

NOTICE: PHOTOS WILL BE TAKEN AT THIS EVENT





Tell us... Where do you fit into the story of this place?





Following the melting of glacial ice sheets, the landscape of Rice Lake / Bde Psin, Minnehaha Creek, and their surroundings are shaped over thousands of years by a warming climate and the flow of ancient waterways. The prairies, savannas, forests, lakes, wetlands, and creek evolve to become a vast and interconnected ecosystem of plant, animal, and human life.

10,000 B.C.E - 1600s **Time Immemorial** Dakota and other Indigenous people live for thousands of years here on the land known as Mni Sóta Makoce ("the land where the mid-1600s Dakota people settle more waters reflect the clouds") permanently near Bdote ("where two rivers come together"), the confluence of the Minnesota and Mississippi Rivers - their birthplace and spiritual center of the universe



An Evolving Story

Minneapolis

Park & Recreation Board

Who or what parts of the story are missing here?



Tell us... How can we tell this story better?

What can we learn from you?



An Evolving Story

m you? What can we learn from the whole story?



THE HIAWATHA GOLF COURSE **AREA PLAN INCLUDES:**

Improving water management at the site while providing opportunities to address flooding in the watershed to the north.

Reutilizing pumped water for a variety of potential uses (e.g. irrigation, snowmaking, facility heating/cooling).

Relocating an improved and reduced pumping strategy at the site to protect nearby low basements from groundwater intrusion to the same degree they are protected today.

Improving water quality in Lake Hiawatha and Minnehaha Creek.

Creating a destination golf facility focused on learning the sport and increasing opportunities for new players, including a 9-hole golf course, driving range, and practice facilities.

Celebrating the history of Black golfers at the course and supporting and providing an introduction 🥐 to golf for people of color.

Expanding access to the site with bicycle and pedestrian trails, a reenvisioned clubhouse area that welcomes the larger community.

Park Plan Overview





Restoring ecological function through the creation of wetlands, riparian and shoreline restorations, upland prairie restoration, and protecting existing wildlife habitat.

Creating a South Minneapolis winter recreation destination complementary to North Minneapolis's Theodore Wirth Park.

Developing nine experiences that tell the cultural and natural history through permanent elements and infrastructure, as well as through art, performance, community events, and ephemeral experiences.







Park Plan Overview



The Design Process and Stages of Project Development

Identify a Problem or Need 0% DESIGN COMPLETION	2014 • June 2014: Floo • March 2015: N Regional Park	oding 1PRB approved Nokomis-Hiawath Master Plan
The process starts by identifying the problem or need that must be addressed.	• September 20 Pumping	15: Identification of Groundwate
February 2017: Hiawatha Golf Course stormwater, surface water, and groundwater survey completed	2017 Park Plan	or Pre-Planning
March 2018: Hiawatha Golf Course Area Master Planning process began	10% DESIGN	COMPLETION
April 2020: MPRB published draft design for the Hiawatha Golf Course area	A park plan (of created that in	ften referred to as master plan) icludes:
• September 2020: Public comment period for the draft design closed	• Vision • Guiding prin	nciples
July 2021: Resolution 2021-250, Renaming the	2020 • Community-o	driven recommendations
Sentember 2022: MPRB Commissioners approved the	2021 This high-level graphic solutio	document provides written and nsfor the park, acting as a road
Hiawatha Golf Course Master Plan	2022 for future desi tackle potentia	gn stages and helping designers al problems as they arise.
(Hiawatha Plan) adopted by the Metropolitan Council (Met Council)	2023	
Schematic Design	TODAY* • Today: Hiawa of design for t	tha Links begins, marking the nex ne Hiawatha Golf Course





Hiawatha golf course was built over former wetland areas which were raised by placing lake dredging on the course area.

A portion of the golf course sits below the lake level and an earthen berm along the lakeshore keeps lake water from flowing into the golf course.

There is approximately a 10% chance per year that the berm is overtopped and the golf course flooded.

Stormwater from the neighborhood immediately to the west flows onto the course and drains through a series of stormwater ponds which are connected via pipes.

The most downstream pond contains a pump that runs daily and maintains water 3 feet below average lake level. The pump is not large enough to handle large storms or creek flooding.

F

Existing Water Management

Without pumping, lake water will seep through the earthen berm and into the lower portions of the golf course.

The golf course pump was installed to keep the golf course playable. This pumping also unintentionally lowers the groundwater level of the nearby neighborhood to the west.

LAKE HIAWATHA GROUND ELEVATION TODAY



Existing Course Elevations

	LAKE LEVEL CONDITION	LAKE HIAWATHA WATER SURFACE ELEVATION (ft NGVD29)
	Minimum	810.1
	Average	812.7
end les tion (ft)*	90th Percentile	814.1
10 12	10-yr FEMA Flood Elevation	815.8
14 16 18 20	Maximum	816.2
0 undary ns have been NAVD88 to NGVD29	Effective FEMA Floodplain Elevation (100-yr)	817.0





Proposed Water Management Considerations

LAKE HIAWATHA STORMWATER RESOURCES



Precipitation patterns in Minnesota are becoming more extreme. There are more extreme seasonal drought and wet weather cycles, and we are experiencing storms with larger rainfalls more frequently. These two issues are causing Lake Hiawatha levels and the surrounding groundwater levels to go even higher during wet weather cycles and the risk of the golf course experiencing damaging floods continues to grow.

Continual pumping is not a viable long-term option for the course, but the City and MPRB understand that any changes to the golf course should not worsen potential flooding conditions for the surrounding neighborhood.

Through collaboration with MPRB, the design team, and project stakeholders, the proposed water resources considerations below will be shaped into design goals that will inform site design.

Future Lake Level and Floodplain Considerations

- Offset floodplain fill with an equal amount of storage at approximately the same elevation.
- Elevate watersensitive features (tee boxes, greens, structures) to limit flood risk.

Future Stormwater Management Considerations

- Provide stormwater storage to not increase flows to Lake Hiawatha.
- Utilize water storage areas for potential wetland restoration and stormwater best management practices to improve the quality of water flowing to Lake Hiawatha.
- Design recreation use areas to drain via surface flow paths and piping.
- Include a trash capture device upstream of Lake Hiawatha.
- Offset any new impervious areas with stormwater storage and water quality treatment.

Future Groundwater Considerations

- Maintain vertical separation between the playable surface and water table.
- Design site features for a condition with an increased groundwater level similar to the lake.
- Address potential impacts to nearby properties resulting from changes to pumping by installing a more localized pump or nearby resident sump pumps.



What ecosystems were here **before** the golf course?

Lake Hiawatha and its surroundings were shaped by retreating glaciers and the flow of ancient waterways. By the 1800's, Minnehaha Creek and Lake Hiawatha had functioned as a vast and interconnected wetland system for thousands of years. This ecosystem would have been home to a great diversity of plant and animal life.



- The area around Lake Hiawatha was shaped as large glaciers retreated across the landscape around 10,000 years ago. During this process, melt water spread into wide plains and coalesced into two glacial rivers, the ancestors of the Mississippi and Minnesota Rivers that we know today.
- · Lake Hiawatha and Nokomis exist where these ancient rivers met, within the former river bed where water once flowed.



- The ancient riverbank forms a hill at the western edge of the golf course, the clubhouse sitting atop this early bluff overlooking the former river valley.
- Minnehaha Creek carves through this ancient riverbank, and historically fanned out into a large delta where it meets Lake Hiawatha. The historic wetland was approximately the size of the current day Lake Nokomis.



- Hennepin County lies in a deciduous forest-woodland zone of Minnesota, which includes historic oak woodland and brushland, maple-basswood forest, and upland prairie vegetation types.
- The Lake Hiawatha Area was historically a wetland complex dominated by oak openings and barrens consisting of bur oak, pin oak, aspen, hazel thickets, and prairie openings.
- The expansive wetland would have been home to cattails, wild rice, and various native plant species. The wild rice was an important food source for the Native American Dakota peoples who traveled through this region, and the lake was once known as Rice Lake for its abundance of wild rice along the shoreline.



View looking northwest over Lake Nokomis, Lake Hiawatha, 1920's Source: Hennepin County Library



Survey of the Mississippi River, Mississippi River Commission, 1895 Source: https://stevenkid.dergeologist.com/wp-content/uploads/2015/02/189bw.pdf

Past Ecology





- There is not documentation of the historic fauna communities of Lake Hiawatha. However, we can assume that many of the species we see today were present prior to the development of the golf course.
- Lake Hiawatha currently supports over 250 species of wildlife, which indicates that historic communities were likely even more diverse.
- Common wetland fauna likely included species of beaver, otter, turtle, frogs, and salamander, along with a great diversity of birds making their way down the Mississippi River migratory flyway.





Looking NE from Cedar Ave and Mi Source: Minnesota Digital Librar

Lake Hiawatha Park Before Golf Course Development, looking North, 1929 Source: Minnesota Digital Library

What ecosystems are present today?

To develop the golf course, Lake Hiawatha was dredged, Minnehaha Creek was relocated, and the surrounding wetland filled in. These changes had a dramatic impact on the sites ecology. Lake Hiawatha currently deals with high levels of phosphorus, bacteria, and trash pollution, along with invasive species like zebra mussel. However, there is still a rich diversity of wildlife that calls this landscape home, including beavers, painted turtles, great horned owls, and bald eagles. There is also likely critical wildlife habitat for the rusty patched bumble bee and other endangered species on site.



- Flora
- During the construction of the golf course, Lake Hiawatha was dredged (scooped out and deepened) and the surrounding wetland area was filled in. At this time Minneahaha Creek was realigned to the present location.



Lake Hiawatha is compromised by pollution, and listed as an MPCA impaired waterbody for phosphorus and bacteria. The lake also receives large amounts of trash from sources upstream and from surrounding neighborhoods.

- Within the golf course boundary, Minnehaha Creek has steep banks dominated by reed canary grass and an open tree canopy. South of the golf course, the creek is more shaded with gradually sloping, rip-rap reinforced banks.
- The flow of water through the creek and into Lake Hiawatha is regulated and controlled upstream at Gray's Bay Dam.



Land cover diagram of Lake Hiawatha prior to development Derived from 1925 Dredging Plan for Lake Hiawatha Park

- The vast majority of the area is turf grass, with tree canopy between holes. Throughout the course there are select areas with managed landscape beds containing both native and non-native plants.
- Reed canary grass is the primary species along riparian areas within the golf course boundary.
- Some emergent vegetation (floating pondweed) was observed in the creek channel, and marsh areas around the delta are dominated by dogwood, cattail, and silky dogwood.
- The forested floodplain area in the southeast corner of the delta included many tree species such as ash, silver maple, American elm, and





Character of Minnehaha Creek south of golf course boundary



Present Ecology





turtles, great horned owl, eagle, osprey, kingfisher, great blue heron and more. It is also a key stop for a great diversity of birds migrating along the Mississippi River corridor. ANERICANBE

Lake Hiawatha is rich in biodiversity and is home to many species,

including beaver, muskrat, otter, mink, soft shelled snapper, painted



Beavers play a keystone role in this ecosystem, both currently and historically. There is currently a partial dam located at the delta of Minnehaha Creek.



- The majority of wildlife habitat exists in the berm between Lake Hiawatha and the golf course area and at the Minnehaha Creek's delta.
- Endangered, threatened, and candidate species that may be present in the project area include the northern longeared bat, tricolored bat, Whooping Crane, Higgin's eye, salamander mussel, monarch butterfly, and the rusty patched bumble bee.



How do we shape the ecology of the future?

Ecological restoration at Hiawatha Park and Golf Course will integrate wetland, stream, and floodplain restoration along with upland restoration and stormwater management. The following are recommended themes and Best Management Practices to guide the Schematic Design process: Stormwater Management, Vegetation Management, and Habitat Connectivity.

Water | Stormwater Management

On-site stormwater

nutrients and sediments

4 Aesthetic & Functional Design

+ Design wetland shapes to blend into the

park's natural setting, and if constraints

require geometric shapes, use grading

and plantings outside the wetland to

integrate them with the landscape.



Flora | Vegetation Management

Focus: Implement strategies for both incoming and sitegenerated stormwater to enhance water quality, reduce flooding, and ensure maintainability, with wetlands playing a critical role.

1 Use a Treatment Train Approach

Incoming stormwater

- + Daylight the 43rd St. stormwater pipe
- + Use interceptors and forebays to capture sediment and trash.
- + Position features for easy maintenance, ensuring access and resilient vegetation.

2 Create Wetland Diversity

- + Provide a diversity of wetland types & uses to align with hydrological & ecological functions.
- + Recognize that wetlands play multiple roles stormwater treatment, flood reduction, and high-quality habitat - and design each wetland with a clear purpose in mind.



3 Connected Systems

+ Make wetlands a hydrologically connected complex, providing diversity in types and habitats to optimize functionality and ecosystem services.

5 Long Term Management

- + Use native vegetation that can tolerate changing hydrological conditions and poor water quality to ensure resilience.
- + Plan for future maintenance, including sediment removal, while balancing investment in vegetation that minimizes upkeep.

Focus: Prioritize native vegetation for upland and wetland restoration, emphasizing ecological function, resilience, and integration with recreational uses.

1 Native Vegetation should be... Prioritized

- + Native vegetation is the top priority for all upland and wetland restoration efforts.
- + Conceptualize Hiawatha Park as a golf course carved out of a natural landscape, with native plant communities dominating the surrounding areas.

Customized

+ Tailor native vegetation to its location and role within the park

Pollinator Habitat

+ Design with pollinators in mind, ensuring continuous forage by incorporating a variety of species with staggered bloom timings.

2 Maintenance and Management Dynamic Management

- + Employ practices like prescribed fire or rotational mowing.
- + Allowing vegetation to adapt to changing conditions and ecological processes

Ecological Processes

- + Infrastructure should accommodate natural disturbances like fire and grazing to support biodiversity.
- Rotate management activities to create habitats at different stages of succession.

Protect High Quality Areas

- Use native vegetation buffers around high-guality resources to resist invasive species.
- Minimize invasive species establishment by promoting stewardship through signage and education to reduce impacts like off-trail travel and soil disturbance.











+ Use native vegetation for buffers to enhance above-ground biomass and root depth, slowing nutrient flow.

Best Practices and Opportunities



| Habitat Connectivity

Focus: Establish continuous, connected habitats that support wildlife movement, reduce fragmentation, and create diverse, functioning ecosystems.

1 Minnehaha Creek and Floodplain Connection

Stream and Floodplain Restoration

- + Restore the natural connection between Minnehaha Creek, its floodplain, and surrounding wetlands to re-establish their integrated ecological functions
- + Re-meander Minnehaha Creek to enhance stream function, improve aquatic and terrestrial habitat diversity, and create a dynamic hydrological system.

Adaptability

Avoiding rigid solutions, such as hard armoring or fixed structures, to allow the stream to adjust naturally over time, accommodate changes in flow, sediment transport, and ecological conditions while increasing resilience to climate change impacts.

Ecological and Habitat Benefits

- Strengthen the connection between riparian and upland habitats.
- + Incorporate features that support habitat complexity, such as shallow floodplain areas for amphibians and fish, and vegetated streambanks for mammals and pollinators.

Corridors and Connectivity

Continuous Habitat

+ Minimize isolated patches of native vegetation, and reduce the distance between native vegetation patches to create more contiguous habitats that support wildlife movement.

Edge Habitat

+ Use irregular borders for native vegetation areas to maximize edge habitat, which supports higher biodiversity and ecological function.

Supplementary, non-living features



+ Incorporate downed logs, brush piles, and rock formations to provide overwintering, nesting, and hiding places for invertebrates, small mammals, and reptiles.

Public Use and Habitat Recovery Designated Recovery Areas, balanced public engagement

- + Rotate areas designated as "off-limits" for one to two years to allow habitat recovery from heavy public use, demonstrating the benefits of rest while balancing engagement.
- Create areas within the park where public access is limited to protect wildlife that requires privacy and preserve higher-quality plant communities.



Current Course Layout and Clubhouse Facilities







Tees & Fairways (Hole 1)



Driving Range





Minnehaha Creek

Water Crossings

Existing Course Features



Precedent Courses & Layouts

Goat Hill Park, California

18-HOLE SHORT COURSE | 75 ACRES



History

- Originally built in 1952 as Center City Golf Course with a regulation length 9-hole par 36 layout
- **Redesigned into 18-hole short course** in early 1990's by Ludwig Keehn, became known as "Goat Hill" to locals
- Local community and golfers united in 2014 to stop redevelopment, restore Goat Hill as "the people's park of Oceanside"
- Course has seen improvement in conditions and overall improvements under new management team

Overview

- Mission: "Renovate, maintain and operate Goat Hill Park to serve the Oceanside community and the greater North County looking to enjoy golf, recreation and community activities at an affordable level. To create 'the Central Park' of Oceanside."
- Motto: "World Class / Working Class"
- All abilities and backgrounds welcome and treated with the same respect
- Unique character with strong identity and community
- "Relaxed vibe" includes being dog friendly, no dress code, and music at the clubhouse
- Free 3-hole kids course for parents and children
- Includes a championship disc golf course
- Permanent home of the North County Junior Golf Association and Caddie Academy

Sewanee, Tennessee

9-HOLE COURSE (PLAYS 18 HOLES W/ ALTERNATE TEES) | 80 ACRES

History

- Opened as a 9-hole course in 1915
- Enjoyed by students, staff, and members of the public for over 100 years



- Reopened in 2013 after 2-year renovation by Gil Hanse

Overview

- Renovation involved **redesigning layout**, including nine new green complexes, added bunkers, and removed trees
- Multiple tees on every hole allow 9 holes to be played twice with different yardages, and some different pars, on every hole
- · Hosts state high school tournaments and State of Tennessee Golf Association Championships





Precedent Courses & Layouts

Belmont, Virginia

12-HOLE COURSE | 100 ACRES



History

- **Originally opened in 1917** as 18-hole Hermitage Country Club
- Only Virginia course to host a major championship
- Redesigned in 2020 with Love Golf Design, restored holes 7-18 into a 12-hole course

Overview

- 12-hole. 100-acre course is **accessible to all levels**
- Includes five tees (3,020 to 4,345 yards), two back-toback Par 5's, two Par 3's, eight Par 4's, 64 bunkers
- **Skill improvement** areas include two practice putting greens, two chipping greens, three practice bunkers
- Nearly acre-sized grass tee box, separate wedge area with spaced targets for club practice
- CapTech Golf Innovation Center includes Zen Green Stage for putting & PGA Professionals for fitting and tracking



Sweetens Cove, Tennessee

9-HOLE COURSE W/ MULTIPLE ROUTINGS | 135 ACRES





History

- 9-hole course, opened in 2014
- Built from **remnants of previous 18-hole course** named Sequatchie Valley
- Built in a floodplain, deals with periodic flooding and potential flood damage

Overview

- Double hole location setup embeds 18-hole experience into one
- Multiple tees and angle of play options off each tee, generous fairway widths and extremely oversized and undulating greens that are set up daily with two different pin locations allow players to have fun and be creative in how *they* want to play the course
- Includes "cross-country" and "hidden" par three routes employed during special events or when there are few players on the course
- No tee times: depending on the day, players may purchase a 9-hole, 18-hole, or all-day pass that allows unlimited play. Limited number of spots available per day
- Priced seasonally: players can purchase cheaper "Down with the Brown" passes in winter





Hiawatha Links Precedent Courses & Layouts

Bobby Jones Golf Course, Georgia

REVERSIBLE 9-HOLE COURSE (PLAYS 18 HOLES) | 130 ACRES







History

- Opened in 1932 as **first public golf course in Atlanta** and a tribute to renown golfer Bob Jones
- 18-hole course became "rather obsolete" with severe safety issues over many years; was considered to no longer properly honor Jones
- The Bobby Jones Golf Course Foundation, Inc. was created by a group of citizens to transform the course into a facility worthy of the name
- The Foundation raised over \$30 million from individuals and Georgia-based institutions, and leases the property from the State of Georgia

Overview

- Reversible 9-course, includes two distinct courses ("Azalea" and "Magnolia") designed by the late Bob Cupp
- Designed to provide extraordinary golf opportunity and present good stewardship of the environment
- Each course offers players 9 holes with **multiple tee and pin combinations** to play a very different loop each time around
- All golf **features completely redeveloped**, including buildings and facilities, parking deck, tennis courts, and a walking trail around the perimeter
- **Programming** is designed to grow the game of golf with a specific focus on juniors and adaptive golf
- Includes state-of-the-art practice facilities and Murray Golf House, home to the Georgia Golf Hall of Fame, the Georgia State Golf Association, an the Georgia Section of the PGA of America





RENOVATED 9-HOLE REVERSIBLE COURSE LAYOUT (PLAYS 18 HOLES)

ORIGINAL 18-HOLE COURSE LAYOUT





Practice & Learning Facilities

Practice Putting Greens

Hiawatha Links



Himalayan-Style Practice Greens

Putting Course

Popstroke Putting Course

Simulators



Private Lesson / Driving Range

Indoor Golf Simulator

Driving Range with Video Feedback

First Tee Program







Private Lessons

Group Lessons



Practice & Learning Facilities **Hiawatha Links**

Goat Hill, California PRECEDENT EXAMPLE



Junior Golf Learning Facilities

Home of the Junior Golf Association & Caddie Academy

St Croix National, Wisconsin PRECEDENT EXAMPLE



Putting Course Facility

Indoor Simulator Practice Facilities

The Park West Palm, Florida PRECEDENT EXAMPLE







Junior Golf Learning Facilities





Extended Golf Experience

Potential Experiences



Practice Facilities

Foot Golf

Workout Facilities



Restaurant / Banquet Hall

Covered Outdoor Dining

Outdoor Patio / Fire Pits





Simulator Facilities

Golf Club Rentals

Community Room



Extended Golf Experience

St Croix National, Wisconsin PRECEDENT EXAMPLE



Putting Course



Indoor Dining / Bar

Bar Amenities

Indoor Simulator



Outdoor Dining / 19th Hole Experience



Add stickers to what you'd like to see at the park!

























Recreation | Active





What's missing? Add your own below!

describe your idea here... show your support here...

> Minn Park &

Add stickers to what you'd like to see at the park!







informal water access















Recreation | Active



What's missing? Add your own below!





Proposed Building Plan Program

- Restaurant + Bar
- Banquet Space
- Kitchen
- Restrooms
- Walk-up Food Window
- Multi-purpose Classroom
- Golf Simulators
- Large Decks / Patios
- Fire Pits
- Separate Dog Friendly Patio
- Pro Shop
- Golf Equipment Rentals
- Informal Lockers
- A Trophy Display
- Canoe / Kayak Rental
- Skate Rental

What's missing? Add your own below!

describe your idea here ...

show your support here...





trophy display

meeting / community rooms

A

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Building | Programming



Add stickers to what you'd like to see at the park!







large decks















Building | Programming





What's missing? Add your own below!



