EXECUTIVE SUMMARY

LAKE BYLLESBY REGIONAL PARK MASTER PLAN

Adopted by the Dakota County Board January 23, 2018

OVERVIEW

Lake Byllesby Regional Park is located on the southern border of Dakota County, Minnesota, adjacent to Lake Byllesby, a 1,300 acre reservoir of the Cannon River. The park, established in 1970, is 620 acres along the north side of Lake Byllesby and the Cannon River. The park is generally divided into a western unit that is located on the northwest side of the lake and along the Cannon River and an eastern unit on the northeast side of the lake adjacent to the Lake Byllesby Dam. The Lake Byllesby Dam, owned and managed by Dakota County, was constructed in 1910 to bring electricity to the rural area and is still in operation today as a hydropower dam.

The park provides public access to the largest recreational lake in the southern Twin Cities metro area, links to the Mill Towns State Trail, and is situated along the Cannon River Water Trail. Across the lake, Goodhue County's Byllesby County Park provides boat access, trails, picnic shelters, and play areas to local residents. The two county parks are connected by a pedestrian and bicycle trail bridge. This document presents the master plan for Dakota County's Lake Byllesby Regional Park with consideration of complementary facilities at Goodhue County's park.

EXISTING PARK CONDITIONS

East Park

The eastern portion of Lake Byllesby Regional Park, which contains 254 acres, has been developed for recreation. Current attractions include the campground, beach, boat launch, and lakeside picnic shelter. Visitors use the park for boating, camping, canoeing/kayaking/paddle boarding, fishing, geocaching, hiking, horseshoes, picnicking, playgrounds, swimming, dogsledding/skijoring, and ice fishing.

West Park

The west side of the park has 366 acres, most of which is undeveloped and lacks basic access and signage. Much of the land within the west park boundary is privately owned and includes homes and farmsteads. The landscape consists of agricultural fields, former agricultural fields, wooded areas, river floodplain, restored prairie, and mudflats delta. Water features include Lake Byllesby, The Cannon River, Oxbow Lake, and Chub Creek.

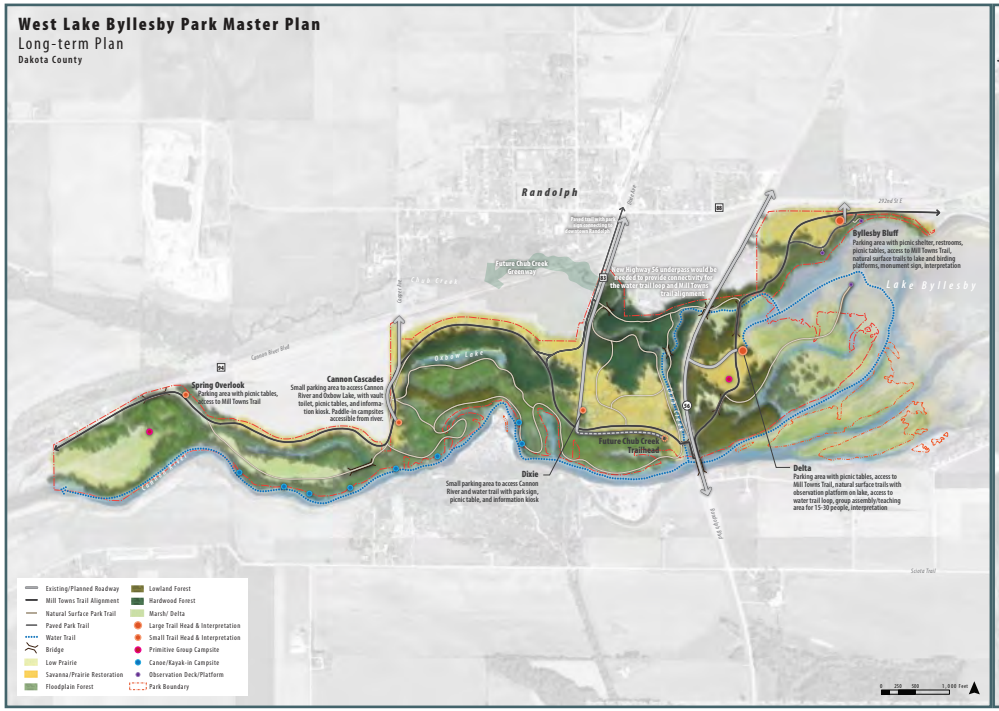
This Master Plan was developed in coordination with Goodhue County as a Master Plan for its Byllesby County Park was developed. The program elements within each park have been designed to complement each other and provide recreation for users as if they were one combined park.

MASTER PLAN GOALS

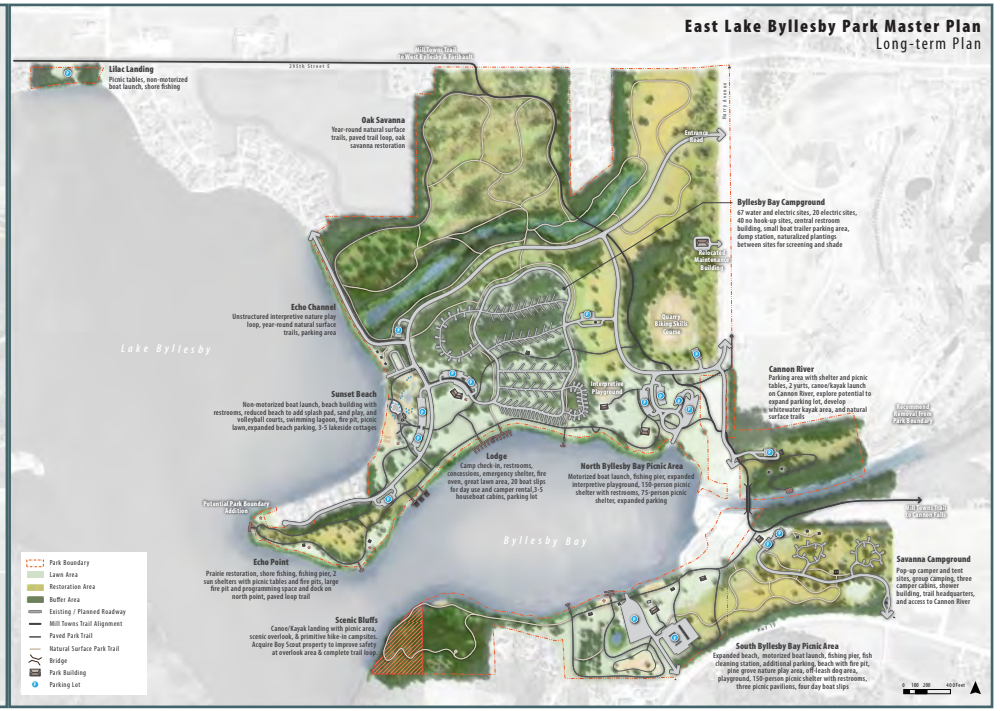
- Create a visionary and strategic document
- Review the current state of Lake Byllesby Regional Park
- Address changes that have occurred since the 2005 Master Plan
- Incorporate direction from 2008 Dakota County Park System Plan
- Represent current community values, recreation needs, and desires
- Address recreation, interpretation, and natural resource management in an integrated process
- Guide future investment in the park
- Meet Metropolitan Council requirements for Regional Park Master Plans

Dakota County's Lake Byllesby Regional Park (2 parts) and Goodhue County's Byllesby Park

Lake Byllesby Regional Park West: Long-term Plan



Lake Byllesby Regional Park East: Long-term Plan



LAKE BYLLESBY REGIONAL PARK DEVELOPMENT LONG-TERM PLAN

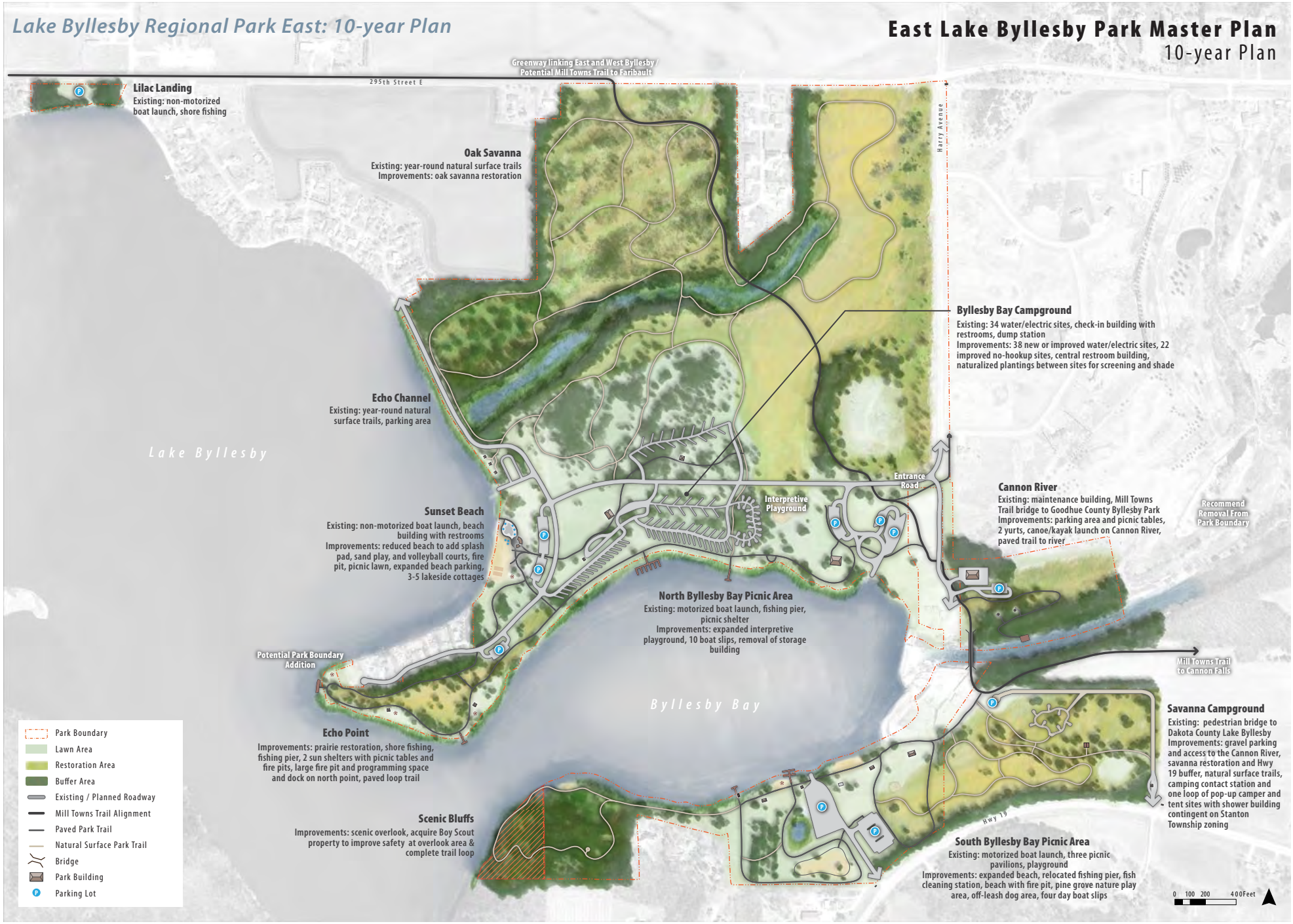
The Lake Byllesby Regional Park Master Plan focuses on improvements prioritized for the next 10 years within the framework of the long-term vision for the park. The long-term plan above shows the park at full recreation development, while the subsequent 10-year plan shows improvements that are reasonably expected to be accomplished during the life of this master plan document based on historic funding levels. The long-term plan is important to understanding 10-year phasing and allows for flexibility. Elements from the long-term plan that are not currently included in the 10-year plan may be accomplished sooner based on changing priorities or unforeseen funding opportunities.

For both the long-term and the 10-year plans, the development concept has been organized into separate plan graphics for the east side and the west side of the park. The east side shows the Goodhue County Byllesby Park concept to illustrate the vision for the combined park.

VISION STATEMENT

Lake Byllesby Regional Park is the natural-resources based park where people can explore the Cannon River Valley. Individuals, families, and groups from around the region visit the park to enjoy the lake, river, and regional trails; to play outdoors and participate in educational activities; to gather with others; and to support the stewardship of the area's wealth of natural resources.

East Lake Byllesby Park Master Plan
10-year Plan



EAST PARK: 10-YEAR PLAN

The concept for the east side of Byllesby Park focuses on expanding overnight accommodations, adding recreation and picnicking options, and incorporating natural resources restoration. These improvements will occur within the east park's current roadway network. An overview of proposed improvements in each park area is provided below.

Sunset Beach

The existing beach area will be enhanced through the addition of sand volleyball courts, a stone fire pit, and sand/water play equipment, and will include ADA accessible amenities. In addition to a beach plaza, an improved picnic area and play lawn will be defined south of the beach to accommodate small and larger group picnicking.

North of the beach, Lakeside cottages will provide overnight options with a view. The existing non-motorized boat launch will be improved with paved road access and better lake entry.

Echo Point

The views of the water and bluffs from Echo Point will be a large draw to park users. Echo Point will be more clearly established as a picnic and gathering area through the development of two sun shelters and fire pits. A fishing pier and informal shoreline fishing area with boulders for standing on will be accessible from a paved loop trail that will extend through Echo Point and back to the Sunset Beach area and campground.

Savanna plant restoration will encompass the central area of the point, and the shoreline will be restored with a 20-25 foot wide buffer of native lake edge plants.

Byllesby Bay Campground

The 10-year plan will retain the 34 existing sites at the lake's edge. In order to provide a more pleasant camping experience, the campground will be expanded and organized to meet current demand for camping and to improve the tent camping experience. The 10-year plan will include 22 sites without water/electric hook ups and 72 water and electric sites. A restroom building with toilets and showers will be located in the center of the campground. All camp sites will be similar to state park camp sites, with trees surrounding and in between the sites for shade and privacy, a gravel parking pad, a picnic table, a tent pad, and a fire pit. To support RVs and pop-up campers, the water and electric sites will have larger parking pads than the sites without water/electric hook up. Some of these sites will be ADA accessible.

Ten boat slips on the lake will be a short 300-foot walk from the campground and will provide space for campers or day boaters to tie up their boats while camping overnight or walking on the park trails.

North Byllesby Bay Picnic Area

In the 10-year plan, the existing playground will be renovated to add elements that interpret the unique natural and historical elements of the park, and the existing storage building will be removed.

Cannon River

Providing access to the Cannon River is one of the intents of the master plan. A trailhead parking lot and picnic tables will be constructed to the southeast of the maintenance facility. A paved trail will lead from the Mill Towns State Trail down the slope to the edge of the Cannon River. A formalized, paved kayak and canoe launch will be at the water's edge to facilitate safe entry to the river. Carts will be provided to portage canoes and kayaks from the lake to the river launch. Space will be provided near the kayak and canoe launch for shoreline fishing and water viewing.

Two yurts will be constructed along the slope, accessible by soft surface trails. These will provide a rustic, overnight experience in the forest with the sound of the rushing water below.

Echo Channel

The existing year-round natural surface trails and parking area will remain. Improvements will be focused on restoring the wetland communities.

Oak Savanna

The Oak Savanna area will be a primary site for natural resources improvements, native landscape plantings, and wetland restorations. The Oak Savanna is an area of the park reserved for passive recreation, where there is minimal planned development.

Lilac Landing

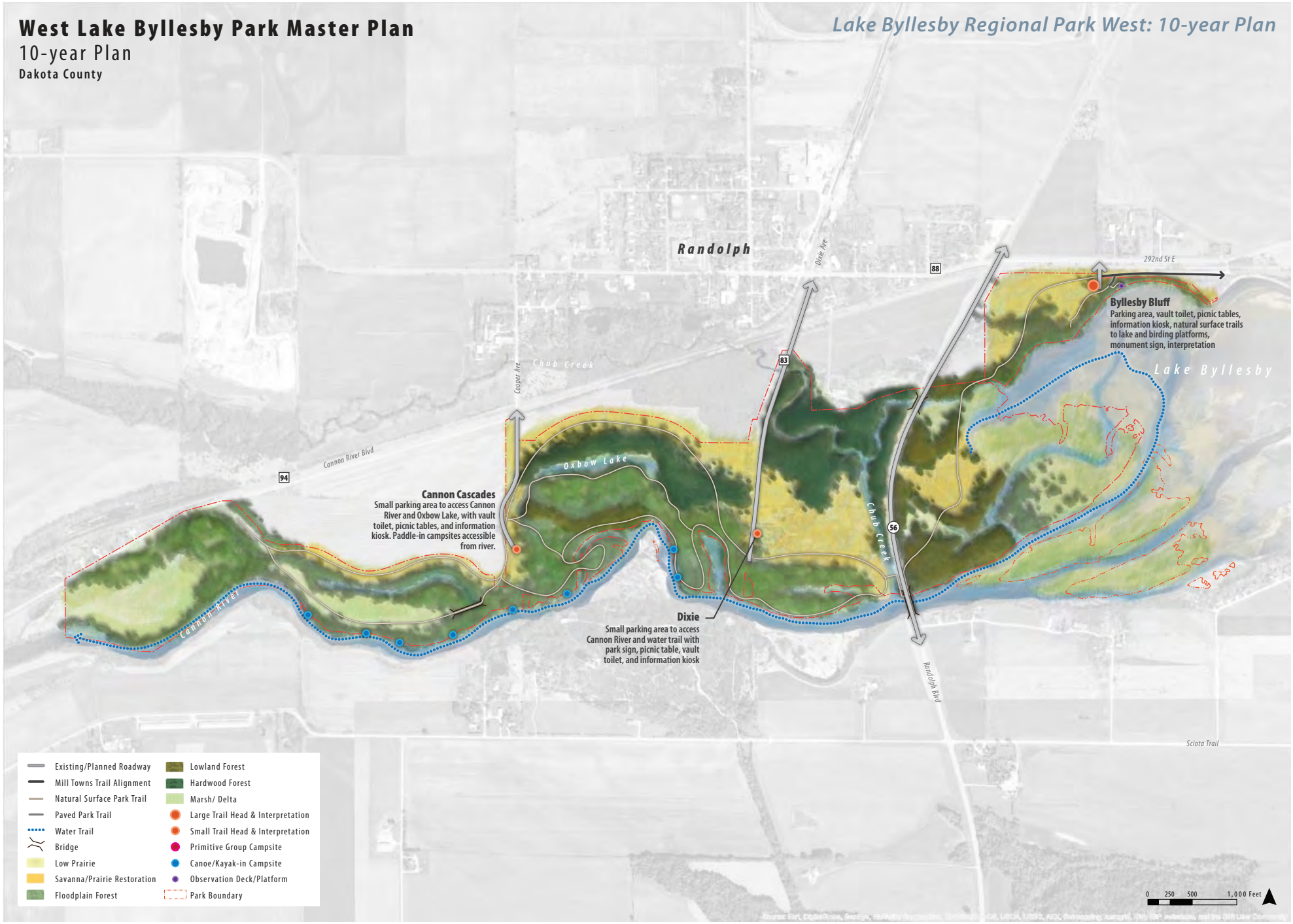
Lilac Landing primarily serves as a non-motorized boat launch in the summer and a lake access point during portions of the winter. It is intended that the site continue to be the location of a non-motorized boat launch, and that parking will remain unpaved.

West Lake Byllesby Park Master Plan

10-year Plan

Dakota County

Lake Byllesby Regional Park West: 10-year Plan



WEST PARK: 10-YEAR PLAN

The west side of Lake Byllesby Regional Park is an undeveloped, floodplain landscape surrounded by agricultural fields and rural residential properties. It is intended that West Byllesby retain its natural resource focus. New entry signage, trailheads, and soft surface trails will be constructed to facilitate visitors' access to the park. In addition to the physical improvements, it will be necessary to build awareness of this park land through online marketing and communication methods in the east park.

Byllesby Bluff Trailhead

One of the primary public access points for the west part of Lake Byllesby Regional Park will be the Byllesby Bluff Trailhead. The trailhead will be constructed at the location of what is today a small gravel vehicle turnaround. Improvements in the 10-year Plan are geared to basic access: park signage, a small parking area for 20 cars, picnic tables, a vault toilet, and a bird blind/lake observation platform.

Dixie Trailhead

The Dixie trailhead will facilitate access to the river hiking and paddling trails. The Dixie Trailhead will be a rustic site with a 10-car gravel parking lot, a vault toilet, picnic tables, a park sign, and access to the river along a natural surface trail.

Cannon Cascades

The Cannon Cascades Trailhead will include a small gravel parking lot for about 10 cars to provide access to Oxbow Lake and the Cannon River with a vault toilet, picnic tables, and soft surface trails. Signage will provide trail information. Canoe and kayak campsites can be accessed from the river or from soft surface trails.

Greenway between East and West Byllesby/ Mill Towns State Trail

Trail Connection Between East and West Byllesby / Mill Towns State Trail

A greenway connection between the Mill Towns State Trail bridge in the east park unit and the west park unit is desired. In the future, the trail may become part of the Mill Towns State Trail, linking Northfield to the Cannon Valley Trail. The Mill Towns State Trail Master Plan has identified several possible alignments between Northfield and Lake Byllesby Regional Park. Dakota County supports a Mill Towns State Trail alignment on the north side of the Cannon River with opportunities for routing within the park, connecting the east and west park units, and connecting to the City of Randolph.

The master plan shows a generalized alignment. It is anticipated that additional planning and design will occur before the trail will be constructed.

PARKWIDE FOCUS AREAS

Winter Use

The long-term plan seeks to provide facilities that would increase winter usage of the park, including a building for indoor programming and rentals, rentable ice houses, and yurts for overnight stays. The location of the non-motorized boat launch is maintained in its current location, in part, because of the winter access it provides. It is anticipated that most of the winter activities will occur in the East Park; however, parking areas in the West Unit will be plowed during the winter months to provide access for snowshoeing and winter walking. The phasing of the East Park was designed to allow the continuation of the use of the natural surface trails around Echo Channel and to the north for dog sledding, though the potential Mill Towns Trail alignment will affect the location of existing and future trails in the north area of the East Park.

Motorized Boating (Mn DNR Guidelines)

The state's Department of Natural Resources (Mn DNR) manages surface water usage and motorized boating in Minnesota. To ensure the safety of motorized and non-motorized lake users, this master plan recommends that boat trailers be required to park on designated, paved surfaces. Coordination between Dakota County and Goodhue County will be needed to ensure that the maximum number of boat trailer spots available is maintained. No changes to the existing distribution of boat parking are proposed.

ELEMENTS PROPOSED IN 10-YEAR PLAN

Paddle-in campsites

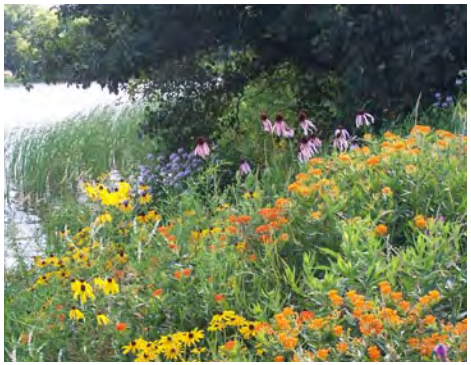
Lakeside cottages

Rustic trailhead parking and signage

Small picnic shelter / sun shelter

Playground with interpretative elements

Splash pad with natural play features



Shoreline restoration

Camp sites

Canoe/kayak portage

Natural surface trail

Bird observation/blind

Fat tire biking

INTERPRETATION PLAN

The interpretive plan provides recommendations for enhancing the visitor experience. Interpretive signage and art will be located throughout the park, along trails, and at facilities and amenities. The interpretive theme for Lake Byllesby Regional Park was developed through research, on-site resource survey, a planning team workshop, and collaboration between the consulting team and County staff.

Lake Byllesby Regional Park and its surrounds have been a gathering place along the Cannon River over time. Although the landscape has radically changed, people continue to be drawn to the distinctive waterways, landscapes, and vistas found here.

Interpretation methods and representative examples are included in the master plan for inspiration; but as park development is undertaken, the interpretation may evolve. Potential partners for Dakota County as it develops its outdoor education programming include Randolph and Cannon Falls Schools, Scouting Groups, Audubon Society, Minnesota Off-Road Cyclists, the Cannon River Watershed, and others.

Interpretive Sub-themes

Powering Minnesota

In response to a growing need for electricity to power homes, businesses, and industries in the area, in the early 1900s, Henry Byllesby harnessed the river to generate hydroelectric power. The dam still provides power and attracts people to the park's engineering history.

The Power of Attraction

This area has been a gathering place across time, attracting people to its bounty and beauty. Flowing water and diverse landscapes once provided sustenance, now people come to enjoy outdoor recreation and distinctive vistas.

From River to Reservoir

When the Byllesby Dam was constructed, the valley was flooded, creating a reservoir and transforming the river landscape. Today, the dam controls the river flow and reservoir water level and exposes upstream mudflats.

Fragmented Landscape

Visitors can experience remnants of habitats and landscapes—prairie, floodplain forest, oak savanna, pine tree bluff—throughout the park. The west end of the park offers a rustic exploration opportunity, while the east end has a more defined outdoor experience.

Linked to the Region

This area is a connected and continuous place linked to the region and watershed. Upstream activities can influence the park, just as park activities can reach into regional communities.

Implementation

The priority for implementation of interpretive elements is based on park development by area or structure. For example, as Dakota County Parks improves Echo Point, the interpretive elements located there should also be developed. As an alternative approach, implementation could be staged to build support and increase visitorship before all development is realized. For example, developing the mobile app and trailheads would raise awareness of park amenities and opportunities and link the park to regional trails.

Binoculars and outdoor book

On-site audio

Augmented reality app

NATURAL RESOURCES STEWARDSHIP PLAN

Natural Resources Inventory

The area around Lake Byllesby Regional Park has drastically changed since European settlement. Information from various sources such as soils, geology, original public land surveys, and historical aerial photography help us formulate a picture of what the site would have been like before. Presettlement, the park's landscape was likely dominated by prairie, with river bottom forest along the Cannon River and small areas of oak openings and barrens. The Cannon River of old was a highly sinuous channel, and a small cascade called Big Falls was located near what is the dam today. However, little remains of the pre-European settlement landscape today. Plowing and intensive grazing by domestic livestock have significantly altered ecological processes and the construction of the hydroelectric dam in 1910 created Lake Byllesby.

Surveys and field visits to the site, conducted by Emmons and Olivier Resources (EOR) in 2016, identified a diversity of natural and disturbed/developed vegetative communities within the park including grassland, prairie, savanna-brushland, woodland-brushland, deciduous forest, wet forest-swamp, floodplain forest, emergent marsh, lake-pond, river-stream, an abandoned nursery, developed parkland, abandoned gravel pits, and cropland. The majority of the vegetative communities identified within the Park were considered disturbed or low vegetative diversity but have the potential to be restored. Only a few forested and wetland areas were identified as habitat of good or fair quality.

The Lake Byllesby Regional Park Natural Resources Management Plan (NRMP) that was developed in tandem with this development master plan includes detailed descriptions of natural resources, existing conditions, desired improvements, and action items. Natural resource improvements throughout the park will provide layers of function even beyond the ecological, from improving the overall setting to creating transitions between uses, providing demonstration opportunities, and modeling stewardship for educational and interpretive purposes. Natural resource improvements will include the conversion of lawn to prairie, naturalization of shoreland, management of invasive species, and restoration of natural communities.

The primary issues identified for Lake Byllesby Park are a lack of high quality and connected natural areas. Specific concerns within these overarching issues include invasive species; habitat fragmentation due to infrastructure, amenities, and agricultural areas; pests; stormwater management; and anthropogenic pollution. Management efforts should focus on efforts to mitigate the aforementioned issues. Specifically, intensive effort to manage prolific invasive species like buckthorn will be important to restoring a more native vegetation community within the park. Furthermore, vegetative restoration efforts should include areas of oak savanna, native prairie and grasslands, non-forested wetlands, and stream habitats as these communities are essential for rare and sensitive wildlife species and pollinators. Habitat restorations will help decrease the fragmented nature of the park and foster an ecosystem more resilient to pests and non-native species invasions. Priority effort should also include the naturalization of the reservoir shoreline. Reducing embankment and

revegetating shoreline areas will help improve fish habitat and also mitigate stormwater. As the Park moves forward with infrastructure additions and improvements, stormwater Best Management Practices (BMPs) should be included to offset any potential increases in stormwater runoff and pollution.

For ease of management, the park was divided into natural resource management units. Each unit is described in terms of existing conditions, issues, opportunities, and recommendations.

Natural Resource Vision Statement

The following vision statement for Lake Byllesby Park is built on the principals and vision outlined in the county-wide NRMSP and also on an understanding of the Park conditions and uses:

Management of Lake Byllesby Regional Park will focus on maintaining, restoring, and enhancing the quality and resilience of natural resources in order to provide a variety of ecosystem services and an outstanding setting for nature-based outdoor recreation.

Natural Resource Management Goals

Overarching management goals for Lake Byllesby Park natural resources management include:

Vegetation

- Focus on invasive species control especially in high quality areas.
- Perpetually maintain restored areas by sufficiently installing native seed and using appropriate invasive species management techniques.
- Identify and prioritize high quality areas where use and management is focused on natural resource integrity, higher connectivity.
- Monitor progress and facilitate adaptive management based on best management practices and scientific methods.

Water Resources

- Focus on management of aquatic invasive species within wetlands and other water features, especially in areas with potential to spread invasion to adjacent waterbodies.
- Utilize stormwater best management practices to improve water management and address listed impairments.
- Develop educational signage and programing to inform visitors of invasive species and water protection efforts.

Wildlife

- Restore and maintain vegetative communities to attract insects and wildlife associated with native plant communities.
- Conduct surveys to monitor indicator species and inform adaptive management.
- Consider strategies to mitigate the impact of overabundant wildlife to protect native vegetation and wildlife (e.g. ex-closures, removal)

Natural Resource Recommendations

Long-term goals for the park include restoration of 400 acres to native vegetative communities. The focus of the remainder of natural resource efforts will be on promoting native vegetation, controlling invasive species, and managing existing restored prairie areas.

Near-term park projects over the next 10 years include restoration of 160 acres of native vegetation, controlling invasive species on 136 acres, and restoring shoreline. See maps of proposed natural resource project recommendations on the following pages.

Mitigation, restoration, and other management activities should be continuously monitored and assessed. Furthermore, the NRMP will be reviewed and updated every five years or as needed to maintain its relevancy.

Through the recommended efforts, Lake Byllesby Park should become both a regional recreation hub for exploring and observing nature and also a place of great habitat diversity and value to a variety of wildlife.

Landscape Buffers to Improve Park Setting

The master plan recommends that sense of setting and aesthetics are considered in park development design and natural resource management. Views from roads, trails, and other developed areas will affect park users' feelings and perceptions of the park. Improvements to the setting through framing iconic views, buffering views to and from adjacent residential areas, creating unique park areas with plantings and landform, and enhancing the park with a more natural signature are envisioned. Native landscape buffers are integral to shaping people's perceptions of the park as an immersive, natural landscape and can be constructed as part of natural resource improvement projects.

Water Quality and Sedimentation

An ongoing issue for the park and local residents is the water quality and sedimentation of the Byllesby Reservoir and the Cannon River. Community concern was expressed repeatedly during the public engagement process for this Plan. These are watershed scale issues that may require state financial assistance.

Since the watershed encompasses more than 900,000 acres across nine counties, a regional plan to meet state requirements called "One Watershed One Plan" is currently underway. Though the Cannon River and Lake Byllesby water quality and sedimentation are largely related to upstream land use, Dakota County is a participating partner in the One Watershed One Plan planning process and has an interest in improved water quality and a reduction of sediment deposition within the reservoir. Sedimentation in Lake Byllesby's East Bay, while unlikely to occur in the near future, is of

East Park Recommendations

A. Establish oak savanna and shrub species within existing restored prairie to provide screening along Harry Avenue.

B. Establish native dry prairie with bur oaks in existing cropland. Consider landform changes to provide screening and habitat diversity.

C. Control invasive species, establish patches of native dry prairie with native trees, and establish buffer along Harry Ave.

D. Restore wetland with native wet meadow and emergent plant communities.

E. Control invasive species and restore woodland habitat.

F. Restore dry savanna. Create and fortify buffers along private homes and roadway.

G. Restore shoreline.

H. Establish oak savanna. Fortify buffers adjacent to homes as needed.

I. Incorporate native plantings throughout campground and future campground area.

J. Remove Siberian elm and establish buffer with native vegetation.

K. Maintain existing tall grass prairie and buffer adjacent homes and road as needed.

L. Restore oak woodland and seepage meadow.

M. Restore river shore.

East Lake Byllesby Park Master Plan

Natural Resources

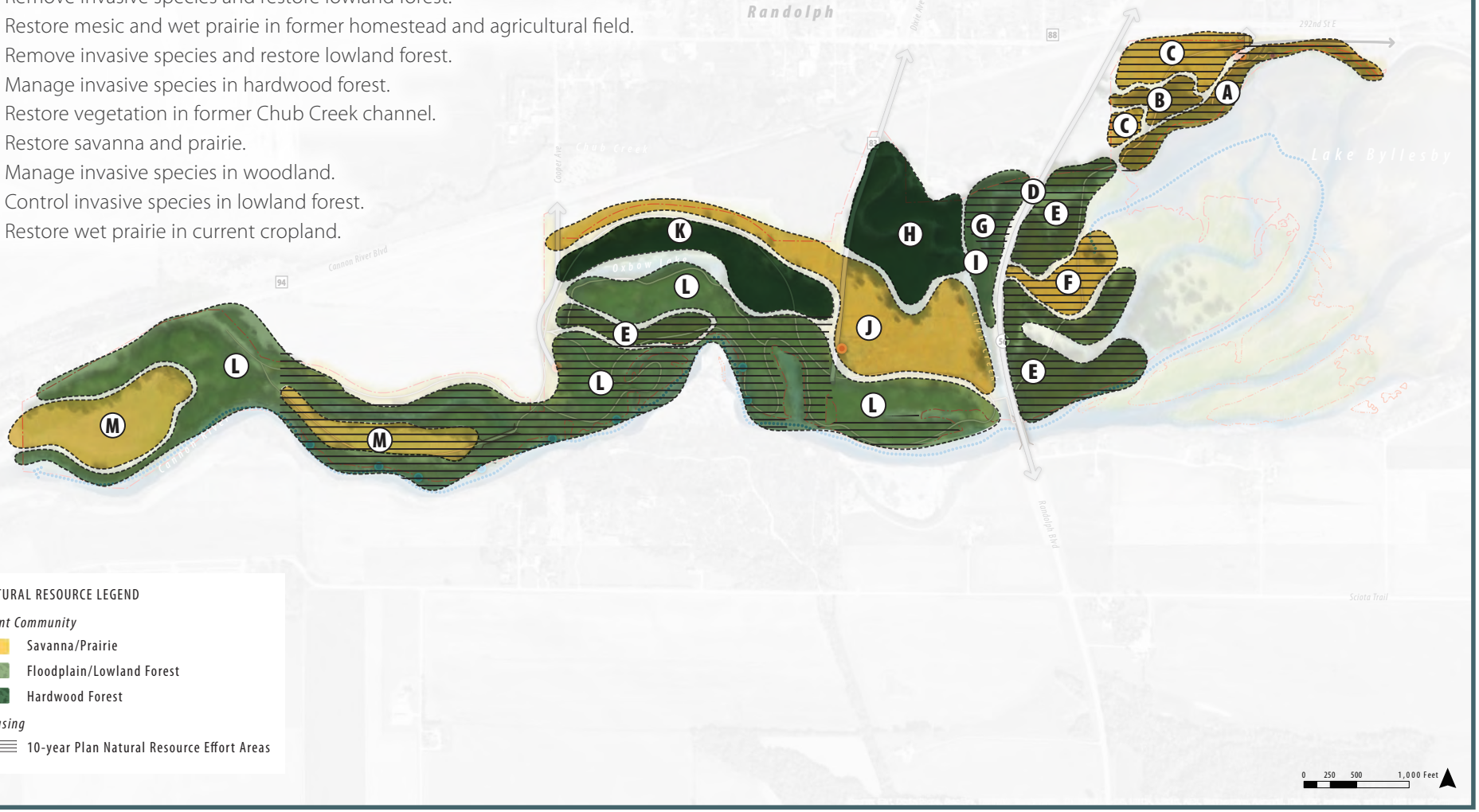
Lake Byllesby Regional Park East: Natural Resources

West Lake Byllesby Park Master Plan
Natural Resources

Lake Byllesby Regional Park West: Natural Resources

West Park Recommendations

A. Control woody invasive species and restore savanna along lake shore.
B. Control woody invasive species and restore mesic prairie.
C. Manage existing short grass and tall grass prairies.
D. Construct wildlife passage at Highway 56.
E. Remove invasive species and restore lowland forest.
F. Restore mesic and wet prairie in former homestead and agricultural field.
G. Remove invasive species and restore lowland forest.
H. Manage invasive species in hardwood forest.
I. Restore vegetation in former Chub Creek channel.
J. Restore savanna and prairie.
K. Manage invasive species in woodland.
L. Control invasive species in lowland forest.
M. Restore wet prairie in current cropland.



particular interest to Dakota County, as it could affect dam operations and recreation (boating, swimming, fishing, and visual quality). Excess sediment is currently a factor in the west portion of the reservoir, forming a delta that functions as an Important Birding Area where the Cannon River runs into Lake Byllesby. The mud flats exposed by seasonal reservoir draw downs are heavily used by migrating waterfowl & shorebirds.

IMPLEMENTATION

Boundary and Acqusition

There are 22 parcels identified in the boundary and acquisition plan. The impact of these boundary changes on the size of the park is shown in the table to the right. In the east park, two parcels are identified for removal from the park boundary, while one is being proposed to be added. It is recommended that in the West Park the boundary be expanded to incorporate more lands for natural resource protection along the Cannon River, to provide land for an upland trail alignment to connect use areas in the west park, provide maintenance access, and potentially serve as the Mill Towns State Trail alignment. In both the East and West Park, parcels will be acquired as opportunities arise from willing sellers.

Cost Estimate

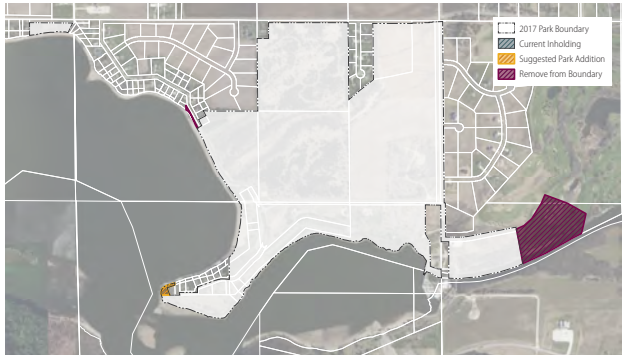
The five-year Parks Capital Improvement Program (CIP) provides for acquisition, greenway and parks improvements and planning. Capital improvements at Lake Byllesby Regional Park will be budgeted for within the CIP process. As shown in the upper right table, the 10-year Plan for recreation development and natural resources restoration is estimated to cost $10.99 million.

The Long-term recreation plan is estimated to cost an additional $23 million. Natural resources management costs will be further evaluated as the 10-year Plan is implemented and impacts are able to be measured.

Summary of Park Boundary Changes

Existing Inholdings	151.59 acres
New Inholdings	94.27 acres
Removals	14.90 acres
Net Gain	79.37 acres added to park boundary

East Park Boundary Adjustment / Acquisition Sites



Master Plan Cost Estimate

Acquisition *(from willing seller over long-term)*	$3,710,200
East Byllesby 10-year Plan	$8,919,300
Recreation Development	$8,372,800
Natural Resources Restoration	$546,500
West Byllesby 10-year Plan	$2,070,250
Recreation Development	$1,776,250
Natural Resources Restoration	$294,000
Total 10-year Plan	$10,989,550

West Park Boundary Adjustment / Acquisition Sites