



# SECTION 4: PARK DEVELOPMENT

## Park Vision

The fundamental philosophy of this Master Plan is to maintain Nokomis-Hawatha's status as a premier regional park by enhancing the existing well-loved amenities and adding select new features. The Park will continue to offer a range of recreation activities located primarily within three identified focus areas, rather than scattering active uses throughout the park. The remaining parkland will be used for more natural amenities, passive recreation, and trail use. Several actions are needed in order to achieve this vision, including redevelopment of existing buildings, improvements to trails and shorelines, restoration and addition of habitat, and new construction of identified amenities.

The Master Plan organizes goals and recommendations for project development into three categories:

### 1. Natural Resources

This category addresses the function and quality of water bodies (lakes, creek, wetlands) and both managed and naturalized uplands to provide an integrated system for supporting wildlife habitat, landscape, and horticultural amenities in the park.

### 2. Circulation and Connectivity

This category addresses the movement of bicycles, pedestrians, and vehicles through and within the park, including how these systems connect to the broader community.

### 3. Recreation

This category addresses both active and passive recreation within the park, including identified "activity centers" where most recreation facilities are located. (Note: trail-based uses are included in Circulation and Connectivity.)

A vision for each category of the plan was established with input from park users, community members, and staff. The resulting goals support implementation of the overarching vision. These visions and goals guided preparation and evaluation of concept alternatives for key areas during the park master planning process. They will continue to guide the park's role, character, and function as the Master Plan is executed over time.

## NOKOMIS-HIAWATHA REGIONAL PARK VISION:

### Natural Resources

Improve the natural setting and quality of the park.

### Circulation & Connectivity

Offer premier trail experiences that knit the park together.

### Recreation

Continue to ensure quality recreation for everyone by enhancing existing amenities and adding key new facilities.

Unfold to see the Nokomis-Hawatha Regional Park Master Plan

# NOKOMIS-HIAWATHA REGIONAL PARK MASTER PLAN

## Key Features

- A** Picnic Area
- B** Beach
- C** ADA water access
- D** Parking
- E** Play Lawn
- F** Fishing Pier
- G** Enhanced Crossings
- H** Restrooms & Drinking Fountains
- I** Improved Sidewalk Access



## Landscape Key

- Regional Park Boundary
- Building
- Bike Path
- Multi-use Path
- Pedestrian Path
- Naturalized Shoreline/Wet Meadow
- Stormwater Feature
- Restored Habitat (savanna, prairie, meadow)



0' 500'

Area of continued coordination with City and County for ongoing study of transportation and safety solutions.

# NATURAL RESOURCES

## Vision: Improve the natural setting and quality of the park

Natural Resources within Nokomis-Hiawatha Regional Park include all aspects of implementing and maintaining the landscape, vegetation, habitat, and water body improvements within the park. The needs assessment process identified several key concerns related to the park's natural resources, including water quality of the lakes and creek, stormwater management, and functional habitat. The goals below address these concerns and support the overall vision for improving the natural setting and quality of the park.

### Natural Landscape

During the planning process, a broad landscape design methodology was presented for discussion, and put two design styles in comparison:

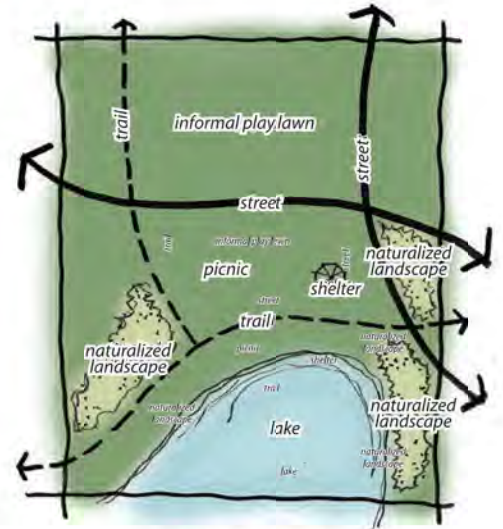
1. A Campus Style that maintains the park primarily as mowed turf, with designated areas of naturalized landscape inserted within it. These naturalized areas— rain gardens, wetlands, or other plantings— could contribute to wildlife habitat and stormwater management.
2. A Naturalized Style that maintains the park primarily as native/ naturalized landscape in the form of savanna, meadow, prairie, woodland, and wetlands, with designated areas of managed turf inserted within it. The naturalized landscape would contribute in greater significance to improved wildlife habitat and stormwater management.

Community input and feedback through the CAC indicates a strong preference for implementing the Naturalized Style, as long as ample areas of managed turf used for passive recreation, informal play, and picnicking are designated sufficiently throughout the park. Similarly, trail access needs to be maintained across the landscape where many people currently cut across open lawns to reach the trail systems. Finally, security was mentioned as a concern regarding more native plantings, and ongoing maintenance will need to address areas of limited sight lines as more of the park becomes naturalized.

Increasing the amount of naturalized vegetation within the park can accomplish several objectives, including improved stormwater management and water quality. The intent of this Master Plan is not to naturalize the entire park, but rather, to increase the amount of naturalized landscape around strategic locations of open lawn and unprogrammed turf areas. The resulting scenario would achieve approximately 50% of naturalized parkland, leaving the remaining 50% as managed turf or active recreational uses. The naturalized landscape envisioned comprises restoration of areas for mesic prairie, savanna and meadow, utilizing appropriate native plants and grasses; it does not entail leaving non-native turf grass to grow without mowing.

The water resource effects of increasing naturalized vegetation in the park have been analyzed for the percentage of park area to be converted from managed turf to native understory plant communities (restored habitat). The following analysis is specific to landcover conversion only and does not take into account the other stormwater best management practices (BMPs) that are likely be sited within naturalized landscape.

#### CHARACTER IMAGES



"CAMPUS STYLE"

A campus style park features open, mown lawns and patches of plantings that shape space and draw the eye to different views. This type of park requires a lot of mowing, but less intensive planting maintenance. Due to its open layout, spaces are highly flexible and can accommodate a variety of uses; however, there is little habitat value to this type of park.



"NATURAL STYLE"

A natural style park features lawns, open spaces, and clearings tucked into a matrix of vegetation. Gathering areas may be surrounded by grassed or prairie overlooking wetlands or wooded. This type of park is composed of native habitats that require specific maintenance, however, mowing is less necessary. Care must be taken to counter natural areas with enough open space to accommodate flexible play. This type of park offers more habitat value than a campus style park.

## Nutrient Loading:

Increased nutrient (nitrogen and phosphorus) loading in lakes leads to degraded water quality and ecosystem health. Reducing the amount of nutrient loading improves water quality and habitat conditions. Requirements that limit the amount of nutrients allowed in water bodies are called Total Maximum Daily Load (TMDL) goals.



Wildflowers at Lake Nokomis

## Naturalized Landscapes and Best Management Practices:

- » Rain Gardens
- » Wet Detention Ponds
- » Shoreline Restoration
- » Constructed Wetlands
- » Meadow
- » Savanna
- » Prairie



Existing wetlands at Lake Nokomis

Test Scenario	% Natural Cover	Volume Reduction		N-load Reduction (see sidebar)	
		acre-ft/year	%	lbs/year	%
X	4%	-	-	-	-
P1	10%	2	0.3%	33	6%
P2	25%	8	1.1%	118	22%
P3	50%	17	2.4%	259	48%
P4	75%	26	3.7%	401	74%
P5	90%	31	4.4%	486	90%

Given the small relative area (in relation to watershed area) and subtle difference in stormwater runoff coefficients between turf grass with trees and naturalized landscape with trees, the water resource effects are modest, but beneficial. The estimated hydrologic cycle changes can be seen in Figure 1 which illustrates steadily higher infiltration and lower runoff rates as naturalized landscape percentage increases.

Water quality improvements to nutrient levels, as measured in Total Maximum Daily Load (TMDL), are apparent but limited. Put in context, the annual 0.6 pound reduction in Total Phosphorus estimated for a 50% natural cover conversion (see Figure 2) is less than 1% of the annual Total Phosphorus load reduction goal for Lake Nokomis.

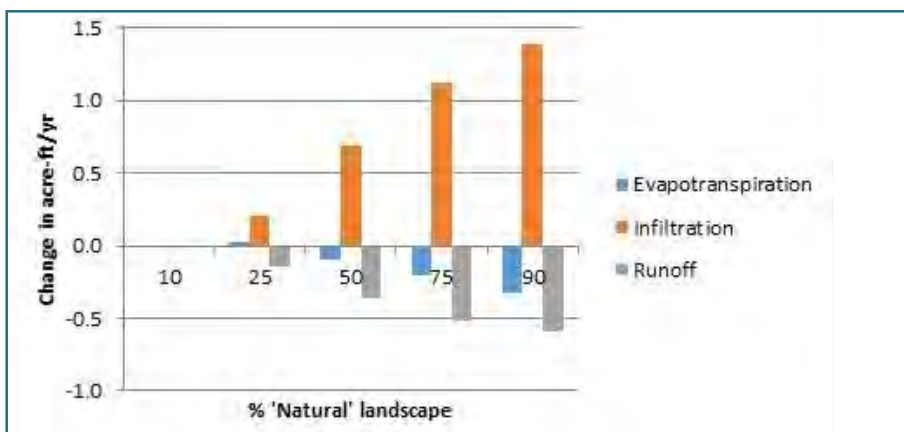


Figure 1 – Estimated annual water cycle change associated with landcover conversion.

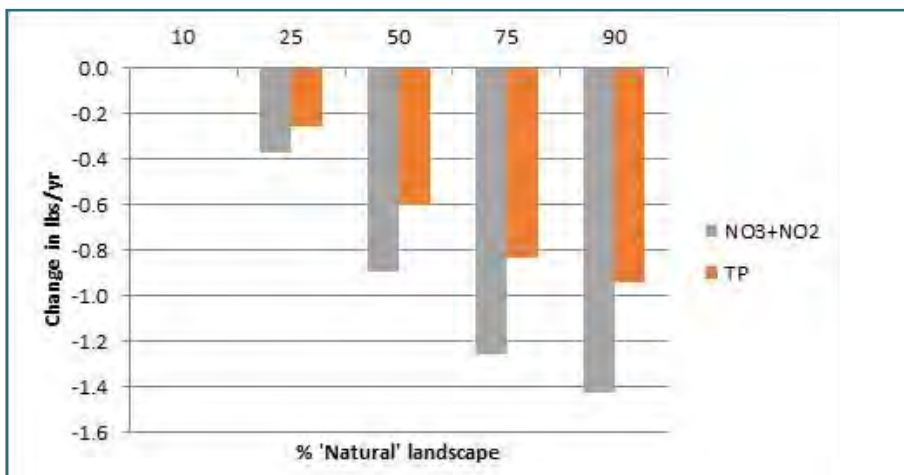


Figure 2 – Estimated annual reduction in Nitrate & Nitrite (NO<sub>3</sub>+NO<sub>2</sub>) as well as Total Phosphorus (TP) to Lake Nokomis & Lake Hiawatha for the range of landcover conversions discussed

While TMDL goals are one way to monitor water quality, they do not account for bacteria levels. At Lake Hiawatha, beach closures due to E. coli levels have impacted swimming and other recreation in past years. While creating naturalized shoreline buffers will not wholly eliminate geese from using the lakes, limiting their ability to gather along the shoreline is likely to help reduce their impacts on water quality.

Though increasing the amount of naturalized plantings will have a small impact on water quality in the lakes, the associated habitat improvements will have an immense impact on the park's wildlife. Native plants not only attract pollinators, but also other insects, birds, and small mammals, forming the basis of a food chain that supports Nokomis-Hiawatha Regional Park's own ecosystem. Most of our native insects need native plants to survive – they simply do not recognize non-native plant species as food. They evolved to feed on only a few kinds of plants, and it takes thousands of years for them to adapt to new food sources. To foster a healthy food chain and support pollinators, we need to offer plants that insects recognize and landscapes that can be used as habitat.

## Water Quality

While the Master Plan addresses water quality strategies that can be implemented within the park, the importance of managing stormwater throughout the watershed cannot be overlooked. Water quality is one aspect of natural resources that is greatly impacted by actions and activities occurring throughout the broader landscape.

The Park is within the Minnehaha Creek Watershed, which includes Minnehaha Creek, the city stormwater sewer system, and surface stormwater runoff. Certain kinds of urban development increase the volume and rate of stormwater runoff and the occurrence of litter and other pollutants in our lakes. Impacts to water quality higher up in the watershed influence the quality of water entering the lakes. Lake Hiawatha is especially vulnerable as Minnehaha Creek directly provides the majority of its pollutant load.

Recent and ongoing water quality improvement efforts in Nokomis-Hiawatha Regional Park include:

- » Study of Total Maximum Daily Load (TMDL) for Lakes Hiawatha and Nokomis
- » Extensive and ongoing water quality monitoring (by MPRB)
- » Bluewater Partnership for stormwater treatment
- » Bio-manipulation Program (by MCWD) to increase biodiversity of lake species in Lake Nokomis
- » Monitoring for aquatic invasive species (zebra mussels)
- » Best Management Practices (BMPs) for establishing and maintaining wetland habitat and treating stormwater
- » Ongoing shoreline restoration study

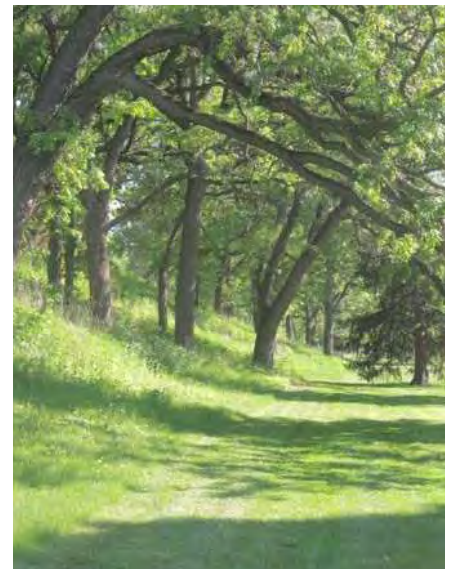
A technical memo prepared by Emmons & Olivier Resources (see Appendix) concludes that combining localized BMPs with stormwater treatment throughout the watershed will prove the most effective and practical strategy for reducing pollutant loads in the lakes. Although this Plan designates about 100 acres for naturalization and stormwater treatment, high water tables, poorly-drained soils, and insufficient topography will reduce the actual area of parkland suitable for BMPs. Fortunately, there are numerous opportunities to incorporate stormwater features in the greater watershed, and when implemented together, a significant portion, if not all, of Lake Nokomis' TMDL goals could be achieved. Comprehensive stormwater management provides several additional benefits, including groundwater recharge, reduced flooding, and increased habitat.



*Native grasses*



*Wildlife*



*Large mature trees*



*Nokomis-Hiawatha Regional Park from above*

## Master Plan Natural Resource Goals:

### Natural Landscape

1. Increase the amount of naturalized landscape in the park with areas of restored wetland, prairie, meadow, and savanna. These naturalized areas will work to increase beneficial vegetation around water bodies, stabilize shorelines, and improve wildlife habitat for birds, pollinators, and fish. Areas of naturalized landscape will be actively managed and planted with select native species appropriate for the location and conditions of the specific site. The natural plantings will be utilized as best management practices (BMPs)— strategies that improve functional habitat and water quality— and care will be taken to maintain their appearance and height to retain views of the lake and promote a safe and attractive park environment. Naturalized landscape will be implemented gradually as maintenance ability and funding allow.



*Fishing pier at Lake Hiawatha*

### Water Quality

2. Increase the number of wetlands in the park to enhance stormwater treatment.
3. Implement additional best management practices (BMPs) for stormwater management, by:
  - » Identifying stormwater management opportunities that serve multiple functions and thrive in a variety of hydrologic conditions
  - » Managing pollution from Canadian geese and dogs
  - » Exploring solutions to reduce trash in Lake Hiawatha via Minnehaha Creek
4. Support ongoing efforts to improve water quality, including TMDL projects, biomanipulation, and water quality monitoring.

## Master Plan Natural Resource Recommendations:

The Natural Resources Framework Plan identifies locations of restored habitat, managed turf, and wetlands, illustrating the following recommendations for park improvements:

1. Maintain active recreation primarily in existing activity areas.
2. Limit turfgrass to identified turf areas managed for picnicking, unprogrammed uses, and passive or informal recreation.
3. Create naturalized landscape opportunities:
  - » Along shorelines
  - » Outside active zones
  - » In low-lying areas
  - » Integrated with stormwater systems
  - » Within the lakes
4. Transition gradually from approximately 10% to 50% restored landscape.
5. Study and manage the effects of non-native carp in the lakes.



*Landscape of the park*



# Natural Resources Framework Plan



*Bicycle Trails*



*Trails in poor condition*



*The park typically provides separate trails for bike and pedestrian traffic*

# CIRCULATION AND CONNECTIVITY

**Vision: Offer premier trail experiences that knit the park together.**

Circulation and Connectivity within Nokomis-Hiawatha Regional Park addresses the movement of pedestrians, bicycles, and vehicles through the park as well as access into and out of the park. The needs assessment process identified the crossing of busy roadways as the greatest circulation concern, particularly along Cedar Avenue and Minnehaha Parkway. Additional study identified locations where conflicts between pedestrians and bikes, or bikes and vehicles posed particular danger. The goals below address these concerns and support the overall vision for improving circulation and connectivity within and around the park.

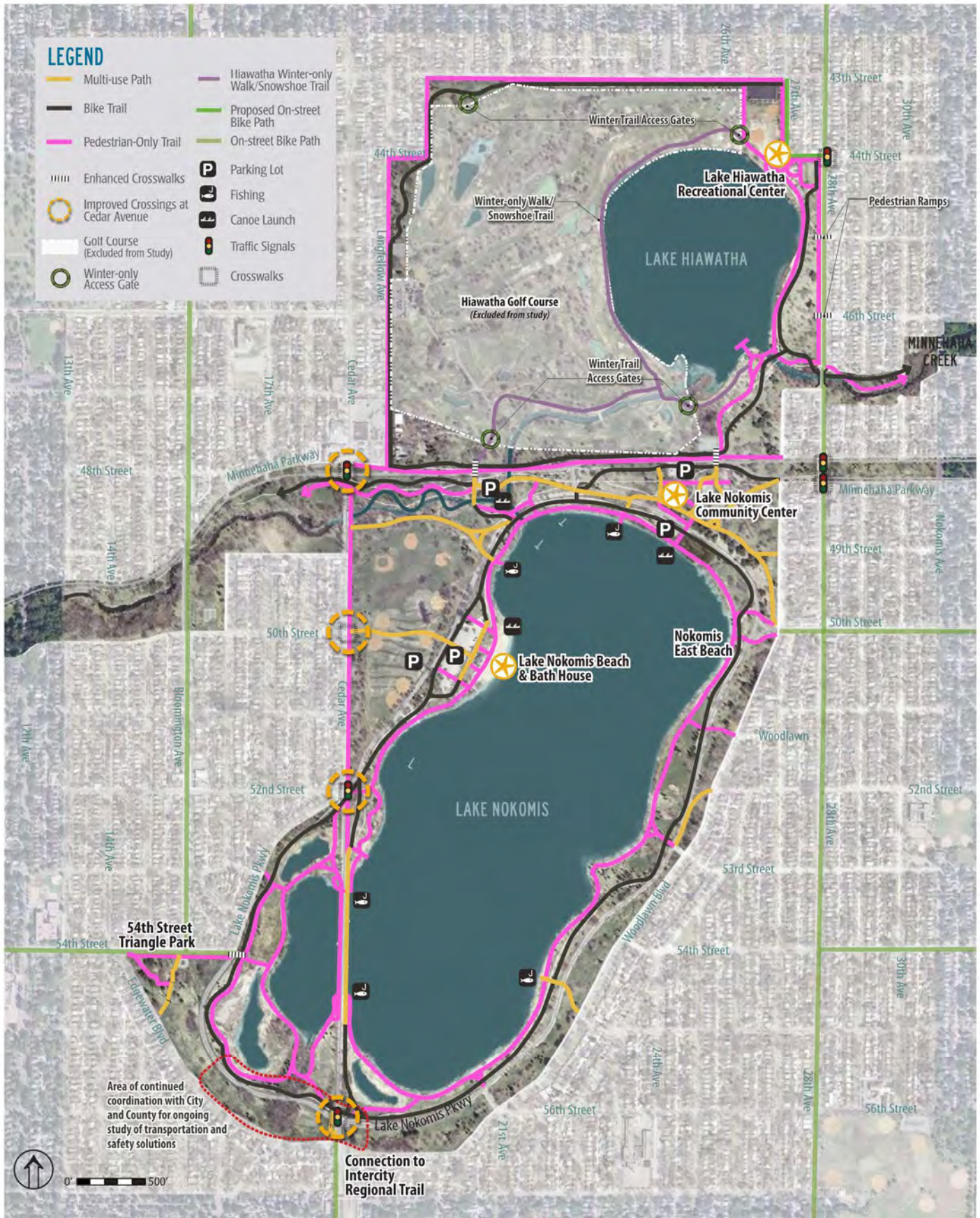
## Master Plan Circulation and Connectivity Goals:

### Circulation

1. Improve the loop trail experience with consistent pavement, additional trails where needed, and clear signage.
2. Reconstruct trails at locations where bicycles, pedestrians, and/or vehicles pose identified traffic conflicts.
3. Provide options for bicycle traffic to safely navigate through or around recreational Activity Centers (see page 36).
4. Enhance winter trail use by adding seasonal access gates for cross-country skiing and winter walking.

### Connectivity

5. Enhance connections to the surrounding neighborhoods.
6. Improve Cedar Avenue crossings for pedestrians and bicyclists.
7. Improve Minnehaha Parkway crossings for pedestrians and bicyclists.
8. Establish a southern gateway to the Grand Rounds to work with the addition of the Intercity Regional Trail.



# Circulation & Connectivity Framework Plan



*Enhanced crosswalks have wider crossing space with markings for separate trails*



*Separate walking and biking trails*



*A bridge across Minnehaha Creek narrows the separation between bike and pedestrian traffic*

## Master Plan Circulation and Connectivity Recommendations:

The Circulation and Connectivity Framework Plan identifies trail routes, locations for enhanced crossings, and opportunities for improved roadway connections, which can be seen in the following recommendations for park improvements:

1. Add or improve trail connections between neighborhoods and the park through additional trails, accessibility improvements, and street crossing enhancements.
  - a. Improved pavement and signage
  - b. Dedicated bicycle and pedestrian paths over Cedar Avenue Bridge
  - c. Bicycle bypass around Nokomis Main Beach and Nokomis Community Center Activity Centers
  - d. Limit informal trails that destabilize soils
2. Southwest “Lagoon” Area Trails
  - a. Add “outer lagoon” walking loop with walking trail parallel to existing bicycle trail near Nokomis Parkway
  - b. Add trail access to Cedar Avenue Bridge at north and south sides
3. Lake Hiawatha Trails
  - a. Reroute the bicycle path around Lake Hiawatha Recreation Area to follow the outside of the play fields and playground connecting to an on-street bike route along 27th Avenue on the east side of Lake Hiawatha
  - b. Add a complete bicycle and pedestrian trail system around the perimeter of Hiawatha Golf Course
  - c. Add a seasonal walking trail on the west side of Lake Hiawatha, accessible only when golfing is not in season
  - d. Connect bicycle and pedestrian trails under the 28th Avenue bridge along Minnehaha Creek
  - e. Add additional seasonal access gates to cross-country trails within Hiawatha Golf Course
  - f. Build a new pedestrian bridge across Minnehaha Creek to fully separate trails at the southeast corner of Lake Hiawatha
4. Roadway Crossings
  - a. Improve Cedar Avenue crossings for bicycles and pedestrians
  - b. Improve Parkway crossing near Nokomis Community Center
  - c. Add crossing of Minnehaha Parkway near existing parking lot
5. Transportation and Traffic
  - a. MPRB shall remain involved in ongoing City- and/or County-led study and improvement of transportation and safety around the Cedar Avenue / Nokomis Parkway / Edgewater Boulevard intersections. Involvement may include assistance with community engagement, access to land for information gathering, continued planning collaboration, and, if warranted, making land available for implementation of a solution that results from careful study, community engagement, and analysis of the positive impact on the park experience.



Circulation & Connectivity Vignette -- Southwest Lake Nokomis



*Passive recreation in the park*



*Athletic fields are popular for softball*



*The park is popular for triathlon events*

# RECREATION

**Vision: Continue to ensure quality recreation for everyone by enhancing existing amenities and adding key new facilities.**

Recreation continues to be the primary draw for visitors at all Minneapolis Parks, and Nokomis-Hiawatha Regional Park is no exception. The community identifies the trails, athletic fields, and beaches as some of the park’s most important features. The biggest concerns with recreation in the park have to do with the lack of restrooms and drinking water available. Other concerns center on the improvement of particular facilities, including the beach house, vita course, and some of the playground equipment.

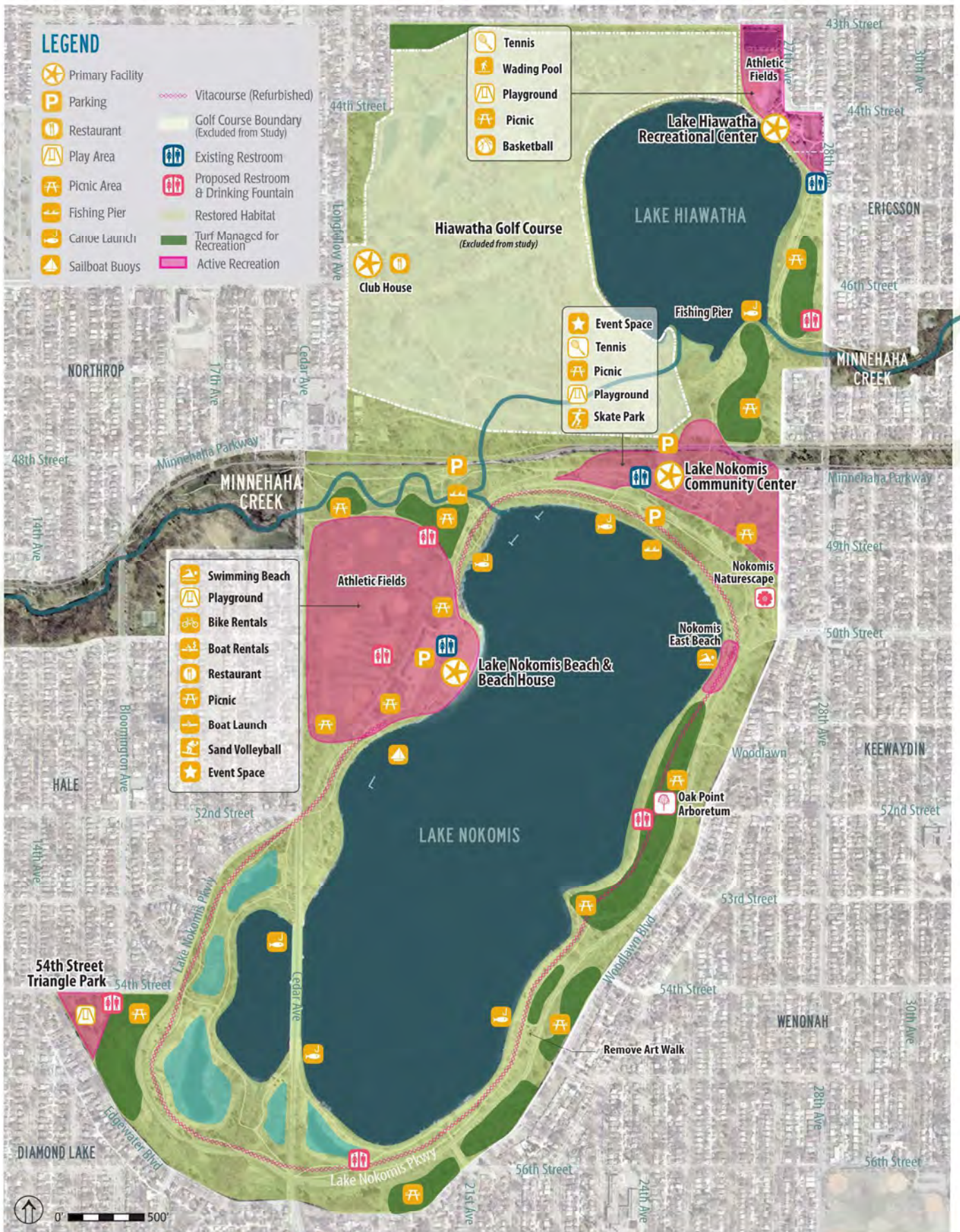
## Master Plan Recreation Goals:

1. Continue to provide a high-quality regional-scale recreation experience.
2. Meet neighborhood recreation needs.
3. Continue to provide multiple scales of community gathering.
4. Add select new facilities in areas that support active uses.

## Master Plan Recreation Recommendations – Park-wide:

The Recreation Framework Plan identifies locations for additional restrooms and drinking water, and pinpoints system-wide improvements, resulting in the following recommendations for park-wide recreation:

1. Focus recreation in existing Activity Centers (see following pages).
2. Expand and improve the number of dedicated and informal picnic areas throughout the park.
3. Add more portable restrooms, especially in the south and east sides of Lake Nokomis.
4. Refurbish the vitacourse.
5. Enhance the arboretum with signage and events.
6. Remove the Art Walk and related signage.
7. Redevelop play area at 54th Street Triangle Park with nature themed equipment and play space.



# Recreation Framework Plan

## Master Plan Recreation Recommendations – Activity Centers:

Specific recreation recommendations are addressed within each of three identified Activity Centers, which benefited from individual, focused study during the planning process. These Activity Centers target the three amenity buildings and facilities currently in the park, and are existing locations for focused recreational uses and programs. They include:

- » Nokomis Main Beach and Athletic Fields
- » Nokomis Community Center and East Beach
- » Lake Hiawatha Recreation Area



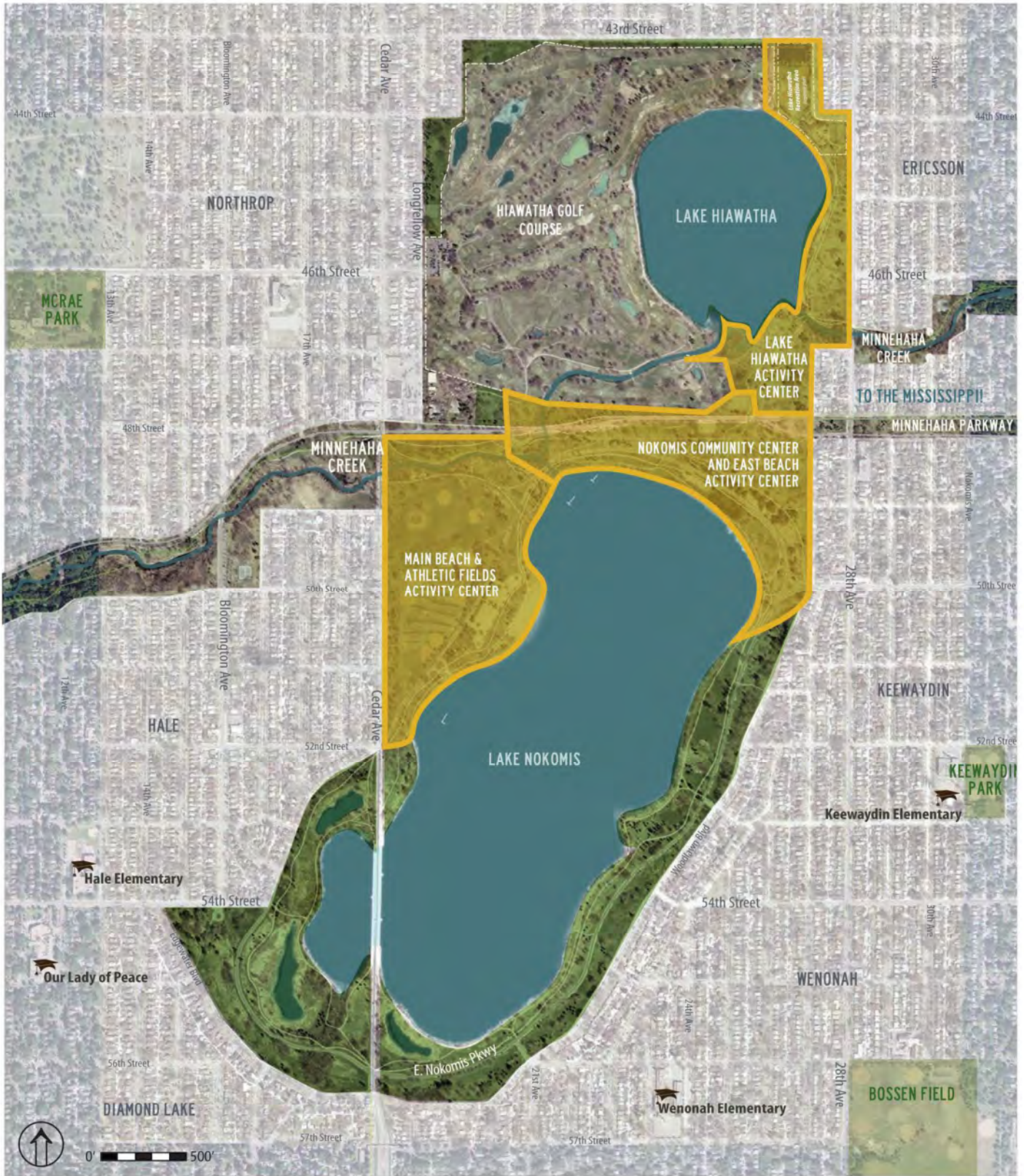
*Nokomis Main Beach*



*Historic WPA playground equipment at Nokomis Community Center*



*Swimming at the East Beach on Lake Nokomis*



# Activity Center Key Map

# Preferred Concept Nokomis Athletic Field Layout



## Nokomis Main Beach and Athletic Fields Activity Center Plan

# Nokomis Main Beach and Athletic Fields

## Main Beach Activity Center Plan

The Nokomis Main Beach and Athletic Fields Activity Center Plan illustrates the following recommendations to enhance the use, access, circulation, and amenities for recreation in this location. Master plan recommendations for this area include:

1. Maintain a cluster of smaller buildings at the main beach.
2. Renovate or redevelop the beach house building.
3. Add more picnic pavilions.
4. Expand the beach's swimmable area to the north and add shade structures.
5. Reconfigure and expand the existing parking lot to add approximately 30 spaces and include methods to manage and clean stormwater.
6. Add ADA accessible water access at the north side of beach.
7. Add sand volleyball south of the parking lot.
8. Move the existing boat storage away from this Activity Center and relocate it below the hill near the Nokomis Community Center.
9. Regrade and reconstruct the Athletic Field with six ball diamonds and a large multi-use open space.
10. Add a new parking lot with approximately 60 spaces west of Nokomis Parkway, ensuring this new lot includes stormwater management BMPs.
11. Add a new bike path between the reconfigured parking lot and Nokomis Parkway to bypass the Nokomis Main Beach area; enhance the trail crossings (with signage and markings) of the parking lot access drives to increase bike visibility and safety.
12. Establish a slow-speed shared trail (with signage and markings) for bike and pedestrian use between the reconfigured existing parking lot and the beach house, and add more bike parking at the beach.
13. Relocate the boat rentals and related concessions to the north side of beach.



*Sandcastle lakeside restaurant*



*Existing playground at the Main Beach*



*Swimming at the Main Beach*



# Nokomis Community Center and East Beach Activity Center Plan

# Nokomis Community Center and East Beach

The Nokomis Community Center and East Beach Plan illustrates the following recommendations to enhance the use, access, circulation, and amenities for recreation in this location. Master Plan recommendations for this area include:

## Upper Hillside

1. Expand the Community Center building to add a double gym and meeting rooms, and a larger plaza at the southwest corner of the building. The new building should meet improved environmental performance standards.
2. Add a small amphitheater to accommodate approximately 150 people.
3. Build a skate park integrated within the landscape that includes stormwater management.
4. SEE BELOW, per Amendment, February, 2022
5. Reconfigure pedestrian and bicycle trails within this activity area to reduce pedestrian/bicycle/vehicle conflicts.
6. Extend the bike trail on the south side of Minnehaha Parkway east to connect with Woodlawn Boulevard.
7. Remove the existing parking lot to the east of the tennis courts and convert to a picnic area.
8. Expand the existing parking lot to replace parking spaces lost by removal of the east parking lot (no net loss of existing parking availability). New construction should incorporate stormwater management and landscaping designed to minimize the visual impact of the larger parking lot.
9. Maintain an open lawn with a small backstop for pickup field games.
10. Relocate the event and gathering space from along the lake to the top of the hill near the playground.
11. Update the playground equipment.
12. Keep historic picnic grounds in place.

## Lower Lakeside

13. Add a formal canoe and kayak launch near the existing lakeside parking lot.
14. Relocate community boat storage for canoes and kayaks from the Main Beach area to a new canoe launch location.
15. Establish a neighborhood gathering area at the 50th Street park entrance, with possible seating and stairs down to the water's edge.
  - 4a. Resurface tennis courts north of Minnehaha Parkway and retain for tennis.
  - 4b. Replace tennis courts south of Minnehaha Parkway with pickleball-specific courts.



*Neighborhood gathering*

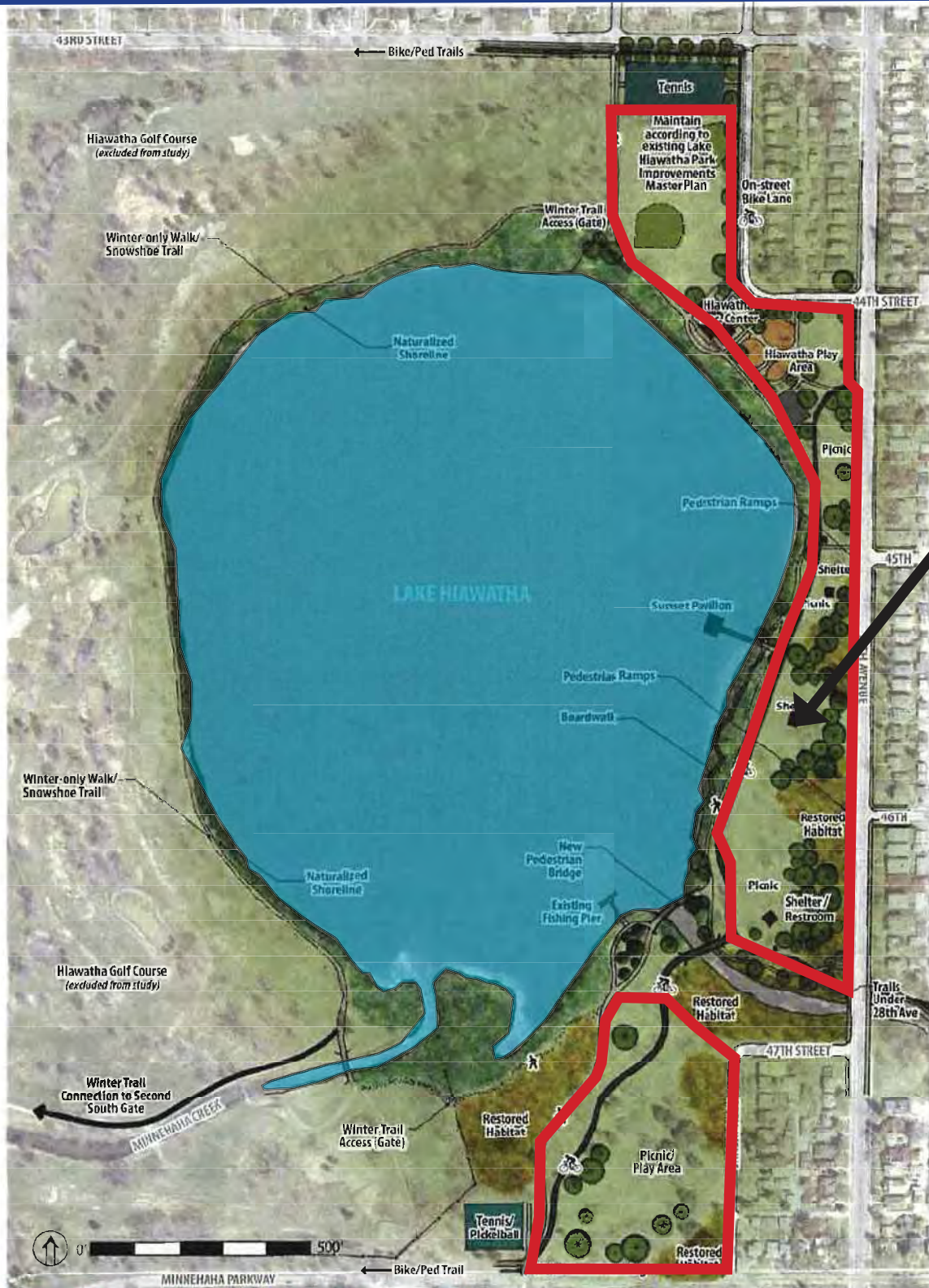


*Existing historic picnic ground*



*The lakes are popular for many activities*

# Designated Urban Agriculture/Habitat Area



proposed area designated for urban agriculture/habitat

Lake Hiawatha Activity Center Plan

# Lake Hiawatha

The Lake Hiawatha Activity Center Plan illustrates the following recommendations to enhance the use, access, circulation, and amenities for recreation in this location. The recreational uses currently existing in and around the Hiawatha Recreation Center are managed under a separate plan (included in the Appendix) and are therefore not included in the recommendations listed here. Outside of this area, the Master Plan recommendations for Lake Hiawatha include:

1. Reconfigure trails at the existing Minnehaha Creek Bridge.
2. Connect bike trails with on-street city bike routes.
3. Install additional gates for cross-country skiing access through the golf course.
4. Add bike and pedestrian trails under the 28th Avenue Bridge when that bridge is reconstructed.
5. Maintain the existing picnic areas and add picnic shelters.
6. Add a trail system around the perimeter of the golf course.
7. Divert the bike path around the recreation center area.
8. Add a winter-only walking/snowshoe trail around the west side of Lake Hiawatha.
9. Add a new bridge for pedestrians over the creek in the southeast part of the lake.
10. Replace the Lake Hiawatha Beach with a naturalized shoreline, boardwalk, and a sunset pavilion.
11. Add a designated canoe/kayak launch and storage racks near the lakeshore.
12. Add curb-cuts for trail access across from 45th and 46th Streets on the east side of Lake Hiawatha.
13. Plant fruit and nut trees for human harvest and provide community education within designated urban agriculture area along the East side of Lake Hiawatha. This recommendation does not provide for any use of the urban agriculture area for individual garden plot.



*Lake Hiawatha*



*Hiawatha Recreation Center*



*Wading pool at Hiawatha Recreation Center*

