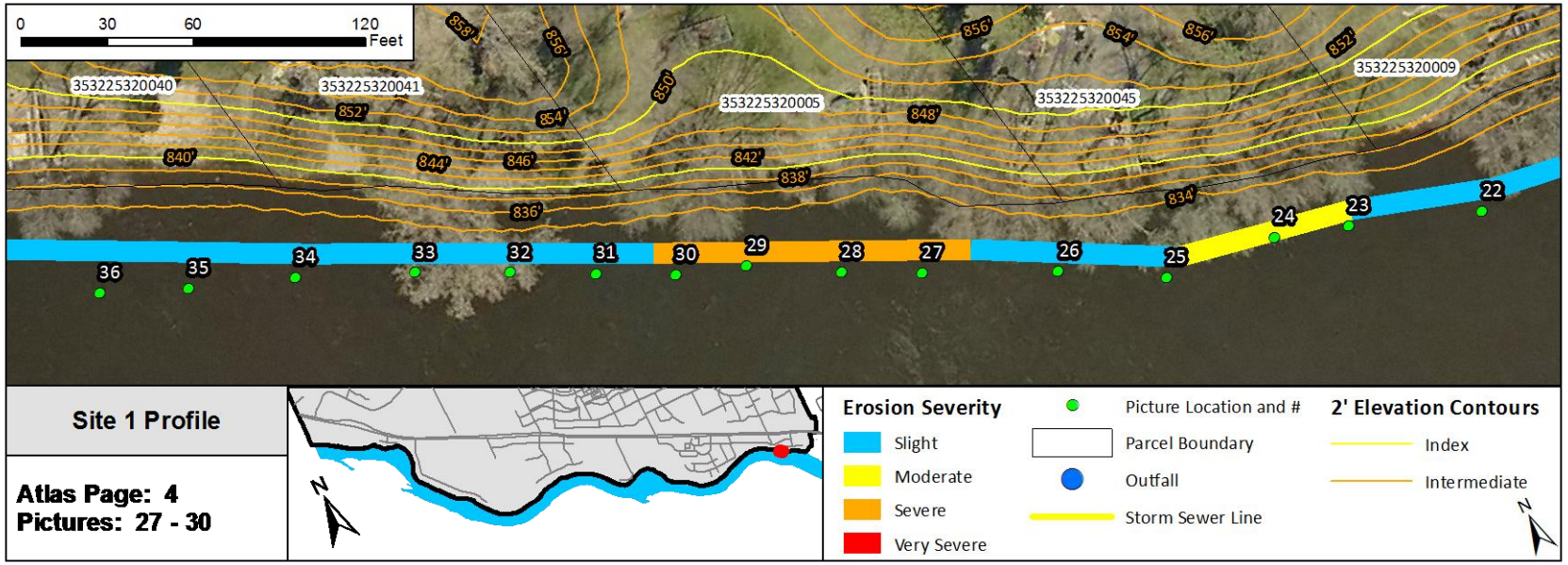
Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private/Anoka County	566	6 - 10	22 - 40	3.7 - 4.2	323.7

Additional Information: This site consists of five properties, four of which are private and one public (Anoka County). Erosion severity was categorized as severe because of the many exposed tree roots and undercut banks.

Potential Solution: Preservation of some of the severely undercut trees could be difficult, and regrading of the bank may be necessary. Stabilization could be accomplished using a combination of hard armoring at the toe of the slope and bioengineering on the upper portions of the bank.







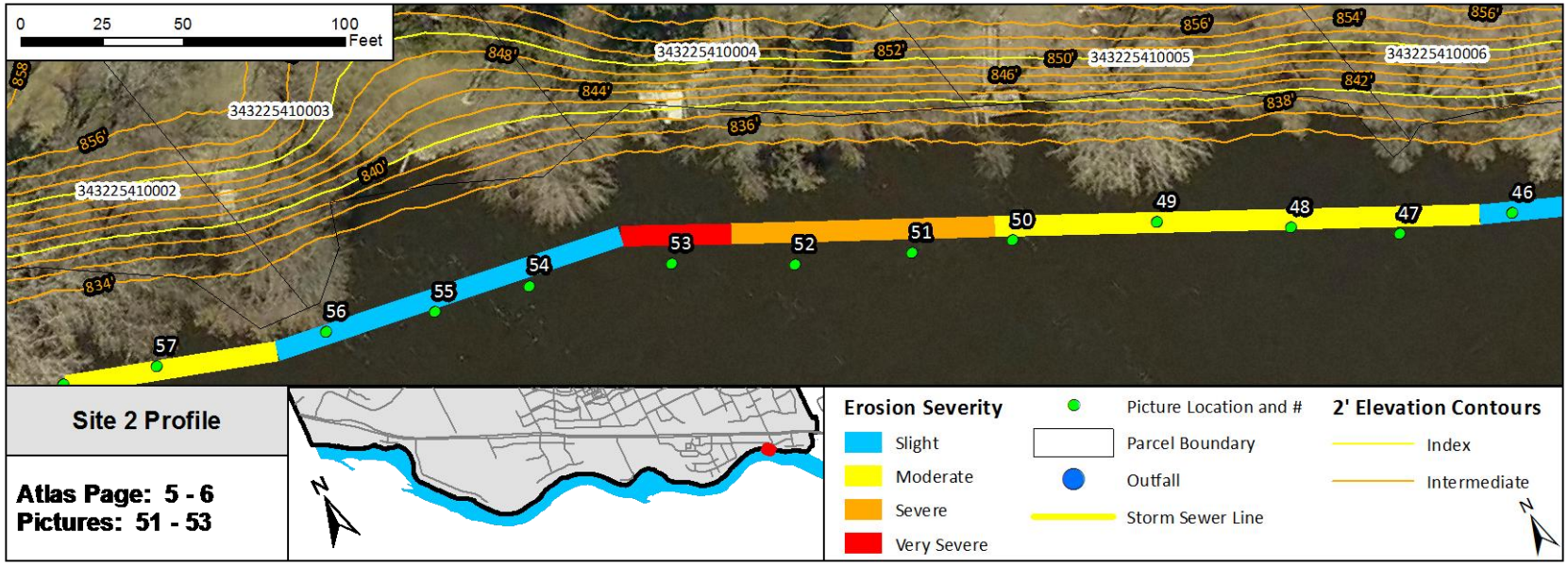
Additional Information: This site consists of one private residential property. Erosion severity was categorized as severe because of the many exposed tree roots and several areas with bank slumps.

Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private	111	12	25	2.1:1	61.6

Potential Solution: Stabilization of the riverbank could be accomplished using a combination of hard armoring at the toe of the slope and bioengineering on the upper portions of the bank. A cedar tree revetment could also be a possibility. Thinning of the canopy may be necessary to promote growth of native vegetation on the upper portions of the bank.


Picture (30).jpg


Picture (28).jpg



Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private	116	22	36	1.6	123.0

Additional Information: This site consists of one private residential property. Erosion severity was categorized as severe and very severe. The many fallen trees on the upstream stretch of the property resulted in the very severe categorization.

Potential Solution: Stabilization of the riverbank could be accomplished using a combination of hard armoring at the toe of the slope and bioengineering on the upper portions of the bank. Because of the large bank slumps, regrading of the bank will likely be required.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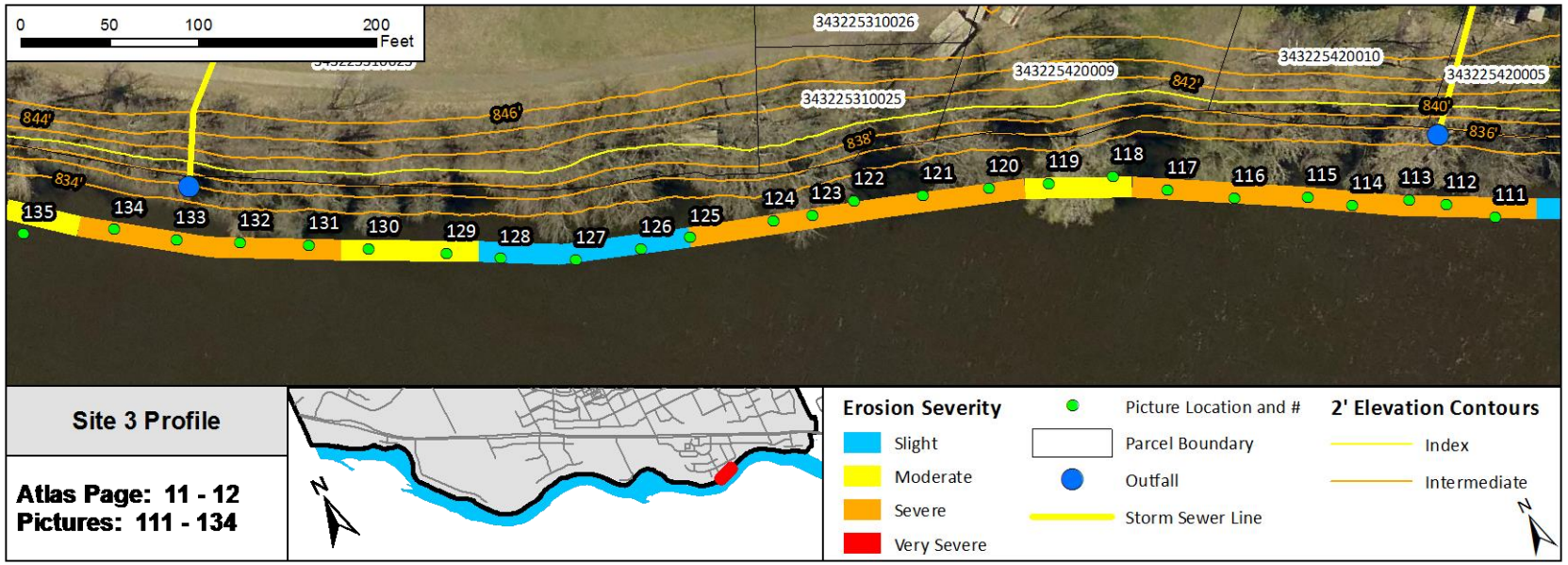
Picture (51).jpg



Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private/Anoka County	566	6 - 10	22 - 40	3.7 - 4.2	323.7

Additional Information: This site consists of five properties, four of which are private and one public (Anoka County). Erosion severity was categorized as severe because of the many exposed tree roots and undercut banks.

Potential Solution: Preservation of some of the severely undercut trees could be difficult, and reshaping the bank may be necessary. Stabilization could be accomplished using hard armoring at the toe of the slope and bioengineering on the upper portions of the bank. Cedar tree revetments may also be an option.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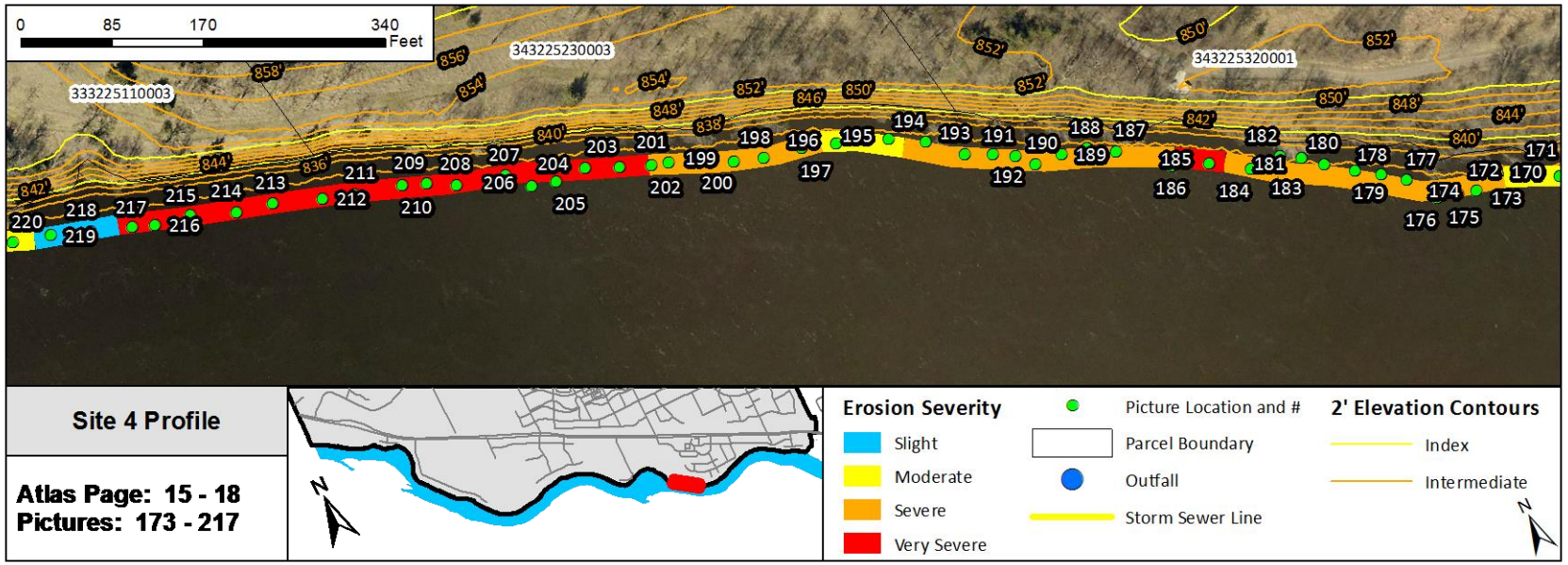
Picture (112).jpg



Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Anoka County	1227	4 - 16	7 - 30	1.8 - 2.5	821.0

Additional Information: This site consists of three parcels, all of which are owned by Anoka County. Erosion ranged from severe to very severe along this section with one small area categorized as moderate. The large sections of bare bank were categorized as very severe.

Potential Solution: Stabilization of some areas categorized as severe could be stabilized using cedar tree revetments and native vegetation. The sections of steep, bare bank could be stabilized using a combination of regrading, hard armoring at the toe of the slope, and bioengineering.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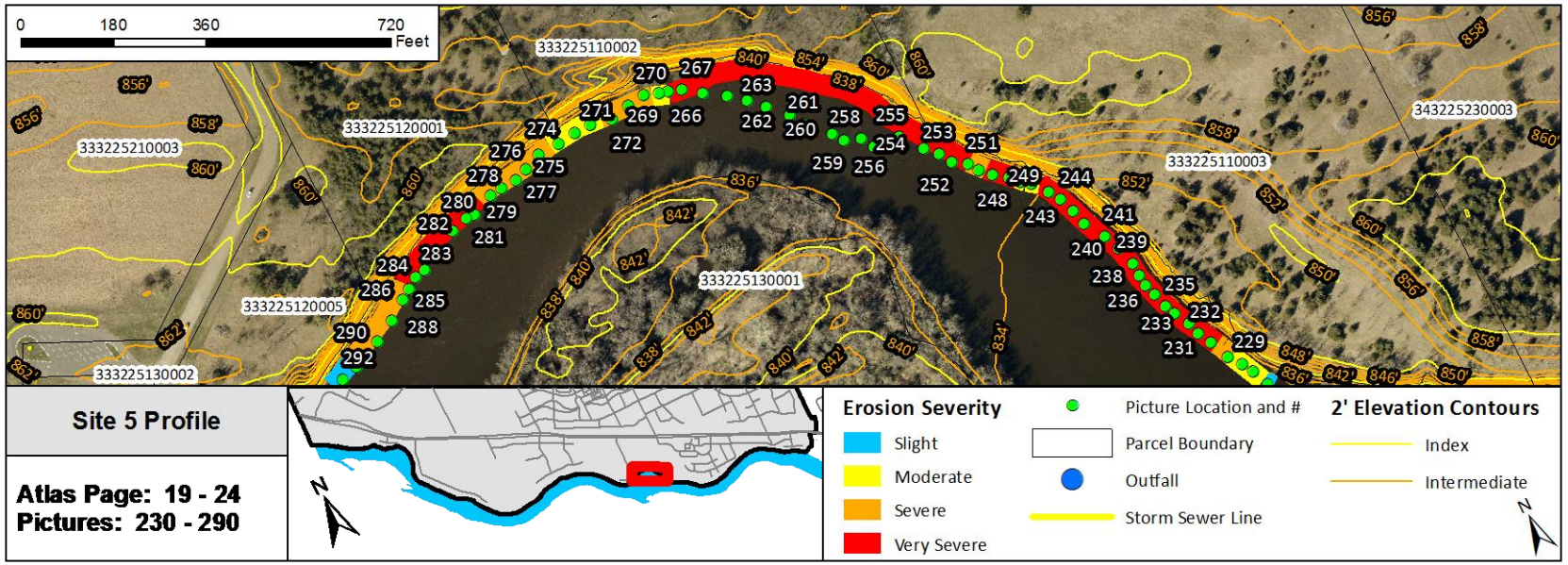
Picture (187).jpg



Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Anoka County	1920	4 - 20	8 - 33	1.5 - 2.0	1869.6

Additional Information: This site consists of four parcels, all of which are owned by Anoka County. Erosion ranged from severe to very severe along this section with short sections categorized as moderate. The large sections of bare bank were categorized as very severe.

Potential Solution: Stabilization of some areas categorized as severe could be stabilized using cedar tree revetments and native vegetation. The sections of steep, bare bank could be stabilized using a combination of regrading, hard armoring at the toe of the slope, and bioengineering.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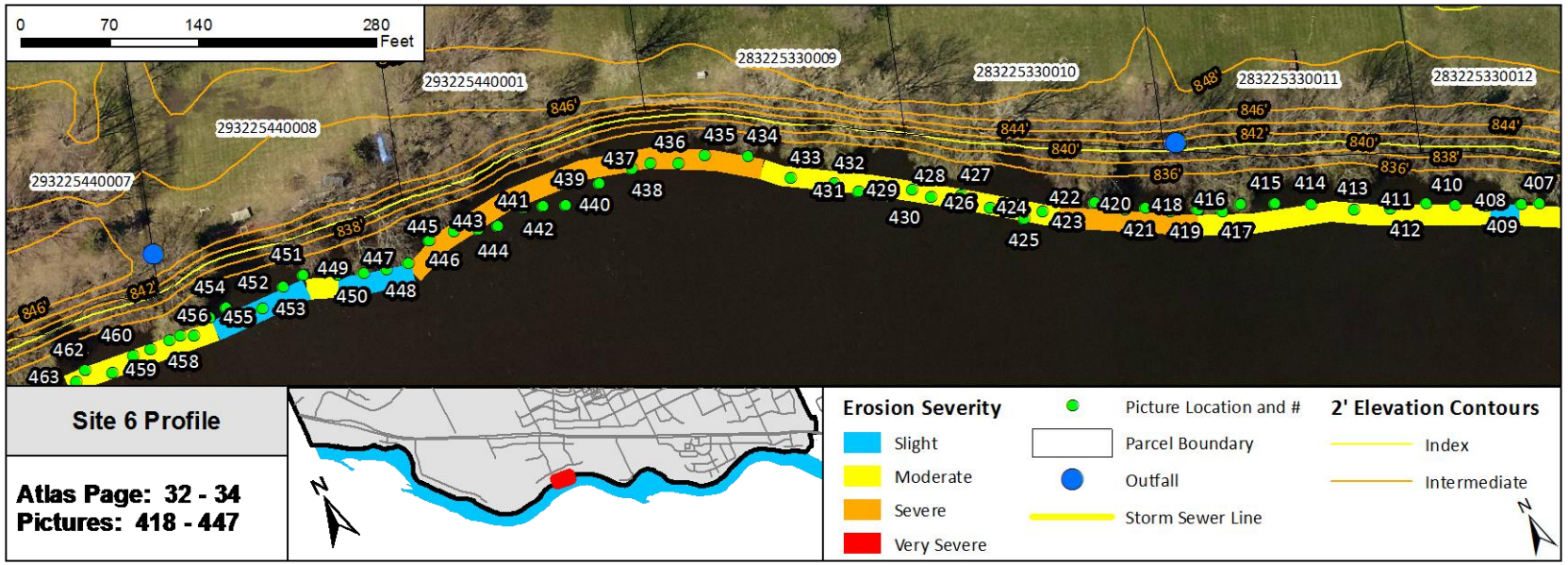
Picture (235).jpg



Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private	412	6	15 - 24	2.5 - 4.0	152.0

Additional Information: Two sections of severe erosion span a total of four privately owned properties in this site profile. The many exposed tree roots and bank undercutting resulted in the severe categorization.

Potential Solution: Much of the erosion could possibly be addressed using cedar tree revetments inter-planted with native vegetation (e.g. Sandbar Willow or Buttonbush). Areas with more severe undercutting may need to be regraded and may warrant hard armoring at the toe with native vegetation higher on the bank.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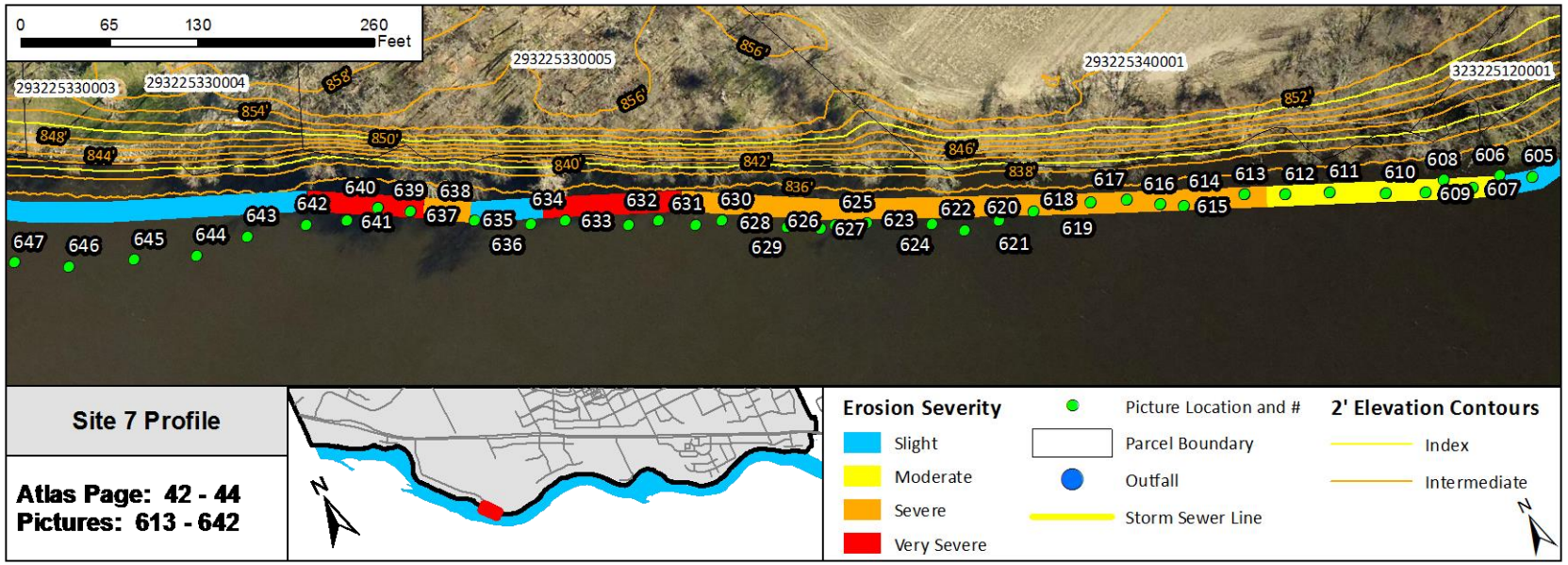

Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private	653	4 - 12	7 - 24	1.7 - 2.5	280.4

Additional Information:
Erosion at this site spans two private properties and ranges from severe to very severe. Much of the severe erosion consists of exposed tree roots and some bank undercutting. The very severe sections have fallen trees and bare bank.

Potential Solution: The severe sections may be effectively stabilized with cedar tree revetments and native vegetation (e.g. Sandbar Willow or Buttonbush). Areas with fallen trees and bare bank may need to be regraded and hard armored at the toe with native vegetation farther up the bank.


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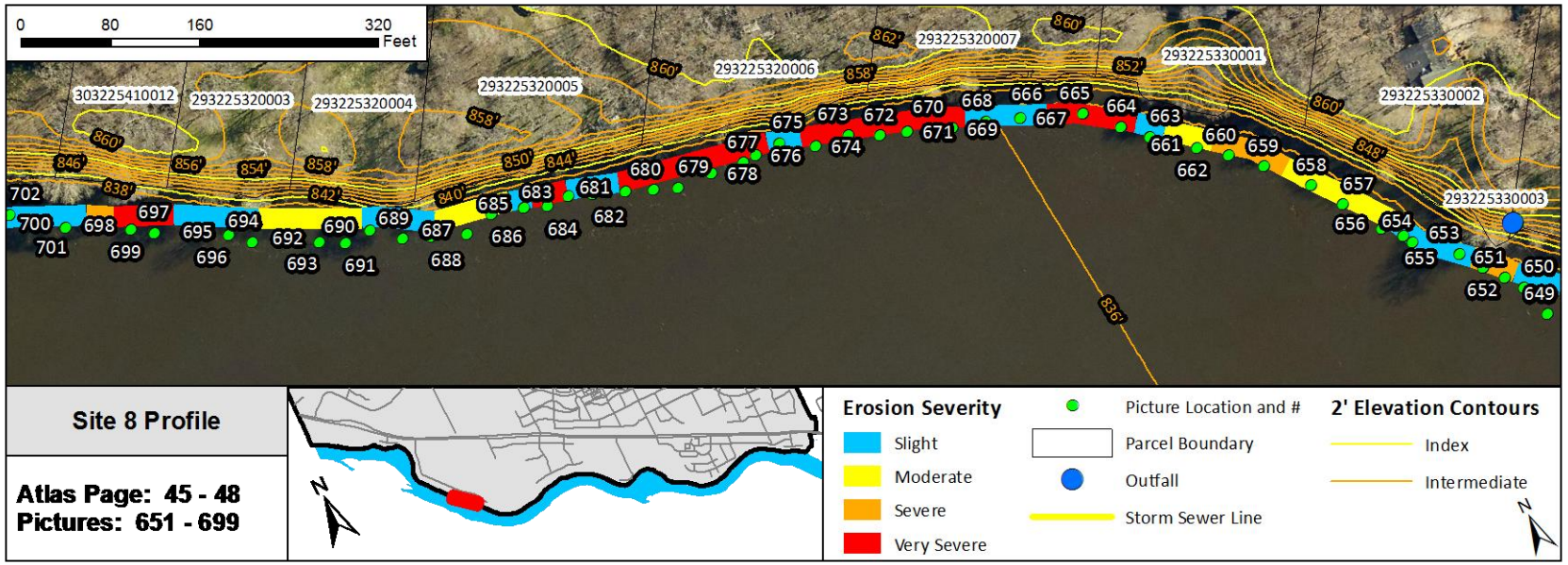


Additional Information:
Erosion at this site spans eight private properties and ranges from severe to very severe. The very severe sections have fallen trees and bare bank.

Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private	589	8 - 22	12 - 33	1.5 - 1.9	653.5

Potential Solution: Most of the erosion sections are very severe and will likely require regrading of the bank. Hard armoring of the slope toe up to a modest elevation (e.g. 2-year or 5-year flood elevation) with native vegetation establishment on the remaining areas higher up the bank may be an effective stabilization option.


Picture (698).jpg


Picture (670).jpg

Additional Information:
Erosion at this site spans seven private properties and ranges from severe to very severe, with most areas categorized as very severe. The very severe sections have fallen trees and bare bank.

Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private	639	6 - 24	11 - 35	1.5 - 2.1	770.9

Potential Solution: Most of the erosion sections are very severe and will likely require regrading of the bank. Hard armoring of the slope toe up to a modest elevation (e.g. 2-year or 5-year flood elevation) with native vegetation establishment on the higher bank areas may be an effective stabilization option.

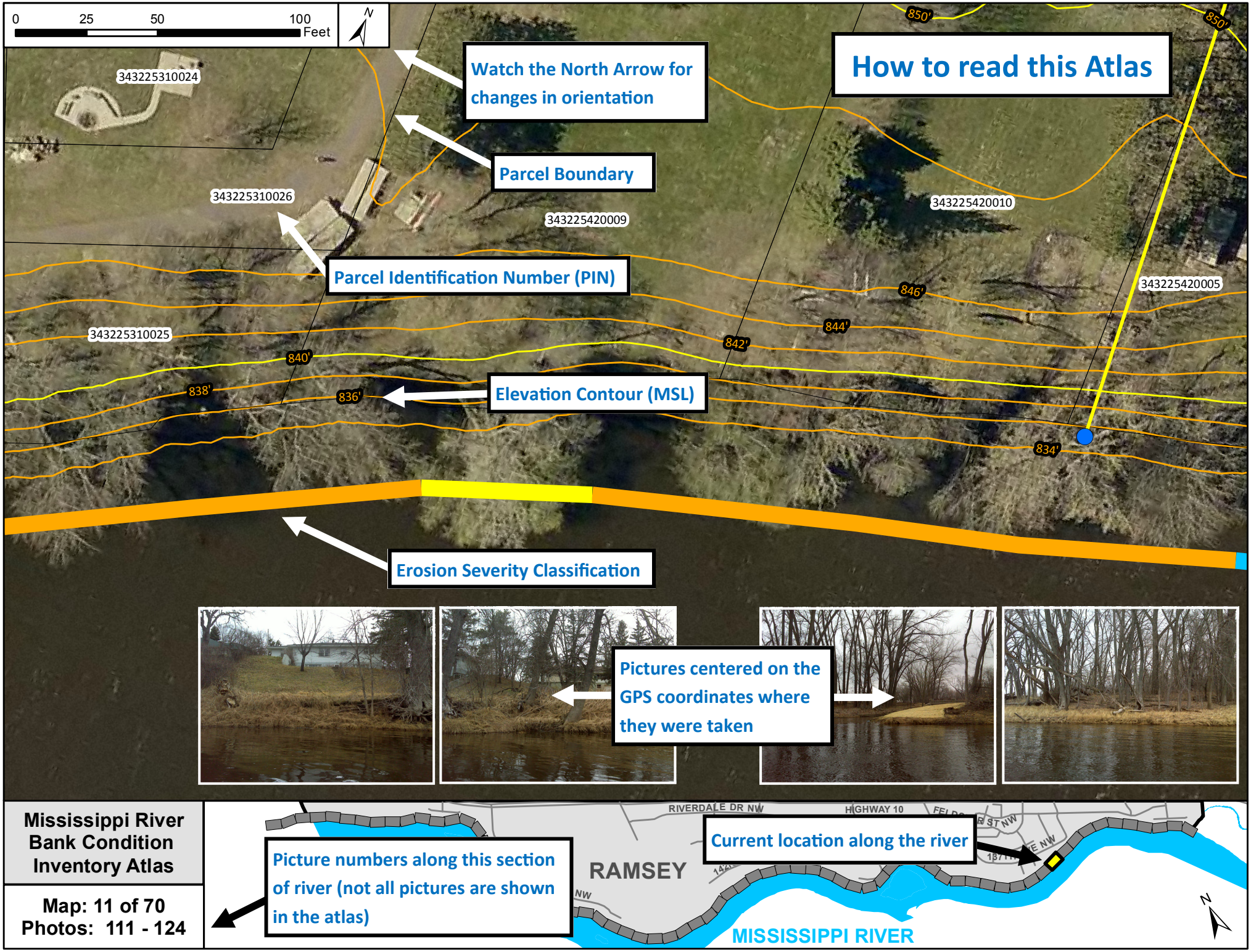

Picture (844).jpg


Picture (813).jpg

Site Information	Ownership	Erosion Length (ft) Severe/Very Severe	Height (ft)	Depth (ft)	Slope (H:V)	Soil Loss (tons/yr)
	Private	325	6 - 8	11 - 14	1.8	92.4

Additional Information: Two sections of severe erosion span four private properties in this site profile. The erosion is characterized by exposed tree roots and some undercutting of the bank.

Potential Solution: Much of the erosion could possibly be addressed using cedar tree revetments inter-planted with native vegetation (e.g. Sandbar Willow or Buttonbush). Areas with more severe undercutting may need to be regraded and may warrant hard armoring at the toe with native vegetation higher on the bank.


0 25 50 100 Feet
N
How to read this Atlas
Watch the North Arrow for changes in orientation
Parcel Boundary
Parcel Identification Number (PIN)
Elevation Contour (MSL)
Erosion Severity Classification
Pictures centered on the GPS coordinates where they were taken
343225310024
343225310026
343225310025
343225420009
343225420010
343225420005
850'
846'
844'
842'
840'
838'
836'
834'
Mississippi River Bank Condition Inventory Atlas
Map: 11 of 70
Photos: 111 - 124
Picture numbers along this section of river (not all pictures are shown in the atlas)
Current location along the river
RAMSEY
RIVERDALE DR NW
HIGHWAY 10
MISSISSIPPI RIVER

RESILIENCE

Energy Infrastructure and Resources

- ☐ Local governments in the seven-county metropolitan area are required by state law to include an element in their Plan for protection and development of access to direct sunlight for solar energy systems.

13. ENVIRONMENTAL PROTECTION/ RESOURCE MANAGEMENT

A. Existing Conditions

Ramsey is fortunate to have an ample amount of natural resources and open space areas and a community attitude that is increasingly concerned about the environment. The inventory of natural resources and open spaces include a variety of wetlands, woodlands, farmlands, parkland and two golf courses. Many native plants and trees are evident in the community. Early settlers cleared much of the land for farming in the early settlement days, but since then residential development has been the main force behind the loss of native vegetation allowing for the introduction of new species into the Ramsey community. The following is a limited description of the natural features and their characteristics that can be found in the Ramsey community and surrounding areas of the Anoka Sandplain. This inventory includes information that has been gathered at a regional level including sources such as U.S. Fish and Wildlife Services, Department of Natural Resources, U. S. Army Corp of Engineering, U.S. Department of Agriculture, the Metropolitan Council and other federal, state and regional resources. Information has also been obtained by local studies conducted by the City of Ramsey.

1. Wetlands

The City of Ramsey has an abundance of wetlands in a variety of wetland types. The following inventory includes two sources of data: the National Wetland Inventory (NWI) and the DNR's Protected Waters Map (see Figure 13-1). The National Wetland Inventory put together by the U.S. Army Corp of Engineers includes a more thorough inventory of land areas that have an impact on maintaining and enhancing the quality of the water. Table 13-1 represents the wetland types as designated by the U.S. Fish and Wildlife Services that can be found in the City of Ramsey.

Table 13-1 NWI Wetland types found in the City of Ramsey

Wetland Type	Wetland Description
Type 1	Floodplain Forest and Seasonally-Flooded Basin
Type 2	Wet Meadow or Prairie
Type 3	Shallow Marsh
Type 4	Deep Marsh
Type 5	Open Water (Pond)
Type 6	Scrub Shrub Swamp
Type 7	Wooded Swamp

The Minnesota Wetland Conservation Act (WCA) of 1991 outlined a program for the conservation of wetlands. The WCA is directed through the Minnesota Board of

Water and Soil Resources (MBWSR) with the DNR acting as the enforcement agency. The Act places implementation responsibilities in Local Units of Government. The Local Unit of Government that monitors wetland activities in the City of Ramsey is the Lower Rum River Watershed Management Organization. The DNR's inventory includes those wetlands that are classified as Type 3, 4, or 5 of the NWI. Figure 13-1 illustrates the City of Ramsey's wetlands.

2. Shorelands

The City has several lakes and marshes that are classified as part of the shoreland management program. The following table highlights the various shorelands in Ramsey:

Table 13-2 Shorelands of the Ramsey Shoreland Overlay District

Natural Environment Lakes	Recreational Development Lakes	General Development Lakes	General Development Streams
Shack Eddy	Jeglens Marsh	Ramsey Terrace	Trott Brook (part)
Itasca	Peltzer	Magnesium Street	Ford Brook (part)
Rogers	Grass (Sunfish)	Industry Avenue	

3. Soils

The predominant soil types in Ramsey consist of the Hubbard–Nymore Association. These soils are nearly level to gently sloping, excessively drained soils that are sandy throughout. This association is well suited to most urban uses and is moderately well suited to farming and to recreational uses. This soil type is mostly found in the central and southern portions of the City while in the northeast part of the City the Zimmerman-Isanti-Lino Association is prominent. This soil association is also dominated by sandy soil conditions, is well suited to urban uses and moderately well suited to farming. The dominant soils of these associations include Hubbard, Nymore, Zimmerman and Isanti. Some of the sub-soils include Markey, Rifle, Dickman, Anoka, Duelm and Becker. A complete inventory map of Anoka County including the City of Ramsey can be found in the Soil Survey of Anoka County found at City Hall or Anoka County Surveyors office.

4. Rivers, Urban Streams and Drainage Ditches

The Mississippi River forms the southern border of Ramsey and one of its tributaries, the Rum River, forms the eastern border. These two rivers are the drainage basins for the entire City. Much of southern Ramsey is part of the Mississippi River Watershed. The northern and central portions of the City are located in the Lower Rum River Watershed. Trott Brook and Ford Brook are two main ditches in a series of county ditches that provide drainage ways through the northern portion of the City and drain into the Rum River.

5. Floodplains

A good portion of the Cities natural resources are located within designated floodway

or floodplain areas. Floodplain areas can be found along Trott Brook, Ford Brook, many of the drainage ditches and wetlands within the community and the Mississippi and Rum Rivers. Characteristics of floodplains include mucky soils that are poorly drained and seasonally flooded and wetland vegetation. Often, floodplains are used for agriculture purposes because of the high nutrient and organic soils that are unsuitable to development.

6. Woodlands

The City of Ramsey conducted tree inventories in 1979 and again in 1992. These inventories indicate a predominance of bur oak, box elder and red oak. The area was originally higher in oak species: however, clear-cutting for agriculture greatly reduced tree cover. Also the oak population is suffering from oak wilt, which has been increasing in recent years. In addition to disease, residential development has reduced much of the wooded population. As the older tree population begins to die off or be removed, new species are introduced. These species are not very well documented. The City of Ramsey has been designated by the National Arbor Day Foundation as a member of Tree City USA since roughly 1986.

7. Natural Resources Inventory

In 2007, the City completed and Natural Resources Inventory to collect and evaluate information on the natural resources of Ramsey. This document also described potential strategies for the protection of these resources. Figure 13-3 shows the existing natural areas in Ramsey and their ranking.

8. Existing Management Efforts

The following programs are currently being implemented by the City of Ramsey to protect the natural resource base:

The Shoreland Management Program provides orderly development of the shoreland and protects lakes and rivers from pollution by individual sewage treatment systems and other non-point sources. The intent of the program is to encourage development of our shorelands in such a way that the water quality is enhanced and the scenic resources are preserved.

The Floodplain Management Program is intended to minimize the threat to life and property resulting from flooding. This program restricts development in floodplains by preventing structures from being built at too low an elevation in areas that have a high risk of flooding. It also controls encroachment so that the floodplain's capacity to hold floodwater will not be reduced, causing flooding to properly located structures.

The Wild and Scenic Rivers Program is a program to preserve and protect rivers with outstanding scenic, recreational, natural, historical and scientific values. The program is designed to prevent damage to these exceptional rivers caused by intensive development and recreational overuse. Both the Mississippi and Rum Rivers are protected under the Wild and Scenic River's Act. The Mississippi River is designated as a "recreational" river through the City of Ramsey while the Rum River is designated as "scenic."

The Critical Areas Act is a program to protect areas, which are of significant regional or statewide public value or interest. The program is designed to protect, preserve and enhance a unique and valuable resource; its biological and ecological functions; its natural, aesthetic, cultural and historical values; and its significance to the transportation, sewer and water and recreational systems for the benefit of the citizens of the state, region and nation. It is also to prevent and mitigate irreversible damage resulting from urbanization. The Mississippi River is designated as a State Critical Area through Ramsey.

The Mississippi National River and Recreation Area Program is a program that furthers the intent of the Critical Areas Act by emphasizing the preservation and enhancement of the historical, scenic, recreational and cultural values of the Mississippi River Corridor. The program is designed to assist and coordinate from a national, regional and local level, activities and projects that emphasize such things as historic/cultural interpretation, public access or native vegetation restoration.

The American Heritage Rivers Program is intended to improve access to federal expertise and resources for riverfront revitalization. The Mississippi River through the Twin Cities Metropolitan Area received designation as an American Heritage River in 1998.

The City Forester and Recycling Coordinator are staff persons hired by the City to provide assistance to residents and business with tree care and recycling needs. The recycling program is funded through Anoka County Integrated Waste Management, while the City Forester is funded through the City. Citizen volunteer groups also contribute to tree preservation and recycling efforts.

Monitoring of Public Wells. As a condition of the approval of Well #8, the latest municipal well to be constructed in the City of Ramsey, the Minnesota Department of Natural Resources and the City of Ramsey began an initiative to monitor the effects of city wells on nearby wetlands and surface water. The purpose of this initiative was the result of concerns by the DNR of using a single aquifer that may result in depleting the resource and possibly lowering the water table. In addition, the City is studying the possibility of using surface water from the Mississippi River as a source for municipal water.

B. A Plan for Environmental Protection and Natural Resources Management

A very important piece to the vitality of the Ramsey community is the protection, preservation and restoration of the native vegetation that covers the community. The following goals and implementation strategies are intended to act as a framework for environmental protection.

1. Natural resources are protected

STRATEGIES:

a) Identify and prioritize natural areas in the City based on the Natural resource Inventory (NRI)
b) Use cluster ordinances, density credits, and conservation development practices to minimize impact on identified natural resources
c) Explore ways to put an economic value on habitat and other natural areas
d) Provide incentives to homeowners for the permanent protection of high-value natural resource areas
e) Establish a revenue stream dedicated to the permanent protection of natural resource areas such as a dedicated City tax enacted through referendum
f) Manage invasive species and promote the use and protection of native species for private and public development
g) Develop educational materials, such as kiosks, Ramsey Resident article, and maps to inform public about the value of natural resources

2. Recreation opportunities are integrated into protected natural areas

STRATEGIES:

a) Coordinate protection and enhancement of natural corridors with neighboring communities
b) Develop a suitability analysis method for reviewing new development that measures both environmental suitability and efficiency of infrastructure use
c) Prioritize the preservation of large, contiguous natural areas (greenways) that provide the greatest opportunities for animal and plant habitat, as well as a contiguous trail system

3. Clean water and clean air for the current and future generations of Ramsey citizens and businesses

STRATEGIES:

a) Preserve existing tree canopy and promote additional tree planting in new development, both public and private
b) Explore options other than ground water for municipal water supply
c) Manage stormwater on site by using alternative stormwater treatment systems, as described in the Storm Water Management Plan
d) Monitor the quality and quantity of groundwater in aquifers and adopt measures to ensure long-term sustainability
e) Seek out alliances and partnerships with non-profit and governmental agencies to assist in securing funding and other resources to assist in achieving this goal
f) Continue to participate in the North Metro Water Supply Group organized by the Metropolitan Council

4. Reduce waste that goes to the landfill from both private and public sources

STRATEGIES:

a) Continue to improve upon the City's award-winning recycling program
b) Seek out alliances and partnerships with non-profit and governmental agencies to assist in securing funding and other resources to assist in implementing this goal
c) Develop educational materials, kiosks, Ramsey Resident articles and maps to inform public about the value of natural resources

C. Implementation Strategies

The following strategies are a suggested means to achieving the goals set forth in the Environmental Protection and Natural Resources Management element of the Comprehensive Plan.

1. Data and Information inventory

A critical step in being able to implement an Environmental Protection and Natural Resources Management plan is to have information that can be analyzed. Such information might include native species, rare habitat, wetlands, soils, diseased areas, septic system problems or other significant natural resource information. Much of this data is already available from federal, state, county or local agencies: however, this data is often outdated, in a variety of different formats (which makes analysis difficult) or too general to provide analysis information. With advances in modern technology, federal, regional and local governments have been able to provide information in Geographic Information Systems (GIS) making data management and information analysis much more feasible and cost effective. The financial ability to establish such a comprehensive inventory could be made possible through supportive funding by the City in partnership with such agencies as the DNR, Office of Environmental Assistance, Department of Agriculture, private foundations and local businesses. Significant research and grant writing would be involved in securing funding for such an analysis and inventory. A critical element of building an inventory of data is having a database that can manage it and allow easy cost effective retrieval and analysis.

2. The Greenway

Greenway corridors mainly include natural resources such as wetlands, hydric soils, tree canopy, natural vegetation, and unique wildlife habitat. It also includes some lands that may not be environmentally unique but instead simply create a link between other open space areas such as parks or wetlands. Some of the elements within greenways are protected through ordinance or other legal means, while others are not. These corridors may be environmentally sensitive areas, which allow for protection of water quality, wildlife movement, scenic views, and a continuous trail system. The intent of the Greenway is not to prohibit development within this corridor but rather to preserve the existing resource base and return areas to their natural state where possible.

The corridor boundary reflecting the Greenway is not a fixed boundary line. This boundary is intended to reflect general (broad) areas that may fall within the Greenway designation, and should send a message to the developers of lands near or obviously within the greenway to develop in the highest environmentally sensitive way possible.

Implementation of the greenway could be handled in a couple of ways. It could be implemented by creating an overlay-zoning ordinance that simply places a layer of regulation over existing zoning districts. This overlay would not replace existing environmental overlay ordinances nor would it be intended to further restrict areas already regulated by existing ordinances rather it would guide development in areas that are not covered by existing environmental ordinances. If the overlay ordinance is the preferred choice of implementation, a more defined boundary should be

established through more site-specific analysis including field study. The other, and less controlling approach, is to refer to the greenway as voluntary means to preserve the environment and create high quality places to live. This could be done through park dedication, conservation easements or clustering housing techniques that can provide incentives to developers to preserve areas that are not otherwise protected by ordinance. This would be handled through the subdivision and site planning process.

3. Scenic Roadways

Some stretches of roadway in Ramsey provide opportunities for scenic vistas that preserve the rural character of the community. An overlay district that designates roadways as having significant scenic values would apply design and planning principles to preserve the rural character of the community. Such principles might include setback criteria, landscaping guidelines, roadway improvement standards or sign regulations.

4. Land Protection Tools

Many tools are available for efforts to protect areas of significant natural resources. These efforts are summarized in many publications one of which is a publication by the Minnesota DNR Natural Heritage and Nongame Research Program "*Natural Areas: Protecting a Vital Community Asset."* For extensive information about open space preservation tools and techniques, the City should consult organizations such as the Department of Natural Resources, The Nature Conservancy, The Trust for Public Land, The Minnesota Land Trust, The Urban Land Institute and many others. The following is a brief explanation of some of the tools and strategies available:

a) Open-space zoning or cluster zoning

The purpose for establishing an open-space or cluster zoning district is to direct development in an effort to preserve large amounts of contiguous open space and protect natural resources that otherwise may be destroyed. These zoning techniques do not reduce overall density rather they simply transfer density from desired preservation areas to development areas. This way, private property owners are granted the reasonable economic use of their property without negatively impacting the remaining natural or open space areas that the community strongly desires. Residential developments would be clustered together in effort to minimize street and utility construction needs and to systematically provide contiguous open space areas.

Primary components of open-space or cluster zoning

- Smaller lot sizes, street widths, or setbacks in effort to maintain an overall density on a portion of the site that otherwise would be spread over an entire site.
- The developer would be required to preserve a percentage of the land within the development as *permanent open space* by placing the land in a permanent conservation easement or other land preservation tool such as dedication to the City.
- Identification of preservation areas on a community-wide basis, such as the greenway corridor, Wild and Scenic Rivers Area or Mississippi River Critical Area.

b) Conservation Easements

Conservation easements are the voluntary transfer of specified development and land use rights from a landowner to a qualifying organization such as a public body or non-profit agency. Conservation easements can be in the form of permanent easements (lasting forever) or "term" easements (lasting for a period of time at which the land use may be changed). Conservation easements in Ramsey should be used to protect natural resources or to permanently preserve areas of the greenway corridor.

c) Transfer of Development Rights

Transfer of development rights allows landowners who may wish to preserve their lands to still receive a profit from the sale of development rights. The purchaser of the development rights would then be able to develop at greater densities. This technique requires the community to establish (on a community wide basis) sending zones, which are areas the community wishes to preserve and receiving zones, which are areas that are most easily served by utilities and are the most logical growth expansion areas. Examples of sending zones may include lands within the greenway corridor, lands identified as containing significant natural resources or lands within the Mississippi River Critical Area corridor. Receiving zones may be located where utilities are readily available or could be easily extended or possibly within the existing MUSA area.

d) Purchase of Development Rights

Purchase of development rights (PDR) operates basically the same way as in the TDR program except instead of transferring development rights the development rights are basically retired or lost. Development rights are typically purchased by the government or non-profit organizations and the land is put into a permanent conservation easement. This program is more of a tool to reduce total growth and can potentially lead to sprawl or leap frog development when areas adjacent to urban services loose their development rights. This program should be used carefully. Residential lands within the Mississippi River Critical Area may be good candidates for the PDR program.

e) Preferential Taxation

Preferential taxation can be used to protect wetlands, agricultural lands or open space. Several of these programs currently exist such as the Agricultural Preserves and Green Acres program, which provide tax breaks for agricultural uses and the Wetland Tax Exemption program which exempts wetland areas from property tax assessments. The purpose for preferential taxation programs is to level the playing field by acknowledging the land's actual use rather than a market value based approach on uses to which the landowner has no intention of putting the land.

f) Property Acquisition

Property acquisition is probably the simplest form of open space preservation to understand in that it simply means the public buys the land. This technique gives the public control over the use of the property; however, this technique can be very expensive and may not always enjoy strong public support.

g) Land Banking

This is a tool similar to property acquisition where the public (City of Ramsey) purchases the land before it is ready to develop. When the area is ready to develop, the City can sell the land with restrictions that preserve open space or limit development. This technique may also be referred to as advanced acquisition.

D. Funding Sources

One of the key obstacles to utilizing some of the tools described above is adequate funding. The following is a list of potential funding sources for implementation of the above-mentioned programs.

- Minnesota Department of Natural Resources
- National Park Service
- Metropolitan Council
- Minnesota Land Trust
- Trust for Public Lands
- 1,000 Friends of Minnesota
- City referendum
- Park dedication from development

Figure 13-1 Wetlands (NWI and DNR Protected Waters) and Natural Drainage

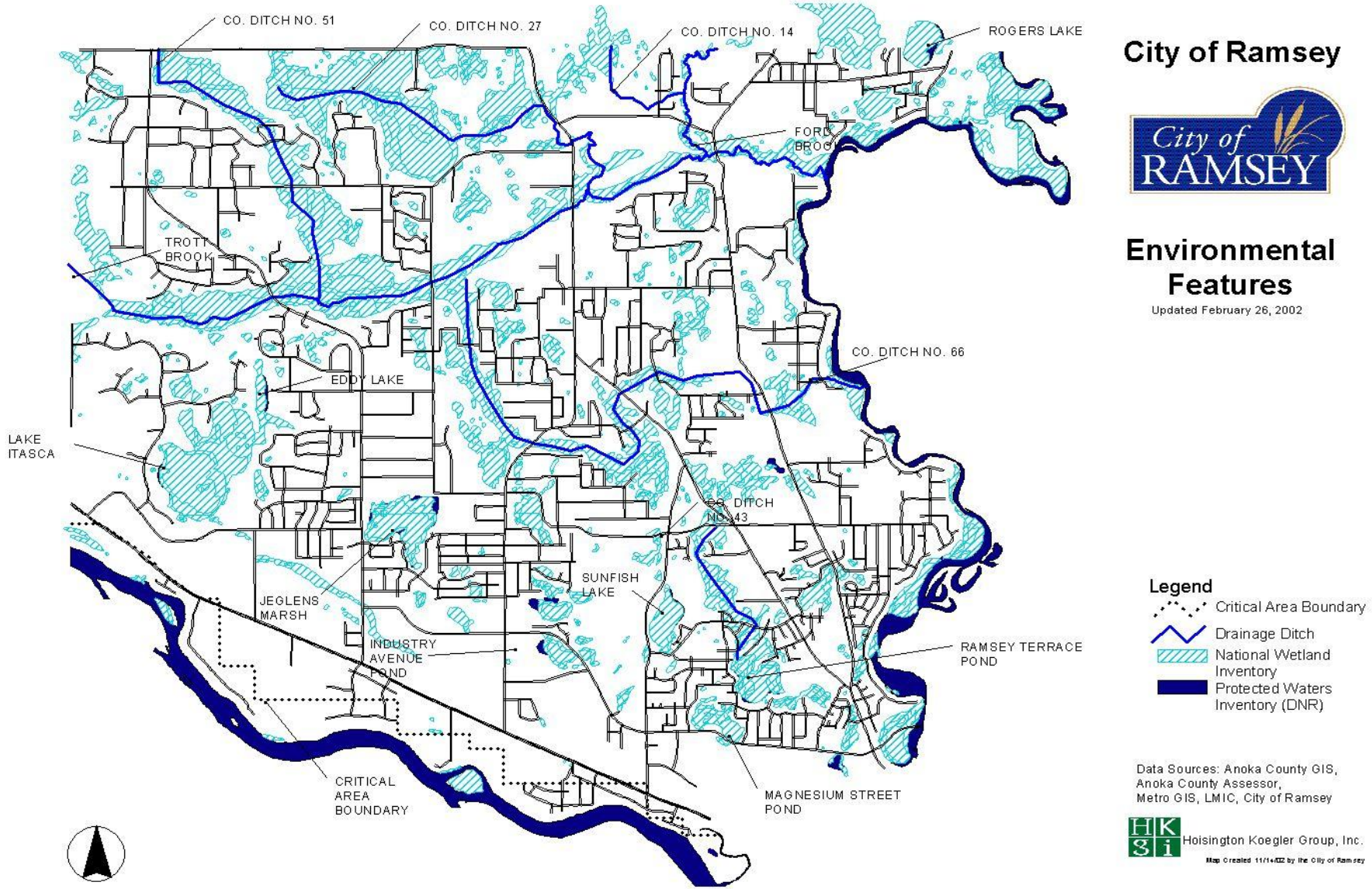


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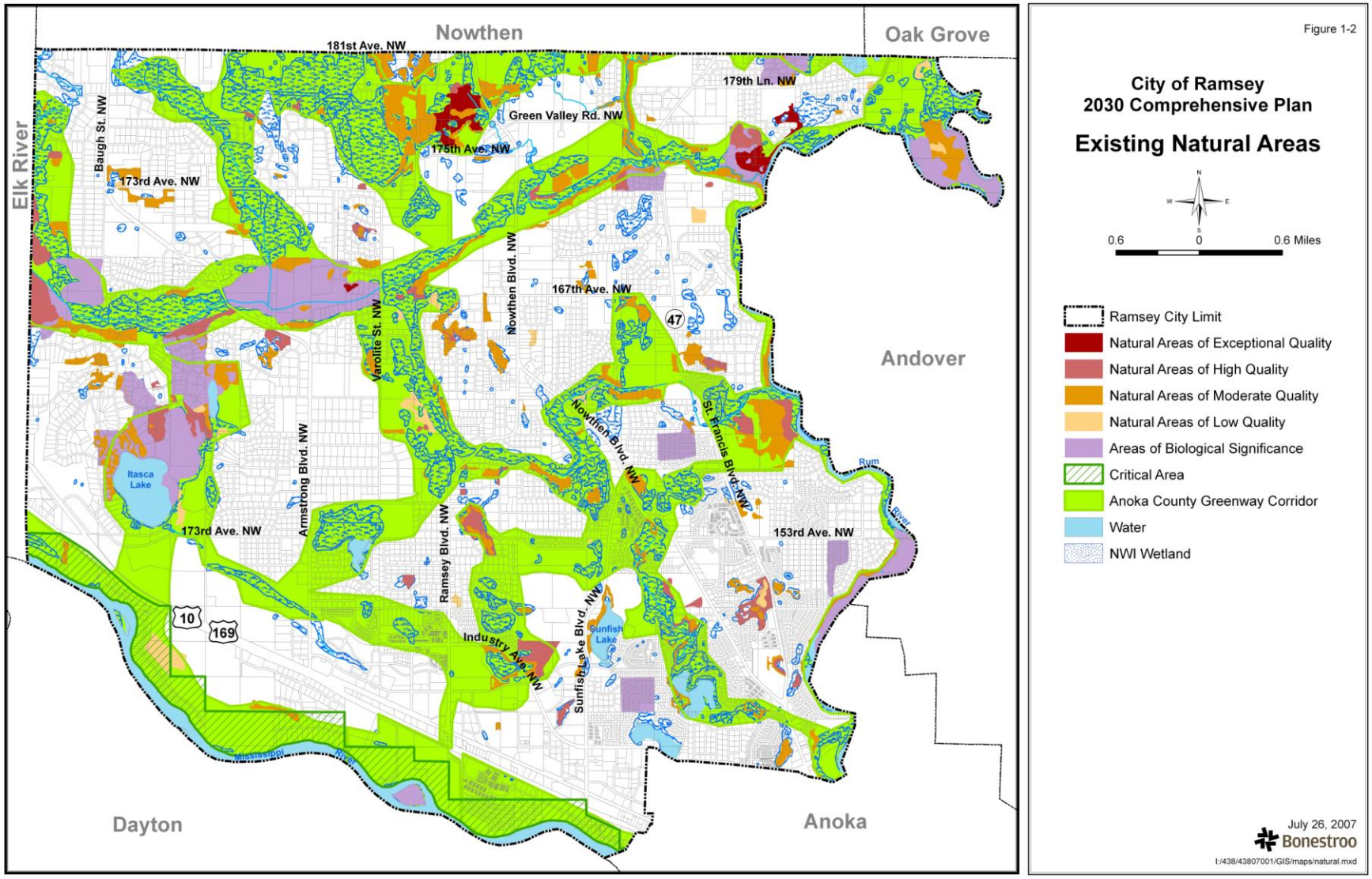
Figure 13-3 **Natural Resources Inventory**



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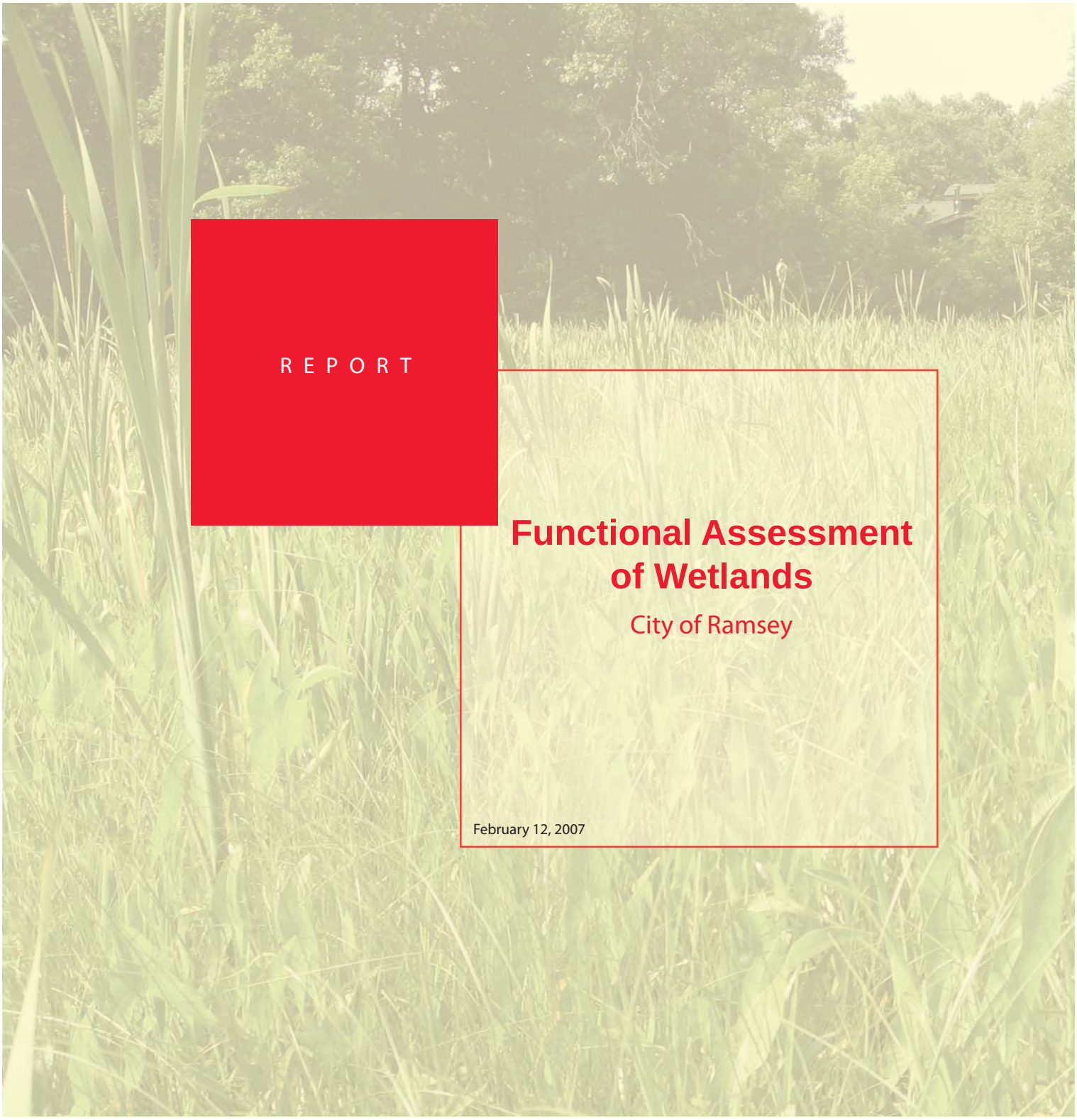

REPORT

Functional Assessment of Wetlands

City of Ramsey

February 12, 2007

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CITY OF RAMSEY

FUNCTIONAL ASSESSMENT OF WETLANDS

February 12, 2007

SUMMARY

Peterson Environmental Consulting (PEC), now part of Westwood Professional Services, Inc., conducted a functional assessment of wetlands within the City of Ramsey. A total of 349 wetlands were identified in the City of Ramsey from National Wetlands Inventory (NWI) and Metropolitan Mosquito Control District (MMCD) data. Using a GIS-based analysis, PEC placed these wetlands into one of four preliminary Wetland Management Classifications: Preserve, Manage 1, Manage 2, or Manage 3. A total of 124 wetlands were initially classified as Preserve and Manage 1 using GIS methods. These wetlands, along with 12 additional wetlands, as requested by the City, were field verified and underwent a complete MnRAM 3.0 analysis. A total of 136 wetlands were assessed in the field between June 13 and November 15, 2006 by Westwood Professional Services, Inc. The MnRAM 3.0 field analysis resulted in the following Wetland Management Classifications for all wetlands inventoried within the City of Ramsey: 40 wetlands classified as Preserve, 46 wetlands classified as Manage 1, 127 wetlands classified as Manage 2, and 130 wetlands classified as Manage 3.

INTRODUCTION

Project History

In 2005, Peterson Environmental Consulting (PEC), now part of Westwood Professional Services, Inc., and Hoisington Koegler Group, Incorporated (HKGI) assisted the Environmental Protection Task Force (EPTF) and the City of Ramsey in the preparation of a Wetland Buffer Ordinance and development of wetland management classifications. These classifications are used to assign upland buffer requirements under the ordinance. Recommended buffer widths provided in the City of Ramsey buffer ordinance vary by Wetland Management Classification (WMC) grouping as described in Board of Water and Soil Resources (BWSR) guidance document *Recommended Wetland Management Classification System* (Draft) (Appendix A).

According to BWSR's Recommended Wetland Management Classification System (Draft), this system classifies wetlands into one of four categories: Preserve, Manage 1, Manage 2, or Manage 3. Preserve and Manage 1 management categories represent the highest quality wetlands with high rankings for several wetland functions. Wetlands in Preserve and Manage 1 categories require the widest wetland buffers under the City's ordinance to sustain existing high functions and values.

Study Area Description

The study area includes the entire limits of the City of Ramsey. The City of Ramsey is located along the western border of Anoka County and is bounded by Burns Township to the north, Dayton and Anoka to the south, Andover to the east, and Elk River to the west (see Exhibit 1).

The City of Ramsey is home to a large number of wetland communities such as shallow and deep marshes, floodplain forests, hardwood swamps, shrub swamps, shallow open waters, and wet meadows. Wetlands provide the City with a vast array of benefits such as wildlife habitat, water storage to prevent flooding and protect water quality, groundwater recharge and discharge, and recreational and educational opportunities.

Wet meadows, shallow and deep marshes, hardwood swamps, and floodplain forests are the most common wetland communities within the City. Wet meadows are saturated depressions with a seasonal high water table at the surface to 12 inches below during the growing season. Wet meadows are dominated by grasses, sedges, and forbs. Shallow and deep marshes are dominated by cattail, arrowhead, bulrushes, and sedges. Throughout the growing season, shallow marshes have standing water up to six inches in depth and deep marshes have standing water between six inches and three feet in depth. Both shallow and deep marshes are common in surface water and groundwater depressional basins and in the fringes of lakes, ponds, and rivers. Hardwood swamps commonly border shallow and deep marshes and along with floodplain forests, they are also found along the Rum and Mississippi Rivers. Hardwood swamps and floodplain forests are composed of deciduous trees such as silver maple, American elm, cottonwood, and black willow. The soils within the hardwood swamps are saturated and can have up to a foot of standing water. Floodplain forests flood during flood events and are usually drained for much of the growing season and serve as migration corridors for plant and animal species.

MNRAM 3.0 FUNCTION ASSESSMENT METHODOLOGY

The placement of wetlands into wetland management categories requires an assessment of wetland functions and values determined through the application of the Minnesota Routine Assessment Method (MnRAM) version 3.0 to the wetlands in question. The MnRAM 3.0 methodology assesses 15 important wetland functions[1]:

1. **Maintenance of Characteristic Vegetative Diversity/Integrity** – this function is the diversity of the wetland vegetation compared to a wetland of the same type under undisturbed conditions.
2. **Maintenance of Hydrologic Regime** – this function is the ability of the wetland to maintain the seasonal water level pattern for the wetland type and measures the degree of disturbance to the wetland hydrology due to human alteration.

[1] Minnesota Board of Water and Soil Resources. *Comprehensive General Guidance for Minnesota Routine Assessment Method (MnRAM) Evaluating Wetland Function, Version 3.0*. July 14, 2004.

3. **Flood/Stormwater Attenuation** – this function is the ability of the wetland to provide flood storage and/or flood wave attenuation.
4. **Downstream Water Quality** – this function is the ability and opportunity of the wetland to protect valuable downstream recreational waters and potable water supplies by removing sediment from stormwater.
5. **Maintenance of Wetland Water Quality** – this function is the ability of a wetland to sustain its characteristics based on the quality and quantity of stormwater runoff entering the wetland.
6. **Shoreline Protection** – this function is evaluated only for those wetlands adjacent to lakes, streams, or deepwater habitats and is rated based on the wetlands opportunity to protect the shoreline.
7. **Maintenance of Characteristic Wildlife Habitat Structure** – this function is the ability of the wetland to support wildlife in a general sense and is not based on any specific species.
8. **Maintenance of Characteristic Fish Habitat** – this function is the ability of the wetland to support native fish populations.
9. **Maintenance of Characteristic Amphibian Habitat** - this function is the ability of the wetland to support amphibian species in a general sense and is not based on any specific species.
10. **Aesthetics/Recreation/Education/Cultural** – this function is based on the wetland's visibility, accessibility, and evidence of recreational uses, evidence of human influences, and any known educational or cultural purposes.
11. **Commercial Uses** – this function is the ability of the wetland to sustain a commercial crop or other commercially-productive uses.
12. **Ground Water Interaction** – this function determines the most likely type of ground water interaction, i.e. recharge or discharge, or a combination.

Additional Evaluation Information

13. **Restoration Potential** – this function determines the potential for wetland restoration.
14. **Sensitivity to Stormwater & Urban Development** – this function determines the sensitivity of a wetland to stormwater and urban development and is based on the wetland type and diversity of wetland vegetation.
15. **Additional Stormwater Treatment Needs** – this function rates the sustainability of the wetland with regard to stormwater discharge and the need for additional stormwater treatment prior to discharge to the wetland.

Each wetland function is rated with a numeric index according to the formulas provided in the methodology. The scoring system is from 0.1 to 1.0 signifying low to high, respectively, and a score of 2 signifies a rating of exceptional. Each wetland function receives a functional index score with the following ratings:

Functional Ratings	**Functional Index Score**
Exceptional:	1.01 – 2.00
High:	0.66 – 1.00
Medium:	0.33 – 0.65
Low:	0.10 – 0.32

WETLAND MANAGEMENT CLASSIFICATION SCHEMA

The MnRAM 3.0 assessment provides a basis for developing wetland management classifications. The functional indices from wetlands assessed are used to assign a recommended management class. Using BWSR's recommended system of management classification, wetlands are classified into one of four categories: Preserve, Manage 1, Manage 2, or Manage 3.

Wetlands placed in the **Preserve** Management Classification have at least one of the following characteristics:

- Wetlands rated with exceptional vegetative diversity/integrity, which may include wetlands with natural communities not significantly impacted by invasive species or other human-induced alterations, wetlands harboring endangered or threatened plant species, or rare wetland habitats classified as imperiled (S1) or critically imperiled (S2) by the state rankings.
- Wetlands rated as exceptional for wildlife habitat. These include wetlands known to harbor endangered or threatened animal species, rare communities, or wildlife refuges and fish and wildlife management areas whose purpose is maintaining suitable habitats for wildlife.
- Wetlands rated as high for amphibian habitat.
- Wetlands rated as exceptional for fish habitat. These wetlands include those specifically managed for fish management; designated trout streams, lakes or adjacent wetlands; and known spawning habitat for game fish.
- Wetlands rated high for shoreline protection. Wide wetlands bordering lakes and feeder streams that have persistent, emergent, submergent, or floating-leaved vegetation are critical to protecting the water quality of the lakes from bank erosion and sedimentation from upstream.
- Wetlands rated exceptional for aesthetics/education/recreation/cultural and rated high for wildlife habitat, include those located on public lands that provide a unique or rare recreational, educational, or cultural opportunity, and have high functional level for wildlife since that is typically a primary focus for users.
- Wetlands that are exceptionally sensitive to stormwater impacts and have a vegetative diversity/integrity rating of medium or higher were also placed in this category. These wetlands may have suffered some degradation from human influences due to

their heightened sensitivity. The vegetative quality of the wetland is such that improved management may allow for restoration of the community.

- Wetlands with a high vegetative diversity/integrity rating *and* a high rating for wetland water quality. The vegetative community in these wetlands typically has been only slightly affected by humans and still maintains high functioning to maintain water quality, which is critical to wetland sustainability.
- Wetlands with a high vegetative diversity/integrity rating *and* a high rating for hydrologic regime. The vegetative community in these wetlands typically has been only slightly affected by humans and still maintains high functioning levels for hydrologic regime, which is critical to wetland sustainability.

Wetlands placed in the **Manage 1** Management Classification have at least one of the following characteristics:

- Wetlands rated with high vegetative diversity/integrity, which typically include diverse wetland plant communities with less than 20 percent cover of non-native or invasive species.
- Wetlands rated as high for wildlife habitat. These generally include wetlands located within large tracts of undeveloped land or in parks, which allow for wide high quality upland buffers. In addition, this includes seasonal wetlands that are well buffered.
- Wetlands rated as medium for amphibian habitat. This includes seasonal wetlands that are well buffered.
- Wetlands rated as high for fish habitat. These wetlands are lacustrine/ riverine or are contiguous with a permanent waterbody or watercourse and provide spawning/nursery habitat, or refuge for native fish species in adjacent lakes, rivers or streams.
- Wetlands rated medium for shoreline protection. These wetlands include those that are moderately wide and support persistent emergent, submergent, or floating-leaved vegetative cover bordering lakes and feeder streams.
- Wetlands rated high for aesthetics/education/recreation/cultural *and* medium for wildlife habitat, include those that provide a number of benefits that may include: spatial buffering, accessibility, public ownership, multiple recreational opportunities, and medium-quality wildlife habitat.
- Wetlands that are highly sensitive to stormwater impacts *and* have a vegetative diversity/integrity rating of medium or high were also placed in this category. The vegetative quality of the wetland is such that improved management may allow for restoration of the community.
- Wetlands with a medium vegetative diversity/integrity rating *and* a high rating for wetland water quality. The vegetative community in these wetlands has only been moderately affected by humans and still maintains high functioning levels for water

quality, which is critical to wetland sustainability. These wetlands would likely benefit from active management.

- Wetlands with a medium vegetative diversity/integrity rating *and* a high rating for hydrologic regime were placed in the **Manage 1** category. The vegetative community in these wetlands has only been moderately affected by humans and still maintains high functioning levels for hydrologic regime, which is critical to wetland sustainability. These wetlands would likely benefit from active management.
- Wetlands rated high for commercial use. These wetlands provide important social value without having an altered hydrology.

Wetlands placed in the **Manage 2** Management Classification have at least one of the following characteristics:

- Wetlands rated with medium vegetative diversity/integrity, which typically include wetlands with less diversity and up to 50 percent cover of non-native or invasive species.
- Wetlands rated as medium for wildlife habitat. These often include wetlands that are increasingly separated from natural communities and wildlife corridors; they often lack significant upland buffers and are increasingly altered.
- Wetlands rated as low for amphibian habitat. These wetlands are increasingly altered, but they still have some opportunity to provide either breeding, over wintering, or resting habitat for amphibians.
- Wetlands rated as medium for fish habitat. These wetlands include those which are intermittently connected to waterbodies supporting native fish populations
- Wetlands rated low for shoreline protection. While these wetlands are not providing the highest level of protection to the lake or river systems, their mere presence provides some level of protection that should not be dismissed. These wetlands are typically narrow, with little emergent, submergent, or floating-leaved vegetation.
- Wetlands rated medium for aesthetics/education/recreation/cultural and low for wildlife habitat.

Wetlands placed in the **Manage 3** Management Classification have at least one of the following characteristics:

- Remaining wetlands that did not fit into any of the above-described conditions.
- Wetlands rated low for vegetative diversity/integrity.
- Wetlands rated medium or high for downstream water quality protection and for flood storage/attenuation. This correlation is expected since wetlands that provide higher levels of water quality treatment and runoff/rate control often suffer from ecological degradation.

PRELIMINARY GIS WETLAND MANAGEMENT CLASSIFICATION

PEC completed a GIS-based analysis to generally place wetlands into preliminary Wetland Management Categories. The following data was gathered and incorporated into the GIS:

a. 2003 Farm Service Agency (FSA) base-map
b. streams and waterways
c. National Wetlands Inventory (NWI)
d. Metropolitan Mosquito Control District (MMCD) digital wetland maps
e. Anoka County soils (SSURGO2)
f. Minnesota Land Cover Classification (MLCCS) System polygons
g. DNR protected waters inventory (PWI)
h. minor watersheds
i. city, county, and state roads
j. scientific and natural areas
k. County biological survey
l. Minnesota Natural Heritage Element Occurrences
m. City of Ramsey parcel map

For the purpose of this inventory and the functions/value analysis, wetlands within the City of Ramsey boundary were identified from NWI and MMCD information. All wetlands considered in this inventory are greater than 0.25 acres in size[2]. These criteria resulted in 349 wetlands that were considered for the MnRAM analyses. Each wetland was assigned a unique Wetland Identification (ID) formatted to meet the MnRAM database requirements as follows:

02-032-25-010-006-A
County Code- Township- Range- Section- PEC ID- Wetland ID

In cases where a wetland existed within more than one section, the wetland was assigned to the section containing the largest wetland area. Wetlands associated with the rivers along the eastern and southern city boundaries were divided into smaller portions that had similar land-use and hydrology based on aerial photo interpretation.

Once all wetlands were assigned a unique Wetland ID, each wetland polygon was attributed with Circular 39 and Cowardin classifications[3]. If a wetland was comprised of more than one wetland type, then the acreage was calculated for each type. The wetland type provided information on the wetland's hydrologic regime and other hydrologic characteristics. This information was used to answer many of the MnRAM questions relating to each wetland's hydrology.

[2] 0.25 acres was the size threshold discussed in the project proposal.
[3] Wetland classifications are set forth in *Wetlands and Deepwater Habitats of the United States* (FWS/OBS Publication 79/31; Cowardin et al. 1979) and *Wetlands of the United States* (USFWS Circular 39; Shaw and Fredine 1971)

Each wetland was similarly attributed with information from the Anoka County soil survey to assess the dominant soils and hydrologic soil groups. This information was used to answer many MnRAM questions relating to the wetland's soils and land-use capabilities and characteristics.

Data from the additional layers listed above was added to the GIS database and attributed to the appropriate wetland(s) and used to answer questions in the MnRAM database. Many of the MnRAM questions required information on characteristics of soils or land-use within a certain upland area surrounding each wetland. Therefore, 200- and 500-foot wetland buffers[4] were created around each wetland. Data was analyzed using these buffered areas to assess surrounding land-use, soil/hydrological characteristics, and presence of rare, listed plant and animal species.

Once all the data was incorporated into the GIS database, each wetland was visually evaluated using high resolution 2003 FSA aerial photographs to confirm and support the existing GIS data and to provide estimates of wildlife habitat, hydrologic group and land-use functions. Based on the information entered for each question, the MnRAM database then assigned a functional assessment ranking of "exceptional', "high", "moderate", "low" or "not applicable" to each of its prescribed wetland functions (see Appendix B for preliminary MnRAM 3.0 Wetland Functional Assessment Summary). These rankings were compared to the Wetland Management Classifications[5] listed and each wetland was assigned an overall preliminary classification of "Preserve", "Manage 1", "Manage 2", or "Manage 3". Exhibit 2 shows the non field-verified preliminary Wetland Management Classifications assigned to all 349 wetlands. A summary of the preliminary classification results are shown in Table 1. Wetlands initially placed into Preserve and Manage 1 classifications were then field verified and underwent a complete MnRAM 3.0 analysis using the existing GIS information, augmented with field observations of applicable functional characteristics.

Special Concerns:

The MnRAM database calculations rely heavily on data relating to vegetative diversity and integrity. This parameter is impossible to assess in the office without field verification, even with the available GIS data. Since only one characteristic must be met to assign a wetland to a given Wetland Management Classification, wetlands are placed in the most appropriate preliminary Wetland Management Classification based on the available data in the office. Not having field-verified vegetative diversity and integrity data available at this stage resulted in some wetlands potentially being under-classified.

Another issue that arose during the GIS analysis was how DNR Heritage Program data on state listed threatened, endangered and special-concern wildlife species affects the

[4] Based on MnRAM 3.0 Full Text, updated 1-19-06.
[5] Draft Recommended Wetland Management Classification System, 7/15/04, Minnesota Board of Water and Soil Resources.

preliminary classifications[6]. The full-record rare feature locations were used for the purpose of the GIS assessment, but cannot be reproduced and published due to the possibility that the release of the information could "result in the damage or destruction of a rare element" (correspondence MnDNR, 9-8-2005). One confirmed sighting of an endangered or threatened species in an area is enough to be listed as an element occurrence. The GIS layer that contains the locations of each known occurrence places each occurrence within a circular "buffer" with a radius of ¼ mile.

One characteristic for classifying a wetland as "Preserve" is one recorded sighting of an endangered or threatened animal species in the wetland. Since only one characteristic needs to be met to make a "Preserve" classification, inclusion of this data (including the buffer around each occurrence) resulted in 105 of the area's 349 wetlands being classified as "Preserve". Of these 105 wetlands, 91 would become Preserve wetlands based solely on the presence of a state-listed species. In short, many wetlands where no listed species has yet been documented would be shifted to "Preserve" status because the wetland falls within the buffer. We believe this represents a substantial over-estimation of the number of wetlands that actually should be upgraded to Preserve status based on listed wildlife species.

In order to present the Heritage Program GIS data without the over-estimation of Preserve wetlands, Westwood removed the buffering and cited only those wetlands at the centroid of each known occurrence of listed species. A total of nine wetlands contained a known occurrence of a state-listed species.

WETLAND FIELD ASSESSMENT METHOLOGY

A total of 349 wetlands were identified from NWI and MMCD information and of those, 124 wetlands were initially placed into Preserve and Manage 1 classifications using GIS methods. These wetlands, along with 12 additional wetlands, as requested by the City, were field verified and underwent a complete MnRAM 3.0 analysis using the existing GIS information augmented with field observations of applicable functional characteristics. A total of 136 wetlands were assessed in the field between June 13 and November 15, 2006 by Westwood Professional Services, Inc.

Field Assessment Mapping

A preliminary set of maps were created for use in the field to locate the wetlands, to assist with the assessment of wetland functions, and to record necessary data. Each field map covered one full section of land or one square mile for the entire City boundary at a scale of 1 inch equals 600 feet. The maps showed all 136 wetlands that would be field verified along with their unique Wetland ID and Circular 39 classifications. In addition, section numbers, parcel lines, and road names were added to the field maps. Color aerial photographs from 2003 were used as a base layer on the field maps.

[6] Records obtained from the Minnesota Department of Natural Resources Natural Heritage and Nongame Research Program.

Field Assessment Procedures

All 136 wetlands were evaluated in the field for wetland function and for restoration potential. The field maps, digital camera, and a letter explaining the project to property owners were used each day during fieldwork. During the field assessment, all the questions posed in the MnRAM 3.0 were answered on MnRAM 3.0 field sheets. The field assessment included an evaluation of the presence and abundance of hydrophytic and invasive vegetation to identify and appraise the plant community, an observation of surface drain tile inlets, ditches or any other drainage feature to identify hydrogeomorphology, buffer of the wetland, land-use within the subwatershed, and apparent public use of the wetland. Also during the field assessment, a digital photograph was taken of all inventoried wetlands to provide a visual record. Each photograph is named using the unique Wetland ID.

Field Data Entry into MnRAM 3.0 Access Database

The MnRAM 3.0 methodology is programmed into a Microsoft Access™ database which all wetland field data is entered, tabulated and stored. The database computes the various functions attributed to wetlands using formulas outlined in the methodology. Upon return to the office, the wetland functional data collected in the field was entered into a copied version of the MnRAM 3.0 database used in the preliminary GIS analysis. A copied version was used in order to update the MnRAM analysis with wetlands verified in the field and also to maintain the MnRAM analysis for those wetlands not field verified.

The MnRAM database contains *The National List of Plant Species that Occur in Wetlands: North Central (Region 3)* (USFWS, Reed, 1988), which includes common and scientific names and the indicator status for each species. This list was used for entering the dominant plant species within each wetland along with the cover class for each species. When wetlands with uncommon or native vegetation were evaluated, those species were also recorded, even if they weren't dominant for the entire wetland. Species were selected from the drop down list to avoid misspellings and improper names. If a species was not present in the plant list, it was added to the species list. For each assessed wetland, the field evaluator recorded their initials and the date of the assessment within the MnRAM database for future reference.

All data entered into the MnRAM database was automatically saved and became part of the permanent record as soon as entered. The database also contains a "Complete Box" which, when checked, indicated that the wetland assessment has been completed. The final MnRAM database contains a total of 349 records which consist of: 1) 136 records updated with the wetland functional data collected in the field for each of the 136 field verified wetlands, and 2) 213 records with the preliminary GIS analysis for the 213 wetlands not assessed in the field.

WETLAND FIELD ASSESSMENT RESULTS

A total of 349 NWI/MMCD wetlands were inventoried within the City of Ramsey and of these, 136 wetlands were verified in the field. Data collected during the field assessment indicated that of the 136 wetlands:

- 122 were wetlands of Circular 39 Types 1 through 8,
- 8 were riverine wetlands, and
- 6 proved to be non-wetland areas

The distribution of the 136 field verified wetlands and associated wetland types, is shown in Exhibit 3.

In order to assess the number and types of wetlands within the City, wetlands were grouped by type according to the Circular 39 methodology and the Cowardin methodology for riverine wetlands since Circular 39 does not provide a type for riverine. Table 2 gives a summary of the wetlands by type, number, and acreage for single and multiple type wetlands. In general, wetlands that had a single Type 2, 3, and 4 classifications were more common than wetlands that had a Type 1, 5, 6, or 7 classification. No wetlands of Type 8 – Bog were inventoried within the City. Wetland complexes with the Type Riverine were the large wetland complexes associated with the Mississippi and Rum River.

Function and Value Assessment

The results of the MnRAM 3.0 assessment are summarized in Table 3. Exhibits 4 through 15 show the functional ratings for the following MnRAM 3.0 wetland functions: Vegetative Diversity/Integrity; Wildlife Habitat; Amphibian Habitat; Fish Habitat; Shoreline Protection; Aesthetic, Recreation, Education; Wetland Stormwater Sensitivity; Stormwater Treatment Needs; Hydrologic Regime; Flood Storage; Downstream Water Quality; and Wetland Water Quality. Based on the assessment, the functional assessment rating of exceptional was assigned to: 1) nine wetlands for Vegetative Diversity/ Integrity, 2) six wetlands for Wildlife Habitat, 3) 15 wetlands for Aesthetics, Recreation, and Education, 4) 17 wetlands for Wetland Stormwater Sensitivity, 5) four wetlands for Stormwater Treatment Needs, and 6) four for Wetland Water Quality . None of the wetlands in the City of Ramsey were found to be used for commercial purposes.

As part of the inventory, wetlands offering potential wetland restoration were identified. Twelve wetlands were identified as having wetland restoration potential. This report does not include a detailed investigation as to the feasibility of restoration or how such restoration might be designed for each of these wetlands. Additional investigation would be required to further analyze the feasibility of restoring wetlands.

Information on each of the wetlands is also included in the inventory made available within the MnRAM 3.0 database. See Appendix C for the Wetland Functional Assessment for the field verified wetlands.

WETLAND MANAGEMENT CLASSIFICATION RESULTS

To classify a wetland as Preserve, Manage 1, Manage 2, or Manage 3, the wetland needs to only meet one of the listed characteristics in the Wetland Management Classification Process Flowchart for Basic Wetland Protection (Appendix A). Therefore, each wetland was classified as Preserve, Manage 1, Manage 2, or Manage 3 using the highest ranking criteria listed in the "Wetland Functional Assessment Summary" (see Appendix C). A summary of the Wetland Management Classifications results for the field assessed wetlands is shown in Table 4.

Table 5 summarizes the Wetland Management Classifications for all 349 wetlands inventoried within the City and Exhibit 16 shows the final Wetland Management Classifications for all wetlands, including both the field verified and non-field verified wetlands. At this scale, small wetlands do not easily appear, but maps "zoomed" into a given section can also be provided at request. The Wetland Management Classifications for 25 wetlands were upgraded from Manage 1 and Manage 2 to Preserve as a result of the field assessment. The classifications for these wetlands were upgraded because they met one of the following listed characteristics in the Wetland Management Classification Process Flowchart for Basic Wetland Protection:

- The wetland was a Special Resource: it was either a rare natural community or threatened or endangered species were known to occur in the wetland,
- Rated high for amphibian habitat,
- Rated high for shoreline protection,
- Rated exceptional for aesthetics, recreation, education,
- Rated exceptional for wetland stormwater sensitivity, and
- Rated high for wetland water quality.

A total of nine wetlands are Special Resource based on the DNR Heritage Program data because either: 1) federal or state listed endangered or threatened plant species or species of concern is known to occur in the wetland, or 2) the wetland is a rare natural community. The wetlands that met the Special Resource Criteria are listed below in Table 6.

The Wetland Management Classifications for wetlands were also downgraded to the following:

- Three wetlands were downgraded from Preserve to Manage 1,
- 37 wetlands were downgraded from Manage 1 to Manage 2,
- One wetland was downgraded from Manage 1 to Manage 3, and
- Six wetlands were downgraded from Manage 1 to non-wetland.

The classifications for these wetlands were downgraded because they met one of the following listed characteristics in the Wetland Management Classification Process Flowchart for Basic Wetland Protection:

- Rated medium or low for vegetative diversity/ integrity,
- Rated medium or low for wildlife habitat,
- Rated low for amphibian habitat,
- Rated medium or low for fish habitat,
- Rated low for shoreline protection, and
- Rated medium or low for aesthetics, recreation, and education.

The Wetland Management Classification Preserve was maintained for 15 wetlands and the Wetland Management Classification Manage 1 was maintained for 38 wetlands as a result of the field assessment.

CONCLUSION

The placement of wetlands into Wetland Management Classifications provides a basis for developing wetland buffer width recommendations to the City of Ramsey. Recommended buffer widths provided in the City of Ramsey buffer ordinance will vary by Wetland Management Classification. Preserve and Manage 1 management categories represent the highest quality wetlands with high rankings for several wetland functions. Wetlands classified as Preserve and Manage 1 require the widest wetland buffers to sustain existing high functions and values. The objective of a Wetland Management Classification system is to assist the City in achieving no net loss of wetland functions and values while providing flexibility for development.

TABLES

Table 1 Summary of Preliminary Wetland Management Classifications[A]		
Wetland Management Classification	**Number of Wetlands**	**Percentage**
Preserve	18	5%
Manage 1	106	30%
Manage 2	93	27%
Manage 3	132	38%
Totals	**349**	**100%**

[A] These classifications do not include assessments of vegetative diversity and integrity or presence of state-listed threatened, endangered and special concern wildlife species.

Table 2 Number, Size, and Classification of Field Verified Wetlands				
Circular 39 Classifications	**Cowardin Classification**	**Number of Wetlands**	**Cumulative Acreage**	**Average Acres Per Wetland**
Type 1 - Seasonally Flooded Basin	PEMA	6	10	1.7
Type 1 Forested / Riverine	PFO1A/R2UBH	3	155	51.7
Type 1 forested / Type 3/ Type 6	PFO1A/PEMCd/PSS1C	1	132	132.0
Type 1 forested /Type 4/ Riverine	PFO1A/PEMH/R2UBH	1	152	152.0
Type 2 - Wet Meadow	PEMB	20	26	1.3
Type 2 / Riverine	PEMB/R2UBH	1	81	81.0
Type 2 / Type 3	PEMB/PEMC	2	12	6.0
Type 2 / Type 6	PEMB/PSS1B	3	235	78.3
Type 2/3/7	PEMBd/PEMCd/PFO1C	1	105	105.0
Type 2/6/7	PEMB/PSS1B/PFO1B	1	313	313.0
Type 3 - Shallow Marsh	PEMC	39	235	6.0
Type 3 / Type 4	PEMC/PEMF	9	118	13.1
Type 3 / Type 5	PEMC/PEMH	1	162	162.0
Type 3 / Type 6	PEMC/PSS1B	5	174	34.8
Type 3 / Type 7	PEMC/PFO1B	3	405	135.0
Type 3/1/90	PEMC/PFO1AR2UBH	1	102	102.0
Type 3/4/5	PEMC/PEMF/PEMH	1	257	257.0
Type 3/4/7	PEMCd/PEMFd/PFO1C	1	124	124.0
Type 3/7/90	PEMC/PFO1C/R2UBH	1	150	150.0
Type 4 - Deep Marsh	PEMF	19	12	0.6
Type 4 / Type 5	PUBG/L1UBH	1	40	40.0
Type 4 / Type 6	PEMF/PSS1C	1	2	2.0
Type 5 - Shallow Open Water	L1UBH	2	14	7.0
Type 6 - Shrub Swamp	PSS1B	4	65	16.3
Type 7 - Hardwood Swamp	PFO1B	2	6	3.0
Type 7 / Riverine	PFO1C/R2UBH	1	23	23.0
Total		**130**	**3,110**	**1,997.8**

Table 3
Summary of MnRAM 3.0 Results for Field Verified Wetlands

Functional Level	Vegetative Diversity/ Integrity	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Wetland Storm-water Sensitivity	Storm-water Treatment Needs	Hydrologic Regime	Flood Storage	Down-stream Water Quality	Wetland Water Quality	Shoreline Protection
Low	45	1	41	43	10	0	6	3	0	0	6	1
Moderate	57	98	6	34	95	92	74	52	67	28	74	15
High	19	25	9	6	10	21	46	75	63	102	46	1
Exceptional	9	6	0	0	15	17	4	0	0	0	4	0
NA	0	0	74	47	0	0	0	0	0	0	0	113
Total	***130***	***130***	***130***	***130***	***130***	***130***	***130***	***130***	***130***	***130***	***130***	***130***

Table 4
Summary of Wetland Management Classifications for the Field Verified Wetlands

Wetland Management Classification	Number of Wetlands[1]	Percentage
Preserve	40	31%
Manage 1	46	35%
Manage 2	43	33%
Manage 3	1	1%
Totals	**130**	**100%**

[1]A total of 136 wetlands were verified in the field, however, 6 wetlands proved to be non-wetland areas.

Table 5 Summary of Wetland Management Classifications for Inventoried Wetlands		
Wetland Management Classification	**Number of Wetlands[1]**	**Percentage**
Preserve	40	12%
Manage 1	46	13%
Manage 2	127	37%
Manage 3	130	38%
Totals	**343**	**100%**

[1]A total of 349 wetlands were inventoried, however, 6 wetlands proved to be non-wetland areas during the field assessment.

Table 6 Special Resource Wetlands		
Wetland ID	**Preliminary Management Classification**	**Final Management Classification**
02-032-25-00-000-E	Preserve	Preserve
02-032-25-00-000-F	Preserve	Preserve
02-032-25-06-001-F	Manage 1	Preserve
02-032-25-07-008-E	Preserve	Preserve
02-032-25-07-008-F	Preserve	Preserve
02-032-25-07-008-G	Preserve	Preserve
02-032-25-18-015-A	Preserve	Preserve
02-032-25-18-015-P	Preserve	Preserve
02-032-25-19-022-G	Preserve	Preserve

EXHIBITS

APPENDIX A

Recommended Wetland Management Classification System

Recommended Wetland Management Classification System

To accompany the Minnesota Routine Assessment Method for Evaluating Wetland Functions, Version 3.0

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1.0 Wetland Management Recommendations

This document is a companion to the *Minnesota Routine Assessment Method for Evaluating Wetland Functions* (MnRAM) [version 3.0 or later]. It is meant to provide a basis for developing wetland management recommendations from data gathered in the field. The objective of a wetland management classification system and management standards is to achieve no net loss of wetland functions and values within the management area while providing flexibility for economic development that may require wetland impacts. Impacts to wetlands include not only direct impacts such as filling, draining, and excavating, but also indirect impacts from stormwater inputs, changes to local surface and ground water hydrology, and pollutant loading.

The wetland protection process begins with an inventory and field assessment of all wetlands within the management area. The wetland inventory should identify wetlands by type (Circ. 39 or Cowardin), size, location and landscape setting, and wetland functions. Wetland assessment evaluates functional capacity, both existing and potential, based on inventory information as well as: vegetative community, soils, hydrology, ecologic characteristics, and cultural uses. Following completion of this assessment, each wetland can be assigned to a recommended management class based on the wetland's current and potential functions as well as the evaluation of local critical wetland resources and the wetland's susceptibility to stormwater degradation (Table 1.1). Each wetland can be classified according to a recommended level of wetland protection and acceptable hydrologic changes (Table 1.2).[1]

1.1 Wetland Management Classification

With data for each wetland in the assessment area complete, the functional indices can then be used to classify the wetlands. This guidance document presents two classification standards based on expert wetland recommendations and concepts[2] and in compliance with the state Wetland Conservation Act[3], state water quality standards[4], and various wetland management plans from both metropolitan and rural Minnesota areas.

Suggested classification schemes offered are for Basic Protection and Increased Protection standards; local authorities can choose a management classification level based on local resource needs and preferences. The Basic Protection Standard (Figure 1.1) is the minimum recommended level that will satisfy no-net-loss goals, protect critical resources, and allow for use of some wetlands in development zones. The Increased Protection Standard will include more wetlands in the Preserve category that might otherwise fall into Manage 1, thereby protecting less-than-pristine wetlands in areas that are at an increased risk for wetland impact, whether direct; outright loss by development pressures or indirect; ecological impact from increased use or hydrologic changes.

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[1] Based largely on the state guidance document *Storm-Water and Wetlands: Planning and Evaluation Guidelines for Addressing Potential Impacts of Urban Storm-Water and Snow-Melt Runoff on Wetlands*, State of Minnesota Storm Water Advisory Group, 1997.

[2] Some of which are presented in *Storm-Water and Wetlands: Planning and Evaluation Guidelines for Addressing Potential Impacts of Urban Storm-Water and Snow-Melt Runoff on Wetlands,* State of Minnesota Storm Water Advisory Group, 1997.

[3] Minn. Rules Chap. 8420.

[4] Minn. Rules Chap. 7050.

These two options are offered as a starting point for regional decision-making. Any final policy will need to take into account how current and predicted pressures affect the landscape. An initial evaluation of the effect of both standards will give an indication how the local wetland manager can adapt an individual strategy to maximize resource protection while retaining development benefits to their community. Using GIS-mapping tools will be invaluable for this evaluation.

Using this system will classify a wetland into one of four categories: Preserve, Manage 1, Manage 2, or Manage 3. The Preserve category is for exceptional and highest-functioning wetlands or those sensitive wetlands receiving conveyed storm water runoff that have yet retained a medium level of vegetative diversity/integrity. These wetlands are those that should be preserved in (or improved to) their most pristine or highest functional capacity with wide, natural buffers, in perpetuity. In the Manage 1 category are high-quality wetlands that should be protected from development and other pressures of increased use, including indirect effects. Maintaining natural buffers will help to retain the significant function these wetlands provide. In the event that impacts to these wetlands cannot be avoided, replacement ratios for mitigation should exceed the state-required minimums. Manage 2 wetlands provide medium functional levels and the wetland extent should be maintained. These wetlands often provide optimal restoration opportunity. Manage 3 wetlands have been substantially disturbed; replacement considerations can be minimized[5] after proper sequencing.

Using the Flowchart

The process can be followed in Figures 1.1 [Basic Standard] and 1.2 [Increase Protection Standard]. Begin at the top and follow the arrows and numbered boxes through the diagram until all of the wetlands have been placed in a management category. Find all wetlands that are classified as Critical Resources, as described in Section 2.0; those wetlands are classified in the Preserve category. Wetlands determined to not fit any of the Critical Resources categories are then classified into one of the four management class groups. The suggested wetland management criteria that could be applied to wetlands within each management class are provided in Table 1.1.

[5] Replacement minimized down to a 1:1 ratio (in the counties with less than 50 percent of their historic wetlands) or lower (in counties with more than 50 percent of their historic wetlands).

Table 1.1
Recommended Wetland Management Standards
Minnesota Routine Assessment Method for Evaluating Wetland Functions, Version 3.0

Management Class	Management Strategy	Stormwater Treatment	Buffer[1]	Mitigation Standard	Hydrologic Guidelines
A—Preserve	Maintain wetland and existing functions, values and wildlife habitat. Possible need for active management of wetland to protect unique features. Apply strict avoidance standards. May be appropriate to develop a conservation easement.	Avoid conveyed flows where prudent and feasible. Upstream sediment and nutrient pretreatment required to maintain background loading rates. Maintain existing hydrology—divert increased flows. Avoid concentrating flows.	≥50 feet for water quality ≥100 feet for wildlife habitat.[2] Require monuments to mark buffer edge.	WCA minimum or greater replacement ratio with documented replacement of functions/values. Consider requiring buffer replacement.	*Bounce (10 yr)*: Existing *Inundation (1 & 2 yr):* Existing *(10 yr)*: Existing *Runout Control:*[3] No Change Maintain existing hydrology. Encourage infiltration and reduced impervious BMPs. Conduct water budget analysis.
B—Manage 1	Maintain wetland without degrading existing functions, values and wildlife habitat. Apply WCA sequencing process.	Pretreat conveyed flows to maintain background loading rates.	35-50 feet Require monuments to mark buffer edge.	WCA minimum or greater replacement ratio. Replacement of functions and values on site or in location specified in plan for drain/fill/excavation impacts. In compliance with Ch. 7050 the entire area affected by storm water or other wastewater flows must be avoided, minimized and replaced at a replacement ratio of 1:1 for all changes in wetland type.	*Bounce (10 yr)*: Existing + 0.5 ft *Inundation (1 & 2 yr):* Existing plus 1 day *(10 yr)*: Existing + 7 days *Runout Control:*[2] No Change Maintain existing hydrology. Encourage infiltration and reduced impervious BMPs.
C—Manage 2	Maintain wetland footprint. Improve wetland biological and plant community diversity/integrity or enhance other functions if possible. Apply WCA sequencing process. Consider for restoration.	Pretreat all conveyed discharges to remove all heavy particles and maximize removal of fine grained sediment prior to discharging to the wetland	25-35 feet Require monuments to mark buffer edge.	WCA minimum replacement of acreage and functions/values on site or in location specified in plan for drain/fill/excavation impacts In compliance with Ch. 7050 the entire area affected by storm water or other wastewater flows must be avoided, minimized and replaced at a replacement ratio of 1:1 for all changes in wetland type.	*Bounce (10 yr)*: Existing + 1.0 ft *Inundation (1& 2 yr):* Existing plus 2 days *(10 yr)*: Existing + 14 days *Runout Control*: [2] 0 to 1.0 ft above existing runout
D—Manage 3	Allow for relaxed sequencing and replacement plan flexibility. Consider for restoration/enhancement.	Pretreat all conveyed flows to remove all medium grained and larger sediments.	25 feet	WCA allows mitigation flexibility with minimum standards required in the plan area, see M.R. 8420.0650. In compliance with Ch. 7050 the entire area affected by storm water or other wastewater flows must be avoided, minimized and replaced at a replacement ratio of 1:1 for all changes in wetland type.	*Bounce (10 yr)*: No Limit *Inundation (1 & 2 yr):* Existing plus 7 days *(10 yr)*: Existing + 21 days *Runout Control:*[2] 0 to 4.0 ft above existing runout

[1] Buffers are unmowed, naturalized strips of vegetation around the wetland perimeter. Buffers would be provided during development or redevelopment
[2] Where possible, use 300-foot buffers as per MnRAM (Question #23).
[3] If currently landlocked, new outlet should be above delineated wetland elevation.

1.1.1 Preserve

Wetlands classified as **Preserve** have at least one of the following characteristics:

- Wetlands rated with exceptional vegetative diversity/integrity, which may include wetlands with natural communities not significantly impacted by invasive species or other human-induced alterations, wetlands harboring endangered or threatened plant species, or rare wetland habitats classified as imperiled (S1) or critically imperiled (S2) by the state rankings.
- Wetlands rated as exceptional for wildlife habitat. These include wetlands known to harbor endangered or threatened animal species, rare communities, or wildlife refuges and fish and wildlife management areas whose purpose is maintaining suitable habitats for wildlife.
- Wetlands rated as high for amphibian habitat.
- Wetlands rated as exceptional for fish habitat. These wetlands include those specifically managed for fish management; designated trout streams, lakes or adjacent wetlands; and known spawning habitat for game fish.
- Wetlands rated high for shoreline protection. Wide wetlands bordering lakes and feeder streams that have persistent, emergent, submergent, or floating-leaved vegetation are critical to protecting the water quality of the lakes from bank erosion and sedimentation from upstream.
- Wetlands rated exceptional for aesthetics/education/recreation/cultural and rated high for wildlife habitat, include those located on public lands that provide a unique or rare recreational, educational, or cultural opportunity, and have high functional level for wildlife since that is typically a primary focus for users.
- Wetlands that are exceptionally sensitive to stormwater impacts and have a vegetative diversity/integrity rating of medium or higher were also placed in this category. These wetlands may have suffered some degradation from human influences due to their heightened sensitivity. The vegetative quality of the wetland is such that improved management may allow for restoration of the community.
- Wetlands with a high vegetative diversity/integrity rating *and* a high rating for wetland water quality. The vegetative community in these wetlands typically has been only slightly affected by humans and still maintains high functioning to maintain water quality, which is critical to wetland sustainability.
- Wetlands with a high vegetative diversity/integrity rating *and* a high rating for hydrologic regime. The vegetative community in these wetlands typically has been only slightly affected by humans and still maintains high functioning levels for hydrologic regime, which is critical to wetland sustainability.

1.1.2 Manage 1

Wetlands classified as **Manage 1** have at least one of the following characteristics:

- Wetlands rated with high vegetative diversity/integrity, which typically include diverse wetland plant communities with less than 20 percent cover of non-native or invasive species.

- Wetlands rated as high for wildlife habitat. These generally include wetlands located within large tracts of undeveloped land or in parks, which allow for wide high quality upland buffers. In addition, this includes seasonal wetlands that are well buffered.
- Wetlands rated as medium for amphibian habitat. This includes seasonal wetlands that are well buffered.
- Wetlands rated as high for fish habitat. These wetlands are lacustrine/riverine or are contiguous with a permanent waterbody or watercourse and provide spawning/nursery habitat, or refuge for native fish species in adjacent lakes, rivers or streams.
- Wetlands rated medium for shoreline protection. These wetlands include those that are moderately wide and support persistent emergent, submergent, or floating-leaved vegetative cover bordering lakes and feeder streams.
- Wetlands rated high for aesthetics/education/recreation/cultural *and* medium for wildlife habitat, include those that provide a number of benefits that may include: spatial buffering, accessibility, public ownership, multiple recreational opportunities, and medium-quality wildlife habitat.
- Wetlands that are highly sensitive to stormwater impacts *and* have a vegetative diversity/integrity rating of medium or high were also placed in this category. The vegetative quality of the wetland is such that improved management may allow for restoration of the community.
- Wetlands with a medium vegetative diversity/integrity rating *and* a high rating for wetland water quality. The vegetative community in these wetlands has only been moderately affected by humans and still maintains high functioning levels for water quality, which is critical to wetland sustainability. These wetlands would likely benefit from active management.
- Wetlands with a medium vegetative diversity/integrity rating *and* a high rating for hydrologic regime were placed in the **Manage 1** category. The vegetative community in these wetlands has only been moderately affected by humans and still maintains high functioning levels for hydrologic regime, which is critical to wetland sustainability. These wetlands would likely benefit from active management.
- Wetlands rated high for commercial use. These wetlands provide important social value without having an altered hydrology.

1.1.3 Manage 2

Wetlands classified as **Manage 2** have at least one of the following characteristics:

- Wetlands rated with medium vegetative diversity/integrity, which typically include wetlands with less diversity and up to 50 percent cover of non-native or invasive species.
- Wetlands rated as medium for wildlife habitat. These often include wetlands that are increasingly separated from natural communities and wildlife corridors; they often lack significant upland buffers and are increasingly altered.
- Wetlands rated as low for amphibian habitat. These wetlands are increasingly altered, but they still have some opportunity to provide either breeding, over wintering, or resting habitat for amphibians.
- Wetlands rated as medium for fish habitat. These wetlands include those which are intermittently connected to waterbodies supporting native fish populations

- Wetlands rated low for shoreline protection. While these wetlands are not providing the highest level of protection to the lake or river systems, their mere presence provides some level of protection that should not be dismissed. These wetlands are typically narrow, with little emergent, submergent, or floating-leaved vegetation.
- Wetlands rated Medium for aesthetics/education/recreation/cultural and Low for wildlife habitat.

1.1.4 Manage 3

Wetlands classified as **Manage 3** include all of the remaining wetlands that did not fit into any of the above-described conditions. **All** of these wetlands would rate **low** for vegetative diversity/integrity. Many of these wetlands rate medium or high for downstream water quality protection and for flood storage/attenuation. This correlation is expected since wetlands that provide higher levels of water quality treatment and runoff/rate control often suffer from ecological degradation.

1.2 Wetland Restoration Potential

Evaluate restoration potential of drained and partially drained wetlands in the field. The potential for wetland restoration is determined based on the ease with which the wetland could be restored considering factors including: the number of landowners within the historic wetland area, the size of the potential restoration area, the potential for establishing buffer areas or water quality ponding, the extent and type of hydrologic alteration, and the potential for flooding adjacent properties. Using those parameters, a functional rating of High, Medium, or Low is computed where High means that there will be fewer obstacles to completing a successful restoration.

1.3 Wetland Susceptibility to Stormwater Input

Stormwater runoff carries soil particles, nutrients, and contaminants that can change the ecological balance of the receiving water body. Changes in the volume, rate, frequency, or duration of stormwater entering or discharging from the water body can also change the ecological integrity. Alterations to the ecological integrity of a wetland often result in changes in the functional capacity, fish and wildlife habitat, replacement of native vegetation with invasive and disturbance-tolerant plant species, and/or other impacts to the wetland's functions and values.

A methodology[6] for determining the susceptibility of wetlands to degradation by stormwater input relates wetland type to a susceptibility level as shown in Table 1.2. Wetlands such as bogs and fens can easily be degraded by changes in the stormwater inflows and are designated as exceptionally susceptible. On the other hand, floodplain forests are more tolerant of changes in the frequency, magnitude and duration of flooding without degradation and are therefore classified as moderately susceptible. Shallow marshes and wet meadows dominated by hybrid cattail, reed canary grass, or other invasive/non-native species (see Table 1.2 and MNRAM 3.0) have a moderate susceptibility to stormwater fluctuations and inputs.

[6] *Storm-Water and Wetlands: Planning and Evaluation Guidelines for Addressing Potential Impacts of Urban Storm-Water and Snow-Melt Runoff on Wetlands* (State of Minnesota Storm Water Advisory Group, 1997).

1.4 Wetland Management Standards

Wetland management standards are proposed to maintain tolerable hydrologic and water quality changes in wetlands based on the goals stated for the management classifications. The recommended wetland management system (Table 1.1) presents a framework for management of storm water in and around wetlands as well as considering the regulation of impacts to wetlands and wetland mitigation; it is not meant to be used for specific wetland area designs. Replacement plans must also consider other laws that may apply, including local regulations, state Wetland Conservation Act rules, and U.S. Army Corps of Engineers 404 or other permit requirements. Additional investigations or evaluations, including detailed hydrologic modeling and modeling of nutrient loadings and removals, will need to be performed to determine final pipe sizes, pipe configuration, pipe elevations, pipe location, and site grading.

1.4.1 Wetland Hydrology Standards

Wetland hydrology management standards were developed[7] to protect wetlands from hydrologic impacts. These standards present tolerable hydrologic changes in terms of bounce (difference between the peak flood elevation and the normal wetland elevation), inundation period (time that flood waters temporarily stored in the wetland exceed the normal wetland elevation), and runout control (elevation of the outlet). It is assumed that wetland impacts will be minimized and existing wetland functions and values will be maintained if these standards are implemented.

[7] Standards shown in Table 1.1.

Table 1.2
Susceptibility of Wetlands to Degradation by Stormwater Impacts[8]
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Exceptionally Susceptible Wetland Types:[1]	Highly Susceptible Wetland Types:[2]	Moderately Susceptible Wetland Types:[3]	Least Susceptible Wetland Types:[4]
Sedge Meadows	Shrub-carrs[a]	Floodplain Forests[a]	Gravel Pits
Open Bogs	Alder Thickets[b]	Fresh (Wet) Meadows[b]	Cultivated Hydric Soils
Coniferous Bogs	Fresh (Wet) Meadows[c, e]	Shallow Marshes[c]	Dredged Material/Fill Material Disposal Sites
Calcareous Fens	Shallow Marshes[d, c]	Deep Marshes[c]	
Low Prairies	Deep Marshes[d, c]		
Lowland Hardwood Swamps			
Seasonally Flooded Wetlands			

1 Special consideration must be given to avoid altering these wetland types. Inundation must be avoided. Water chemistry changes due to alteration by stormwater impacts can also cause adverse impacts. Note: All scientific and natural areas and pristine wetland should be considered in this category regardless of wetland type.

2 a., b., c. Can tolerate inundation from 6 inches to 12 inches for short periods of time. May be completely dry in drought or late summer conditions. d. Can tolerate +12 inches inundation, but adversely impacted by sediment and/or nutrient loading and prolonged high water levels. e. Some exceptions.

3 a. Can tolerate annual inundation of 1 to 6 feet or more, possibly more than once/year. b. Fresh meadows that are dominated by reed canary grass. c. Shallow marshes dominated by reed canary grass, cattail, giant reed, or purple loosestrife.

4 These wetlands are usually so degraded that input of urban storm water may not have adverse impacts.

Notes: There will always be exceptions to the general categories listed above. Use best professional judgment. A more complete description of wetland characteristics under each category is contained in Appendix A of the source (see footnote). Pristine wetlands are those that show little disturbance from human activity.

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[8] **Adapted from:** *Storm-Water and Wetlands: Planning and Evaluation Guidelines for Addressing Potential Impacts of Urban Storm-Water and Snow-Melt Runoff on Wetlands*, State of Minnesota Storm-Water Advisory Group, June 1997.

1.4.2 Wetland Buffer Standards

Wetland buffer standards were developed with the focus on the buffer widths necessary for protecting water quality and for providing wildlife habitat. Suggested wetland buffer standards in Table 1.1 were developed based on a review of the scientific literature. The literature shows that the effectiveness of wetland buffers in removing sediments and nutrients from surface runoff varies widely due to many factors which include but are not limited to: slope, vegetative cover density, vegetation types, and width. Typically, buffers are established for their water quality improvement potential. High quality wildlife habitat requires significantly wider buffers and higher vegetative diversity/integrity.

Results from numerous studies on the effectiveness of buffers for improving water quality were compiled in a report prepared for the Minnehaha Creek Watershed District[9]. This data suggests that buffer widths of 50 feet generally will provide adequate protection from suspended solids for maintaining high water quality.

The data for phosphorus removal shows a slightly stronger, although not statistically significant, trend. Buffers wider than 60 feet showed considerably greater total phosphorus reductions than narrower buffers (69 percent of those buffers reduced total phosphorus by more than 70 percent).

Another major function of wetland buffers is providing wildlife habitat. Recommendations in the literature for wetland buffer maintenance for optimal wildlife functions range from an absolute minimum of 50 feet up to 600 feet. In general, wider buffers are suggested as providing greater wildlife benefits. Reasonable wildlife benefits can be realized with the retention of 100-foot wide buffers. Several communities in the Twin Cities Metropolitan area have enacted wetland buffer ordinances with required buffer widths up to 100 feet.

1.4.3 Wetland Sequencing and Mitigation Standards

The wetland sequencing and mitigation standards presented are suggestions based on interagency discussions and experiences with Comprehensive Wetland Management Plans. The goal of the recommended standards is to provide incentives to protect high quality wetland resources while realizing that low quality wetlands would not receive as stringent protection.

There are specific standards that must be met according to state and federal rules (WCA, 404, etc.). They can be varied by local plan and these management standards could serve as a basis, but not a substitute, for a local plan. Some management prescriptions suggested here could be implemented without a formalized local plan but all local, state, and federal rules would still apply. The COE could use these standards to vary replacement ratios on a case-by-case basis.

1.4.4 Stormwater Treatment Standards

Stormwater treatment management standards were developed to protect wetlands from water quality impacts. Various levels of pre-treatment of conveyed stormwater are recommended based on wetland management classification.

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[9] EOR, 2001

1.5 Best Management Practices

A table of common best management practices (BMPs) is provided in the Comprehensive Guidance. It includes a description of the benefits of each, pollutants controlled, and some general construction requirements. A comprehensive selection and design manual[10] for BMP usage in cold climates covers a total of 40 BMPs including:

- Definition and description of the BMP
- Discussion of the BMP's means of operation
- Diagrams and information to guide design and installation
- Listing of inspection and maintenance considerations
- References for more detailed information

A comprehensive guide[11] to BMPs for protection and improvement of water quality in Minnesota includes the major principles and notable points relating to BMP practices. This is not a design manual. The BMP approaches are split into several categories including:

- BMPs for Storm Water Systems
- Detention Ponds
- Erosion Protection and Sediment Control
- Pollution Prevention

In addition, the manual includes a section summarizing the attributes of various hydrologic models. Best management practices should be implemented to the extent feasible in all construction projects to maintain and prevent degradation of wetland functions and values.

[10] The *Minnesota Urban Small Sites BMP Manual – Stormwater Best Management Practices for Cold Climates,* Metropolitan Council and Barr Engineering Co., 2001.

[11] *Protecting Water Quality in urban Areas – Best Management Practices for Dealing with Storm Water Runoff from Urban, Suburban, and Developing Areas of Minnesota,* Minnesota Pollution Control Agency, 2000.

2.0 Critical Wetland Resources

Wetlands in the assessment area should be evaluated for designation as critical resources based on several features defined in Minnesota Statutes. These critical wetland resources should be classified into the Preserve management class due to their special functions. Criteria for designating wetlands as critical resources are as follows:

- Outstanding Resource Value Waters (Minn. Rules 7050.0180)
- Designated Scientific and Natural Areas (Minn. Rules 86A.05)
- Wetlands with known occurrences of Threatened or Endangered Species (Minn. Stat. 84.0895)
- State Wildlife Management Areas (Minn. Stat. 86A.05, subpart 8)
- State Aquatic Management Areas (Minn. Stat. 86A.05, subpart 14).
- Wellhead Protection Areas (Minn. Stat. 103I.101, MN Rules Chapter 4720).
- Sensitive Ground Water Areas (MN Rules 8420.0548, Subp. 6).
- Designated trout streams or trout lakes (MN Rules 6264.0050).
- Calcareous fens (MN Rules 8420.1010 through 8420.1060).
- High priority areas for wetland preservation, enhancement, restoration and establishment (MN Rules 8420.0350, subpart 2).
- Designated Historic or Archaeological Sites
- State or federal designated wild and scenic rivers (MN Rule Chapter 7050)

2.1 Outstanding Resource Value Waters

"Outstanding resource value waters" are defined in MN Rules 7050.0180 as waters within the Boundary Waters Canoe Area Wilderness; Voyageur's National Park; and Department of Natural Resources designated scientific and natural areas; wild, scenic, and recreational river segments; Lake Superior; those portions of the Mississippi River from Lake Itasca to the southerly boundary of Morrison County that are included in the Mississippi Headwaters Board comprehensive plan dated February 12, 1981; and other waters of the state with high water quality, wilderness characteristics, unique scientific or ecological significance, exceptional recreational value, or other special qualities which warrant stringent protection from pollution.

2.1.1 Calcareous Fens

Calcareous fens are defined in MN Rules 8420.1020 as peat-accumulating wetlands dominated by distinct groundwater inflows having specific chemical characteristics. The water is characterized as circumneutral to alkaline, with high concentrations of calcium and low dissolved oxygen content. The chemistry provides an environment for specific and often rare hydrophytic plants[12]. Minnesota Rules 8420.1010-1070 sets out minimum standards and criteria for the identification, protection, and management of calcareous fens as authorized by Minnesota Statutes, section 103G.223. The MnDNR is charged with identifying and maintaining a list of calcareous fens in the state and maintains a database of them. Calcareous fens are also listed in the Classifications for Waters in

[12] MN Rules 8420.1020

Major Surface Water Drainage Basins[13]. Finally, the rules for Nondegradation of Outstanding Resource Value Waters[14] also lists identified calcareous fens in the state.

2.1.2 Scientific and Natural Areas

State scientific and natural areas (SNA) are established to protect and perpetuate, in an undisturbed natural state, those natural features which possess exceptional scientific or educational value (MN Statutes 86A.05). This may include but is not limited to any of the following features: geological processes; significant fossil evidence, an undisturbed plant community, an ecological community significantly illustrating the process of succession and restoration to natural condition following disruptive change; a habitat supporting a vanishing, rare, endangered, or restricted species of plant or animal; a relict flora or fauna persisting from an earlier period; or a seasonal haven for concentrations of birds and animals, or a vantage point for observing concentrated populations, such as a constricted migration route. The area should embrace an area large enough to permit effective research or educational functions and to preserve the inherent natural values of the area.

2.1.3 Habitat for Designated Endangered, Threatened, or Special Concern Species

Endangered and threatened plant and animal species are protected in Minnesota as specified in MN Statutes 84.0895. In MN Statutes, Subp. 3, species of wild animal or plant are designated as:

1. **Endangered**, if the species is threatened with extinction throughout all or a significant portion of its range; or
2. **Threatened**, if the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range; or
3. **Species of special concern**, if although the species is not endangered or threatened, it is extremely uncommon in this state, or has unique or highly specific habitat requirements and deserves careful monitoring of its status.

In 1987, the Minnesota County Biological Survey (MCBS) began a systematic survey of rare biological features. The goal of the MCBS is to identify significant natural areas and to collect and interpret data on the distribution and ecology of rare plants, rare animals, and native plant communities. The MCBS data for the assessment area (if available) should be examined for sites with medium, high and outstanding biologic diversity significance.

The MnDNR Natural Heritage and Nongame Research Program (Natural Heritage Program) collects, manages, and interprets information about nongame animals, native plants, and plant communities to promote the wise stewardship of these resources. The Natural Heritage Program has developed a ranking system that is intended to reflect the extent and condition of natural communities and species in Minnesota.[15] These 'state ranks' have no legal ramifications, they are used by the Natural

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[13] MN Rules 7050.0470

[14] MN Rules 7050.0180, Subp. 6

[15] Aaseng, N.E., J.C. Almendinger, R.P. Dana, B.C. Delaney, H.L. Dunevitz, K.A. Rusterholz, N.P. Sather, and D.S. Wovcha. 1993. Minnesota's Native Vegetation: A Key to Natural Communities, Version 1.5. Minnesota Department of Natural Resources Biological Report No. 20. Natural Heritage Program.

Heritage Program to set priorities for research and for conservation planning. They are grouped as follows:

State Element Rank:

S1: Critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation from the state.

S2: Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.

S3: Rare or uncommon in state (on the order of 21 to 100 occurrences).

S4: Apparently secure in state with many occurrences.

S5: Demonstrably secure in state and essentially ineradicable under present conditions.

SH: Of historical occurrence in the state, perhaps having not been verified in the past 20 years, and suspected to be still extant.

SN: Regularly occurring, usually migratory and typically nonbreeding species for which no significant or effective habitat conservation measures can be taken in the state.

SR: Reported from the state, but without persuasive documentation which would provide a basis for either accepting or rejecting the report.

SRF: Reported falsely.

SU: Undetermined. Possibly in peril in the state but status uncertain; need more information.

SX: Extirpated within the state.

The Natural Heritage Program information database should be searched to determine if any endangered, threatened, or special concern species have been sighted within 500 feet of the assessment area. The list of species, the subwatershed location, legal protection status, state element rank and county should be compiled.

2.1.4 State Wildlife Management Areas

State wildlife management areas are established to protect those lands and waters which have a high potential for wildlife production and to develop and manage these lands and waters for the production of wildlife, for public hunting, fishing, and trapping, and for other compatible outdoor recreational uses[16]. State wildlife management areas satisfy the following criteria:

1. Includes appropriate wildlife lands and habitat, including but not limited to marsh or wetlands and the margins thereof, ponds, lakes, stream bottomlands, and uplands, which permit the propagation and management of a substantial population of the desired wildlife species; and
2. Includes an area large enough to ensure adequate wildlife management and regulation of the permitted recreational uses.

[16] MN Statute 86A.05, subpart 8. A map of all MnDNR Wildlife Management Areas can be found at: www.dnr.state.mn.us/maps/compass.html.

2.1.5 Designated Trout Streams and Lakes

Designated trout streams and lakes in the state of Minnesota are inhabited by trout other than lake trout. Fishing and other restrictions have been placed on these waterbodies to protect and foster the propagation of trout. Wetlands associated with these lakes are an integral part of the whole ecosystem that functions to maintain the characteristics necessary to support the fishery.

A list of all state trout streams and lakes can be found at: www.revisor.leg.state.mn.us/arule/6264/.

2.1.6 Aquatic Management Areas

Minnesota Statutes 86A.05, Subpart 14, allows for the establishment of aquatic management areas to protect, develop, and manage lakes, rivers, streams, and adjacent wetlands and lands that are critical for fish and other aquatic life, for water quality, and for their intrinsic biological value, public fishing, or other compatible outdoor recreational uses. Aquatic management areas may be established to protect wetland areas under ten acres that are donated to the department of natural resources. Aquatic management areas must meet one or more of the following criteria:

1. Provides angler or management access;
2. Protects fish spawning, rearing, or other unique habitat;
3. Protects aquatic wildlife feeding and nesting areas;
4. Protects critical shoreline habitat; or
5. Provides a site for research on natural history.

2.1.7 Wellhead Protection Areas

Wellhead protection is defined as a method of preventing well contamination by effectively managing potential contaminant sources in all or a portion of the well's recharge area. The statutory authority for wellhead protection comes from Minnesota Statutes 103I.101. The rules for establishment of Wellhead Protection Plans are found in Minnesota Rules Chapter 4720, which are administered by the Minnesota Department of Health. Wetlands present within wellhead protection areas are likely to be predominantly recharge wetlands. Since wetlands typically collect surface water runoff from a larger upland area, recharge wetlands within wellhead protection areas have a greater probability of transmitting pollutants to a public groundwater supply than other wetlands. Wellhead protection plans are developed and implemented by the public water supplier, which is typically a city or the Minnesota Department of Health.

2.1.8 Sensitive Groundwater Areas

The Wetland Conservation Act requires that projects proposing to impact wetlands must evaluate whether the impacts would have an adverse impact on groundwater quality[17]. If it is determined that

[17] Minnesota Rules 8420.0548, Subpart 6. The state rules governing wellhead protection can be accessed on the web at: www.revisor.leg.state.mn.us/arule/4720/.

a proposed replacement plan would have a significant adverse impact on groundwater quality, the replacement plan must be denied. Wetlands determined to be primarily recharge wetlands as a result of a functional assessment using *MNRAM Version 3.0* should be evaluated for the potential to affect groundwater resources[18].

2.1.9 High-Priority Areas for Wetland Preservation, Enhancement, & Restoration

Water management plans prepared by water management organizations in the metropolitan areas under Minnesota Statutes, section 103B.231 must identify those areas that qualify as high priority areas for wetland preservation, enhancement, restoration, and establishment[19]. These priority areas shall be included in the next scheduled water management plan update. Plans should give strong consideration to identifying as high priority areas, minor watersheds having less than 50 percent of their original wetland acreages, and intact wetlands, diminished wetlands, and the areas once occupied by wetlands that have been diminished or eliminated and could feasibly be restored taking into account the present hydrology and use of the area. Plans should give strong consideration to identifying as high priority areas all type 1 or 2 wetlands, and other wetlands at risk of being lost by permanent conversion to other uses. When individual wetlands are identified as high priority for preservation and restoration, the high priority area shall include the wetland and an adjacent buffer strip not less than 16.5 feet wide around the perimeter of the wetland and may include up to four acres of upland for each wetland acre.

Plans may identify additional high priority areas where preservation, enhancement, restoration, and establishment of wetlands would have high public value by providing benefits for water quality, flood water retention, public recreation, commercial use, and other public uses. High priority areas should be delineated by minor or major watershed.

2.1.10 State and Federal Designated Scenic and Wild Rivers

The rules for the protection of state designated scenic and wild rivers is set forth in Minnesota Rules Chapter 6105 as administered by the MnDNR[20]. Wild rivers are defined as those that exist in a free-flowing state with excellent water quality and with adjacent lands that are essentially primitive and scenic rivers are defined as those that exist in a free-flowing state with adjacent lands that are essentially primitive. Management plans must be developed before a river can be included in the wild and scenic river system. The plans must give emphasis to the preservation and protection of the area's scenic, recreational, natural, historic, and similar values while placing no unreasonable restrictions upon compatible, preexisting, economic uses of particular tracts of land.

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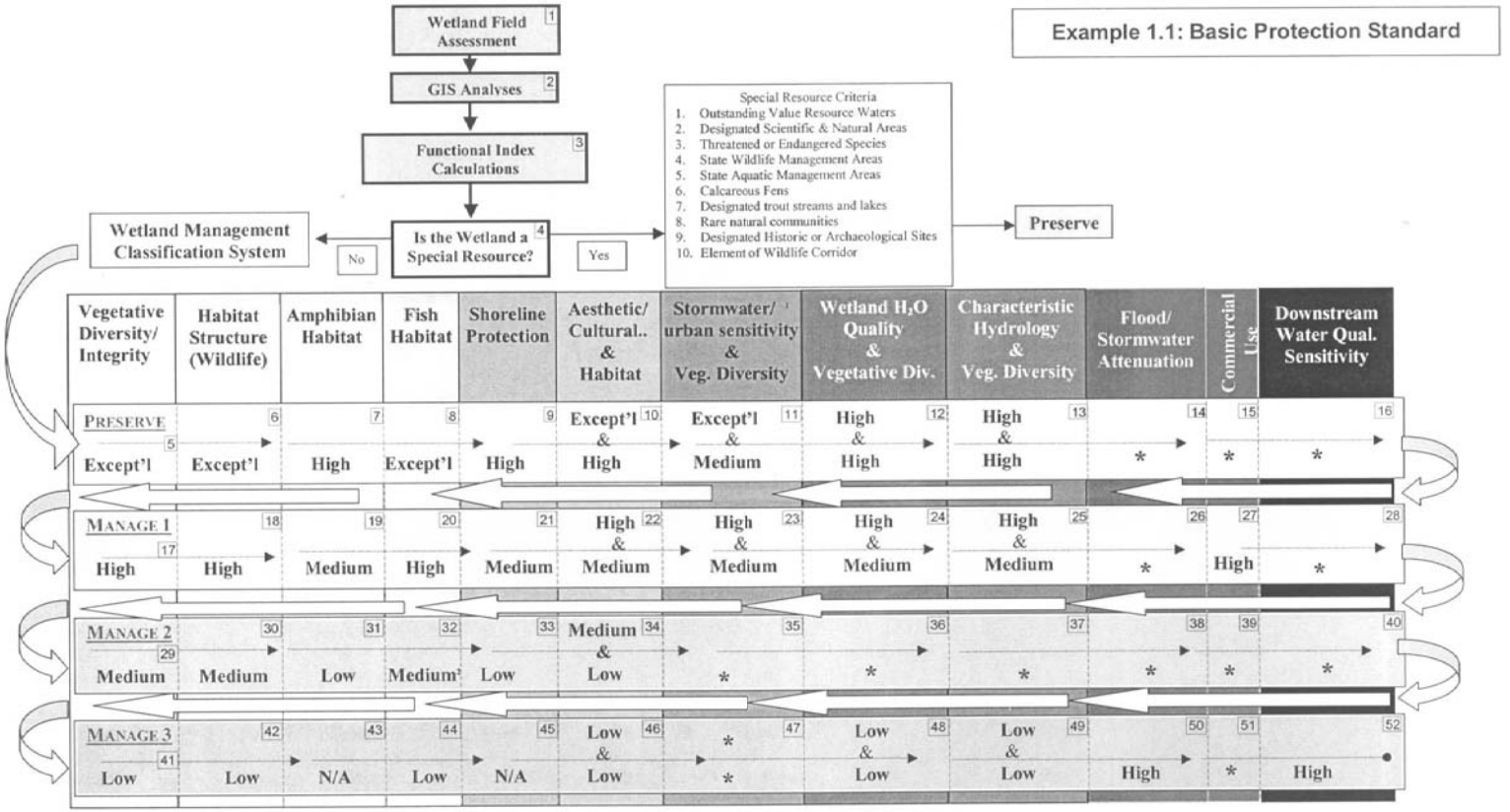
[18] Evaluate according to the guidelines in: *Criteria and Guidelines for Assessing Geologic Sensitivity of Ground Water Resources in Minnesota* (MnDNR, 1991).

[19] Minnesota Rules 8420.0350, Subp. 2

[20] The state rules can be accessed at: www.revisor.leg.state.mn.us/arule/6105/.

Figure 1.1
Wetland Management Classification Process Flowchart for Basic Wetland Protection

Each wetland will be ranked into a Wetland Management group by the highest rated function for the wetland.
Follow the arrows through numbered boxes in progression through the tables; classify wetlands into the first group that applies.



[1] For types as shown in Table 1.2.

* This rating does not apply here.

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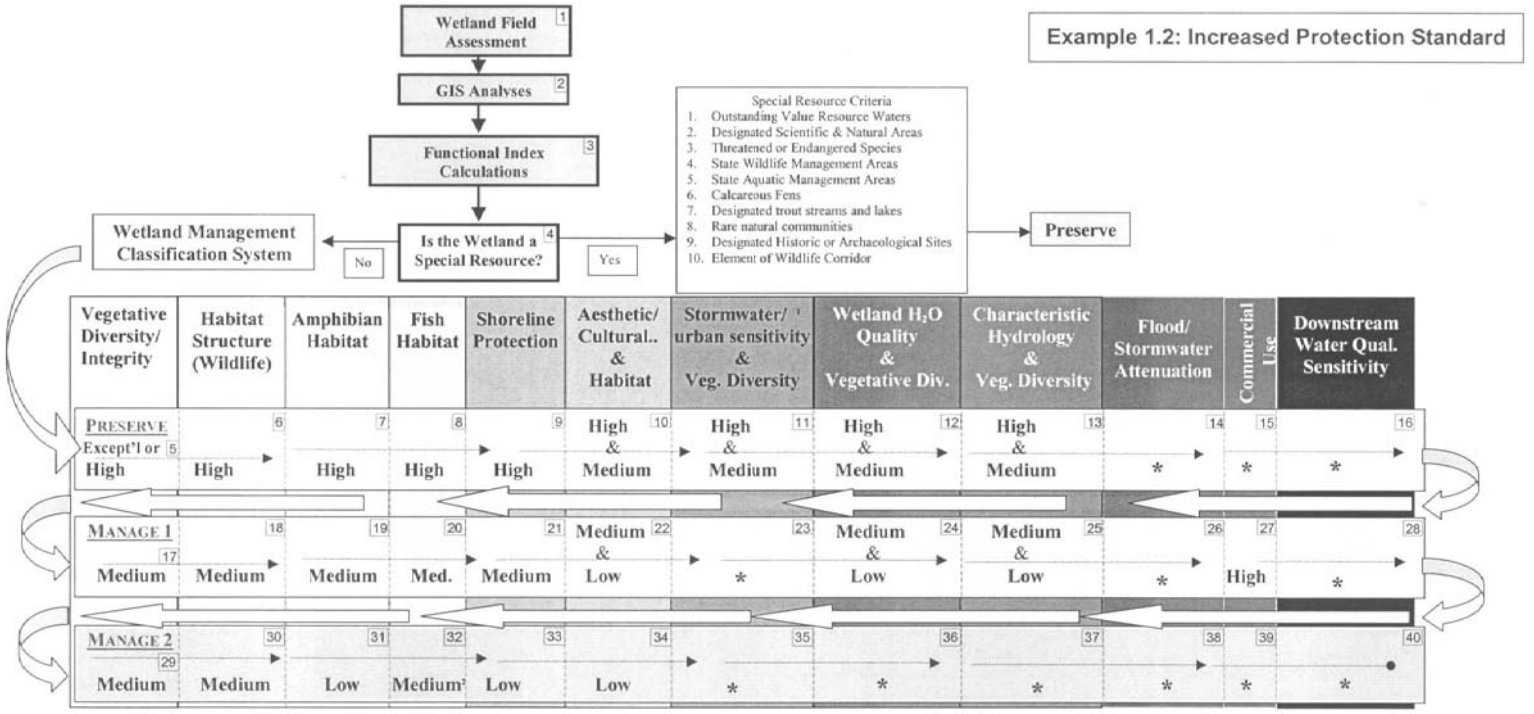
Figure 1.2
Wetland Management Classification Process Flowchart for Increased Wetland Protection

Each wetland will be ranked into a Wetland Management group by the highest rated function for the wetland.
Follow the arrows through numbered boxes in progression through the tables; classify wetlands into the first group that applies.



[1] For types as shown in Table 1.2.

* This rating does not apply here.

APPENDIX B

Preliminary MnRAM 3.0 Wetland Functional Assessment Summary

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-24-06-007-A	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-B	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-C	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-24-06-007-D	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-F	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-G	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-H	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-I	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-J	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-K	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-24-06-007-L	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-00-000-A	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Low	Moderate	Low
02-032-25-00-000-B	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-00-000-C	Not Applicable	High	High	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-00-000-D	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Low		Low
02-032-25-00-000-E	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-00-000-F	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-00-000-G	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-A	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-01-006-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-01-006-C	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-D	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Wetland Restoration Potential	Wetland Stormwater Sensitivity	Stormwater Treatment Needs
02-032-25-01-006-E	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-F	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-G	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-01-006-H	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-I	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-J	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-K	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-L	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-M	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-N	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-O	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-01-006-P	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-02-005-A	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-02-005-B	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-02-005-C	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-02-005-D	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-02-005-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-02-005-F	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-02-005-G	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-02-005-H	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-02-005-I	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-02-005-J	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-03-004-A	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-25-03-004-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-03-004-C	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-03-004-D	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-03-004-E	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-03-004-F	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-03-004-G	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-03-004-H	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-03-004-I	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-03-004-J	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-03-004-K	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-03-004-L	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-03-004-M	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-03-004-N	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-03-004-O	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-04-003-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Low
02-032-25-04-003-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-04-003-C	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-04-003-D	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-04-003-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-04-003-F	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-04-003-G	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-04-003-H	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-04-003-I	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Wetland Restoration Potential	Wetland Stormwater Sensitivity	Stormwater Treatment Needs
02-032-25-04-003-J	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-04-003-K	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Not Applicable
02-032-25-04-003-L	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-05-002-A	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-05-002-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-05-002-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-05-002-D	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-05-002-E	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Not Applicable
02-032-25-05-002-F	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-05-002-G	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-05-002-H	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-05-002-I	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-05-002-J	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-05-002-K	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-05-002-L	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-05-002-M	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-05-002-N	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-05-002-O	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-05-002-P	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-05-002-Q	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-06-001-A	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-06-001-B	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-06-001-C	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-25-06-001-D	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-06-001-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-06-001-F	Exceptional	Moderate	Not Applicable	Not Applicable	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Low
02-032-25-06-001-G	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-07-008-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-07-008-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-07-008-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-07-008-D	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-07-008-E	Exceptional	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-07-008-F	Exceptional	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-07-008-G	Exceptional	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-07-008-H	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-07-008-I	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-07-008-J	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-08-009-A	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-08-009-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-08-009-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-08-009-D	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	Moderate
02-032-25-08-009-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-09-010-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-09-010-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-09-010-C	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	*Wildlife Habitat*	*Fishery Habitat*	*Amphibian Habitat*	*Aesthetics, Recreation, Education*	*Commercial*	*Ground-Water Interaction*	*Wetland Restoration Potential*	*Wetland Stormwater Sensitivity*	*Stormwater Treatment Needs*
02-032-25-09-010-D	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-09-010-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-09-010-F	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Combination Discharge, Recharge	Not Applicable		Low
02-032-25-09-010-G	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-09-010-H	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-09-010-I	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-09-010-J	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-09-010-K	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-10-011-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-10-011-B	Not Applicable	Moderate	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-10-011-C	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-10-011-D	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-10-011-E	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-10-011-F	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-10-011-G	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-10-011-H	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-10-011-I	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-11-012-A	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Not Applicable
02-032-25-11-012-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-C	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-D	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-11-012-E	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-11-012-F	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-25-11-012-G	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-11-012-H	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-11-012-I	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-11-012-J	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-11-012-K	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-L	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-M	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-N	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-O	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-11-012-P	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-Q	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-R	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-11-012-S	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-T	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-U	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-11-012-V	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-11-012-W	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-11-012-X	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-12-013-A	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-13-020-A	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-13-020-B	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-14-019-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-14-019-B	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-25-14-019-C	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-14-019-D	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-14-019-E	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-14-019-F	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-14-019-G	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-14-019-H	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-14-019-I	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-14-019-J	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-14-019-K	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-14-019-L	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-14-019-M	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-14-019-N	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-15-018-A	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-15-018-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-15-018-C	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-15-018-D	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-15-018-E	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-15-018-F	Not Applicable	Low	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-15-018-G	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-15-018-H	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Not Applicable
02-032-25-15-018-I	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-15-018-J	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-15-018-K	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Wetland Restoration Potential	Wetland Stormwater Sensitivity	Stormwater Treatment Needs
02-032-25-16-017-A	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-16-017-B	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-16-017-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-16-017-D	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Low
02-032-25-16-017-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-16-017-F	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-16-017-G	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-16-017-H	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-17-016-A	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-17-016-B	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Not Applicable
02-032-25-17-016-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-17-016-D	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-17-016-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-17-016-F	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-17-016-G	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-17-016-H	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-17-016-I	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-17-016-J	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-17-016-K	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-17-016-L	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-18-015-A	Exceptional	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-18-015-B	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-18-015-C	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-25-18-015-D	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-F	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-G	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-H	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-I	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-J	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-18-015-K	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-L	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-M	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-N	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-18-015-O	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-P	Exceptional	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-18-015-Q	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-19-022-A	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-19-022-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-19-022-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-19-022-D	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-19-022-E	Not Applicable	Moderate	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-19-022-F	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-19-022-G	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-19-022-H	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-19-022-I	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-25-19-022-J	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-20-023-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-20-023-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-20-023-C	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-20-023-D	Not Applicable	Moderate	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-20-023-E	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-20-023-F	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-21-024-A	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-21-024-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-21-024-C	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-21-024-D	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-21-024-E	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-21-024-F	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-21-024-G	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-21-024-H	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-21-024-I	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-22-025-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-22-025-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-22-025-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-22-025-D	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-22-025-E	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-22-025-F	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-22-025-G	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Wetland Restoration Potential	Wetland Stormwater Sensitivity	Stormwater Treatment Needs
02-032-25-22-025-H	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-22-025-I	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-22-025-J	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-22-025-K	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-22-025-L	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-23-026-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-23-026-B	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-23-026-C	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-23-026-D	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-23-026-E	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-23-026-F	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Not Applicable
02-032-25-23-026-G	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-23-026-H	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-23-026-I	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-23-026-J	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-23-026-K	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-23-026-L	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-24-027-A	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-C	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-D	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Low
02-032-25-24-027-E	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-24-027-F	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-25-24-027-G	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Not Applicable
02-032-25-24-027-H	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-I	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-J	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-K	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-L	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-M	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-24-027-N	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-O	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-24-027-P	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-24-027-Q	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-25-034-A	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-25-034-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-25-034-C	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-25-034-D	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-25-034-E	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-25-034-F	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-25-034-G	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-25-034-H	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-26-033-A	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-26-033-B	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-26-033-C	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-26-033-D	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable

Wetland Functional Assessment Summary
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							Additional Information		
Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Wetland Restoration Potential	Wetland Stormwater Sensitivity	Stormwater Treatment Needs
02-032-25-26-033-E	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-26-033-F	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-26-033-G	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-26-033-H	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-26-033-I	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-26-033-J	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-26-033-K	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-26-033-L	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-26-033-M	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-27-032-A	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-27-032-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-27-032-C	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-27-032-D	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	High	Not Applicable
02-032-25-27-032-E	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-27-032-F	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-27-032-G	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-27-032-H	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-27-032-I	Not Applicable	Low	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-27-032-K	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-27-032-L	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-27-032-M	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-27-032-N	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-27-032-O	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	Wildlife Habitat	Fishery Habitat	Amphibian Habitat	Aesthetics, Recreation, Education	Commercial	Ground-Water Interaction	Additional Information: Wetland Restoration Potential	Additional Information: Wetland Stormwater Sensitivity	Additional Information: Stormwater Treatment Needs
02-032-25-27-032-P	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-27-032-Q	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-27-032-R	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-27-032-S	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-28-031-A	Not Applicable	Moderate	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-28-031-B	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-28-031-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-28-031-D	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-28-031-E	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-28-031-F	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Low
02-032-25-28-031-G	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-28-031-H	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Exceptional	Not Applicable
02-032-25-28-031-I	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-28-031-J	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-28-031-K	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-28-031-L	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-28-031-M	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-28-031-N	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-28-031-O	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-28-031-P	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Low
02-032-25-29-030-A	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-29-030-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-29-030-C	Not Applicable	Not Applicable	Moderate	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Low

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	*Wildlife Habitat*	*Fishery Habitat*	*Amphibian Habitat*	*Aesthetics, Recreation, Education*	*Commercial*	*Ground-Water Interaction*	*Wetland Restoration Potential*	*Wetland Stormwater Sensitivity*	*Stormwater Treatment Needs*
02-032-25-34-036-A	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-34-036-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-35-037-A	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable		Not Applicable
02-032-25-35-037-B	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable
02-032-25-36-038-A	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Recharge	Not Applicable	Moderate	Not Applicable

APPENDIX C

MnRAM 3.0 Wetland Functional Assessment for Field Verified Wetlands

Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-24-06-007-A	Ford Brook	1.090000	L1UBH	Type 5	Shallow, Open Water Communities	100	0.5				
02-032-24-06-007-A						100		Moderate	Moderate	Moderate	☐
02-032-24-06-007-B	Rum River	1.037	PEMC	Type 3	Shallow Marsh	100	1				
02-032-24-06-007-B						100		High	High	High	☐
02-032-24-06-007-C	Rum River	1.700000	PSS1C	Type 6	Shrub Carr	100	1				
02-032-24-06-007-C						100		High	High	High	☐
02-032-24-06-007-D	Rum River	150.5	PEMC	Type 3	Fresh (Wet) Meadow	15	0.5				
02-032-24-06-007-D	Rum River	150.5	PFO1C	Type 7	Hardwood Swamp	62	0.5				
02-032-24-06-007-D	Rum River	150.5	R2UBH			15	0				
02-032-24-06-007-D						92		Moderate	Moderate	Moderate	☐
02-032-24-06-007-E	Rum River	0.44	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-24-06-007-E						100		Moderate	Moderate	Moderate	☐
02-032-24-06-007-F	Rum River	0.560000	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-24-06-007-F						100		Moderate	Moderate	Moderate	☐
02-032-24-06-007-J	Rum River	0.945	PEMF	Type 4	Deep Marsh	100	0.5				
02-032-24-06-007-J						100		Moderate	Moderate	Moderate	☐
02-032-24-06-007-K	Rum River	0.496	PEMF	Type 4	Deep Marsh	100	0.5				
02-032-24-06-007-K						100		Moderate	Moderate	Moderate	☐
02-032-25-00-000-A	Trott Brook	101.56	PFO1A	Type 1	Floodplain Forest	18	0.5				
02-032-25-00-000-A	Trott Brook	101.56	R2UBH			44	0				
02-032-25-00-000-A	Trott Brook	101.56	PEMC	Type 3	Shallow Marsh	22	0.5				
02-032-25-00-000-A						84		Moderate	Moderate	Low	☐
02-032-25-00-000-B	Rum River	22.82	R2UBH			84	0.5				
02-032-25-00-000-B	Rum River	22.82	PFO1C	Type 7	Hardwood Swamp	16	0.5				
02-032-25-00-000-B						100		Moderate	Moderate	Moderate	☐

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-00-000-C	Rum River	25.67300	R2UBH		Floodplain Forest	74	1				
02-032-25-00-000-C	Rum River	25.67300	PFO1A	Type 1	Floodplain Forest	26	1				
02-032-25-00-000-C						100		High	High	High	☐
02-032-25-00-000-D	Rum River	151.8600	R2UBH			43	0				
02-032-25-00-000-D	Rum River	151.8600	PEMH	Type 4	Deep Marsh	13	0.1				
02-032-25-00-000-D	Rum River	151.8600	PFO1A	Type 1	Floodplain Forest	21	0.5				
02-032-25-00-000-D						77		Moderate	Low	Low	☐
02-032-25-00-000-E	Mississippi River	81.41000	PEMB	Type 2	Fresh (Wet) Meadow	10	0.1				
02-032-25-00-000-E	Mississippi River	81.41000	R2UBH			90	0.1				
02-032-25-00-000-E						100		Exceptional	Exceptional	Exceptional	☐
02-032-25-00-000-F	Mississippi River	31.85000	R2UBH			98	0.5				
02-032-25-00-000-F	Mississippi River	31.85000	PFO1A	Type 1	Floodplain Forest	2	0.5				
02-032-25-00-000-F						100		Exceptional	Exceptional	Exceptional	☐
02-032-25-00-000-G	Mississippi River	97.93000	PFO1A	Type 1	Floodplain Forest	17	0.5				
02-032-25-00-000-G	Mississippi River	97.93000	R2UBH			83	0.5				
02-032-25-00-000-G						100		Moderate	Moderate	Moderate	☐
02-032-25-01-006-A	Ford Brook	2.07	PEMF	Type 4	Deep Marsh	50	0.5				
02-032-25-01-006-A	Ford Brook	2.07	PSS1C	Type 6	Shrub Carr	50	0.5				
02-032-25-01-006-A						100		Moderate	Moderate	Moderate	☐
02-032-25-01-006-C	Ford Brook	12.80000	L1UBH	Type 5	Shallow, Open Water Communities	100	0.5				
02-032-25-01-006-C						100		Moderate	Moderate	Moderate	☐
02-032-25-01-006-H	Rum River	0.269	PSS1C	Type 6	Shrub Carr	30	0.5				
02-032-25-01-006-H	Rum River	0.269	PEMC	Type 3	Shallow Marsh	70	0.1				
02-032-25-01-006-H						100		Moderate	Low	Low	☐
02-032-25-01-006-N	Trott Brook	0.920000	PEMC	Type 3	Shallow Marsh	53	0.1				

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-01-006-N	Trott Brook	0.920000	PEMF	Type 4	Deep Marsh	47	0.5				
02-032-25-01-006-N						100		Moderate	Low	Low	☐
02-032-25-02-005-A	Ford Brook	0.32	PEMB	Type 2	Fresh (Wet) Meadow	100	0.5				
02-032-25-02-005-A						100		Moderate	Moderate	Moderate	☐
02-032-25-02-005-D	Trott Brook	0.26	PEMF	Type 4	Deep Marsh	100	0.1				
02-032-25-02-005-D						100		Low	Low	Low	☐
02-032-25-02-005-E	Trott Brook	2.168	PEMCd	Type 3	Shallow Marsh	60	0.5				
02-032-25-02-005-E	Trott Brook	2.168	PEMB	Type 2	Fresh (Wet) Meadow	40	0.1				
02-032-25-02-005-E						100		Moderate	Low	Moderate	☐
02-032-25-03-004-A	Trott Brook	0.300000	PEMF	Type 4	Deep Marsh	100	0.5				
02-032-25-03-004-A						100		Moderate	Moderate	Moderate	☐
02-032-25-03-004-B	Trott Brook	1.422000	PEMF	Type 4	Deep Marsh	30	0.1				
02-032-25-03-004-B	Trott Brook	1.422000	PEMC	Type 3	Shallow Marsh	70	0.1				
02-032-25-03-004-B						100		Low	Low	Low	☐
02-032-25-03-004-C	Trott Brook	91.45	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-03-004-C						100		Moderate	Moderate	Moderate	☐
02-032-25-03-004-F	Ford Brook	0.400000	PEMA	Type 1	Seasonally Flooded Basin	100	0.1				
02-032-25-03-004-F						100		Low	Low	Low	☐
02-032-25-03-004-G	Ford Brook	0.419	PEMA	Type 1	Seasonally Flooded Basin	100	0.1				
02-032-25-03-004-G						100		Low	Low	Low	☐
02-032-25-03-004-H	Trott Brook	12.78600	PSS1C	Type 6	Shrub Carr	100	0.5				
02-032-25-03-004-H						100		Moderate	Moderate	Moderate	☐
02-032-25-03-004-M	Trott Brook	1.409000	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-03-004-M						100		Moderate	Moderate	Moderate	☐
02-032-25-03-004-N	Ford Brook	0.864000	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-03-004-N						100		Low	Low	Low	☐

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-04-003-A	Co Ditch #51	398.6300	PEMF	Type 4	Deep Marsh	14	0.5				
02-032-25-04-003-A	Co Ditch #51	398.6300	PSS1Cd	Type 6	Shrub Carr	16	0.5				
02-032-25-04-003-A	Co Ditch #51	398.6300	PEMC	Type 3	Shallow Marsh	40	0.5				
02-032-25-04-003-A	Co Ditch #51	398.6300	PFO1B	Type 7	Hardwood Swamp	30	0.5				
02-032-25-04-003-A						100		Moderate	Moderate	Moderate	☐
02-032-25-04-003-E	Trott Brook	0.270000	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-04-003-E						100		Low	Low	Low	☐
02-032-25-04-003-F	Trott Brook	0.71	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-04-003-F						100		Low	Low	Low	☐
02-032-25-04-003-H	Trott Brook	1.781000	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-04-003-H						100		Moderate	Moderate	Moderate	☐
02-032-25-04-003-I	Trott Brook	0.632000	PEMB	Type 2	Sedge Meadow	100	0.5				
02-032-25-04-003-I						100		Moderate	Moderate	Moderate	☐
02-032-25-05-002-A	Co Ditch #51	0.26	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-05-002-A						100		Moderate	Moderate	Moderate	☐
02-032-25-05-002-B	Co Ditch #51	1.14	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-05-002-B						100		Low	Low	Low	☐
02-032-25-05-002-C	Co Ditch #51	0.38	PEMC	Type 3	Shallow Marsh	100	1				
02-032-25-05-002-C						100		High	High	High	☐
02-032-25-05-002-G	Co Ditch #51	45.69	PSS1B	Type 6	Shrub Carr	100	0.1				
02-032-25-05-002-G						100		Low	Low	Low	☐
02-032-25-05-002-I	Co Ditch #51	3.09	PFO1B	Type 7	Hardwood Swamp	100	0.5				
02-032-25-05-002-I						100		Moderate	Moderate	Moderate	☐
02-032-25-05-002-J	Co Ditch #51	2.5	PFO1B	Type 7	Hardwood Swamp	100	0.1				
02-032-25-05-002-J						100		Low	Low	Low	☐
02-032-25-05-002-K	Co Ditch #51	4.820000	PSS1B	Type 6	Shrub Carr	101	0.1				

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-05-002-K						101		Low	Low	Low	☐
02-032-25-06-001-A	Trott Brook	4.87	PEMC	Type 3	Shallow Marsh	54	0.5				
02-032-25-06-001-A	Trott Brook	4.87	PFO1B	Type 7	Hardwood Swamp	46	0.5				
02-032-25-06-001-A						100		Moderate	Moderate	Moderate	☐
02-032-25-06-001-B	Trott Brook	7.690000	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-06-001-B						100		Low	Low	Low	☐
02-032-25-06-001-C	Co Ditch #51	105	PFO1C	Type 7	Hardwood Swamp	42	0.1				
02-032-25-06-001-C	Co Ditch #51	105	PEMCd	Type 3	Shallow Marsh	22	0.1				
02-032-25-06-001-C	Co Ditch #51	105	PEMBd	Type 2	Fresh (Wet) Meadow	32	0.1				
02-032-25-06-001-C						96		Low	Low	Not Applicable	☐
02-032-25-06-001-D	Trott Brook	3.02	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-06-001-D						100		Low	Low	Low	☐
02-032-25-06-001-E	Trott Brook	0.680000	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-06-001-E						100		Low	Low	Low	☐
02-032-25-06-001-F	Trott Brook	107.3700	PSS1B	Type 6	Shrub Carr	21	0.5				
02-032-25-06-001-F	Trott Brook	107.3700	PEMB	Type 2	Fresh (Wet) Meadow	77	0.5				
02-032-25-06-001-F						98		Exceptional	Exceptional	Exceptional	☐
02-032-25-06-001-G	Co Ditch #51	0.360000	PEMF	Type 4	Deep Marsh	100	0.1				
02-032-25-06-001-G						100		Low	Low	Low	☐
02-032-25-07-008-B	Trott Brook	1.490000	PEMF	Type 4	Deep Marsh	100	0.1				
02-032-25-07-008-B						100		Low	Low	Low	☐
02-032-25-07-008-C	Trott Brook	1.67	PEMF	Type 4	Deep Marsh	50	0				
02-032-25-07-008-C	Trott Brook	1.67	PEMC	Type 3	Shallow Marsh	50	0.5				
02-032-25-07-008-C						100		Moderate	Low	Low	☐
02-032-25-07-008-E	Trott Brook	144.7200	PEMC	Type 3	Shallow Marsh	65	1				
02-032-25-07-008-E	Trott Brook	144.7200	PSS1B	Type 6	Shrub Carr	35	1				

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
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Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-07-008-E						100		Exceptional	Exceptional	Exceptional	☐
02-032-25-07-008-F	Trott Brook	0.58	PEMF	Type 4	Deep Marsh	100	1				
02-032-25-07-008-F						100		Exceptional	Exceptional	Exceptional	☐
02-032-25-07-008-G	Trott Brook	2	PEMC	Type 3	Shallow Marsh	100	1				
02-032-25-07-008-G						100		Exceptional	Exceptional	Exceptional	☐
02-032-25-08-009-A	Trott Brook	2	PEMF	Type 4	Deep Marsh	50	0.5				
02-032-25-08-009-A	Trott Brook	2	PEMC	Type 3	Shallow Marsh	50	0.5				
02-032-25-08-009-A						100		Moderate	Moderate	Moderate	☐
02-032-25-08-009-B	Trott Brook	0.32	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-08-009-B						100		Low	Low	Low	☐
02-032-25-08-009-D	Co Ditch #51	313.33	PSS1B	Type 6	Shrub Carr	10	0.5				
02-032-25-08-009-D	Co Ditch #51	313.33	PFO1B	Type 7	Hardwood Swamp	43	0.1				
02-032-25-08-009-D	Co Ditch #51	313.33	PEMB	Type 2	Fresh (Wet) Meadow	30	0.1				
02-032-25-08-009-D						83		Moderate	Low	Low	☐
02-032-25-08-009-E	Trott Brook	0.330000	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-08-009-E						100		Low	Low	Low	☐
02-032-25-09-010-D	Trott Brook	25.838	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-09-010-D						100		Low	Low	Low	☐
02-032-25-09-010-E	Trott Brook	0.29	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-09-010-E						100		Low	Low	Low	☐
02-032-25-09-010-F	Trott Brook	132.017	PSS1C	Type 6	Shrub Carr	26	0.5				
02-032-25-09-010-F	Trott Brook	132.017	PEMCd	Type 3	Shallow Marsh	28	0.1				
02-032-25-09-010-F	Trott Brook	132.017	PFO1A	Type 1	Floodplain Forest	56	0.5				
02-032-25-09-010-F						110		Moderate	Moderate	Moderate	☐
02-032-25-09-010-J	Trott Brook	0.340000	PEMA	Type 1	Seasonally Flooded Basin	100	0.1				
02-032-25-09-010-J						100		Low	Low	Low	☐

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-10-011-B	Trott Brook	62.50600	PSS1B	Type 6	Shrub Carr	36	0.5				
02-032-25-10-011-B	Trott Brook	62.50600	PEMC	Type 3	Shallow Marsh	64	0.5				
02-032-25-10-011-B						100		Moderate	Moderate	Moderate	☐
02-032-25-10-011-F	Rum River	1.057000	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-10-011-F						100		Low	Low	Low	☐
02-032-25-10-011-G	Trott Brook	1.192000	PEMC	Type 3	Shallow Marsh	76	0.5				
02-032-25-10-011-G						76		Moderate	Moderate	Moderate	☐
02-032-25-11-012-B	Rum River	0.544000	PEMC	Type 3	Shallow Marsh	40	0.5				
02-032-25-11-012-B	Rum River	0.544000	PEMG	Type 4	Deep Marsh	60	0.1				
02-032-25-11-012-B						100		Moderate	Low	Low	☐
02-032-25-11-012-K	Rum River	0.47	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-11-012-K						100		Low	Low	Low	☐
02-032-25-11-012-P	Rum River	5.264	PEMCd	Type 3	Shallow Marsh	75	1				
02-032-25-11-012-P	Rum River	5.264	PSS1C	Type 6	Shrub Carr	25	0.5				
02-032-25-11-012-P						100		High	High	High	☐
02-032-25-11-012-Q	Rum River	0.7	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-11-012-Q						100		Low	Low	Low	☐
02-032-25-11-012-R	Rum River	1.694000	PEMB	Type 2	Fresh (Wet) Meadow	70	0.1				
02-032-25-11-012-R	Rum River	1.694000	PSS1Cd	Type 6	Shrub Carr	30	0.1				
02-032-25-11-012-R						100		Low	Low	Low	☐
02-032-25-11-012-S	Rum River	0.360000	PEMF	Type 4	Deep Marsh	100	1				
02-032-25-11-012-S						100		High	High	High	☐
02-032-25-11-012-T	Rum River	0.360000	PEMH	Type 4	Deep Marsh	100	0.1				
02-032-25-11-012-T						100		Low	Low	Low	☐
02-032-25-11-012-U	Rum River	0.280000	PEMB	Type 2	Sedge Meadow	100	1				
02-032-25-11-012-U						100		High	High	High	☐

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			Community								
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02-032-25-14-019-F	Rum River	0.427	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-14-019-F						100		Low	Low	Low	☐
02-032-25-14-019-I	Rum River	4.145	PEMCd	Type 3	Shallow Marsh	100	0.5				
02-032-25-14-019-I						100		Moderate	Moderate	Moderate	☐
02-032-25-14-019-N	Rum River	2.256000	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-14-019-N						100		Low	Low	Low	☐
02-032-25-15-018-F	Rum River	4.179	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-15-018-F						100		Low	Low	Low	☐
02-032-25-15-018-G	Rum River	125.9240	PEMBd	Type 2	Fresh (Wet) Meadow	55	0.1				
02-032-25-15-018-G	Rum River	125.9240	PSS1B	Type 6	Shrub Carr	21	0.1				
02-032-25-15-018-G						76		Low	Low	Not Applicable	☐
02-032-25-16-017-C	Trott Brook	1.56	PFO1B	Type 7	Hardwood Swamp	17	0.1				
02-032-25-16-017-C	Trott Brook	1.56	PEMC	Type 3	Shallow Marsh	71	0.5				
02-032-25-16-017-C						88		Moderate	Low	Moderate	☐
02-032-25-16-017-D	Trott Brook	123.77	PFO1C	Type 7	Hardwood Swamp	20	0.1				
02-032-25-16-017-D	Trott Brook	123.77	PEMCd	Type 3	Shallow Marsh	58	0.5				
02-032-25-16-017-D	Trott Brook	123.77	PEMFd	Type 4	Deep Marsh	22	0.5				
02-032-25-16-017-D						100		Moderate	Moderate	Moderate	☐
02-032-25-16-017-E	Trott Brook	3.6	PEMC	Type 3	Sedge Meadow	100	1				
02-032-25-16-017-E						100		High	High	High	☐
02-032-25-16-017-F	Trott Brook	1.03	PEMC	Type 3	Shallow Marsh	100	1				
02-032-25-16-017-F						100		High	High	High	☐
02-032-25-16-017-H	Trott Brook	0.340000	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-16-017-H						100		Moderate	Moderate	Moderate	☐
02-032-25-17-016-A	Trott Brook	1.870000	PEMB	Type 2	Sedge Meadow	100	1				
02-032-25-17-016-A						100		High	High	High	☐

** Denotes incomplete calculation data.*

Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-17-016-C	Trott Brook	1.850000	PEMC	Type 3	Shallow Marsh	100	1				
02-032-25-17-016-C						100		High	High	High	☐
02-032-25-17-016-D	Trott Brook	9.340000	PEMC	Type 3	Shallow Marsh	90	0.5				
02-032-25-17-016-D						90		Moderate	Moderate	Moderate	☐
02-032-25-17-016-E	Trott Brook	1.26	PEMB	Type 2	Sedge Meadow	100	1				
02-032-25-17-016-E						100		High	High	High	☐
02-032-25-17-016-F	Mississippi River	1.730000	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-17-016-F						100		Moderate	Moderate	Moderate	☐
02-032-25-17-016-H	Mississippi River	1.490000	PEMB	Type 2	Sedge Meadow	100	1				
02-032-25-17-016-H						100		High	High	High	☐
02-032-25-17-016-I	Mississippi River	0.300000	PEMF	Type 4	Deep Marsh	100	0.5				
02-032-25-17-016-I						100		Moderate	Moderate	Moderate	☐
02-032-25-18-015-A	Trott Brook	10.96000	PEMC	Type 3	Shallow Marsh	85	0.5				
02-032-25-18-015-A	Trott Brook	10.96000	PSS1C	Type 6	Shrub Carr	15	0.5				
02-032-25-18-015-A						100		Exceptional	Exceptional	Exceptional	☐
02-032-25-18-015-D	Trott Brook	0.58	PEMC	Type 3	Shallow Marsh	100	1				
02-032-25-18-015-D						100		High	High	High	☐
02-032-25-18-015-E	Trott Brook	0.340000	PEMH	Type 4	Deep Marsh	100	0.5				
02-032-25-18-015-E						100		Moderate	Moderate	Moderate	☐
02-032-25-18-015-F	Trott Brook	0.32	PEMA	Type 1	Seasonally Flooded Basin	100	1				
02-032-25-18-015-F						100		High	High	High	☐
02-032-25-18-015-G	Trott Brook	3.3	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-18-015-G						100		Moderate	Moderate	Moderate	☐
02-032-25-18-015-H	Mississippi River	11.68000	PEMC	Type 3	Shallow Marsh	60	0.5				
02-032-25-18-015-H	Mississippi River	11.68000	PEMF	Type 4	Deep Marsh	40	0.5				
02-032-25-18-015-H						100		Moderate	Moderate	Moderate	☐

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-18-015-I	Mississippi River	2.3	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-18-015-I						100		Moderate	Moderate	Moderate	☐
02-032-25-18-015-K	Mississippi River	1.02	PEMH	Type 4	Deep Marsh	100	0.5				
02-032-25-18-015-K						100		Moderate	Moderate	Moderate	☐
02-032-25-18-015-L	Mississippi River	1.06	PEMH	Type 4	Deep Marsh	100	0.5				
02-032-25-18-015-L						100		Moderate	Moderate	Moderate	☐
02-032-25-18-015-M	Mississippi River	0.680000	PEMH	Type 4	Deep Marsh	100	0.5				
02-032-25-18-015-M						100		Moderate	Moderate	Moderate	☐
02-032-25-18-015-O	Trott Brook	1.14	PEMH	Type 4	Deep Marsh	100	0.1				
02-032-25-18-015-O						100		Low	Low	Low	☐
02-032-25-18-015-P	Trott Brook	0.310000	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-18-015-P						100		Exceptional	Exceptional	Exceptional	☐
02-032-25-18-015-Q	Trott Brook	0.340000	PEMH	Type 4	Deep Marsh	100	0.1				
02-032-25-18-015-Q						100		Low	Low	Low	☐
02-032-25-19-022-A	Mississippi River	7.880000	PEMA	Type 1	Seasonally Flooded Basin	100	0.1				
02-032-25-19-022-A						100		Low	Low	Low	☐
02-032-25-19-022-B	Mississippi River	0.26	PEMA	Type 1	Seasonally Flooded Basin	100	0.1				
02-032-25-19-022-B						100		Low	Low	Low	☐
02-032-25-19-022-C	Mississippi River	0.52	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-19-022-C						100		Low	Low	Low	☐
02-032-25-19-022-D	Mississippi River	257.3900	PEMH	Type 5	Shallow, Open Water Communities	45	0.5				
02-032-25-19-022-D	Mississippi River	257.3900	PEMC	Type 3	Shallow Marsh	45	0.5				
02-032-25-19-022-D	Mississippi River	257.3900	PEMF	Type 4	Deep Marsh	10	0.5				
02-032-25-19-022-D						100		Moderate	Moderate	Moderate	☐
02-032-25-19-022-E	Mississippi River	1.360000	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-19-022-E						100		Low	Low	Low	☐
02-032-25-19-022-F	Mississippi River	0.58	PEMH	Type 4	Deep Marsh	100	0.1				
02-032-25-19-022-F						100		Low	Low	Low	☐
02-032-25-19-022-G	Mississippi River	0.35	PEMH	Type 4	Deep Marsh	100	0.1				
02-032-25-19-022-G						100		Exceptional	Exceptional	Exceptional	☐
02-032-25-19-022-I	Mississippi River	0.57	PUBF	Type 4	Deep Marsh	100	0.1				
02-032-25-19-022-I						100		Low	Low	Low	☐
02-032-25-19-022-J	Mississippi River	0.35	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-19-022-J						100		Low	Low	Low	☐
02-032-25-20-023-B	Mississippi River	0.29	PEMB	Type 2	Fresh (Wet) Meadow	100	0.5				
02-032-25-20-023-B						100		Moderate	Moderate	Moderate	☐
02-032-25-21-024-A	Mississippi River	91.61000	PEMF	Type 4	Deep Marsh	20	0				
02-032-25-21-024-A	Mississippi River	91.61000	PEMC	Type 3	Shallow Marsh	80	1				
02-032-25-21-024-A						100		High	Moderate	High	☐
02-032-25-21-024-B	Mississippi River	0.32	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-21-024-B						100		Low	Low	Low	☐
02-032-25-22-025-B	Rum River	1.64	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1				
02-032-25-22-025-B						100		Low	Low	Low	☐
02-032-25-22-025-C	Rum River	0.310000	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-22-025-C						100		Moderate	Moderate	Moderate	☐
02-032-25-22-025-D	Rum River	0.52	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-22-025-D						100		Moderate	Moderate	Moderate	☐
02-032-25-23-026-J	Rum River	1.56	PEMC	Type 3	Shallow Marsh	100	1				
02-032-25-23-026-J						100		High	High	High	☐
02-032-25-23-026-K	Rum River	12.82	PEMC	Type 3	Shallow Marsh	80	0.5				
02-032-25-23-026-K	Rum River	12.82	PSS1B	Type 6	Shrub Carr	20	0.5				

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-23-026-K						100		Moderate	Moderate	Moderate	☐
02-032-25-24-027-O	Rum River	0.83	PEMC	Type 3	Shallow Marsh	100	1				
02-032-25-24-027-O						100		High	High	High	☐
02-032-25-25-034-B	Rum River	0.592000	PEMB	Type 2	Sedge Meadow	100	1				
02-032-25-25-034-B						100		High	High	High	☐
02-032-25-25-034-H	Rum River	0.414000	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-25-034-H						100		Low	Low	Low	☐
02-032-25-26-033-A	Rum River	39.55500	PUBG	Type 4	Deep Marsh	10	0.5				
02-032-25-26-033-A	Rum River	39.55500	L1UBH	Type 5	Shallow, Open Water Communities	87	0.5				
02-032-25-26-033-A						97		Moderate	Moderate	Moderate	☐
02-032-25-26-033-C	Rum River	162.42	PEMH	Type 5	Shallow, Open Water Communities	20	0.5				
02-032-25-26-033-C	Rum River	162.42	PEMC	Type 3	Shallow Marsh	80	0.1				
02-032-25-26-033-C						100		Moderate	Low	Low	☐
02-032-25-27-032-F	Mississippi River	6.14	PEMF	Type 4	Deep Marsh	41	0.1				
02-032-25-27-032-F	Mississippi River	6.14	PEMC	Type 3	Shallow Marsh	59	0.1				
02-032-25-27-032-F						100		Low	Low	Low	☐
02-032-25-27-032-H	Rum River	2.430000	PEMC	Type 3	Shallow Marsh	50	0.5				
02-032-25-27-032-H	Rum River	2.430000	PEMF	Type 4	Deep Marsh	50	0.5				
02-032-25-27-032-H						100		Moderate	Moderate	Moderate	☐
02-032-25-28-031-B	Mississippi River	4.137000	PEMC	Type 3	Shallow Marsh	100	0.1				
02-032-25-28-031-B						100		Low	Low	Low	☐
02-032-25-28-031-C	Mississippi River	10.08	PEMB	Type 2	Fresh (Wet) Meadow	40	0.1				
02-032-25-28-031-C	Mississippi River	10.08	PEMC	Type 3	Shallow Marsh	60	0.5				
02-032-25-28-031-C						100		Moderate	Low	Moderate	☐

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Wetland Community Summary
City of Ramsey Wetland Inventory

			Vegetative Diversity/Integrity								
			Community								
Wetland ID	Subwatershed	Wetland Size (acres)	Cowardin Classification	Circular 39	Plant Community	Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating	*
02-032-25-29-030-C	Mississippi River	1.13	PEMC	Type 3	Shallow Marsh	100	0.5				
02-032-25-29-030-C						100		Moderate	Moderate	Moderate	☐

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Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	*Hydrogeomorphology*	*Hydrologic Regime*	*Flood Storage*	*Downstream Water Quality*	*Wetland Water Quality*	*Shoreline Protection*
02-032-24-06-007-A	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	Moderate	High	High	Moderate
02-032-24-06-007-B	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-24-06-007-C	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-24-06-007-D	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	High	High	High	Moderate
02-032-24-06-007-E	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-24-06-007-F	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-24-06-007-J	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	Moderate	High	High	Not Applicable
02-032-24-06-007-K	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	Moderate	High	High	Not Applicable
02-032-25-00-000-A	Riverine (within the river/stream banks)	High	Moderate	High	Moderate	Moderate
02-032-25-00-000-B	Riverine (within the river/stream banks)	High	Moderate	High	Moderate	Moderate
02-032-25-00-000-C	Riverine (within the river/stream banks), Lacustrine Fringe (edge of deepwater areas)/Shoreland	Moderate	Moderate	Moderate	High	Moderate
02-032-25-00-000-D	Riverine (within the river/stream banks), Floodplain (outside waterbody banks)	Moderate	Moderate	Moderate	Moderate	High
02-032-25-00-000-E	Riverine (within the river/stream banks)	Moderate	Moderate	Moderate	High	Moderate
02-032-25-00-000-F	Riverine (within the river/stream banks)	Moderate	Moderate	Moderate	High	Moderate
02-032-25-00-000-G	Riverine (within the river/stream banks), Floodplain (outside waterbody banks)	Moderate	Moderate	Moderate	Moderate	Moderate
02-032-25-01-006-A	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-01-006-C	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	Moderate	High	Moderate	Moderate

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	*Hydrogeomorphology*	*Hydrologic Regime*	*Flood Storage*	*Downstream Water Quality*	*Wetland Water Quality*	*Shoreline Protection*
02-032-25-01-006-H	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	Moderate	Moderate	Moderate	Moderate	Not Applicable
02-032-25-01-006-N	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-02-005-A	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-02-005-D	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-02-005-E	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-03-004-A	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	High	High	High	Not Applicable
02-032-25-03-004-B	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-03-004-C	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-03-004-F	Depressional/Isolated (no discernable inlets or outlets)	Low	Moderate	Moderate	Moderate	Not Applicable
02-032-25-03-004-G	Depressional/Isolated (no discernable inlets or outlets)	Low	Moderate	High	Moderate	Not Applicable
02-032-25-03-004-H	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	High	High	Not Applicable
02-032-25-03-004-M	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	Moderate	Moderate	High	High	Not Applicable
02-032-25-03-004-N	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Moderate	Not Applicable
02-032-25-04-003-A	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-04-003-E	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	High	High	Moderate	Not Applicable
02-032-25-04-003-F	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-04-003-H	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-04-003-I	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-05-002-A	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-05-002-B	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-05-002-C	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	*Hydrogeomorphology*	*Hydrologic Regime*	*Flood Storage*	*Downstream Water Quality*	*Wetland Water Quality*	*Shoreline Protection*
02-032-25-05-002-G	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-05-002-I	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-05-002-J	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-05-002-K	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	High	High	Moderate	Not Applicable
02-032-25-06-001-A	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	High	High	Moderate	Not Applicable
02-032-25-06-001-B	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-06-001-C	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-06-001-D	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Low	Not Applicable
02-032-25-06-001-E	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Low	Not Applicable
02-032-25-06-001-F	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	Moderate	High	Exceptional	Not Applicable
02-032-25-06-001-G	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	Moderate	High	Moderate	Not Applicable
02-032-25-07-008-B	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-07-008-C	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-07-008-E	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Exceptional	Moderate
02-032-25-07-008-F	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	High	High	Exceptional	Not Applicable
02-032-25-07-008-G	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	High	High	High	Exceptional	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	*Hydrogeomorphology*	*Hydrologic Regime*	*Flood Storage*	*Downstream Water Quality*	*Wetland Water Quality*	*Shoreline Protection*
02-032-25-08-009-A	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-08-009-B	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-08-009-D	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Moderate
02-032-25-08-009-E	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-09-010-D	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-09-010-E	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-09-010-F	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	High	Moderate	Moderate	Moderate
02-032-25-09-010-J	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-10-011-B	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	High	Moderate	Moderate	Moderate
02-032-25-10-011-F	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	Moderate	Moderate	Not Applicable
02-032-25-10-011-G	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	Moderate	Moderate	Not Applicable
02-032-25-11-012-B	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	High	Moderate	Not Applicable
02-032-25-11-012-K	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Moderate	Not Applicable
02-032-25-11-012-P	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-11-012-Q	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-11-012-R	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-11-012-S	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-11-012-T	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	High	Moderate	Not Applicable
02-032-25-11-012-U	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-14-019-F	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-14-019-I	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-14-019-N	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	High	Moderate	Not Applicable
02-032-25-15-018-F	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	Moderate	Moderate	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	*Hydrogeomorphology*	*Hydrologic Regime*	*Flood Storage*	*Downstream Water Quality*	*Wetland Water Quality*	*Shoreline Protection*
02-032-25-15-018-G	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	Moderate	Low	Not Applicable
02-032-25-16-017-C	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-16-017-D	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-16-017-E	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-16-017-F	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	High	High	High	Not Applicable
02-032-25-16-017-H	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-17-016-A	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-17-016-C	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	Moderate	High	High	Not Applicable
02-032-25-17-016-D	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-17-016-E	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	High	High	High	Not Applicable
02-032-25-17-016-F	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-17-016-H	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	High	High	Not Applicable
02-032-25-17-016-I	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-18-015-A	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	High	High	Not Applicable
02-032-25-18-015-D	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-18-015-E	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-18-015-F	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-18-015-G	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-18-015-H	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-18-015-I	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-18-015-K	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-18-015-L	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	*Hydrogeomorphology*	*Hydrologic Regime*	*Flood Storage*	*Downstream Water Quality*	*Wetland Water Quality*	*Shoreline Protection*
02-032-25-18-015-M	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	High	Not Applicable
02-032-25-18-015-O	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Moderate	Not Applicable
02-032-25-18-015-P	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-18-015-Q	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-19-022-A	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	Low	Moderate	Moderate	Moderate	Not Applicable
02-032-25-19-022-B	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	High	Moderate	Not Applicable
02-032-25-19-022-C	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	Moderate	Low	Not Applicable
02-032-25-19-022-D	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Moderate
02-032-25-19-022-E	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-19-022-F	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Moderate	Not Applicable
02-032-25-19-022-G	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	High	Not Applicable
02-032-25-19-022-I	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Moderate	Not Applicable
02-032-25-19-022-J	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Low	Not Applicable
02-032-25-20-023-B	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-21-024-A	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-21-024-B	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Low	Not Applicable
02-032-25-22-025-B	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	Moderate	High	High	Moderate	Not Applicable
02-032-25-22-025-C	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-22-025-D	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	High	High	Not Applicable
02-032-25-23-026-J	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	High	Not Applicable
02-032-25-23-026-K	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable
02-032-25-24-027-O	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	High	High	High	Not Applicable
02-032-25-25-034-B	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	High	High	High	High	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

Wetland ID	*Hydrogeomorphology*	*Hydrologic Regime*	*Flood Storage*	*Downstream Water Quality*	*Wetland Water Quality*	*Shoreline Protection*
02-032-25-25-034-H	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	Moderate	Moderate	Moderate	Moderate	Not Applicable
02-032-25-26-033-A	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Moderate
02-032-25-26-033-C	Depressional/Isolated (no discernable inlets or outlets)	Moderate	Moderate	Moderate	Moderate	Low
02-032-25-27-032-F	Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	Moderate	Moderate	High	Moderate	Not Applicable
02-032-25-27-032-H	Depressional/Isolated (no discernable inlets or outlets)	Moderate	High	Moderate	Moderate	Not Applicable
02-032-25-28-031-B	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-28-031-C	Depressional/Isolated (no discernable inlets or outlets)	High	Moderate	High	Moderate	Not Applicable
02-032-25-29-030-C	Depressional/Isolated (no discernable inlets or outlets)	High	High	High	Moderate	Not Applicable

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-24-06-007-A	High	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-24-06-007-B	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable	Recharge	Not Applicable	High	High
02-032-24-06-007-C	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable	Recharge	Not Applicable	High	High
02-032-24-06-007-D	High	High	Low	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-24-06-007-E	Moderate	Moderate	Moderate	Exceptional	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-24-06-007-F	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-24-06-007-J	High	Not Applicable	Moderate	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-24-06-007-K	High	Not Applicable	Moderate	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-00-000-A	Moderate	High	Low	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-00-000-B	High	High	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	Moderate

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-00-000-C	High	High	Low	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-00-000-D	Moderate	High	Low	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-00-000-E	High	High	Low	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-00-000-F	High	High	Low	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-00-000-G	High	High	Low	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-01-006-A	High	Moderate	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	Moderate
02-032-25-01-006-C	High	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-01-006-H	Moderate	Low	Low	Moderate	Not Applicable	Recharge	Not Applicable	High	Moderate
02-032-25-01-006-N	Moderate	Low	High	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-25-02-005-A	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-25-02-005-D	Moderate	Low	Moderate	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-02-005-E	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-03-004-A	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-03-004-B	Moderate	Low	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-03-004-C	Moderate	Low	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-03-004-F	Moderate	Not Applicable	Not Applicable	Low	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	Moderate
02-032-25-03-004-G	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Exceptional	Moderate
02-032-25-03-004-H	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	High
02-032-25-03-004-M	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Low	Moderate	High
02-032-25-03-004-N	Moderate	Low	Low	Low	Not Applicable	Combination Discharge, Recharge	Moderate	Moderate	Moderate
02-032-25-04-003-A	Moderate	Low	Low	Moderate	Not Applicable	Discharge	Not Applicable	Moderate	Moderate
02-032-25-04-003-E	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-04-003-F	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-04-003-H	Moderate	Low	Moderate	Moderate	Not Applicable	Recharge	Low	Moderate	Moderate

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-04-003-I	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	High
02-032-25-05-002-A	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-25-05-002-B	Moderate	Not Applicable	Not Applicable	Low	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-05-002-C	High	Not Applicable	Not Applicable	Exceptional	Not Applicable	Recharge	Not Applicable	High	High
02-032-25-05-002-G	Moderate	Not Applicable	Not Applicable	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	Moderate
02-032-25-05-002-I	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	Moderate
02-032-25-05-002-J	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Low	Exceptional	Moderate
02-032-25-05-002-K	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	Moderate
02-032-25-06-001-A	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-06-001-B	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-06-001-C	Moderate	Low	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	Moderate

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-06-001-D	Moderate	Low	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Low
02-032-25-06-001-E	Moderate	Low	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Low
02-032-25-06-001-F	Exceptional	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Exceptional
02-032-25-06-001-G	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-07-008-B	Moderate	Not Applicable	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-07-008-C	Moderate	Low	High	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-07-008-E	Exceptional	High	Low	Exceptional	Not Applicable	Combination Discharge, Recharge	Moderate	High	Exceptional
02-032-25-07-008-F	Exceptional	Not Applicable	High	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	Exceptional
02-032-25-07-008-G	Exceptional	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	Exceptional

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-08-009-A	Moderate	Low	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-08-009-B	Moderate	Not Applicable	Moderate	Low	Not Applicable	Recharge	Moderate	Moderate	Moderate
02-032-25-08-009-D	Moderate	Moderate	Low	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	Moderate
02-032-25-08-009-E	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-09-010-D	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-09-010-E	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-09-010-F	Moderate	Low	Low	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-09-010-J	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Exceptional	Moderate
02-032-25-10-011-B	Moderate	Moderate	Low	High	Not Applicable	Recharge	Not Applicable	High	Moderate
02-032-25-10-011-F	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Moderate	Moderate	Moderate
02-032-25-10-011-G	Moderate	Not Applicable	Low	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-11-012-B	High	Low	Moderate	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-11-012-K	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-11-012-P	Moderate	Not Applicable	Low	Moderate	Not Applicable	Recharge	Not Applicable	High	High
02-032-25-11-012-Q	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-11-012-R	Moderate	Not Applicable	Low	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-11-012-S	High	Not Applicable	Moderate	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	High

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-11-012-T	Moderate	Not Applicable	Low	Low	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-11-012-U	High	Moderate	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	High
02-032-25-14-019-F	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-14-019-I	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-14-019-N	Moderate	Not Applicable	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-15-018-F	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Low	Moderate	Moderate
02-032-25-15-018-G	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Low	Moderate	Low
02-032-25-16-017-C	Moderate	Not Applicable	Low	Moderate	Not Applicable	Recharge	Low	Moderate	Moderate
02-032-25-16-017-D	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-16-017-E	High	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	High
02-032-25-16-017-F	High	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	High
02-032-25-16-017-H	Moderate	Low	High	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	High

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-17-016-A	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	High
02-032-25-17-016-C	High	Not Applicable	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	High
02-032-25-17-016-D	Moderate	Not Applicable	Moderate	Low	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-17-016-E	High	Not Applicable	Moderate	Moderate	Not Applicable	Recharge	Not Applicable	Exceptional	High
02-032-25-17-016-F	Moderate	Not Applicable	High	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-25-17-016-H	High	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Exceptional	High
02-032-25-17-016-I	Moderate	Low	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-18-015-A	Exceptional	Not Applicable	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-18-015-D	High	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	High	High
02-032-25-18-015-E	High	Not Applicable	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-18-015-F	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Exceptional	High
02-032-25-18-015-G	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High

Wetland Functional Assessment Summary
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							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-18-015-H	Moderate	Not Applicable	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-18-015-I	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-18-015-K	Moderate	Low	High	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-18-015-L	Moderate	Low	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-18-015-M	Moderate	Low	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-18-015-O	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-18-015-P	Exceptional	Not Applicable	Low	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-25-18-015-Q	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-19-022-A	Low	Not Applicable	Not Applicable	Low	Low	Recharge	Moderate	Exceptional	Moderate
02-032-25-19-022-B	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Exceptional	Moderate
02-032-25-19-022-C	Moderate	Not Applicable	Low	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-19-022-D	Moderate	Low	Moderate	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-19-022-E	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-19-022-F	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-19-022-G	High	Moderate	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-19-022-I	Moderate	Low	Low	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-19-022-J	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-20-023-B	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-25-21-024-A	Moderate	Low	Low	Exceptional	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	High
02-032-25-21-024-B	Moderate	Low	Low	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Low
02-032-25-22-025-B	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Low	Moderate	Moderate
02-032-25-22-025-C	Moderate	Not Applicable	Not Applicable	Low	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-22-025-D	Moderate	Not Applicable	Not Applicable	Low	Not Applicable	Recharge	Not Applicable	Moderate	High
02-032-25-23-026-J	High	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	High
02-032-25-23-026-K	Moderate	Low	Moderate	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	High	Moderate
02-032-25-24-027-O	High	Not Applicable	Not Applicable	Moderate	Not Applicable	Recharge	Not Applicable	High	High
02-032-25-25-034-B	Moderate	Not Applicable	Not Applicable	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Exceptional	High

Wetland Functional Assessment Summary
City of Ramsey Wetland Inventory

							Additional Information		
Wetland ID	***Wildlife Habitat***	***Fishery Habitat***	***Amphibian Habitat***	***Aesthetics, Recreation, Education***	***Commercial***	***Ground-Water Interaction***	***Wetland Restoration Potential***	***Wetland Stormwater Sensitivity***	***Stormwater Treatment Needs***
02-032-25-25-034-H	Moderate	Low	Low	Moderate	Not Applicable	Recharge	Not Applicable	Moderate	Moderate
02-032-25-26-033-A	Moderate	Low	Moderate	High	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-26-033-C	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-27-032-F	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-27-032-H	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-28-031-B	Moderate	Low	Moderate	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-28-031-C	Moderate	Low	Low	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Moderate	Moderate
02-032-25-29-030-C	Moderate	Low	Moderate	Low	Not Applicable	Recharge	Not Applicable	Moderate	Moderate

GOALS/STRATEGIES NEEDING REFINEMENT

- Reduce refuse to landfill
    - Separate organics
- Enhance water as higher priority
- Incentives and revenue sources expand as separate section
- Cluster Ordinance – say Conservation Subdivision
    - Protect natural resources
- Improve education
    - Especially water conservation
    - Community to be aware how significant an issue it really is
    - Put a price tag on the water supply issue
    - Separately meter irrigation & potable
    - Sewer rate tied to water use. Separate irrigation.
    - How to quantify when on a private well
- Balance environmental protection with economies
    - Return on investment

GOALS/STRATEGIES GOOD 'AS IS'

- Complete NRI update

MISSING GOALS/STRATEGIES

- City owned land inventory
    - Parks that are no longer needed?
- Review Park Dedication requirements
- Stress Sustainability
- Open space purchase similar to Andover
- Keep eye on tax forfeit & Sheriff sales
- Emergency Response
    - Especially post-response
- As City operations, how can we reduce our carbon foot print
- Points based system – Zoning Code
- Green steps

Comp Plan Steering Committee **2. 3.**

Meeting Date: 05/08/2017

By: Tim Gladhill, Community Development

Information

Title:

Review Materials for Economic Development Chapter

Purpose/Background:

The purpose of this case is to review materials to be presented at the June 12 Workshop related to Economic Development.

Observations/Alternatives:

Attached is the existing Economic Development Chapter of the Comprehensive Plan. The focus of this evening is Goals and Strategies and not the full draft, similar to previous chapters reviewed by the Steering Committee. This Chapter is likely to get a broader overhaul compared to other chapters due to updated Strategic Plans, Work Plans, and economic development policies. Economic Development Staff will not be in attendance this evening. The intent of this meeting is to introduce available materials and see what questions exist. The Economic Development Team (Staff and Consultant) will be available at the June 12 Workshop as well as the July Steering Committee Meeting for a more in-depth overview.

Staff is also suggesting a daytime workshop for businesses in addition to the June 12 Workshop.

Staff is also including a draft of the 2017 Strategic Plan Update (City Council), as it addresses several economic development initiatives.

Recommendation:

Provide feedback on content to be presented.

Action:

Provide feedback on content to be presented.

Attachments

Economic Development Check List
Existing Economic Development Chapter
EDA Work Plan
Economic Development Tools
Business Subsidy Policy
DRAFT 2017 Strategic Plan Update

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	Tim Gladhill	05/04/2017 04:35 PM
Form Started By: Tim Gladhill		Started On: 05/04/2017 03:15 PM
Final Approval Date: 05/04/2017		

ECONOMIC COMPETITIVENESS

Redevelopment

- ☐ Minnesota Statutes § 473.859 Subd. 1 states that local comprehensive plans "shall contain objectives, policies, standards, and programs to guide… redevelopment and preservation for all lands and waters within the jurisdiction of the local governmental unit". The information provided in this section of the handbook is intended to assist communities as they grapple with the opportunities and challenges associated with development sites that are declining in value, viability, and marketability.

12. ECONOMIC DEVELOPMENT

A. Historical Economic Development in Ramsey

In the settlement days of Ramsey, the principal economy was trading. Settlers took advantage of major transportation routes to set up trading posts where goods were traded with members of the Winnebago, Sioux and Chippewa Indian tribes. Some settlers that came to the area took up farming; however, poor soil conditions prevented farming from becoming a strong part of the economy. In late the 1800s and early 1900s, the major economic growth of the area was focused in the nearby City of Anoka, where the Rum River provided a source of power for the milling industry. The City of Anoka's downtown soon emerged as a center for jobs, business and entertainment and eventually became the Anoka County seat.

It was not until the 1950s and 1960s that Ramsey began to see an interest in commercial and industrial development. As the early development of trading posts occurred along a major transportation route, so has recent development. Highway 10 is a major route connecting the Twin Cities to northern Minnesota and has seen a scattering of commercial and industrial developments occur over several years. Some new construction has taken place while other sites simply have converted farmhouses and farm buildings into businesses.

Industrial park development has taken place in many phases over the last 30 years. In the late 1960s and early 1970s Gateway North Industrial Park Airport and Ramsey 67 Industrial Park developed north of the railroad tracks in the south central and southeastern portion of the community. This early development pattern essentially defined the general location for future industrial development, which now makes up the bulk of economic activity in the community. These parks saw development of some heavy industrial uses such as a concrete and masonry plant and heavy construction companies. Many of these businesses remain today and in some cases represent gross inefficiency of urban land use. A more unique development that occurred was a business incubator, which has assisted the growth and expansion of numerous start-up businesses in Ramsey and subsequently sparked a need to provide industrial land for these companies to grow and expand within the City. Gateway North Industrial Park was created through redevelopment of the airport site, which was decommissioned in the early 1990s.

In 1994 and 1995 the City began the development of Ramsey Business Park 95 by acquiring roughly 85 acres for industrial development. Around this same time a major utility company, The Anoka Electric Cooperative (now named Connexus Energy), began development of the AEC Energy Park. The AEC Energy Park is roughly 135 acres and is home to AEC's corporate headquarters. Both of these parks have rapidly filled up and the few remaining lots are under consideration by several companies and expected to be developed by the end of 1998.

A strong industrial market made much of this development possible. As vacancy rates in the metropolitan area were extremely low in the early 1990s, many companies looked to build new facilities rather than pay increased rent rates to renew leases. During this time, the entire Metropolitan area saw similar growth in the industrial market. Other contributing elements to the success of Ramsey's industrial growth include its location along a major transportation corridor between St. Cloud and Minneapolis/St. Paul (including convenient rail access), the availability of a highly trained labor force, the location of Anoka-Hennepin Technical College nearby for employee training programs and the ability of the City to provide financial incentives to prospective businesses.

Because of the reasons cited above, it is anticipated that industrial development will continue to be of high demand in Ramsey, provided land can be made available. As employment numbers are expected to increase sharply over the life of this plan it is important to ensure adequate commercial and retail services are available to serve the basic needs of this employment base. The future land use plan shows a mixed-use site located within the heart of Places to Work. Small-scale retail, general services, restaurants, civic green space and a transit element may be included within a mixed-use concept, all of which provide the employment base with much needed ancillary services and amenities.

A significant piece to the success of the economic development in the City of Ramsey was the creation of the Economic Development Authority and the Economic Development Commission in 1993. State enabling legislation in 1987 gave municipalities the ability to establish a separate public body with its own rules and taxing authority to promote and facilitate economic development. The City of Ramsey has recently consolidated its EDC and EDA into a single entity, the Ramsey Economic Development Authority (EDA).

Major tasks of the EDA include:

- Recommending goals and policies for housing, economic development and redevelopment.
- Implementing housing redevelopment projects and economic development/redevelopment projects.
- Financing programs for first time homebuyers, housing rehab or start up businesses.

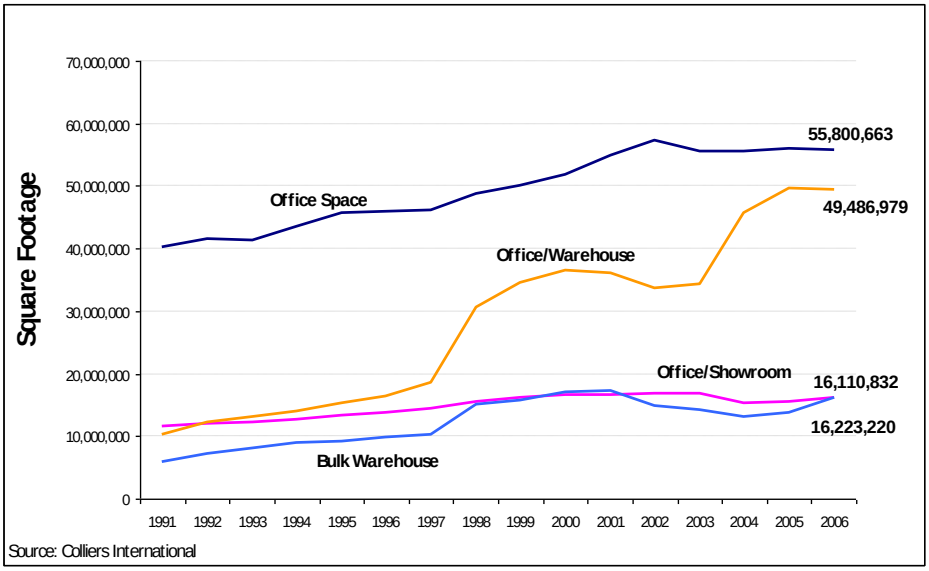
B. Economic Snapshot of the Twin Cities, Anoka County, and Ramsey

This portion of the Comprehensive Plan presents a brief overview of key indicators about the economy of the Twin Cities and Anoka County. With numerous sites that have strategic access to Highway 10, the profile of Ramsey will increase among the commercial/industrial development community, though the timing and scope of development hinges on the regional economic picture at the time individual sites are built-out.

1. Twin Cities Office and Industrial Space Absorption (Multi-Tenant Space) 1991-2006

Figure 12-1 shows that the Twin Cities Metro Area has absorbed nearly 70 million square feet of office and industrial space[1] during the past 15 years. This translates to an annual average of about 4.6 million square feet, which is annual growth rate of 4.7 percent.

Figure 12-1 – Occupied Multi-tenant Office and Industrial Space, Twin Cities Metro Area



Office-warehouse space, which has been historically indicative of the manufacturing sector, grew by nearly 40 million occupied square feet between 1991 and 2006 (10.5% annually), followed by office space, which grew by 16 million occupied square feet (2.2% annually). The overall strong growth in office-warehouse space with its intermittent peaks and valleys is more reflective of a changing office market than growth in the manufacturing sector. As the most accessible sites become cost prohibitive for many businesses with office workers, office-warehouse properties in traditionally industrial locations have become increasingly popular.

Overall, the strong historical expansion in multi-tenant office and industrial space in the Twin Cities suggests that Ramsey can likely absorb a variety of space types, assuming that the economy continues to expand. The mix of building types will depend on the particular parts of the economy that are expanding at the

[1] Multi-tenant industrial space descriptions per Colliers International: office-warehouse - buildings with at least 25,000 square feet, 10%-20% finished office space and 16-20 foot clear ceiling heights; office-showroom - buildings of at least 25,000 square feet, near freeways with good visibility, 30%+ finished office space and 12-16 foot clear ceiling heights; bulk warehouse - buildings of 50,000 square feet or more, constructed after WWI, with no more than 10% finished office space and 20-foot or greater clear ceiling heights.

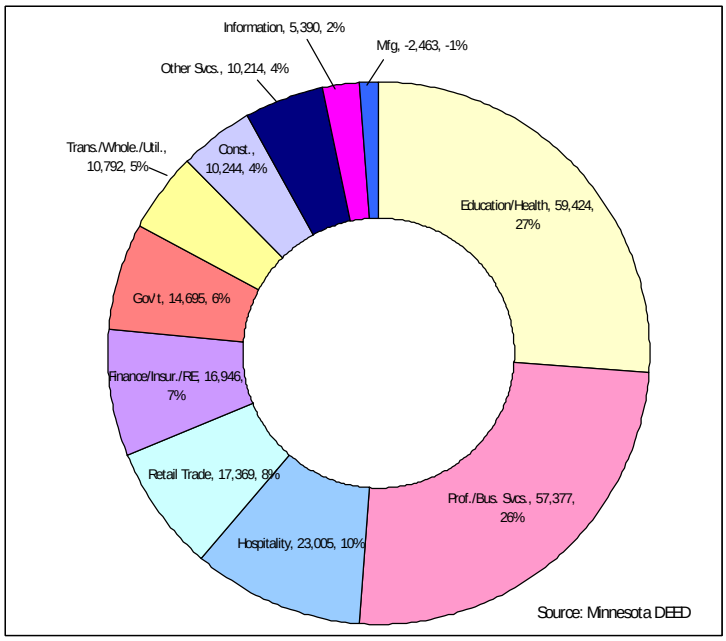
time individual sites are being developed (e.g. if growth in the healthcare sector is strong, medical office demand will be strong).

2. Twin Cities Employment Growth by Sector 2004-2014

Figure 12-2 presents predictions from the Minnesota Department of Employment and Economic Development (DEED) about the growth of the Twin Cities economy by industrial sector. The chart shows very strong expansion in several service sectors. In particular, 63 percent of all new jobs over 10 years will be education/health services, professional/business services, or hospitality. Other important growth sectors include retail trade (8% of new jobs), finance/insurance/real estate (6%), and government (7%). These projections indicate that commercial development in the Twin Cities region in the coming decades will likely focus on several service sectors because they will be the major drivers of employment growth.

3. Anoka County Office and Industrial Space Absorption (Multi-Tenant Space) 1998-2006

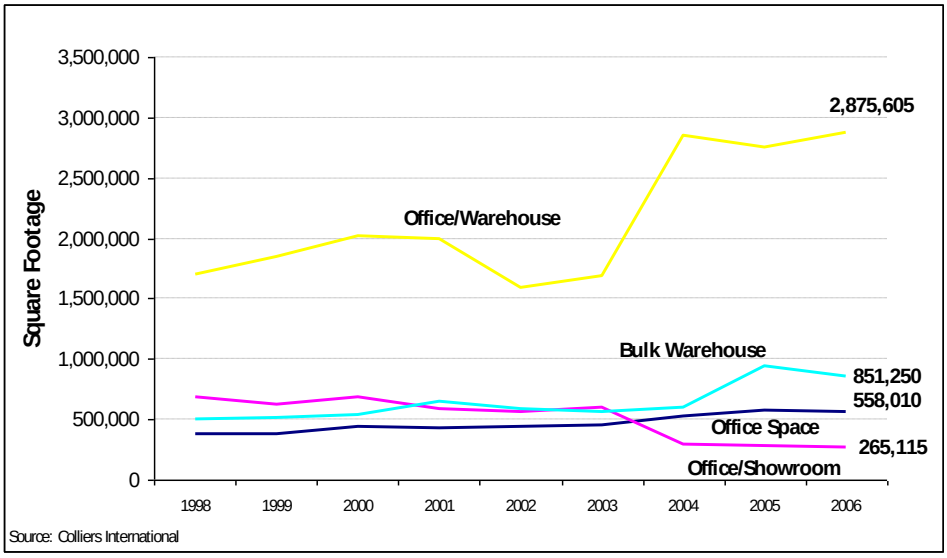
Figure 12-2 – Projected Employment Growth by Sector, 7-County Twin Cities Region, 2004-2014



Absorption of commercial and industrial space has been slow over the last seven years in Anoka County. Figure 12-3 shows that the amount of space absorbed has been relatively flat for each property type with the exception of office/ warehouse space, which has seen a nearly 60 percent increase in the amount of occupied space. Compared to the remainder of the metro area, however, the amount of office space in Anoka County is minimal.

Another important point that the chart displays is how much office/warehouse space dominates the market in Anoka County. Even if one were to add together office, office/showroom, and bulk warehouse space, it would not add up to office/warehouse space.

Figure 12-3 – Occupied Office and Industrial Space, Anoka County

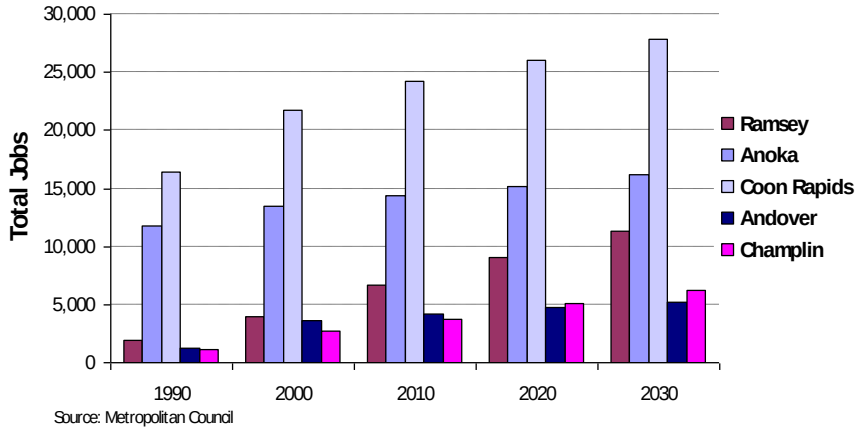


4. North Metro Projected Employment Growth

Figure 12-4 shows projected employment for Ramsey and adjacent communities through 2030. The data comes from the Metropolitan Council and shows employment for the cities listed collectively growing from about 32,000 jobs in 1990 to 67,000 jobs by 2030 with majority of the growth occurring in Ramsey and Coon Rapids.

The communities listed currently account for roughly three percent of all jobs in the 7-County Twin Cities Metro Area. Their share of projected job growth through 2030 is expected to remain about three percent of all jobs.

Figure 12-4 – Projected Job Growth, 1990-2030



Based on the projections in Figure 12-4, Ramsey will become an important employment center for the northern half of the metropolitan area. However, it will be important to continue to track employment growth since redevelopment areas in Anoka and Coon Rapids, as well as the emerging district along Highway

610 in Brooklyn Park, may siphon considerable demand for new commercial and industrial growth in the coming years.

Not all of the forecasted job growth will result in development of new commercial space since some industry sectors do not require traditional office or industrial space to house workers. Industry sectors that typically use office space are Professional and Business Services, FIRE (Finance, Insurance and Real Estate), and a small proportion of Education and Healthcare Services. Industrial space is typically used by employees in the Manufacturing, Wholesale Trade, and Transportation sectors.

5. Ramsey Employees and Employers

Table 12-1 and Figure 12-5 illustrate historical and forecasted employment figures for Ramsey. In 1990, Ramsey was a bedroom community with few local jobs to support the local population. Over the past 15 years, the Ramsey employment base has grown more rapidly than the population and there are currently approximately 1.5 households for every local job. Although Ramsey is adding jobs, several nearby communities still have a much higher concentration of jobs. A comparison with surrounding communities is contained in Table 12-2. Having a balance between employment and housing reduces the commuting demands on the regional highway system, increases resident quality of life, improves property values and leads to a more sustainable community. The Metropolitan Council is projecting that Ramsey's economy will continue to grow through 2030, however, the employment growth is not projected to keep pace with household growth and as with many suburban communities the number of jobs per household will continue to lag the average in the region.

Figure 12-5: Local Employment per Household

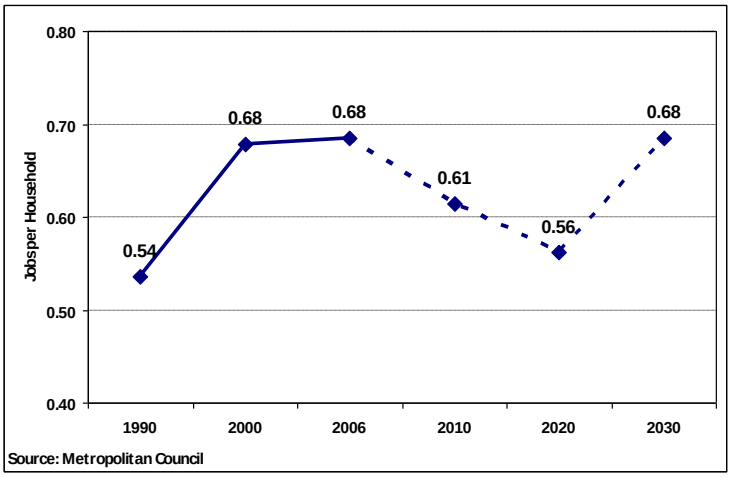


Table 12-1: Employment and household growth

	1990	2000	2006	2010	2020	2030
Employment	1,941	4,008	5,225	6,700	9,100	11,300
Households	3,620	5,906	7,629	10,900	16,200	16,500
Emp/HH	0.54	0.68	0.68	0.61	0.56	0.68
Source: Metropolitan Council						

Table 12-2: Jobs Per Household in Nearby Communities

	Jobs per Household
Fridley	2.18
Anoka	1.84
Spring Lake Park	1.48
Coon Rapids	1.05
Blaine	0.99
Ramsey	***0.68***
Ham Lake	0.67
Champlin	0.49
Andover	0.44
Dayton	0.40
Burns	0.24
Oak Grove	0.23

Source: Metropolitan Council

6. Travel Time

Table 12-3 identifies the mode of transportation that Ramsey residents use to access their jobs. A majority of residents travel to work alone and access employment by car, truck or van. However, nearly 10 percent of residents carpool to work, five percent work from home and less two percent took public transportation.

Table 12-3: Means of Transportation to Work, 2000

Means of Transportation	Number of Workers	Percent
Car, truck, or van - drove alone	8,778	83.3%
Car, truck, or van - carpooled	1,004	9.5%
Public Transportation	166	1.6%
Worked at home	514	4.9%
Walked	39	0.4%
Other means	38	0.4%
Workers age 16 and over in 2000	10,539	100.0%
Source: U.S. Census		

Since many of Ramsey's residents work outside of the city, commuting time is significant, with the average worker spending over 30 minutes commuting to their place of employment. Extremely long commutes are all too common due to the poor highway access to the Minneapolis and St. Paul downtown areas. Table 12-4 demonstrates the travel time to work for workers.

Table 4-5: Commute Time, 2000

Travel Time to Work	Number of Workers	Percent
Workers who did not work at home	10,025	100.0%
Less than 10 minutes	754	7.5%
10 to 14 minutes	1,071	10.7%
15 to 19 minutes	1,166	11.6%
20 to 24 minutes	1,377	13.7%
25 to 29 minutes	746	7.4%
30 to 34 minutes	1,451	14.5%
35 to 44 minutes	521	5.2%
45 to 59 minutes	2,211	22.1%
60 to 89 minutes	552	5.5%
90 or more minutes	176	1.8%
Mean travel time to work (minutes)	30.1	(X)
Source: U.S. Census		

7. Major Industrial/Manufacturing Employers

There are several major employers within the community as shown in Table 12-5. The largest employer in the community is the Aveda Corporation, with 663 total employees.

Table 12-5: Major Employers

Business	Products/Services	Employees
Life Fitness	Other Fabricated Metal Product Manufacturing	500
Vision Ease	Optical Instrument & Lens Manufacturing	400
Connexus Energy	Electric Power Distribution	230
Anderson & Dahlen	Metalworking Machinery Manufacturing	165
ALTRON, Inc.	Electronic Computer Manufacturing	140
Sign Zone	Sign Manufacturing	120
RJM/General Paper Products	Converted Paper Product Manufacturing	103
ACE Solid Waste	Waste Collection	83
Command Tooling	Machine Shops	65
Wendells	Other Fabricated Metal Product Manufacturing	51
Zero Zone Refrigeration	Ventilating, Heating, & Air Conditioning	51
Airgas North Central	Other Direct Selling Establishments	50
Grosslein Beverages	Beverage Manufacturing	40
Source: Minnesota Department of Employment & Economic Development		

According to the Minnesota Department of Employment and Economic Development (DEED), there are just over 5,000 employed workers in the City of Ramsey. Table 12-6 demonstrates the number of employees per industry. The industries most heavily represented in Ramsey include manufacturing (31%), construction (13%), professional and business services (11%), utilities, transportation, and wholesale trade (10%), leisure and hospitality (9%), and retail trade (9%).

Table 12-6: Number of Employees by Industry, 2006

Industry	Ramsey		MSP Metro Area	
	Employees	Percent	Employees	Percent
Manufacturing	1,568	30.9%	185,177	11.5%
Construction	675	13.3%	75,503	4.7%
Professional & Business services	539	10.6%	253,990	15.8%
Utilities, Transportation, & Wholesale Trade	501	9.9%	156,439	9.7%
Leisure & Hospitality	452	8.9%	146,935	9.2%
Retail Trade	448	8.8%	169,237	10.5%
Health Care and Social Assistance	299	5.9%	197,990	12.3%
Other Services (except public administration)	234	4.6%	54,948	3.4%
Educational Services	127	2.5%	117,072	7.3%
Public Administration	104	2.1%	64,650	4.0%
Financial Activities	68	1.3%	136,889	8.5%
Information	45	0.9%	43,255	2.7%
Natural Resources and Mining	10	0.2%	3,582	0.2%
Total	5,070	100%	1,605,667	100%
Source: Minnesota Department of Employment and Economic Development				

8. Workforce

The skills and training of the local workforce contributes to the local economy, influences economic development and also suggests potential demands of current residents. Table 12-7 shows the educational attainment levels in the community. Nearly two-thirds of Ramsey residents age 25 or older has a high school diploma or some college experience as their highest level of educational attainment. In contrast, less than six percent of the population has yet to attain a high school diploma, and almost one-third have attained an associates degree or even higher level of education. In general the educational achievement of Ramsey residents is very similar to the rest of Anoka County.

Table 12-7: Educational Attainment, 2000

Population 25 years and over	Ramsey		Anoka County	
	Number	Percent	Number	Percent
Less than 9th grade	163	1.4%	4,152	2.2%
9th to 12th grade, no diploma	509	4.5%	12,638	6.8%
High school graduate (includes equivalency)	3,192	28.3%	60,701	32.4%
Some college, no degree	3,716	33.0%	52,724	28.2%
Associate degree	1,333	11.8%	17,080	9.1%
Bachelor's degree	1,623	14.4%	29,847	16.0%
Graduate or professional degree	731	6.5%	9,980	5.3%
Total	**11,267**	**100%**	**187,122**	**100%**
Percent high school graduate or higher	(x)	94.0%	170,332	91.0%
Percent bachelor's degree or higher	(x)	20.9%	39,827	21.3%
Source: U.S. Census				

9. Household Income

The following tables describe the income levels of households in Ramsey as of 2000. As shown in Table 12-8, approximately five percent of households in Ramsey make less than $25,000 a year, 52 percent make between $25,000 and $75,000, and 42 percent make more than $75,000 a year. Ramsey has a higher

concentration of middle class residents, exceeding the metro average in every income category between $50,000 and $99,999.

Table 12-8: Household Income, 2000

	Ramsey		MSP Metro Area	
Income	Households	Percentage	Households	Percentage
Less than $10,000	70	1.2%	53,201	5.2%
$10,000 to $14,999	83	1.4%	42,019	4.1%
$15,000 to $24,999	130	2.2%	94,467	9.2%
$25,000 to $34,999	320	5.4%	112,968	11.1%
$35,000 to $49,999	770	13.0%	159,422	15.6%
$50,000 to $74,999	2,022	34.1%	233,671	22.9%
$75,000 to $99,999	1,361	23.0%	148,158	14.5%
$100,000 to $149,999	778	13.1%	114,712	11.2%
$150,000 to $199,999	196	3.3%	31,043	3.0%
$200,000 or more	196	3.3%	32,350	3.2%
Total	5,926	100.0%	1,022,011	100.0%
Source: U.S. Census				

C. The Plan for Economic Development

Future economic development should be a coordinated effort between the City Council, the Ramsey Economic Development Authority and the business community. Decisions should be guided and based upon a set of goals and policies that are community driven.

1. Economic Development Goals

The following are Economic Development goals and strategies developed as part of the Comprehensive Plan Update process:

a) A diverse economic environment where a variety of businesses can grow and thrive

STRATEGIES:

1. Foster communication between the City and the business community~
2. Explore programs and activities to attract larger employers and employers that provide high-paying jobs
3. Continue to monitor options for a community-wide technology plan to meet business technology needs (fiber-optic and/or wi-fi)
4. Promote redevelopment of underutilized parcels within industrial areas and along major transportation corridors^
5. Explore opportunities for additional city-sponsored business events
6. Enhance communication between City and business community
7. Continue business retention and subsidy programs
8. Continue partnerships with neighboring cities and local chambers of commerce

b) New development in Ramsey Town Center

STRATEGIES:

1. Encourage and assist with new development in Town Center
2. Explore programs and activities to improve the image of Ramsey Town Center
3. Promote Northstar Commuter Rail and commuter bus service as economic development tools

c) A positive community image

STRATEGIES:

1. Explore the opportunity to develop a local chamber of commerce or marketing team to market the unique qualities of Ramsey
2. Consider options for increasing or improving signage at City gateways and other strategic locations
3. Continue to pursue Revolving Acquisition Loan Fund (RALF) for the Highway 10 corridor
4. Purchase land south of the MPCA landfill for industrial park development
5. Identify, acquire and redevelop underutilized and blighted properties, especially within industrial areas and along major transportation corridors~
6. Strengthen commercial and industrial development standards in City Code
7. Maintain high standards for citywide property maintenance, including City-owned properties

D. Economic Development Tools

Attaining many of the City's economic development goals will require some level of funding. The following is a brief list of some of the more common tools and resources available to cities in need of project funding assistance.

1. Tax Increment Financing (TIF)

TIF is a tool used by cities and other development authorities to finance certain types of development/redevelopment costs. The public purposes of TIF are the redevelopment of blighted areas, construction of low and moderate-income housing, provision of livable wage employment opportunities, and improvement of tax base. [2]

Ramsey has two tax increment project areas that contain six tax increment districts designated for redevelopment and economic development.

[2] Tax Increment Financing March 1996, Program Evaluation Division, Office of the Legislative Auditor

2. Livable Communities Act

By being a participant in the Metropolitan Council's Livable Communities Act, the City becomes eligible for grants and loans that support development and redevelopment of livable communities. The tax base revitalization account provides funds to clean up contaminated land to support economic redevelopment, job retention and job growth. This site could possibly assist the City with any clean up costs that might be associated with unknown dumps on potential industrial land or spills on redevelopment lands.

3. Tax Abatement

A new law created in 1997 allows Minnesota communities to individually "abate" taxes on a parcel of land if the community can find that it is in the public interest. Such public interest reasons may include to:

- Increase or preserve tax base
- Provide employment opportunities
- Help to acquire or construct public facilities
- Help redevelop blighted areas; or
- Help provide residents with access to services

4. Department of Trade and Economic Development

DTED provides support to local municipalities particularly geared towards retaining businesses within the State of Minnesota. DTED will provide help with creating an economic development plan and identifying strategies to implement the plan. Financial assistance is available in the form of a variety of loans and grants such as the Contaminated Site Cleanup grant program, which is designed to assist communities in converting brownfields back into marketable/developable industrial and commercial land.

2017 Economic Development Workplan (DRAFT)

Purpose

Provide a functional plan that prioritizes the work of the City's economic development department and Economic Development Authority (EDA). This plan highlights both day-to-day and long term economic development priorities and goals for the City of Ramsey. The City Council's 3-year strategic action plan includes economic development initiatives; which have been reflected in this plan.

Objectives

1. Encourage, and plan for, growth of industrial, commercial, retail and housing activities
2. Foster the retention and expansion of existing Ramsey businesses
3. Support and maintain a positive local businesses environment
4. Leverage use of outside economic resources, partnerships and funding for economic development initiatives

Outcomes

1. Growth of the City's tax base
2. Growth in the City's quantity of jobs
3. Improved quality of life

Priorities

Priority #1:
Primary expectation of City staff. Highest priority economic development functions and initiatives for the EDA.

Priority #2.
Secondary expectations. When workloads permit, staff will bring forward secondary priorities for discussion and direction.

First Priority

Tactics	*Timeline*	*Additional Resources & Tools Required*	*Key Outcomes/Metrics*
(1) Business Retention & Expansion The large majority local economic growth comes from existing Ramsey businesses. The purpose of this goal is to develop and maintain positive relationships with existing Ramsey businesses (establish trust). This goal is implemented through quality customer service, businesses visits, and facilitating business events. In 2017, staff would like to review the option of utilizing the University of Minnesota's BRE program (link). If the EDA was interested in the program, Connexus Energy has indicated a willingness to sponsor the program (2018).	Ongoing	Currently Sufficient: assuming moderate customer service demand levels, sufficient resources exist to complete this tactic as proposed.	Complete 24 business visits annually. Execute EDA business expo, business appreciation golf tournament, and fall networking event. Participate in Anoka County Broker Event and MN Marketing Partnership. *This tactic fits within EDA objectives 2 and 3.*
(2) Future Business Park Continue to move along the City's future business park initiative. Below are major work items to be addressed: 1. Finalize Economic Development Analysis 2. Develop and solidify the City's position/ involvement/ policy. 3. Attain shovel ready status.	1. Winter 2016 2. Winter 2016 3. Fall 2016	Currently Sufficient: assuming moderate customer service demand levels, sufficient resources exist to complete this tactic as proposed. This work item does require use of third-party professional services (Shovel Ready Certifications, Economic Development Analysis, and subsequent due-diligence). TIF #1 and the EDA Fund have been identified as funding sources for this work in the past by the EDA and City Council.	"Ready-to-go" business park and clear position of City involvement. *This tactic fits within EDA objectives 2 and 3 and the City's strategic plan.*
(3) Old Municipal Center Redevelopment Facilitate redevelopment of old municipal center site. Below are major work items to be completed: 1. Remove former Fire Station #2 and clean site 2. Close on sale of property, phase #2 3. Close out land-swap agreement with Meadow Creek Builders	1. Fall 2016 2. Winter 2016 3. Fall 2016	Currently Sufficient: assuming moderate customer service demand levels, sufficient resources exist to complete this tactic as proposed. The Anoka County HRA account has been identified as a funding source for the demolition and site clean-up work in the past.	Old municipal center site cleaned and ready for sale by Winter 2016. *This tactic fits within EDA objectives 1 and the Council's strategic plan.*

Tactics	*Timeline*	*Additional Resources & Tools Required*	*Key Outcomes/Metrics*
<u>(4) Recruit new industry and major retail businesses to Ramsey</u>	Fall 2017	Currently Sufficient: this tactic requires assistance from the City's real estate broker CBRE; and demand from the development market. In order to provide latitude on which method is selected to tackle this goal (several exist), staff is requesting an increase of the EDA marketing budget line item from $3,000 to $30,000 in 2017.	Secure two new 30,000 square foot retail, and two new 30,000 square foot industrial facilities. *This tactic fits within EDA objective 1. This tactic fits within the City's strategic plan and Council policy discussions.*
<u>(5) Sell Surplus City Owned Land</u> The City owns a large inventory of surplus land available for development. Attain shovel ready status for all listed City owned property (including cut/fill estimations and identifying major costs for development—such as required extension of public infrastructure).	Fall 2016 for shovel ready certifications	Currently Sufficient: assuming moderate customer service demand levels, sufficient resources exist to complete this tactic as proposed. This work item does require use of third-party professional services (Shovel Ready Certifications and subsequent due-diligence). TIF #1 has been identified as a funding source for this work.	Land sales are closed. Staff shall provide an annual overview. *This tactic fits within EDA objective 1. This tactic fits within the City's strategic plan and Council policy discussions.*
<u>(7) COR Development Pro-Forma and Policy</u> The City of Ramsey has taken the role of master developer for The COR. From a development perspective, the list of City obligations (expenditures) for The COR is relatively long, and at this point not well-defined. Additionally, the list of revenue streams from The COR is relatively straight forward, but have been committed informally in several instances. Staff would like to develop a pro-forma for The COR outlining all anticipated expenses and all anticipated revenues for the project. NOTE: this work has been partially completed in the past in many different forms (i.e. Landform, Ehlers, City C.I.P., etc.). This discussion also warrants the City to take policy positions on various items (i.e. expenses) and how they will be paid for (all city, all developer, split, etc.), and roughly when various improvements will be made. Completion of this pro-forma will put the City in a much better position to effectively analyze development proposals, strategize marketing efforts (i.e. pricing of land), budget discussions, and various policy items.	Summer 2017	This work will require assistance from third party professionals: (A) infrastructure analysis for The COR--$20,000-$30,000. (B) regional stormwater plan for The COR--$15,000-$30,000. (C) updated sign plan and cost estimates for The COR--$5,000-$15,000. At this point, the numbers outlined above a very preliminary. Staff would like to get quotes for EDA review. Staff anticipates various funding sources will be utilized to implement this work.	Completed development pro-forma.

Second Priority

Tactics	Timeline	Additional Resources Required	Key Outcomes/Metrics
(8) RALF The Metropolitan Council reinstated the RALF (revolving acquisition loan fund) program in 2015 with eligibility modifications which significantly affect cities' ability to use this program. In fact, since the 2015 rule change, no RALF awards have been made by the Metropolitan Council, to any city Staff would like the EDA/ City Council to consider pursing amendments/ exceptions to the RALF program criteria. Staff is receiving requests/ inquiries from Highway 10 property owners RE this subject; which are intensifying with time. Staff would like to submit a RALF application to the Metropolitan Council to test/ challenge their new policies and positions. Additionally, said application will serve as a base point for future policy discussions for the City of Ramsey.	Fall 2016	No additional resources requested. Normal staff duties.	A RALF program that can actually be utilized by the City of Ramsey.
(9) Business Incubator Consider utilizing vacant space on the second floor of the Ramsey Municipal Center for a business incubator program—(or a cowork space, COCO). Staff would like to kick the process with a scoping meeting (i.e. how should we approach this task).	Spring 2017, scoping meeting with EDA.	At this point, no additional resources are being requested. Based on the scope of this project, additional resources will be needed.	Decide if the City has a genuine interest in starting a business incubator. Have a general scope for what a business incubator means in Ramsey.
(10) ZIP Code In 2015, the City of Ramsey did open its doors to the first ever Ramsey substation USPS Post Office. Although this is a positive step for Ramsey, the need for an independent zip code still exists. The purpose of this tactic is to pursue an independent zip code for our community. Process: 1. Meet USPS minimum standards for obtaining a new zipcode (delivery points, deliver routes, scheme items, sectors). The City needs to submit a request for an audit. 2. USPS audit made—Ramsey either meets minimum thresholds or not. If they do, move on to step 3. 3. USPS conducts a survey of community to gather feedback/ support for a new zip code. 4. USPS grants Ramsey a new zip code.	1. Completed in July of 2016 2. In process, expected to be completed by fall of 2016 3. Expected for completion in 2017. 4. Expected for completion in 2017/208.	No additional resources requested. Normal staff duties.	Approval or denial of a new Ramsey zip code.

APPENDICES

APPENDIX A

Ramsey Economic Development

2015 ACTIVITY REPORT

ECONOMIC DEVELOPMENT EVENTS

1. EDA Spring Business Expo
2. Ramsey Happy Days Festival, Business Expo
3. EDA Fall Networking Event
4. MN Marketing Partnership Familiarization Tour
5. EDA Business Appreciation Golf Tournament
6. Anoka Area Chamber Golf Tournament
7. Anoka County Developer/ Broker Event
8. Multiple Highway 10 Lobbying Tours
9. Armstrong Interchange Ground Breaking (December)

BUSINESS VISITS

Formal (3): Riverside Manufacturing, Waltek, Zero Zone

Informal (10): Life Fitness, Dedicated Networks, Molin Concrete, RJM, JBT, All Seasons Garage, Sil-Pro, Country Side Services, Sil-Pro, In'Tech, PSD LLC, M&G Trailer.

BUSINESS WELCOME BLASTS

9: Stoney River, The Lunch Box, USPS Mail Substation, Molin Concrete, All Seasons Garage Door, China Dragon, GNC, Country Side Services, Quality Forklift.

CITY OWNED LAND TRANSACTIONS

- PSD LLC---$1.89M (13.97 acres)
- Common Bond---$435K (1.85 acres)
- Casey's---$596K (1.36 acres)
- GS Land---$616K (14.86 acres)
- Meadow Creek---$0 (land swap)

  TOTAL--$3.58M GROSS (32.04 acres)

PROJECTS WITH CITY/ STATE INCENTIVES

- PSD LLC---$500K FV TIF
- Life Fitness---$350K FV TIF
- Life Fitness---$441K FV DEED
- Dedicated Networks---$130K FV DEED
- Dynamic Group---$250K FV DEED

  TOTAL--$1.672M FV, PAYGO

NEW CONSTRUCTION VALUES, MAJOR PROJECTS

- Dedicated Networks---20K SF ($915K)
- PSD LLC---121 Units ($13.9M)
- Common Bond---47 Units ($7M)
- Casey's General Store---5K SF ($2.3M)
- Life Fitness---48K SF ($3.2M)
- NTI---2K SF ($150K)
- Coborn's---Remodel ($492K)

  TOTAL--$28M New Const. Val. (Major Projects Only

MISCELLANEOUS

1. Creation of business advocacy Group for improvements to U.S. Highway 10.

2. Future Business Park: completed infrastructure study and economic development study (December/ January). Next step, policy discussion/ direction.

3. Old Municipal Center: phase one sold, and currently under development. Phase two requires demolition and site cleanup—expected to be ready by summer 2016. Demolition will likely be funded by the Anoka County HRA.

4. Replaced COR real estate signs.

5. 167 Avenue/ Highway 47 *EDA Workplan item* dropped (consider grant program).

6. Spring Business Expo *EDA Workplan item* discussion initiated. Was requested to be brought back for further discussion.

7. EDA began sponsoring the Anoka Area Chamber of Commerce, Manufacturers Coalition.

8. New TIF district created—TIF District 15, for demolition of the former Health Quest building.

APPENDIX B

Ramsey Economic Development Dashboard of Funds

FUNDS & ACCOUNTS		
EDA Fund (end of 2015)	$	795,000
Utilized for project costs associated with EDA initiatives. Examples include property acquisition, site preparation, demolition, professional services, other.		
Revolving Loan	$	301,000
Fill financing gap between project costs and private debt financing		
Typically, low or even zero interest rate; entices recruitment and expansion in Ramsey.		
Anoka Country HRA (end of 2015)	$	994,034
All purpose redevelopment and economic development dollars		
OMC redevelopment targeted ($200-$500K), Future Biz Park?		
Sub Total	$	2,090,034
ASSETS (future land proceeds)		
Nordvick Property #45, 1.43 Acres (147th/Armstrong)	$	436,036
Purchased for by City for $800,000, $600,000 from EDA fund. Listed for $10 psf ($622,908)		
Building demolition and site clean up, EDA Fund (23,550).		
Industrial Park Property #28, .95 Acres (Basalt/Bunker)	$	61,950
Purchased for by City for $211,200 in 2006, 11% of proceeds must payback CDBG County		
Currently listed by CBRE for $105,000		
Industrial Park Property #37, 4.14 Acres (Ramsey/Jasper)	$	315,000
Purchased for by City for $XXXXX in XXXX. Proceeds will go back to TIF Account #1		
Currently listed by CBRE for $450,000		
Former Bookstore Property #40, 1.23 Acres, Dolomite/Hwy 10	$	150,500
Purchased for by City for $XXXXX in XXXX. Proceeds are open to EDA use (w/Council approval)		
Currently listed by CBRE for $215,000		
Former Amoco Station Property #08, 1.01 Acres, Hwy 47/142nd	$	123,200
Purchased for by City for $XXXXX in XXXX. Proceeds will go back to XXXXXX.		
Currently listed by CBRE for $176,000		
Sub Total	$	1,086,686
ANNUAL EDA BUDGET		
Miscellaneous Operating Supply (2017 projected)	$	18,000
Primary Fund for EDA events and miscellaneous costs. Examples		
Include expo, golf tournament, networking event, business of the years costs.		
Miscellaneous Professional Services (2017 projected)	$	50,000
Primary fund to supplement EDA initiatives with professional services.		
Examples: site investigation, ED consulting, Financial consulting, site concepts.		
Marketing (2017 projected)	$	30,000
Sub Total	$	98,000

City of Ramsey
Economic Development

Project Financing Tools

OVERVIEW

The City of Ramsey has a number of financial tools available for economic development projects. In general, tools include gap financing loans, SBA loans/loan guarantees and project based local tax incentives. Below is an overview of each available tool.

GAP FINANCING:

1. Ramsey Revolving Loan Fund (RLF)
2. Minnesota Investment Fund (MIF)

The City's RLF and the State's MIF programs are used to fill the financial "gap" of a particular project. A financial gap occurs when private financing and/or owner equity cannot fund an entire project. Commonly, these programs are used to purchase equipment; however, other eligible uses exist. Interest rates and terms are negotiable. In some cases, loans can be forgivable (i.e. a grant).

SBA FINANCING:

3. Small Business Administration (SBA) Loans
4. Small Business Administration (SBA) Loan Guarantees

SBA 504 Loans provide long-term, below-market, subordinated financing for up to 40% of project costs. SBA Loan Guarantees provide a private lender with a repayment guarantee up to 85% on its loan for an eligible project.

PROPERTY TAX PROGRAMS:

5. Tax Abatement
6. Tax Increment Financing (TIF)

Tax abatement and TIF are local tax programs typically used for development or land acquisition costs. In general, both programs work by capturing property taxes generated by a particular parcel then dedicating said tax revenue for a specific project cost.

Eligibility for financing tools is based on the merit of an individual project, compliance with specific program requirements and in many cases approval from the Ramsey EDA and City Council. The City of Ramsey targets quality projects with high quality job growth. Typically, projects require owner equity and/or private financing (e.g. SBA loan). Most programs require specific job creation goals and annual reporting. The following pages provide detailed information on each program.

HOW DO I KNOW WHAT TOOLS I AM ELIGIBLE FOR?

Identifying finical tools your business may be eligible for is a clearer and cleaner process if project specs can be provided to the City (i.e. project budget, job details, building specs, etc.).

City of RAMSEY

City of Ramsey
Economic Development

Project Financing Tools

RAMSEY REVOLVING LOAN FUND (RLF)

This program works by providing below market gap financing to new and expanding businesses. The Ramsey Revolving Loan Fund (a.k.a. Growth Fund) is designed to work with other forms of financing available in the marketplace. Key elements of the Ramsey Revolving Loan Fund include the following:

PROGRAM PURPOSE:
To create new and retain the highest quality jobs possible with a focus on industrial and technology related companies; to increase the local tax base and improve the economic vitality for all Ramsey residents.

ELIGIBILITY:
Business and industries excluding passive investment and real estate development projects. Loans for fixed assets including land, buildings, machinery, equipment and leasehold improvements.

MINIMUM REQUIREMENTS:
All projects must have a private financing match. Owner equity must be 10% or greater. Wage and job goals must be established for projects receiving financing in the amount of $25,000 or more.

MAXIMUM AVAILABLE:
$250,000 lending limit to any borrower unless expanded by the EDA. Realistically, the fund is limited to its fund balance at any given time.

OTHER FUNDS REQUIRED:
At least 50% of total project costs must be privately financed through owner equity and other lending sources. Most applications approved for funding have at least 70% private financing.

INTEREST RATE & TERMS:
Negotiated rate. Real estate a maximum of 15 years; machinery and equipment a maximum of 10 years.

COLLATERAL REQUIREMENTS:
Negotiated. Personal guarantees may be required.

APPLICATIONS ACCEPTED:
On a year-round basis using the Ramsey Growth Fund application.

APPROVAL:
30 to 60 days from receipt of all information required for a complete application. Reviewed and approved by the Ramsey Economic Development Authority; and the Ramsey City Council.

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City of Ramsey
Economic Development

Project Financing Tools

MINNESOTA INVESTMENT FUND (MIF)

This program works by providing below market gap financing to new and expanding businesses. The MIF Fund is designed to work with other financing tools in the marketplace. Key elements of the Minnesota Investment Fund include the following:

PROGRAM PURPOSE:
To create new and retain the highest quality jobs possible on a state wide basis with a focus on industrial manufacturing and technology related industries; to increase the local and state tax base and improve the economic vitality for all Minnesota citizens.

ELIGIBILITY:
Cities apply on behalf of local businesses. Loans for land, buildings, equipment and training are eligible. Funds may also be used for infrastructure improvements necessary to support businesses located or intending to locate in Minnesota.

MINIMUM REQUIREMENTS:
All projects must meet minimum criteria for private investment; number of jobs created or retained, and wages thresholds.

INELIGIBLE PROJECTS:
Working capital, retail business and new industrial park development.

OTHER FUNDS REQUIRED:
At least 50% of total project costs must be privately financed through owner equity and other lending sources. Most applications selected for funding have at least 70% private financing.

INTEREST RATE AND TERMS:
Negotiated rate. Real estate a maximum of 20 years; machinery and equipment a maximum of 10 years. $500,000 maximum.

COLLATERAL REQUIREMENTS:
Negotiated, generally a lien against the part of the project that the funds are used against. This can be subordinate to other funding sources.

APPROVING AUTHORITY:
Department of Employment and Economic Development, Ramsey EDA and Ramsey City Council.

DISBURSEMENT OF FUNDS:
Concurrent with the disbursement of other funding sources.

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City of Ramsey
Economic Development

Project Financing Tools

SMALL BUSINESS ADMINISTRATION 504 LOANS (page 1/2)

The SBA 504 Loan Program aims to provide long-term, below-market, subordinated financing. This program is widely used by the small business sector. Important elements of the program include the following:

Program Purpose: To provide long-term, below-market, subordinated financing through the 504 Loan Program for established small businesses to expand their operations.

	Private Lender	**Development Company/SBA**
Financing:	Typically 50% of project costs	Up to 40% of project costs, between $50,000 and $4,000,000 (up to $4.5 million in certain situations)
Interest Rates:	Negotiated with borrower	Below market, fixed for the term of the loan
Loan Terms:	Minimum of 10 years for real estate; minimum of 7 years for M & E	20 years for real estate; 10 years for machinery and equipment
Collateral:	First lien on real estate and equipment	Second lien on real estate and equipment
Fees:	Negotiated separately with borrower	Fees of about 3% of the SBA 504 amount, plus attorney's fees, financed in the debenture.

Eligible Businesses: Existing, for-profit, "user" businesses with net worth of not more than $15 million and net profits after taxes averaging less than $5 million.

Eligible Costs: Land acquisition, construction or rehabilitation of a building, development costs, and acquisition of long-lived machinery and equipment.

Job Creation Requirements: Development corporation must maintain a portfolio averaging at least one new job for every $65,000 of SBA 504 funds.

504 Funding Mechanism: The development corporation issues debentures bought by private, institutional purchasers. These debentures carry a 100% guaranteed payback from the U.S. Small Business Administration. The Corporation lends the proceeds from its debenture sales to authorized small businesses.

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City of Ramsey
Economic Development

Project Financing Tools

SMALL BUSINESS ADMINISTRATION 504 LOANS (page 2/2)

Approval Process: The application is reviewed by the Corporations Board of Directors and the SBA; a decision is typically made within 30 days of submission of a completed application. Depending on project needs, additional loans may be made in conjunction with the SBA 504 financing.

What SBA 504 Program Offers To Lenders:

- Low collateral risk
- No interest rate risk
- Increase borrower's repayment capacity
- Lower credit risk

What The SBA 504 Program Offers To Borrowers:

- Longer than conventional term
- Reasonable cost
- Lower than conventional payment
- Low down payment
- Insulation against rate risk

Sba 504 Program Highlights:

- Fixed asset financing
- Subordinate financing
- Fixed rate financing
- Takeout financing
- Long Term: 10 or 20 years
- For-profit, "user" businesses
- Low down payment
- Credit worthy borrowers

Typical SBA 504 Deal:

Private Lender	50% (1st mortgage)
SBA 504	40% (2nd mortgage)
Local injection (equity)	10%
Total project costs:	100%

City of Ramsey
Economic Development

Project Financing Tools

SBA 7 (a) GUARANTEED LOAN PROGRAM

This program works by providing a SBA administered loan guarantee to a private lender; which results in reducing risk for a private lender and making a project more attractive to fund and move forward.

Program Purpose: To aid small businesses having difficulty obtaining conventional bank loans.

How it Works: The SBA guarantees a commercial lender up to 85% repayment on its loans to eligible businesses. Equity requirements, rates, and terms will be set by the lender.

Eligible Businesses: Business must be for-profit and have a positive net worth.

Eligible Costs: Working capital, machinery and equipment, leasehold improvements, land and building acquisition, construction and renovation of buildings, purchase of businesses, and refinancing of existing short-term debt.

Amount Available: SBA's 7(a) Loan Program has a maximum loan amount of $5 million dollars. SBA's maximum exposure is $3.75 million. Thus, if a business receives an SBA guaranteed loan for $5 million, the maximum guaranty to the lender will be $3.75 million or 75 percent.

For those applicants that meet the SBA's credit and eligibility standards, the Agency can guaranty up to 85 percent of loans of $150,000 and less, and up to 75 percent of loans above $150,000.

Equity Required: Depends on the net worth of the business. 30% to 50% equity may be required for start-up businesses.

Interest Rate: Maximum rate for loans under seven years is 2 ¼ % over prime; maximum is 2 ¾ % over prime for loans seven years or longer.

Term of Loan: Varies with the useful life of the assets being financed.

Collateral: Generally, first lien on assets being financed. Additional security is determined by lender on a project-by-project basis.

Fees: SBA will charge a guaranty fee of 2% of the guaranteed portion of the loan.

Approval Process: Loan application must first be approved by a commercial lender. After completion of the packaging work, the lender then submits the package to the SBA for approval. After SBA approval the lender disburses the proceeds to the business. The entire process takes about 4 to 8 weeks

City of RAMSEY

City of Ramsey
Economic Development

Project Financing Tools

TAX INCREMENT FINANCING (TIF)

Tax increment financing works by capturing an increment of local property taxes generated from a new project; then redirecting said tax increment and applying to eligible project costs. Often times, project costs include land/building acquisition and development improvements. Requires a TIF agreement.

- TIF is a statutory tool used to promote economic development, redevelopment, and housing in areas where it otherwise would not occur; governed by MN Statute 469.174 to .1793

- A TIF authority, typically a city, a county, or an entity created by a city or county, captures the increase in the net tax capacity resulting from new development within a designated geographic area called a TIF district.

- The TIF authority uses tax increments, which are the property taxes on the captured increase in net tax capacity, to pay for TIF-eligible costs of the new development that generated the increase in the net tax capacity. Property taxes generated by the new development are used to pay development costs that the owner, developer, or local government otherwise would have paid.

- Examples of TIF-eligible costs:
  - Land and building acquisition
  - Demolition of structurally substandard buildings
  - Site preparation, installation of utilities, road improvements
  - Construction of low- or moderate-income housing

  Costs eligible to be paid from tax increment vary depending on the type of TIF district created and the year in which the district was created.

- Up-front costs of TIF-subsidized development frequently are financed with the proceeds of general obligation bonds, revenue bonds, or inter-fund loans. Debt service on those obligations is paid with tax increment generated by one or more TIF districts.

- An alternative to bonded debt or inter-fund loans, known as pay-as-you-go financing (PAYGO), also is used. Under PAYGO, the property owner or developer pays the development costs up front and is reimbursed if, and when, the TIF district generates tax increment. Under this method, the risk of insufficient tax increment to reimburse all of the TIF-eligible costs rests with the property owner or developer, rather than with the TIF authority.

- Use of TIF requires passing the “but-for” test. Meaning, but for TIF assistance, a particular project would not move forward. Use of TIF requires Ramsey EDA and City Council approval.

City of RAMSEY

City of Ramsey
Economic Development

Project Financing Tools

TAX ABATEMENT

Tax abatement works by capturing and redirecting local property taxes and applying them to eligible project costs. The portion of the local property taxes collected can be any combination of City, County or School District property taxes; and does not limit the captured portion of taxes to the increment created with a new project (like TIF). Often times, project costs include land/building acquisition and development improvements. Requires an abatement agreement.

- Unlike tax increment, tax abatement can be used to capture taxes on land and existing buildings as well as new improvements. The captured taxes must be used to offset the costs agreed to under an abatement agreement. Tax abatement does require Ramsey EDA and City Council approval.

- The benefits gained must equal or exceed the cost to the political subdivision, and the project must be in the public interest because it does one of the following: (1) Increases or preserves the tax base (2) Provides employment opportunities (3) Provides or helps acquire or construct public facilities (4) Helps redevelop or renew blighted areas (5) Helps provide access to services, or (5) Finances or provides for public infrastructure.

- Up to 100% of the respective jurisdiction's taxes on land and building can be captured through abatement for up to 10 years. Abatements cannot be back-to-back and cannot overlap tax increment districts. Public infrastructure financed need not be on or adjacent to the property from which the tax abatement dollars were derived.

- Similar to tax increment, tax abatement law provides for borrowing against anticipated future taxes through the issuance of bonds, including general obligation bonds. If multiple jurisdictions are abating, one entity can bond against the aggregate amount of taxes pledged by the other jurisdictions. The total principal amount that can be borrowed is limited to the estimated sum of abatements to be collected in the years authorized for abatement.

- Law does limit the use of bond proceeds themselves to benefiting public improvements, acquiring and conveying land or other property, reimbursing an owner for improvements made to the property, and paying costs of bond issuance.

- Section 469 refers to the capturing or deferral of property taxes due as "tax abatement." Under Minnesota law, taxes due on real property subject to tax abatement must still be paid when due. If tax abatement is in place, the appropriate portion of the taxes can be captured and applied to project costs. A participating city, county, and school district need to act separately on their own portion of the property's tax to capture them through abatement.

City of RAMSEY

The Economic Development Authority and City of Ramsey, Minnesota

Business Subsidy Policy
Tax Abatement Policy
Tax Increment Policy

Dated January 13, 2009

Prepared by The City of Ramsey

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1. City and EDA of Ramsey Business Subsidy Policy

The following business subsidy criteria are intended to satisfy the requirements of Minnesota Statutes, §§116J.993 through 116J.995 (the "Act"). The term "City" means the City of Ramsey. The term "project" means the property with respect to which the business subsidy is provided.

A. MANDATORY CRITERIA

All projects must comply with the following criteria:

1. *But For Test*. There is a substantial likelihood that the project would not go forward without the business subsidy.
2. *Wage Policy*. If the project results in the creation of any jobs, the wage for each part-time and full-time job created must be, within two years of the date assistance is received (as defined in the Act), at least equal to 70% of the most recent median wage figure for the Twin City 7 County Metro County as published by the Minnesota Department of Employment and Economic Development or such greater amount as the City may require for a specific project.
3. *Economic Feasibility*. The recipient must demonstrate to the satisfaction of the City that it has adequate financing for the project and that the project will be completed in a timely fashion.
4. *Compliance with Act*. The business subsidy from the City must satisfy all requirements of the Act.
5. *Minimum Subsidy Amount*: Financial assistance in the form of a business subsidy of $25,000 or more; and business loans and guarantees of $75,000, must be reported to the Department of Employment and Economic Development. A public hearing is only required if the business subsidy is greater than $150,000.

B. POLICY

1. The City recognizes that the creation of good paying jobs is a desirable goal which benefits the community. Nevertheless, not all projects assisted with subsidies derive their public purposes and importance solely by virtue of job creation. In addition, the imposition of high job creation requirements and high wage level requirements may be unrealistic and counter-productive in the face of larger economic forces of influence and the financial and competitive circumstances of an individual business. In determining the requirements for a project under consideration for a business subsidy, the determination of the number of jobs to be created and the wage levels therefore will be guided by the following principles and criteria:

a. The evaluation of projects will take into consideration the project's importance in and benefit to the community from all perspectives, including created or retained jobs.

b. If a particular project does not involve the creation of jobs, but is nonetheless found to be worthy of support and subsidy, assistance may be approved without any specific job or wage goals if permitted by applicable law.

c. In cases where the objective is the retention of existing jobs, the recipient of the subsidy will be required to provide evidence which demonstrates that the loss of those jobs is specific and demonstrable.

d. The setting of wage and job goals will be informed by (i) prevailing wage rates, (ii) local economic conditions, (iii) external economic forces over which neither the City nor the recipient of the subsidy has control, (iv) the financial resources of the recipient and (v) the competitive environment in which the recipient's business exists.

2. Because it is not possible to anticipate all the needs and requirements of every type of project and the ever-changing needs of the community and in order to retain the flexibility necessary to respond to all proposed projects, the City retains the right to approve projects and business subsidies which may vary from the principles and criteria set forth herein.

C. PROJECT EVALUATION CRITERIA

The project review and evaluation criteria are the following:

1. Jobs and Wages

a. *New Jobs*. The minimum net number of direct full time equivalent jobs to be created or retained by the proposed project for a period of at least two years from the estimated benefit date.

b. *Payroll*. The minimum annual net payroll (including employer contributions for health benefits) to be generated at the end of the second anniversary date of the estimated benefit date.

2. Tax Base

a. *Increase in Tax Base*. The net increase in property taxes estimated to be generated by the project in the second full year of operation.

3. Land Use

   a. *Compliance with Comprehensive or Other Plans.* Whether, apart from any needed services to the community described in section 5 below, the project is compatible with the comprehensive plan and permitted uses for the property.

   b. *Marginal Property*. Whether the project is located on property which needs but is not likely to be developed or redeveloped because of blight or other adverse conditions of the property. For example property may be so blighted that the cost of making land ready for redevelopment exceeds the property's fair market value.

   c. *Design and/or Other Amenities*. Whether, as a result of the business subsidy, the project will include design and/or amenity features not otherwise required by law. For example, the project may, at the request of the City, include landscaping, open space, public trails, employee work out facilities or day care facilities which serve a public purpose but are not required by law.

4. Impact on Existing and Future Public Investment

   a. *Utilization of Existing Infrastructure Investment*. Whether and to what extent (a) the project will utilize existing public infrastructure capacity and (b) the project will require additional publicly funded infrastructure investments.

   b. *Direct Monetary Return on Public Investment*. Arrangements made or to be made for the City to receive a direct monetary return on its investment in the project. For example, the business subsidy may be in the form of an interest bearing loan or may involve a project sharing arrangement.

5. Economic Development

   a. *Leveraged Funds*. For every dollar of business subsidy to be provided for the project, the minimum amount of private funds which will be applied towards the capital cost of the project.

   b. *Spin Off Development*. The dollar amount of non-subsidized development the project is expected to generate in the surrounding area and the need for and likelihood of such spin off development.

c. *Growth Potential*. Based on recipient's market studies and plans for expansion, whether and to what extent the project is expected within five years of its completion, be expanded to produce a net increase of full time equivalent jobs and of payroll, over and above the minimum net increase in jobs and payroll described in section 1 above.

6. Quality of Life

a. *Community Services*. Whether the project will provide services in the community and the need for such services. For example, the project may provide health services, retail convenience services such as a nearby grocery store, or social services needed in the community.

b. *Natural Environment*. Whether the project will add to, or detract from, the environment. It is a reflection of what is important to the community - clean air and water, beautiful scenery, recreational opportunities, and a strong desire to pass along these attributes to future generations.

7. Other

a. *Other Factors*. Depending on the nature of the project, such other factors as the City may deem relevant in evaluating the project and the business subsidy proposed for it.

D. ADDITIONAL CONSIDERATIONS

The City will give consideration to one or more of the issues listed below in determining whether to provide financial or other assistance to a project as a business subsidy:

1. The City may consider the requirements of any other business subsidy received, or to be received, from a grantor other than the City.
2. If the business subsidy is a guaranty, the amount of the business subsidy may be valued at the principal amount of the guaranteed payment obligation.
3. If the business subsidy is real or personal property, the amount of the subsidy will be the fair market value of the property as determined by the City.

4. If the business subsidy is received over time, the City may value the subsidy at its present value using a discount rate equal to an interest rate which the City determines is fair and reasonable under the circumstances.

As used herein "benefit date" means the date the business subsidy is received. If the business subsidy involves the purchase, lease, or donation of physical equipment, then the benefit date occurs when the recipient puts the equipment into service. If the business subsidy is for improvements to property, then the benefit date refers to the earliest date of either: when the improvements are finished for the entire project, or when a business occupies the property.

E. FINANCIAL ASSISTANCE NOT CONSIDERED A BUSINESS SUBSIDY

The following forms of financial assistance are not a business subsidy as per Minnesota Statutes, §§116J.993, Subd.3 and therefore do not require a public hearing:

1. A business subsidy of less than $150,000;
2. Assistance that is generally available to all businesses or to a general class of similar businesses, such as a line of business, size, location, or similar general criteria;
3. Public improvements to buildings or lands owned by the state or local government that serve a public purpose and do not principally benefit a single business or defined group of businesses at the time the improvements are made;
4. Redevelopment property polluted by contaminants as defined in section 116J.552, subdivision 3;
5. Assistance provided for the sole purpose of renovating old or decaying building stock or bringing it up to code and assistance provided for designated historic preservation districts, provided that the assistance is equal to or less than 50 percent of the total cost;
6. Assistance to provide job readiness and training services if the sole purpose of the assistance is to provide those services;
7. Assistance for housing;
8. Assistance for pollution control or abatement, including assistance for a tax increment financing hazardous substance subdistrict as defined under section 469.174, subdivision 23;
9. Assistance for energy conservation;
10. Tax reductions resulting from conformity with federal tax law;

11. Workers' compensation and unemployment insurance;
12. Benefits derived from regulation;
13. Indirect benefits derived from assistance to educational institutions;
14. Funds from bonds allocated under chapter 474A, bonds issued to refund outstanding bonds, and bonds issued for the benefit of an organization described in section 501(c)(3) of the Internal Revenue Code of 1986, as amended through December 31, 1999;
15. Assistance for a collaboration between a Minnesota higher education institution and a business;
16. Assistance for a tax increment financing soils condition district as defined under section 469.174, subdivision 19;
17. Redevelopment when the recipient's investment in the purchase of the site and in site preparation is 70 percent or more of the assessor's current year's estimated market value;
18. General changes in tax increment financing law and other general tax law changes of a principally technical nature;
19. Federal assistance until the assistance has been repaid to, and reinvested by, the state or local government agency;
20. Funds from dock and wharf bonds issued by a seaway port authority;
21. Business loans and loan guarantees of $150,000 or less; and
22. Federal loan funds provided through the United States Department of Commerce, Economic Development Administration; and
23. Property tax abatements granted under section 469.1813 to property that is subject to valuation under Minnesota Rules, chapter 8100.

Adopted by: Ramsey EDA / City Council

Date of Adoption: 11-13-08/1-13-09

Date of Public Hearing: 1-13-09

2. City and EDA of Ramsey Tax Abatement and Tax Increment Financing Policy

A. PURPOSE

The purpose of this policy is to establish the City's position relative to the use of Tax Abatement (§§469.1812 through §§469.1815) and Tax Increment Financing (§§469.174 through §§469.1799) (TIF), also referred to in this document as the *business assistance programs*, or *business assistance*. This policy shall be used as a guide in the processing and review of applications requesting the use of Tax Abatement and Tax Increment Financing. It is the expressed intent of the City to minimize the risk and amount of business assistance to a project and to leverage its public dollars to maximize private sector funding.

The City is granted the power to utilize the business assistance programs by Minnesota Statutes 2008 as cited. The fundamental purpose of the business assistance programs is to encourage desirable private development or redevelopment within the City that would not occur *but for* the assistance provided. Further information related to the States business assistance programs and links to State Statutes can be found at www.state.mn.us.

The City will approve or reject requests for business assistance on a case by case basis taking into consideration established policies, project criteria, and the project's demonstrated public purpose. Meeting all policy criteria does not guarantee approval of the requested business assistance. The City maintains its ability to approve or deny the request at its discretion.

B. PUBLIC PURPOSE OBJECTIVES

The City will consider the use of business assistance programs which demonstrate the achievement of one or more of the following public purpose objectives:

1. To encourage redevelopment of priority sites within the City as determined by the City Council and EDA.

2. To retain local jobs and/or increase the number and diversity of jobs that offer stable employment and/or attractive wages and benefits.

3. To enhance and/or diversify the City's economic base.

4. To encourage additional unsubsidized private (re)development.

5. To remove blight and/or encourage (re)development of commercial and industrial areas.

6. To assist in creating environmental sustainability.

7. To provide a diversity of family housing and alternative housing choices.

8. To promote neighborhood stabilization and revitalization by the removal of blight and the upgrading of existing housing stock in residential areas.

9. To accomplish other public policies which may be adopted such as the promotion of quality urban or architectural design, energy conservation, and decreasing capital and/or operating costs of local government, or any of the following:

    - Utilization of architectural and landscaping techniques that will enable the components of the project to blend with the natural environment.
    - Mitigation of project impact on the natural environment.

C. POLICY POSITIONS

1. Business assistance shall be provided in a form that minimizes the risk of public participation.
2. Business assistance requests for up-front project financing through the sale of bonds or other internal sources may require personal guarantees of the developer. These requests shall be addressed on a case by case basis.
3. Business assistance shall not be provided for projects requiring land and/or building purchases at prices in excess of fair market value.
4. Business assistance shall not be provided to developers/projects that cannot adequately demonstrate an ability to complete the proposed project on time and on budget.
5. Assistance will be provided based on $25,000 per qualified job created as referenced in Section 1.A.2 in the Business Subsidy Policy unless a waiver is provided by the City Council.

D. PROJECT REQUIREMENTS

All projects requesting business assistance must demonstrate the following:

1. That the project is not financially feasible but-for the use of Revolving Loan Fund, Tax Abatement or Tax Increment Financing.
2. That the project will comply with all provisions set forth in Minnesota Statute chapters 116j.993 through 116j.995, as amended (Business Subsidies).

3. That the business assistance request complies with all provisions set forth in Minnesota Statutes 2008 chapters 469.1812 through 469.1815 as amended (Tax Abatement), and chapters 469.174 through 469.1799 as amended (Tax Increment Financing).
4. That the project is consistent with the City's comprehensive plan, land use plan, and zoning ordinances.

E. APPLICATION PROCESS

1. Applicant submits a Business Assistance Application (Exhibit A) to the EDA and/or City.
2. Staff reviews the application and completes the Application Review Worksheet (Exhibit B).
3. Staff uses results of the Worksheet to inform the EDA/City.
4. EDA reviews proposal, provides comments, and makes an advisory recommendation to the City Council on denial or approval of the request within 30 days.
5. If advisory approval is granted, staff prepares all necessary notices, resolutions and certificates.
6. City Council holds public hearing(s) on the proposed project to consider the advisory recommendation(s).
7. The City Council grants final approval or denies the request.

EXHIBIT A

BUSINESS ASSISTANCE APPLICATION

A. APPLICANT INFORMATION

Name of Corporation/Partnership _____

Address _____

Primary Contact _____

Address _____

Phone _____ Fax _____ E-mail _____

Type of business assistance requested (select one):

☐ Tax Abatement ☐ Tax Increment Financing ☐ Revolving Loan Fund ☐ Other

Have you been, or are you currently, involved in any bankruptcy proceedings or lawsuits related to other development projects with which you have been involved? If yes, please provide an explanation.

☐ Yes ☐ No

On a separate sheet, please provide the following:

- Brief description of the corporation/partnership's business, including history, principal product or service, etc**. Attach as Part 1**.
- List names of officers and shareholders/partners with more than five percent (5%) interest in the corporation/partnership. **Attach as Part 2**.
- Brief description of the proposed project. **Attach as Part 3**.
- A *but for* analysis and narrative. **Attach as Part 4**.
- Completed Revolving Loan Fund Application. **Attach as Part 5 if required.**

Attorney Name _____

Address _____

Phone _____ Fax _____ E-mail _____

Contractor Name _____

Address _____

Phone _____ Fax _____ E-mail _____

Engineer Name _____

Address _____

Phone _____ Fax _____ E-mail _____

Architect Name _____

Address _____

Phone _____ Fax _____ E-mail _____

B. PROJECT INFORMATION

The project will be: (Check all that apply)

- ☐ Industrial: (☐ New Construction ☐ Redevelopment/Rehab ☐ Expansion)
- ☐ Office/research facility: (☐ New Construction ☐ Redevelopment/Rehab ☐ Expansion)
- ☐ Commercial: (☐ New Construction ☐ Redevelopment/Rehab ☐ Expansion)
- ☐ Housing: (☐ New Construction ☐ Redevelopment/Rehab ☐ Expansion)
- ☐ Other _____

The project will be: ☐ Owner Occupied ☐ Leased Space

- If leased space, please attach a list of names and addresses of future tenants and indicate the status of commitments or lease agreements. **Attach as Part 5**.

Project Address _____

- Include Legal Description and PID number(s). **Attach as Part 6**.

Site Plan Attached: ☐ Yes ☐ No

Current Real Estate Taxes on Project Site:$_____

Estimated Real Estate Taxes Upon Completion: Phase I $_____
Phase II$_____
Phase III $_____
Total $_____

Construction Start Date: _____

Construction Completion Date: _____

If Phased Project: _____ % Completed in _____years
_____ % Completed in _____years
_____ % Completed in _____years

C. PUBLIC PURPOSE OBJECTIVES

It is the policy of the City and EDA of Ramsey that the business assistance should result in a public benefit as identified in items 1-10 below. Please indicate how the proposed project will accomplish this by checking the appropriate boxes. **Attach additional narrative as Part 7.**

- ☐ 1. To encourage redevelopment.
- ☐ 2. To retain local jobs and/or increase the number and diversity of jobs that offer stable employment and/or attractive wages and benefits.
- ☐ 3. To enhance and/or diversify the City's economic base.
- ☐ 4. To encourage additional unsubsidized private (re)development.
- ☐ 5. To remove blight and/or encourage (re)development of commercial and industrial areas.
- ☐ 6. To create housing opportunities.
- ☐ 7. To provide a diversity of housing.
- ☐ 8. To provide a variety of family housing ownership alternatives and housing choices.
- ☐ 9. To promote neighborhood stabilization and revitalization by the removal of blight and the upgrading of existing housing stock in residential areas.
- ☐ 10. To accomplish other public policies which may be adopted such as the promotion of quality urban or architectural design, energy conservation, and decreasing capital and/or operating costs of local government.
    - Utilization of architectural and landscaping techniques that will enable the components of the project to blend with the natural environment.
    - Mitigation of project impact on the natural environment.

D. SOURCES & USES OF FUNDS

Attach additional information as Part 8

SOURCES	AMOUNT
Bank Loan	$ _____
Other Loans	$ _____
Owner Equity	$ _____
Fed Grant/Loan	$ _____
State Grant/Loan	$ _____
Industrial Development Bonds	$ _____
Tax Increment Financing	$ _____
Tax Abatement	$ _____
Revolving Loan Fund	$ _____
Other	$ _____
TOTAL	**$** _____

USES	AMOUNT
Land Acquisition	$ _____
Site Development	$ _____
Construction	$ _____
Machinery & Equipment	$ _____
Architectural/Engineering Fees	$ _____
Debt Service Reserve	$ _____
Contingencies	$ _____
Other	$ _____
TOTAL	**$** _____

Total Amount of business assistance requested from either Revolving Loan Fund, Abatement, Tax Increment Financing or another source: $_____

E. ADDITIONAL DOCUMENTATION AND CHECKLIST

Applicants will also be required to provide the following documentation.
All personal financial information will be kept private and confidential.

- ☐ 1. Written business plan or a description of the business, ownership/ management, date established, products and services, and future plans.
- ☐ 2. Financial statements for past two years, including profit and loss statements and balance sheets.
- ☐ 3. Two year financial projections.
- ☐ 4. Personal financial statements of all major shareholders (principals) including the most recent 2 years of tax returns. (If requested.)
- ☐ 5. Letter of commitment from other sources of financing, stating terms and conditions of their participation in the project.
- ☐ 6. Administrative fee of up to $5,000. In addition to defraying the cost of staff time, the fee will be used to pay costs associated with processing this request for financial assistance such as legal, engineering and financial analysis. The City reserves the right to stop the processing of the request until additional fees are paid should the original amount be insufficient to pay such costs. That portion which remains unspent, if any, will be returned only if the project is denied approval.
- ☐ 7. Attach the following documentation:
  - _____ Part 1 – Corporation/Partnership Description
  - _____ Part 2 – List of Shareholders/Partners
  - _____ Part 3 – Description of Project
  - _____ Part 4 – *But For* Analysis
  - _____ Part 5 – List of Prospective Lessees (If requested)
  - _____ Part 6 – Legal Description, Property Identification Numbers, maps of the project area, and project renderings
  - _____ Part 7 – Public Purpose Narrative
  - _____ Part 8 – Sources & Uses of Funds – Additional Information

The undersigned certifies that all information provided in this application is true and correct to the best of the undersigned's knowledge. The undersigned authorizes the City and EDA of Ramsey to check credit references, verify financial and other information, and share this information with other political subdivisions as needed. The undersigned also agrees to provide any additional information as may be requested by the City after the filing of this application.

Applicant Name _____ Date _____

By _____

Its _____

EXHIBIT B

BUSINESS ASSISTANCE REVIEW WORKSHEET

FOR COMMERCIAL/INDUSTRIAL PROJECTS

TO BE COMPLETED BY APPLICANT AND CITY STAFF

A. The project meets which of the following objectives as set forth in Section C of the Business Assistance policy:

- ☐ 1. To encourage redevelopment.
- ☐ 2. To retain local jobs and/or increase the number and diversity of jobs that offer stable employment and/or attractive wages and benefits.
- ☐ 3. To enhance and/or diversify the City's economic base.
- ☐ 4. To encourage additional unsubsidized private (re)development.
- ☐ 5. To remove blight and/or encourage (re)development of commercial and industrial areas.
- ☐ 6. To accomplish other public policies which may be adopted such as the promotion of quality urban or architectural design, energy conservation, and decreasing capital and/or operating costs of local government.
  - Utilization of architectural and landscaping techniques that will enable the components of the project to blend with the natural environment.
  - Mitigation of project impact on the natural environment.

B. Ratio of Private to Public Investment in Project:

$ _____ Private Investment
$ _____ Public Investment
_____ **Ratio Private : Public Financing**

	Points:
5:1	5
4:1	4
3:1	3
2:1	2
Less than 2:1	1

C. Job Creation:

_____ Net *new* jobs (minimum 40 hours per week) or fulltime equivalents

	Points:
50+	5
20+	4
10+	3
5+	2
Less than 2	1

D. Wage Level of jobs created:

Average hourly wage
Of *new* jobs _____

	Points:
Over $21/hour	5
$18-21/hour	4
$14-17/hour	3
$10-13/hour	2
Under $10/hour	1

E. Ratio Of Business Assistance To New Jobs Created: **Points:**

$ _____ Business assistance requested
_____ Number of net *new* jobs created
$ _____ **of business assist. per net *new* job created**

$5,000 or less	5
$15,000 or less	4
$25,000 or less	3
$50,000 or less	2
Over $75,000	1

F. Project size: **Points:**

The project will result in the construction of _____ square feet

75,000+	5
50,000+	4
25,000+	3
10,000+	2
5,000 or less	1

G. Type of Project: **Points:**

_____ 100% Owner Occupied	5
_____ Mix Owner Occupied & Investment	3
_____ Investment Property	1

H. Likelihood that the project will result in unsubsidized, spin-off development: **Points:**

_____ High	5
_____ Moderate	3
_____ Low	1

I. _____

Sub-Total Points _____ of a possible 35 points.

Bonus Points **Bonus Points:** _____

The project will be 100% *pay-as-you-go* financing.	3
The project is a redevelopment project.	3

Total Points: _____

Overall project analysis:	High	35 points
	Moderate	25 points
	Low	15 points
	Not Eligible	5 points

APPENDIX I
Business Subsidy Statute 2008

APPENDIX II
Sample Business Subsidy Agreement

APPENDIX III
Business Subsidy Reporting Form

Strategic Action Plan
2017 Update (April 25, 2017)

MISSION

To work together to responsibly grow our community, and to provide quality, cost-effective, and efficient government services

Strategic Imperative I: Financial Stability

Ensure strategic economic development that complements the city's desired quality of life and builds a stable tax base, all while maintaining a low tax levy.

Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
						Uses adopted 2017 Budget as benchmark. Assumed to hold constant for 2018 to determine additional resources needed to accomplish initiative.
Improve budget preparation to identify operational efficiencies and cost-savings	1) Develop an all-inclusive integrated budget document that will incorporate Strategic Planning items, adopted budgets, CIP, metrics, and trend information.	June 2015	December 2018	• Increased citizen involvement and communication of budget process	Lund	• Software for internet-based citizen engagement for budgeting
Increase economic growth and development	2) Sale of City-Owned Parcels that are listed for sale for economic development.	2017	2019	• City owned land will be positioned: "as-competitive-as-possible" in today's real estate market. • Removed development "unknowns" for prospects and significantly improved project timelines. • Land sale closings above previous three year term.	Brama	• 2011-13 $750K, 3.02 acres • 2014-16 $4.2M, 25.1 acres
	3) Recruit new industry and market-ready major retail businesses to Ramsey	Ongoing	Fall 2019	• Secured additional retail facilities. • Secured two (2) new 30,000+ square foot industrial facilities.	Brama	• No additional resources requested • Industrial goal completed. • Retail goal not completed: outside of City control • City currently re-visioning The COR, and considering hiring a master developer

Strategic Action Plan
2017 Update (April 25, 2017)

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Strategic Imperative I: Financial Stability

Ensure strategic economic development that complements the city's desired quality of life and builds a stable tax base, all while maintaining a low tax levy.

Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
Increase economic growth and development (continued)	4) Establish new Business Park, west of Armstrong Boulevard	Spring 2016	Fall 2017	• Arterial Infrastructure cost-share agreements in-place. • Policy for selling Hageman Holdings owned land established. • Property officially rezoned appropriately to allow for a business park.	Brama	• No additional resources requested • Goal not completed yet. • All action items are in place, and in motion. Expected to be completed in the next six months. • Project was delayed due to major change in land use by a major property owner.
	5) Develop and plan for key infrastructure improvements (AUAR improvements, extensions of municipal utilities, and major transportation corridors.	April 2015	December 2017	• Meet the COR AUAR milestones • Scheduled prioritized projects in CIP • Revised JPA construction schedule - Meet the scheduled milestones. • Reviewed possible extension of sewer and water to 167th and Hwy 47 area • Mobility improvements made to major highway corridors (i.e. US Hwy 10, Hwy 47 and CR 5)	Westby	•
Leverage outside funding sources	6) Optimize use of non-city funding through joint projects, grants and partnerships	2015	2018	• Increased grant awards • Reduced reliance on the general fund. • Effective grant administration • Increased public and private partnerships • Partner with other agencies regarding future parking ramp. • Secure partner(s) for community center. • Historic Town Hall • Space in Municipal Center • MnDOT Facility • RALF • Water supply • Transportation	Ulrich	•

Strategic Action Plan
2017 Update (April 25, 2017)

MISSION

To work together to responsibly grow our community, and to provide quality, cost-effective, and efficient government services

Strategic Imperative II: A Connected Community

Ensure that the city is a connected city that is part of a comprehensive regional transportation system that enables all citizens to easily navigate the community and attracts business development.

Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
Improve the safety and mobility of major road corridors	7) Actively lobby State Legislature and Federal Congressional Delegation for $170M to construct the identified Highway 10 corridor priorities	March 2015	December 2018	• State and federal funding secured for high priority TH Highway 10 projects. • Preliminary design for Highway 10. • Policy Packet for next Highway 10 projects in Ramsey.	Ulrich	•
	8) Introduce legislation requesting state funding for highway-rail separation at Ramsey and Sunfish Lake Blvd. rail intersections.	March 2015	May 2018	• Allocation of up to $10 M in state bonding for projects.	Ulrich	•
	9) Initiate a regional effort to complete Preliminary Engineering and Environmental Review for all projects of the Highway 10 Study	March 2015	December 2018	• Preliminary Design and Engineering in regard to MnDOT/Anoka County US Highway 10 Access Planning Study projects are commenced.	Ulrich	•
	10) Develop a communications strategy in regard to Highway 10 improvements	Summer 2015	2017	• 1-2 page flyer (marketing material) summary of Highway 10 • Created project webpage on City website. • "Support network" of businesses and land owners willing to assist in lobbying established. • "Lobbying List" outlining an inventory of people the City should be communicating with (lobbying) established.	Brama	• No additional resources requested. • All steps completed except flyer. • Draft flyer has been completed, finalized in next 60 days.

Strategic Action Plan
2017 Update (April 25, 2017)

MISSION

To work together to responsibly grow our community, and to provide quality, cost-effective, and efficient government services

Strategic Imperative II: A Connected Community

Ensure that the city is a connected city that is part of a comprehensive regional transportation system that enables all citizens to easily navigate the community and attracts business development.

Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
Improve the safety and mobility of major road corridors (continued)	11) Complete a Comprehensive Plan for Transportation	January 2017	December 2017	• Vision and plan for complete transportation	Westby/Gladhill	• Already budget for.
	12) Conduct CSAH 5 Corridor Study (land use and traffic integrate in cooperation with the County and School District	April 2015	October 2018	• Corridor study completion in 2017 • At least one high priority improvement project commenced by 2018	Westby	• $50,000 in professional services • Commence after completion of Comprehensive Transportation Plan
	13) Conduct MN State Hwy 47 Study in cooperation with MNDOT and City of Anoka	April 2015	October 2018	• Corridor study completion in 2017 • At least one high priority improvement project commenced by 2018	Westby	• $50,000 in professional services • Commence after completion of Comprehensive Transportation Plan
Create a diverse and robust offering of recreational opportunities	14) Develop a comprehensive recreation plan that inventories existing recreation programs, services, and infrastructure at the local, regional, and national level	5/2015	10/2017	• Present findings and recommendations in 2017 as part of budget development for 2018 implementation • Art in the Park and other recreation opportunities for all ages. • Review City funding of community events as part of annual budget	Riemer/Riverblood	• Funds provided in 2017 budget for pilot program
	15) Develop Plan for future parks, trails, and open space capital improvements	2015	2017	• Completed Master Park and Trail Plan Update • CIP Aligned with Parks Plan • Complete Needs Assessment for Community Center	Gladhill/Riverblood	• $25,000 for professional services for Community Center needs assessment/feasibility study.

Strategic Action Plan
2017 Update (April 25, 2017)

MISSION

To work together to responsibly grow our community, and to provide quality, cost-effective, and efficient government services

Strategic Imperative III: Smart, Citizen-Focused Government

Continue the delivery of quality services to ensure the city will have safe and thriving neighborhoods and business districts, and a clean environment.

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Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
Improve and maintain the safety of the community	16) Reduce illegal drug activity in the community	June 2015	January 2017	• Increased number of arrests for drug crimes • Increased intelligence on drug activity • Reduced criminal activity in community related to drug use • Increased community awareness of illegal drug activity • Evaluate effectiveness of Drug Task Force Officer after Year 1 through Year 3.	Katers	•
	17) Provide adequate public safety staffing based on City's growth factors	June 2015	Ongoing	• Maintain response time for police and fire per balanced score card metric.	Ulrich	•
	18) Consider security cameras to enhance safety and security	June 2015	2018	• Visible deterrent to criminal activity • Reduction of Vandalism to city owned property by 10 % • Assisted in identification of criminal suspects • Provided increased sense of security in public spaces. • Investigate Mobile camera system or other alternative approaches.	Katers	• $20,000 to $75,000 in equipment and software
	19) Expand and improve residential rental licensing program	April 2015	2018	• Evaluate effectiveness after Year 1.	Gladhill	•
Create a strong positive image for residential neighborhoods, business districts, and key corridors	20) Improve the image of residential neighborhoods, business districts, and key corridors.	2016	2018	• Enhanced focus on key corridors (Highway 10, Highway 47, and Nowthen Boulevard). • Improved image of residential neighborhoods.and business districts. • Better resources for residents, neighborhoods, and districts. • Tools such as licensing to add value to neighborhoods and districts. • Proactive enforcement in key nodes.	Gladhill	• 1.0 FTE • $50,000 in professional services for corridor plans

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Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
Enhance Community Engagement	21) Identify opportunities for community volunteer work and citizen recognition	June 2015	2018	• Implemented citizen recognition program • Incorporate recognition contests into recreation programing • Increased citizen volunteer hours	Ulrich	• 0.5 FTE • Possible shared position.
	22) Increase engagement opportunities in future land use decisions	2015	2018	• Adopt a citizen engagement framework for 2040 Comprehensive Plan update • Determine appropriate scale of update to the City's Comprehensive Plan • Complete required 2040 Comprehensive Plan update • Clarified vision for the COR • Comprehensive land use plan for new elementary school and surrounding area. • Create a comprehensive education plan in conjunction with the school district. • Utilize social media and pop up meetings.	Gladhill	•
Enhance the level of customer service	23) Evaluate staffing deployment and process effectiveness	2015	2017	• Evaluate areas of customer service effectiveness and services. • Update and enhance the Balanced Scorecard Metrics.	Gladhill	•
Define and promote Ramsey Brand	24) Develop strategy with Ramsey Brand as umbrella while still promoting sub-areas of the community	2018	2018	• Create sub-district base marketing/ communication materials and sign templates, while keeping the overall Ramsey Brand a priority (167/47, COR, Bunker/47, business parks). • Create parks/ trails marketing/ communication materials and sign templates while keeping the overall Ramsey Brand a priority. • Review all Ramsey events flyers/ materials, and consider updating to better reflect overall Ramsey Brand.	Brama	• Basic all-purpose marketing and comm. Tools/ guidelines completed in early 2016
	25) Acquire a ZIP Code for Ramsey	Spring 2015	Indefinite	• New and unique ZIP Code assigned to Ramsey	Brama	• No additional resources. • Metric dependent upon USPS.

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Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
Ensure long-term sustainability of Public Water System	26) Work with neighboring cities and regulating agencies to identify regional solution(s) for sustainable water supply/water treatment facility	2015	2018	• Commitment to regional solution for long-term water supply • Active participation of neighboring cities/regulating agencies	Westby	•
	27) Develop a Comprehensive Plan for City long-term water resources plan	2015	2018	• Updated Comprehensive Water Supply Study • Consider grant for feasibility study of surface water supply. • Updated Comprehensive Wastewater Supply Study	Westby	•

Strategic Action Plan
2017 Update (April 25, 2017)

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Strategic Imperative IV: An Effective Organization

Maintain a highly functional staff, citizen volunteers, and elected officials and governance structure that meet the increasingly ever-changing needs of the organization

.

Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
Improve City communications with the community	28) Establish new and improved website	2017	2018	• More user friendly and technologically advanced website completed. Important attributes: (1) 100% mobile friendly website (2) ability to process online payments (3) clear formatting/ categorizing for ease of use by different customer groups (4) online registration for events and room rental • (5) ability to easily add/ drop modules as needed	Brama/ Fredrickson	• Increase IT Technician to Full Time (0.25 FTE)
	29) Pro-Active, Progressive, and Robust Communication	2017	2018	• Define what pro-active and progressive communication means for Ramsey (what does success look like for this goal). • Identify resources needed to accomplish goal. • Implementation of new pro-active communication strategies.	Brama/ Wenberg	• Potentially new staff resources, and/or redeploy existing administration department resources/ responsibilities. Need to define scope in order to define resources.
Improve and sustain high employee morale	30) Develop a Staff recognition program	April 22, 2015 Kick-off	Ongoing	• Consider a refresh of program for variety and relevance. Discuss with Labor Management Committee.	Lasher	•
	31) Continue strategy to highlight City Employees and job duties (put a face to a name and highlight their contribution to the community)	July/Aug. 2015	Ongoing (monthly) RR Publications as scheduled	• Increased awareness of Dept. Functions. / increased staff recognition • Increased awareness of specific roles and specific current events / increased staff recognition. • Promoted Ramsey Brand / increased staff recognition.	Lasher	•

Strategic Action Plan
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Strategic Initiative	Tactics	Initiation Date	Completion Date	Key Outcome Indicators/Metrics	Responsible Party	Additional Resources/Progress Notes
Plan for public facilities to meet City's growth	33) Plan for a new public works campus	2015	2016 (summer 2018)	• Decision by Council on how project planning process should be administered (i.e. standard route with staff only and a GC or hire a project manager/ construction manager). • Review financial analysis pro-forma. • Completed design for new campus (i.e. preliminary and final design) • Project is in the CIP and budget documents for spring 2019 construction	Riemer	• 2016 goal of obtaining a space needs analysis, feasibility report, and discuss effect of project on future city budget completed. • Complete financial analysis component before additional design • This tactic has been updated for next step in the process.

Comp Plan Steering Committee **2. 4.**

Meeting Date: 05/08/2017

By: Tim Gladhill, Community Development

Information

Title:

Review Next Steps for Comprehensive Plan Update

Purpose/Background:

The purpose of this case is to review next steps in the Comprehensive Plan Update process.

Observations/Alternatives:

The June 12 Public Workshop represents the last of the topic specific public feedback and issues identification stage. The next step in the process is to formalize goals and strategies, update maps/tables/figures, and begin drafting chapters of the update.

Staff has begun to draft a Background Report to set the stage for individual sections and will begin drafting the Land Use Chapter by the end of May. Both documents will be reviewed by the Comprehensive Plan Steering Committee in July and by the Planning Commission and City Council in August. Staff may also have a draft Transportation Chapter completed by this time as well. The Parks and Recreation Chapter will follow soon thereafter.

Staff encourages the Steering Committee to volunteer one evening during The Draw Summer Event Series to staff a Comprehensive Plan Kiosk/Booth to engage with the public on the plan.

1. June 15
2. June 22
3. June 29
4. July 6
5. July 13
6. July 20
7. July 27
8. August 3
9. August 10
10. August 17
11. August 24

Staff is also seeking volunteers for the Happy Days event on Saturday, September 9.

1. 10-11
2. 11-12
3. 12-1
4. 1-2
5. 2-3

Finally, Staff is in the process of scheduling neighborhood meetings during the month of October on feedback on the broader plan draft. Some suggested sites to explore include, but are not limited to the following.

- Area Churches, Religious Institutions, and Places of Assembly
- Rum River Hills Golf Course
- The Links at Northfork Golf Course
- Fire Station No. 1
- Fire Station No. 2

- Central Park
- Elmcrest Park

Finally, specifically to the Parks and Recreation Plan, the Parks and Recreation Commission will host their regular meetings during the summer in area parks. As a part of this meeting schedule, public workshops will also be held on this chapter.

Recommendation:

Staff is seeking general feedback on the process moving forward. Are there any topic specific workshops we need to consider before moving into the next stages?

Action:

Provide general feedback on the items below.

Attachments

DRAFT Community Background Chapter

EXISTING Land Use Chapter

Form Review

Inbox	Reviewed By	Date
Tim Gladhill	Tim Gladhill	05/04/2017 04:35 PM
Form Started By: Tim Gladhill		Started On: 05/04/2017 02:53 PM
Final Approval Date: 05/04/2017		

Chapter __: Community Profile

The City of Ramsey

Community

Located in the northwest Twin Cities Metro, the City of Ramsey boasts an urban downtown, incredible outdoor recreation opportunities, an impressive manufacturing sector, and a stable, pro-active local government.

The City of Ramsey has experienced strong and steady development over the past 20 years. This trend is expected to continue as the City has over 1,000 acres of developable land located near U.S. Highway 10.

? "Message from the Mayor" ?

The COR

The COR (Center of Ramsey) is the City's downtown development. This 300+ acre development is a true, transit oriented and walkable, urban development. The COR is centered on the Ramsey Northstar Commuter Rail Station and U.S. Highway 10/ U.S. Highway 169. This mixed-use development is home to a long list of successful projects including residential, retail, office, recreation, government facilities, and much more. Provided below is a list of Pre-2015 projects which took place in *The COR:*

1. Coborn's multi-tenant retail center, over 90% occupancy (95,000 sf)
2. PACT Charter School (K-12)
3. Ramsey Municipal Center (60,000 sf)
4. Veterans Affaris Outpatient Clinic (40,000 sf)
5. Ramsey Office Plaza, over 90% occupancy (80,000 sf)
6. Midwest Medical Examiner's Office
7. NAU County Insurance Office (42,000 sf)
8. Northgate Church & Community Performing Arts Center (500 seats)
9. Allina Medical Clinic (25,000 sf)
10. 230-unit luxury apartment complex (Residence at The COR)
11. $3M *The Draw* park & amphitheater
12. Ramsey Rail Station: connected to 800-stall covered parking ramp by skyway with service to Minneapolis
13. Various single family and townhome developments totaling several hundred households.

The COR, known formerly as *Ramsey Town Center,* was purchased by the City of Ramsey in 2009. About 130 acres of land is available for development in The COR today; about 90 acres if City-owned. Located directly adjacent to The COR is 90 acres of additional land available for commercial development.

Recent projects in *The COR* include 121 apartment units and 77 townhome units of market rate housing near *The Draw* park and amphitheater, as well as 47 units of workforce housing adjacent to the Northstar Commuter Rail Station.

{COR Land Use Plan Graphic}

Residential

The City of Ramsey was the second fastest growing community in Anoka County from 2001-2010. That trend is anticipated to continue from 2011-2020. Residents find the wide variety of housing options, the long list of local amenities, access to the Twin Cities, and connection to Minnesota's natural assets an attractive offering.

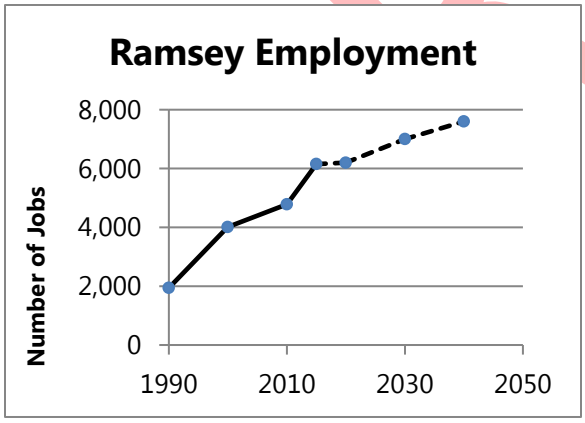
In fact, in 2015, Ramsey was named a "Top Minneapolis Suburb for Young Couples" by movoto.com.

Residential Development Patterns

	Single Family (units)	Townhomes (units)	Multi Family (units)
2012	57	8	230
2013	96	66	72
2014	66	0	0
2015	83	39	168
2016	XX	XX	XX

Employment

The City of Ramsey is proud to be a pro-economic development community. This is not only demonstrated by its rich history of successfully developing business parks, it is exemplified by Ramsey's commitment to the future of economic development. The City has placed an emphasis on encouraging economic growth within its Council strategic plan and EDA work plan.



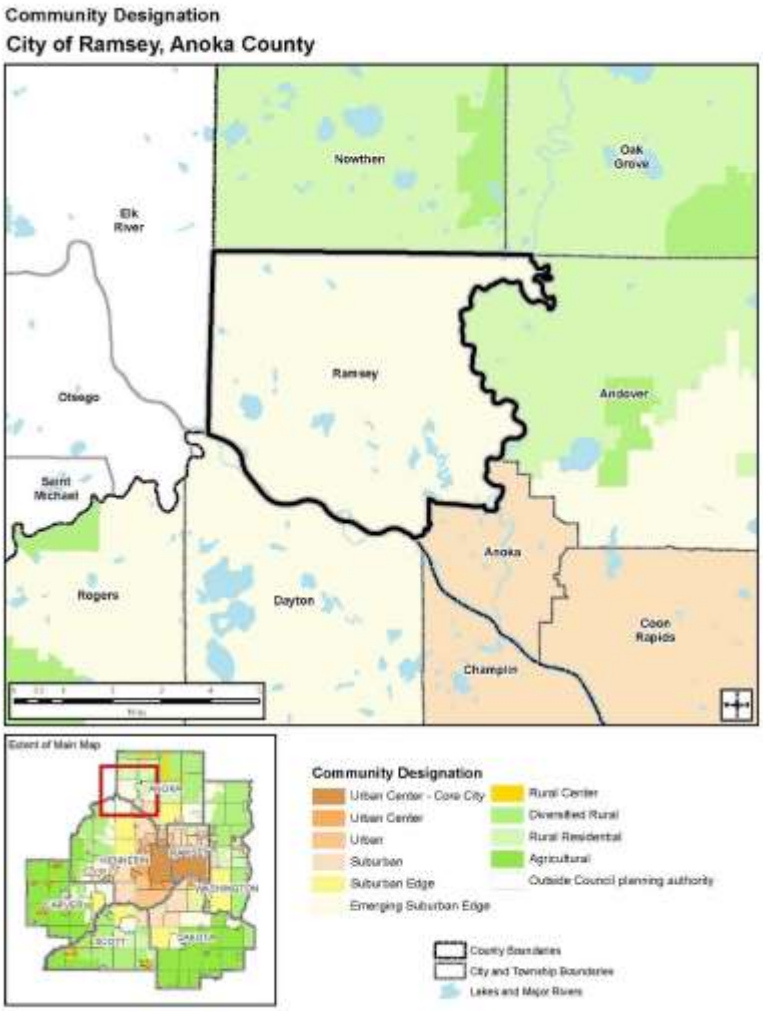
The Cities of Ramsey and Anoka share a large business park spanning across 1,000 acres of land. This business park includes various office, warehouse, assembly, and a wide-variety of manufacturing users. Over 10,000 jobs have been created by this business park. The City of Ramsey and Anoka share a major economic engine that serves not only the Twin Cities, but also the national and global market place. The success of this shared business park has sparked the planning of a new 93-acre green field business park located just northwest of the new full-access grade-separated Armstrong Boulevard/ U.S. Highway 10 Interchange.

Top 10 Employers

	Employer	Employee's
1.	Life Fitness	457
2.	Vision Ease Lens	349
3.	Connexus Energy	250
4.	Anderson Dahlen	175
5.	Zero-Zone Refrigeration	175
6.	Green Valley Greenhouse	165
7.	Diamond Graphics	160
8.	In'Tech Industries	136
9.	Ramsey Elementary	135
10.	Altron Manufacturing	112

Community Designation

The Metropolitan Council designates Ramsey as an "Emerging Suburban Edge" community. Emerging Suburban Edge communities include cities, townships and portions of both that are in the early stages of transitioning into urbanized levels of development. As a component of this designation, it is expected that Ramsey plan to meet its forecasted growth at an average density ranging from 3 to 5 units per acre. Emerging Suburban Edge communities must also target opportunities to support appropriate densities near regional transit investments such as the Northstar Community Rail line station.



Forecasted Growth

In the period from 1990 to 2010, Ramsey experienced significant population growth. Population rose over 90 percent, and the number of households grew by around 123 percent during the two-decade period. Metropolitan Council estimates put Ramsey's most recent 2015 population at just over 25,000. By 2040, Ramsey's forecasted population will be 34,700, with a 50 percent increase in the number of households.

	Census	Estimate	Met Council Forecast				
	1990	2000	2010	2015	2020	2030	2040
Pop.	12,408	18,510	23,668	25,362	26,400	30,700	34,700
Housing	3,620	5,906	8,033	8,690	9,400	11,300	13,000
Emp.	1,941	4,008	4,779	6,150	6,200	7,000	7,600

The Land

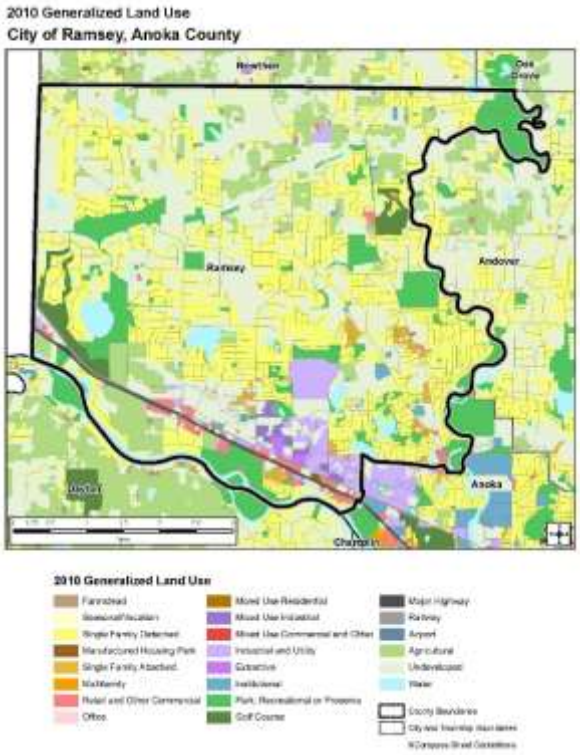
Existing Land Use

Existing land use can be thought of as what exists on the ground at the present time, regardless of what has been planned or what zoning regulations exist. The most accurate depiction of what land uses currently exist in Ramsey comes from the Metropolitan Council's 2010 Generalized Land Use map, which uses a combination of aerial photography, county parcel data and community "ground truthing" to provide current land use types by acreage.

Land Use	Acres	Percent
Single Family Detached	6,837	36%
Undeveloped	5,957	31%
Park, Recreational or Preserve	1,960	10%
Agriculture	1,659	9%
Open Water	753	4%
Industrial and Utility	561	3%
Golf Course	332	2%
Retail and Other Commercial	254	1%
Single Family Attached	227	1%
Mixed Use Industrial	107	1%
Major Highway	144	1%
Extractive	40	<1%
Farmstead	65	<1%
Institutional	95	<1%
Manufactured Housing Park	7	<1%
Mixed Use Residential	8	<1%
Multifamily	12	<1%
Office	14	<1%
Railway	67	<1%
Total Land (acres)	**19,099**	**100%**
Source: Met Council Generalized Land Use (2010)		

Existing land use types, total acreage and percent of total acreage are shown in the table below. As an *Emerging Suburban Edge* community, many opportunities for development exist within the City.

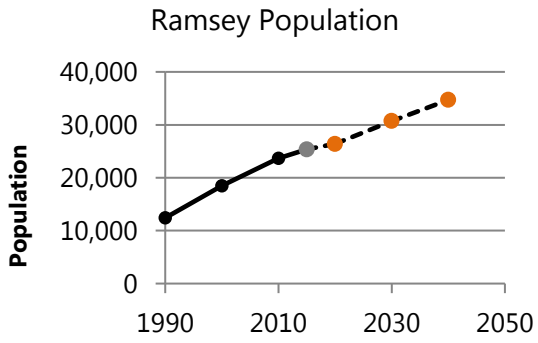
Figure __-__: Metropolitan Council Generalized Land Use



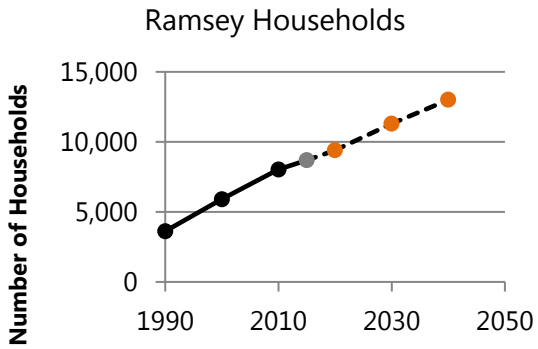
The People

Population

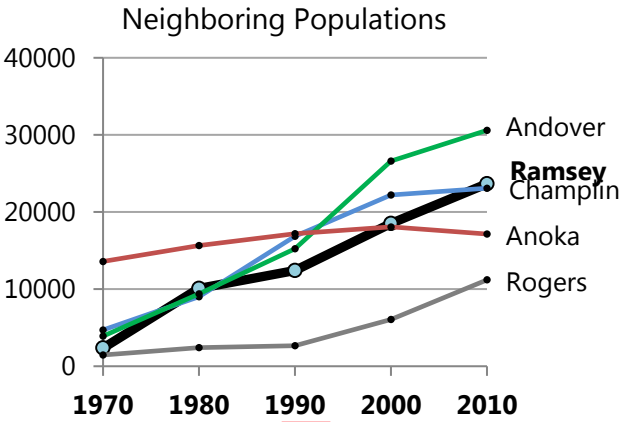
As of the 2010 US Census, the population of Ramsey was 23,668 and the most recent estimates from 2016 put the population at 25,828. Per forecasts by the Metropolitan Council, the 2040 population is projected to increase to 34,700.



With the number of households projected to see steady continued growth, the increase in population will be accommodated by continued single family detached and multi-family housing.



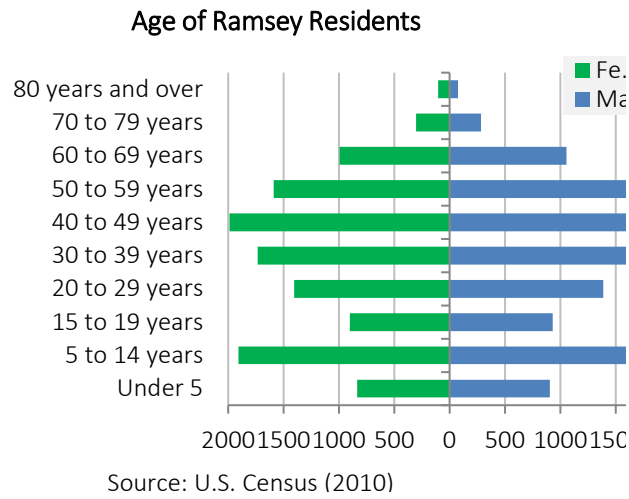
Ramsey's population has held steady growth in keeping pace with surrounding communities in Anoka County. Ramsey is poiwed to experience continued growth over the next three decades.



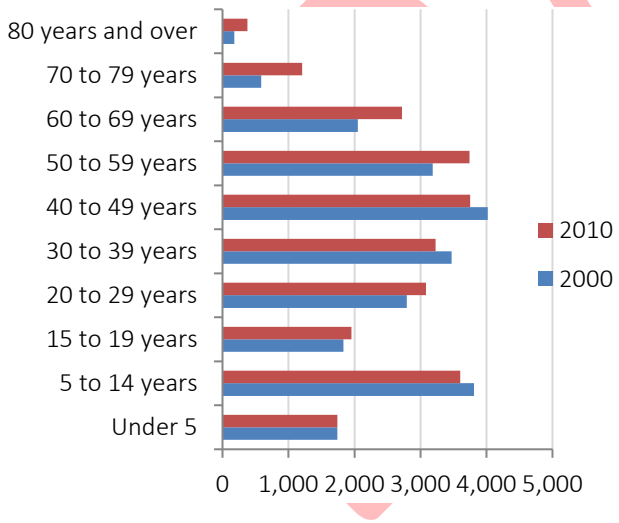
Age Demographics

Consistent with most other communities across the region, Ramsey's population is aging. The demographic breakdown shows the largest segment of the population in the 40 to 49 age range. It will be important for Ramsey to plan for alternative housing options for these residents as they age so that they can remain in the community. It will also remain important that Ramsey seek ways to be competitive in retaining and attracting younger residents.

Housing Age



Looking at the changes in age demographics from 2000 to 2010, the greatest gains were in the categories of "empty nester" adults and modest gains in for those considered young adults. Modest reductions were seen in the school aged children.



Household Income

Education

Race

Housing Types

5. LAND USE

A. Existing Land Use

1. General Land Use

The City of Ramsey is surrounded on three sides by other municipalities including the Cities of Elk River, Anoka and Oak Grove and Nowthen. All of these communities are growing communities except for Anoka, which is near fully developed. Ramsey is rapidly growing and has developed for the most part as a bedroom community with most developed land as low-density single family residential. The City has roughly 29 square miles of land, including roadways and open water. The following table represents the existing land use inventory for the City as a whole.

Table 5-1 Existing Land Use—2008

Land Use Category	Gross Acreage	Net Acreage	% of City*
Agricultural	1,956.82	1,693.65	10.2%
Commercial	360.35	326.35	1.9%
Industrial	425.40	421.76	2.2%
Landfill	157.62	151.58	0.8%
Multi-Family Residential	258.08	239.89	1.3%
Park	1,820.51	1,120.39	9.5%
Public/Quasi-public	347.60	284.02	1.8%
Rural Residential	6,888.71	5,576.42	36.0%
Single Family Residential	1,998.05	1,746.75	10.4%
Vacant	2,303.03	1,517.61	12.0%
Right-of-Way	2,043.76	2,043.76	10.7%
Water	568.24	568.24	3.0%
Wetland	0.00	3,437.74	-
Total City	**19,128.16**	**19,128.16**	100.0%

a) Residential

The City of Ramsey is predominantly a residential community. Over 7,500 acres have been developed as residential housing, the majority of which is in single family housing units. Other housing types include townhomes, a mobile home park and an apartment building.

The typical lot size within the Metropolitan Urban Services Area (MUSA) is around 10,000 to 12,000 square feet, however larger lots up to 5 acres in some areas can be found along the Mississippi and Rum Rivers. *Densities within smaller lot subdivisions range anywhere from 2 to 3 units per gross acre or roughly 2.5 to3.5 units per net acre.* Net acre refers to total land area less major road right-of-way and wetlands.

Outside of the MUSA, development patterns generally consist of residential subdivisions with lot sizes of 1 to 5 acres. A portion of the area lying generally north of Trott Brook in central Ramsey remains in large tracts of land (10 or more acres in size). Residential platting has

not occurred in this area due to the numerous wetlands and poor soil conditions, which largely prohibit development. In 1989 the City adopted an ordinance intended to preserve large tracts of land for future orderly expansion of urban services. This policy was consistent with regional growth management policy. The City also adopted an ordinance that established a maximum density of 1 unit per 10 acres and limited lot sizes to 10-acre minimums in the Urban Reserve and Central Rural Reserve areas and 2.5-acres in the Rural Developing area. *Densities of **existing** rural subdivisions generally range between 0.2 units per gross acre to 1 unit per gross acre.*

b) Commercial

The commercial development has been primarily focused along the Highway 10 corridor and the Highway 47 corridor south of 155th Avenue. These two corridors generate a high volume of traffic, which is attractive for retail businesses. The commercial activity that dominates Highway 10 is primarily retail and wholesale trade oriented with several used car and recreational vehicle sales businesses. Several sites along Highway 10 are unimproved and in some instances operating out of single-family homes. Commercial activity located around the Bunker Lave Boulevard and Highway 47 intersection is a more service-oriented shopping area consisting of fast food restaurants, a hair salon, a video store, a real estate office, a gas-convenience store, two day care centers and two banks.

A commercial node in the rural area at the intersection of Highway 47 and 167th Avenue consists of a grocery store, hardware store, video store, a bank, hair salon and other small businesses situated in a strip mall development. Because low-density development surrounds this strip mall, retail stores tend to struggle; however, the site does have good visibility and accessibility making it somewhat conducive to commercial activity. The site is not served by municipal utilities and has had problems with on site septic system operations.

Other commercial development exists on Highway 10 adjacent to Elk River. There are also some home occupations scattered throughout the community.

A unique development mixes business and residential land uses along the south side of 149th Avenue. These long narrow lots were developed outside the MUSA adjacent to industrially zoned property. They were intended to act as a buffer between industrial and residential land uses.

Within the Town Center Master Plan area, some commercial development has occurred near the corner of Armstrong Boulevard and Sunwood Drive. Additional commercial development is planned throughout the Town Center area.

c) Industrial

Recent industrial development has consumed a large portion of the undeveloped land within the MUSA. Development of the AEC Energy

Park and the City of Ramsey Business Park 95 has created over 500,000 square feet of new construction since 1996. This new development has occurred all within the MUSA and has intermingled with older, existing industrial developments. Redevelopment of underutilized industrial sites needs to be studied for future industrial development opportunities and in order to preserve the quality of the existing development that is in place. There has been continued demand for industrial land in Ramsey, and vacancy rates have been low in 2008.

d) Park and Recreation

The City of Ramsey has two regional parks within its boundaries, Mississippi West Regional Park and the Rum River Central Regional Park. These two regional parks encompass an area of over 500 acres. There is a State Wayside Rest along Highway 10 and the Mississippi River that has camping facilities, restroom facilities, and picnic tables. Several community and neighborhood parks ranging in size from less than one acre to over 50 acres are scattered throughout the City. On the private side, Ramsey has two 18-hole golf courses open to the public, the Links at Northfork located in west Ramsey just north of Highway 10 and Rum River Hills Golf Course located near 167th Avenue and Highway 47. The Boy Scouts of America own approximately 160 acres of land, which is used for recreational camping and outdoor activities along the Rum River. The total acreage devoted to park and recreation uses is roughly 1,814 acres or 10% (inclusive of wetlands within parks) of the Ramsey land area.

e) Agriculture

As shown on the Existing Conditions Land Use Map, agricultural uses are primarily located in the northeastern and southwestern portions of the City. A total of 1,956 acres appear to have some kind of agricultural use occurring on them as of 2008. The dominant soil type in Ramsey is the Hubbard-Nymore association, which is classified as "moderately well suited" to farming: however, fertility and available water capacity are low.[1]

f) Public/Qausi-Public

Public/Semi-public land uses are comprised of churches, schools, city offices, public works facilities, fire stations and other government or non-profit entities. Several churches provide Ramsey with a variety of worship opportunities. Ramsey Elementary School is the only school located in Ramsey and is located within MUSA. Middle and high school students are bused to Anoka and Elk River. City Hall and the police station are located north of Highway 10 in Town Center. A public works garage is located in the Gateway Industrial Park. The City has a fire station located at the old City Hall.

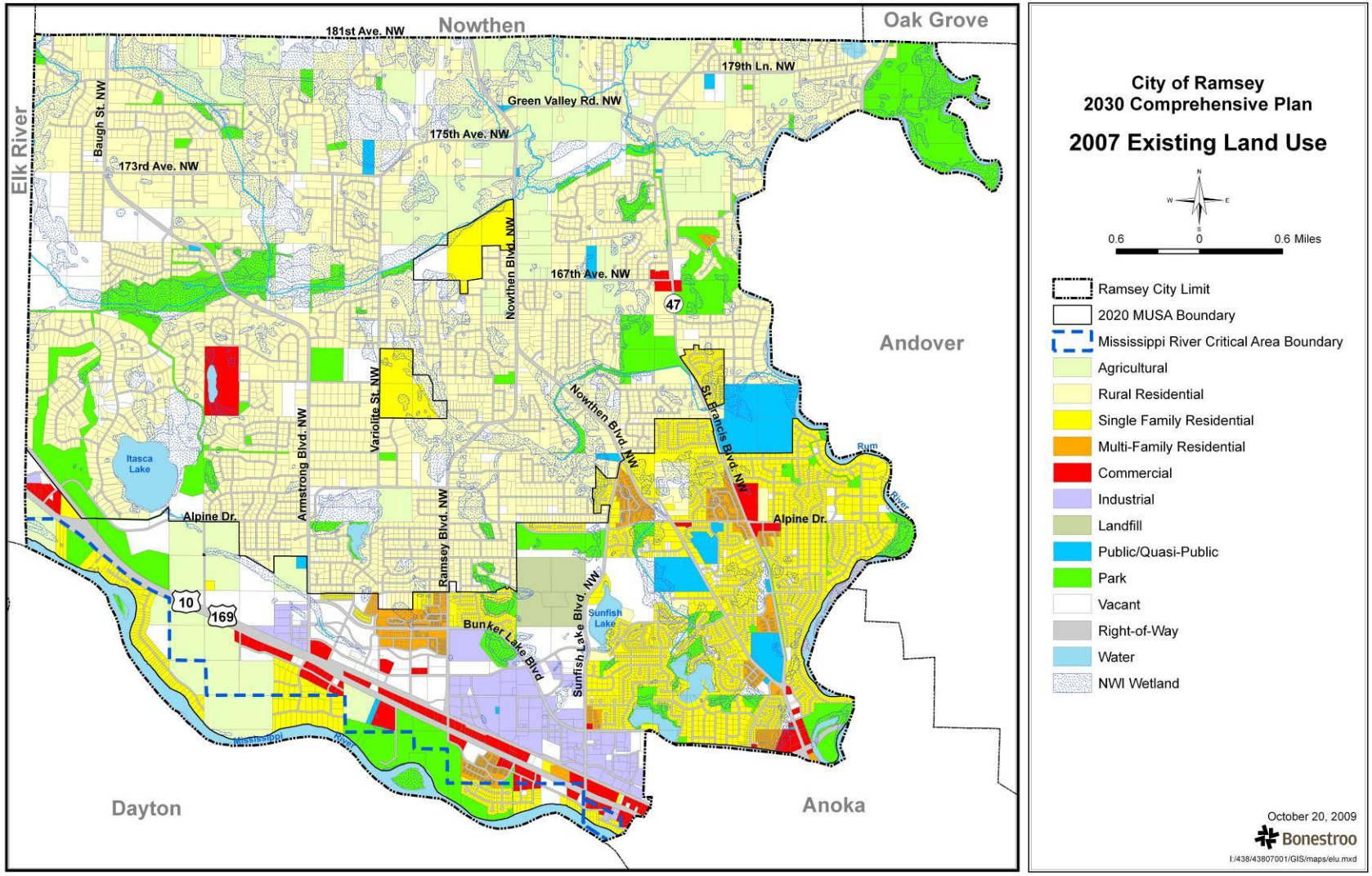
g) Transportation

Currently the City contains over 2,043 acres of City, County and State road right-of-way. Much of the right-of-way is comprised of U.S.

[1] *Soil Survey of Anoka County*, 1977 United States Department of Agriculture, Soil Conservation Service

Highway 10, a 4 lane divided highway. The Burlington Northern Santa Fe Railroad line stretches the length of the community and is wide enough to contain utility easements as well. The Mississippi and Rum Rivers contain no barge traffic and serve only recreational boating.

Figure 5-1 Existing Land Use Map



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B. Future Land Use

1. Land Use Goals

The following are Land Use goals and policies developed as part of the Comprehensive Plan Update process:

a) The needs and rights of existing residents are balanced with the needs and rights of those who wish to develop

STRATEGIES:

1. Encourage a developer-led public involvement process for new development that solicits feedback from the public at the beginning of the process
2. Develop a meaningful density transition ordinance that incorporates lot size, transitioning, screening, space, berms, landscaping, or buffers
3. Protect Ramsey's rural character while providing opportunities for urban growth

b) A variety of housing densities and types

STRATEGIES:

1. Develop dense, mixed-use environments in Town Center and other key locations served by sewer and water
2. Assess the market for various housing types and densities and have the Land Use Plan reflect appropriate opportunities to match market demand

c) Fair and consistent land use regulations

STRATEGIES:

1. Develop a policy for processing comprehensive plan amendments
2. Establish a rational, logical staging plan for extension of MUSA consistent with the Comprehensive Sewer Plan and tied to Comprehensive Plan Amendment Policy
3. Re-assess the value of 4 in 40 (rural preserve and rural reserve)

d) Walkable neighborhoods

STRATEGIES:

1. Include a review of infrastructure, including parking for walking and other non-motorized transportation modes when reviewing any transportation improvement projects
2. Explore options for revising the City's sidewalk policy, including requiring sidewalks or trails on both sides of some new public streets, different standards for public versus private roads, high-volume versus low-volume roads, and issues related to long-term maintenance
3. Locate residential development at appropriate densities near services to encourage walking

e) Efficient growth

STRATEGIES:

1. New development should use existing infrastructure where possible
2. New development should be built close to existing or proposed services such as commercial, employment, and government, where possible.

f) Ramsey Town Center is constructed in accordance with its vision

STRATEGIES:

1. Concentrate the highest density residential development in or near Town Center and at other key locations as shown on the future land use map
2. Encourage residential and commercial development in the Town Center before other parts of the City
3. Continue to work to secure a stop on the Northstar Commuter Rail Line for Ramsey
4. Develop incentives for the Town Center to enhance its marketability
5. Maintain high quality design standards for the Town Center

g) Adequate retail and commercial services

STRATEGIES:

1. Locate other neighborhood commercial nodes with basic services available close to existing and future residential neighborhood concentrations
2. Assess the supply of commercial and industrial land available for development

h) New development is well-integrated with existing development

STRATEGIES:

1. New development should protect natural resources, make trail connections, and blend in with surrounding development
2. Use clustering and/or conservation development practices to protect existing neighborhoods and natural resources
3. Develop form-based codes
4. Develop a meaningful density transition ordinance that incorporates lot size, transitioning, screening, space, berms, landscaping, or buffers

i) The rights of property owners are respected and protected within the planning and development process.

STRATEGIES:

1. Private property owners will be allowed the maximum use and enjoyment of their property, as free as practical from excess taxation, assessment, or intrusion consistent with good planning and the well-being of the larger community.
2. The rights of private property owners will be balanced with the need to protect and enhance natural resources in the community.
3. The rights of private property owners will be balanced with the need to provide a safe and efficient transportation system in the community.
4. The rights of private property owners will be balanced with the needs of future development.

j) Property rights are protected along with natural resources

STRATEGIES:

1. Explore options to compensate property owners for development rights to protect natural resources
2. Regularly assess outcomes of ordinances related to natural resources and make changes as necessary
3. Provide incentives to homeowners for the permanent protection of high-value natural resource areas

2. The General Plan

The land use plan is intended to guide the future development of the community. It is designed to protect, preserve, enhance and build upon the physical features of both the built and natural environment. Developed through a combined effort of Ramsey residents, landowners, city officials and business owners, the plan guides land uses through the year 2030. Many people will use the plan to learn about the community, its direction and vision. More importantly it will be used to

assist and guide local decision-makers and city staff in the everyday business demanded of a growing suburban community.

The future land use element contains goals and polices for the following land use categories:

a) Rural Developing
Areas of Ramsey guided Rural Developing will not have urban services and include single family, detached housing types. Minimum lot size is 2.5 acres per unit. Much of Ramsey has been developed in this pattern, and only some areas guided Rural Developing contain large lots that could be subdivided into 2.5 acre lots.

b) Low Density Residential
Areas guided Low Density Residential must have urban services before development can take place. These areas will average 3 units per acre and contain single family, detached dwellings.

Where Low Density Residential is directly adjacent to areas guided Rural Developing that contain 2.5 acre lots, strategies for density transitioning will be employed. This means that while an area of Low Density Residential may average 3 units per acre, those lots directly adjacent to 2.5 acre lots will be closer in size to 2.5 acres in order to provide an effective transition that maintains the existing character of the neighborhood. Screening methods, such as landscaping must also be employed to transition between very low density areas and urban lots.

c) Medium Density Residential
These areas are within the MUSA and intended to receive medium density housing including lower density multi-family housing and higher density single-family housing. Average density will be 6 units per acre.

d) High Density Residential
These areas are within MUSA and intended to accommodate multi-family housing such as townhomes and apartment buildings. Average density will be 12 units per acre.

e) Business Park
Areas guided Business Park are reserved for office and industrial development.

f) Office Park
Areas guided Office Park are reserved primarily for office and office-showroom development. Corporate campuses are also appropriate in these areas. Light and heavy industrial uses are not appropriate for areas guided Office Park.

g) Commercial
Areas guided Commercial may include a range of neighborhood and community commercial/retail development.

h) Mixed Use
Mixed Use areas may include a combination of residential, commercial, light industrial, open space and a transit hub.

i) Parks, Trails and Open Space
Parks, trails and open space include the City Park and trail system, golf courses, regional parks, wetlands and the greenway. Lands in this category are intended to preserve the natural resource base and provide an adequate supply of active and passive recreational lands in Ramsey.

j) Public/Quasi-Public
This category generally includes city offices, public works facilities, churches, schools other non-profit or government facilities, and bridges/major rights-of-way.

Figure 5-3 shows the changes in land use designation on the new 2030 Land Use Plan compared to the previous 2020 Plan.

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Figure 5-2 Future Land Use Map

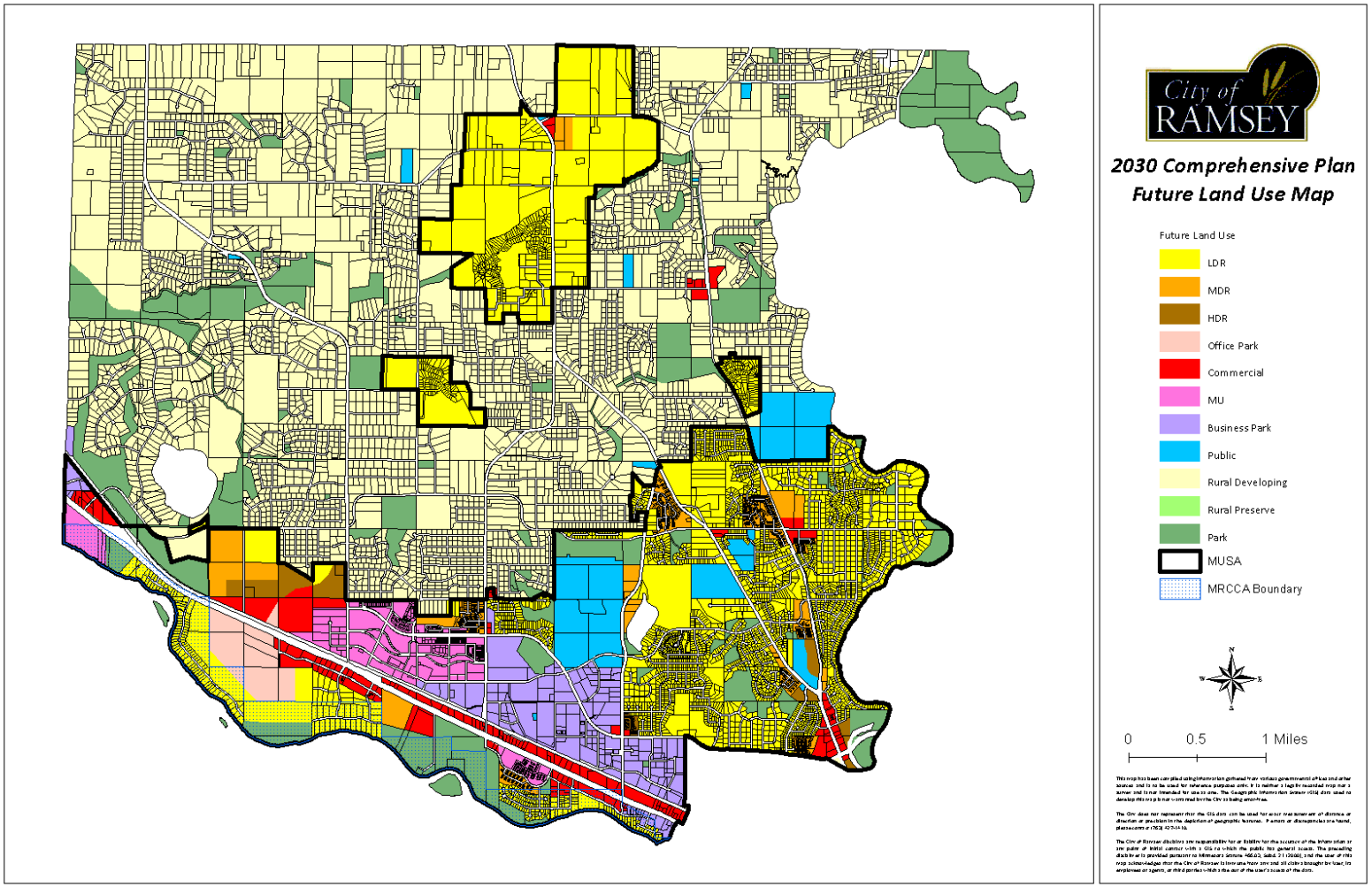

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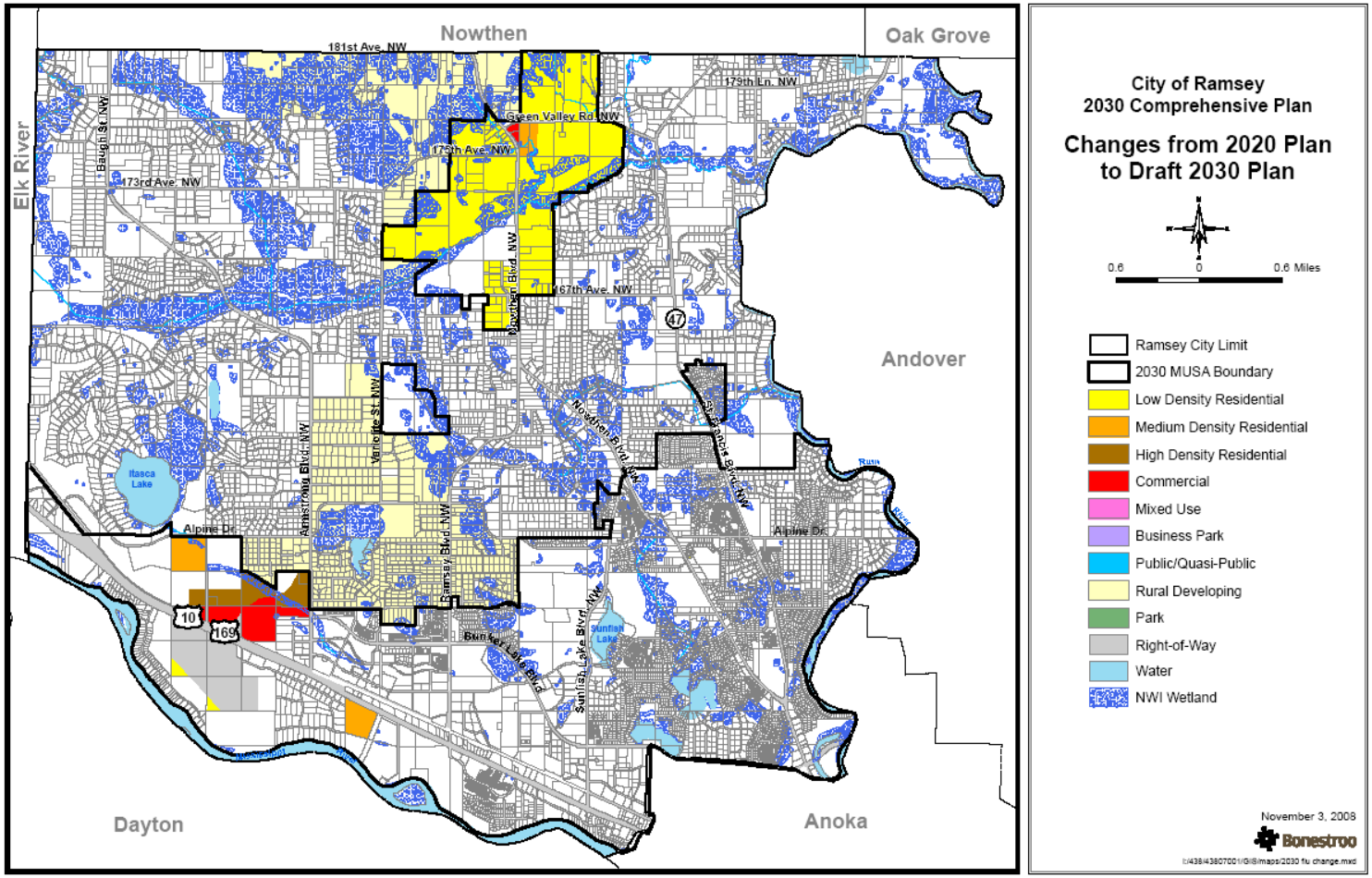
Figure 5-3 Changes in Land Use from 2020 Plan to 2030 Plan



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3. Future Land Use Calculations

The following table represents a tabulation of land uses based on the future land use plan. The tabulations assume a complete build out of the community, which may or may not happen within the lifetime of this plan. Park and Open Space includes the landfill, privately owned golf courses and the Boy Scouts of America camp grounds in addition to public park lands. Although this plan shows the eventual depletion of agriculture lands in Ramsey in terms of a land use category, it is anticipated that agriculture activities that occur today may still occur in the Rural Developing areas. The agriculture land located in areas designated as urban residential, places to work or other urban uses will continue to be farmed until such time that the property owners decide to develop in accordance with the development staging plan or sell to development interests.

Table 5-2 Future Land Use Calculations

2030 Land Use	Gross Acreage	Net Acreage	% of City
Low Density Residential	3,389.52	2,854.72	14.9%
Medium Density Residential	373.49	339.05	1.8%
High Density Residential	122.09	103.07	0.5%
Commercial	401.76	389.92	2.0%
Mixed Use	358.76	333.74	1.7%
Business Park	566.18	552.54	2.9%
Office Park	166.80	166.80	0.9%
Public/Quasi-Public	388.58	342.62	1.8%
Rural Developing	8,660.06	6,644.40	34.7%
Park	2,088.92	1,351.56	7.1%
Right-of-Way	2,043.76	2,043.76	10.7%
Water	568.24	568.24	3.0%
Wetland	-	3,437.74	18.0%
Total City	**19,128.16**	**19,128.16**	**100.0%**

4. Future Land Use Categories

The following is a description of the various land use categories that will guide future development of the community.

a) Residential (Rural Developing, Low Density, Medium Density, High Density and Mixed Use)

Through the year 2030 Ramsey will continue to be primarily a commuter suburb dominated by single-family detached housing. As transportation access to the rest of the metro area and neighboring suburbs improves, more persons will be interested in obtaining part of the rural life-style present in Ramsey. As the population in Ramsey ages, new housing opportunities will be demanded to fulfill the life-cycle housing needs of Ramsey residents. It is critical that growth in Ramsey be guided and managed so that today's residents can continue to enjoy a high quality of life and that future generations will be awarded the same benefits as today's residents.

Residential areas are intended to reflect the continuous greenway corridor (see Environmental Protection Chapter XIII.). While lands restricted for development (wetlands, steep slopes, ponds and lakes) are not intended to be eligible for density credit, useable lands, which are voluntarily protected for greenways are intended to receive density credit. Landowners are encouraged to preserve and restore areas of significant natural resources such as open prairie or tree canopy as permanent open space by increasing density in areas more conducive to development.

Residential areas in Ramsey are very diverse in terms of lot sizes, but very similar when it comes to types of housing. Residential lots range from the farmstead of 10 to 20 acres to the rural estate lots averaging 2.5 acres, down to the urban lot of 10,800 square feet served by municipal utilities. In each of these lot size classifications, single-family homes are the dominant housing type.

The future land use plan creates opportunities for the development of a diversity of housing types and styles while preserving the strong single-family character of existing residential neighborhoods.

b) Rural Developing

The Rural Developing area is the largest land use within the City of Ramsey. The existing primary use of this area is very low-density residential development with average densities of *roughly 1 unit per 2.5 acres,* a development pattern that was established in the early 1970s. Because of this very low-density pattern of development and the numerous wetlands, the extension of urban services to the rural developing area is not practical or financially feasible. Regional growth policy would suggest imposing a gross density consistent with the Rural

Preserve area of 1 unit per 10 acres. However, because of the historical development pattern that has already been well established, an overall density of one unit per 10 acres will never be established.

The maximum density for the Rural Developing area shall be *1 unit per 2.5 acres* gross. This density was determined by examining the natural features and the predominant existing density within the Rural Developing area.

Rural Policy
It is the policy of the City of Ramsey to:

1. Enforce a maximum overall density of 1 unit per 2.5 acres in the *Rural Developing* area.

2. Encourage preservation of open space and natural resources beyond what is required by ordinance or other legal means through the PUD process.

3. Develop, implement and enforce a septic system inspection program and wellhead protection program for existing and future private septic systems and wells consistent with Minnesota Rules Chapter 7080.

4. Encourage environmentally sensitive and open space design and construction techniques that preserve natural resources within private control (i.e. other than public land dedication).[2]

5. Provide for the extension of urban services only when groundwater contamination (due to failing septic systems or other reasons) has the potential to pose a threat to human health and the provisions and process outlined in the City Charter have been followed.

6. Encourage private well users to periodically test the drinking water supply from private wells in order to prevent serious health hazards from occurring due to groundwater contamination.

Rural Performance Criteria
Residential development projects in the Rural Developing area shall be evaluated based on the following criteria:

1. Rural design principles are evident in the plan.

[2] Good examples of rural design principles can be found in the book Rural by Design by Randall Arendt, an APA publication.

2. The site or sites can support two septic drain fields in accordance with Minnesota Rules Chapter 7080.

3. Owner/developer agree to on-site septic system inspections in accordance with City requirements.

4. The plan reflects a strong sensitivity to protecting and enhancing natural resources (wetlands, tree canopy, ponds, drainage ditches, rivers, etc.) particularly in relation to the greenway corridor system.

5. The site uses landscaping and natural vegetation (such as planting of windrows or shade trees) to improve the energy efficiency of housing.

c) Urban Residential

All future (new) urban residential development will be served by public sewer and water according to the development staging plan as further described later in the future land use plan. Exceptions to this rule may occur in areas where pre-existing large lot development surrounds vacant urban lands and soils are well suited for on-site septic systems. Densities within the urban residential area may vary by district; however, an average *gross* density of all future urban residential development is targeted at 3 or more units per gross acre (a goal consistent with regional growth policy). Overall, the plan encourages a higher density of development in the urban area to provide a wider variety of housing opportunities including single family and multi-family housing affordable to a range of household incomes. Furthermore, higher density development increases land use efficiency.

A concern expressed by many residents living in the rural areas of Ramsey and on large lot developments within the existing Metropolitan Urban Services Area involved the transition between future urban development and existing rural development. It is the intention of this plan to assure compatibility between future urban housing and existing residential developments by establishing some form of transition between existing single family homes and future (new) urban development. Areas where transitions are necessary are primarily (but not exclusively) located along the edges of the urban services boundary and are to be served by municipal sewer and water.

Land uses within the urban residential area include:

- Low and high density housing including predominantly single-family housing but also multi-family housing and accessory apartments
- Limited, small-scale home occupations
- Education and institutional services limited to schools and churches
- Park & open space

The principles of affordable housing and preservation of open space are addressed in the urban residential areas through the provision of density bonuses and density credits. These are voluntary provisions that provide incentives to developers who provide affordable housing or preserve significant natural resources and open space.

Density bonuses for affordable housing should be based on a definition of affordable housing that reflects average wages and incomes of the region. In 2007, the Metropolitan Council defined affordable housing as housing which costs up to $201,800. It is intended that a density bonus formula may be established as part of the City of Ramsey zoning ordinance update.

Subject to City Council approval as part of the PUD process, density credit may be given to areas of the greenway (see Chapter 13. Environmental Protection and Natural Resource Management for a further description of the Greenway) that are significant environmental areas, which are not protected by ordinance or other legal means. For example, if a 40-acre parcel contained no major road right-of-way and no wetlands but contained 10 acres of land within the greenway[3], the developer may receive density credit for the entire 40 acres as net developable acreage. A maximum density of 5 units per net acre (for example) would then yield 200 units. The developer may be allowed to reduce lot sizes or mix housing styles in order to preserve some or all of the remaining 10 acres in the Greenway as permanent open space. This open space would not be left as unmanaged open space (or an outlot) but would be required to be preserved as permanent open space through park dedication or some land preservation tool such as a land trust or permanent conservation easement acceptable to the City Council.

The following further defines urban residential uses: low density residential, medium density residential and high density residential.

<u>Low Density Residential</u>

[3] Lands within the Greenway may include significant natural resources, vegetative cover or habitat worth preserving or simply may be vacant land which should be preserved as open space to connect other pockets of open space, parkland, wetlands etc.

Low density residential places an emphasis on single-family detached housing but is designed to allow a variety of housing types and styles (life-cycle housing) including attached single-family housing (townhouses) and two-family homes (twin-homes, duplexes). This area represents over 3,000 acres of total land use in the community.

In order to ensure that low-density mixed-housing projects can be made viable and acceptable to the community, all low-density mixed-housing projects are intended to be the subject of a Planned Unit Development (PUD)[4]. Any residential development proposal containing unit types other than exclusively single-family detached housing will be required to be processed as a PUD. Individual elements (or housing types) within a PUD may range in density as long as the overall density of the PUD does not exceed a maximum *of 3 units per net acre.*

Low Density Residential Performance Criteria: Projects within the Low Density Residential areas as shown on the Future Land Use Plan shall adhere to the following performance criteria:

1. The project shall be planned as an integral element of the larger neighborhood with interconnecting streets, pedestrian trails and greenways.

2. Higher intensity housing shall be planned as an integrated part of the project and may be used for buffering or transition to major roads or more intense uses.

3. Higher intensity housing shall have direct access to major roadways (local collectors) so excessive traffic is not routed through local streets and lower density neighborhoods.

4. Higher intensity housing shall be located within close proximity to existing or planned park and recreation facilities and connected by an off or on-road trail.

5. Where possible, natural features shall be protected and incorporated into the PUD or site plan as permanent open space for the benefit of the project and the community.

6. Where possible and practical, traffic generated by new development shall be routed to collector streets rather than through adjacent local neighborhood streets.

[4] The Planned Unit Development is a process by which land use can be more closely tied to design decisions during a subdivision approval process. It allows for more opportunities to preserve open space and natural features and provide a variety of housing types through greater flexibility with zoning regulations.

7. Where possible and practical, parkland and open space shall be situated to act as a buffer between future and existing development.

8. New development that is adjacent to existing single- family detached development shall be compatible in density and type with existing and planned development.

Medium Density Residential

Medium density residential shall not *exceed 6 units per net acre*. Medium density areas include housing units such as attached and detached townhouses, condominiums, duplexes and triplexes or small apartment buildings. These areas are smaller, typically "infill" sites, that would not be conducive to high density housing, yet would be underutilized as single family housing. These areas take advantage of close proximity to park and open spaces, commercial and public services and accessibility to the road network.

If low-density residential land is rezoned to accommodate higher density residential uses, the new high density residential development shall include a transition area between existing single-family detached housing and the new high-density housing. This transition area may consist of single-family detached home, open space or some other transition acceptable to the City Council.

High Density Residential

This category sets aside parcels strictly for high-density housing development with a maximum density of *12 units per net acre* and includes housing units such as townhouses, condominiums and apartments. These areas will provide housing for a variety of residents including seniors. Areas of high-density residential land use should have direct access to the major roadway network in order to promote transit usage and convenient access to city services such as park and recreation uses and the greenway. Locating high density housing with these factors in mind, minimizes traffic through local streets and neighborhoods, creates a larger labor pool for businesses, and allows residents convenient access to shopping, parks and recreation facilities encouraging a more walkable pedestrian oriented community life-style.

If low-density residential land is rezoned to accommodate higher density residential uses, the new high density residential development shall include a transition area between existing single-family detached housing and the new high density housing. This transition area may consist of single-family

detached home, open space or some other transition acceptable to the City Council.

Urban Residential Policy
It is the policy of the City to:

1. Require Low Density Residential developments except those that are exclusively single-family detached units to be completed through a planned unit development.

2. Require a transitioning of new higher density housing to existing single-family detached housing. The transitioning should consist of a more compatible density, open space, or other means acceptable to the City Council.

3. Periodically review the planned unit development section of the zoning ordinance to ensure appropriate guidelines and rules for development of land within the residential areas.

4. Encourage scattered site affordable housing developments as part of each residential housing project rather than segregating affordable housing in one project.

5. Consider allowing density bonuses for providing affordable housing, preservation of natural areas, creating open space connections, or buffering consistent with the plan.

6. Require compatible land use transitions at the edges of neighborhoods through land use, site design and landscaping.

7. Encourage environmentally conscious site design and construction methods to assure that development respects the natural environment.

8. Provide dispersed locations for a diversity of housing styles, types, and price ranges and encourage development of housing and services that meet the needs of nontraditional households.

9. Plan and provide for the housing and service needs of the elderly and disabled.

10. Regularly review and revise, as necessary, zoning and subdivision regulations, building codes, design standards and approval processes to assure that regulations and standards are flexible enough to allow quality and variety of housing options.

11. Require and enforce high design and maintenance standards for all residential development.

12. Require the maintenance of existing and future housing through enforcement of the housing maintenance code.

13. Facilitate and promote housing rehab and renovation programs through partnerships with HUD, Fannie Mae, local banks, MHFA, Metro Council, ACCAP, Anoka County HRA and other non-profit or private organizations.

14. Promote and market first time homebuyer programs such as the Minnesota Cities Participation Program through MHFA.

15. Ensure projects are consistent with the goals and policies of the Mississippi River Critical Area Plan (MNRRA) and are sensitive to the Rivers natural environment.

16. Ensure open space that is part of a residential development is preserved as permanent open space through such means as permanent conservation easements, land trusts, deed restrictions or other legal means to permanently preserve open space.

The following table summarizes maximum density allowances for the various residential districts.

Table 5-3 Density Table

Land Use Category	Average Density
Rural Developing	1 unit per 2.5 acres gross
Low Density Residential	4 units per net acre
Medium Density Residential	7 units per net acre
High Density	15 units per net acre

d) Commercial

Commercially guided land uses are generally located along Highways 10 and 47. Highway 10 is of critical importance in developing a strong community image. Future commercial development and redevelopment should focus on key nodes along the corridor (rather than span an entire corridor) and serve the travelers along the corridor as well as adjacent neighborhood residents. (See chapter VI for a further discussion on a Highway 10 corridor study). The commercial development along Highway 47 is more of a commercial node pattern. This land use plan supports existing commercial nodes that serve neighborhoods and commuters particularly at the intersections of County Road 116 and Alpine Drive.

The locations of existing commercial within the community (at major intersections such as County Road 116 and Highway 47 or along major roadways such as Highway 10) play an important role in what types of uses go there. The predominant use is gas/convenient stores that serve commuters. Other uses include fast food or sit down restaurant, grocery, small-scale retail trade and services such as drive through banking, real estate, legal services, dry-cleaning, or day care. The Mixed-Use land use (defined later) is also intended to provide shopping and services.

While commercial development along the Highway 10 corridor should be guided by the results of a corridor study and river crossings study, other commercial nodes can be better defined as follows.

167th Avenue and Highway 47: The commercial node at 167th Avenue and Highway 47 functions as a neighborhood service center; however, the viability of this commercial node is somewhat unstable due to the low density development within its primary market area and the lack of adequate public facilities. The surrounding area is guided for future development of a rural character.

Alpine Drive and Highway 47: This area is intended to function as a neighborhood commercial service center with uses that serve the basic convenience needs of Ramsey residents such as grocery, hair salon, gas/convenience, coffee shop, bakery, dry-cleaners, and other convenience uses. The basic intent of this commercial area is to service the immediate residential neighborhood and the travelers on Highway 47. Uses that draw regional traffic such as the typical big box retailers, large department stores, automotive sales, or large screen theaters are not intended for this area. These uses are more destination oriented uses and would likely create traffic volumes that are not supported by the local roadways serving this node.

Bunker Lake Boulevard and Highway 47: This commercial node is largely developed and operates in a similar fashion as Alpine Drive and Highway 47. However, because this node has more accessibility due to Bunker Lake Boulevard (County Road 116) more destination-oriented uses such as banks, postal services, real estate or insurance offices and other services are appropriate uses.

General Goals for Commercial
The following are the goals of the City relative to places to shop:

1. To provide commercial/retail services to satisfy basic needs of Ramsey residents and commuters.

2. To reduce traffic congestion and create an environment that conveniently and efficiently serves the automobile while maintaining a pedestrian friendly atmosphere.

3. To create an image that is attractive, inviting to both pedestrians and automobiles and displays an identity consistent with the overall community identity.

4. To redevelop, improve and clean up underutilized commercial sites along Highway 10.

Commercial Policy
It is the policy of the City to:

1. Allow for the development of community convenience uses at the intersection of Alpine Drive and Highway 47 and County Road 116 and Highway 47.

2. Control access to Highway 47 and Highway 10 in order to reduce traffic congestion and improve accessibility to businesses.

3. Facilitate private sector redevelopment and rehabilitation of underutilized sites along the Highway 10 corridor.

4. Provide safe and convenient access to places to shop from adjacent neighborhoods through pedestrian trails and paths.

5. Discourage strip commercial development along the Highway 10 Corridor and seek solutions to traffic problems associated with multiple access points.

6. Encourage clustering of commercial development at major intersections that can take advantage of good access to and visibility from the major roadway system.

7. Require development within the Mississippi River Corridor to be compatible with the goals and policies of the Mississippi National River and Recreation Area (MNRRA) and the Critical Area Plan.

e) Business Park and Office Park
The City of Ramsey has an existing industrial park area that consists of a variety of heavy and light industrial uses. This area generally lies east of Ramsey Boulevard and south of Bunker Lake Boulevard and the sanitary landfill. During the early 1990's the AEC Energy Park and Ramsey Business Park 95 opened up new land for industrial development with urban services. These parks have rapidly been filling up and have brought over 1,000 new jobs to the community, many of which were new jobs created in the metropolitan area.

Ramsey has a significant supply of available land that is strategically located just north of U.S. Highway 10 and along the BNSF railroad line. The current zoning ordinance designates the majority of this land as Business Warehouse and Industrial property. Since the last plan update,

much of this land has been developed, and vacancy rates for industrial property in Ramsey are generally low.

To increase the supply of land for business and office park development, the plan for 2030 guides land south of Highway 10 near the proposed Mississippi River Bridge crossing for Office Park use.

General Goals for Business Park and Office Park
The following are the goals of the City:

1. To ensure a diversity of good paying jobs to residents of the City of Ramsey.

2. To provide a sound economic base for the City, local school districts and Anoka County.

3. To improve the ratio of jobs to housing in order to lessen Ramsey's dependency on job centers elsewhere in the region.

4. To provide opportunities for growth of existing businesses (business retention).

5. To create opportunities for high quality development that contributes to a good image for the City of Ramsey.

6. To ensure adequate means of transportation and transit for employees to be able to get to and from places to work.

It is the intent of the plan to create industrial/office park settings where buildings and uses relate to each other to become places rather than function as freestanding elements. Future business park and office park uses will be served by urban utilities in order to insure the highest quality of public infrastructure and public and private investment. Development of these areas is intended to maximize the efficiency of land use by optimizing street widths and utility lengths and creating centralized storm ponds that function not only to filter sediments from surface runoff but also provide amenities for the employees and businesses there.

The Business Park designation accommodates uses such as business and professional offices, showrooms, warehousing, light industrial/manufacturing, heavy industrial/manufacturing, and public works facilities.

This Office Park designation is intended to accommodate corporate campus, office, office-showroom and other low-impact, job-producing uses that are less intense than those found in the Business Park areas.

Business Park and Office Park Policy
It is the policy of the City to:

1. Require developments to adhere to environmentally sensitive design and construction standards. (See "Protecting Water Quality in Urban Areas" a publication on Best Management Practices by the MPCA).

2. Encourage high quality and unique design and site planning.

3. Allow for techniques to minimize infrastructure costs such as centralized storm ponds, shared driveways and loading docks and optimum street widths.

4. Facilitate the clean up and redevelopment of brownfields and underutilized sites within the places to work area.

5. Promote economic development in the City of Ramsey.

6. Continue to market, develop and expand the Ramsey Business Park.

7. Develop and implement a business retention and expansion program.

8. Work with the educational entities such as the Anoka High School and Anoka Hennepin Technical College to enhance employee-training programs and connect welfare recipients to work opportunities as part of the welfare to work program.

9. Require individual sites to be connected to a trail system that links employees with the Town Center, parks and neighborhoods.

10. Work with the Anoka County Traveler and the Metropolitan Council Transit Organization to address transit and employee transportation issues.

Business Park, Office Park and Commercial Performance Criteria
In order to ensure proper siting and development of commercial, office and industrial uses within the designated areas all projects should be evaluated based on the following criteria:

1. The project is planned as an integral element of the larger community with interconnecting streets, paths and greenways.

2. The project is planned to minimize conflicts between non-business/industrial uses (for example parking lots and loading docks should be located away from or adequately buffered from residential neighborhoods).

3. Opportunities to minimize infrastructure and other elements of the built environment are incorporated into the design (for example shared parking and driveways or decked parking).

4. The project displays elements that enhance or build upon the identity and image of the Ramsey Community and the project.

f) Mixed-Use

Mixed Use includes retail, commercial, entertainment, office, institutional, high density residential, transit hubs and park and recreation uses. The Comprehensive Plan anticipates two areas of Ramsey to be designated as Mixed Use; the first area stretching from the west side of Armstrong Blvd. to the west side of Ramsey Blvd. and a second area south of State Highway 10 west of Feldspar St.

Town Center Mixed Use Area: The Town Center Mixed Use area is proposed to be located in portions of Section 28 and 29 stretching from the west side of Armstrong Blvd. to the west side of Ramsey Blvd., north of the railroad. Mixed Use was chosen for this site because of the proximity to major employment areas, major transportation corridors and a future commuter rail station serving the Northstar Commuter Rail Corridor[5]. The area east of Armstrong Boulevard is governed by the Town Center Master Plan, which provides specific land use and design guidance for this area. The purpose of the Town Center Mixed Use Area is to establish a community hub that integrates places to work, play and live and embraces transit oriented design in anticipation of the potential future commuter rail station.

Mixed-Use enhances the functionality of a transit hub at this location because it creates efficiencies by being able to send and receive people who might work or live in the area. Because a large portion of the area is undeveloped, it has the opportunity to be organized in a pedestrian friendly environment that supports mass transit. A commuter rail station in this location would be spaced approximately 3-5 miles from stations to the north near downtown Elk River and south in Anoka near 7th Avenue. It will take advantage of good accessibility from the north via Armstrong Boulevard and from the east and west via Industry Avenue and Highway 10, all arterial roadways. Mixed use development would be transit oriented to support the station. Development should be intense with multi-story buildings rather than one level building. Commercial and residential buildings should be linked by a pedestrian-way so people can park at the station and stroll through commercial shops. It should be directly connected to areas of major employment (Ramsey Business Park, AEC Energy Park, Anoka Enterprise Park and future places to work) and Anoka Hennepin Technical College. This could be done through a shuttle bus service, which would serve not only places to work but also residential neighborhoods. It also should make connections to the new hotel project south of Highway 10 near Sunfish Lake Boulevard and the Mississippi West Regional Park.

Ramsey does not have much choice for local shopping, eating out or doing business within its own community. Ramsey has no identifiable

[5] The Northstar Corridor is a 70-mile long transportation corridor that runs along TH 10/47 from downtown Minneapolis to the St. Cloud and Rice areas. The Northstar Corridor Development Authority has been organized to study the feasibility of improved transit services along this corridor including the option of Commuter Rail.

downtown for its citizens. The downtowns of neighboring communities such as Elk River and Anoka and the many features of the Twin Cities Metropolitan Area are the primary sources of entertainment for Ramsey residents. There are two grocery stores in Ramsey, one is located in northern Ramsey along Highway 47 and the other is Coborn's at the western edge of the Town Center area near Armstrong Boulevard. The other commercial areas focus on special services like used car lots or recreational vehicle sales.

The Town Center is meant to identify a place in the community where a variety of social activities may occur more convenient to Ramsey residents. Its location should take advantage of being central to the Ramsey population base, connected through a strong pedestrian trail or sidewalk system, easily accessible by the automobile and visible to the shopper's eye. The Town Center is intended to receive a mix of land uses including:

- Civic places where people can gather or events can be held (a park, community center, library or history museum).
- Commercial/retail where people can take care of casual everyday shopping or sit down at a local restaurant (grocery, hardware, restaurant, or hair salon).
- Professional Offices/places to work or take care of everyday business (real estate, banking, accounting, legal services and local post office).
- High-density residential/places to live including senior housing (owner and renter occupied).

By mixing high density residential with civic, commercial and office uses, a vibrant Town Center can be created where life goes on all day and into the evening. Housing is located within walking distance to jobs and shopping. Sidewalks and trails link neighborhoods to the Town Center and link civic facilities with commercial and housing facilities creating a pedestrian oriented environment within the Town Center. Civic places are well lit and aesthetically pleasing, inviting the public into a defined public space. Buildings are well designed and areas of landscaping reflect the identity of strong natural features in the Ramsey Community. These characteristics create the Town Center of Ramsey's future.

An important decision will need to be made in the future about whether to construct a new bridge over the Mississippi River and what alignment it should follow. This potential connection will have a significant impact on the future of the Mixed-Use site because a future bridge corridor will likely alter traffic patterns in this general area. If a bridge is constructed near the Mixed-Use site, Ramsey must be able to influence the design of the roadways so that the Mixed-Use area can survive and benefit. However, should a bridge crossing not be constructed, the Mixed Use area must be designed to function on existing surrounding land use patterns. Furthermore, if development of this area should come to

fruition prior to the establishment of a definitive alignment for a future bridge that crosses the Mississippi River, the City of Ramsey should work with Anoka County and MnDOT to ensure a future alignment to satisfy local and regional needs.

Careful design and planning for the Mixed-Use site can offer a wonderful image to Ramsey that will serve residents, workers and travelers using Highway 10. The location along the BNSF Railroad Tracks is highly visible from Highway 10 and demands high quality design. Specific standards and design elements for the Town Center area have been developed through amendments to the Zoning Code, the creation of a zoning overlay district and adoption of Town Center design guidelines.

Mixed Use Area – South of Highway 10: Another area of mixed use is located south of Highway 10 just east of Mississippi West Regional Park. The intended mixed-use pattern on this location is to provide opportunity for higher density housing integrated with commercial uses which are supported by both the higher density housing and the traffic from Highway 10.

General Goals for Mixed Use
The following are the goals of the City relative to Mixed Use:

1. To provide an area where people can live, work and play, which supports alternative modes of transit while still accommodating the automobile.

2. To ensure adequate service and retail opportunities to meet the needs of major employment areas and businesses.

3. To enhance the local labor supply through provision of high density housing in close proximity to major places to work.

4. To create an attractive high quality, community oriented development that positively reflects on the image and identity of the Ramsey Community.

Mixed-Use Policy
Within the areas designated for Mixed-Use, it is the policy of the City to:

1. Work with the landowners to develop a master plan consistent with the intent of the Mixed-Use designation.

2. Encourage consistent design standards based on transit orientated development practices that serve as a framework for both public and private improvements addressing streets, lighting, landscaping, and building materials and placements.

3. Allow higher density residential development within the Mixed-Use area.

4. Provide safe walkway and trail linkages from the Town Center Mixed-Use area to other public facilities, major employment centers (such as Ramsey Business Park 95) and residential neighborhoods.

5. Encourage the Northstar Corridor Development Authority to consider the Town Center Mixed-Use area site for a commuter rail station site and work with the corridor to plan for such a facility.

6. Communicate with Anoka County and MnDot regarding development impacts associated with a potential bridge crossing.

8. Encourage all high-density residential developments to include a commercial/retail component within the same building at street level.

5. Staging of Development--MUSA Expansion

Future expansion of Urban Services must be done in a manner consistent with the provisions and process outlined in the City Charter.

Between 2008 and 2030, sewered development will continue in a contiguous fashion from the existing sewered areas. However, since large portions of the city have already been developed at in a very low density pattern, it is unlikely that many of these areas will be served by municipal services before 2030.

Based on extensive public input, it was determined that it was logical to extend services north of Trott Brook with the understanding that private development would likely bear the cost of any future extension. This area is the last area of the city that has significant undeveloped larger lots, which provide the opportunity for development concepts which incorporate key elements such as density transition and natural resources protection and still allow for economic feasibility.

Table 5-4 demonstrates the staging of sewered development in 5-year increments to 2030 consistent with the 2030 Land Use Plan map.

Table 5-4 Land Use Staging in 5-Year Increments (By Sewer District)

North Trott Brook Sewer District (in acres)

Within Urban Service Area	Allowed Density Range Housing Units/Acre Minimum	Maximum	Existing (2008) acres	2010 acres	2015 acres	2020 acres	2025 acres	2030 acres	Change 2008-2030 acres
Residential Land Uses			0	124	248	372	496	621	621
Low Density Residential	3	4	0	120	241	361	482	602	602
Medium Density Residential	3	7	0	4	7	11	15	18	18
High Density Residential	7	15	0	0	0	0	0	0	0
Mixed Use Primarily Residential*	10		0	0	0	0	0	0	0
C/I Land Uses	Est. Employees/Acre		0	1	2	3	4	5	5
Commercial	15		0	1	2	3	4	5	5
Industrial	8								0
Office	10								0
Mixed Use Primarily C/I*									0
Extractive									0
Public/Semi Public Land Uses			0	185	186	186	186	186	186
Public/Semi Public Land Uses			0	0	1	1	1	1	1
Parks and Recreation									0
Open Space									0
Roadway Rights of Way									0
Vacant/Agricultural									0
Vacant/Agricultural									0
Wetlands and Open Space			0	185	185	185	185	185	185
Subtotal Sewered			**0**	**310**	**436**	**561**	**687**	**812**	**812**
Outside Urban Service Area	**Minimum lot size**	**Maximum lot size**	**Existing (2008)**	**2010**	**2015**	**2020**	**2025**	**2030**	**Change 2000-2030**
Rural Residential 2.5 acres or less	2.5		1973	2104	2234	2365	2496	2626	654
Public/Semi Public Land Uses									0
Public/Semi Public Land Uses			12	12	11	11	10	10	(2)
Parks and Recreation			56	65	75	84	93	102	46
Subtotal Unsewered			2041	2181	2320	2460	2599	2739	698
Vacant/Agricultural									
Vacant/Agricultural	40		1325	1060	795	530	265	0	(1325)
Wetlands and Open Space			1557	1372	1372	1372	1372	1372	(185)
Total			**4923**	**4923**	**4923**	**4923**	**4923**	**4923**	

* For Mixed Use categories include information regarding the estimated minimum and maximum housing density ranges and acres/percentage of residential use.

Table 5-4 Land Use Staging in 5-Year Increments (By Sewer District)-Cont.

Mississippi River Sewer District (in acres)

Within Urban Service Area	Allowed Density Range Housing Units/Acre Minimum	Maximum	Existing (2008) acres	2010 acres	2015 acres	2020 acres	2025 acres	2030 acres	Change 2008-2030 acres
Residential Land Uses			468	586	704	822	940	1058	590
Low Density Residential	3	4	357	386	415	443	472	501	143
Medium Density Residential	3	7	111	120	130	139	148	157	46
High Density Residential	7	15	0	13	27	40	53	66	66
Mixed Use Primarily Residential*	10		0	67	133	200	267	334	334
C/I Land Uses	Est. Employees/Acre		738	798	858	918	978	1038	301
Commercial	15		205	228	250	273	296	319	114
Industrial	8		422	448	474	500	526	553	131
Office	10		0	33	67	100	133	167	167
Mixed Use Primarily C/I*									0
Landfill			111	89	67	44	22	0	(111)
Public/Semi Public Land Uses			1546	1368	1184	1001	817	633	(912)
Public/Semi Public Land Uses			10	43	75	108	141	173	163
Parks and Recreation			293	301	309	317	324	332	39
Open Space									0
Roadway Rights of Way									0
Vacant/Agricultural									0
Vacant/Agricultural			1120	896	672	448	224	0	(1120)
Wetlands and Open Space			123	128	128	128	128	128	5
Subtotal			**2752**	**2752**	**2746**	**2741**	**2735**	**2729**	
Outside Urban Service Area	**Minimum lot size**	**Maximum lot size**	**Existing (2008)**	**2010**	**2015**	**2020**	**2025**	**2030**	**Change 2000-2030**
Rural Residential 2.5 acres or less	3		1517	1560	1603	1646	1689	1732	215
C/I Land Uses									
Commercial			56	45	34	22	11	0	
Industrial/Business Park									
Public/Semi Public Land Uses									0
Public/Semi Public Land Uses									0
Parks and Recreation			210	219	228	237	246	255	45
Subtotal			1782	1823	1864	1905	1946	1987	261
Vacant/Agricultural									
Vacant/Agricultural	40		176	141	106	70	35	0	(176)
Wetlands and Open Space			364	358	358	358	358	358	(6)
Total			**5074**	**5074**	**5074**	**5074**	**5075**	**5074**	

* For Mixed Use categories include information regarding the estimated minimum and maximum housing density ranges and acres/percentage of residential use.

Table 5-4 Land Use Staging in 5-Year Increments (By Sewer District)-Cont.

Rum River Sewer District (in acres)

Within Urban Service Area	Allowed Density Range Housing Units/Acre Minimum	Maximum	Existing (2008) acres	2010 acres	2015 acres	2020 acres	2025 acres	2030 acres	Change 2008-2030 acres
Residential Land Uses			1568	1645	1722	1799	1875	1952	384
Low Density Residential	3	4	1389	1462	1534	1607	1679	1752	362
Medium Density Residential	3	7	129	136	143	150	157	164	35
High Density Residential	7	15	0	7	15	22	29	37	37
Rural Residential	0		50	40	30	20	10	0	(50)
C/I Land Uses	Est. Employees/Acre		91	83	75	67	59	51	(39)
Commercial	15		51	51	51	51	51	51	0
Industrial	8								0
Office	10								0
Mixed Use Primarily C/I*									0
Landfill			40	32	24	16	8	0	(40)
Public/Semi Public Land Uses			881	876	847	817	788	758	(123)
Public/Semi Public Land Uses			108	115	122	129	136	143	35
Parks and Recreation			127	127	126	126	126	126	(1)
Open Space									0
Roadway Rights of Way									0
Vacant/Agricultural									0
Vacant/Agricultural			181	145	109	73	36	0	(181)
Wetlands and Open Space			465	489	489	489	489	489	24
Subtotal			**2540**	**2604**	**2643**	**2683**	**2722**	**2762**	
Outside Urban Service Area	**Minimum lot size**	**Maximum lot size**	**Existing (2008)**	**2010**	**2015**	**2020**	**2025**	**2030**	**Change 2000-2030**
Rural Residential 2.5 acres or less	3		2032	2083	2134	2184	2235	2286	254
C/I Land Uses									
Commercial			14	14	14	14	14	14	
Industrial/Business Park									
Public/Semi Public Land Uses									0
Public/Semi Public Land Uses			154	126	98	70	42	14	(139)
Parks and Recreation			270	289	308	327	347	366	96
Subtotal			2470	2512	2554	2596	2638	2681	211
Vacant/Agricultural									
Vacant/Agricultural	40		409	327	245	163	82	0	(409)
Wetlands and Open Space			791	767	767	767	767	767	(24)
Total			**6210**	**6210**	**6210**	**6210**	**6210**	**6210**	

* For Mixed Use categories include information regarding the estimated minimum and maximum housing density ranges and acres/percentage of residential use.

Consolidated/All Districts

Within Urban Service Area	Allowed Density Range Housing Units/Acre Minimum	Maximum	Existing (2008)	2010	2015	2020	2025	2030	Change 2008-2030
Residential Land Uses			2037	2355	2874	2993	3312	3631	1594
Low Density Residential	3	4	1747	1968	2190	2412	2633	2855	1108
Medium Density Residential	3	7	240	260	280	299	319	339	99
High Density Residential	7	15	0	21	41	62	82	103	103
Rural Residential	0.4		50	40	30	20	10	0	-50
Mixed Use Primarily Residential*	10		0	67	133	200	267	334	334
C/I Land Uses	Est. Employees/Acre**		828	882	935	988	1042	1095	266
Commercial	15		256	280	304	328	352	376	120
Industrial	8		422	448	474	500	526	553	131
Office	10		0	33	67	100	133	167	167
Landfill			151	121	90	60	30	0	-151
Public/Semi Public Land Uses			2427	2429	2216	2004	1791	1578	-849
Public/Semi Public Land Uses			118	158	198	238	278	318	200
Parks and Recreation			420	428	435	443	450	458	38
Open Space									0
Roadway Rights of Way									0
Vacant/Agricultural									0
Vacant/Agricultural			1301	1041	781	520	260	0	-1301
Wetlands and Open Space			587	802	802	802	802	801	214
Subtotal			5292	5666	5826	5985	6144	6303	
Outside Urban Service Area	**Minimum lot size**	**Maximum lot size**	**Existing (2008)**	**2010**	**2015**	**2020**	**2025**	**2030**	**Change 2008-2030**
Rural Residential 2.5 acres or less	2.5		5521	5746	5971	6195	6420	6644	1123
C/I Land Uses									
Commercial			70	59	48	37	26	14	-56
Public/Semi Public Land Uses									
Public/Semi Public Land Uses			166	137	109	81	53	24	-141
Parks and Recreation			536	573	611	648	686	723	188
Subtotal			6293	6516	6738	6961	7184	7406	1113
Vacant/Agricultural									
Vacant/Agricultural	40		1910	1528	1146	764	382	0	-1910
Wetlands and Open Space			2712	2497	2497	2497	2497	2497	-215
Total			**16207**	**16207**	**16207**	**16207**	**16207**	**16207**	

* For Mixed Use categories include information regarding the estimated minimum and maximum housing density ranges and acres/percentage of residential use.

** Values shown for estimated employees per acre are the anticipated 2030 densities and represent an increase in employment density over the 2008 actual. Over the 2008-2030 time period, steadily increasing employment density estimates are used for each decade to forecast anticipated increase in employment density.

Table 5-4 also contains information on the planned density levels of households and employment per acre. The Metropolitan Council uses this calculation to determine how much of the planned regional growth can be accommodated by a particular community. Development typically occurs at range of densities in a community and therefore, in order to maintain consistent application across the region, the Metropolitan Council directs communities to calculate a community's growth capacity using the lowest density in the planned range. A summary of the Ramsey planned household and employment capacity are in Tables 5-5 and 5-6.

Table 5-5 Planned Household Capacity (2030) (By Sewer District)

North Trott Brook SD

	Min. Density	Net Acres	Household Capacity
Within 2030 MUSA			
Low Density Residential	3	602	1,807
Medium Density Residential	3	18	54
Outside 2030 MUSA			
Rural Residential	0.4	2,626	1,051
Total Household Capacity			2,912

Mississippi River SD

	Min. Density	Net Acres	Household Capacity
Within 2030 MUSA			
Low Density Residential	3	501	1,502
Medium Density Residential	3	157	472
High Density Residential	7	66	465
Mixed Use	10	334	3,337
Outside 2030 MUSA			
Rural Residential	0.4	1,732	693
Total Household Capacity			6,469

Rum River

	Min. Density	Net Acres	Household Capacity
Within 2030 MUSA			
Low Density Residential	3	1,752	5,255
Medium Density Residential	3	164	491
High Density Residential	7	37	256
Outside 2030 MUSA			
Rural Residential	0.4	2,286	914
Total Household Capacity			6,916

Not in a Sewer District

	Min. Density	Net Acres	Household Capacity
Outside 2030 MUSA			
Rural Residential	0.4	0	0
Total Household Capacity			0

TOTAL HOUSEHOLD CAPACITY	16,297

Table 5-6 Planned Employment Capacity (2030) (By Sewer District)

North Trott Brook SD

	Employment Density	Net Acres	Employment Capacity
Within 2030 MUSA			
Commercial	15	5	80
Total Employment Capacity			80

Mississippi River SD

	Employment Density	Net Acres	Employment Capacity
Within 2030 MUSA			
Commercial	15	319	4,783
Industrial/Business Park	8	553	4,421
Office	10	167	1,668
Total Employment Capacity			10,872

Rum River SD

	Employment Density	Net Acres	Employment Capacity
Within 2030 MUSA			
Commercial	15	50	771
Outside 2030 MUSA			
Commercial	15	16	215
Total Employment Capacity			986

Not in a Sewer District

	Employment Density	Net Acres	Employment Capacity
Outside 2030 MUSA			
None	0	0	0
Total Employment Capacity			0

TOTAL EMPLOYMENT CAPACITY	11,938

These planned capacities appear to be in general compliance with the Metropolitan Council's published forecasts of 16,500 households and 11,300 employment by 2030. It should be noted that the density of employment can be highly variable due to the wide range of business and structure types in each commercial and industrial category.

6. Net Density of New Planned Residential Land

The Metropolitan Council requires a calculation of the net density of areas of new *planned* residential development that have changed since the last Comprehensive Plan. They require a minimum density of three units per net developable acre. Net density is calculated by dividing the total number of planned units by the acres of land guided for residential use (minus wetlands and road right-of-way). Table 5-7 shows the net density of the areas guided for a residential land use within the MUSA between 2008 – existing development – and the new 2030 Land Use Plan.

Table 5-7 Net Density of New Planned Residential Land

Land Use Change - 2008 (Existing) to 2030 Plan	Additional Net Acres	Min Density	Total Units	Avg Density
Low Density Residential	1,108	3.0	3,324	3.0
Medium Density Residential	99	3.0	297	3.0
High Density Residential	105	7.0	735	7.0
Mixed Use (Residential portion)	334	10.0	3,340	10.0
Total	**1,646**		7,696	4.7

Note: The City has also been participating in the Metropolitan Council's plat monitoring program. Fr

C. Historic Preservation

Historic preservation is an important element of Ramsey's identity even though there are not many historically significant buildings or sites in Ramsey. In fact the Town Hall is the only building on the National Registrar of Historic Places. However, any time a community is located on a major transportation route such as the Mississippi River, it is bound to be rich with stories and adventures of early settlement. Many of these stories are important because they begin to tell us how Ramsey became the community that it is today.

Although Ramsey does not have a historic preservation district or an official body that responds to issues of historic significance, Anoka County has an active Historical

Society that responds to countywide issues. Located in the City of Anoka, the Anoka County Historical Museum maintains historical materials such as letters, photos, books and legal documents. The Museum is currently short on space and is looking to expand. The Oliver J. Kelly Farm, a Minnesota State Historical site, provides a regional resource for historic information. It also provides a recreational and educational source at its real life living history farm. The site is located approximately 3 miles north of Ramsey along the Mississippi River and is an excellent source of historical information for the City of Ramsey.

Historic Preservation Policy
It is the policy of the City of Ramsey to:

1. Review local building permit applications, site plan proposals and PUDs for historic significance through consultation and communications with the State Historical Preservation Office (SHPO) and the Anoka County Historical Society and other historic preservation resources and agencies.

2. Encourage restoration efforts of historic structures to use compatible building materials and styles to the era of the structure.

3. Promote the use and conservation of historic properties for the education, inspiration, pleasure, and enrichment of the citizens of this community and state.

4. Require future trail development along the Mississippi River, within the MNRRA corridor, to plan for or consider historical markers that explain the significance of the river corridor.

5. Work with federal, state, and local organizations including the Anoka County Historical Society, the State Historic Preservation Office, the Secretary of the Interior and local citizen groups in planning and designing for historic preservation projects.

D. Solar Access Protection

Solar energy provides an alternative means to energy that has less impact on the natural resource base of the world. Use of solar energy reduces the need for fossil fuels and nuclear power to heat or cool our homes and businesses or fuel our automobiles. State legislation enacted in 1978 requires local Comprehensive Plans to address solar access protection to ensure that direct sunlight access to solar panels is not subjected to shading from nearby trees, buildings or other structures.

Policies for Solar Access Protection
It is the policy of the City of Ramsey to:

1. Ensure existing levels of solar access are maintained in developed neighborhoods.

2. Encourage the use of solar energy in future housing developments through such programs as the "Energy House".

3. Ensure future site and building plans maximize efforts to design for efficient use of solar energy including such elements as the location of windows, shade trees (and types), windrows, and driveways.

4. Use where possible solar energy design elements for future public facilities and infrastructure development.

5. Encourage and support educational programs and research that focuses on alternative or renewable energy systems.

6. Work with the League of Minnesota Cities, University of Minnesota Extension Services, Minnesota Office of Environmental Assistance, Anoka County and other agencies to develop programs that increase usage of solar energy systems.