

Dakota County Natural Systems Plan: Draft Objectives, Strategies, and Tactics

Framework

Goals and strategies from the **2050 Parks Vision Plan** provide overarching guidance. The Natural Systems Plan will include objectives, strategies, and tactics from the existing Parks Natural Resources System Plan (2017) and the Land Conservation Plan (2020), as well as new content to build out a comprehensive framework to guide work over the next 10 years.

Working Definitions

Question	If the answer is “yes,” it’s likely a...	Example
Does it describe a desired future state or major role?	Goal	“Lead and support on ecological stewardship and climate resilience.”
Does it describe <i>what success looks like</i> in measurable terms?	Objective	“Increase pollinator habitat acreage by 15%.”
Does it describe <i>how you intend to achieve</i> that success, in broad strokes?	Strategy	“Focus habitat restoration near existing high-quality prairies to expand connectivity.”
Does it describe a <i>specific action, tool, or step</i> to carry out the strategy?	Tactic	“Seed 10 acres adjacent to Prairie Preserve with native grasses and forbs.”

Land Protection

Goals, strategies, and tactics pertaining to land protection from the Land Conservation Plan were largely retained and reformatted as objectives, strategies, and tactics (displayed as I. *objective*, A. *strategy*, and 1. *tactic*). Minor updates to wording were made.

These actions form the foundation of the Land Protection Chapter. Content from the Land Conservation Plan that relates more to stewardship and management was moved to the Natural Systems Stewardship chapter.

- I. **Prioritize ecologically important areas for protection.**
 - A. Use County Park and Greenway Plans, and Conservation Focus Areas (CFAs) as a framework for protecting and connecting natural areas and habitat.
 1. Refine and periodically update acquisition project evaluation criteria and weighting for different classifications (surface water, wetland and adjacent habitat, upland and mixed upland habitat) to prioritize potential land protection projects.
 2. Conduct landowner outreach within prioritized CFAs to effectively inform and engage landowners.

3. Create detailed, baseline information profiles for each CFA to document natural resource attributes, quality, needs, and opportunities with evolving updates.
4. Prioritize identified wetland basins for landowner outreach and further hydrological analysis and cost estimates.
5. Use a range of voluntary land protection methods, such as fee title and easement acquisition and land registry.
6. Protect representative, high-quality native communities (wetlands, grasslands and forests) within the County.
7. Establish a technical advisory group to evaluate and develop recommendations for the use of property tax modifications as conservation incentives.
8. Review CFA boundaries every five years and revise as needed, based on new information.
9. Define and periodically reevaluate Greenway Corridor widths (100 ft Urban, 200ft Suburban, or 300 ft Rural contexts) beyond County easements to:
 - a. Prioritize partnership work with landowners on native habitat buffers and restoration priorities for connecting habitat corridors along Greenway Trails and
 - b. incentivize larger restoration efforts on non-County public lands.

B. Expand strategic partnerships with agencies and organizations.

1. Continue implementing the City-County Conservation Collaborative for natural resource planning, protection, and management.
2. Assist townships with natural resource planning, protection and management in preparation for 2050 comprehensive planning.

II. Protect and enhance water quality and quantity.

A. Use preliminary CFAs to identify, prioritize, protect, and restore wetland basins, shoreland, headwaters, and groundwater recharge areas to improve water quality and supply and to reduce flooding.

1. Review and revise evaluation criteria and weighting as needed to prioritize potential protection and restoration projects.
2. Conduct landowner outreach within prioritized CFAs to effectively inform and engage landowners.
3. Use a range of voluntary land protection methods, such as fee title and easement acquisition and explore options for long-term agreements.

B. Protect and restore critical infiltration areas outside CFAs identified in the County Groundwater Plan.

1. Establish evaluation criteria and weighting to prioritize potential protection and restoration projects.
2. Conduct landowner outreach in other important areas to inform and engage landowners and initiate wetland restoration.
3. Use a range of voluntary land protection methods, such as fee title and permanent or temporary easements.

III. Use CFAs as a framework for restoring and sustaining biodiversity.

A. Use CFAs to identify and prioritize habitat protection for rare, declining, and special concern species on public lands.

1. Identify and inventory areas of existing high biodiversity and high restoration potential.
 2. Develop baseline biodiversity data, goals, priorities, and monitoring protocols for the County and each CFA.
- B.** Use CFAs to identify and protect habitat for rare, declining, and special concern species on private lands.
1. Prioritize biodiversity in CFA protection and restoration criteria, weighting, and implementation.

IV. Inform and engage the public in natural resource protection and management.

- A.** Provide timely and relevant Land Conservation Program information.
1. Update the Land Conservation Communication Plan to provide a wide variety of information and stories to the general public throughout the year.
 2. Develop a collaborative, countywide, web-based network and interactive map to share natural resource information with the general public.
 3. Provide environmental assessments for interested landowners.
 4. Provide regular program updates and information to property owners with County easements information and two-way communication opportunities for participating landowners.
- B.** Work with partners to engage the public through in-person conservation events and activities.
1. Facilitate volunteer opportunities in partnership with other agencies and organizations (e.g., BioBlitz, seed collection, invasive species control, and vegetation and wildlife monitoring).
 2. Provide programs, workshops, and tours.

V. Enhance nature-based recreational access to conservation lands.

- A.** Add new publicly accessible recreational lands within CFAs.
1. Work with landowners and partners to add and/or expand publicly accessible land within each CFA.
 2. Inventory and select multiple countywide locations for the public to experience high quality, representative wetland, grassland and forest communities.
 3. Recreational amenities in conservation lands should be passive in nature and require minimal operations and maintenance, defined with a new minimum amenity package (to be developed). NEW
- B.** Restore, enhance, and maintain non-County land used for outdoor recreation
1. Partner with other public entities to increase restoration, enhancement, and long-term management of natural resources on non-County public lands.
 2. Work with partners to provide natural resource information for outdoor recreation participants through multiple venues and methods. Work with the Minnesota Department of Natural Resources to provide more public amenities (kiosks, benches, trails) on state Wildlife and Aquatic Management Areas.

Natural Systems Stewardship

The 2017 Natural Resources Management System Plan (NRMSP) included goals for vegetation, water, wildlife, greenways and conservation easements but did not identify supporting strategies or

tactics. New objectives, strategies and tactics were developed, incorporating the goals from the previous plan and building out from the 2050 Vision Plan goals. Selected content from the Land Conservation Plan was also incorporated into this Natural Systems Stewardship chapter.

I. Manage natural systems on protected lands in a comprehensive and sustainable manner. (new) (based on concept of adaptive management cycle, drawn from NRMSP)

- A. Invest:** Commit to natural systems restoration and perpetual maintenance.
1. Periodically review restoration target acreages with Board requests for funding and staff resources to improve the long-term integrity of natural systems, increasing resources as the system grows.
 2. To protect the ecological and financial investment in the acres restored, secure stable funding for long-term adaptive management.
 3. Build and sustain partnerships with other public agencies, organizations, and individuals (cities, SWCD, state, federal, tribes, non-profit organizations, landowners, volunteers, community members).

4. Continue requiring ongoing restoration, management and maintenance activities as part of land protection easement agreements.
5. Explore options for using a private funding entity to secure and disburse private funds for natural resource restoration and maintenance on protected private lands.



B. Plan: Develop a coordinated, science-based framework that guides natural resources management across all parks, greenways and easements.

1. Base management plans in sound ecological science incorporating goals that align with site ecology, planned site uses, available resources, and projected climate change effects. Make reasonable plans to avoid conflicts between site use and ecological needs.
2. Designate selected areas within the park system that have higher natural resource quality, unique habitat value, restored areas, or areas with sensitive cultural resources as places where the priority use and management will be to protect, improve and maintain resource integrity. Limit recreational use and access in areas with the most sensitive resources on a temporary or permanent basis.
3. Identify and adhere to standards for desired restoration outcomes that reflect ecological context, intensity of site uses, and potential climate impacts.
4. Develop individual and prioritized natural resource management plans (NRMP) for each park, greenway, and easement being managed, and update plans regularly.
5. Integrate priorities across individual NRMPs into system-wide priorities.
6. Engage partners, landowners, stakeholders, and experts in scoping and planning initiatives.

7. Apply the CFA framework and data from individual NRMPs to establish criteria and weighting for project prioritization, ensuring site-level priorities integrate into a coordinated, system-wide strategy.
8. Identify a consistent and secure, long term funding source for natural resource work.
9. Develop a streamlined, clearly defined staffing structure that focuses on system priorities, enhances efficiency, supports staff development, and aligns with organizational needs.

C. Implement: Implement plans in accordance with the principles of natural systems management and the 2050 Vision Plan.

1. Base plan implementation in sound ecological science and established priorities for the system.
2. Develop workplans that adhere to the Adaptive Management principle of maintaining flexibility to address emerging issues and opportunities.
3. Continue implementing the City-County Conservation Collaborative to increase natural resource management within ecologically significant city lands using shared and leveraged resources.

D. Monitor: Utilize a coordinated, science-based framework to monitor work progress and natural system change over time.

1. Monitor vegetation, water and wildlife to track natural system change using a well-designed system that can be sustained over time.
2. Use disease monitoring and Invasive Species Early Detection monitoring protocols to track and respond to emergent issues.

E. Adapt: Learn from project outcomes and monitoring results and adjust implementation strategies accordingly.

1. Refine and improve management approaches based on adaptive management principles and lessons learned.
2. Create opportunities to test new resource management approaches.
3. Incorporate flexibility in plans to account for unforeseen changes and opportunities.
4. Continually revisit and refine programs, including cost share funding formulae.

II. Manage natural systems to mitigate and improve resilience to the impacts of a changing climate. (new) (from 2050 Vision Plan)

A. Strengthen ecosystem diversity and health to withstand climate impacts.

1. Maintain and restore diverse natural communities that can better withstand extreme temperatures, severe storm events, drought, and the influx of new pests and diseases from other climate zones.
2. Increase species diversity as a critical element of climate resilience.

B. Use adaptive, science-based practices to prepare for future conditions.

1. When supported by science, explore the use of assisted migration methods to carefully introduce selected species that are native to warmer climate zones.
2. Apply emerging research to anticipate and manage ecological changes linked to climate trends.

C. Increase carbon sequestration within the system and in other areas of opportunity.

1. Restore diverse native communities that sequester carbon, including grasslands and woodlands.
2. Maintain the health of native communities to reduce loss of sequestration capacity.
3. Work with and advise other County departments and partners to increase ecologically appropriate and diverse tree and vegetative plantings as a cooling and carbon sequestration mechanism in targeted locations.

D. Reduce the carbon footprint of management activities.

1. Reduce emissions from restoration and maintenance work through practices such as using biochar in lieu of burning wood.
2. Transition maintenance equipment and operations toward electric or low-emission alternatives.

III. Improve ecological quality in County Parks, on other public lands and permanently protected private lands. (new) (incorporates NRMSP and LCP content)

A. Restore, enhance, and maintain natural systems on County-owned public lands. (formerly the NRMSP vegetation goals)

1. Enhance ecological functioning in targeted restorations with the addition of selected native species.
2. Propagate local native ecotypes for vegetation restoration projects.

B. Restore, enhance, and maintain natural resources on non-County public lands. (from Land Conservation Plan)

1. Use the CFA framework to develop criteria and weighting for prioritizing potential natural resource management projects within CFAs.
2. Review funding formulas for restoration projects on public lands within and outside of CFAs.

C. Restore, enhance, and maintain natural resources on protected private lands. (from Land Conservation Plan)

1. Provide new incentives for improved natural resource management on protected and non-protected private lands.

D. Identify natural system management gaps not addressed through County lands, other public protected lands, and permanently protected private lands. (from Land Conservation Plan)

1. Consider refinements to the Conservation Focus Areas as new opportunities arise for stewardship of sensitive natural resource lands.
2. Consider opportunities to assist other private property managers in managing natural systems on their lands.

IV. Manage permanently protected land to improve surface and groundwater quality. (modified from NRMSP water goals)

A. Support partner efforts to address surface water impairments in County Parks based on lakes study and collected data. (Adapted from NRMSP water goals)

1. Support partner efforts to address the most significant aquatic invasive species (AIS) and the most significant wetland invasive species.

2. Support partner efforts to install stormwater best practices at priority locations in park watersheds outside of park boundaries to address impairments.
- B.** Use a range of natural resource management techniques within and outside of CFAs to restore, enhance and maintain lands for improved water quality, infiltration and storage to reduce flooding and provide wildlife habitat benefits. *(from Land Conservation Plan)*
- C.** Partner with the SWCD and watershed organizations to promote, incentivize and implement water quality and quantity management and soil health practices in agricultural use areas within or outside of CFAs (e.g., functional buffers, perennial vegetation on critical recharge areas, erosion control, wetland restoration, water retention basins). *(from Land Conservation Plan)*
1. Review existing programs to determine if there are gaps or new opportunities and develop and implementation plan.
 2. Secure new cost-share funding for best management practice (BMP) implementation.
 3. Promote awareness of BMP opportunities among landowners and operators.
 4. Leverage financial and staff resources to implement projects on protected lands.
- V. Manage habitat to sustain native and rare species, increase biodiversity, and enhance ecosystem health on permanently protected lands.** *(Adapted and expanded from NRMSP wildlife goals)*
- A.** Monitor and manage wildlife populations to sustain ecological balance and support adaptive management.
1. Monitor selected resident and migratory species (both short- and long-term) to track progress, evaluate ecosystem health, and inform management priorities.
 2. Control overabundant species that negatively impact natural systems.
 3. Seek opportunities for the reintroduction of appropriate native species in coordination with regional and state partners.
 4. Manage the Spring Lake Park Reserve Bison herd to sustain their health and provide ecological and cultural benefits within their range.
- B.** Enhance habitat connectivity and wildlife movement across the landscape.
1. Enhance wildlife movement corridors in greenways, parks, and adjacent lands to maintain population genetic diversity and resilience.
 2. Partner with the MN DNR, adjacent jurisdictions, and others on regional wildlife habitat and connectivity.
 3. Identify and remove barriers to wildlife movement, prioritizing locations with high ecological or connectivity value.
- VI. Expand capacity for natural systems management by building and sustaining effective partnerships and supporting the efforts of others.** *(from 2050 Vision Plan)*
- A.** Build enduring partnerships to share expertise and resources.
1. Create and foster long-term partnerships with County departments, cities, tribes, state and federal agencies, and organizations to manage natural systems using a coordinated, systems-based approach.
 2. Engage and learn from Indigenous partners and experts in Traditional Ecological Knowledge (TEK) to inform management practices.

3. Explore co-management opportunities for areas that contain significant cultural resources.
 4. Strengthen and expand collaborative initiatives such as the City-County Conservation Collaborative and the Greenway Collaborative.
 5. Partner with transportation agencies and utilities to improve pollinator habitat within right-of-way and corridors.
- B.** Increase the capacity of others to manage natural systems.
1. Provide technical assistance, training, and educational resources for public and private landowners.
 - a. Support volunteer training, coordination, and ongoing engagement in restoration and monitoring.
 - b. Work with educational institutions, training programs, and organizations to build the natural systems management workforce.
 - c. Evaluate and implement mechanisms—such as technical assistance, incentives, or cooperative programs—to help private landowners, corporations, and institutions manage land for ecological benefit.
- C.** Promote stewardship through outreach and education.
1. Promote County parks as living classrooms and demonstration sites for restoration and stewardship best practices.
 2. Share knowledge and lessons learned from County projects to inspire and inform partner and community stewardship efforts.