

Rum River Nature Area Management Plan



Prepared in cooperation with the City of Anoka
By
The Anoka Conservation District

Rum River Nature Area Management Plan

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Part I – INTRODUCTION

Foreword

Being one of Minnesota’s most pristine rivers and one of the largest tributaries to the Mississippi River north of the Twin Cities, the Rum River provides an important fish and wildlife corridor as well as many recreational opportunities. Its superb water quality and areas of undeveloped adjacent land earned it a place in the Minnesota’s Wild and Scenic Rivers Program in 1978. The Rum River Nature Area Conservation Easement is one of the last significant areas of undeveloped land along the Rum River before it reaches the Mississippi River (Figure 1). The property consists of approximately 200 acres located in northern Anoka, MN near the intersection of County Highway 116 (Bunker Lake Blvd.) and County Highway 7 (7th Ave NW) and bordering the Rum River. It is comprised of degraded dry oak forest, 9,737 feet of undeveloped river frontage, floodplain forest, several wetlands and an old agricultural field that is no longer being cultivated. Extensive trails are open to public use and provide access points to the Rum River. The property is owned by the City of Anoka and protected by a conservation easement held by the Anoka Conservation District.

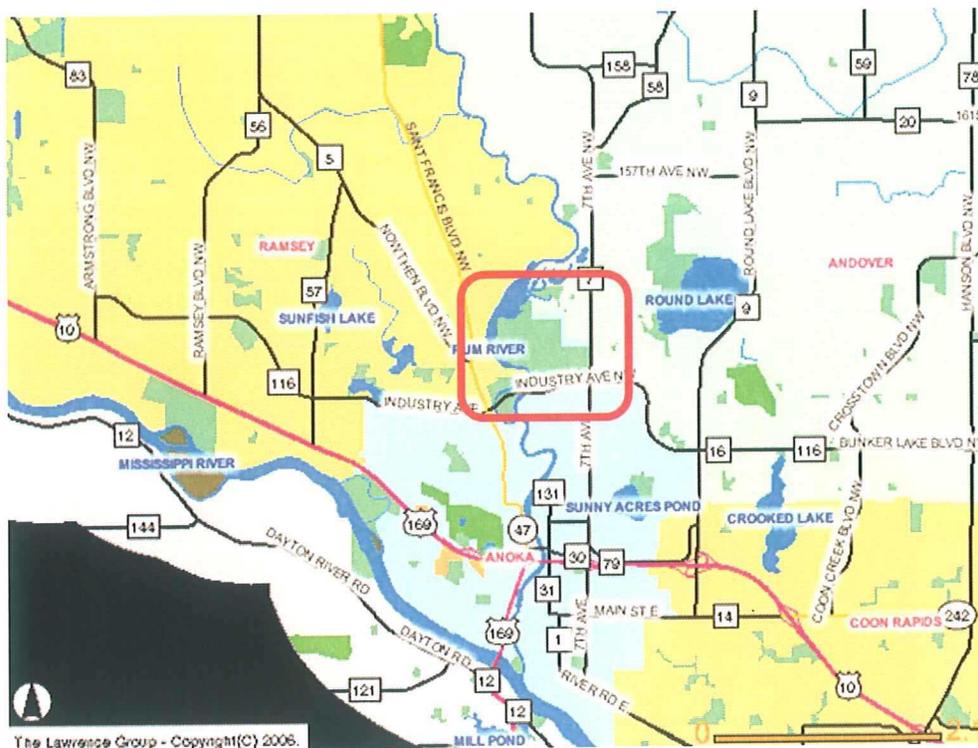


Figure 1. Location of the Rum River Nature Area (circled in red).

Purpose of Management Plan

The purpose of this document is to provide a record of existing conditions and photographic documentation of the property boundary (Appendix B) normally found in a property report, as well as guidelines for future management of the Rum River Nature Area. The management goal is to preserve and protect the natural and recreational features of the property defined by the conservation values found in this document and in the easement document. This plan includes 1) landscape history and current conditions 2) possible impacts to the conservation values and 3) ways to avoid and repair impacts to the conservation values and 4) natural resource management. The management plan works with existing city parks policies (Appendix E) to retain a simple permitting process while informing applicants of their responsibilities when using the property. However, existing city permitting requirements may need to be modified in order to ensure that applicants address how they will prevent natural resource impacts as discussed in appendices C and D. These appendices discuss ways to avoid and repair impacts to the conservation values and should be provided to permit applicants.

Conservation Values

Rum River Nature Area management will focus on the preservation and protection of the site's natural systems, scenic character and value to wildlife. Where public use does not compromise these features, the nature area will provide passive recreation and education opportunities to the public. The following are the conservation values as stated in the conservation easement and are to be protected and managed according to the easement and this management plan:

- *Offers the general public opportunities to experience, appreciate, and learn about the natural environment through low-impact outdoor recreation, educational and permitted activities;*
- *Approximately 9,737 feet of undeveloped river frontage that help protect the water quality of the Rum River from impacts of non-point source pollution and provide habitat for flora and fauna;*
- *Approximately 21 acres of floodplain wetlands providing valuable vegetative and aquatic habitat and also important for the protection and enhancement of water quality in the Rum River;*
- *Approximately 13 acres of floodplain forests that provide habitat and diversity of vegetative species;*
- *Undeveloped vegetated buffers an uplands, including open spaces and significant stands of oak savanna woodland, that provide habitat for flora and fauna and protect the property's wetlands from non-point source pollution impacts that could be associated with future development, or other uses of surrounding land including the Protected Property;*
- *Scenic Views from the Rum River of an undeveloped river frontage and upland, and scenic views to the Rum River from the shoreline and upland areas; and*

- *Historic values of the property from human usage such as its role in logging activity and Work's Progress Administration (WPA) programs.*

The easement property offers great opportunities for recreational and educational uses. Some low-impact activities currently enjoyed by the public are hiking, jogging, cross-country skiing, snowshoeing, bird watching, fishing, swimming, canoeing and kayaking. The education values of the property are appreciated by the public and the Anoka High School which is located just south of the property. The property has several different ecosystem types that provide examples of natural processes and ecological concepts.

Connectivity of habitats is an ecological concept that is crucial to wildlife populations. The protected property provides a variety of habitats that are connected to other important areas along the Rum River. Contributing to a large part of the conservation values, the Rum River is an aquatic resource heavily depended on by flora and fauna. Wetlands, marshes and floodplain forest have diverse plant populations and are excellent habitats for a variety of aquatic and terrestrial wildlife. The wetlands on the property help to improve water quality while the entire property acts as a buffer to the river from non-point source pollution.

Part II – LANDSCAPE HISTORY AND CURRENT CONDITIONS

History

Earliest evidence of human presence on the Rum River Nature Area dates back to the Woodland Time Period (400/200 B.C. – A.D. 1650). There were likely small campsites in the area used for hunting and fishing and would only be occupied seasonally because of flooding from the river (BRW, Inc. 1997). The entire Rum River Basin was utilized by the Dakota Indian Tribe. However, European settlement forced the Ojibwa west and the area became disputed between the two tribes. Eventually the Dakota moved west of the Mississippi River and Anoka became a neutral area (City of Anoka 2008). The large hill on the north side of the field was speculated to be a burial mound, but no archeological or geological evidence that the hill is man-made has been found (BRW, Inc. 1997).

During early European settlement, logging had an impact on the Rum River Basin. In 1820 logging began in the area to support the construction of Fort Snelling. Logs were floated down the Rum River to the Mississippi River. Heavier logging started around 1848 and lasted about 40 years. In 1853 the first dam on the Rum River was built in its current location about a mile and a half downstream of the easement property, and a sawmill was constructed the following year (City of Anoka 2008). Because the Rum River Nature area is near this Anoka dam site and the confluence with the Mississippi River, it has historical significance.

Several different people owned the property that comprises the Rum River Nature Area between 1857 and 1895, and it was mainly used for agriculture. The state of Minnesota purchased the land in 1895 as part of the farm operation for a new state asylum. Built about a mile down the river, the asylum used the property for farming, gardening and exercise as part of their treatment program. Part of the property was also used by the asylum as a dump site (Figure 3) for old dinnerware, cans and medical vials. The section of pine trees on the east side of the woodland is thought to be related to the operations of the asylum or a work relief project effort. Aerial photography dates the plantings between 1938 and 1953, but no documentation has been found linking the trees to their source (BRW, Inc. 1997).

The property was purchased from the state of Minnesota by the City of Anoka in 1971 through a Federal Housing and Urban Development open space grant, and the land was designated as “public open space.” The grant program ended on January 1, 1995 and the “public open space” designation was removed. For years the City of Anoka debated selling parcels of the land for development to meet the demands of urban sprawl. In 1999, 11 acres of the land was dedicated to the Anoka County Library Board and the Rum River Library was built. In October, 2007, the City of Anoka donated a conservation easement to the Anoka Conservation District that covered approximately 200 acres of the property owned by the city, protecting it from development.

Existing Land Conditions

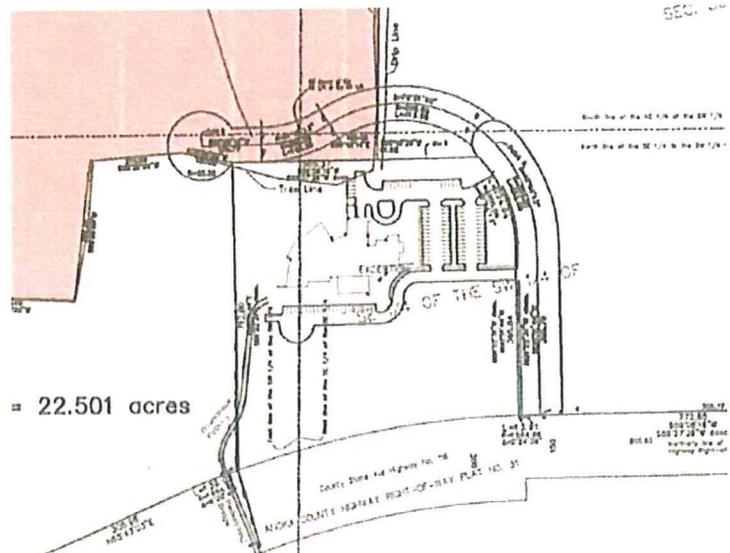
Property Uses

Currently the property is open to the public. Its extensive trails and river access (Map 1) make it a popular location for recreational activities such as hiking, jogging, cross-country skiing, snowshoeing, bird watching, fishing, swimming, canoeing and kayaking. It is also a valuable resource for Anoka High School, which is located across county highway 116 to the south. Teachers and students use the property as a natural history laboratory for ecological studies. High school students also use the property for recreational purposes.

Rights-of-Way

There is an ingress/egress and drainage and utility easement located in the southeast corner of the property (Figure 2, also noted in Appendix A).

Figure 2. Ingress/egress and drainage and utility easement. Map excerpt from Property Description Sketch by Hakanson Anderson Assoc., Inc.



Structures and Improvements

There are currently no structures on the property. The nearest structure is the Rum River Library located off of the southeast corner of the property.

Boundary or Neighbor Issues

The northeast portion of the property is bordered by residential development. Dumping of yard waste and other trash are potential risks to the aesthetic values of the property, and the area should be monitored closely for encroachment.

Contamination

One area of recorded contamination exists on the site (Figure 3). In the southwest floodplain area, ceramic plates, glass, metal cans, medicinal vials, scrap and building materials were found during a Phase I Cultural Resources Survey. The dumpsite was linked to the state hospital located about a mile south of the property (BRW, Inc. 1997). Further investigation of potential hazards from this site as well as a cleanup strategy should be included in any future park development plan.

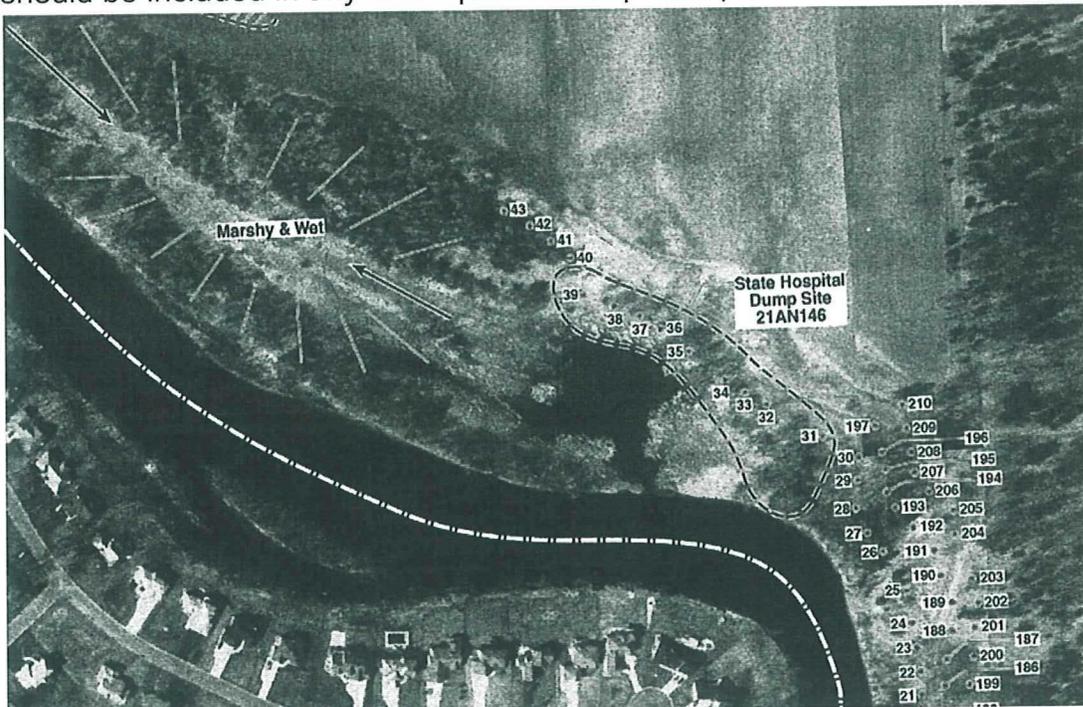


Figure 3. Location of State Hospital dump site. Map excerpt from Phase I Cultural Resources Survey (BRW, Inc. 1997).

Landscape Features/Site Inventory

Trails

None of the trails on the property are official, installed or maintained by the city, but rather exist solely due to extensive use. Trails can be found throughout the property and provide recreation opportunities for the public as well as access to the river (Map 1). One river access point is found on the south-central edge of the property at the end of a main trail. Another main trail winds through the woodland and meets the river at

the north end of the property. Extensive trails in the woodland provide the public with the opportunity to see a variety of plants and wildlife while a trail that borders the field allows people to experience open space.

Topography

Topography of the property is of generally low relief with elevations ranging from 840-890 feet (Map 2). There is a steep hill on the north side of the field that rises about 30 feet above the surrounding ground. The riverbank along the northern border of the property is also fairly steep. The highest points on the property can be found in the woodland and are reached by gradual slopes. Areas along and approaching the Rum River on the southwest and northern border of the property have the steepest slopes.

Soils

The Rum River Nature Area is located on the Anoka sand plain, making most of its soils sandy in nature. Upland areas are dominated by Nymore and Hubbard soils (Map 3). Soils with a higher silt composition such as Dalbo and Becker as well as Alluvial soils can be found in areas near the river.

Land Cover

Land cover was determined from the Minnesota Land Cover Classification System (MLCCS) records compiled by the Anoka Conservation District at an earlier date (Map 4). The majority of the eastern and northern woodland is classified as oak forest-dry subtype. Altered/non-native mixed woodland comprises the next largest area of woodland. There are two areas on the east side of the property classified as upland soils with planted, cultivated or maintained coniferous trees. These trees and their possible origins are discussed in the property history. The open field is classified as upland soils with close grown cropland and has a history of agricultural use, though currently it is not being cultivated. The wetlands found in the woodland and on the north side of the field were not mapped during the inventory process because they are smaller than the 2.5 acre minimum, but are addressed in the next section. Along the river on the south side of the property where soils are more saturated, floodplain forest and mixed emergent marsh dominate land cover.

Wetlands

There are four wetlands on the property that have no surface connectivity to the Rum River (Map 5). The largest of these wetlands is located near the north-east corner of the field. It is a palustrine wetland with emergent vegetation. It can have surface water early in the growing season, but will normally be dry at the surface. The three other wetlands are small depressions located in the woodland. They are surrounded by large deciduous trees and rarely have surface water, though the soil may be saturated for extended periods. The largest wetland area on the property is directly adjacent to the Rum River. Water levels in the river are influenced by the dam downstream. Boards are added to the dam in the summer to maintain a higher water level, and removed in the fall through spring high water time. Fluctuating water levels affect the seasonally and semi-permanently flooded emergent wetland along the river on the southwest side

of the property as well as the seasonally flooded scrub-shrub and deciduous floodplain forest also found in this area.

Resource Issues and Concerns

Invasive Species

Invasive plants can be found throughout the property and seem to be spreading generally from the southeast to the northwest (Map 6). Invasive common buckthorn (*Rhamnus cathartica*), prickly ash (*Zanthoxylum americanum*) and tartarian honeysuckle (*Lonicera tatarica*) have established over a significant portion of the southern half of the woodland. Prickly ash is found extensively along the property border (excluding along the river), trails and in areas without significant canopy cover. Honeysuckle is denser along woodland edges, especially on the southern border and on the eastern border of the field. Large clusters of honeysuckle are abundant along trail corridors in the southern half of the woodland but diminish as you move north. Buckthorn is found throughout the woodland, especially along trails and woodland borders where prickly ash is sparse. Cedars and dense stands of red oak seem to reduce the abundance of these species, likely due to the reduction of sunlight that reaches the woodland floor.

From the north border of the field and continuing up to the river, invasive species are less abundant. The invasive plants present are very young, suggesting they have been spreading north from the older, denser infestations in the south. A moderate infestation zone is apparent between these two areas where some portions are heavily infested and others are relatively clear.

Canada thistle (*Cirsium arvense*) and spotted knapweed (*Centaurea maculosa*) can be found in the field, and smooth brome grass (*Bromus inermis*) has spread around the edges of the field. Reed canary grass (*Phalaris arundinacea*) is present around the wetland in the north end of the field, in the floodplain forest just south of the field and in other areas along the Rum River.

Trail and River Erosion

Monitoring the site for trail and river erosion should be a priority in the management of the Rum River Nature Area. Erosion issues are not only hazardous to public safety, but may also result in sediment washing into the river, negatively effecting water quality. Trail sections with steep slopes, such as on the hill in the field, should be monitored for public safety issues. If such issues should arise, restricting public access or repairing the problem through trail stabilization projects should be pursued.

The two main areas where trail erosion could affect water quality are where the main trails provide river access on the south and north sides of the property. Steep slopes and heavy public use on the south river access point accelerate erosion problems by reducing infiltration rates and soil-stabilizing plant root structures. Though steep slopes are not as much of a factor on the north access point, heavy public use has reduced the amount of vegetation on the riverbank, leaving bare soil exposed to the river. Sediment

washed away from these areas flows directly into the river and can negatively impact water quality.

Ecologically Sensitive Areas

Several areas on the property should be considered ecologically sensitive (Map 7). These areas either have diverse populations of plants or are important areas in the life cycle of animals. Public use should be monitored or restricted to best protect the quality of these areas. The entire northern and western borders of the property are considered sensitive because they border the Rum River. One reason the Rum River is listed as a Wild and Scenic river by the DNR is because of its outstanding water quality. Since the property provides direct access to the river, there is an inherent risk imposed to the waterway by public use. Excessive use along the riverbank can cause bank instability and erosion issues that could negatively affect water quality and should be monitored closely.

The floodplain forest and emergent marsh on the south side of the field is another ecologically sensitive area. Not only is it directly connected to the river, but it hosts a variety of sensitive wetland plants. It is also valuable habitat to a lot of aquatic and terrestrial wildlife including fish, amphibians, birds, insects and small mammals. Threatened Blanding's Turtles have been seen in the area, and the floodplain forest provides ideal habitat for them.

Wetlands are usually considered ecologically sensitive. The woodland wetlands are dry for most of the year and aren't crossed by any trails, limiting the risk of damage from low-impact public use. The larger wetland on the north side of the field, though it is degraded, should be considered sensitive because it can have standing water for periods of time. Standing water is excellent breeding grounds for insects and amphibians and the surrounding vegetation provides shelter for other animals. This area should be monitored closely for damage from public use.

Part III – IMPACTS TO CONSERVATION VALUES

This section describes possible ways park users can negatively impact the conservation values. Park use should be monitored periodically to identify impacts. Methods of avoiding and repairing impacts can be found in appendices C and D.

Introduction of Invasive Species

A heavy emphasis is placed on plant diversity and habitat for flora and fauna by the conservation values of the Rum River Nature Area, and the introduction of invasive species can greatly impair those values. Invasive species are usually generalists, meaning they have the ability to survive and consume a variety of resources that other more sensitive species rely on. As invasive species spread, they choke out the sensitive species, reducing plant diversity and diminishing wildlife habitat quality.

Trash and Animal Waste

Scenic, recreational and water quality conservation values can all be impacted by the mismanagement of garbage and animal waste. In addition to pathogens, animal waste such as horse manure has the potential to transport invasive species seed onto the property. Trash and animal waste brought into the property should be disposed of off-site.

Vegetation Disturbance

Almost all of the Rum River Nature Area is covered with some kind of vegetation that provides food or shelter to wildlife and stabilizes soil. As the conservation values highlight, vegetation on the property provides habitat to wildlife and a buffer to the Rum River from non-point source pollution. Disturbing vegetation can lead to erosion problems and opens spaces for invasive species to move in. Unless it is part of an approved restoration plan, disturbing vegetation on the property should be avoided. See appendix C for more information on reducing vegetation impacts.

Land Disturbance

Any land disturbance on the property can impact the conservation values. If there is a planned disturbance, such as grading, the City of Anoka codes and permit process must be followed.

Part IV – NATURAL RESOURCE MANAGEMENT

All planned natural resource management activities must get written authorization from the Anoka Conservation District and the City of Anoka and comply with the city's permit process.

Forest and Vegetation Management

Timber Removal

Wood may only be harvested from the property if it is deemed a public safety hazard, or if it is part of an approved ecological restoration plan.

Species Management

Removal of invasive species and the introduction of desirable species are permitted as part of an approved restoration plan. Species should be selected that are native to the area and are adapted to the soils, moisture and sunlight characteristics of the planting area.

Erosion Control

Trail Erosion

Trails should be managed in a way that prevents erosion and degradation. If problems occur that could affect public safety or impact the conservation values, proper measures should be taken to repair those problems. See Appendix C and D for more information on how to avoid and repair trail issues.

Riverbank Erosion

If riverbank erosion becomes an issue such that the conservation values are impacted, the problem should be repaired in a way that maintains the scenic values of the riverbank and protects water quality. This could include a vegetative riverbank stabilization project, or simply limiting public access to the impaired area to prevent further degradation.

Ecological Restoration Activities

Restoration activities are permitted only with a restoration plan that has been approved by the property owner and easement holder. Restoration plans should include but are not limited to the following:

1. Site Preparation

Ecological restoration sites need to be prepared properly in order to be successful. Undesirable invasive species should be removed in a manner that best preserves any present desirable species and erosion control measures should be completed in any areas with exposed soils.

2. Species Selection

Plant species that are to be part of a restoration plan must be non-invasive and adapted to site conditions. They should be selected to suite the desired land cover type as well as the present soils, moisture and available sunlight.

3. Vegetation Establishment

Proper measures must be taken to aid in the establishment of introduced plant species. Any seeding should be done during the specific planting period of the seed being used as well as employ installation and maintenance methods that optimize germination and plant growth (see Appendix D).

4. Maintenance

Other measures may need to be taken to aid in the establishment of, or to protect a successful project. Periodic mowing, burning, spot weed and brush control and reseeded in unsuccessful areas may be required. Possible management of deer or other animals to help achieve vegetation goals may also be required.

Potential Projects

There are several potential restoration projects that could be completed on the property. These projects could be accomplished by volunteer groups and funded through grants. All restoration projects must follow permit requirements and receive approval from the property owner and easement holder. The following restoration projects are merely concepts, and a detailed restoration plan must be completed and approved before projects can begin.

1. Buckthorn and exotic honeysuckle removal

Buckthorn and honeysuckle are two undesirable invasive species found on the property. Removal of these species could promote the regeneration of native plants and acts as a step in improving the quality of the woodland. A recommended process of removing these species involves starting where invasive species density is lowest and eradicating them from those areas (see Map 6). This method will generally eliminate the youngest plants and prevents the species from establishing a seed bank. Once a “front” has been established, efforts can be made to push it back, expanding the treated area. This will require many hours of work over many years as new plants sprout from the present seed bank.

2. Savanna thinning

Several decades ago, the present woodland areas were likely oak savanna. Significant thinning, including the removal of invasive species, would need to be done in order to restore it to savanna. This would involve selective tree and shrub removal.

3. Field restoration to prairie

Restoring the field to a native prairie could be accomplished a number of ways. The process that needs to happen involves disturbing the soil and removing the present vegetation through mowing, herbicide or controlled burn. This would have to happen several times to exhaust the seed bank of undesirable species. One possible way of accomplishing this normally expensive process would be to lease the land out for agricultural use. Light farming is an excellent method of site preparation as the farmer disturbs the soil and removes undesirable species. A few years of these activities could provide excellent site prep at very little cost. A crop like wheat would act as the cover crop for a prairie restoration project, and as part of the lease, the farmer could be required to seed the field with a native prairie mix before he leaves, eliminating the need for expensive equipment.

Conclusion

This document is meant to serve as a report of current conditions and a plan for management of the natural resources on the property. Any alterations, variations or modifications of this management plan shall be valid only when they have been reduced to writing and approved by the City of Anoka and the Anoka Conservation District. The guidelines presented here and in the appendices should be reviewed periodically and

modified as necessary to ensure proper management practices take place. Additional reviews may be necessary if restoration activities or other alterations to the property occur.

References

City of Anoka. 2008. Official City of Anoka Website [Online]. Available:
www.ci.anoka.mn.us

BRW, Inc. 1997. *A Phase I Cultural Resources Survey, for the North Pointe Project*. City of Anoka, Anoka County, Minnesota. OSA #97-047-C, BRW Report Number 97-04.

APPENDIX A

Legal Description of Property and Property Sketch

Legal Description

Government Lot 1 and that part of Government Lot 2, Section 25, Township 32, Range 25, Anoka County, Minnesota lying northerly of ANOKA COUNTY HIGHWAY RIGHT-OF-WAY PLAT NO. 31 said Anoka County and also lying westerly of the following described line its extensions:

Commencing at the intersection of the north line of said ANOKA COUNTY HIGHWAY RIGHT-OF-WAY PLAT NO. 31 and the east line of said Government Lot 2; thence North 89 degrees 30 minutes 08 degrees West, assumed bearing, along the said north line of ANOKA COUNTY HIGHWAY RIGHT-OF-WAY PLAT NO. 31, a distance of 134.21 feet and the point of beginning of the line to be described; thence North 02 degrees 53 minutes 41 seconds East a distance of 22.31 feet; thence North 24 degrees 56 minutes 04 seconds East a distance of 103.21 feet; thence North 09 degrees 29 minutes 10 seconds East a distance of 164.58 feet; thence North 16 degrees 38 minutes 03 seconds East a distance of 226.71 feet to said east line of Section 25 and said line there terminating.

AND

The Southwest Quarter of the Northwest Quarter of Section 30, Township 32, Range 24, Anoka County, Minnesota.

AND

The Northwest Quarter of the Southwest Quarter of Section 30, Township 32, Range 24, Anoka County, Minnesota.

AND

That part of the Northeast Quarter of the Southwest Quarter of Section 30, Township 32, Range 24, Anoka County, Minnesota lying westerly of the following described line and its extensions:

Commencing at the Southwest Corner of said Northeast Quarter of the Southwest Quarter; thence on an assumed bearing of North 89 degrees 43 minutes 14 seconds East, along the south line of said Northeast Quarter of the Southwest Quarter, a distance of 180.00 feet to the point of beginning of the line to be described; thence North 00 degrees 45 minutes 26 seconds East a distance of 1175.00 feet; thence North 30 degrees 00 minutes 00 seconds West a distance of 163.00 feet to the north line of said Northeast Quarter of the Southwest Quarter and there terminating.

AND

That part of the Southeast Quarter of the Southwest Quarter of Section 30, Township 32, Range 24, Anoka County, Minnesota lying northerly of the to be described "Line X" and also lying westerly of the following described line and its extensions:

Commencing at the Northwest Corner of said Southeast Quarter of the Southwest Quarter; thence on an assumed bearing of North 89 degrees 43 minutes 14 seconds East, along the north line of said Southeast Quarter of the Southwest Quarter, a distance of 180.00 feet to the point of beginning of the line to be described; thence South 00 degrees 45 minutes 26 seconds West a distance of 61.92 feet to the intersection with said "Line X" and said described line there terminating.

"Line X" is described as commencing at the Southeast Corner of said Southwest Quarter; thence on an assumed bearing of North 00 degrees 00 minutes 03 seconds West, along the east line of said Southwest Quarter, a distance of 668.74 feet to the intersection with the northerly right-of-way line of ANOKA COUNTY HIGHWAY RIGHT-OF-WAY PLAT NO. 31, said Anoka County, Minnesota; thence South 88 degrees 37 minutes 29 seconds West, along said right-of-way line, a distance of 805.93 feet; thence westerly, along said right-of-way line, along a tangential curve concave to the south, said curve having a radius of 1984.86 feet and central angle of 00 degrees 24 minutes 06 seconds, a distance of 13.91 feet to the point of beginning; thence North 01 degree 22 minutes 31 seconds West, not tangent to said curve, a distance of 395.84 feet; thence northwesterly along a tangential curve concave to the southwest, said curve having a radius of 300.00 feet and central angle of 42 degrees 54 minutes 13 seconds, for a distance of 224.64 feet to the point of beginning of said "Line X"; thence South 88 degrees 37 minutes 29 seconds West, not tangent to last described curve, for a distance of 565.37 feet and said "Line X" there terminating.

AND

That part of the Southwest Quarter of the Southwest Quarter of Section 30, Township 32, Range 24, Anoka County, Minnesota lying northerly and westerly of the following described line and its extensions:

Beginning at the point of beginning of the aforescribed "Line X"; thence on a bearing of South 89 degrees 08 minutes 16 seconds West, along said "Line X" a distance of 565.37 feet; thence North 78 degrees 36 minutes 00 seconds West a distance of 120.00 feet; thence South 85 degrees 20 minutes 00 seconds West a distance of 210.00 feet; thence South 06 degrees 35 minutes 00 seconds West a distance of 325.00 feet; thence North 88 degrees 04 minutes 00 seconds West a distance of 290.00 feet; thence North 84 degrees 54 minutes 00 seconds West a distance of 618.00 feet; thence South 08 degrees 49 minutes 00 seconds West a distance of 177.43 feet; thence South 16 degrees 38 minutes 03 seconds West a distance of 136.36 feet to the west line of said Southwest Quarter of the Southwest Quarter and said line there terminating.

DESCRIPTION OF INGRESS/EGRESS AND DRAINAGE AND UTILITY EASEMENT

A permanent 80.00 foot easement for ingress/egress and drainage and utility purposes over, under and across the Southwest Quarter of Section 30, Township 32, Range 24, Anoka County, Minnesota.

The centerline of said easement is described as follows:

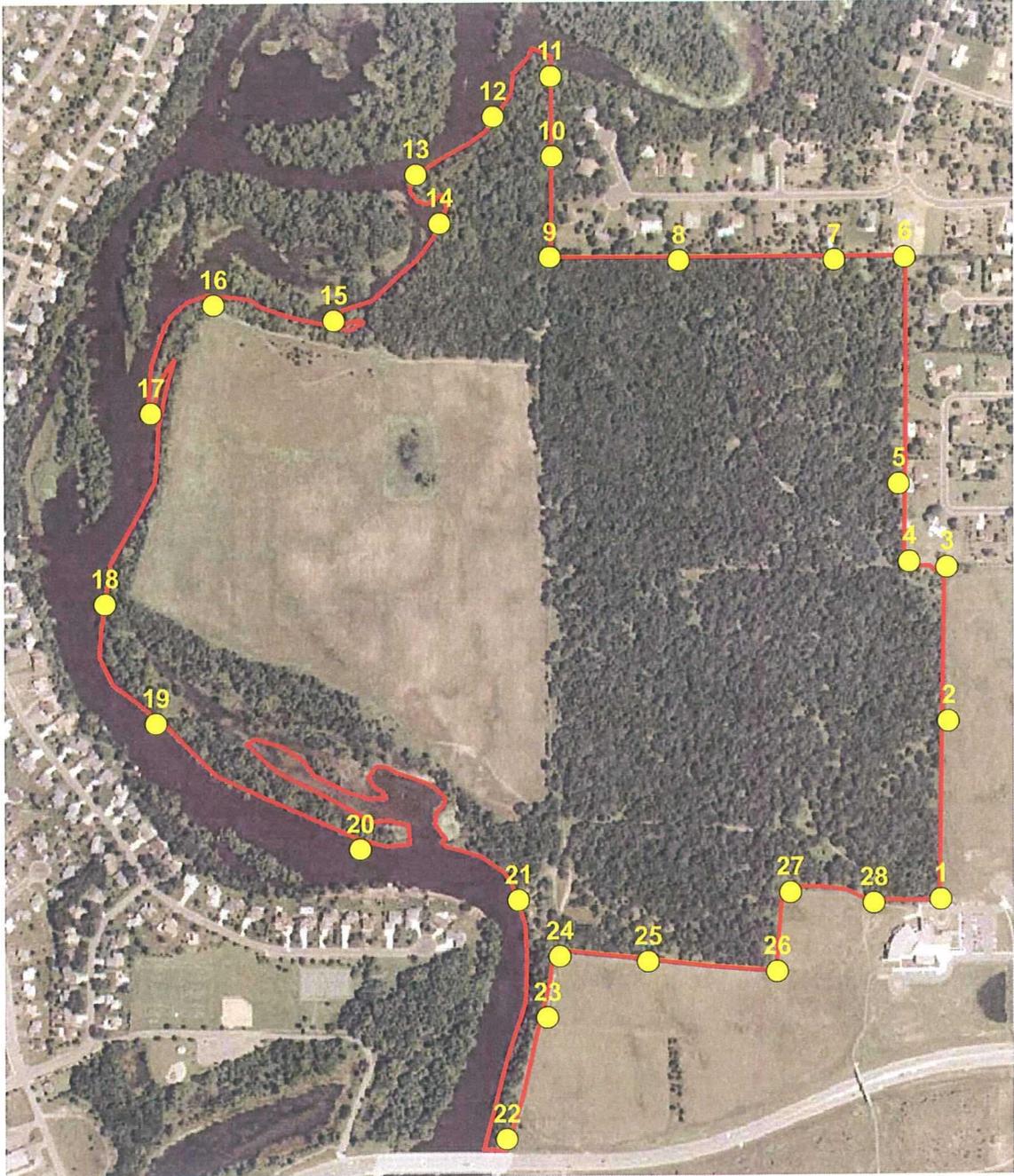
Commencing at the Southeast Corner of said Southwest Quarter; thence on an assumed bearing of North 00 degrees 30 minutes 49 seconds East, along the east line of said Southwest Quarter, a distance of 668.74 feet to the intersection with the northerly right-of-way line of ANOKA COUNTY HIGHWAY RIGHT-OF-WAY PLAT NO. 31, said Anoka County, Minnesota; thence South 89 degrees 08 minutes 16 seconds West, along said right-of-way line, a distance of 769.77 feet; thence North 00 degree 51 minutes 44 seconds West a distance of 395.79 feet; thence northwesterly along a tangential curve concave to the southwest said curve having a radius of 350.00 feet and a central angle of 42 degrees 54 minutes 13 seconds for a distance of 262.08 feet to a point of beginning of the centerline to be described; thence northwesterly on a compound curve, said curve having a radius of 300.00 feet and central angle of 78 degrees 51 minutes 00 seconds for a distance of 412.86 feet; thence westerly, along a reverse curve concave to the north, said reverse curve having a radius of 300.00 feet and central angle of 31 degrees 45 minutes 13 seconds for a distance of 166.26 feet; thence South 89 degrees 08 minutes 16 seconds West, tangent to said reverse curve, a distance of 135.77 feet to a point hereinafter referred to as "Point B" and said centerline there terminating.

AND

A permanent easement for ingress/egress and drainage and utility purposes over, under and across said Southwest Quarter of Section 30, Township 32, Range 24, Anoka County, Minnesota lying within the circumference of a circle with a radius of 80.00 feet. The center of said circle is the aforescribed "Point B".

APPENDIX B

Property Border Photo Journal



— Property Border

● Photo Point

Map Point 1



West



North

Map Point 2



South



North

Map Point 3



South



West

Map Point 4



East



North

Map Point 5



South



North

Map Point 6



South



West

Map Point 7



East



West

Map Point 8



East



West

Map Point 9



East



North

Map Point 10



South



North

Map Point 11



South



West

Map Point 12



Northeast



Southwest

Map Point 13



Northeast



South

Map Point 14



North



Southwest

Map Point 15



Northeast



West

Map Point 16



East



South

Map Point 17



North



South

Map Point 18



Northeast



Southwest

Map Point 19



Northwest



Southeast

Map Point 20



Northwest



Southeast

Map Point 21



Northwest



South

Map Point 22



West



North

Map Point 23



South



North

Map Point 24



South



East

Map Point 25



West



East

Map Point 26



East



South

Map Point 27



North

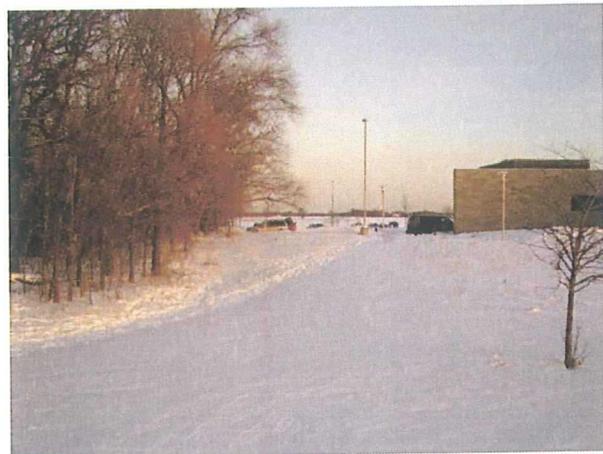


East

Map Point 28



West



East

APPENDIX C

GUIDELINES TO MINIMIZE IMPACTS

Trail Impacts

Trails play an important role in providing public access to the Rum River Nature Area. Special attention must be paid to the trails in order for them to continue to provide safe passage into the area. Low-impact recreation activities including hiking, jogging, cross-country skiing, snowshoeing, bird watching, fishing, swimming, canoeing and kayaking are activities that have a reduced impact on trail condition. Trails are often impacted by erosion and steep slopes due to improper use. In order to prevent these issues, the following guidelines have been established:

- Motorized vehicles are not allowed on the property without permission from the City of Anoka and the Anoka Conservation District
- Large organized groups participating in low-impact recreational activities should avoid areas of trail with steep slopes or apparent erosion problems because these events could amplify the problem.
- When possible, have groups split up and use several different trails to minimize the impact on any single trail.
- Inform and supervise participants to help reduce the impact on the trails.

River Impacts

The exceptional water quality of the Rum River is a tremendous resource to the Rum River Nature Area. Rivers can also be dangerous if you are careless. Rivers have naturally steep slopes and unstable banks due to high water levels and fast currents. This can lead to safety hazards as well as erosion and water quality issues if the banks are significantly disturbed. To avoid this problem, and to promote safety along the riverbank, it is recommended that you:

- Stand several feet from the river bank when fishing or viewing the river.
- Limit use of vegetated river bank areas to protect the plants that hold soil in place.
- Try to restrict river use to the two existing access points.

Waste Impacts

Currently there are no garbage cans on the property so be prepared to carry out any trash you bring to the property. Bottles, wrappers and other trash impact the scenic value of the area. The following guidelines are designed to protect water quality, wildlife and safety within the Rum River Nature Area:

- Bring a garbage bag if you are going to have trash.
- Any hazardous materials are strongly discouraged from the nature area. Items like batteries that are carelessly discarded can have long-term environmental impacts.
- Glass containers are also not recommended in the area. A lot of people use the area for recreational activities and broken glass is very dangerous.
- Picking up what less considerate people leave behind is also appreciated!

Vegetation Impacts

Vegetation provides food and habitat for wildlife and is crucial in stabilizing soils. Steep slopes and riverbanks are prone to erosion problems without adequate vegetation and root systems to hold soil in place. Follow these tips to help preserve the vegetation on the property:

- Keep activities on the existing trails to protect surrounding vegetation from disturbances.
- Avoid damaging native vegetation. Damage exposes soil and provides an area for invasive species to move in. Invasive plants can greatly reduce habitat quality and scenic values.
- Creating new trails is not recommended. Currently there are plenty of trails on the property that allow visitors to see the entire area. Any additional trails would not provide any recreational benefit, and would damage existing vegetation.
- Structures are not to be put on the property without permission from the City of Anoka. When permitted, structures on the property for an extended period of time should be moved frequently to reduce the impacts on vegetation. Plants are easily scorched and trampled when covered and walked on during warm weather. Reducing their exposure to the sun for long periods of time is also harmful. If a structure is allowed on the property, it is recommended that it gets moved every 24-48 hours to minimize impacts to vegetation. If the weather is especially sunny and hot, moving the structure every 24 hours is best.

Vehicle Impacts

Motorized vehicles are not allowed on the property without permission from the City of Anoka. Vehicles compact soils and damage plant life. Temporary vehicle access for setup of approved events may be permitted.

- If there is an approved event that requires long-term parking, parking should be off-site.
- Parking is available at the Rum River Library adjacent to the Nature Area as well as at Anoka High School across the foot-bridge.

APPENDIX D

STANDARDS FOR REPAIRING IMPACTS

The following recommendations are intended to provide general guidance for repairing damage to trails, riverbanks and vegetation. Please follow the guidelines in Appendix C to prevent or minimize impacts. Planting plans should be prepared by the applicant and reviewed by the easement holder prior to implementation.

Repairing Trail Impacts:

Most trail issues will result from excessive use in a short period of time, or by using the trails for activities other than low-impact recreation. If trail damage occurs, the following steps should be taken to repair the area:

- Use a stable tread material that can be compacted to reduce displacement and erosion. A loam soil mixed with rocky material (e.g. crushed stone) is ideal.
- Trail should be compacted and graded to drain water off of the trail to an area lower than the tread.
- Monitor and perform routine light maintenance to promote stabilization.

Repairing River Impacts:

It is strongly recommended to follow the recommendations in Appendix C to prevent river impacts. Repairing damage done to the banks of the Rum River such as erosion or bank sloughing is beyond the scope of this document. Bank stabilization projects often require engineers, special equipment and can cost thousands of dollars (roughly \$100/linear foot) to complete.

Repairing Impacts to Vegetation:

Vegetation impacts can occur anywhere on the property. It is best to avoid these impacts, but if they do occur, the following procedure will help to restore vegetation.

Planting can be done by seeding or planting live stock. Seed can be broadcast or drilled into the soil. Live stock can be in the form of plugs, clippings, live stakes, bare root, or container plants and can vary in size from very small seedlings to large trees. Due to the cost to purchase and install live stock, seed is often used for large areas. Small areas can be planted with live stock, which reduces long term maintenance issues. Only broadcast seeding is described in this document since it is the most likely method to be employed, but it may not be the optimal approach for all cases.

Broadcast Seeding:

Broadcast seeding is the scattering of seed over the soil surface. **It is essential that steps be taken to ensure good seed to soil contact when broadcast seeding.** To ensure good seed germination, broadcast seeding may not be desirable if the weather is hot and dry, and/or the soil moisture is low. Do not broadcast seed on a windy day. Good site preparation will avoid many problems, so it is important not to rush through it.

The season of planting for native grass and forbs mixtures runs from spring to early summer and from fall until the ground freezes.

1) Site Preparation

To reduce potential weed competition, the area can be lightly watered to germinate any existing weed seeds. The newly germinated seeds can then be killed through smothering (cover the area in black plastic for at least 6 weeks), cultivating, or herbiciding with a glyphosate (such as Round-up) or a combination of these. If weeds are already present, they should be removed or treated before watering. Be sure to wait at least a week before seeding, and consult a professional before using any chemicals near water. If weeds persist several treatments may be required before the site is ready. When the vegetation is dead, the top inch of soil should be loosened and smoothed by raking it lightly. Too much disturbance may result in exposing additional weed seeds.

2) Seeding

Native Grass and Forbs Mixes - These seed mixes consist of a diverse mixture of warm-season native grasses, cool-season native grasses, and native forbs (wildflowers). Diverse plantings are more resistant to drought, floods, and pathogens than monotypic, or low diversity plantings, and provide the greatest benefit to wildlife. Cool-season native grasses tend to establish quickly and will decrease over time on sites where warm-season species would normally dominate. Warm-season native grasses tend to be slower to establish, but are extremely hardy and long-lived. Warm-season grasses also tend to stay standing over the winter and provide the best snow filtering capabilities and wildlife habitat. In addition to planting a large diversity of species, we recommend using local ecotype plant materials. Seeding only with grasses will facilitate weed control with a broadleaf herbicide. Once grasses are well established, forbs can be added.

- Because native seeds vary in size and weight it is best to mix them with an inert material for broadcasting. Slightly moistened sand, sawdust, or peat-moss (at a one to one ratio) will stick to the seeds resulting in a more even spread, make seeded areas more visible, and help extend small amounts of seed.
- Divide the seed into two parts. Broadcast the first half of the seed over the entire area while walking in one direction (e.g. north-south), at the rate specified by the seed mix.
- Broadcast the second half walking perpendicular (e.g. east-west) to your first pass. This will ensure even coverage and you won't run out of seed before you get the whole area seeded.
- If you are seeding a large area you may want to break it up into small sections.

Cover/Nurse Crops – Annual or short term cover crops are used to establish a quick, temporary cover for soils to reduce competition from weeds and reduce erosion while the slower germinating grasses and forbs are taking hold. ReGreen (a hybrid

cross between slender wheat grass and winter wheat) provides excellent temporary cover.

3) Raking

The site should be lightly raked following seeding to ensure good seed to soil contact.

4) Packing

The site should be firmly packed following raking. Walk over the area, drag a heavy roller or culti-packer over the area, or any method that works well for you. After proper packing, the seedbed should barely show footprints when walked on.

5) Fertilizer

Fertilizers are not usually needed for native grass and forbs plantings. Most soils already contain a sufficient amount of nitrogen, phosphorus, and potassium for the native grasses and forbs to establish. In the case of planting in infertile soils, it is recommended that a soil test be taken to determine any deficiencies in the soil. Adding nutrients when not needed may lead to excessive weed growth.

6) Mulch

Temporary Erosion Control - It is usually a good idea to protect a new seeding by covering it with straw mulch or an erosion control blanket of some kind. In general, slopes that are 3:1 and gentler should be mulched with weed free straw mulch following seeding. Mulching should attempt to cover 90% of the exposed soil surface. This generally requires about 2 tons per acre of straw mulch or 100 lbs. per 1,000 square feet, which is about three square straw bales. NOTE: Mulches derived from pasture hay containing reed canary grass, smooth brome and other introduced forage species may contain enough seed of those species to ruin the native grass and forbs planting.

On slopes that are steeper than 3:1 it is recommended that the seeding be covered with an erosion-control blanket (composed of straw or wood-fiber, held together by photodegradable or biodegradable netting, and held in place by biodegradable stakes). Straw or wood-fiber erosion-control blankets will last up to 10 months.

If seeding is being done in a ditch or swale that will receive moderate water flows for periods of time, it is recommended that a straw/coconut blanket be used to cover it, which will last up to 24 months. Also, consider utilizing a series of "check dams" to slow the flow of water and reduce the chance for flushing seed away. Check dams can consist of wood-fiber sediment logs, placed perpendicular to the water flow and staked to the ground

7) Watering

Spring and summer seedings benefit from regular watering the first 4-6 weeks. Always water in the early morning, every other day for about half an hour.

Early Maintenance & Evaluation of Native Grass/Forb Plantings:

Native perennial wildflowers and grasses tend to grow slowly and weeds such as thistles, foxtail, crabgrass, and witchgrass may become a problem the first several years. By following a simple maintenance routine you can help ensure the success of your planting.

Year 1

Establishment (spring seeding):

- Site preparation should occur from late April to May.
- Seeding should be done May 1 - July 1.

Establishment (fall seeding):

- Site preparation should occur from late August - early September.
- Seeding should be done from late September to freeze-up.

Maintenance:

- Mow periodically to 6 inches unless the native plants are taller than 12 inches to prevent weed seeds from maturing. Most native plants will not be taller than about 6 inches the first year. Mowing may be needed only once, or several times depending on temperature and rain fall to prevent weeds from flowering and producing seed.
- Weed Control - mowing should keep annual weeds down. Spot spray or hand-pull thistles and other problem species.

Evaluation:

- Cover crop growing within 2 weeks of planting.
- Native grass seedlings may only be 4-6 inches tall by end of first growing season.
- If there is a flush of growth from foxtail etc., mow more often.

Year 2

Maintenance:

- Mow as indicated above.
- Weed Control - mowing should keep annual weeds down. Spot spray or hand-pull thistles etc.
- Some sites may not require much maintenance the second year.

Evaluation:

- Cover crop will be gone.
- Some flowers should be blooming (black-eyed susans, bergamot etc.).
- If there is a flush of growth from foxtail etc., mow more often.

Year 3

Maintenance:

- Mow only if necessary (excessive weed growth).
- Weed Control - Spot spray or hand-pull thistles, etc.
- Sites usually do not require much maintenance the third year.

Evaluation:

- Planting should begin looking like a prairie - tall grasses, flowers etc.

APPENDIX E

CITY OF ANOKA POLICY FOR UTILIZATION OF PROTECTED PROPERTY IN THE CONSERVATION EASEMENT

The city of Anoka has provided this protected property to be enjoyed and experienced by all city residents and the general public. The use of this property is managed by the City of Anoka Parks and Recreation Department to ensure the preservation of the conservation values of the protected property as recommended by the Parks and Recreation Advisory Board and established by the Anoka City Council. All activities shall conform to the Easement and to the Management Plan and not degrade or impair the conservation values of the protected property in the conservation easement.

- I. **RECREATIONAL AND EDUCATIONAL USES** – The protected property may be used for low-impact recreation and education programs, activities, or events. They must not significantly impair or interfere with the conservation values of the protected property. These uses could include, but are not limited to, the following examples: hiking, running, bicycle riding, bird watching, canoeing, fishing, cross country skiing, snowshoeing, picnicking, and canoe camping (two sites with a maximum of four people total). Written permission or notification is not required for these activities.

- II. **ORGANIZED EVENTS AND EXCLUSIVE USE** – These activities require permit approval before the event through the Anoka Parks and Recreation Department. They must not significantly impair or interfere with the conservation values of the protected property. These uses could include, but are not limited to, the following examples: camping, archery hunt, animal reduction hunt, food plots for habitat enhancement, public competitions, school competitions, educational events, or other specific requests, which require specific consideration for approval. Fees may be charged for these activities to cover the costs associated with adherence to the Easement and Management Plan.

RUM RIVER NATURE AREA MANAGEMENT PLAN

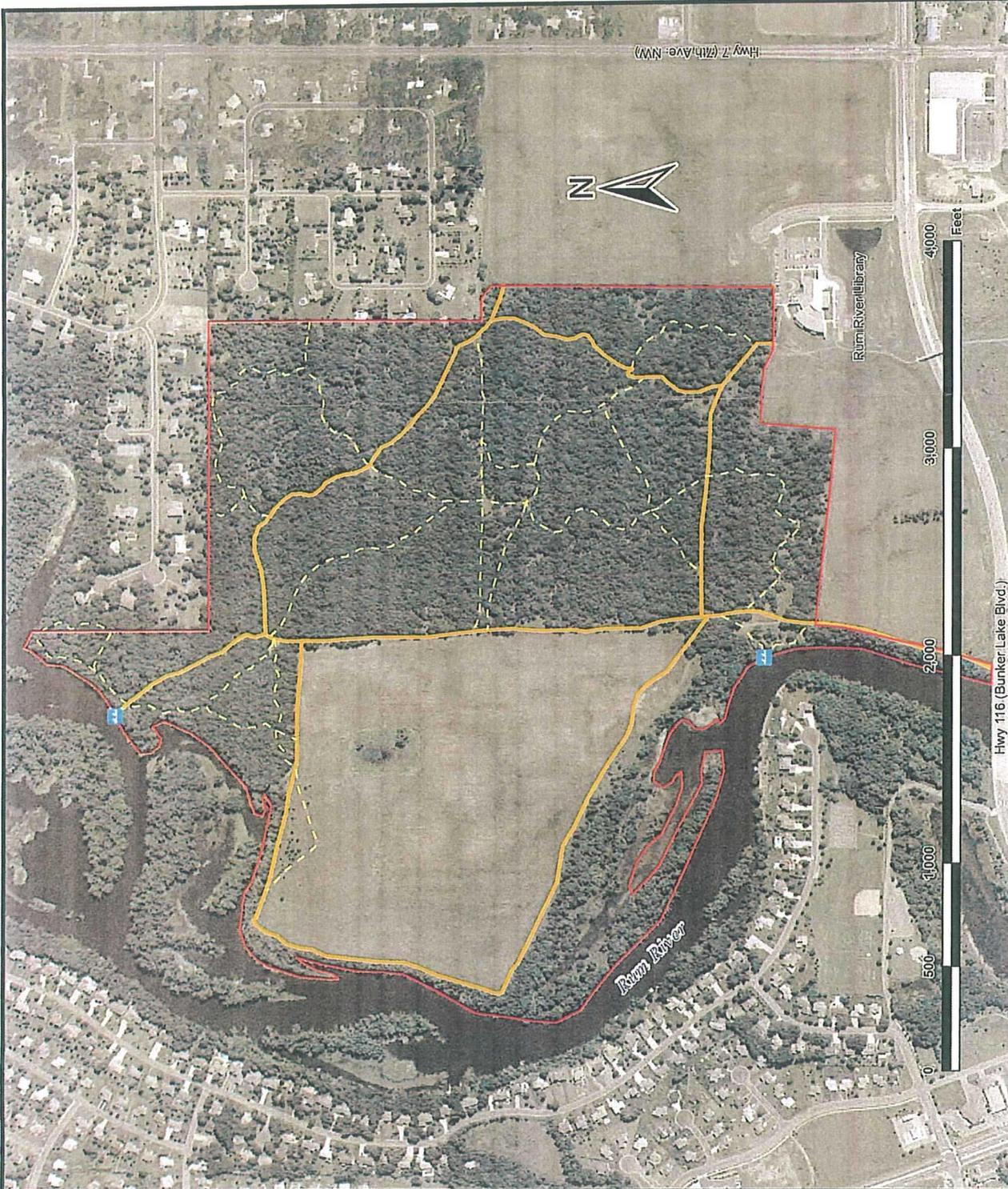
Map 1

Trails

Legend

- Existing River Access (unofficial)
- Property Border
- Trail Type
 - Main Trail
 - Secondary Trail

This is a reference map that depicts information
collected from aerial photos and its completeness
or total accuracy cannot be guaranteed. If there
are any questions, please contact the Anoka
Conservation District, (763) 434-2030



Map 2

Topography

Legend

- Property Border
- Contour

Source: USGS
Topographic Quadrangle, 1967

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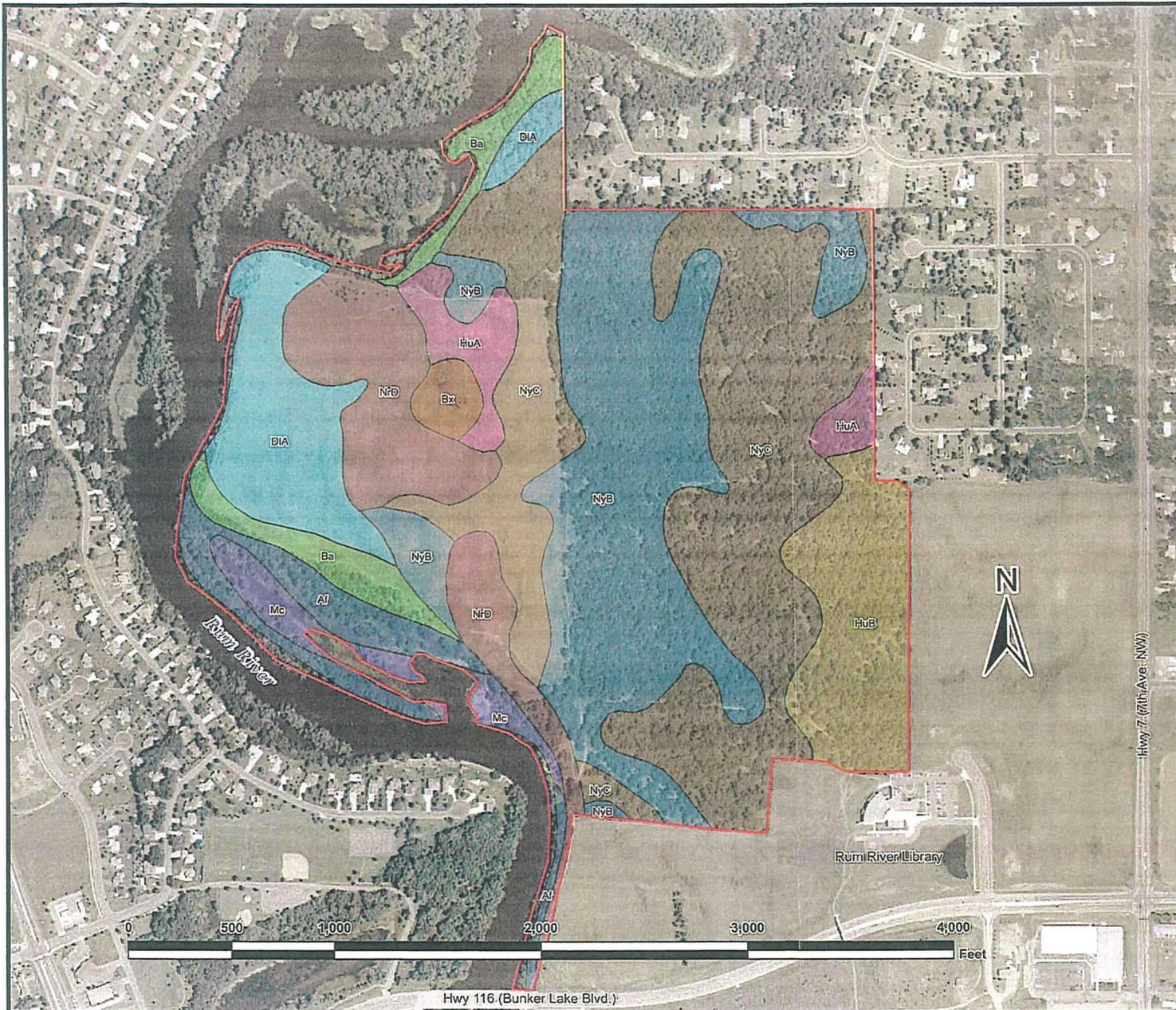
**RUM RIVER NATURE AREA
MANAGEMENT PLAN**

Map 3

Soils

Legend

-  Property Border
- Soil Type**
-  Af-Alluvial Land
-  Ba-Becker very fine sandy loam
-  Bx-Brickton silt loam
-  DIA-Dalbo silt loam 1-5% slope
-  HuA-Hubbard coarse sand 0-2% slope
-  HuB-Hubbard coarse sand 2-6% slope
-  Mc-Marsh
-  NyB-Nymore loamy sand 2-6% slope
-  NyC-Nymore loamy sand 6-12% slope
-  NrD-Nymore loamy coarse sand 12-25% slope



**Source: USDA
Anoka County Soil Survey, 1977**

This is a reference map that depicts information compiled from several sources and its completeness or total accuracy cannot be guaranteed. If there are any questions, please contact the Anoka Conservation District, (763) 434-2030

Map prepared by:



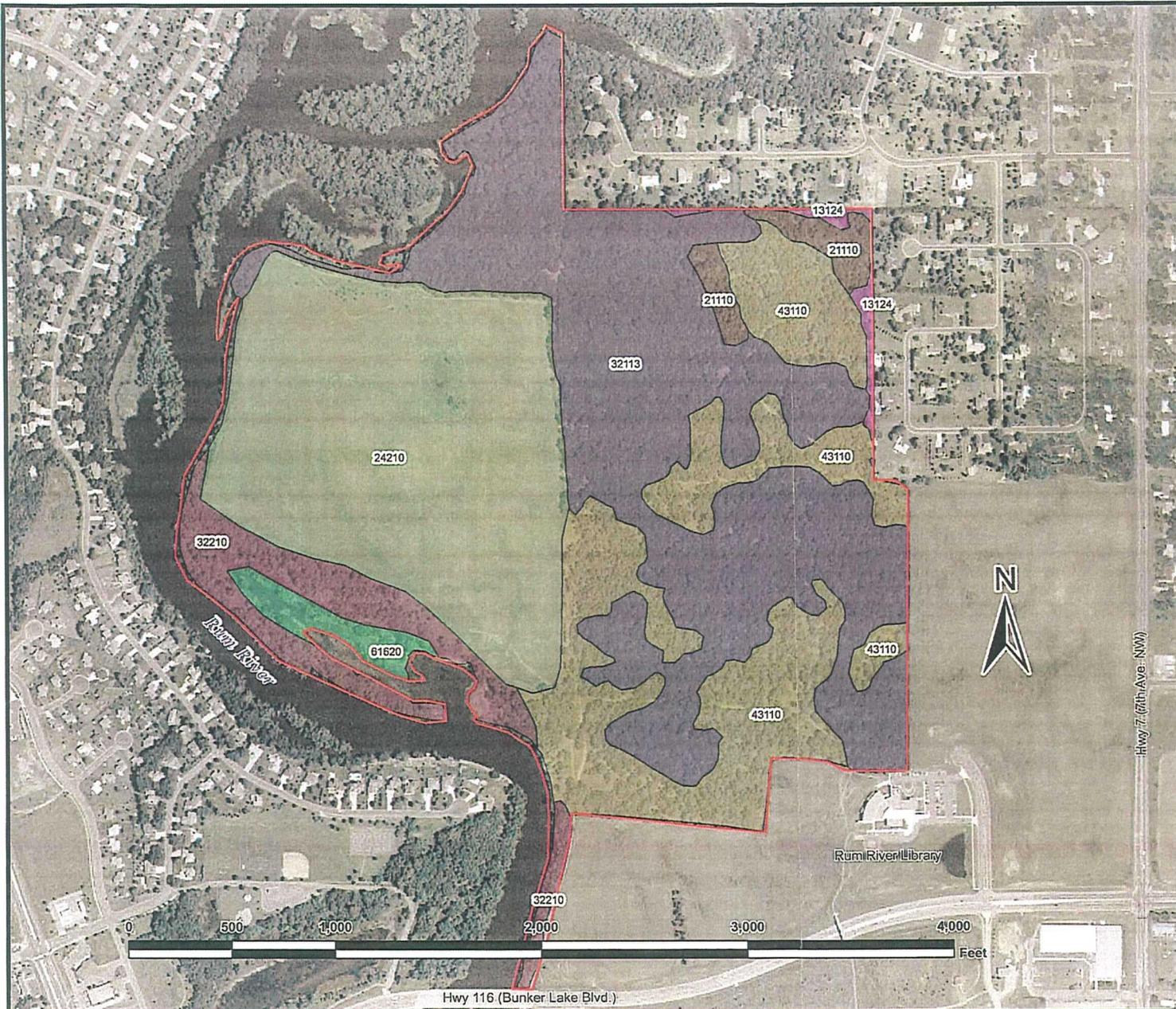
**RUM RIVER NATURE AREA
MANAGEMENT PLAN**

Map 4

Land Cover

Legend

-  Property Border
- MLCCS**
-  13124-Short grasses and mixed trees, 11-25% impervious cover
-  21110-Upland soils with planted, maintained, or cultivated coniferous trees
-  24210-Upland soils - close grown cropland
-  32113-Oak forest dry subtype
-  32210-Floodplain forest
-  43110-Altered/non-native mixed woodland
-  61620-Mixed emergent marsh



**Source: Minnesota DNR
Minnesota Land Cover
Classification System, 2003**

This is a reference map that depicts information compiled from several sources and its completeness or total accuracy cannot be guaranteed. If there are any questions, please contact the Anoka Conservation District, (763) 434-2030

Map prepared by:



RUM RIVER NATURE AREA MANAGEMENT PLAN

Map 5

Wetlands

Legend

-  Property Border
-  PEMC-Emergent, seasonally flooded
-  PEMF-Emergent, semipermanently flooded
-  PFO1B-Forested, broad-leaved deciduous, saturated
-  PSS1C-Scrub-Shrub, deciduous, seasonally flooded
-  PUBG-Unconsolidated bottom, intermittently exposed



Source: U.S. Fish and Wildlife Service
National Wetlands Inventory, 1991

This is a reference map that depicts information compiled from several sources and its completeness or total accuracy cannot be guaranteed. If there are any questions, please contact the Anoka Conservation District, (763) 434-2030

Map prepared by:



RUM RIVER NATURE AREA
MANAGEMENT PLAN

Map 6 Invasive Species

Legend

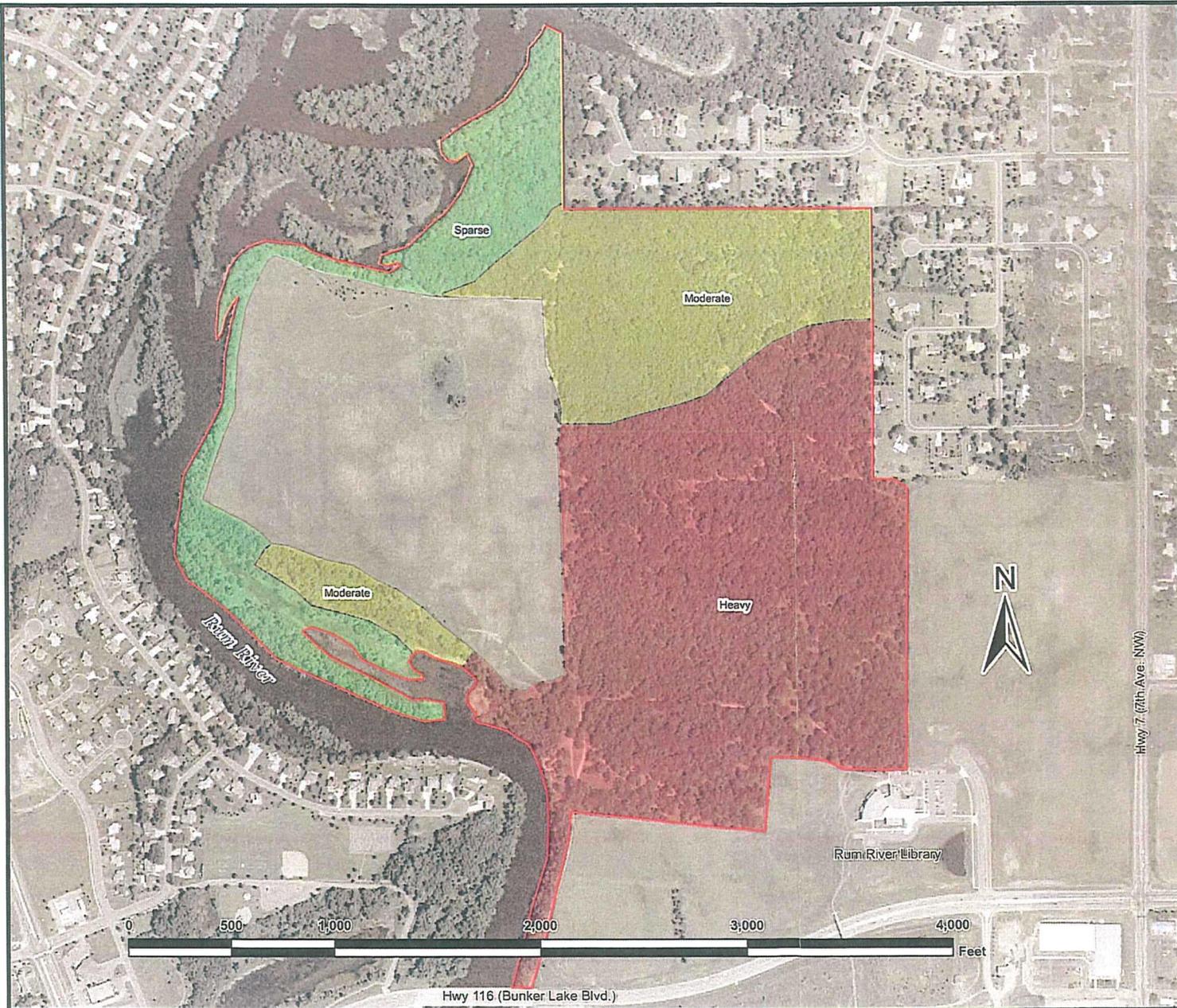
 Property Border

Extent of Woodland Invasives

 Heavy

 Moderate

 Sparse



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RUM RIVER NATURE AREA
MANAGEMENT PLAN

Map 7 Ecologically Sensitive Areas

Legend

-  Property Border
-  Ecologically Sensitive Area



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