CEDAR LAKE / LAKE OF THE ISLES MASTER PLAN

PREFERRED CONCEPT

JUNE 2022

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<u>Minneapolis</u> Park & Recreation Board

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GUIDING PRINCIPLES

PROTECT	Protect and enhance parkland and water bodies whi	le
	climate.	

Welcome diverse users by creating a sense of arrival, intuitive orientation, INVITE education for visitors, and ensuring safe connections to and through the park for both people and wildlife.

Create flexible, safe, and clear circulation networks for all transportation CONNECT modes to clarify and improve links between people, wildlife, and natural resources.

Acknowledge and respond to layers of history related to the land and lakes, and **TELL STORIES** value authentic stories through education, interpretation, and stewardship.

Create inclusive and equitable programs and activities that reflect the unique ENGAGE character of each lake and provide welcoming and safe spaces for visitors to experience the natural environment.

RESPECT

Honor the uniqueness of each lake by respecting current and valued historic features while accommodating improvements to sustain biodiversity and strengthen new and returning visitor experiences.

adapting to a changing

Lake of the Isles and Cedar Lake, as part of the Minneapolis Chain of Lakes Regional Park, contribute to a vital, urban natural ecosystem with unique experiences that protect, connect, and sustain people, wildlife, and natural resources, while maintaining the health of the lakes.

PREFERRED PARK CONCEPT FRAMEWORK

The Preferred Park Concept aims to sensitively respond to both the general engagement received since 2019 and the most recent 5-month Initial Park Concept community comment period, which included a series of focused Community Advisory Committee (CAC) meetings, and several stakeholder site walks and workshops.

The Preferred Park Concept has been developed at the overall Master Plan scale, and also zooms in on areas that have distinct characteristics and/or would be helpful to see in more detail.

LEGEND

Zone 1: Northwest Cedar Lake

Zone 2: Northeast Cedar Lake

Zone 3: Kenilworth Channel and Southeast Lake of the Isles

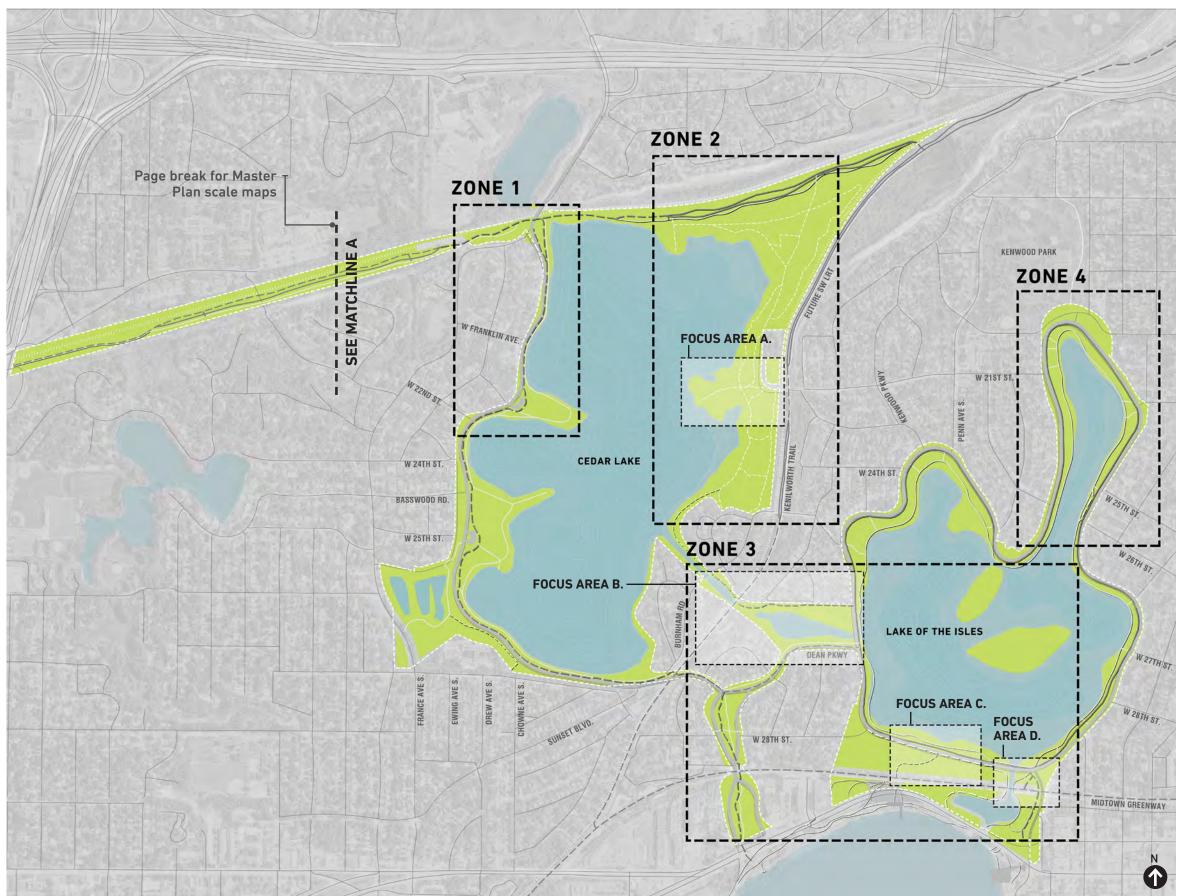
Zone 4: North Lake of the Isles

Focus Area A: East Cedar Beach and Adjacent Parkland

Focus Area B: Kenilworth Channel and Lake of the Isles Connection

Focus Area C: South Lake of the Isles Parkway

Focus Area D: Lake of the Isles Parkway and East Bde Maka Ska Parkway Intersection



PREFERRED PARK CONCEPT

WATER QUALITY GOALS

The draft water quality goals and strategies have been developed by guidance from the Water Quality CAC Subcommittee and will be reviewed again during the Preferred Park Concept phase. Water quality-focused research and data for Cedar Lake and Lake of the Isles was compiled, reviewed, and organized to identify opportunities for best management strategies within the project area.

To holistically address current and future water quality improvement opportunities for Cedar Lake and Lake of the Isles, the CAC Subcommittee recognized that goals need to be implemented across three scales (small to large):

- Lake Scale (strategies implemented internally within a lake)
- Master Plan Scale (strategies to be implemented on parkland within the project boundary)
- Watershed Scale (cross -jurisdictional work implemented throughout the areas draining to the lakes.)

The Preferred Park Concept identifies goals and strategies to address water quality improvements within the project boundary. These strategies compliment the identified goals for the lake and watershed-scales beyond the project boundary. These goals will give direction to MPRB policy makers and staff about priorities for each scale to implement in the future.

LAKE MANAGEMENT PLAN-LEVEL GOALS

1. Lake of the Isles should be an ecologically healthy, shallow lake where phosphorus levels are below <40ug/L, diverse native aquatic plants dominate, and the aquatic food web is maintained.

2. Manage Cedar Lake as an ecologically healthy, deep lake where phosphorus levels are below <25 ug/L, diverse native aquatic plants dominate, and the aquatic food web is maintained.

MASTER PLAN-LEVEL GOALS

1. Reduce phosphorus, chloride, trash, and sediment from entering the lake from areas within the project area.

2. Address run-off from hard surfaces on parkland.

3. Maintain and stabilize shoreline with native vegetation in all areas except for formal access points and historic viewsheds.

4. Maximize and restore habitat (terrestrial and aquatic) to improve health of the lake and have spaces for wildlife.

5. Meet state swimming standards at Cedar Lake and meet boating standards for Lake of the Isles.

HIGH-LE GOALS

1. Utilize Cedar-Isles Master Plan as an MPRB case study to implement master plans through development of specific measurable outcomes to meet goals and objectives.

2. Formalize collaborative community-agency committee to continue monitoring and developing rapid solutions for water quality in the face of a changing climate.

3. Reduce watershed pollutant loading by reinvigorating the partners of the Clean Watershed Partnership and renew efforts to meet the objectives that have either not been completed or currently need to be repeated.

PREFERRED PARK CONCEPT FRAMEWORK

HIGH-LEVEL WATERSHED

WATER QUALITY IMPROVEMENT STRATEGIES: STORMWATER RUNOFF

This visual gives an overview of the water guality improvement strategies proposed to meet the Master-Plan Level Water Quality Goals (see page 6). Natural resources-based improvement strategies include: an improved and expanded shoreline buffer, expanded littoral edge, and marsh restoration.

Stormwater runoff from hard surfaces (parkways and parking lots) improvement strategies include: rain gardens, tree trenches, and underground treatment. Stormwater runoff from impervious trails will be treated by the shoreline buffers and expanded littoral edge.

The Preferred Park Concept also aims to treat runoff coming from the larger watershed through six outfall pipes: these outfall locations and size of contributing drainage area allow for treatment within the parkland. Water guality improvement strategies include retrofitting existing treatment facilities, marsh restoration as well as the practices stated above for hard surfaces.

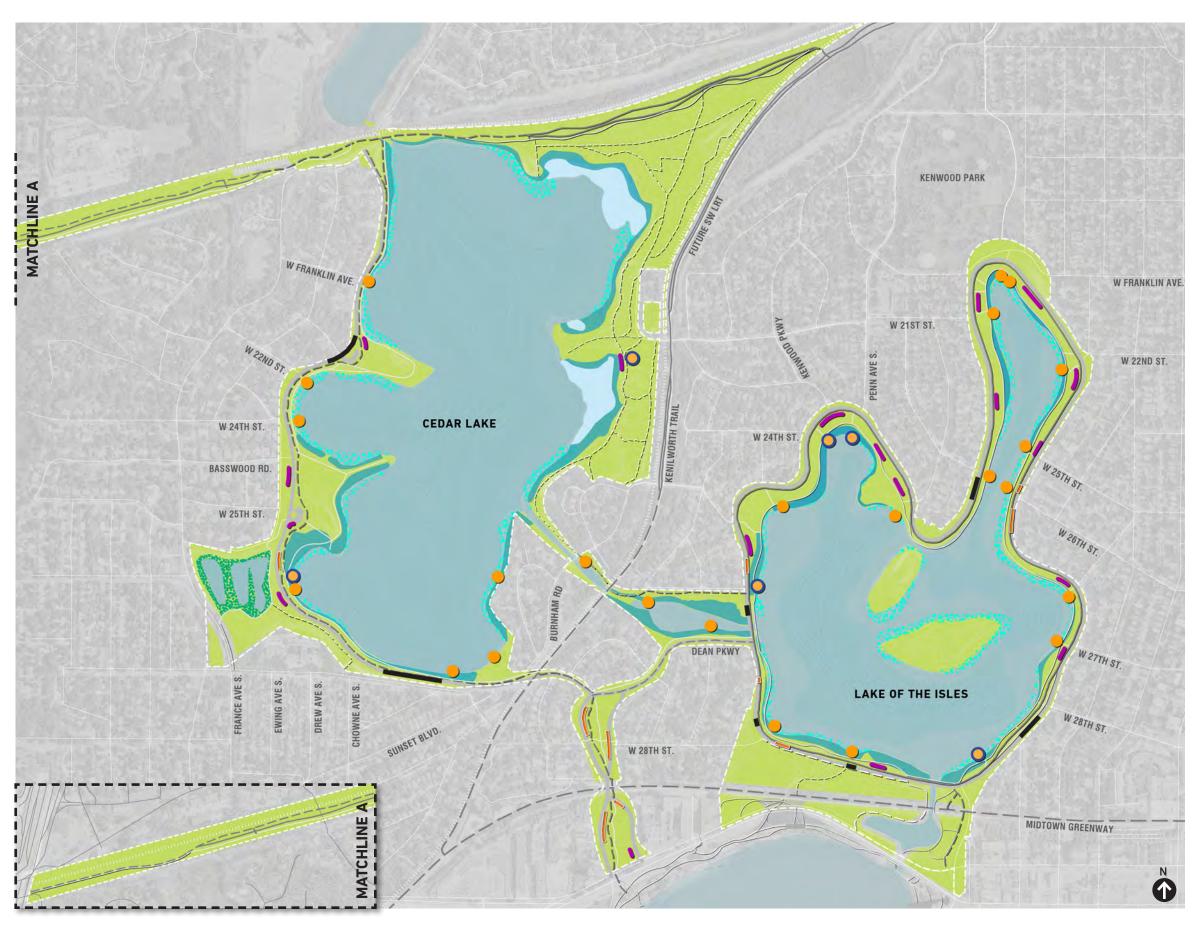
Together, these strategies will clean stormwater to improve water quality before it enters the lake and will help make the lakes more resilient to flooding.

LEGEND

Existing Outfall Locations



- **Existing Outfalls identified for Stormwater Treatment within Park Boundary**
- **Proposed Retrofits of Existing Constructed** Wetland
- **Proposed Improved Shoreline Buffer**
- Proposed Littoral Edge
 - **Proposed Marsh Restoration**
- Proposed Rain Garden
- Proposed Tree Trenches Adjacent to Pkwy
 - **Proposed Underground Pkwy Treatment**



PREFERRED PARK CONCEPT FRAMEWORK

WATER QUALITY IMPROVEMENT STRATEGY PRECEDENTS

PREFERRED PARK CONCEPT FRAMEWORK





Expanded Littoral Edge

An improved vegetative edge beginning from the ordinary high water mark and extending into permanently submerged shoreline. This feature reduces impacts of rain events, protects the shoreline and filters pollutants from stormwater runoff.

Improved Shoreline Buffer

Enhanced vegetative strip of varying character along the shoreline edge. This practice can stabilize shorelines, minimize the impact of heavy rain events and act as a filter, capturing sediment and pollutants.



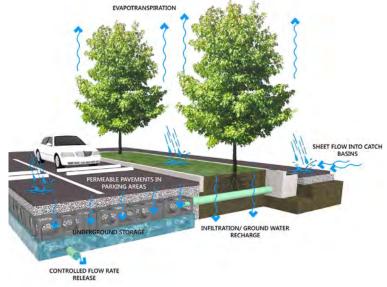
Marsh Restoration

Reestablished areas of historic marshes with native and adaptive vegetation and invasive species removal. These restored ecosystems provide enhanced wildlife habitats, flood risk reduction, reduced phosphorus loading, and soil health improvements.



Tree Trenches

Engineered landscape practice often adjacent to roads, consisting of a linear system designed to improve water quality, promote infiltration, manage incoming runoff, and support an urban tree canopy.



Underground Parkway Treatment

Underground system aimed at maximizing available parkland while providing runoff storage, controlling release rates, and reducing pollutant levels.

Rain Gardens

Form of bioretention consisting of a constructed or altered depression where soils have been amended and native and adaptive vegetation established to support groundwater recharge, pollutant removal and runoff detention.

WATER QUALITY IMPROVEMENT STRATEGIES: LAKE ACCESS

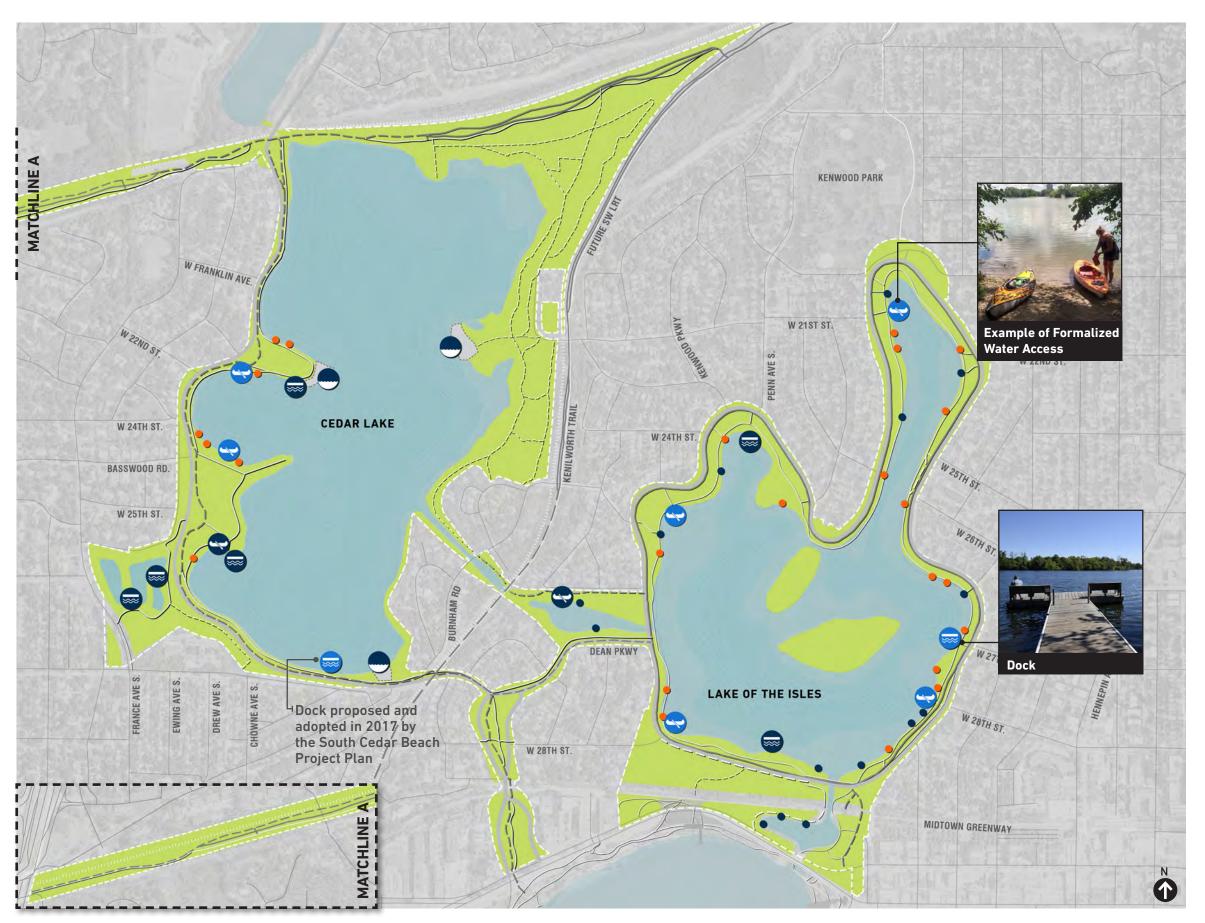
Another important aspect of the Preferred Park Concept to help meet water quality goals includes reducing and formalizing access to the water's edge.

The inventory shown on this map reveals over 30 places where either formal stone step access points or informal lake access areas used for fishing and small boat launches are located. The Preferred Park Concept reduces the quantity of lake access points that have been informally created over time to minimize erosion, reduce nutrient loading, meet water quality goals, and reduce negative impacts on habitat and wildlife.

Proposed water access design strategies include retaining existing stone steps, formalizing water access locations (such as a boat launch, fishing spot, or viewing area) in several key locations where there is evidence of heavy public use, and restoring the shoreline buffer for all remaining erosion locations.

LEGEND

- **Existing Erosion Caused by Informal Water** Access: Remove and Restore
- **Existing Water Access: Stone Steps**
- **Existing Boat Launch**
- Existing Beach Water Access
- Existing Dock/Boat Launch
- **Proposed Dock**
 - **Proposed Formalized Water Access**



PREFERRED PARK CONCEPT FRAMEWORK

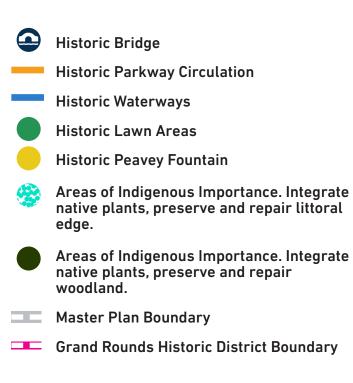
HISTORIC PRESERVATION AND CULTURAL LANDSCAPES

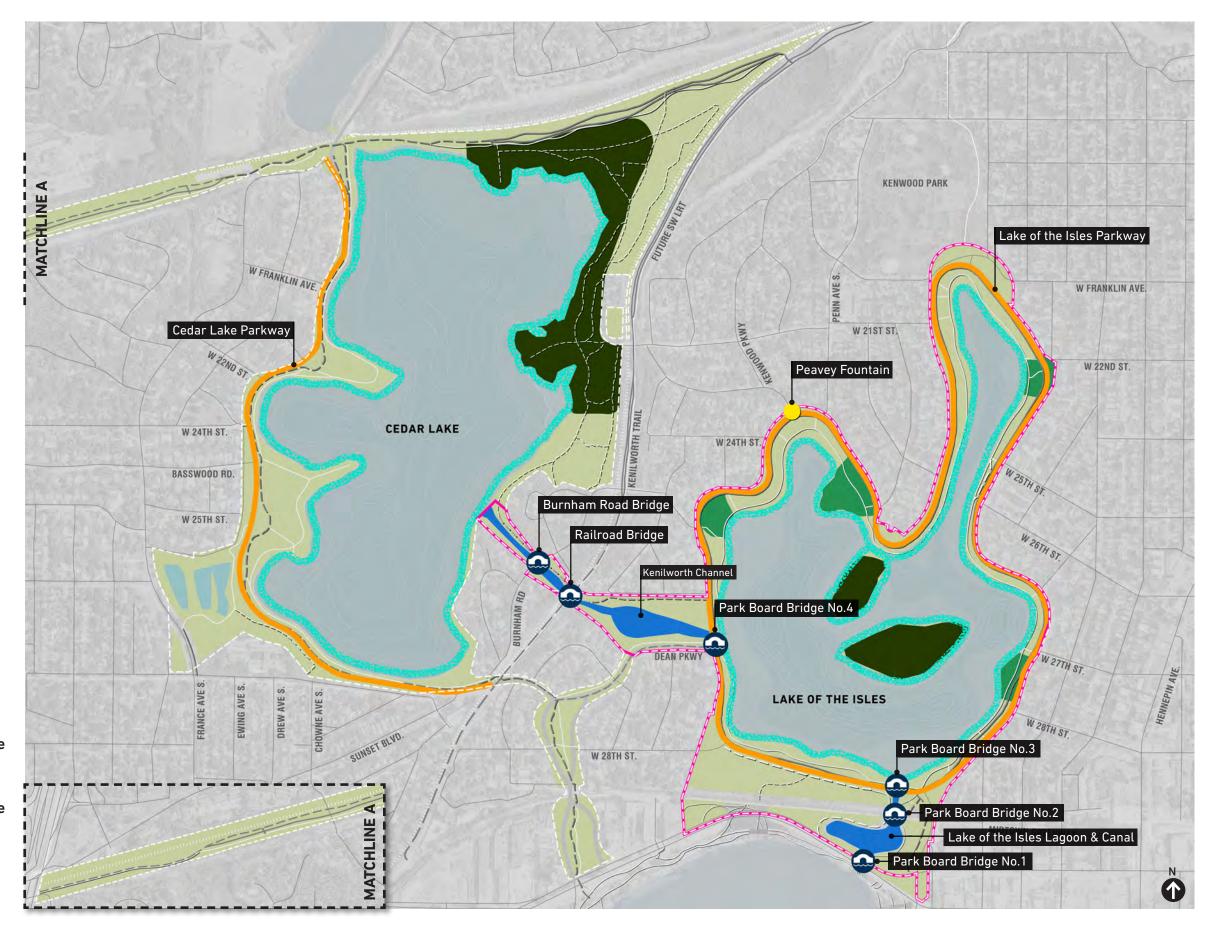
PREFERRED PARK CONCEPT FRAMEWORK

Preservation planning has occurred in parallel with the master planning process. Historic and cultural landscape consultants have documented the site's history, changes over time, and its historic significance.

This map identifies infrastructure, features, and landscapes of historic and cultural significance that shall be preserved and that have guided the design of the Preferred Park Concept.

LEGEND





COMMUNITY INITIATIVES AND STEWARDSHIP

Cedar Lake and Lake of the Isles benefit from ongoing volunteer efforts and neighborhood initiatives that include invasive species removal, plant restoration, placemaking, and programming. These sustained stewardship efforts support the collective management and social cohesion of the public parkland.

Note: This map may not be fully comprehensive of all community work and initiatives and will continue to adapt and evolve over time.

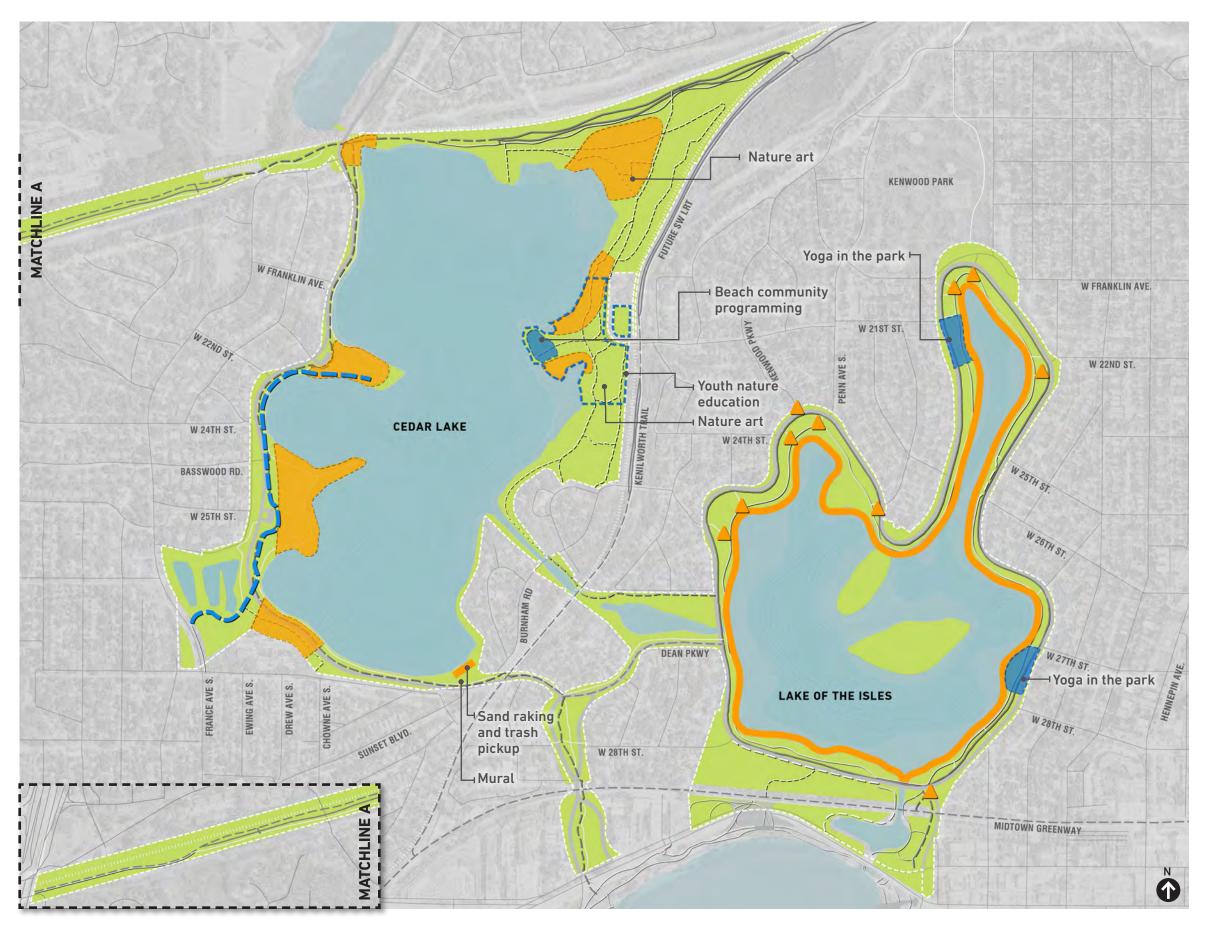
LEGEND

Restoration Volunteer Initiatives Loosestrife Removal + Trash Pick-up **Volunteer Restoration Area** Garden Bed Maintenance

Programming Volunteer Initiatives

Programming Activities (labeled)

- Informal Birding Corridor
- **DNR School Forest** -----



PREFERRED PARK CONCEPT FRAMEWORK

AMENITIES AND PROPOSED LAND ACQUISITION

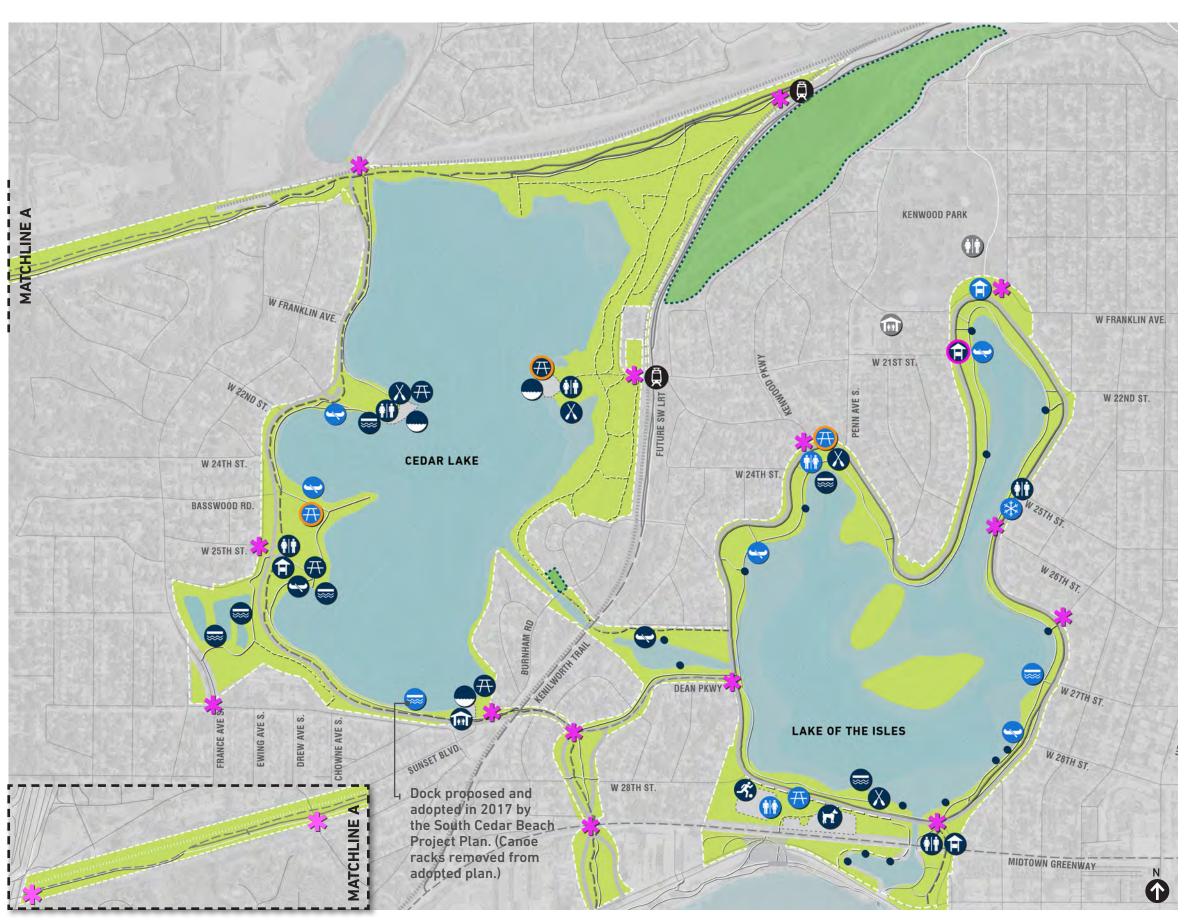
Proposed amenities for the Preferred Park Concept welcomes visitors, provides access to the water, proposes new portable restroom locations on Lake of the Isles, and preserves existing amenities.

Proposed Welcome Entry Points will build upon existing signage and include welcome and wayfinding signage - some locations may include other amenities such as seating areas, bike racks, city bikes, gardens, and/or water fountains.

This map shows proposed land parcels that MPRB should acquire in the future based on community feedback and continued conversations with land owners.

LEGEND

- (Â Future LRT Stop
- Ē **Existing Kiosk**
- A **Proposed Kiosk to Relocate**
- **Existing Temporary Portable Restroom**
- Existing Permanent Restroom
- **İ Proposed Portable Restroom**
- **Existing Dog Park**
- **Existing Canoe Rack**
- **Existing Dock/Boat Launch**
- Proposed Dock
- **Upgraded Temporary Warming House**
- Å. Existing Multi-Use Fields
 - **Existing Beach Water Access**
- Existing Water Access: stone steps
- Æ Existing Picnic Area (Oindicates ADA)
 - Proposed Picnic Area (Oindicates ADA)
 - **Existing Boat Launch**
 - **Proposed Formalized Water Access**
 - **Proposed Land Acquisition**
- **Enhanced Welcome Entry Point** CEDAR LAKE AND LAKE OF THE ISLES MASTER PLAN



PREFERRED PARK CONCEPT DESIGN

WINTER AMENITIES

PREFERRED PARK CONCEPT DESIGN

All existing winter amenities on both lakes will be retained. The temporary warming house on Lake of the Isles will remain in the same general location.

The pedestrian trail along the shoreline will be re-routed around the temporary warming house location, running parallel to the bike trail for a short distance to alleviate trail conflicts. Once rerouted, the old section of pedestrian trail will be restored.

A new ice-skating ribbon will extend north from the existing ice rink.

LEGEND





CIRCULATION AND ACCESS

PREFERRED PARK CONCEPT DESIGN

Circulation and access strategies include providing safe crossings, improving connections between/to the lakes, and creating clear entry points with wayfinding and signage to welcome a broad audience.

Proposed improvements to Cedar Lake include adding new soft surface trails to expand access (near Jones Harrison and along the Kenilworth Channel) and formalizing some natural surface trails in the northeast wooded areas. Proposed improvements to Lake of the Isles include transforming two segments of the one-way bike trail to a slightly wider two-way bike trail, improving sidewalk connections on the south side of the lake, adding a new paved two-way bike trail connection from Kenilworth Place to the Kenilworth Trail, and adding a new soft surface trail from the Midtown Greenway to the lake at the dog park.

All strategies are paired with water quality improvements to support water quality goals.

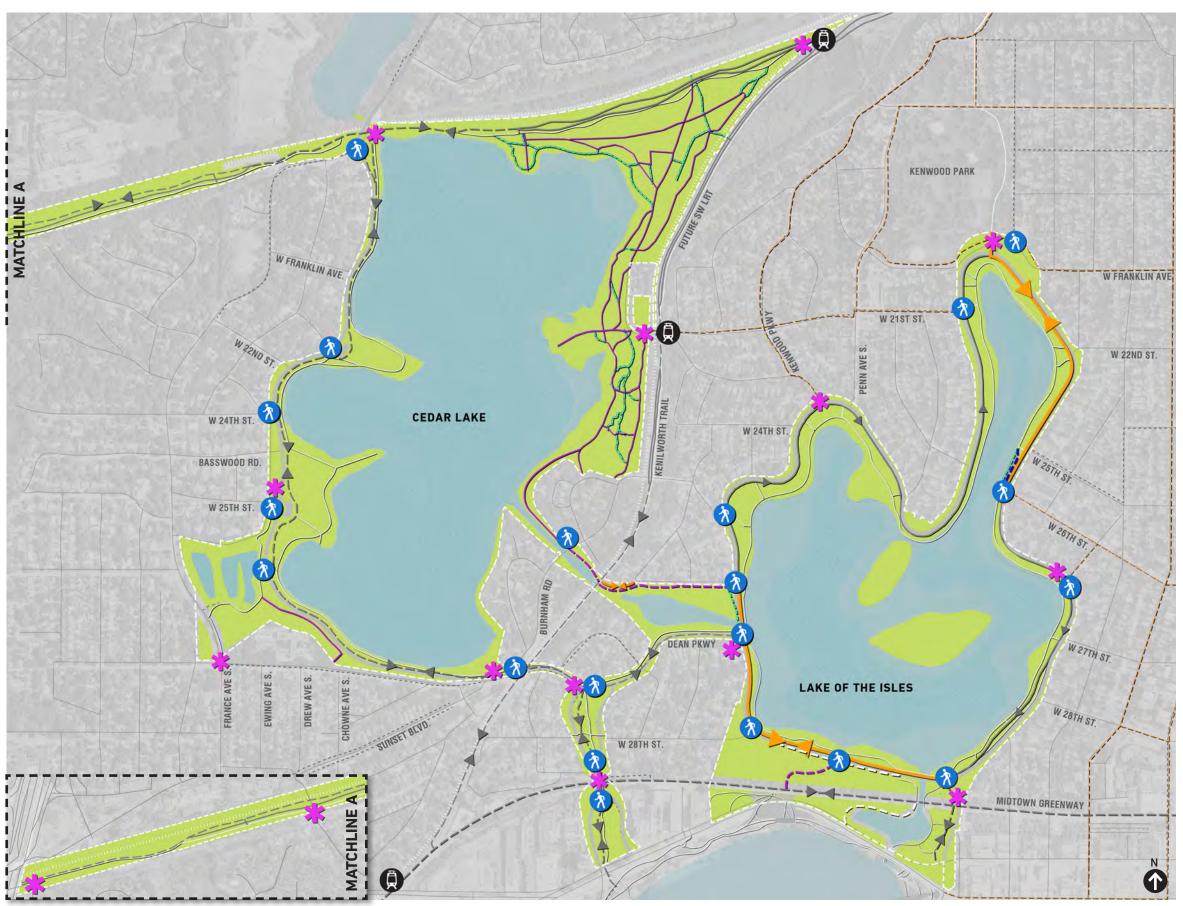
LEGEND

Future LRT Station

- Existing Parkway
- ——— Existing Pedestrian Trail
- **— — Existing Two-Way Bike Trail**
- Existing One-Way Bike Trail
- ----- Existing On-Street Bikeway
- ---- Planned Bikeway (City)
 - Proposed Intersection Improvements
- ---- Proposed Pedestrian Trail to be Removed
 - Proposed Soft Surface Formalization of Existing Pedestrian Trail
- ---- Proposed New Soft Surface Trail
- - Proposed Paved Pedestrian Connection

Proposed Two-Way Bike Trail

- \longleftrightarrow
 - Enhanced Welcome Entry Point
- Existing Soft Surface Trails to Restore to Woodland
- Proposed Pedestrian Trail Realignment
 CEDAR LAKE AND LAKE OF THE ISLES MASTER PLAN



NATURAL RESOURCE RESTORATION

PREFERRED PARK CONCEPT DESIGN

Natural resource restoration strategies include:

Cedar Lake

- Restore both degraded and healthy existing woodland areas through a phased process of selective removal, invasive species management, and restoration infill over time.
- Preserve and enhance existing prairie plantings.

Lake of the Isles

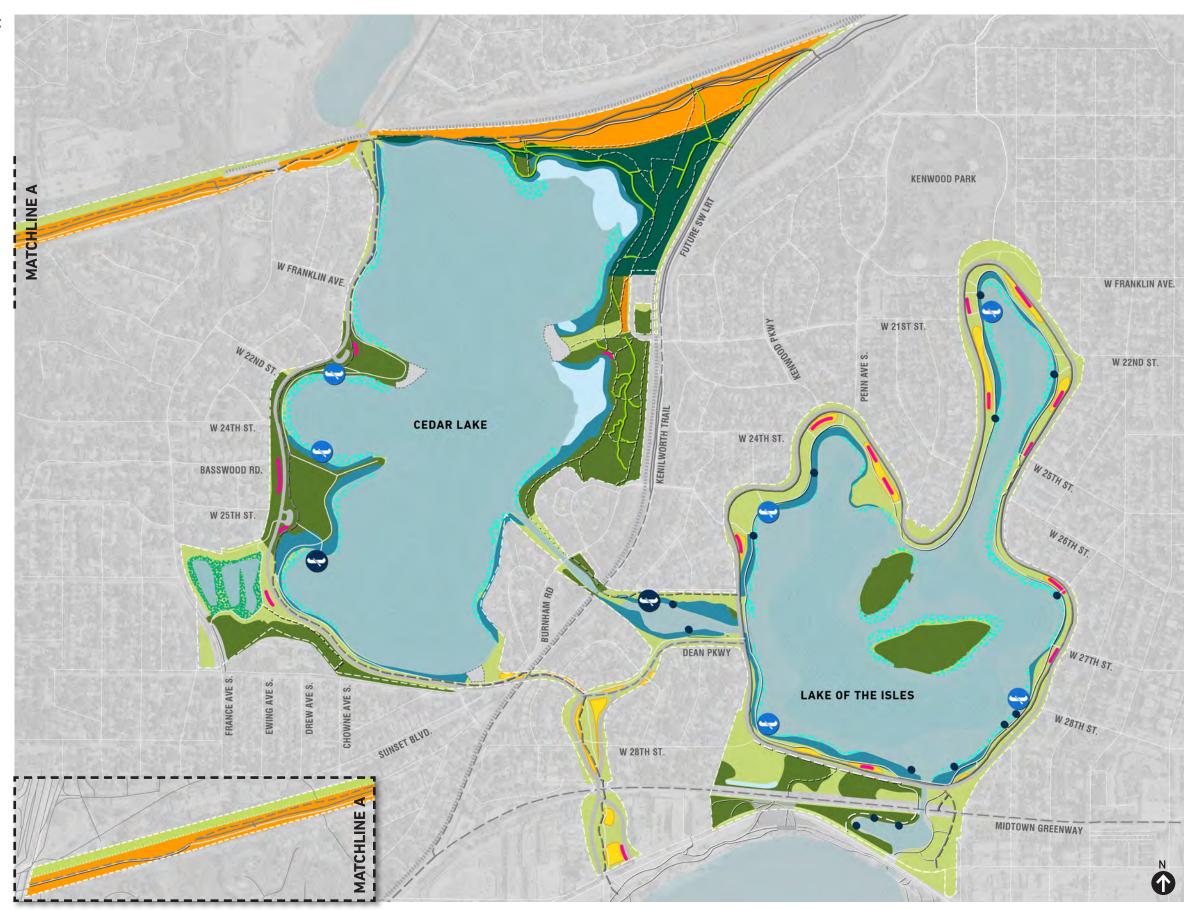
- Retain historic and well-used lawn areas.
- Add Rain Gardens in constructed or altered depressions to infiltrate and filter stormwater.
- Expand and/or improve the shoreline buffer.

Dean Parkway

- Retain well-used lawn areas.
- Add prairie planting zones for pollinators.
- On both lakes, increase littoral edge planting, expand the shoreline buffer to support water quality goals, and preserve existing healthy trees to the greatest possible extent.

LEGEND

- Existing Water Access: Stone Steps
- Existing Boat Launch
- Existing Constructed Wetland
- Existing Land Cover, No Change
- Existing Sand Beach
- Proposed Formalized Water Access Proposed Enhanced Prairie
- Proposed Prairie/Pollinator Planting
- Proposed Oak Savanna Restoration
- Proposed Mesic Oak Forest Restoration
- Proposed Improved Shoreline Buffer
- Proposed Littoral Edge Expansion
- Proposed Marsh Restoration
- Proposed Rain Garden
- Existing Soft Surface Trails to Restore to Woodland



NATURAL RESOURCE RESTORATION PRECEDENTS

PREFERRED PARK CONCEPT DESIGN



Enhanced Prairie



Formalized Water Access



Improved Shoreline Buffer



Improved Shoreline Buffer



Littoral Edge Expansion



Marsh Restoration



Mesic Oak Forest Restoration



Oak Savanna Restoration



Pollinator Planting CEDAR LAKE AND LAKE OF THE ISLES MASTER PLAN



Prairie Planting



Prairie Planting



Rain Garden

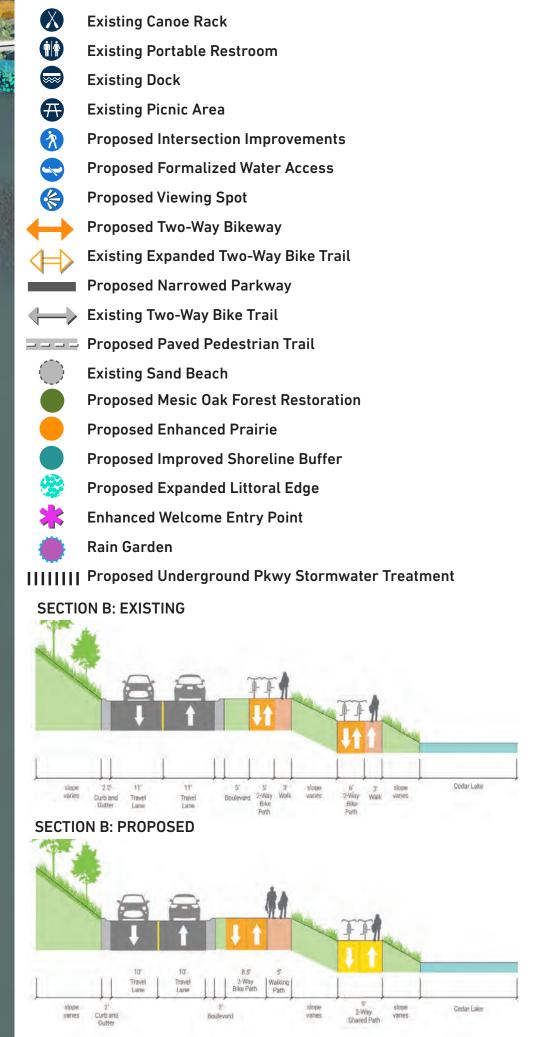


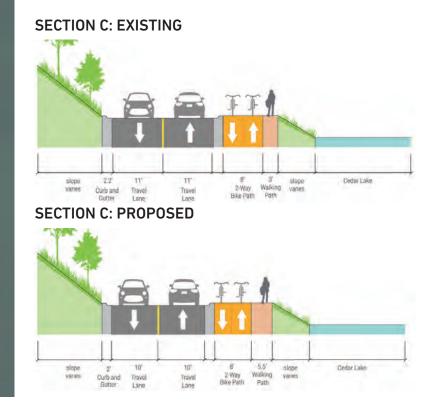
ZONE 1: NORTH WEST CEDAR

PREFERRED PARK CONCEPT



LEGEND





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ZONE 2: NORTHEAST CEDAR LAKE

PREFERRED PARK CONCEPT



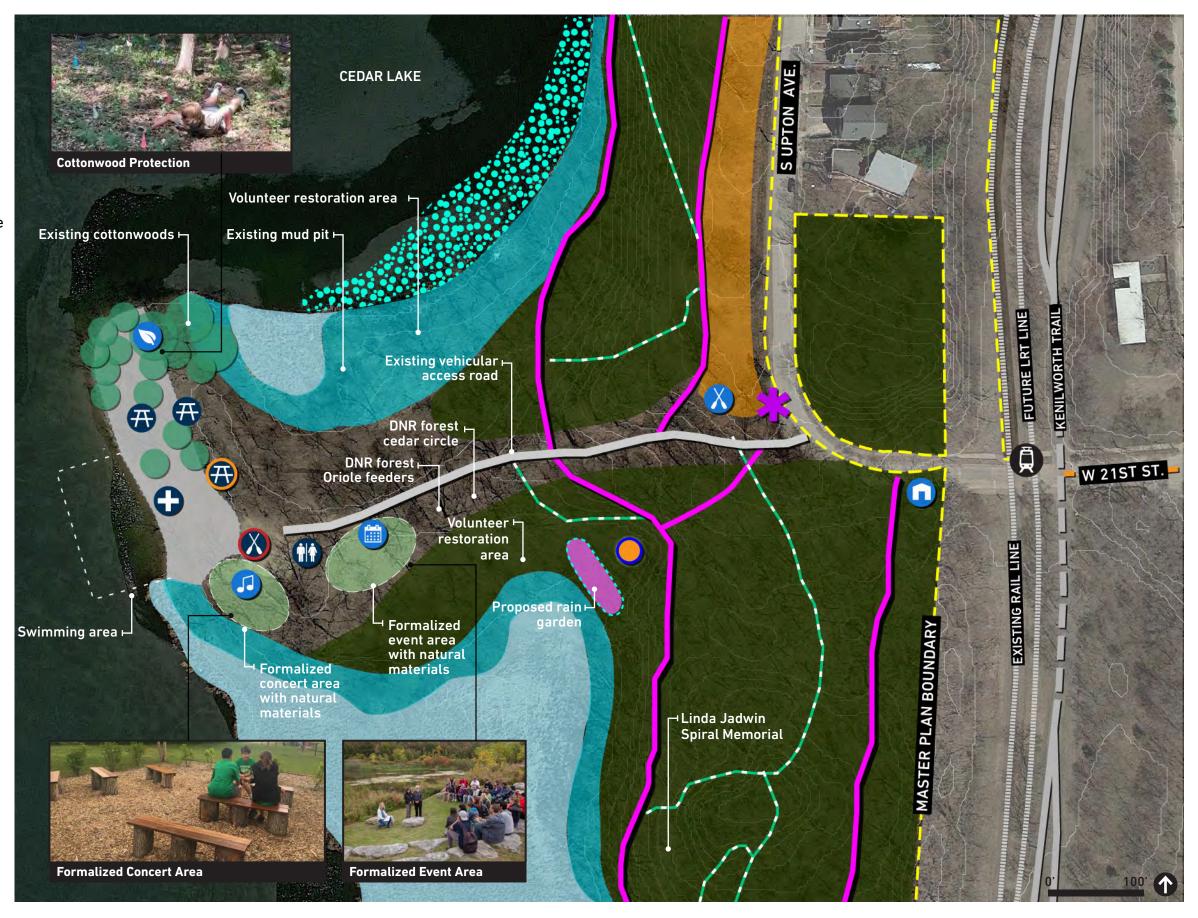
FOCUS AREA A: EAST CEDAR BEACH

The design strategies that were outlined for the East Cedar Beach and surrounding forest areas aim to preserve current uses and character of the beach and forest, while also welcoming new programming and visitors:

- Preserve the natural areas and improve water quality
- Strengthen human relationships with nature
- Successfully manage and welcome an increase in visitors
- Reduce user conflicts (water access/trails/ events spaces)
- Maintain and expand tree canopy

LEGEND

- Existing Picnic Table (Oindicates ADA)
- **Existing Temporary Portable Restroom**
- Existing Lifeguard Stand
- Existing Cane Rack to Relocate
- Proposed Canoe Rack Relocation
- Proposed Cottonwood Protection Area
- Proposed Formalized Event Area
- Proposed Formalized Concert Area
- Proposed Storage
 - Proposed Soft Surface Formalization of Existing Pedestrian Trail
- Existing Soft Surface Trails to Restore to Woodland
 - Existing Sand Beach
 - Proposed Enhanced Prairie
 - Proposed Improved Shoreline Buffer
 - Proposed Littoral Edge Expansion
 - **Proposed Marsh Restoration**
 - Proposed Mesic Oak Forest Restoration
 - Proposed Rain Garden
- Existing Outfall Identified for Stormwater Treatment CEDAR LAKE AND LAKE OF THE ISLES MASTER PLAN



PREFERRED PARK CONCEPT

ZONE 3: KENILWORTH CHANNEL AND SE LAKE OF THE ISLES

PREFERRED PARK CONCEPT



LEGEND

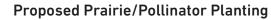
- Existing Water Access: Stone Steps
- **Existing Dock**

- **Proposed Paved Pedestrian Trail**
 - Proposed Pedestrian Trail to be Removed





- \bigotimes Existing Canoe Rack
- $\mathbf{\Theta}$ **Existing Kiosk**
- **Existing Temporary Portable Restroom**
- Fi **Existing Dog Park**
- Æ **Proposed Picnic Area**
- **Proposed Formalized Water Access** 5
- (11) Proposed Temporary Portable Restroom
- Ŕ **Proposed Intersection Improvements**
 - Existing One-Way Bike Trail
 - **Existing Pedestrian Trail**
- Existing Two-Way Bike Trail ←→
- Proposed Two-Way Bike Trail
- 💳 💳 Proposed Soft Surface Pedestrian Trail



- **Proposed Mesic Oak Forest Restoration**
- **Proposed Improved Shoreline Buffer**
- 62 Proposed Littoral Edge Expansion
 - Proposed Marsh Restoration
- Proposed Rain Garden
- Proposed Tree Trench Adjacent to Parkway
- Proposed Underground Pkwy Stormwater Treatment
 - Enhanced Welcome Entry Point



- Existing Outfall Identified for Stormwater Treatment
- **Proposed Land Acquisition**





Welcome Entry Point

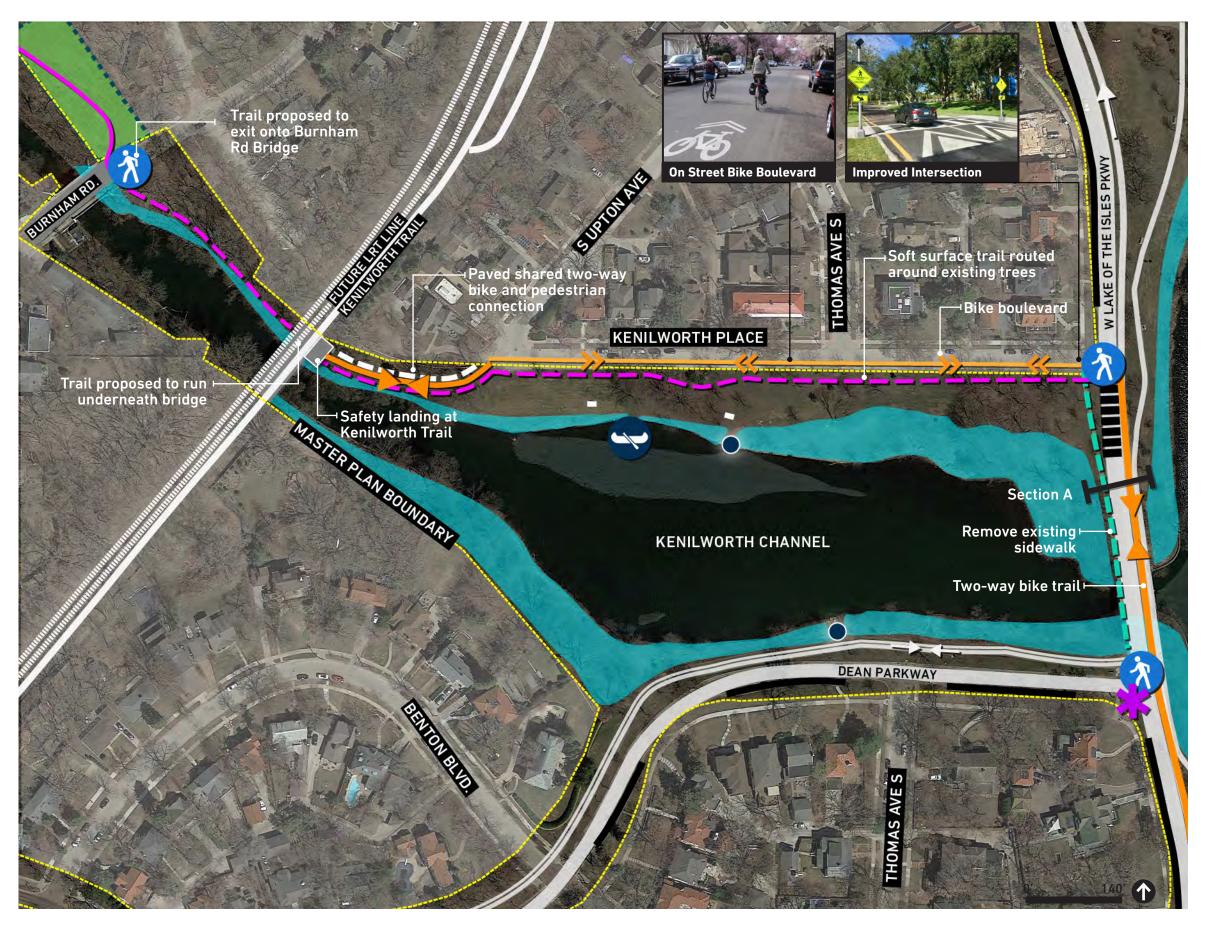
Prairie/Pollinator Planting

Temporary Portable Bathroom

FOCUS AREA B: KENILWORTH CHANNEL AND LAKE OF THE ISLES CONNECTION

SECTION A: EXISTING





CEDAR LAKE AND LAKE OF THE ISLES MASTER PLAN

Treatment

PREFERRED PARK CONCEPT

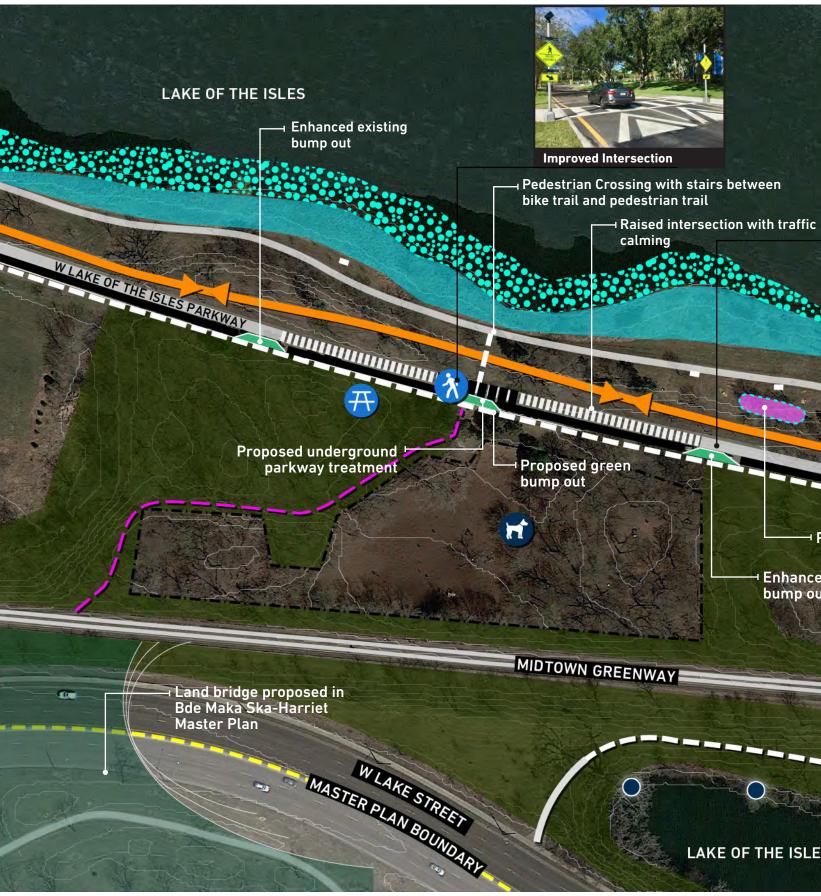
FOCUS AREA C: SOUTH LAKE OF THE ISLES PARKWAY

At the south side of Lake of the Isles, the oneway bike path is proposed to become a twoway path and continue to the new proposed Kenilworth Trail connection- it is only slightly widened and avoids existing trees. At the dog park entry, there is a new raised intersection and green bump-outs to increase safety for pedestrians and bicyclists along the Parkway. New underground stormwater treatment and an adjacent rain garden treat this stretch of parkway run off.

A new soft surface path hugs the dog park boundary and connects the Greenway to the proposed paved Parkway trail.

LEGEND

Existing Water Access: Stone Steps ××× **Existing Dock Existing Canoe Rack** (X)**Existing Dog Park** X **Proposed Intersection Improvements Proposed Picnic Area Existing Parkway Existing Parking Existing Pedestrian Trail** Proposed Two-Way Bike Trail **Proposed Soft Surface Trail** Proposed Paved Pedestrian Trail **Proposed Improved Shoreline Buffer Proposed Littoral Edge Expansion Proposed Mesic Oak Forest Restoration Proposed Green Bump Outs** Proposed Rain Garden Proposed Underground Pkwy Stormwater Treatment

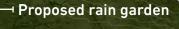


PREFERRED PARK CONCEPT



Green Bump Outs

CONT X DUNIO



Enhanced existing bump out

LAKE OF THE ISLES LAGOON

PREFERRED CONCEPT JUNE 2022

100'

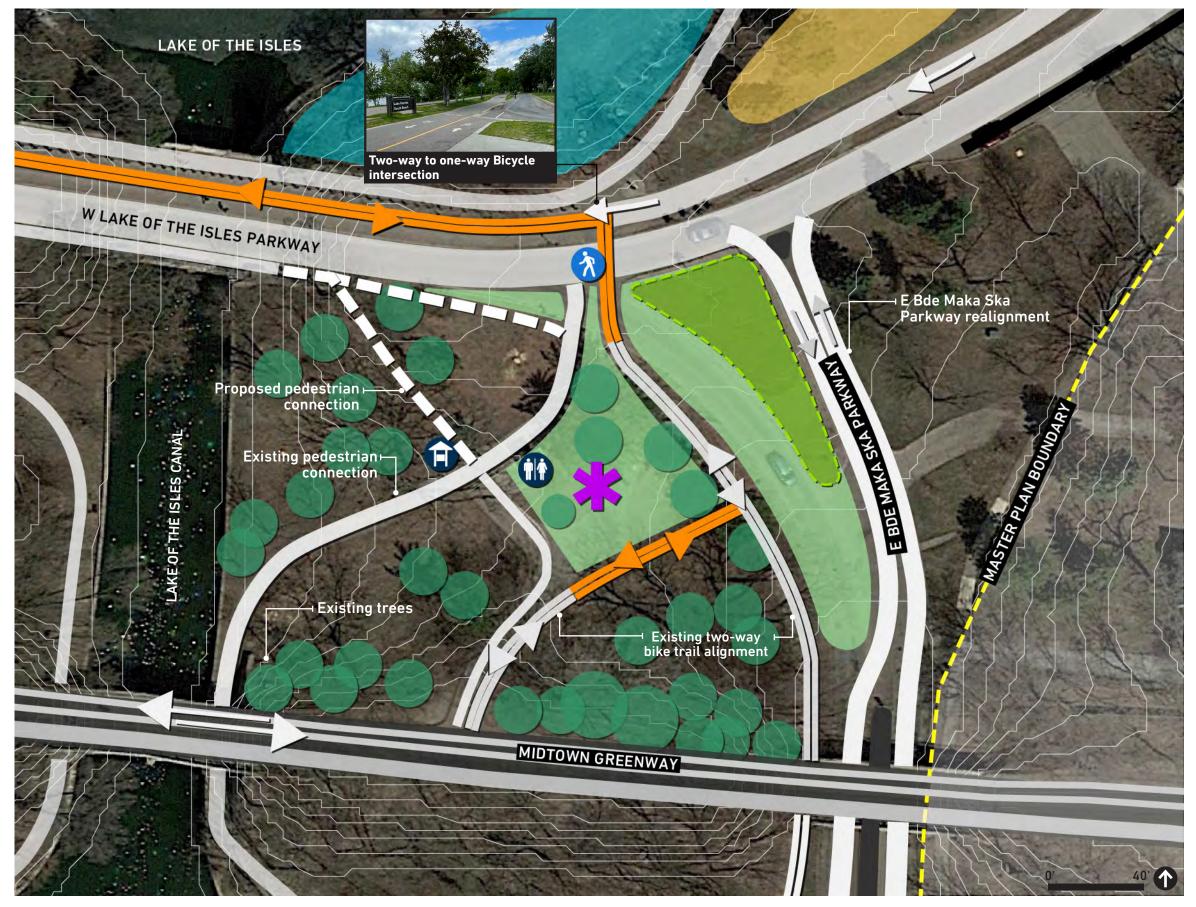
FOCUS AREA D: LAKE OF THE ISLES PKWY AND BDE MAKA SKA PKWY INTERSECTION

Improvements to this SE corner of Lake of the Isles include redesign of the vehicle intersection at Lake of the Isles Parkway and Bde Maka Ska Parkway to improve safety, adding an improved intersection for walkers and bikers, and a slight reconfiguration of the biking and walking trails that connect Lake of the Isles to the Lagoon, the Midtown Greenway, and Bde Maka Ska Parkway.

This is also the location where the one-way bike path around Lake of the Isles is proposed to become a two-way path and continue to the new proposed Kenilworth Trail connection. The improvements propose to retain the existing ornamental island garden and all trees.

LEGEND

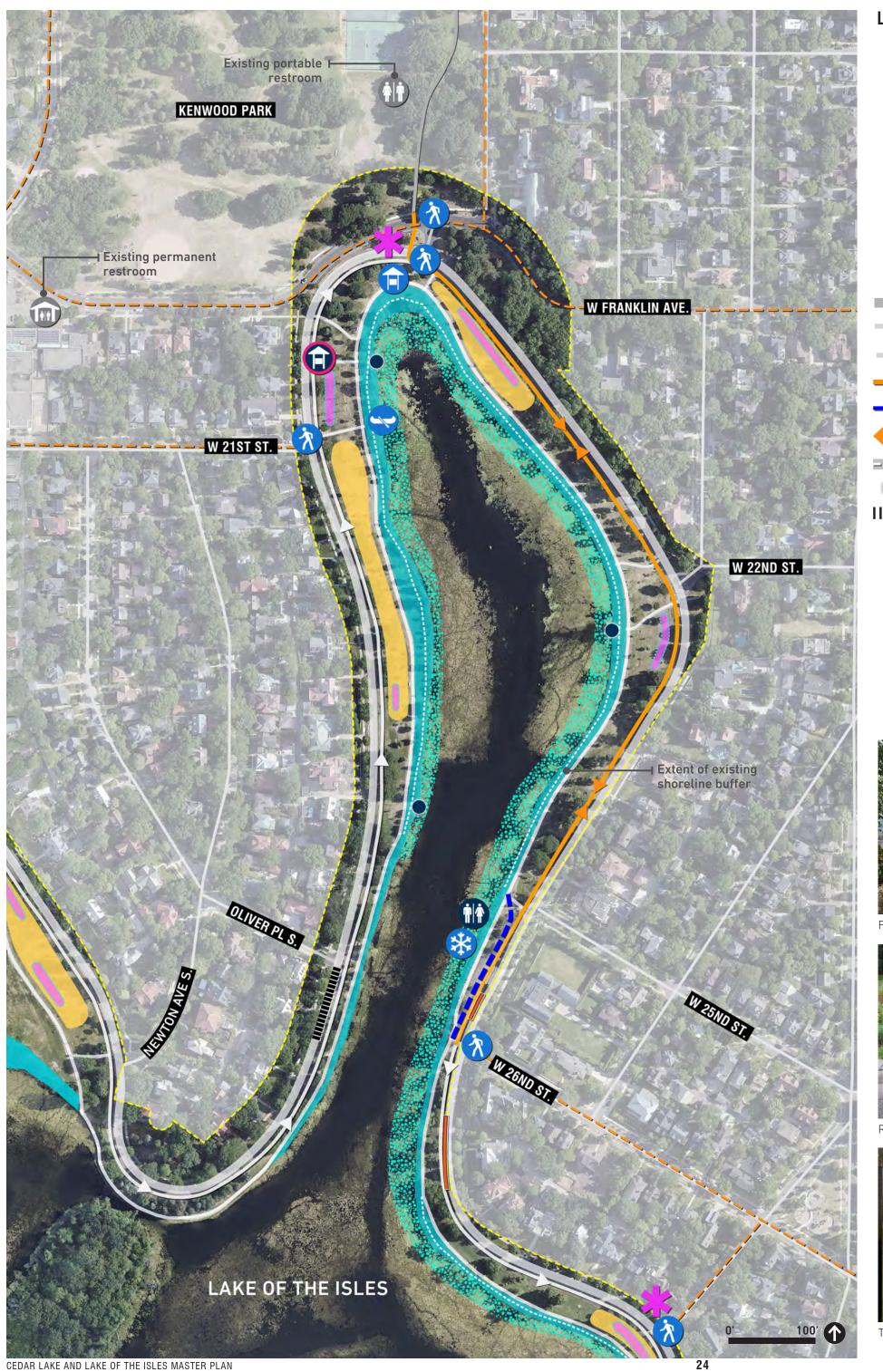
Existing Temporary Portable Restroom $\mathbf{\Theta}$ Existing Kiosk **Proposed Intersection Improvements** 67) **Existing Parkway Existing Parking Existing Pedestrian Trail Existing Two-Way Bike Trail Existing One-Way Bike Trail** Proposed Two-Way Bike Trail Proposed Paved Pedestrian Trail **Proposed Improved Shoreline Buffer Proposed Prairie/Pollinator Planting** Restored turf area **Enhanced Welcome Entry Point Existing Ornamental Planting Island**



(Expanded)

ZONE 4: NORTH LAKE OF THE ISLES

PREFERRED PARK CONCEPT



LEGEND

*	Enhanced Welcome Entry Point
	Existing Water Access: Stone Steps
	Existing Temporary Portable Restroom
\bigcirc	Existing Kiosk to Relocate
	Proposed Kiosk (relocated)
	Proposed Upgraded Temporary Warming House
	Proposed Formalized Water Access
Ŕ	Proposed Intersection Improvements
	Existing Parkway
\rightarrow	Existing One-Way Bike Trail
	Existing Pedestrian Trail
	Planned Bikeway (City)
	Proposed Pedestrian Trail Realignment
\longleftrightarrow	Proposed Two-Way Bike Trail
	Proposed Paved Pedestrian Trail
	Proposed Tree Trench Adjacent to Parkway
	Proposed Underground Pkwy Stormwater Treatment
	Proposed Prairie/Pollinator Planting
	Proposed Improved Shoreline Buffer
	Proposed Littoral Edge Expansion
-	Proposed Rain Garden
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Formalized Boat Launch

Improved Shoreline buffer















Rain Garden Planting

Raised Intersection

Tree trench







Two- way Bike Trail

Temporary Warming House

Enhanced Welcome Entry Point

PREFERRED CONCEPT JUNE 2022

CEDAR LAKE AND LAKE OF THE ISLES MASTER PLAN