DAKOTA COUNTY PLANNING COMMISSION

Dakota County Western Service Center – Room L139
14955 Galaxie Avenue
Apple Valley, MN 55124
Thursday, January 26, 2023
7:00 PM – 9:00 PM

Agenda

I. Call to Order

II. Pledge of Allegiance

III. Public Comments:
Anyone wishing to address the Planning Commission on an item not on the agenda may address the Planning Commission at this time (comments are limited to 5 minutes).

IV. Election of 2023 Planning Commission Officers – Action (Kurt Chatfield – Planning)

V. Approval of the Agenda

VI. Approval of Previous Meeting Minutes

VII. Welcome New Planning Commissioner—Kelly Kausel (Led by Amy Hunting)

VIII. Establishment of 2023 Meeting Dates - Action (Kurt Chatfield – Planning)

IX. Planning Commission Administrative Forms – Information (Liz Hansen – Administration)

X. 2023 Planning Commission Work Plan – Information (Kurt Chatfield – Planning)

XI. Veterans Memorial Greenway Natural Resource Management Plan -Information
(Christopher Klatt – Parks)

XII. Vermillion River Greenway (Hastings) Natural Resource Management Plan - Information
(Joe Walton - Parks)

XIII. Planning Manager Update and County Board Actions

- Dakota County was notified of a $4,995,000 federal award for the Veterans Memorial Greenway
- County Board reviewed the findings of the Lebanon Hills Regional Park Sustainable Trails Study
- County Board reviewed the Miesville Ravine Park Reserve phase 1 public participation and research results, requested options for next steps to be discussed at February PDC

XIV. Upcoming Public Meetings – Community Outreach

Concord Blvd Crossing Improvements and the Mississippi River Greenway Open House	Wednesday, Jan. 25, from 5pm-7pm Veterans Memorial Community Center – Room #3 https://www.co.dakota.mn.us/Transportation/PlannedConstruction/CR56/Pages/default.aspx

XV. Topics for Next Meeting (Thursday, February 23, 2023)

- None at this time

XVI. Planning Commissioner Announcements/Updates

XVII. Adjourn

2023 Planning Commission Meeting Schedule

Proposed for Adoption by Planning Commission on 1/26/2023

Planning Commission Dates
January 26, 2023
February 23, 2023
March 23, 2023
April 27, 2023
May 25, 2023
June 22, 2023
July 27, 2023
August 24, 2023
September 28, 2023
October 26, 2023
November 16, 2023 (3rd Thursday)*
December 14, 2023 (2nd Thursday)*

* Meetings moved from the 4th Thursday to the 3rd & 2nd Thursday to avoid conflicting with holidays

Citizen Advisory Committee Member
Statement of Representation

The purpose of this form is to either confirm or waive individual eligibility for per diem compensation to citizen appointees to boards, committees, commissions, councils, or task forces appointed by the Dakota County Board of Commissioners.

According to the Citizen Advisory Committee Membership Policy: County Board appointees to the following committees, who are not representing a governmental unit, receive $35 per diem (but no additional expense reimbursement) for attendance at regular and special meetings of the committee:

Community Corrections Advisory Board
Extension Committee
Human Services Advisory Committee
Library Board
Planning Commission
Zoning Board of Adjustment

Please check ONE of the following statements:

o I represent another governmental unit in connection with my presence on this board, committee, commission, council, or task force and:

  o a) I receive compensation, in the form of salary or a per diem, from that governmental unit for my participation. Therefore, I am not eligible to receive per diem compensation from the County for my attendance at regular or special meetings of this group.

  o b) I do not receive compensation from that governmental unit for my participation. Therefore, I am eligible to receive per diem compensation from the County for my attendance at regular or special meetings of this group.

o I do not represent another governmental unit in connection with my presence on this board, committee, commission, council, or task force. I am therefore eligible to receive per diem compensation from the County for my attendance at regular and special meetings of this group.

Name:_____

Signature:_____ **Date:**_____

Name of the board, committee, commission, council, or task force to which you have been appointed to serve:

_____

Please complete and return this Statement of Representation to your Committee Staff Liaison.

Dakota County Planning Commission Member
Consent to Release Private Data - 2023

Minnesota Statutes Ch. 13 on data privacy requires that you be informed that the following information about you is considered **private data: home telephone number and e-mail address.**

I hereby grant permission to use the information provided below by me, including that which is considered **private data**, for use in preparing a Planning Committee membership roster to be distributed to members.

Name: _____
Last Name First Name

Home Address: _____
Street

_____ MN _____
City State Zip

Telephone/Fax: (___) _____ (___) _____ (___) _____
Home Business Fax

E-mail Address: _____

This consent expires one year from the date of signature.

_____ _____
Signature of Committee Member **Date**

Planning Commission 2023 Work Plan

Board Goal	Committee's Goal for 2023	Project/Activity	Outcome Measure	Timeline
A Healthy Environment with Quality Natural Areas	Park Ordinance No. 107 (Phase II)	Update park ordinance	Recommendation to PDC	Q1
	Miesville Ravine Park Reserve Natural Resource Management Plan	Prepare assessment and plan to restore and manage natural resources	Recommendation to PDC	Q1-Q4
	Miesville Ravine Park Reserve Master Plan Update	Update master plan	Recommendation to PDC	Q1-Q4
	Veterans Memorial Greenway Natural Resources Management Plan	Prepare assessment and plan to restore and manage natural resources	Recommendation to PDC	Q1-Q3
	Veterans Memorial Greenway Master Plan Amendment	Review alignment amendment	Recommendation to PDC	Q1
	Vermillion River Greenway (Hastings) Natural Resources Management Plan	Prepare assessment and plan to restore and manage natural resources	Recommendation to PDC	Q1-Q4
	Vermillion River Greenway (Hastings) Interpretive Plan	Prepare interpretive plan and messaging along greenway	Recommendation to PDC	Q2-Q4
	Mississippi River Greenway Master Plan	Update master plan	Recommendation to PDC	Q2-Q4*
	Mississippi River Greenway Natural Resources Management Plan	Prepare assessment and plan to restore and manage natural resources	Recommendation to PDC	Q2-Q4*
	Park System Plan Update (Including NRMP and Visitor Services Plan)	Review research findings, park units, service levels, and system needs and amend plan as needed	Recommendation to PDC	Q1-Q4*
	Solid Waste Master Plan	Amend plan based on progress toward plan	Recommendation to PDC	Q1-Q4*
A great place to live	Trunk Hwy Plans and Design Studies (Highways 77, I-35, 3)	Review and discuss proposed improvements to State highways as part of multi-agency coordination effort	Review and comment to PDC	Q1-Q4

* Indicates that project will extend into 2024 work plan.

DAKOTA COUNTY PLANNING COMMISSION

DATE: 1/26/2023
AGENDA ITEM: Veterans Memorial Greenway Natural Resource Management Plan (*information*)
PREPARED BY: CHRISTIAN KLATT

PURPOSE
Provide Planning Commission:
1. *An Informational introduction to the Veterans Memorial Greenway Natural Resource Management Plan*
2. *An overview of management scope and restoration partnership opportunities along the Greenway*

BACKGROUND
The proposed Veterans Memorial Greenway encompasses over five miles of trail that would connect the communities near Lebanon Hills Regional Park in Eagan to those near the Mississippi River in Inver Grove Heights. Natural Resources is looking for input towards developing ecological restoration opportunities within 420 acres adjacent to the trail in partnership with the Cities of Eagan and Inver Grove Heights, as well as with private entities such as the Church of St. Thomas Becket, Xcel Energy, and Flint Hills Resources.

ATTACHMENTS
A. Overview Map of the Proposed Scope of the Veterans Memorial Greenway NRMP
B. Sample Cost Share Project for Greenway Corridor Partnerships

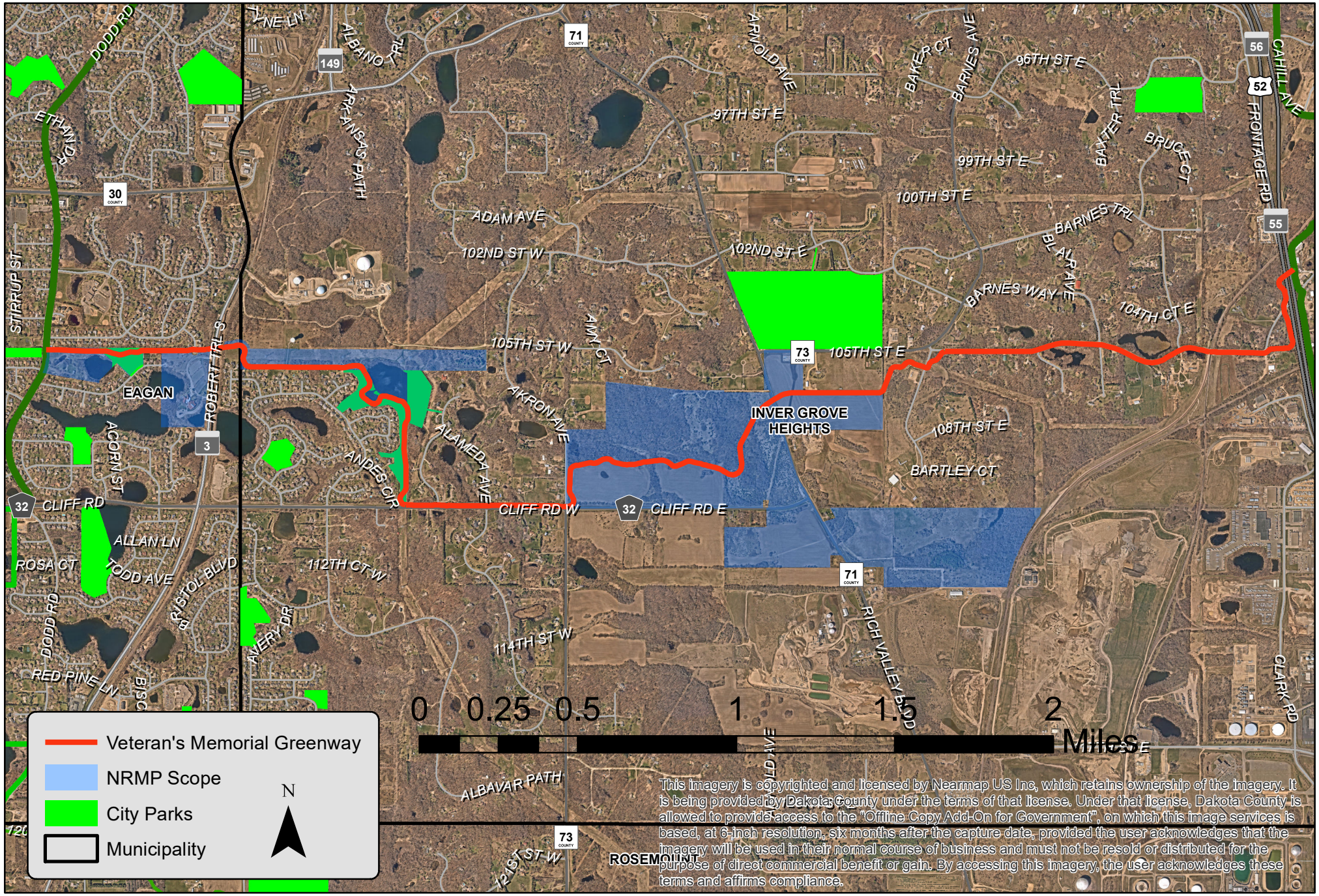
QUESTIONS
The following questions are intended to help assist in review of the packet materials.

1. *How shall we engage private partners for restoration beyond the County's lands and easements?*

2. *In what ways can we engage the public at the forefront of the NRMP planning process?*

3. *Are there additions or omissions in geographical scope that you would suggest for this Greenway, or changes in content scope compared to past Greenway Natural Resource Management Plans?*

Veterans Memorial Greenway
Natural Resources Management Plan



Example Greenway Cost-Share

Greenway Cost Share

Greenway Roles and Responsibilities	30 foot Trail Easement	100 – 300 foot Greenway Corridor	Natural Lands Beyond Corridor
Grant Match Cost Share	County	County and Landowner have equal cost share (50/50).	County/Landowner cost share to be determined by Land Conservation Plan.
Restoration Project Management	County	County/Landowner Partnership.	Landowner. County may assist as determined by Land Conservation Plan.
Maintenance	County	County. Landowner may assist.	County/Landowner cost share to be determined by Land Conservation Plan.

Example Restoration Cost-Share

16. Oak Savanna and Prairie (K2)	1	Remove and control invasive woody vegetation (mostly common buckthorn)	
		Thin aggressive or dense native trees and shrubs	
		Remove and control invasive herbaceous vegetation	
		Seed or overseed with appropriate mix and manage for establishment	
		Manage with prescribed fire if/where feasible in the early years	
		In prairie areas, manage with prescribed fire; use 2-3 burn units, burning each unit every 3 years	
		Over time, replace volunteer/weedy tree species with longer-living native trees that provide greater habitat value	
		Install oaks if desired, using ≥ 30-foot spacing	
		Monitor and practice adaptive management to enhance biodiversity	
			Subtotal $103,035

State Grant: **$86,000**
County Match (10%): **$8,600**
City Match (10%): **$8,600**

Total Project Budget: $103,200

DAKOTA COUNTY PLANNING COMMISSION

DATE: JANUARY 26
AGENDA ITEM: Introduction to the Vermillion-Hastings Greenway Natural Resource Management Plan
PREPARED BY: JOE WALTON

PURPOSE

1. Inform the Planning Commission of this project and layout the general project extents, scope, and desired end product.
2. Seek direction from the Planning Commission on stakeholder involvement or issues that they may like us to address in the plan.

BACKGROUND

We are in the process of developing a Natural Resource Management Plan (NRMP) to guide the management of the natural resources contained in and surrounding the Hastings portion of the Vermillion Greenway and surrounding public lands. The NRMP will establish specific, near-term (five years) implementation steps and a long-term vision (20+ years). It will also include a prioritized list of restoration/management projects and cost estimates for the Greenway Corridor, for which the County can readily apply for grant funding and/or seek partnership with other landowners to assist in project implementation. A Master Plan for this greenway was composed and approved in 2019.

The Vermillion-Hastings Greenway ("Greenway") (Figures 1-3) is an approximately 5-mile stretch of paved bike/hike trail, with a 10-foot trail width, with 2- to 3-feet mowed swathes on each side of the trail, and a 30-foot-wide right of way that connects the northern part of Hastings by the Mississippi River to the southwest part of Hastings. The width of the greenway, however, occasionally widens out to 100 to 300 feet, depending on the surrounding landscape. This greenway will connect from the City of Hastings-owned parcel PID 198323900040 just west of General Sieben Drive in southwest Hastings, and traverses the south and east sides of the City, to Levee Park in northern Hastings (Figure 1). There are parks and/or places owned by either the City of Hastings or that are privately owned that will form "natural area nodes" along this greenway, even though they may not be owned by the County (Figure 2). Places along the Greenway will include the following: Lake Rebecca Park (City of Hastings), River Falls Park (City of Hastings), Jaycee Park (City of Hastings), Levee Park (City of Hastings), Rivertown Dog Park (City of Hastings), C.P. Adams Park (City of Hastings), Old Mill Park (City of Hastings), Vermillion Falls Park (City of Hastings/Con Agra), Vermillion River Linear Park (City of Hastings), several private properties along the Vermillion just east of General Sieben Drive, and the former Wallin Property (Dakota County Park Conservation Area) (Figure 3). Also along the Greenway are nearby semi-natural lands that more or less follow the course of the Vermillion River, through both public and private ownerships.

The NRMP will develop comprehensive and strategic approaches to provide community assets, control invasive species, connect natural area nodes, and improve habitat for pollinators and other wildlife along public lands in suburban and rural trail corridors, which will help to reverse a trend in natural resource degradation at these sites.

ATTACHMENTS

1. Map of the Vermillion-Hastings corridor (FMR 2022)
2. Map of Sites of Biodiversity Significance Rankings (DNR) (FMR 2022)
3. Map of Metro Conservation Corridors and Vermillion River Greenway Corridor (FMR 2022)

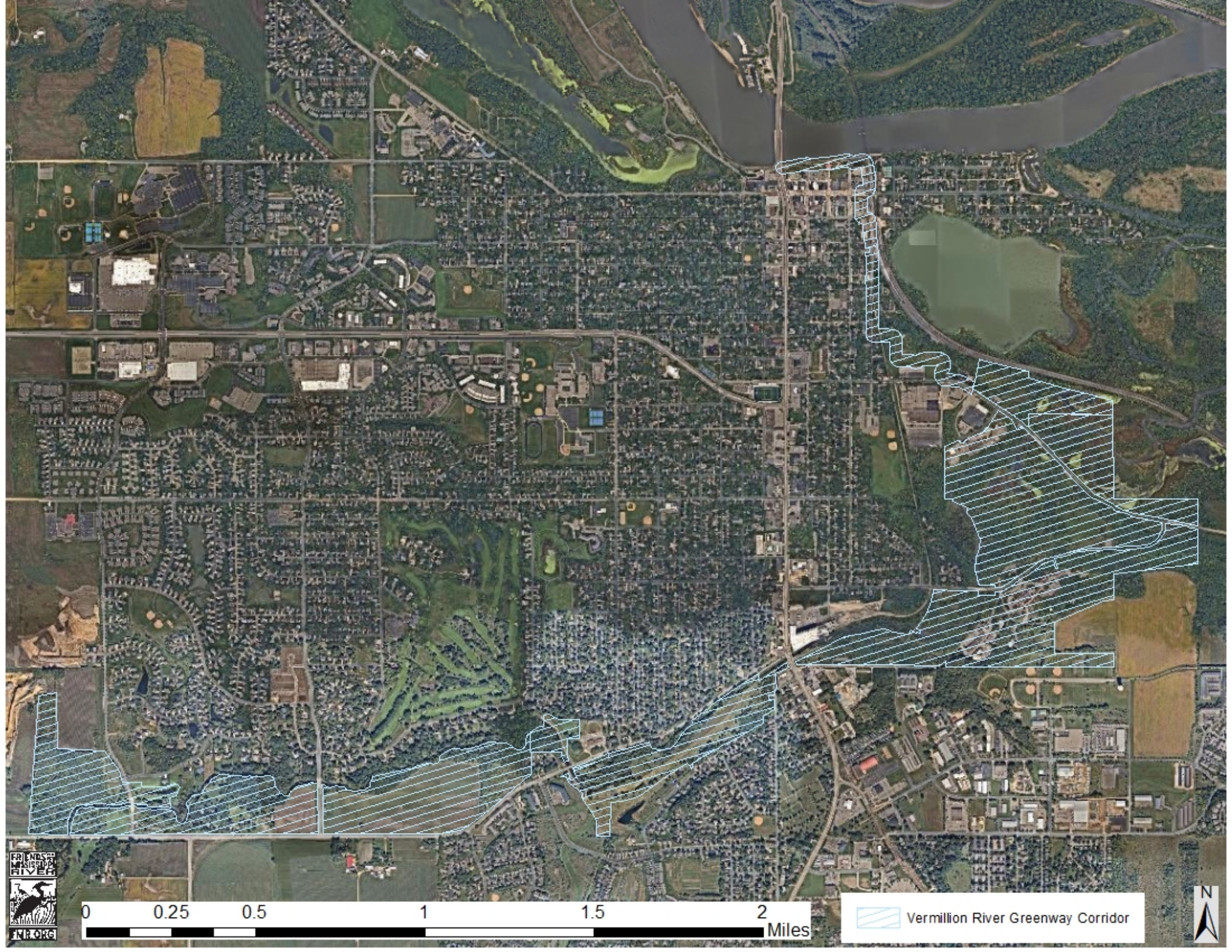
4. Map of Stewardship Plan from 2019 Master Plan, showing the area and the envisioned greenway in its entirety (2019 Master Plan)
5. Map of the greenway corridor and surrounding area's groundwater sensitivity to pollution (FMR 2022)
6. Vermillion River Greenway NRMP DRAFT NODE DESCRIPTIONS (FMR 2022)
7. Vermillion Falls Area, rare plant population, and potential overlooks
8. Vermillion-Hastings Greenway NRMP development and greenway construction schedules

QUESTIONS

1. Is this the right scope and level of effort for this project? Does the schedule seem right?

2. Have we forgotten anything important? Are there any gaps in the project? Is there anything else that you would like us to address?

3. Can you please provide guidance for stakeholder involvement? Who are the stakeholders that should be included and engaged? What level and types of stakeholder involvement is appropriate for this project, and do you have any suggestions on how to proceed with that?


FRIENDS OF THE MISSISSIPPI RIVER
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Vermillion River Greenway Corridor
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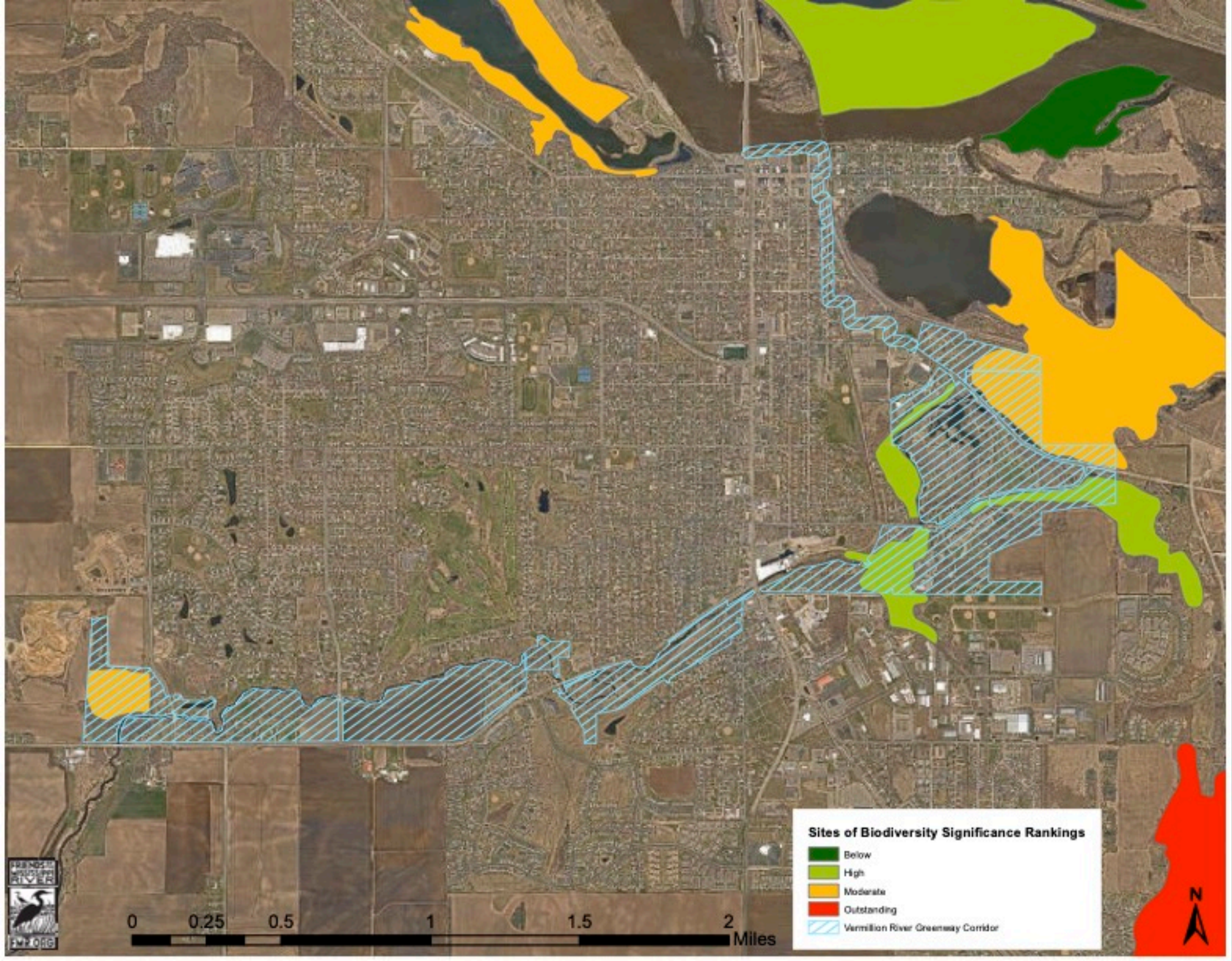
Sites of Biodiversity Significance Rankings
Below
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Outstanding
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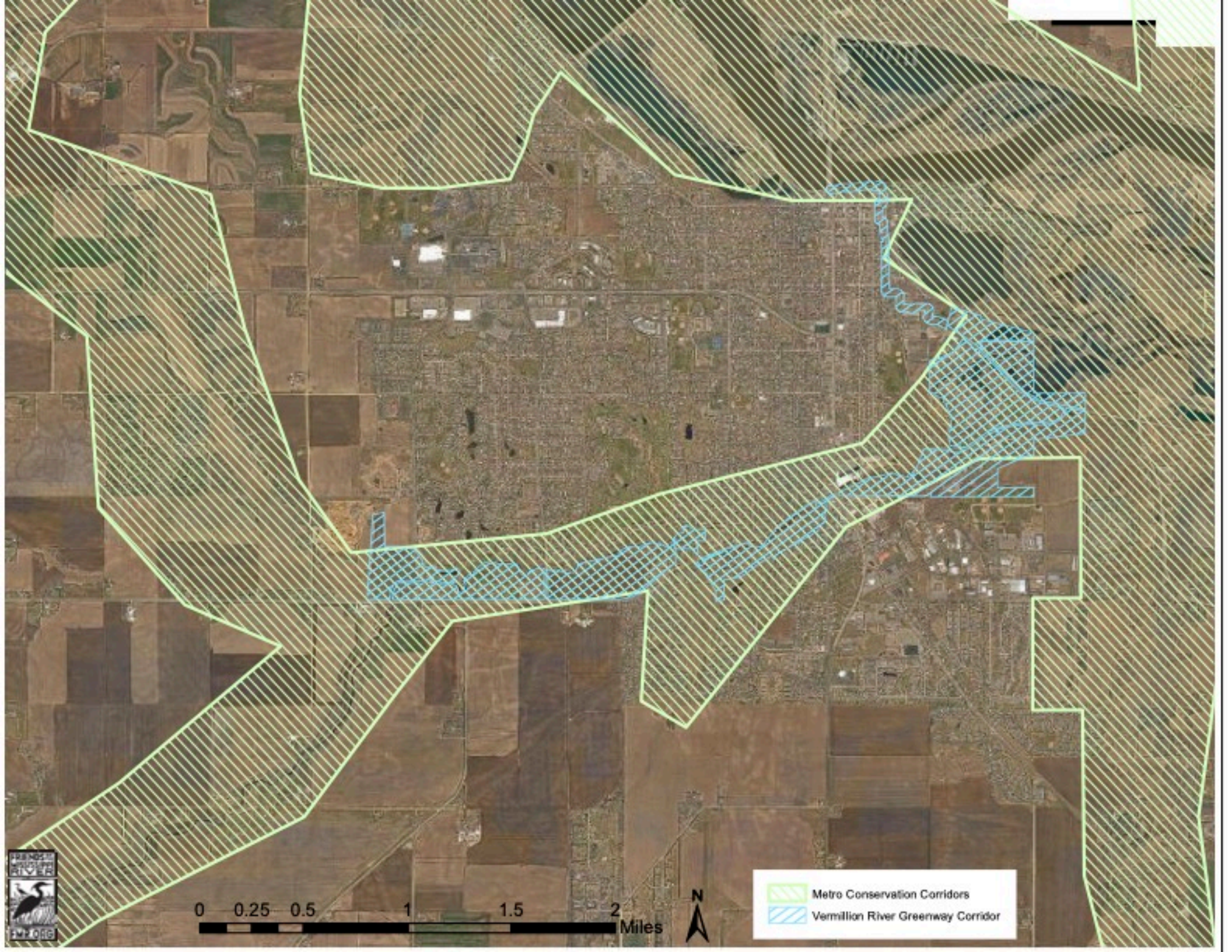
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Metro Conservation Corridors
Vermillion River Greenway Corridor

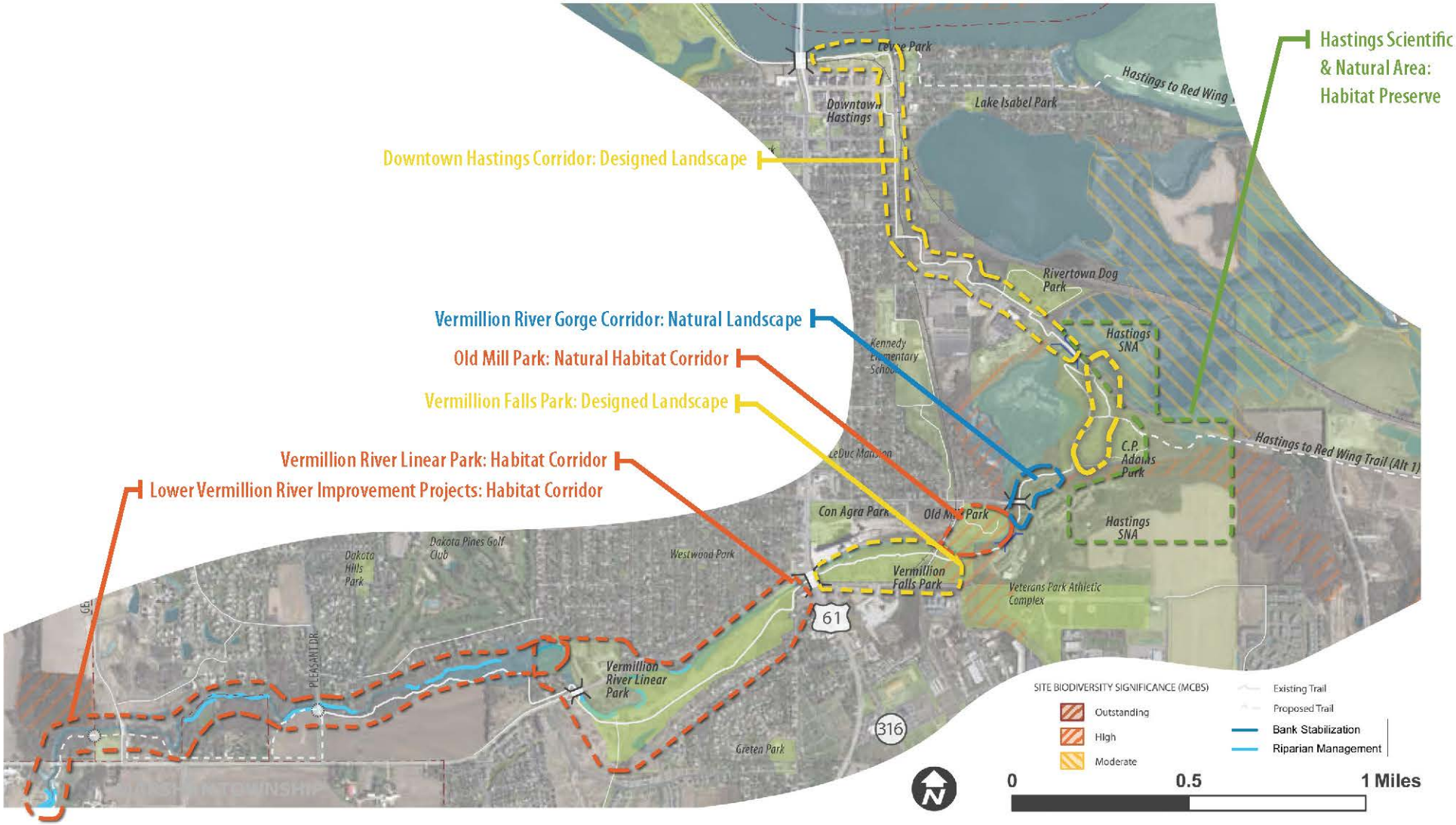


Figure 53. Stewardship Plan

Plant Community Assessments

On-site plant community assessments were conducted within the parks and publicly owned parcels of the Vermillion River Greenway following an approximate 300-foot-wide corridor. Sections of the corridor within private properties were visually surveyed from the trail or nearby roads and were defined by property boundaries or logical divisions using cross-streets. Publicly owned units were surveyed using a meander survey, noting general species abundance in each stratum, and privately owned units received more generalized inspections. The surveys were conducted by FMR ecologists in September 2022. Summaries of these assessments follow.

West of General Sieben Drive: The 4-acre parcel at the northwest corner of General Sieben Drive and 160th Street East is owned by the City of Hastings and has approximately 385 feet of frontage on the Vermillion River. The MLCCS cover types are listed as *Long grasses on upland soils* in the upland areas and *Altered/non-native deciduous woodland* along the river. The upland is a fallow field in recent production, and the stream corridor is forested and dominated by bur oak, green ash, eastern cottonwood, and box elder. The shrub layer is dominated by common buckthorn, but some oak regeneration is present in canopy gaps. Smooth brome has moved from the upland/old field area into the perimeter of the woodland. The open character of the parcel indicates that it could be easily converted to oak savanna or native prairie, if canopy thinning were to take place.

Dakota County Conservation Area (Former Wallin Property): The open character of the previous parcel continues across General Sieben Drive to the south half of the county-owned Dakota County Conservation Area. Again, MLCCS categorizes most of the parcel as *Long grasses on upland soils.* This cover type is more evident on the south half of this parcel, but more closely resembles a *Grassland with sparse conifer or mixed deciduous*. Large bur oaks with wide canopies and limbs reaching the ground indicate that this area was historically oak savanna. A remnant prairie plant community is present with hoary vervain, Scribner's panic grass, plantain-leaved pussytoes, and Scribner's panic grass in general abundance in open areas. Hill's thistle has also been recorded in the area. In 2022, a trail alignment through this parcel was staked to move trail users through the remnant oak savanna but needs to be adjusted slightly to avoid the drip line/root zone of the bur oaks. As is common in prairies and savannas where fire or other disturbance has been excluded, ruderal woody species are well-established. Siberian elm seedlings are plentiful, and eastern red cedar is abundant. Within the northern half of the parcel, the grade drops slightly toward the river and a moderately-wide floodplain is present. Bur oaks reach into the transition area between upland and lowland, and very large green ash and black cherry are present with smaller hackberry in the understory. Bur oaks are also regenerating in this transition area with most in the 4-6" diameter size class, but large, mature common buckthorn are also present. Within the river corridor, the streambanks are stable, but reed canary grass is dominant along the stream channel and in the floodplain, and common buckthorn and Tatarian honeysuckle fill the shrub layer.

East of Jorgen Avenue: Nine privately-owned residential parcels comprise the greenway section between the Dakota County Conservation Area and Pleasant Drive to the east. There is no existing public access through these parcels, and the Vermillion River Trail follows local roads north of these parcels. Because the parcels are not publicly accessible, a general assessment of plant communities was done from the roadway. Continuous

native tree cover lines the riverbank within these parcels with silver maple, green ash, black walnut, white oak, and red oak all present. There is regeneration of these species in the subcanopy with light- to moderate common buckthorn in the shrub layer. Smooth brome dominates the grassy field edge of the cultivated field (soybeans) at the northwest corner of Pleasant Drive and 160th Street East. The MLCCS cover type map indicates a lobe of *Medium-tall grass altered/non-native dominated grassland* along the streambank; this may indicate a small remnant prairie. Recent aerial imagery shows an open area on this parcel that may be presently mowed. The other parcels have closed canopies, and given the abundance of buckthorn on nearby properties, it can be assumed that these woodlands also have buckthorn unless they have been managed to prevent invasion.

East of Pleasant Drive: Four privately-owned parcels totaling approximately 67 acres comprise the section of greenway east of Pleasant Drive before the Vermillion River turns south and travels under County Road 47. The Vermillion River Trail traverses these parcels within an easement conveyed to the City of Hastings, but the trail typically closes from December 15 to March 15 as no maintenance occurs through the winter. The three western parcels are row cropped, and the fourth parcel is a homestead with a mix of short- and medium-grasses that are non-native according to the MCLLS cover map. The eastern edge of this parcel has both jack pine and short grasses and may have remnant plant communities. A wide *Lowland hardwood forest* is present within the floodplain of the Vermillion. The floodplain here is quite wide (150-200 feet) in some areas with very large eastern cottonwood and silver maple present and hackberry and Siberian elm in the understory. Several culverts run under the trail allowing for flood flows to reach the wide floodplain, and for water stored in the floodplain to reach the river when lower flows occur. On higher ground at the edge of the cultivated fields, black walnut is very abundant. The shrub layer is dominated by buckthorn, but management is planned by the City of Hastings. Several social trails (unofficial footpaths) run from the paved trail to the river where people attempt to access the river despite private property postings. This is likely contributing to weediness in the herbaceous layer: garlic mustard is abundant in this unit.

Corridor west of Dakota County Highway Department: The Vermillion River Trail traverses this area within a narrow easement and is thus flanked by private property with dense, mature buckthorn. Several social trails run from the paved trail to the river and contribute to bare ground, eroded streambanks, and weed pressure. The woodland is very degraded through this unit. Siberian elm and box elder dominate the canopy, and dense buckthorn and Tatarian honeysuckle fill the shrub layer. Garlic mustard is prevalent in the herbaceous layer. The stream corridor within this area has changed considerably over the last century. The river was moved south from its original alignment in a flood diversion project in the 1940s, and approximately 1000 feet of streambank at the outside bend of the river is currently hard armored with riprap. The City of Hastings owns approximately 4 acres on the south side of the river, but this land is surrounded by private properties that prevent access. Four of these private properties line the paved trail that runs parallel to County Road 47, and their residential landscaping spills over beyond the private parcel boundaries including a dense stand of silver feather grass *(Miscanthus sinensis).*

The trail follows a below-grade crossing under County Road 47. Reed canary grass is dominant along the riverbank, and dense cheatgrass was treated with herbicide before the time of the plant community assessment. Heavy silt on the trail indicates that flood flows reach the trail during times of high water.

Vermillion River Linear Park: This 60-acre park is a long, linear property managed by the City of Hastings. In coordination with Friends of the Mississippi River (FMR), three phases of restoration have been undertaken on the property following priorities of a natural resources management plan developed by FMR ecologists in 2012. These priorities include restoration of the riverbanks, managing invasive species, and establishing native plant communities appropriate for the present-day hydrology of the site. Specific restoration has included conversion of most of the upland to dry or mesic native prairie, management of invasive species in the floodplain forest along the Vermillion, cedar revetment stabilization of the streambanks, and native plant establishment in the bypass channel at the center of the park. Some invasive woody shrub management has also been completed on the periphery of the park. Conversion to native plant communities is in process as of late 2022 and will continue for at least 5-10 years. Side oats grama, big bluestem, and gray-headed coneflower are plentiful in the upland prairie areas, which is typical of early establishment restored grasslands. Native wild lupine, cup plant, and porcupine grass are also present which indicates some remnant seed bank. Native spring ephemerals are also present in the floodplain forest including Virginia bluebells and bloodroot. Vegetation community issues specific to this site include an established population of spotted knapweed on the western portion of the prairie which has been managed with mowing, spot herbicide application, and biocontrol (root-boring and flower-boring weevils); Siberian elm in the restored prairie which has been managed with mowing, and an afforested floodplain which may benefit from targeted canopy thinning.

Vermillion Falls Park: Vermillion Falls Park is a 25-acre city park located along the south side of the Vermillion River east of Highway 61. The Vermillion Greenway Trail follows the river bluff through the park for about 0.5 miles between Hwy 61 and the Veterans Home property.

Friends of the Mississippi River completed a Natural Resource Management Plan for the park in 2019 and has been implementing habitat restoration activities at 20 acres of the park since then to restore oak forest, maple-basswood forest, and oak savanna.

Wooded areas cover about 16 acres of the park, including maple-basswood forest, mesic oak forest, dry oak forest, and very degraded oak woodland. Non-native grassland with scattered trees and shrubs occupies about four acres and about five acres is mowed turf with scattered trees, at the west end of the park. The eastern oak forest and maple-basswood forest were ranked high biodiversity by the DNR (though invasive woody plants had degraded them by the time management began).

Ecological restoration is well underway at the park, with invasive woody removal completed on the higher quality wooded areas, and seeding with native species. The degraded woodlands in the central part of the site will be managed for invasive woody plants in winter 2023 and the conversion of the non-native grasslands to oak savanna will also begin in 2023.

The cliff walls along the Vermillion River and very steep portions of the dry gorge have not been managed and have an abundance of large buckthorn. These plants will continue to provide a seed source to the surrounding restored lands. The buckthorn also can cause significant erosion issues as ground layer vegetation is reduced from shading.

Another opportunity to improve the ecological conditions at the park would be to convert some of the mowed turf at the far west end of the park to native prairie plantings.

There are also significant concerns for the native plant diversity at the park due to unmanaged park visitor uses. The lower river bank below the falls is one of the highest quality areas in the park, with unusual species including Canada yew, walking fern, and native spring wildflowers. There is currently an old trail to the river, about midway between the bridge and the falls, which has fallen into disrepair. These stairs could be improved for safer access. One of the beautiful things of this park, however, is the natural features and lack of built structures. Keeping this area as "wild" as possible with only modest stairs like the original, will retain its charm. Any additional stairs to the river should be avoided due to the significant impacts to the gorge walls and the plants located there. Increased access to the river will also likely result in loss of the native plants that make it special. The existing somewhat difficult access helps to keep the foot traffic in check so that the entire area does not get trampled.

The cliff walls along the river are being degraded by unauthorized trails. As people scramble up and down the steep slopes, they have become denuded of vegetation, causing erosion, and creating safety risks. Similarly, there are unauthorized trails crisscrossing the park in the bluff areas and the dry gorge that have erupted since invasive woody plants removal made the park more accessible. It is important to address these areas, but doing so will be costly and will require specialized crews that are trained to work on cliff sides.

The newly opened woods have also attracted mountain bikers. The trails are not designed or suited for bikes, which cause trail erosion and are destructive to the wildflowers such as Dutchmen's breeches, wild ginger, large-flowered bellwort, blue cohosh, which are still present with abundance in some areas, but others where they are struggling to hang on. Trails are also how invasive species are moved around, so the more trails there are, the more invasives are likely and the fewer native plants. The diverse native wildflowers are special to this park and should be protected. Official trails need to be established, signed, and maintained so it's clear where the designated trails are. Interpretive signs can help visitors understand the importance of staying on trails.

There is one rare (state-threatened) plant species found at the park – kittentails (*Besseya bullii*) – which has been found north of the main trail, especially between the falls and the bridge. A survey should be done to map the plants before any future plans for the park are enacted.

Vegetation management and ecological restoration at the park is otherwise being conducted by Friends of the Mississippi, but plans should be in place to continue the maintenance after the initial restoration is complete in a few years.

Old Mill Park: Old Mill Park is a 10-acre city park located along the north and west sides of the Vermillion River as it bends to the north. The Vermillion Greenway Trail does not intersect the park but is just across the river at Vermillion Falls Park.

Friends of the Mississippi River completed a Natural Resource Management Plan for the park in 2012 and has been implementing habitat restoration activities at the park since then to restore oak savanna and oak forest.

Present ecological conditions of the park are very good, with the oak savanna and oak woodland well-established and diverse native plant communities generally sustaining. The park needs regular monitoring to manage for invasive woody and weedy plants. Prescribed burns should be completed on over the entire park 3 to 6 years, with no more than half of the park burned in any given year.

One area that has not been addressed for invasive woody plants is the steep walls along the river. As with Vermillion Falls Park, it is important to address these areas, but doing so will be costly and will require specialized crews that are trained to work on cliff sides.

In addition to invasive species, other concerns are the prevalence of unauthorized trails that crop up and tend to multiply and deepen and widen. These trails in the prairie have become entrenched, then resulting in new trails being created. As the trails spread out they threaten the native plants in the prairie, especially kittentails, the state endangered species which is directly adjacent to the trails. In addition to threatening the kittentail plants the entrenched trails become eroded.

Old Mill Park has a fairly abundant population of kittentails, most of which are located along the bluff between the bridge and the ruins. Any future trail or overlook development plans for the park should include a detailed survey for kittentails and should avoid the bluff areas. The trails at the park need to be repaired and need better signage to designate official trails and to close unofficial trails.

Veterans Home: The Veterans Home (VH), about 88 acres, is divided by 18th St East, with a third of the property to the north and two thirds to the south. About 0.4 miles of the Vermillion Greenway Trail pass through the property, paralleling the Vermillion River along the southwest side, then following along on the north side of the north housing units.

The VH includes about 28 acres of campus buildings and facilities, mostly on the south side of 18th St, along with about 12 more acres that include ballfield, turfgrass, cropland and other uses.

About half of the property (44 acres) is forested, half of which is mixed deciduous/oak forest that is degraded by invasive woody plants, especially buckthorn but also occasional black locust trees. Other forest acres include a couple acres each of maple-basswood forest, dry oak forest and mesic oak forest, 11 acres of floodplain forest, and five acres of hardwood swamp.

Overall, bur oak, red oak, sugar maple and basswood are the primary tree species, with large trees of over 22-inches diameter in the more intact wooded areas. Trees were generally younger/smaller diameter in the degraded woods. Other tree species noted were pin oak, cottonwood, quaking aspen, black cherry, and paper birch.

Invasive woody removal is the primary management needed in all the wooded acres, though it was most abundant in the degraded woods, with some large shrubs up to four-inches diameter. The floodplain forest had widely scattered but very large buckthorn, in the maple-basswood forest it was primarily along the trailside edge, and in the dry oak forest it dominated the ground layer up to two feet with a dense cover of small stems. Along the river the buckthorn was very large, often obliterating the view of the river and the Old Mill Ruins on the other side. Much of the terrain there is quite steep and would require ropes and skilled experts to remove it.

Black locust was most common along the river trail, especially at the 18th St underpass where there were several large diameter trees. A few other notable trees along the trail were several large white pine, possible relicts from the past, and one catalpa.

Other opportunities for improved habitat would be in many of the mowed turf areas near the buildings, including along some stretches of the Greenway Trail, which could be converted to prairie or savanna plantings. Reducing the acres of mowing and converting to native plantings would reduce carbon emissions, increase water infiltration, reduce runoff, provide habitat for pollinators, birds, and other wildlife. Such plantings would also provide an aesthetic experience for residents and an opportunity for residents to engage with the restoration process and future nature observation.

C.P. Adams Park: CP Adams Park is a 60-acre City of Hastings Park consisting of about 24 acres of mowed grassland with scattered trees, 22 acres wooded areas, and 14 acres wetland and open water. The Vermillion Greenway trail passes through or along the edges of the park for about 0.6 miles, more than any other single property. The trail follows the forest-grassland edge and roadsides on a generally north-south course through the park. The primary recreational attraction at the park is the disc golf course situated in the grassland and extending into the woods on all sides.

The **mowed grassland** has about a 50% tree canopy consisting of scattered large trees as well as narrow tree corridors that serve to divide the disc golf fairways. Scattered tree species include red oak, bur oak (24" diameter at breast height, or dbh), cottonwood (up to 34" dbh), green ash (24-30" dbh), red cedar, basswood (32" dbh) and catalpa. Additional species in the wooded corridors include black walnut, quaking aspen, white pine (up to 24" dbh), silver maple, and bitternut hickory. The shrub layer in the grassland is primarily present only in the wooded fairway dividers and includes sapling canopy trees as well as a moderately low abundance of common buckthorn (1" or less dbh) and non-native honeysuckle. The ground layer in those areas is a somewhat weedy but mostly native composition of seedling trees, white snakeroot, Virginia creeper, zigzag goldenrod and moonseed with some burdock present as well.

The **wooded portions** occupy about a third of the park along the west (maple-basswood and altered deciduous forest), far northwest (oak forest, floodplain forest, mixed hardwood swamp), and northeast (floodplain forest and mesic oak forest) sides of the park. The west woods are on a steep west to northwest slope, and transition from maple-basswood (2 ac) at the south end to altered deciduous forest (2 ac) at the north. The maple-basswood forest is largely intact, but there is abundant buckthorn along the top edge in places. The altered woods harbors remnants of past uses, such as piles of rubble (fencing, concrete) and had some apparent soil disturbances. The canopy trees tended to be smaller diameter than other wooded areas, indicating these woods grew up more recently. Tree species include green ash, hackberry, cottonwood, basswood and occasional small Siberian elm. Invasive shrubs are low abundance. The ground layer is fairly beat up, with large unvegetated areas, possibly due to foot traffic. Creeping Charlie and burdock are abundant, but native species were present including patches of wild ginger, zigzag goldenrod, clearweed, eastern woodland sedge, white snakeroot and Virginia creeper.

The mesic oak forest was about 7 acres. The patch on the east side has an intact canopy and low abundance of non-native shrubs. The ground layer has good native cover including Jack in the pulpit, zigzag goldenrod and

false Solomon's seal. Buckthorn is larger and more abundant at the north oak forest, with 1 to 2-inch dbh. However, that unit is on a very steep south-facing slope that will make access difficult.

There are several floodplain forest units, totaling about 11 acres, which tend to have a dense tree canopy dominated by cottonwood (up to 3 feet or more dbh, including one enormous tree north of the bridge) and silver maple (20-inch dbh) as well as basswood and green ash. The shrub layer is sparse but included patches of buckthorn, up to 3-inch dbh.

The wooded units generally have dense tree canopies, a diversity of tree sizes, and a fairly sparse shrub layer with moderate amounts of common buckthorn and lesser amounts of Tatarian honeysuckle. While buckthorn stems can be up to three inches diameter, most are less than one inch. Both species are most abundant along woodland edges. Large portions of interior woods do not have any buckthorn, but it is fairly abundant in the northern wooded units. Ground cover vegetation was fairly dense in general but was sparse on northly slopes and under dense canopies. The ground cover consisted mostly of native species, but diversity was fairly low.

The wetland areas consist of open water ponds, mixed emergent marsh, and mixed hardwood swamp. The latter had a canopy of scattered silver maple, 4-10" dbh, no shrub layer, and a ground cover dominated by rice cut grass, and abundance of swamp beggartick, jewelweed, and clearweed. The emergent marsh was dominated by cattail. There was also a stormwater wetland in the southeast corner of the grassland by the parking lot, composed of a variety of native wetland plants. The wetland units did not need any management.

The management priority for the entire CP Adams Park is invasive woody removal in the wooded areas. Invasive weeds (primarily burdock) should also be managed in all the wooded areas, though abundance is low. Some of the wooded corridors that separate the disc fairways could be enhanced with native shrubs that are beneficial for pollinators. The altered woodland unit needs to be treated for invasive weeds and overseeded to establish some ground cover. The trash and rubble could also be removed. Invasive woody plants in the oak forest units should be cut and stump-treated only, not foliar treated, to protect native ground cover species.

Hastings Scientific and Natural Area (SNA): Hastings SNA is a 65-acre nature preserve located on the east and northeast sides of C.P. Adams Park. The Vermillion Greenway Trail does not transect the SNA but is across the road (Ravenna Trail) and parallels it for about 0.14 miles.

Friends of the Mississippi River completed an Adaptive Management Plan for the SNA in 2012 and has implemented habitat management activities at the site since then. The most recent management was invasive woody control in 2017.

The SNA consists of a northwest parcel (26 acres) and a southeast parcel (39 ac), joined at their corners. The Vermillion River bisects the northwest parcel while the southeast parcel is divided into three sections by two roads (Ravenna trail and 18th Ave E).

The parts of the SNA north of Ravenna trail are mostly emergent marsh, floodplain forest and open water. Silver maple dominates the floodplain forest, with green ash and small diameter American elm. These areas are largely devoid of invasive species except along the roadsides and edges, where buckthorn and honeysuckle have re-

established, and some are quite large. There are a few interior areas, especially the eastern section, with patches of small buckthorn have regenerated.

The southwest and southeast sections of the SNA are mostly mesic oak-basswood forest, with maple-basswood forest on the north-facing slope and wet ash (seepage) swamp and ponds at the base of the terraces. Old growth red oak, sugar maple, and basswood are found on the steep north-facing bluffs and bluff tops. Most of the SNA is ranked moderate to high biodiversity significance by the DNR.

A wide array of plant species occurs on this site, including the rare snow trillium. Talus slopes and steep escarpments of dolomitic limestone provide habitat for specialized plants, such as mosses, lichens, and liverworts and those areas are ranked high biodiversity significance. The terrain drops 170 feet from the high points on the south to the lowest areas at the north.

Most of the native plant communities are relatively intact, but non-native invasive woody species are again encroaching in the woodlands. Buckthorn is the primary concern, and non-native honeysuckle was also present, primarily along roadsides and other edges. In addition to the roadsides, small buckthorn was fairly abundant in the southeast section, occupying several acres east of the Veteran's Home property. The shrubs present are generally small - seedling to six feet tall - and up to one-inch diameter.

Invasive woody control is the top priority management need at the SNA. To provide maximum protection to native plants, the method of buckthorn control should only be cut and stump-treated (with dauber applicators). Foliar application should not be done. Very small plants will not get treated, so a repeat cut-and-treat will be needed in five or six years to address plants that have matured to a larger size.

Rivertown Dog Park: The Rivertown Dog Park is Hastings' most visited city park, and its 14 acres of park-like vegetation structure is suited to walking and exercising dogs. Approximately two-thirds of the park at its center is mowed turf with scattered trees which allows dogs to run and play among several internal footpaths. The remaining third is a perimeter of woods with a paved path encircling the park. The canopy is predominantly green ash and black walnut with several green ash marked for emerald ash borer monitoring. Several red oak dot the perimeter of the park, and the understory in the perimeter contains small amounts of buckthorn. The eastern end of the woodland has a higher density of buckthorn, and these plants are mature and senescing. The canopy trees in the eastern woodland include red and pin oak, black walnut, American basswood, and green ash. Some regeneration of these native species is present, but the understory is largely dominated by buckthorn.

Corridor between Rivertown Dog Park and Downtown Hastings: The greenway section between the Rivertown Dog Park and the parks along the Mississippi River is a narrow corridor of trail along Ravenna Trail which connects through the neighborhoods south of downtown. The trail edges are primarily mowed turf and have been planted with swamp white oak in sections. The trail's crossing of the Smead property skirts the edge of a possible remnant prairie that has been degraded by invasive species such as spotted knapweed and Siberian elm. The trail's alignment through the neighborhoods west of Lake Isabelle follows the edge of the Canadian Pacific railyard, and the vegetation quality is very poor owing to the degree of disturbance. Yard waste dumping has introduced day lilies and snapdragons through this area of the corridor, and a large stormsewer outfall between 5th and 6th Streets on Bailly Street has created a deep gully between the railroad tracks and the trail.

Levee Park/Jaycee Park: The downtown Hastings parks, Levee Park and Jaycee Park, at the northern extent of the greenway, are highly maintained public spaces which accommodate gatherings, events, and concerts. Large areas of mowed turf are present along the hillsides above the Mississippi River along with small ornamental plantings in planter boxes and beds. At Levee Park, a significant area of hard armoring is present along the riverbanks upstream and downstream of the railroad bridge. A native prairie planting on the slope between the Rotary Club Pavilion and the parking lot east of Sibley Street was initiated but is weedy with common ragweed, alfalfa, and turf grasses. Little tree cover is present, and the hillside is in nearly full sun. At Jaycee Park, large areas of mowed turf are also present, but the trail corridor is somewhat screened from roadways by trees and shrubs.

Invasive Species

In considering the habitat quality and potential restoration of natural areas, a significant factor in level of difficulty, cost, likelihood of success, and persistence of habitat is the presence of invasive or introduced species, the spatial extent of the invasive species, and the length of time the site has been affected by invasive species. As such, invasive species management is often the initial consideration in planning and implementing habitat restoration.

Table 3 summarizes the presence or understood absence of common invasive species identified within each site. Other invasive species may be present at each site, and these specifics are noted in the Plant Community Assessments above. It should also be noted that new invasive species can quickly become established at a site and frequent inspection and monitoring is necessary to prevent establishment or reinvasion after initial management.

Table 3. Invasive Species Identified in the Corridor

Scientific name	Common name	Seib	Jorg> East	Pleas >East	Hstg PW	VLP	VFP	OMP	VH	CPA	SNA	RDP	B/T - Dwntn	Levee/ Jaycee
Alliaria petiolata	garlic mustard			M	H	H						M		
Arctium minus	common burdock					L	L	L	L	L		L		
Berberis thunbergii	Japanese Barberry								L		L			
Bromus inermis	smooth brome	M	M				M	L	L	M		M		M
Centaurea stoebe	spotted knapweed	L			M	H	L							
Cirsium arvense	Canada thistle						L	L						L
Cirsium vulgare	bull thistle													
Euphorbia virgata	leafy spurge													
Frangula alnus	glossy buckthorn													
Hemerocallis fulva	daylily						L				L			
Linaria vulgaris	butter and eggs						L							
Lonicera tatarica	Invasive honeysuckle	M			M		L	L	M	M	L		M	
Lotus corniculatus	bird's foot trefoil					M						L		L
Lythrum salicaria	purple loosestrife													
Morus alba	white mulberry										L	M		

Phalaris arundinacea	reed canary grass	L			H						L			
Rhamnus cathartica	common buckthorn	M	H	M		L	L	L	H	M	M	M	M	
Robinia pseudoacacia	black locust				H		L		L					
Saponaria officinalis	soapwort										L			
Securigera varia	crown vetch											L		M
Typhus angustifolia	narrow-leaved cattail									L				
Ulmus pumila	Siberian elm	M		M	L	L		L		L		M	H	

Site name abbreviations: Sieb = W Of Gen Sieben Dr + Dakota Co Cons Area, Jorg>East=East of Jorgen Ave, Pleas>East Of Pleasant Drive, Hstg PW=Corridor Near Hastings Public Works, VLP=Vermillion Linear Park, VFP=Vermillion Falls Park, OMP=Old Mill Park, VH=Veterans Home, SNA=Hastings SNA, RDP=Rivertown Dog Park, B/T Dwntn= Between Rivertown Dog Park & Downtown, Levee /Jaycee=Levee Park and Jaycee Park

Abundance codes: H=High, M=Medium, L=Low

Wildlife

Dakota County encompasses a variety of ecological subsections as noted above, and each subsection contains multiple habitats, an abundance of water resources, and hosts a diverse assemblage of plant communities and wildlife, including Species of Greatest Conservation Need (SGCN) whose populations are rare, declining, or vulnerable to decline in Minnesota.

Table 4 lists relatively common species that are known or likely to occur within the Greenway Corridor. Not all species would be expected at any given site. Presence/absence can depend on multiple factors, including size and shape of habitat and proximity to other habitat types, degree of isolation, and structural and species diversity.

Table 4. Wildlife Species Observed in Dakota County with Statuses

Common Name	*Scientific Name*	Endangered	Threatened	Special Concern	SGCN
Mammals					
American badger	*Taxidea taxus*				X
Prairie vole	*Microtus ochrogaster*			X	X
Thirteen-lined ground squirrel	*Ictidomys tridecemlineatus*				
Grassland Birds					
American kestrel	*Falco sparverius*				X
Barn swallow	*Hirundo rustica*				
Clay-colored sparrow	*Spizella pallida*				
Dickcissel	*Spiza americana*				X
Eastern bluebird	*Sialia sialis*				
Eastern kingbird	*Tyrannus tyrannus*				
Eastern meadowlark	*Sturnella magna*				X
Field sparrow	*Spizella pusilla*				X
Grasshopper sparrow	*Ammodramus savannarum*				X
Henslow's sparrow	*Ammodramus henslowii*	SE			X
Horned lark	*Eremophila alpestris*				
Lark sparrow	*Chondestes grammacus*			X	X

Common Name	*Scientific Name*	Endangered	Threatened	Special Concern	SGCN
Northern rough-winged swallow	*Stelgidopteryx serripennis*				X
Savannah sparrow	*Passerculus sandwichensis*				
Song sparrow	*Melospiza melodia*				
Tree swallow	*Tachycineta bicolor*				
Tree Nesting Birds					
American goldfinch	*Spinus tristis*				
Baltimore oriole	*Icterus galbula*				
Brown thrasher	*Toxostoma rufum*				X
Chipping sparrow	*Spizella passerina*				
Indigo bunting	*Passerina cyanea*				
Orchard oriole	*Icterus spurius*				
Ruby-throated hummingbird	*Archilochus colubris*				
Reptiles					
Bull snake	*Pituophis catenifer sayi*			X	X
Plains (western) hognose snake	*Heterodon nasicus*			X	X
Prairie skink	*Plestiodon septentrionalis*				
Smooth green snake	*Opheodrys vernalis*				X
Insects					
Monarch butterfly	*Danaus plexippus*				X
Rusty-patched bumble bee	*Bombus affinis*	FE			X

Source: MN DNR 2016
Abbreviations: SE = State Endangered; FE = Federally Endangered; SGCN = Species of Greatest Conservation Need

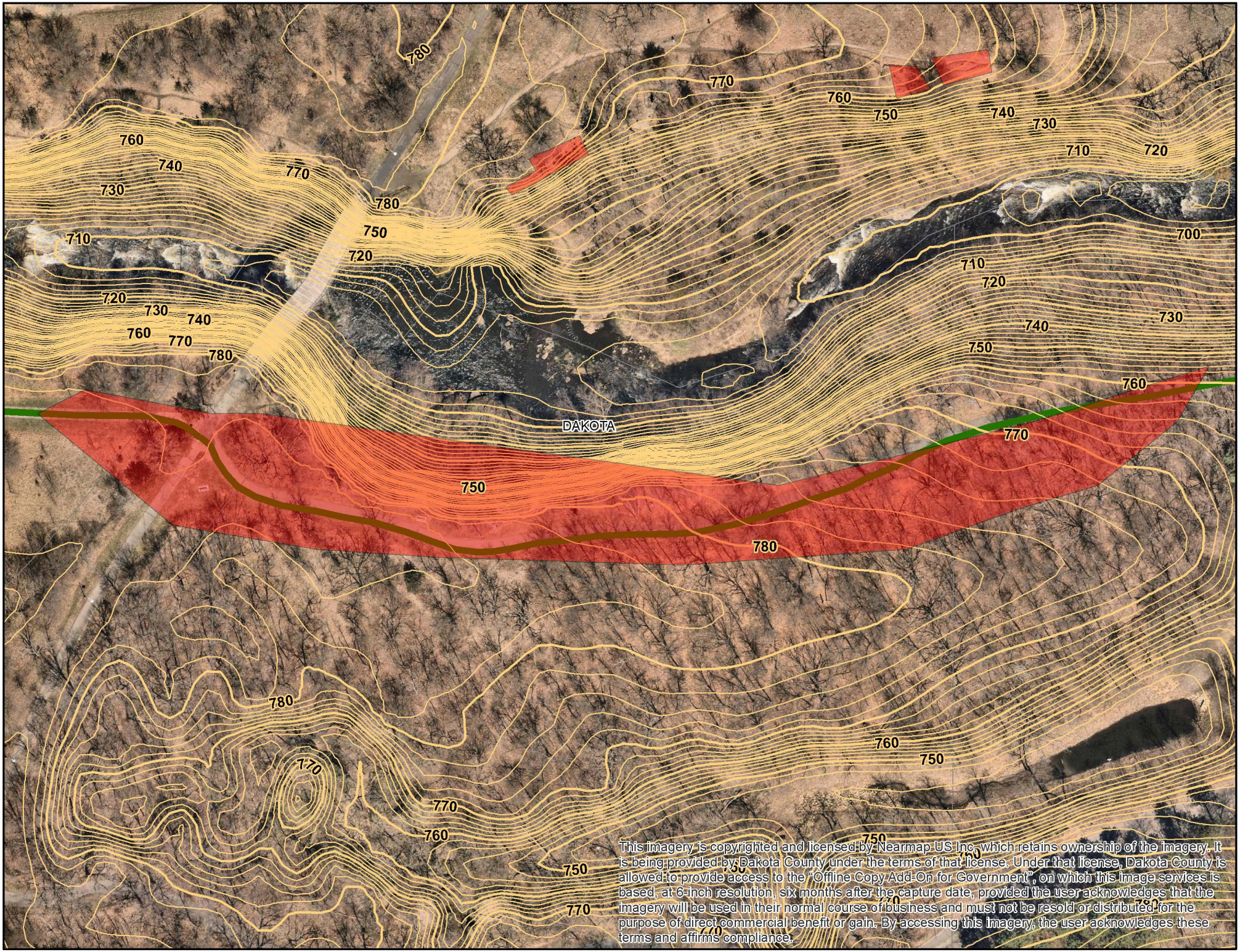
Ecological Recommendations, Preliminary

Priorities identified in this plan focus attention on the preservation, restoration, or enhancement of particular species, plant communities, water resources, or ecosystem processes. Restoration or conservation objectives are listed for each target plant community within each site below.

Oak Savanna

Sites: West of General Sieben Drive (upland), Dakota County Conservation Area (upland), Vermillion Falls Park, Old Mill Park

- **Eliminate cover of all invasive shrubs.** Invasive common buckthorn and honeysuckle species exhibit the greatest extent of shrub layer cover of many woodlands and oak savanna remnants within the Vermillion River Greenway corridor. Removing these species, performing follow-up maintenance, and establishing a diverse, native shrub and herbaceous plant layer appropriate for the native plant community target is necessary to protect these remnants or to restore lost habitat. Ongoing maintenance of these restorations, including prescribed fire, is needed.
- **Remove secondary growth or ruderal trees and shrubs.** Native tree species such as box elder, Eastern cottonwood, green ash and black walnut have afforested oak savannas due to fire suppression. To re-establish savanna plant communities, these species, in addition to any non-native (Siberian elm, black locust) trees should be removed to reduce the tree density to between 10 and 20 percent canopy cover, with a preference towards retaining bur oaks.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NRMP Development Schedule

Schedule Dates	Milestones
August 2022	Contractor was hired
October 2022	Stakeholder meeting with City of Hastings Park's staff
August-December 2022	Site survey and background information collected
February 2023	Draft Plans
February-March 2023	comment period
April 2023	Final public drafts
April-May 2023	Final adoption

Greenway Construction Schedule

Schedule Dates	Milestones
2023 Q1	Finalize design
2023 Q2	Bidding and award
2023 Q3	Construction start
2023 Q4	Construction complete
2024	Some construction, if unable to get a variance