Land Conservation Plan

for Dakota County

Adopted on November 17, 2020

Dakota COUNTY

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Vermillion River cover photo: Courtesy of Joe Walton, Dakota County

Land Conservation Plan for Dakota County

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I. EXECUTIVE SUMMARY

Dakota County -- a vast homeland to Dakota and Ojibwa people, then part of the Dakota Territory encompassing millions of acres westward to the Missouri River -- is now one of seven core Twin Cities Metropolitan Area counties. Bounded by the Mississippi, Minnesota and Cannon rivers, the County includes 576 square miles of ecologically and visually diverse landscapes. Most of nearly 430,000 residents live in developed and expanding suburbs in the northern third of the County, and 820 farms and small rural centers cover the southern two thirds of the County.

The Need for Natural Resource Conservation

Development of natural lands has altered and damaged natural resources and systems in the County, with consequences to local communities. Rivers, streams and lakes became increasingly polluted from urban and agricultural runoff. Groundwater is being pumped more rapidly than it is being replenished and contamination is a growing concern. Soil health has been compromised by development, erosion, compaction, and chemicals. Wildlife habitat has been lost, fragmented, and degraded resulting in declining plant and animal populations and overall species diversity. Many natural places enjoyed and valued by generations have disappeared across the County.

Today, as the world deals with Covid-19, there is growing consensus that our natural resource base creates essential infrastructure for individual and community health and well-being. We all need drinkable water, breathable air, reliable food, and a safe place to live. It's not difficult to find evidence of declining environmental quality, whether relative to the world of our childhood, or that of our grandparents, or earlier. The following indicators provide a snapshot of water quality, natural areas, wildlife, and County residents' concerns about environmental quality.

- State impaired waters listings identify lakes, rivers, and streams that no longer provide for designated uses, such as fishing, swimming or drinking. The number of impaired waters in the County has increased over time. In 2018, testing found at least one impairment for every tested waterbody, for a total of 81 impairments.[1] The number of quality issues has also grown, as new problems emerge, and new impairments are defined.
- Wetlands are critical to overall water quality and flood control. More than 85 percent of Dakota County's settlement-era wetlands have been lost.[2]
- Despite having a highly diverse mix of landscapes and ecosystems in the mid-1800s, only an estimated three percent of Dakota County's natural landscapes remain.
- Habitat loss has led to declining wildlife populations and diversity. Nationally, bird populations dramatically illustrate this decline since the 1970s.[3] For example, grassland bird species have declined nationally by more than 50 percent.

Living in a modern world defined by development, transportation, and convenience requires balancing the trade-offs between control of our immediate environment and protection of the natural environment that sustains us all.

To protect natural resources and systems, land conservation reserves lands with significant natural resource value and manages them to restore natural functions. It is based on the concept that natural

[1] https://www.pca.state.mn.us/water/2018-impaired-waters-list

[2] Minnesota Wetlands Conservation Plan, Version 1.02, 1997, Minnesota Department of Natural Resources, St. Paul, Minnesota.

[3] Decline of the North American Avifauna, Science, Sept. 2019

resources and natural places provide ecological, societal and economic benefits within and beyond the conservation area boundaries. Land conservation includes *protection*, which restricts use of the land. To be effective over time, protection must be accompanied by ongoing *natural resource management*.

Benefits that protected and restored forests, grasslands, and wetlands can provide include:

- Absorbing nutrient runoff, toxins, and sediments for cleaner water downstream
- Promoting infiltration and groundwater recharge and protecting drinking water supplies
- Moderating drought and flood
- Improving soil health
- Providing wildlife habitat and sustaining pollinators
- Providing opportunities for recreation, education, and inspiration
- Mitigating and adapting to climate change

Scientific surveys of Dakota County residents[4] consistently show strong support for land protection and resource management, with the strongest support for water quality, wildlife habitat, and natural areas.

2019 County Survey, Percent identifying preserved land management as "Essential" or "Very Important"	
Approach	**Percent**
Protecting and improving water quality	92
Protecting and improving wildlife habitat	84
Protecting and improving natural areas	83
Increasing access for outdoor recreation	73
Protecting and improving land used for agriculture/specialty crops	71

Land Conservation in the County

Dakota County's 2001 Farmland and Natural Area Protection Plan identified priority natural areas and farmland to protect. Residents passed a $20 million bond referendum in November 2002 for a new land protection program. As of 2020, the County had spent $20.6 million, received $26.3 million in landowner donations, and leveraged $34.7 million in non-County funds to:

- Acquire 71 agricultural easements totaling 7,811 acres, including 1,300 acres of natural areas and 49 miles of shoreland
- Acquire 45 natural area easements totaling 1,809 acres and 31 miles of shoreline
- Work with other public entities to protect 22 properties totaling 2,000 acres and 16 miles of shoreline

Land Conservation Plan

Dakota County developed this countywide *Land Conservation Plan* as a shared vision for the geographic area of Dakota County, to be implemented with partners, to guide future land protection efforts, and to strengthen natural resource management on protected lands. The focus is to:

- Identify and prioritize significant natural areas and connecting corridors for voluntary protection and increased resource management, especially for wetland restoration and water retention on the land

[4] Residential Surveys, https://www.co.dakota.mn.us/Government/Analysis/ResidentSurvey/Pages/default.aspx

- Improve County coordination and collaboration with other agencies and organizations on land protection and long-term natural resource management
- Explore potential tools and incentives to increase voluntary land protection and natural resource management of private lands
- Update Land Conservation Program guidelines for interested landowners and partners

Stakeholder and partner engagement led to development of **the Plan vision, goals and new approaches.**

Land Conservation Plan Vision

The natural resources of Dakota County are collaboratively protected, improved, and managed for current and future generations.

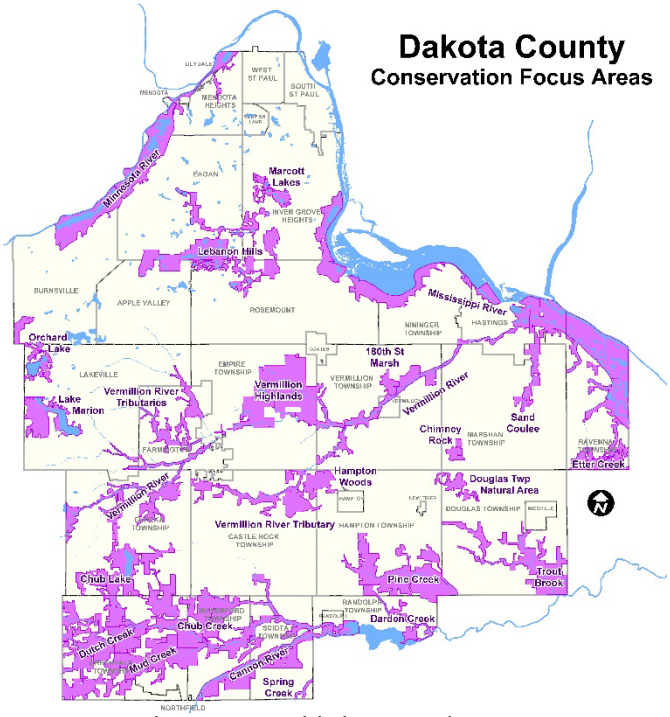
Land Conservation Plan Goals

1. Ecologically important areas are prioritized for protection.
2. Water quality and quantity are enhanced and protected.
3. Natural resource quality is improved and sustained.
4. Biodiversity is restored and sustained.
5. The public supports and is involved in natural resource protection and management.
6. Recreational access to conservation lands is enhanced.

New approaches will be used for achieving these goals.

Refine Land Protection Priorities with Preliminary Conservation Focus Areas (CFAs)

Land protection priorities are based on the combination of natural features, connectivity, hydrology, and land ownership with renewed emphasis on water. The resulting 24 Preliminary CFAs total 74,863 acres, of which 32,521 acres are protected and 42,342 acres are not protected. The preliminary CFAs provide a framework for landowner outreach, collaborative landscape conservation and public investments. The preliminary CFAs refine and reduce the extent of eligible areas identified in the 2002 Farmland and Natural Area Protection Plan.



Develop a City-County Conservation Collaborative and Coordinate with Townships

Form a City-County collaborative to more effectively protect critical undeveloped areas, increase natural resource restoration and management, and share information and financial and staff resources within all incorporated areas. Establish a coordination group among all townships and the County for natural resource planning, protection and management. Enhance communication with townships on land protection projects.

Establish a County Conservation Private Funding Partner
Continue evaluating models for raising and distributing private funds for natural resource restoration, enhancement and maintenance on protected private lands.

Restore Large-Scale Wetlands and Assist in Implementing the new Dakota County Groundwater Plan
Strategically protect, restore, and maintain existing and former wetlands, recharge areas and sensitive groundwater resources. Approximately 14,000 acres of cultivated wetlands in large basins have been identified for potential restoration.

Improve Conservation in Agricultural Use Areas
Assist the Dakota County Soil and Water Conservation District as they work with rural landowners and agricultural operators to improve management practices and convert marginal farmland to natural vegetation.

Ten-Year Plan Outcomes
Ten-year outcomes and associated costs were developed for four protection and ownership scenarios:

- Publicly-owned conservation land within Preliminary CFAs
- Protected private lands within Preliminary CFAs
- Non-protected private land within Preliminary CFAs
- Non-protected private land outside of Preliminary CFAs

Estimates were developed based on the following key assumptions:

- 80 percent of public agencies would be interested in participating in partnership efforts to restore their lands.
- 30 percent of landowners with County easements would be willing to additionally protect and restore land.
- 20 percent of new program applicants would be interested in protecting and restoring some of their land.
- Existing and future State and other non-County grant funds would continue to be available.
- County cost-share likely would be 20 to 25 percent for protection and restoration activities.

Based on the four scenarios, landscape types, and assumptions, potential outcomes for the next ten years are:

10,205 acres of additional land protection at a projected County cost of $9.5 million.

18,156 acres of additional restoration at a projected County cost of $5.0 million.

Estimated Cost
The total estimated cost for protecting and restoring lands within the Preliminary Conservation Focus Areas and areas identified outside of the CFAs is $79.6 million, based on past program experience, estimated participation levels, current land and easement values and unit restoration costs.

Potential Outcomes and Estimated County Cost

Protection and Ownership Status	Total Acres	Protect: Ten-Year Acres	Protect: Ten-Year Total Costs	Protect: Ten-Year County Cost	Restore: Ten-Year Acres	Restore: Ten-Year Total Costs	Restore: Ten-Year County Cost
1. **Public Conservation Lands within CFAS**	23,824	0	0	$0	8,712	$16,983,500	$958,680.0
2. **Protected Private Lands within CFAs**	8,697	1,953	$9,662,000	$2,115,500	2,347	$5,139,500	$727,900.0
3. **Non-Protected Private Land within CFAs**	42,342	7,772	$26,846,000	$6,511,500	6,617	$15,675,500	$2,935,100.0
4. **Non-Protected Private Land outside of CFAs**	2,400	480	$3,480,000	$870,000	480	$1,800,000	$360,000.0
Totals	**74,863**	**10,205**	**$39,988,000**	**$9,497,000**	**18,156**	**$39,598,500**	**$4,981,680.0**

Operational Considerations

Land conservation projects can be highly complex, with many variables that influence timeframes and costs. Acquisition projects can require 18 to 24 months and restoration projects require three or more years. Staff capacity influences the amount of land that can be protected and restored annually and over the Plan's ten-year timeframe. Based on current staff capacity, an estimated 250 acres could be protected each year for a total of 2,500 acres and an estimated 400 acres could be restored each year for a total of 4,000 acres over the ten-year plan.

An additional 1.0 FTE Acquisition Specialist could double the land protection to 5,000 acres over ten years. An additional 2.0 FTE Restoration Specialists could increase natural resource restoration acreage to 12,000 acres over ten years. The estimated costs for these staffing options are outlined below:

LAND PROTECTION				
Acres Protected Annually	250	500	750	
Staff and Operations	2.5 FTE (current)	3.5 FTE	4.5FTE	
Annual Cost	$470,000	$640,000	$810,000	
Acres Protected in Ten-Years	2,500	5,000	7,500	
Ten-Year Cost	$4,700,000	$6,400,000	$8,100,000	
RESTORATION				
Acres Restored Annually	400	800	1,200	1,600
Staff and Operations	1.5 FTE (current)	2.5FTE	3.5 FTE	4.5 FTE
Annual Cost	$220,000	$363,000	$506,000	$650,000
Acres Restored in Ten-Years	4,000	8,000	12,000	16,000
Ten-Year Cost	$2,200,000	$3,630,000	$5,060,000	$6,500,000

The Environmental Resources Department will develop annual workplans detailing activities for the following year. Annual program budgets are subject to County Board review and approval.

Moving Forward

The County will continue to rely on private landowner interest in voluntary land protection and will work with landowners within their timeframes and on meeting their needs.

Realizing the Land Conservation Vision will also rely on partners that have additional objectives, needs, and priorities beyond Dakota County's. Dakota County envisions its role in facilitating, planning assistance, implementation assistance, and funding to realize this vision. The hope is that others embrace this Plan and take ownership of its goals and implementation.

Chub Creek, Sciota Township

II. INTRODUCTION AND PURPOSE

A. Introduction

1. A Changing Landscape

Dakota County -- a vast homeland to Dakota and Ojibwa people, then part of the Dakota Territory encompassing millions of acres westward to the Missouri River -- is now one of seven core Twin Cities Metropolitan Area counties. Bounded by the Mississippi, Minnesota and Cannon rivers, the County includes 576 square miles of ecologically and visually diverse landscapes. The majority of nearly 430,000 residents live in developed and expanding suburbs in the northern third of the County, while the southern two thirds of the County includes 820 farms and small rural centers.

From hunting and gathering indigenous cultures, to diverse agricultural heritage, to contemporary residential, commercial and industrial land uses, the County's rich natural resources provided for survival, development, commerce, and special places deemed sacred, beautiful, and defining of a sense of place.

As in most communities, these natural resources and special places were transformed over time. Vast grasslands were cultivated to provide food. Forests were felled for building lumber and in turn, provided more land to farm. Large wetlands were drained, filled, and tiled to grow food. Many agricultural areas then gave way to towns and cities, a growing network of roads, suburbs, and larger cities.

Development of natural lands has altered and damaged natural resources and systems in the County, with consequences to local communities. Rivers, streams and lakes have become increasingly polluted from urban and agricultural runoff. Groundwater is being pumped more rapidly than it is being replenished and contamination is a growing concern. Soil health has been compromised by development, erosion, compaction, and chemicals. Wildlife habitat has been lost, fragmented, and degraded resulting in declining plant and animal populations and overall species diversity. Many natural places enjoyed and valued by generations have disappeared across the County.

2. Land Conservation in the County

Early conservation efforts included the establishment of Carleton Arboretum along the Cannon River in the 1920's, Kaposia Park in South St. Paul in 1937 and the Gores Pool State Wildlife Management Area along the Mississippi River floodplain in the late 1930's. Extensive land protection efforts in the County expanded in the 1960's with the establishment of Fort Snelling State Park, Dakota County's park system, the regional park system, Dodge Nature Center in West St. Paul, and many city parks.

These lands were protected for the many public and individual benefits that land conservation offers, including a broad range of ecosystem services (ES).

- **Regulation** of natural processes, such as maintaining air and water quality, climate moderation, pest mitigation, and flood control
- **Supporting** processes that contribute to and are essential for ecosystem services, such as soil generation, waste decomposition, nutrient and water cycling, and pollination
- **Providing** products obtained from nature, such as food, fresh water, timber, fiber, and biomass fuel
- **Cultural** nonmaterial benefits, such as recreation, aesthetic appreciation, education, health, and inspiration

Forests, grasslands, and wetlands absorb nutrient runoff, toxins, and sediments from roads, agriculture, and industry, protecting drinking water and aquatic resources and saving municipalities major costs in chemical or mechanical water treatment. Forests, grasslands, and wetlands also slow runoff, minimize evaporation, and allow for infiltration and groundwater recharge. This can moderate drought and flood to provide a more consistent water supply for consumption, electricity generation, industrial uses, and recreation.

Large, contiguous blocks of forests and wetlands are most likely to contain fully functioning ecosystems and provide valuable ecosystem services. Healthy, functioning watersheds naturally filter pollutants, reduce soil erosion, decrease flooding, and recharge groundwater, with cleaner water downstream.

3. Farmland, Natural Areas, and Land Conservation

Resident interest in protecting farmland and natural areas increased in the 1990's, in response to increased residential development and the possible relocation of the Minneapolis St. Paul International Airport to central Dakota County. The County's 2002 Farmland and Natural Area Protection Plan identified more than 160,000 acres of natural areas and farmland as eligible for protection, with 78,000 acres identified as high priority. Residents supported County leadership in land protection and demonstrated a willingness to increase their property taxes by passing a $20 million bond referendum in November 2002 for land protection.

In 2003, the County began working with willing sellers to protect high-quality natural areas and farmland with high quality soils along rivers and streams, through acquisition of permanent conservation easements and financially assisting other public entities in acquiring fee title. As of 2020, the County had spent $20.6 million, received $26.3 million in landowner donations, and leveraged $34.7 million in non-County funds to:

- Acquire 71 agricultural easements totaling 7,811 acres, including 1,300 acres of natural areas and 49 miles of shoreland
- Acquire 45 natural area easements totaling 1,809 acres and 31 miles of shoreline
- Work with other public entities to protect 22 properties totaling 2,000 acres and 16 miles of shoreline

The combination of County acquisitions and lands acquired by cities and the Minnesota Department of Natural Resources has increased the amount of publicly accessible protected natural lands in the County by an estimated 3,811 acres over the past 18 years. Combined with nearly 9,620 acres of permanently protected private lands, nearly 8.6 percent of the County is permanently protected conservation lands.

Management of natural resources on protected lands also has accelerated throughout the County. Recognition that land is not truly protected unless it is actively managed, the relentless spread of invasive species, expanding scientific knowledge, increased management capacity in the public and private sectors, and greater access to native plants and seeds have contributed to this essential component of lasting conservation work.

Despite this notable progress, the need for additional conservation work continues.

- Most surface waters in the County that have been assessed continue to be impaired in some way.
- Nitrate contamination is documented in extensive portions of the County's groundwater.
- Diminished soil health continues to be a concern.
- Flood damage has increased due to land use practices and more frequent and extreme precipitation.
- Special concern wildlife species continue to decline in number and diversity.
- Recognition that people benefit physically and mentally from quality time outdoors has grown.

Land conservation reserves land with significant natural resource value, to protect natural resources and systems from the harmful impacts of various land uses. This is based on the concept that natural resources and natural places provide a wide range of ecological, societal and economic benefits within and beyond conservation area boundaries. Land conservation includes *land protection*, generally achieved through the purchase of land in fee title or easements that restrict use of the land. To be effective over the long-term, land protection must be accompanied by ongoing *natural resource management*, including restoration when needed. Many natural processes that would normally maintain the integrity of natural resources have been disrupted by a range of land use activities (e.g., suppression of natural fire, alteration to pre-settlement hydrology, and introduction of invasive species). Without evaluation, intervention, and ongoing management, natural resources on protected lands are likely to decline over time, undermining the investment made in protecting these lands.

B. Planning Purpose

In 2018, the County began developing this countywide *Land Conservation Plan for Dakota County* (Plan) as a shared vision for the geographic area of Dakota County, to be implemented with partners, to guide future land protection efforts, and to strengthen natural resource management on protected lands. The Plan focus is to:

- Identify and prioritize significant natural resource lands and connecting corridors for voluntary protection and increased natural resource management, especially for wetland restoration and improved water retention on the land
- Improve County coordination and collaboration with other agencies and organizations on land protection and long-term natural resource management
- Explore potential tools and incentives to increase voluntary land protection and natural resource management of private lands
- Update Land Conservation Program guidelines for interested landowners and partners

This Plan builds from the lessons learned and the successes of the 2002 *Dakota County Farmland and Natural Area Protection Plan* and the countywide Farmland and Natural Areas Program (FNAP), as well as its successor, the Dakota County Land Conservation Program.

Vermillion River Gorge, Hastings

C. Planning Context

This Plan was informed by many comprehensive and natural resource management plans that address the geographic area of Dakota County, including City, Township, County, Regional, and State plans. Review of current plans demonstrated alignment of goals and principles for protection and management of land and natural resources.

County Plans

This Land Conservation Plan is guided by two overarching County plans, the 2017 ***Dakota County Strategic Plan*** and the ***2040 Dakota County Comprehensive Plan***.

The ***Dakota County Strategic Plan*** reflects the County Board of Commissioners' vision for the County and guides County programs and initiatives, including the *Land Conservation Plan*.

A great place to live

- Dakota County strives to be a welcoming place where all people are safe, have opportunities to thrive, and enjoy a high lifelong quality of life.

A healthy environment with quality natural areas

- Dakota County protects and maintains natural resources for the health and enjoyment of current and future residents.

A successful place for business and jobs

- Dakota County fosters business and employment success through modern infrastructure, low taxes, and a prepared, connected workforce.

Excellence in public service

- Dakota County demonstrates sound stewardship of human and financial resources, communicates and engages with the public, and innovates and collaborates to provide excellent service.

The *Land Conservation Plan* supports the following Natural Resource Goals identified in the ***2040 Dakota County Comprehensive Plan***, adopted in 2019:

5.3 *Preserve vital functions of natural systems by strategically and collaboratively improving Dakota County's green infrastructure*

5.4 *Conserve and protect natural resources in Dakota County, including air quality, water, soil, productive farmland, minerals (bedrock, sand and gravel aggregates), vegetation, and wildlife*

5.5 *Sufficient and sustainable high-quality water resources*

5.6 *Sufficient and sustainable high-quality water supplies*

City and Township Plans

Comprehensive Plans prepared in 2018-2019 by municipalities in the County identify land protection and natural resource management goals for the coming decades. More than half of the city plans identify needs for open space/natural area protection not related to parks acquisition, and many identify working with the County on land protection. Roughly half of the large city plans call for habitat corridors linking natural areas.

Most townships and rural centers in Dakota County participated in the ***Rural Collaborative Comprehensive Plan***, which includes land protection and natural resource management policies that are consistent with the County's, as shown by the following excerpt:

Rural Collaborative 2040 Comprehensive Plan Environmental Resources Policies

- Work cooperatively with Dakota County and other organizations that support the goals of protecting natural areas and corridors in southern Dakota County.
- Develop and implement a protection and management plan for natural areas that includes:
  - A cohesive system of natural areas connected by natural corridors
  - Areas identified and prioritized for preservation, protection, or restoration
  - A functional classification of natural areas based upon appropriate use, including recreation, preservation, hunting, agricultural, and private access
  - Land protection strategies for targeted areas, including voluntary conservation plans, donation or purchase of conservation easements, transfer of development rights, purchase of development rights, and acquisition
  - Strategies and standards for the long-term management of natural areas
  - A description of partnerships with other units of government to protect shared natural areas
  - Innovative and appropriate natural area agricultural practices
  - Funding and funding sources

D. Planning Principles

Guiding Principles were developed for this Plan based on research and stakeholder engagement. These principles establish primary approaches for the County in pursuing land protection and natural resource management.

1. Protect and manage land to ensure that quality natural resources exist for future generations.
2. Recognize that natural resources are not confined to jurisdictional or ownership boundaries.
3. Protect and manage natural resources as a shared responsibility.
4. Emphasize protection and management of natural resources that provide multiple benefits.
5. Emphasize connection of natural communities.
6. Manage natural resources as an adaptive process requiring a long-term commitment.
7. Serve as a catalyst for broader participation and collective action in Dakota County as a place with natural resources and systems worth protecting and managing.

Operating Principles articulate values grounding the Dakota County Land Conservation Program and are a lens through which program decisions will be made and how program work will be done:

- **Accountability:** track and report program progress toward County and Plan goals
- **Collaboration:** develop working partnerships with other agencies, organizations, and residents to achieve shared goals
- **Data-driven decision-making:** use sound, science-based information as a foundation for decisions
- **Equity and inclusiveness:** engage all people who may have an interest in program activities
- **Fiscal stewardship:** make optimal use of program budget and leveraging outside funding
- **Transparency:** provide easily accessible public communication on program activities

School Field Trip in Restored Prairie

Restored Prairie, Miesville Ravine Park Reserve

III. THE LAND CONSERVATION PLAN

A. Plan Vision

The overarching vision for the *Land Conservation Plan* is:

> ***The natural resources of Dakota County are collaboratively protected, improved, and managed for current and future generations.***

B. Plan Goals, Strategies, and Tactics

Six goals emerged from research and community engagement. The goals aspire to desired future conditions for natural resource protection and management in the County.

The following section discusses the goals, providing a set of strategies (approaches) for reaching the desired future conditions. Proposed tactics (specific tasks) for the Program and its partners support the strategies. Proposed tactics will be refined throughout implementation, related to Program annual work planning and landowner response to outreach. A current status is provided for each tactic – *ongoing* (activity that will continue), *expanded* (increased activity) , or *new* (activity introduced by this Plan).

Plan Goals

1. Ecologically important areas are prioritized for protection.
2. Water quality and quantity are enhanced and protected.
3. Natural resource quality is improved and sustained.
4. Biodiversity is restored and sustained.
5. The public supports and is involved in natural resource protection and management.
6. Recreational access to conservation lands is enhanced.

<u>Goal 1</u>: Ecologically important areas are prioritized for protection.
Preliminary Conservation Focus Areas (CFAs) emerged from an evaluation and refinement of previously identified priority areas for voluntary land protection and enhanced natural resource management. CFAs include natural resource lands that are publicly protected, private easements, unprotected areas, and connecting corridors. The CFAs form a countywide network of landscapes and corridors that represent some of the County's best natural resources, but also are a starting point for discussion with stakeholders. Section C of this chapter provides information on the process used to identify CFAs.

Strategies and Tactics:

A. Use preliminary Conservation Focus Areas (CFAs) as a framework for protecting and connecting natural areas and habitat.

1. Refine acquisition project evaluation criteria and weighting for different classifications (surface water, wetland/upland and upland) to prioritize potential land protection projects. (expanded)
2. Conduct landowner outreach within all CFAs to effectively inform and engage landowners. (expanded)
3. Create detailed, baseline information profiles for each CFA to document natural resource quality, needs, and opportunities with evolving updates. (new)
4. Identify and prioritize wetland basins for further hydrological analysis and cost estimates. (new)

5. Use a range of voluntary land protection methods, such as fee title and easement acquisition and land registry.[5] (expanded)
6. Develop and test prioritization approaches for individual CFAs. (new)
7. Protect representative, high-quality native communities (wetlands, grasslands and forests) within the County. (expanded)
8. Establish a technical advisory group to evaluate and develop recommendations for the use of property tax modifications as conservation incentives. (new)
9. Protect critical groundwater recharge areas in CFAs identified by the County Groundwater Plan. (new)
10. Review CFA boundaries every five years and revise as needed, based on new information. (new)

B. Expand strategic partnerships with agencies and organizations.

1. Establish and begin implementing a City-County Conservation Collaborative for natural resource planning, protection, and management. (new)
2. Establish and implement a coordination group among all townships and the County for natural resource planning, protection and management. (new)

Goal 2: Water quality and quantity is enhanced and protected.

Land conservation with enhanced natural resource management can be powerful tools in improving and protecting surface and groundwater quality. To improve surface water quality, the Plan will focus on protecting and restoring wetland basins and shoreline areas. The Program also can assist in implementing the new County Groundwater Plan by working with interested landowners to strategically protect vital recharge areas and sensitive groundwater resources. Several Drinking Water Supply Management Areas and other infiltration areas could benefit from land-management changes and land protection to adequately protect groundwater. These areas also could be a priority for the Land Conservation Program, whether or not the lands are located within the preliminary CFAs.

To improve water quality, it will be important to work with willing landowners to improve agricultural management practices; potentially convert row crop agricultural lands to less impactful crops; implement innovative practices, such as cover crops and practices emphasizing improved soil health; or even restore natural areas. It is envisioned that the Land Conservation Program would assist the Dakota County Soil and Water Conservation District as they lead these activities.

Strategies and Tactics:

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. Establish evaluation criteria and weighting to prioritize potential protection and restoration projects. (expanded)
2. Conduct landowner outreach within all CFAs to effectively inform and engage landowners. (expanded)

[5] *See Chapter IV, Implementation, for more information on the range of land protection tools.*

3. Use a range of voluntary land protection methods, such as fee title and easement acquisition and explore options for long-term agreements.[6] (expanded)
4. Use a range of natural resource management techniques to restore, enhance and maintain lands for improved water quality, infiltration and storage to reduce flooding and provide wildlife habitat benefits. (expanded)

B. Partner with the SWCD and other entities to promote, incentivize and implement water quality and quantity management and soil health practices in agricultural use areas (e.g., functional buffers, perennial vegetation on critical recharge areas, erosion control, wetland restoration, water retention basins, and soil health).

1. Develop project goals and funding criteria. (expanded)
2. Secure new cost-share funding for best management practice (BMP) implementation. (new)
3. Promote awareness of BMP opportunities among landowners and operators. (expanded)
4. Combine and leverage resources to implement projects. (ongoing)

C. Protect and restore critical infiltration areas outside CFAs identified by the County Groundwater Plan.

1. Establish evaluation criteria and weighting to prioritize potential protection and restoration projects. (new)
2. Conduct landowner outreach outside of CFAs where important areas have been identified to effectively inform and engage landowners and initiate wetland restoration initiatives. (expanded)
3. Use a range of voluntary land protection methods, such as fee title and easement purchase and long-term agreements. (expanded)
4. Use a range of natural resource management techniques to restore, enhance and maintain lands for improved water quality, infiltration and storage to reduce flooding and provide wildlife habitat benefits. (expanded)

Goal 3: Natural resource quality is improved and sustained.

Natural areas are not truly protected unless natural resources are managed over time. Restoration and natural resource maintenance are needed to protect the initial investment made in conservation lands, but also require long-term commitment of funding and effort. The need for restoration and management applies to publicly- and privately-owned protected lands.

More can be accomplished on public lands through collaborative approaches, such as a City-County Conservation Collaborative (CCCC). The CCCC would identify land protection priorities and opportunities; develop natural resource management plans and priorities for city properties; develop joint grant proposals; improve efficiencies and lower costs for purchasing seed, nursery stock, and other materials; and potentially share staff resources and equipment.

Funding natural resource restoration, management, and maintenance on protected private land has been a critical and ongoing challenge.

[6] *See page 49 for more information on the range of land protection tools.*

Strategies and Tactics:

A. Restore, enhance, and maintain natural resources on private lands.

1. Develop criteria and weighting for ranking potential natural resource restoration projects within CFAs. (new)
2. Develop funding formulas for restoration projects on private land within and outside of CFAs. (new)
3. Require ongoing restoration, management and maintenance activities as part of land protection agreements. (ongoing)
4. Partner with the SWCD and other entities to promote, incentivize, and implement natural resource management practices on private lands. (expanded)
5. Provide new incentives for improved natural resource management on protected and non-protected private lands. (new)
6. Work with other jurisdictions, agencies, and organizations to share natural resource management information and techniques with private landowners. (new)
7. Explore options for using a private funding entity to secure and disburse private funds for natural resource restoration and maintenance on protected private lands. (new)
8. Develop and implement monitoring protocols of management areas to assess results. (new)

B. Restore, enhance, and maintain natural resources on public lands.

1. Develop criteria and weighting for prioritizing potential natural resource management projects within CFAs. (new)
2. Develop funding formulas for restoration projects on public lands within and outside of CFAs. (new)
3. Use the CFA framework to determine natural resource management priorities for public lands. (new)
4. Establish and implement a City-County Conservation Collaborative to increase natural resource management within ecologically significant city lands using shared and leveraged resources. (new)
5. Expand strategic partnerships to increase natural resource management using shared and leveraged resources for ecologically significant, non-County public land. (expanded)
6. Coordinate natural resource information with other public entities. (new)
7. Establish a network of natural resource restoration reference sites. (new)
8. Develop and implement monitoring protocols of management areas to assess results. (new)

Goal 4: Biodiversity is restored and sustained.

Located at the intersection of five major ecological sub-sections and on the Mississippi River Flyway for migratory birds, Dakota County's rich legacy of biodiversity can be restored and sustained. The process for identifying CFAs looked at State biodiversity data and rare species and ecosystems, as well as corridors that are vital for the movement and population health of wildlife. The use of land protection tools combined with collaborative enhanced natural resource management is intended to assist in stabilizing and sustaining the County's native natural heritage.

Strategies and Tactics:

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

1. Identify and inventory areas of existing high biodiversity and high restoration potential. (expanded)
2. Develop baseline biodiversity data, goals, priorities, and monitoring protocols for the County and each CFA. (new)
3. Compile a comprehensive list of plant and animal species found in the County. (new)

B. Use CFAs to protect habitat for rare, declining, and special concern species on private lands.

1. Prioritize biodiversity in CFA protection and restoration criteria, weighting, and implementation. (new)

C. Develop and implement a Pollinator Habitat Network.

1. Develop a Pollinator Habitat Network for the County. (new)
2. Partner with transportation agencies and utilities to improve pollinator habitat within right-of-way and corridors. (new)
3. Partner with non-profit and other entities to improve pollinator habitat sites within a Pollinator Habitat Network. (new)

Goal 5: The public supports and is involved in natural resource protection and management.

This goal addresses the need for enhanced communication about the Land Conservation Program, land protection, and natural resource management. In addition to providing high quality information, this goal seeks ways to engage people who would like to be more involved in land and water conservation activities.

Strategies and Tactics:

A. Provide timely and relevant Land Conservation Program information.

1. Develop a business plan for creating a web-based network with partners for sharing natural resource information. (new)
2. Develop inclusive and accessible information resources for the public. (new)
3. Provide regular information and two-way communication opportunities for participating landowners. (expanded)

B. Work with partners to engage the public through in-person conservation events and activities.

1. Provide volunteer opportunities in partnership with other organizations and County departments (e.g., BioBlitz, seed collection, and vegetation and wildlife monitoring). (expanded)
2. Provide seminars, tours, and speaking engagements. (expanded)
3. Help promote the SWCD Conservation Landowner of the Year program. (new)

Goal 6: Recreational access to conservation lands is enhanced.
Public access to protected public lands with high quality natural resources enables people, including under-represented populations, to learn about and appreciate nature, relax, recreate, and be inspired. For youth, early experiences in nature may help shape the next generation of conservationists and natural resource stewards. 21 of the 24 preliminary CFAs already include protected public land that is publicly accessible for a range of compatible outdoor recreational uses. The natural resources of these public lands will be enhanced through increased restoration and management and other improved visitor amenities. Opportunities to work with private landowners with properties adjacent to parks, greenways and other conservation lands will be explored to protect viewsheds and adjoining habitat. Program staff will seek opportunities where landowner would consider allowing additional public access on existing and future protected private land. There should be an overall, net increase in publicly accessible sites, particularly to expand opportunities to experience higher quality natural areas and representative landscapes of the County.

Strategies and Tactics:

A. Provide new and enhanced opportunities for compatible outdoor recreation activities through the addition of publicly accessible lands within CFAs.

1. Work with landowners on a voluntary basis to provide at least one publicly accessible site or to expand existing publicly accessible land within each CFA. (expanded)
2. Provide at least one location for the public to access high quality, representative wetland, grassland and forest communities. (expanded)

B. Improve outdoor recreation activities on public lands through enhanced natural resource quality, information and amenities.

1. Work with other public entities to strategically increase natural resource restoration and long-term management on existing public lands. (expanded)
2. Work with other public entities to provide coordinated information about recreational and interpretive opportunities. (new)
3. Work with the DNR to provide more public amenities (kiosks, benches, trails) on state Wildlife and Aquatic Management Areas. (new)

C. Preliminary Conservation Focus Areas (CFAs)

Evaluation of natural areas and connectivity in the County considered public and private lands that are already protected and past conservation mapping work from other plans, including:

2002 Farmland and Natural Area Protection Plan
In 2002, residents identified natural open space, compiled into a "Citizen Natural Area Protection Map." The Dakota County SWCD mapped land cover and protected areas using the newly-developed Minnesota Land Cover Classification System (MLCCS). Combined analysis identified 36,000 acres of priority natural areas. Residents also identified priority farmland to protect and the Plan included 42,000 acres of productive farmland adjacent to natural corridors and within a half mile of a stream or river.

2003 Metro Conservation Corridors
The Minnesota DNR and Metro Greenways Program partners used the MLCCS to update a Metro Conservation Corridors map for the seven-county metropolitan area, focused on larger areas and connections between waterways and existing public lands.

2008 Dakota County 2030 Park System Plan
This plan proposed a 200-mile network of multi-purpose greenways connecting natural areas, parks, schools, open and civic spaces, and new development. Greenways would benefit habitat, water, and non-motorized recreation and transportation. Many corridors aligned with previously identified conservation corridors.

2010 Vermillion River Corridor Plan
With funding from the state Environment and Natural Resources Trust Fund, the County developed a plan for the Vermillion River Watershed to integrate water quality, wildlife and outdoor recreation.

2015 Refined County Conservation Corridors Map
With updates to the MLCCS, land protection projects, regional greenways, and land use changes, a refined map was developed with County Priority Natural Areas and Metro Conservation Corridors in the County, which became the basis for the County's land conservation efforts.

1. Preliminary Conservation Focus Area Purpose

The County's landscape is a diverse and dynamic mixture of public and private natural areas, farmland, culturally and historically significant places, rural towns, and suburban cities -- which do not exist independently of one another. These landscapes can protect water, clean air, mitigate climate change impacts, and provide habitat for plants and animals that people depend on for many needs. Natural landscapes help drive local and regional economies (e.g., timber, grazing, farming, tourism), reflect cultural legacies, provide scenic beauty, and offer opportunities for recreation and gathering. Communities need healthy, natural landscapes to remain viable.

A more integrated effort is needed to connect habitats for biodiversity, ecological function, and climate resilience. Conservation efforts cannot ignore ownership or political boundaries but need to take a larger view and recognize interrelated large-scale issues, such as wetland loss and declining water quality or habitat fragmentation and loss of species.

Chimney Rock, Marshan Township

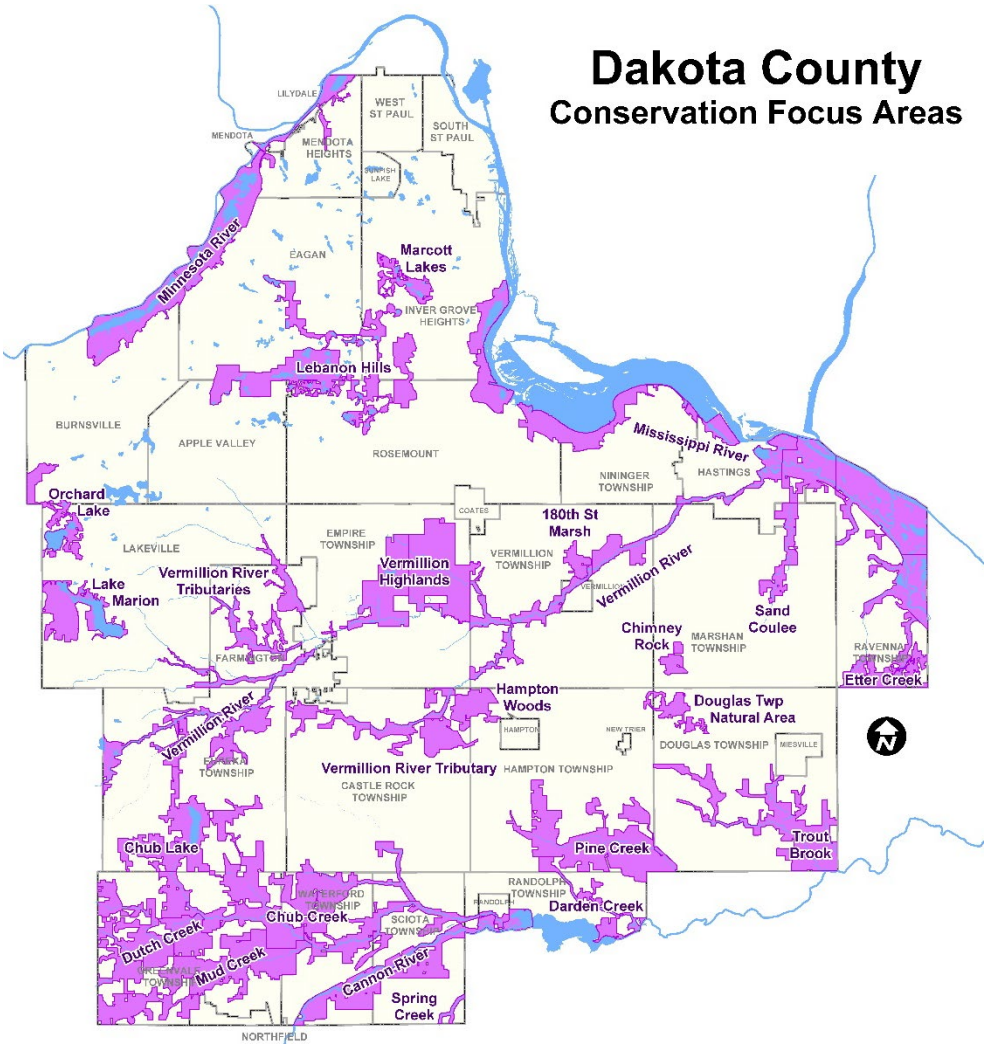
Preliminary CFA Definition
To refine priorities and protect significant and sustainable natural areas and connecting corridors, this Plan proposes working with landowners on a voluntary basis within landscape-oriented preliminary Conservation Focus Areas (CFAs). These preliminary CFAs were

identified to include high quality natural areas, undeveloped open space, restorable wetlands on cultivated lands, and interconnecting corridors to create an extensive, integrated open space system.

The preliminary CFAs encompass **74,863 acres** and include a combination of public and private lands. Examples of public conservation lands in the preliminary CFAs are the Minnesota Valley National Wildlife Refuge, State Aquatic and Wildlife Management Areas and Scientific and Natural Areas, Regional Parks, and city-owned community parks, totaling about 21,990 acres. This Plan suggests greater collaboration with other public entities managing natural resource lands and, where possible, managing public right-of-way in preliminary CFAs (1,834 acres) for greater natural resource benefits.

The preliminary CFAs are organized into 24 named areas. Due to their size or river corridor character, some CFAs are further subdivided into sub-units.

1. **180th Street Marsh**
2. **Cannon River**
3. **Chimney Rock**
4. **Chub Creek**
5. **Chub Lake**
6. **Darden Creek**
7. **Douglas Township Natural Area**
8. **Dutch Creek**
9. **Etter Creek**
10. **Hampton Woods**
11. **Lake Marion**
12. **Lebanon Hills**
13. **Marcott Lakes**
14. **Minnesota River**
    - A. Black Dog Unit
    - B. Fort Snelling Unit
    - C. Mendota/Lilydale Unit
    - D. Oheyawahe Unit
15. **Mississippi River**
    - A. Pine Bend Unit
    - B. Spring Lake Unit
    - C. River Bluffs Unit
    - D. Vermillion Bottoms Unit
16. **Mud Creek**
17. **Orchard Lake**
18. **Pine Creek**
19. **Sand Coulee**
20. **Spring Creek**
21. **Trout Brook**
22. **Vermillion Highlands**
23. **Vermillion River Main Stem**
24. **Vermillion River Tributaries**



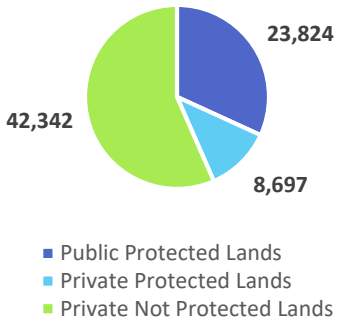
CFAs include protected and unprotected private lands. For the approximately 8,697 acres of private lands already under permanent protection, this plan suggests greater outreach and collaboration with landowners on restoration, enhancement and long-term natural resource management. For lands that are not currently protected, this plan will continue to rely on outreach and working with willing landowners to protect land and manage natural resources over the long-term through a variety of incentives.

PRELIMINARY CFA IDENTIFICATION METHOD

The CFAs were developed through review of previous plans and Geographic Information Systems (GIS) analysis of:

- surface water and hydrology
- presence of larger drained wetland basins
- public and private protected lands and buffers
- land cover
- natural resource quality and restoration potential
- natural area size and connectivity
- land ownership

Protection Status in Preliminary CFAs, Acres



The CFAs presented in this Plan are preliminary and are the framework for outreach and subsequent land conservation projects. Outreach would be a first step in convening landowners to assess the issues and opportunities for each CFA and determine priorities, goals, and future land protection and natural resource improvement projects. CFA boundaries will likely evolve based on landowner discussions. Some areas may be removed from the map, due to a lack of landowner interest or relative importance. Other lands could be added to CFAs. Wetland restoration hydrology involves many unknowns and will likely require project boundary adjustments and different approaches.

Potential wetland restoration areas are included in the preliminary CFAs. The identification of proposed wetland restoration areas focused on larger drained basins (most are currently cultivated) with relatively fewer landowners, using the following method:

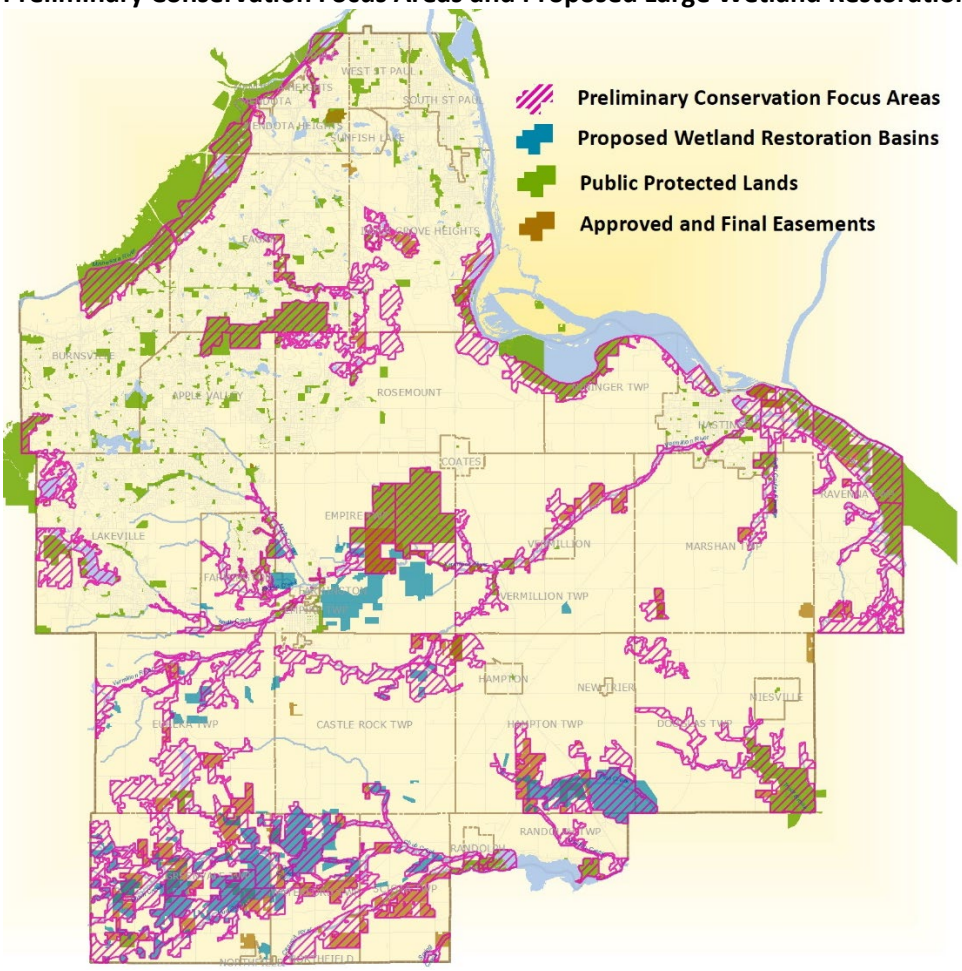
1. Using the County Soil Survey and MLCCS data, a map of cultivated, hydric (former wetland) soils was developed.
2. Light Detection and Ranging (LIDAR) landform sensing technology was used to identify basins. Relatively larger scale potential wetland basins were selected and divided into units.
3. Using basin size, proximity, land ownership and avoidance of roads, individual basins were aggregated to maximize size and minimize multiple ownership parcels.

More than 14,000 acres in 90 potential wetland restoration basins have been identified, although basin boundaries may be modified based on further study. The location and impact of underground drain tile is largely unknown, which will influence the feasibility and extent of wetland restoration projects. The preliminary CFAs include 7,461 acres in identified restorable wetland basins that are currently cultivated.

PRELIMINARY CFA DESCRIPTIONS

The preliminary CFAs represent some of the highest quality natural resources in the County and include a diverse mix of natural landcover types and agricultural land. They also represent opportunities to restore natural resource integrity and functions and connect high-quality habitat.

Preliminary Conservation Focus Areas and Proposed Large Wetland Restoration Basins



Land Cover	Public	Protected Private Land	Private Land	Total	Percent
Floodplain - Natural vegetation	7,163	1,108	6,418	14,689	20
Cultivated Land (excludes cultivated wetlands)	2,442	3,405	6,833	12,680	17
Upland Forest/Woodland	3,975	366	6,244	10,585	14
Cultivated Wetlands	389	1,873	5,200	7,461	10
Floodplain-Cultivated	218	752	5,518	6,488	9
Grassland/Pasture	3,003	478	2,951	6,432	9
Open Water	2,318	136	3,482	5,936	8
Designated Wetlands	1,151	499	3,053	4,703	6
Artificial	1,044	48	1,896	2,988	4
Public Right-of-Way	1,834	0	0	1,834	2
Floodplain - Artificial	223	5	382	610	1
Designated Buffers	65	28	365	457	1
Totals	**23,824**	**8,697**	**42,342**	**74,863**	**100**

The preliminary CFAs encompass the majority of the sites in the County identified by the Minnesota Department of Natural Resources (DNR) as having high or outstanding biodiversity. A broad range of representative native communities[7] of varying ecological quality exist within the preliminary CFA boundaries. The CFAs also include existing and potential habitat for rare and declining native species, including many with legal protection status. Examples of Species of Greatest Conservation Need associated with some of these communities are provided below.

Native Communities and Species of Greatest Conservation Need Found within CFAs

Native Community found in CFAs	Example Species of Greatest Conservation Need
Wetlands	***Wetland Species***
• Black Ash - (Red Maple) Seepage Swamp • Calcareous Fen (Southeastern) • Northern Wet Meadow/Carr • Sedge Meadow • Seepage Meadow/Carr • Southern Seepage Meadow/Carr • Spikerush - Bur Reed Marsh (Prairie) • Tamarack Swamp (Southern) • Willow - Dogwood Shrub Swamp	*Sedge wren (bird)* *Nelson's Sharp-tailed Sparrow (bird)* *Two-spotted Skipper (insect)* *Least Bittern (bird)* *Virginia Rail (bird)* *Blanding's Turtle (reptile)*
Grasslands	***Grassland Species***
• Dry Barrens Prairie (Southern) • Dry Bedrock Bluff Prairie (Southern) • Dry Hill Prairie (Southern) • Dry Sand - Gravel Prairie (Southern) • Mesic Prairie (Southern) • Wet Prairie (Southern)	*Loggerhead Shrike (bird)* *Henslow's Sparrow (bird)* *Western Hognose Snake (reptile)* *Prairie Vole (mammal)* *Karner Blue (insect)*
Savanna	***Savanna Species***
• Dry Sand - Gravel Oak Savanna (Southern)	*Eastern Racer (reptile)* *Field Sparrow (bird)* *Red-headed Woodpecker (bird)*
Forest and Woodland	***Forest and Woodland Species***
• Red Oak - Sugar Maple - Basswood - Forest • Red Oak - White Oak Forest • Silver Maple Floodplain Forest • Southern Dry-Mesic Oak Forest • Sugar Maple - Basswood Forest • White Pine - Oak - Sugar Maple Forest • Pin Oak - Bur Oak Woodland • White Pine - Oak Woodland	*Acadian Flycatcher (bird)* *Wood Thrush (bird)* *Cerulean Warbler (bird)* *Prothonotary Warbler (bird)* *Four-toed Salamander (amphibian)* *Woodland Vole (mammal)* *Eastern Pipistrelle (mammal)* *Northern Long-Eared Bat (mammal)*
Lakes, Rivers, and Streams	***Lake, River, and Stream Species***
• Shallow Lake • Deep Lake • Coldwater Stream • Major River	*Higgin's Eye Pearly Mussel (mussel)* *Pallid Shiner (fish)* *Paddlefish (fish)*

[7]MN DNR, Natural Heritage Information System GIS Database

Prothonotary Warbler, National Audubon Society

Higgins Eye Pearly Mussel, US Fish and Wildlife Service

Blanding's Turtle, US Fish and Wildlife Service

Redheaded Woodpecker, National Audubon Society

The following profile for the preliminary **Marcott Lakes CFA** in Inver Grove Heights provides an example of the information that will be developed for each CFA.

Marcott Lakes

Size and Ownership
650 acres
93 Landowners
10.8 percent public land
34.4 percent private protected land
54.8 percent unprotected land

Unique or Significant Features
This preliminary CFA encompasses three of the four southernmost lakes in the Marcott Chain of Lakes, which are the most pristine with visibility reaching depths of 20 to 30 feet.

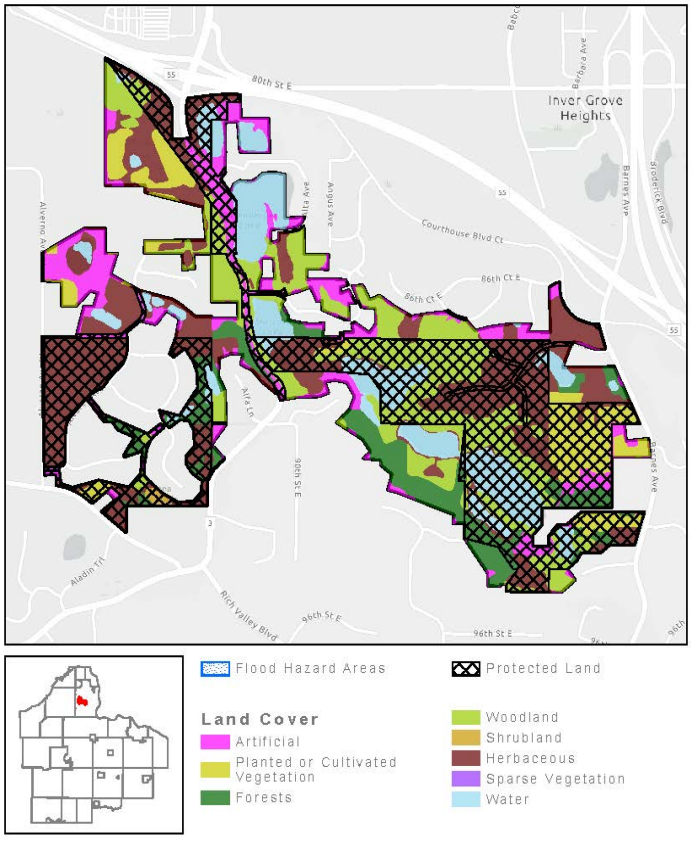
Vegetation
Forest/Woodlands are varied and include oak woodland-brushland, non-native deciduous woodland, oak forest, mesic oak forest, and conifer plantations.

Grasslands include long grasses, medium-tall grass altered/non-native dominated, short grasses and mixed trees, mixed planted and/or native grasses,

Wildlife
Although not documented on protected land, Blanding's turtle was recorded within one mile. This CFA contains suitable habitat for this species.

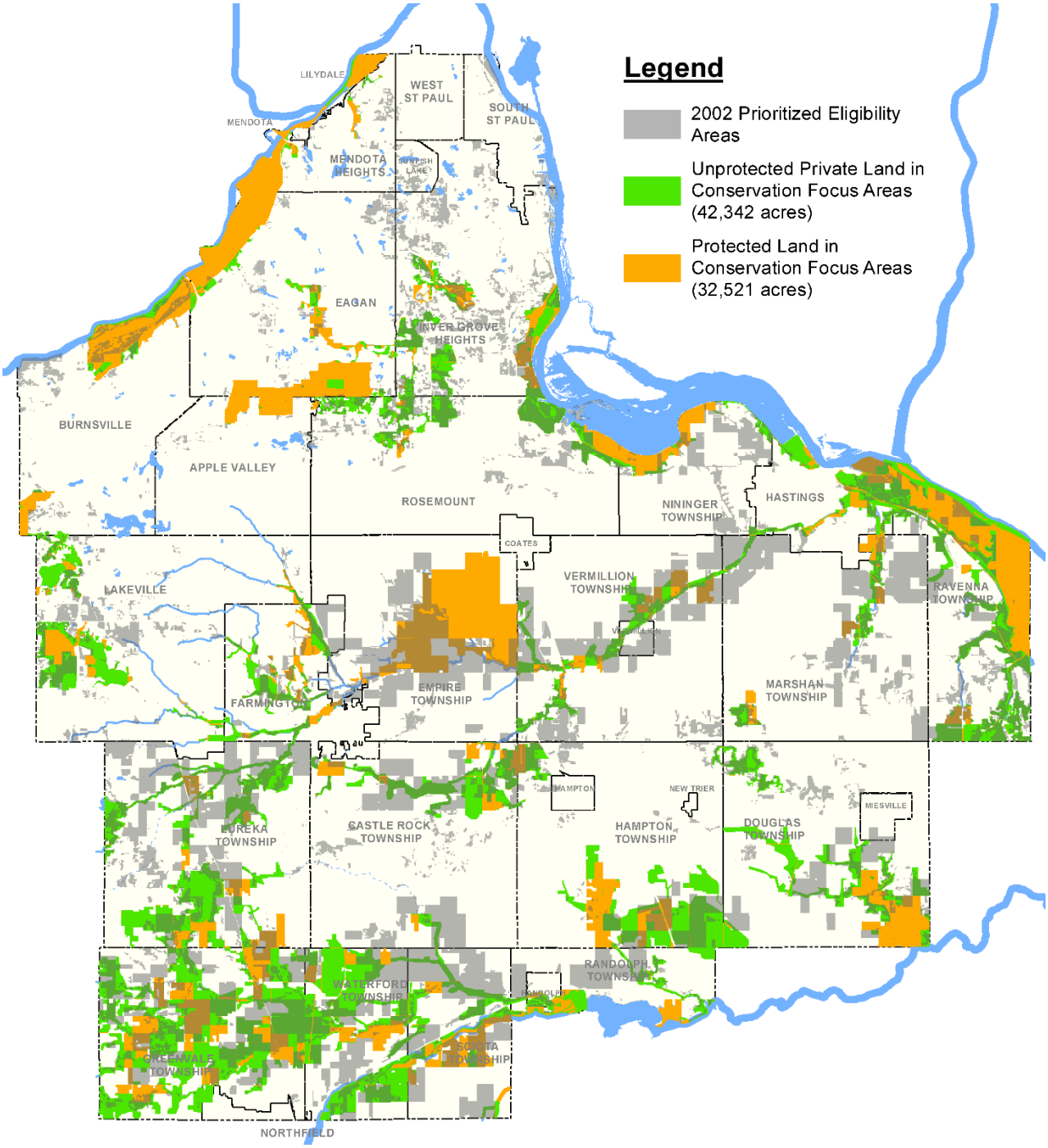
Sixteen to twenty bird Species of Greatest Conservation Need (SGCN) have been recorded within the vicinity of the Marcott Lakes CFA, including rose-breasted grosbeak, eastern pewee, black-billed cuckoo, and wood thrush.

Other SGCN documented over many years on protected land include big brown bat, least weasel, five-lined skink, and spotted salamander.



The preliminary CFAs represent reduction and refinement of the areas prioritized in the 2002 Farmland and Natural Areas Protection Plan (FNAP) and subsequent modification of its eligibility areas, as shown in the following map and summary table.

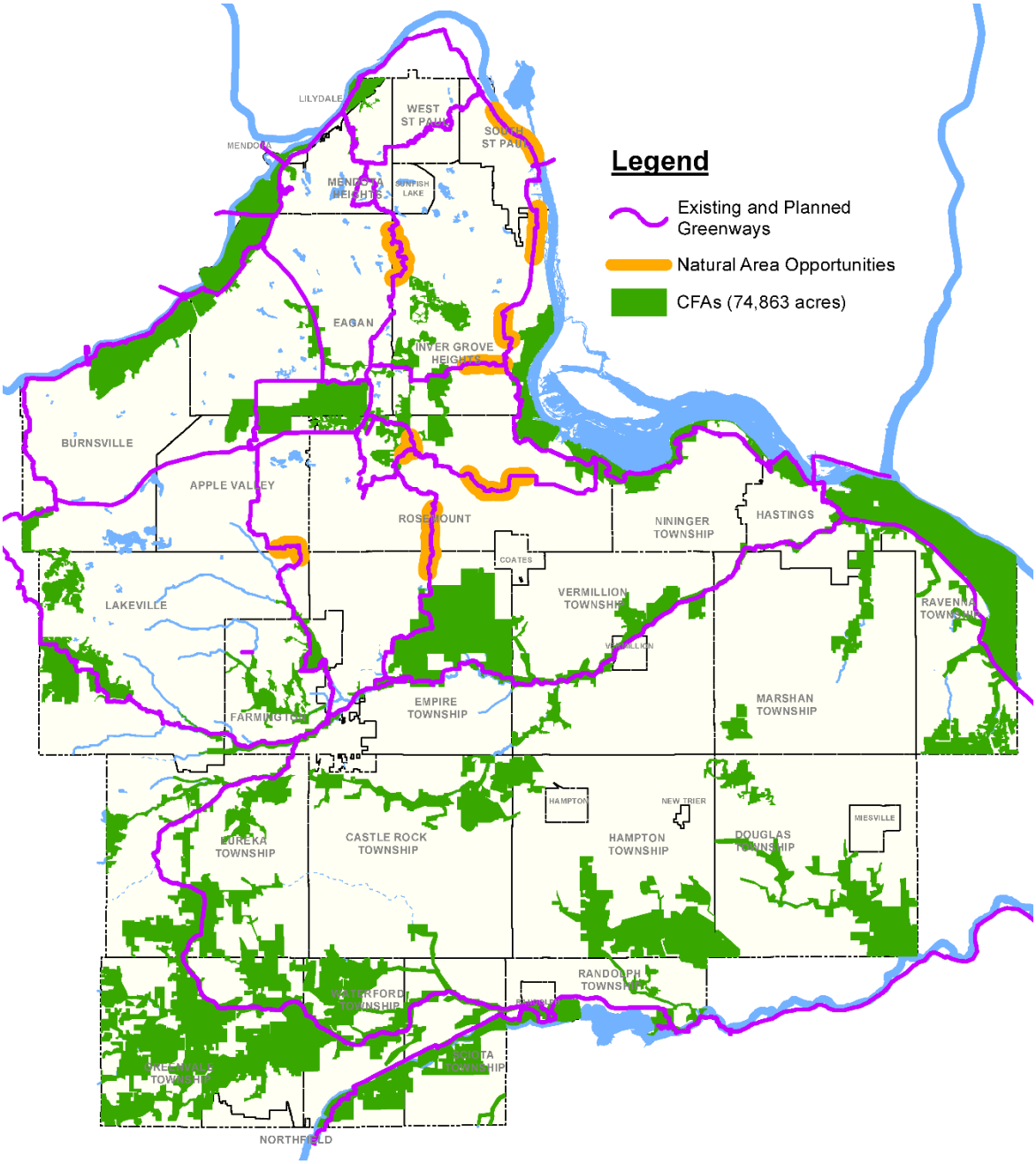
Land Protection Eligibility	Priority Unprotected Acres
2002 Farmland and Natural Area Protection Plan	78,000
Preliminary Conservation Focus Areas, 2020	42,342



PRELIMINARY CFAS AND GREENWAYS

In addition to larger protected public lands, such as Regional Parks and State Wildlife Management Areas, many of the preliminary CFAs already include segments of the larger, long-term Regional Greenway System that are already open or planned for public use. Other portions of the planned greenway system are located outside of the preliminary CFAs. These corridors were partially chosen for their natural amenities and include potential areas for protection and restoration that would enhance both the ecological functions and the recreational experience of users. Specific conservation opportunities will be determined as greenway corridor plans are further refined and implemented. The following map shows the relationship of the County's Regional Greenway System with the preliminary CFAs.

Dakota County Regional Greenways and Preliminary CFAs



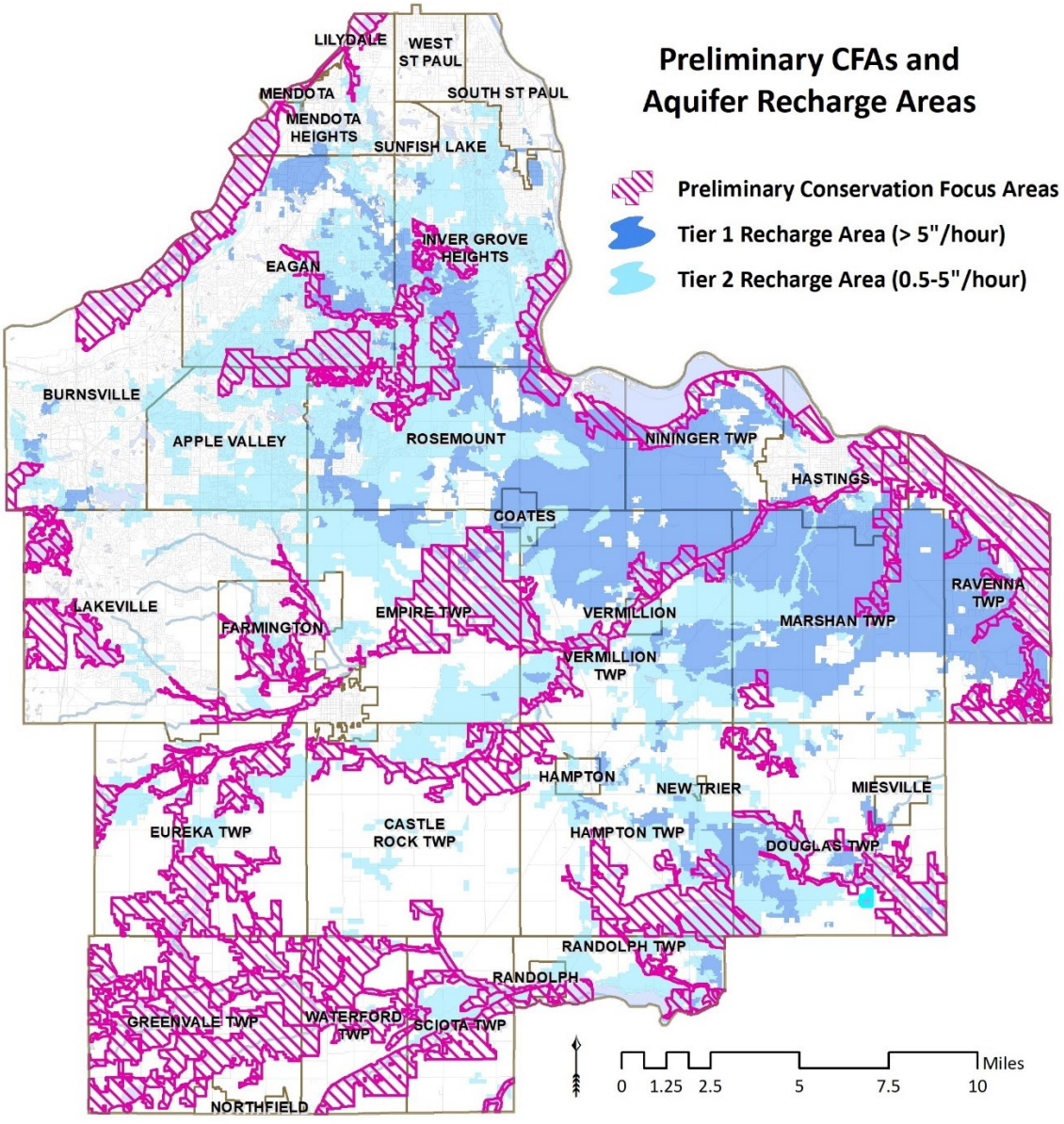
2. Additional Eligible Lands Outside of Preliminary CFAs

A. GROUNDWATER PROTECTION AREAS

Groundwater aquifer recharge areas are vital in ensuring an adequate water supply in the future. Depending on soil types, some portions of the County have faster infiltration rates ranging from a half an inch to more than five inches per hour.

Where groundwater is highly vulnerable to contamination, voluntary land protection with adoption of groundwater-protective management practices provides another option for improving groundwater quality over time. The County Land Conservation Program will assist, as needed and when feasible, in protecting high priority aquifer recharge areas outside of CFAs.

The following map shows the location of 83,807 acres of significant recharge areas, which include substantial areas outside of the preliminary CFAs. The significant recharge areas shown exclude developed areas with more than ten percent impervious surface.



B. OTHER NATURAL FEATURES

Additional areas outside of the preliminary CFAs that have ecological value would be evaluated for protection based on landowner inquiry. These areas include:

- More than 1,800 acres of forests/woodlands with greater than 40 contiguous acres
- Restorable wetlands
- Locally significant open spaces
- Sites that could provide native plant seeds
- Surface water corridors for water quality, such as second- and third-order tributaries to public waters

Restored Prairie on protected private property, Eureka Township

Woodland Easement, East Lake Community Park, Lakeville

D. Natural Resource Management

1. Purposes

Natural resource management is vital for Conservation Focus Areas and private or public protected lands. Ongoing stewardship maintains ecological functions as part of a larger regional natural framework.

Dakota County's rich natural heritage is based on its location at the crossroads of several ecological subsections identified by the Minnesota Department of Natural Resources, including the St. Paul Baldwin Plains and Moraines, Big Woods, Oak Savanna, Rochester Plateau, Bluff land, and three Major River systems. Although little pre-settlement landscape remains in Dakota County, high quality natural areas and open space areas could be restored and managed as wetland, prairie, and woodland.

Restoration and management of these natural areas can increase provision of a broad range of ecological services. These services provide real economic benefits that are measurable in dollars per year but are often regarded as "free" and generally not well-accounted for in a range of land uses and development. Many studies have evaluated economic values for these services[8]. For more information, please see Appendix 3.

Vermillion River, Vermillion Township

Natural resources also influence how a community defines itself, with effects on culture and the economy, beyond the ecological benefits often cited as the main purpose of natural areas. Parks, open spaces, greenways, and agricultural landscapes add value and create a sense of place that attracts new residents and convinces current residents to stay. Increased awareness of the economic and community benefits of natural resources establishes a rationale for protecting and properly managing natural resources as a widely accepted, normal part of a community's ongoing and future activities.

Economic Valuation of Ecosystem Services (ES): Middle Cedar River Watershed, Iowa, 2011[5]

A valuation study of ecosystem service benefits in the Middle Cedar River Watershed in Iowa identified 14 categories of ES across eight land cover classes in the 1.5 million-acre (~2,400 square miles) watershed. The study estimated that the ES generated between $548 million and $1.9 billion in goods and services. Wetlands constitute 2.3 percent of the land cover in the watershed but were found to contribute 16.5 to 30.1 percent of the total ES value. The top-ranking ES provided by wetlands was flood risk mitigation, valued at $2,544 to $3,651 per acre per year.

[8] Kocian, M., Traughber, B. Batker, D. (2012). "Valuing Nature's Benefits: An Ecological Economic Assessment of Iowa's Middle Cedar River Watershed." Tacoma: Earth Economics

2. Natural Resource Management Issues and Opportunities

Restoring natural places and systems amid a long history of ecosystem alteration and loss must address systemic changes over time, current efforts and issues, and growing research on effective approaches.

Systemic changes that have contributed to the decline of native species and ecosystems include:

1. **Land use change** since the mid 1800's: Native ecosystems were removed or altered as the County was farmed and urbanized, resulting in the loss and fragmentation of native species habitat, disrupted connectivity between habitat areas, and a reduction in the number of native species.

2. **Removal of natural regulatory processes,** such as fire and grazing, contributes to changes in landscape composition and health. Fire recycles excess nutrients and repeated fire prevents colonization by pioneering woody plants that convert grasslands to shade-dominated woodlands.

3. **Hydrologic changes** from urban stormwater systems and agriculture (e.g., drain tile) have increased runoff entering natural waterways instead of being infiltrated on land. Warm water from streets and fields enters lakes, streams, and wetlands, carrying chemicals, nutrients, and sediment.

4. **Invasive species** include a growing number of plants and animals. Without natural predators or diseases, non-native invasive species outcompete the native species and ecosystems.

5. **Climate** data has indicated warmer and wetter conditions with more frequent severe weather events and weather extremes, with impacts to native ecosystems.

Ongoing Issues include:

- Reversing these systemic changes mentioned above is difficult, even when possible. Mitigation of their impacts at a smaller scale requires a long-term effort.
- Natural resource management requires an ongoing commitment to maintenance.
- Despite increased public investment in protecting land and water quality, more restoration and natural resource management remains to be done.
- Most land will remain in private ownership and pose many challenges in addressing long-term natural resource management and costs.
- Natural resource management would benefit from a clear and shared framework, including language and terminology.

Natural Resource Management Recommendations include:

- Basing management decisions on sound science and professional practice.
- Involving the public and landowners, to benefit from diverse perspectives, needs, and interests.
- Working across jurisdictional and ownership boundaries, through partnerships and collaboration.
- Having clearly-conceived goals that are realistic, with sufficient time horizons.
- Having clear performance metrics to track progress toward project goals.
- Continuing natural resource monitoring and assessment over time.
- Developing and using clear standards for restoration and management goals, effective monitoring, and adapting project practices when needed.
- Providing adequate budgets to sustain restoration and management efforts over time.
- Sharing resource and management information with landowners, partners, and the public.

Ecological Restoration and Management

Ecological restoration rebuilds ecosystems by stabilizing and enhancing their diversity, resilience, and natural functions. Healthy ecosystems are usually diverse in plants and wildlife, have few invasive plants, have healthy soils and good reproduction of important species, and generate ecosystem services, such as clean air and water, regulating and purifying stormwater runoff, recharging groundwater, controlling erosion and building soil.

The composition and function of restored ecosystems is intended to be similar to native ecosystems. The development of site-specific Natural Resource Management Plans (NRMPs) is fundamental to effective natural resource management. NRMPs describe the ecological setting, existing conditions, and goals for natural resource restoration and management. Plans define management units, tasks, priorities, costs, and a schedule of work. Successful natural resource restoration and management plans are flexible. Ecosystems may not respond as expected, or new technology and scientific understanding may emerge. NRMPs are a starting point and should be updated every five years, or as needed based on site response and new information. Regular monitoring of conditions and reporting on progress provides a basis for adjusting NRMPs, also referred to as adaptive management.

Ecological restoration involves short- and long-term phases. The short-term phase is often more intensive but provides an essential foundation for overall restoration. Establishing the proposed plant community structure (e.g., tree canopy, shrub layer) often lasts three to four years. Tasks can include woody brush removal, invasive species control, seeding/planting native species, and using bio-control techniques when available. After initial restoration, ongoing management is essential to protect the investment already made. Typical tasks include spot spraying of invasive plants, re-seeding disturbed or poorly developing areas, re-planting woody plants, and maintaining the right disturbances, such as fire, to perpetuate the plant community.

It is important to develop and use consistent standards and language for describing natural resource management. The Five-Star Ecological Recovery Reference System[9], developed by the Society for Ecological Restoration (SER), provides a potential framework for setting goals and monitoring progress. The Five Star model:

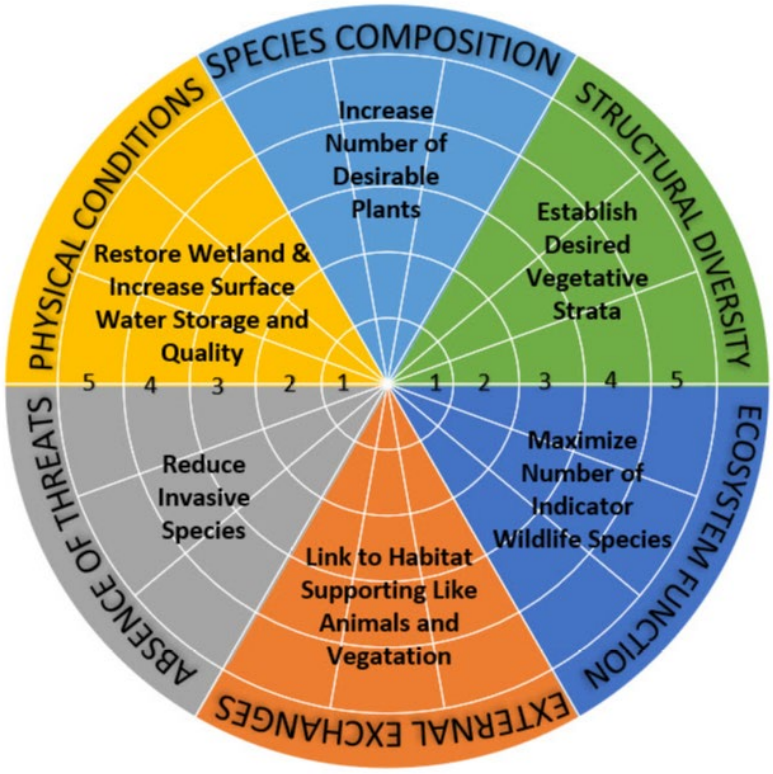
- Evaluates progression of an ecosystem based on recovery outcomes, not restoration activities.
- Is based on key attributes, or broad goals, supported by more specific goals and objectives.
- Recognizes that each restoration project does not necessarily start at the same level and full recovery of some attributes will be difficult to achieve.

[9] https://www.ser.org/page/SERNews3113

The following table and adapted graphic provide an example set of attributes, goals, and measures.

Five-Star Ecological Recovery Reference System Attributes, Goals, and Measures		
ATTRIBUTES	**GOALS**	**EXAMPLE MEASURES**
1. Absence of Threats	• Reduce invasive species	*Common buckthorn, honeysuckle, garlic mustard, and black locust are not present*
2. Physical Conditions	• Restore wetlands and increase surface water storage and quality	*Acre-feet of new water storage*
3. Species Composition	• Increase number of desirable plants • Increase number of desirable animals	*List of all native species evidently persisting on the site, particularly any threatened species*
4. Structural Diversity	• Establish desired vegetative layers	*Assemblage of species and age*
5. Ecosystem Function	• Maximize number of wildlife indicator species	*Breeding bird census*
6. Connectivity	• Maintain and increase wildlife movement	*Wildlife species using adjacent/nearby sites*

This adapted Ecological Recovery Wheel is based on a more complex SER Ecological Recovery Wheel. It can be used to visually depict the status of a site at a specific time in the restoration process. This can be an important tool for comparing efforts but requires coordination and acceptance of established standards and measurements. The concentric rings are used to represent a "one to five" assessment for each attribute over time.



E. Potential Ten-Year Outcomes for the Plan

Targeted ten-year outcomes and associated cost estimates were developed for four protection and ownership scenarios:

- Publicly-owned conservation land within preliminary Conservation Focus Areas
- Protected private lands within preliminary Conservation Focus Areas
- Non-protected private land within preliminary Conservation Focus Areas
- Non-protected private land outside of preliminary Conservation Focus Areas

Acquisition and restoration costs were then estimated for the following eleven major landscape types:

- Open water
- Floodplain – natural vegetation
- Floodplain – cultivated
- Designated wetlands
- Designated 50-foot wide stream buffers and 16.5-foot wide ditch buffers
- Upland forest/woodlands
- Cultivated, non-hydric land
- Cultivated hydric land/wetland
- Grassland/pasture
- Public right-of-way
- Other

The total estimated cost for protecting and restoring lands within the Preliminary Conservation Focus Areas and areas identified outside of the CFAs is $79M, based on past program experience, current land and easement values and unit restoration costs. Estimates were adjusted based on these key assumptions:

- 80 percent of public agencies would be interested in participating in partnership efforts to restore their lands, the majority of floodplain acres would not require restoration and one third of grasslands have already been restored
- 30 percent of landowners with County easements would be willing to additionally protect and restore land.
- 20 percent of new program applicants would be interested in protecting and restoring some of their land.
- Continued availability of existing and future State and other non-County grant funds
- County cost-share likely would be 20 to 25 percent for protection and restoration activities

Based on the scenarios, landscape types, and assumptions, potential land protection and restoration outcomes for the next ten years are:

10,205 acres of additional land protection at a projected County cost of $9.5 million.

18,156 acres of additional restoration at a projected County cost of $5.0 million.

IV. IMPLEMENTATION

A. Establishing Priorities

The following section prioritizes activities to implement earlier and at the geographic level, to develop approaches for work within individual preliminary Conservation Focus Areas. The first year focuses on:

- Improving land protection and natural resource management tools and incentives
- Updating program guidelines for land protection and natural resource restoration/management
- Initiating landowner outreach
- Strengthening partnerships and identifying priorities with local governments
- Collecting data on potential wetland restoration areas and CFAs
- Conducting pilot studies on CFAs and wetland restoration

1. Priorities for Plan Actions

Goals, strategies, and tactics are summarized in the following table with preliminary priorities suggested for strategies. The fourth column identifies when the tactic generally would be initiated over the ten-year life of this Plan: within **one to two years** (2021-2022), within **three to four years** (2023-2024), or within **five or more years** (2025 and beyond). Initiation timeframes are based, in part, on overall priority and availability of needed resources and information. Some tactics are discrete tasks that can be completed in less than one year, others will be multi-year projects, and many will be ongoing activities. Implementation and prioritization of strategies and tactics are subject to County Board approval, through annual budgeting, work planning processes, and partner considerations.

GOALS	STRATEGIES	PROPOSED TACTICS	STATUS	TIMEFRAMES
Goal 1 Ecologically important areas are prioritized for protection.	A. Use preliminary Conservation Focus Areas (CFAs) as a framework for protecting and connecting natural areas and habitat. Priority: HIGH	1. Refine acquisition project evaluation criteria and weighting for different classifications.	Expanded	2021
		2. Conduct landowner outreach within all CFAs.	Expanded	2021-2022
		3. Create detailed, baseline information profiles for each CFA.	New	2021-2023
		4. Identify and prioritize wetland basins.	New	2021-2025
		5. Use a range of voluntary land protection methods.	Expanded	2020-2030
		6. Develop and test conservation approaches for individual CFAs.	New	2021-2025
		7. Protect representative, high-quality native plant communities.	Expanded	2021-2031
		8. Establish a technical advisory group on property tax modifications as conservation incentives.	New	2022-2023
		9. Protect critical groundwater recharge areas within CFAs in association with Groundwater Plan.	New	2023-2030
		10. Review CFA boundaries every five years and revise as needed.	New	2026-2031

GOALS	STRATEGIES	PROPOSED TACTICS	STATUS	TIMEFRAMES
	B. Expand strategic partnerships with agencies, organizations, and local governments. Priority: MEDIUM	1. Establish and implement a City-County Conservation Collaborative for natural resource planning and protection.	New	2021-2031
		2. Establish and implement a coordination group between the County and all townships	New	2021-2031
Goal 2 Water quality and quantity are enhanced and protected.	A. Use CFAs to identify, prioritize, protect, and restore wetlands, shoreland, headwaters, and groundwater recharge areas for water quality and supply and flood reduction. Priority: HIGH	1. Establish evaluation criteria and weighting to prioritize potential water quality projects.	Expanded	2021
		2. Conduct landowner outreach within all CFAs.	Expanded	2021-2022
		3. Use a range of voluntary land protection methods.	Expanded	2021-2031
		4. Use a range of natural resource management techniques.	Expanded	2021-2031
	B. Partner with the SWCD and other entities to promote, incentivize and implement water-quality and quantity management and soil health practices. Priority: MEDIUM	1. Develop program goals and funding criteria.	Expanded	2021
		2. Secure new, cost-share funding for BMPs.	New	2022-2031
		3. Promote awareness of BMP opportunities.	Expanded	2021-2031
		4. Combine and leverage resources.	Ongoing	2020-2030
	C. Protect and restore critical infiltration areas outside of CFAs identified in the County Groundwater Plan, as needed and when feasible Priority: LOW	1. Establish project criteria and weighting.	New	2021
		2. Conduct landowner outreach outside of CFAs.	Expanded	2022-2031
		3. Use a range of voluntary land protection methods.	Expanded	2021-2031
		4. Use a range of natural resource management techniques for water quality, infiltration and storage, and habitat.	Expanded	2021-2031
Goal 3 Natural resource quality is improved and sustained.	A. Restore, enhance, and maintain natural resources on protected private lands. Priority: HIGH	1. Develop criteria and weighting for restoration projects within CFAs.	New	2021
		2. Develop funding formulas for restoration projects within and outside of CFAs.	New	2021
		3. Require ongoing restoration, management and maintenance as part of protection agreements.	Ongoing	2020-2030
		4. Partner with the SWCD and other entities on natural resource management.	Expanded	2021-2031
		5. Provide new incentives for improved natural resource management.	New	2022-2031
		6. Work with other organizations to share natural resource management information and techniques.	New	2022-2031
		7. Explore development of a private funding entity for natural resource management.	New	2022-2023
		8. Develop and implement monitoring protocols to assess results on management areas.	New	2021-2022

GOALS	STRATEGIES	PROPOSED TACTICS	STATUS	TIMEFRAMES
	B. Restore, enhance, and maintain natural resources on public lands. Priority: MEDIUM	1. Develop criteria and weighting for natural resource management projects within CFAs.	New	2021-2022
		2. Develop funding formulas for restoration projects within and outside of CFAs.	New	2021-2022
		3. Use CFA framework to determine natural resource priorities.	New	2022-2031
		4. City-County Conservation Collaborative for management of ecologically significant city lands.	New	2021-2022
		5. Expand partnerships to increase management of ecologically significant, non-County land.	Expanded	2021-2031
		6. Coordinate natural resource information with other public entities.	New	2022-2031
		7. Establish a network of natural resource restoration reference sites.	New	2022-2023
		8. Develop and implement monitoring protocols of management areas to assess results.	New	2021-2022
Goal 4 Biodiversity is restored and sustained.	A. Use CFAs to protect habitat for rare, declining, and special concern species on public lands. Priority: HIGH	1. Inventory areas of high biodiversity and restoration potential.	Expanded	2021-2023
		2. Develop baseline biodiversity data, goals, priorities, and monitoring protocols.	New	2021-2023
		3. Compile a comprehensive list of plant and animal species in Dakota County.	New	2021-2031
	B. Use CFAs to protect habitat for rare, declining, and special concern species on private lands. Priority: MEDIUM	1. Prioritize biodiversity in CFA criteria, weighting and implementation.	New	2021-2022
	C. Develop and implement a pollinator habitat network. Priority: LOW	1. Develop a pollinator habitat network for the County.	New	2022-2023
		2. Partner with transportation agencies and utilities to improve habitat within right-of-way.	New	2022-2031
		3. Partner with other entities to improve small-scale pollinator habitat sites within the network.	New	2023-2031
Goal 5 The public supports and is involved in natural resource protection and management	A. Provide timely and relevant natural resource information. Priority: HIGH	1. Develop a business plan for a web-based network for sharing natural resource information.	New	2022
		2. Develop a web-based natural resource information network.	New	2022-2024
		3. Provide regular information and opportunities for participating landowners.	Expanded	2021-2031
		4. Develop inclusive and accessible public information.	New	2024-2031
	B. Work with partners to engage the public through conservation events and activities. Priority: LOW	1. Provide volunteer opportunities in partnership with other organizations and County departments.	Expanded	2021-2031
		2. Provide seminars, tours and speaking engagements.	Expanded	2021-2031
		3. Help promote the SWCD Conservation Landowner of the Year Program.	New	2023

GOALS	STRATEGIES	PROPOSED TACTICS	STATUS	TIMEFRAMES
Goal 6 Recreational access to conservation lands is enhanced	A. Provide new and enhanced opportunities for compatible outdoor recreation activities through addition of publicly accessible lands within CFAs. Priority: MEDIUM	1. Work with landowners to expand and improve publicly accessible sites within each CFA.	Expanded	2021-2031
		2. Provide at least one location in the County for the public to access high quality, representative wetland, grassland and forest communities.	Expanded	2021
	B. Improve outdoor recreation activities on public lands through enhanced natural resource quality, information and amenities. Priority: MEDIUM	1. Work with other public entities to strategically increase natural resource restoration and long-term management on existing public lands.	Expanded	2021-2031
		2. Work with other public entities to provide coordinated information on recreational and interpretive opportunities.	New	2021-2031
		3. Work with the DNR to provide more public amenities on state Wildlife and Aquatic Management Areas.	New	2022-2031

2. Establishing Preliminary Conservation Focus Area Priorities

The preliminary Conservation Focus Areas (CFAs) are the primary geographic focus for this Plan. While unprotected lands within CFAs would be automatically eligible for protection, the Land Conservation Program is refining how it evaluates and prioritizes projects submitted from CFA landowners.

A. PRIORITIES ACROSS CONSERVATION FOCUS AREAS

Implementation of this Plan will involve outreach to all landowners in all CFAs after Plan adoption. The Land Conservation Program will respond to all expressions of landowner interest. CFAs with greater interest among landowners would move up in priority for convening CFA landscape conservation dialogues.

In addition to priorities based on the degree of landowner interest from initial outreach efforts, the presence of larger-scale wetland restoration basins would increase the priority level of a CFA to begin the process of convening landowners and working to develop projects.

B. PRIORITIES WITHIN PRELIMINARY CONSERVATION FOCUS AREAS

CFA-level priorities will be identified through landowner meetings. Representatives of local government and watershed management organizations will be invited to initial and future CFA-wide meetings. This plan proposes establishing one to three pilot landscape conservation projects involving individual CFAs in 2021. The goal is to convene landowners early in the process to discuss their priorities for their CFA.

Updated project evaluation criteria will reflect at least three types of land protection projects:

- *Areas with Surface Water Present*: including priority natural areas, natural area conservation zones, greenway corridors, areas adjacent to water, priority groundwater recharge areas, and areas with flood reduction or storage potential. Additional consideration will be given to public health benefits, urban projects, and areas adjacent to protected land.
- *Areas with a Combination of Uplands and Wetlands*: including priority natural areas, natural area conservation zones, greenway corridors, areas adjacent to water, priority groundwater

recharge areas, and areas with flood reduction or storage potential. Additional consideration will be given to public health benefits, urban projects, and areas adjacent to protected land.

- *Upland Forest and Grassland*: including priority natural areas, natural area conservation zones, greenway corridors, and priority groundwater recharge areas. Additional consideration will be given to urban projects, and areas adjacent to protected land.

C. PRIORITIES FOR OTHER COUNTYWIDE NATURAL AREAS (OUTSIDE OF PRELIMINARY CFAS)

Although the preliminary CFAs are the primary Plan focus, additional areas are important to protect and restore. Apart from preliminary CFAs, natural areas with at least one of the following significant natural characteristics are eligible for protection under the Land Conservation Program:

- Includes ecologically significant features
- Provides important wildlife habitat
- Is adjacent to a river, lake, or stream
- Is adjacent to existing protected property with natural habitat
- Is located within a designated greenway corridor
- Provides other environmental benefits (e.g., surface water or groundwater quality protection, aquifer recharge, flood control, connectivity). Depending on the benefits, this may be considered as more than one criterion to eligibility
- Is considered locally significant open space

Examples of other natural areas that that merit review for protection are small woodlands at least 40 acres in size, restorable wetlands, and other natural areas with habitat characteristics or known species of concern.

D. PRIORITIES FOR NATURAL RESOURCE MANAGEMENT PROJECTS

Criteria for evaluating natural resource management projects within and outside of CFAs will be developed to address water quality goals, ecological benefits, social considerations, economics, and project locations, including:

Water Quality

- Improves water retention and infiltration
- Retains water in stream headwaters
- Installs stream channel and shoreline stabilization projects
- Promotes functional vegetative buffers along water resources in areas where they are not already required by regulations and/or restores native or desirable vegetation in buffers that consist of non-desirable species
- Promotes perennial vegetation on critical recharge areas
- Implements erosion control practices
- Promotes soil health
- Improves habitat

Ecological

- Existing high biodiversity
- Presence of rare or unique species
- Offers opportunity to develop baseline biodiversity data
- Offers opportunity to develop comprehensive list of plant and animal species

- Improves pollinator habitat
- Connects existing natural areas or restorable areas
- Improves Species of Greatest Conservation Need (SGCN) habitat
- Cessation of threats from over-utilization or elimination and control of invasive species
- Reinstatement of hydrologic conditions
- Elimination of undesirable plants and animal species and promotion of desirable species
- Reinstatement of structural layers, food webs, and spatial diversity
- Promote connection of habitat links into bigger, functional whole
- Difficulty of restoration
- Conditions of adjoining lands

Social
- Promotes landowner involvement
- Promotes City-County Conservation Collaborative on ecologically significant land
- Expands strategic partnerships with other entities
- Promotes information sharing with other entities
- Provides public participation opportunities
- Includes areas of public use or visibility
- Expands nearby nature experiences for under-represented audiences
- Provides potential education opportunities

Economic
- Cost
- Leveraged non-County funding resources
- Relative restoration cost to achieve a certain standard
- Long-term maintenance costs
- Level of landowner commitment
- Level of partner(s) commitment
- Opportunities for volunteer assistance

Project locations
- Inclusion in a CFA
- Drinking Water Supply Management Area outside of a CFA
- Woodlot outside of a CFA
- Wetland outside of a CFA
- Other undeveloped land in cities
- Native seed source site

B. Partnerships

1. City-County Conservation Collaborative

Many agencies -- such as Dakota County, Dakota County Soil and Water Conservation District (SWCD), Watershed Management Organizations, the Minnesota Department of Natural Resources (DNR), private and nonprofits groups -- work to protect natural areas and manage natural resources. Agencies often work independently, using the legal, financial, and other resources available to them. Collaboration often occurs on case-by-case projects or initiatives, but conservation and resource management are not always coordinated and systematic. An organized collaborative can help coordinate activities, allowing partnering agencies to do more together than they could do separately. Each collaborating partner or entity would bring its own strengths, expertise, experience, and tools to create a whole that is greater than the sum of its individual parts. These suggested guidelines envision several layers of collaboration to perform different tasks. The large group guides efforts, coordinates plans, and shares experiences. Project-specific partner groups meet more regularly to perform tasks with a focus on specific project delivery.

The collaborative approach also puts the weight of the region and multiple organizations behind funding applications and project delivery. This gives local projects legitimacy and demonstrated need by showing they are supported. The following table suggests participants and activities for a large group collaborative and smaller project-specific collaboratives.

Suggested Model for a City-County Conservation Collaborative		
Group	**Large Group Collaborative**	**Project-Specific Partnerships**
Participants	• Cities • Dakota County	• Businesses • Cities and Townships • Dakota County • DNR and other state agencies • Landowners • Nonprofit Organizations • SWCD • Watershed Management Organizations
Activities	• Identify collaboration opportunities • Guide efforts • Develop standards • Communicate values • Reinforce regional importance • Develop grant applications • Increase staff capacity and knowledge • Share natural resource information • Coordinate purchasing	• Develop comprehensive, master, development and other plans based on shared vision • Land protection projects • Natural resource restoration and management

Governance of a collaborative requires a mutually-acceptable framework by which cities, the County, landowners, and other partners set project goals and fund activities. The roles of each agency or organization may vary greatly from project to project. Partners should seek a structure that is opportunistic and flexible, to take advantage of funding and opportunities without cumbersome processes. It must also build from the strengths of each project partner. Suggested functions and roles are:

Collaborative Functions
Communication will be vital to develop and institutionalize effective communication channels
Coordinated Planning will be necessary to build consensus on conservation and project goals, roles, and funding responsibilities. In many cases, integration of objectives from existing plans will be essential.
Project Prioritization will use a collaborative approach to identify priorities within each project.
Land Protection and Ownership Options will be determined based on project type, location and other factors.
Cost-Sharing and Funding should be linked with other strategic decisions. Funding roles should be determined based on the strengths of each agency and individual conservation projects. In-kind contributions of land, easements, design, restoration, and management are encouraged. Joint Powers Agreements will be developed to establish predominant roles and responsibilities.
Long-Term Management and Stewardship will vary across projects and land ownership types. The Collaborative will develop goals and identify partner roles for natural resource management and long-term maintenance of conserved areas.
Measuring Success includes lands protected, restored, and maintained; outside dollars leveraged by the collaborative, dollars saved through cost sharing or combined purchasing, staff time utilized on conservation related activities, and more.

2. Convening Preliminary CFA Landowners and Stakeholders

In addition to conducting annual landowner application rounds as the Program has done in the past, this Plan uses a "landscape conservation" approach to convene landowners, stakeholders and local governments, such as townships and watershed organizations, to share information and make decisions in a way that promotes natural landscapes as a valued part of society. The idea of a shared landscape fosters dialogue and exchange of ideas to develop projects that are community-supported, locally significant, and enduring. Bringing all interests together -- with diverse perspectives, expertise, and responsibilities -- can help find common ground, avoid and address conflicts, and develop creative solutions that protect and restore natural resources.

This Plan recognizes that each preliminary CFA is unique in terms of land, natural resources, and people. The landscape conservation approach will explore how to engage and convene landowners within each preliminary CFA to determine individual and shared needs, goals, and conservation-related priorities. The following chart summarizes how the County could convene landowners and stakeholders and help advance desired goals.

Elements of a Collaborative CFA Initiative					
PHASES	**ORGANIZE**	**ASSESS**	**DEVELOP**	**ACHIEVE**	**ADVANCE and SUSTAIN**
PREPARATION	Define CFA boundary based on resources, land use, ownership, etc.	Identify resources, issues, challenges, and opportunities within the CFA	Develop vision, goals, and strategies	Prioritize, fund and implement strategies	Evaluate progress, update plan and adapt over time
KEY ACTIVITIES	**With Partners:** • Contact and convene • Identify interests, concerns, goals, and roles **With Landowners:** • Create owner database • Meet with key landowners • Outreach • Convene	• Map ecological features, land uses • Identify concerns, and interests • Explore connectivity to other conservation efforts • Identify protection opportunities and approaches • Identify resource management needs and opportunities	• Finalize vision and goal • Refine boundary and profile • Finalize plan – Protection priorities – Resource management priorities – Communications – Metrics • Select projects	• Identify and secure funding • Implement priority activities • Monitor, measure, and share results	• Celebrate successes • Evaluate progress and effectiveness • Recalibrate strategies and tactics to reflect lessons learned • Adapt as necessary
PARTNER BUILDING AND OUTREACH	• Strengthen relationships • Identify others who should be involved • Conduct ongoing communications	• Determine most effective communications to build trust, partnerships, and learn from each other	• Building trust • Add stakeholders • Recognize partner contributions, shared activities, and understanding • Ensure good communication • Acknowledgment	• Continue strategic outreach and develop new communication activities and products	• Give credit to all • Showcase successes and progress through events and effective communications
STRUCTURE AND STAFFING	• Identify lead entity • Identify key landowners and partners • Identify potential coordination structure	• Explore leadership and organizational options, roles, and activities	• Establish coordination structure, roles, and responsibilities • Establish project roles and responsibilities	• Refine governance structures as needed • Increase staffing capacity as needed	• Remain flexible and adaptive, patient and persistent

3. Enhanced Coordination with Townships

Enhanced coordination with townships will be important for identifying potential issues with proposed projects and working toward mutually acceptable solutions. This plan proposes to:

- Include township officials in outreach mailings to landowners within preliminary CFAs
- Notify townships of landowner responses, project pre-applications, and staff-recommended projects in their township
- Invite township representatives to group meetings with CFA landowners within their townships
- Require that interested landowners contact their townships to confirm the number of building rights involved, and encourage them to seek a letter of support from their township
- Provide a 30-day period for township response to proposed acquisition projects within their township
- Hold bi-annual meetings with township representatives to update them on projects, issues, and opportunities.

C. Funding the Work

1. Current Land Conservation Operating Budget

The Land Conservation Program has grown incrementally since its inception. Program staff and budget for 2020 include:

4.0 FTEs, salaries and benefits:	$486,137
Operations/Contracted Services:	$201,664
	$687,801

2. Potential Protection and Restoration Outcomes and Estimated County Cost

Based on the scenarios, landscape types, and assumptions, the potential land protection and restoration targets are:

10,205 acres of additional land protection at a projected County cost of $9.5 million.

18,156 acres of additional restoration at a projected County cost of $5.0 million.

Potential Outcomes and Estimated County Cost*

Protection and Ownership Status	Total Acres	Ten-Year Protection Acres	Ten-Year Total Protection Costs	Ten-Year County Protection Cost	Ten-Year Restoration Acres	Ten-Year Total Restoration Costs	Ten-Year County Restoration Cost
1. **Public Conservation Lands within CFAS**	23,824	0	0	$0	8,712	$16,983,500	$958,680
2. **Protected Private Lands within CFAs**	8,697	1,953	$9,662,000	$2,115,500	2,347	$5,139,500	$727,900
3. **Non-Protected Private Land within CFAs**	42,342	7,772	$26,846,000	$6,511,500	6,617	$15,675,500	$2,935,100
4. **Non-Protected Private Land outside of CFAs**	480	480	$3,480,000	$870,000	480	$1,800,000	$360,000
Totals	**75,343**	**10,205**	**$39,988,000**	**$9,497,000**	**18,156**	**$39,598,500**	**$4,981,680**

*Please see Appendix 5 for additional information on cost analyses.

Operational Considerations

It is important to recognize that land conservation projects can be highly complex, with many variables that influence timeframes and costs. Typical acquisition projects require 18 to 24 months and typical restoration projects require three or more years.

In the past, most land protection projects consisted of large tracts of agricultural easements, resulting in:

- An average of ten completed acquisition projects per year for one full-time staff person (FTE)
- Higher average acreage per project
- Lower average cost per acre and lower total cost per project
- Less complexity and reliance on partners requiring less average time per project
- Initially no natural resource restoration requirements

Based on past performance and going forward, anticipated land protection projects and associated restoration will likely result in:

- Lower average acres per project
- Higher average cost per project
- Greater complexity and reliance on partners, including adjacent landowners
- Required natural resource management increases project duration and requires more staff time

Staffing

Staff capacity influences the amount of land that can be protected and restored annually and over the Plan's ten-year timeframe. Based on current staff capacity, an estimated 250 acres could be protected each year for a total of 2,500 acres and 400 acres could be restored each year for a total of 4,000 acres over the ten-year plan.

An additional 1.0 FTE Acquisition Specialist could double the land protection to 5,000 acres over ten years. An additional 2.0 FTE Restoration Specialists could increase natural resource restoration acreage to 12,000 acres over ten years. Estimated costs for various staffing scenarios are outlined in the following tables. Annual budgeting processes, subject to County Board approval, will determine any changes to staffing levels in the future.

LAND PROTECTION				
Acres Protected Annually	250	500	750	
Staff and Operations	2.5 FTE (current)	3.5 FTE	4.5FTE	
Annual Cost	$470,000	$640,000	$810,000	
Acres Protected in Ten-Years	2,500	5,000	7,500	
Ten-Year Cost	$4,700,000	$6,400,000	$8,100,000	
RESTORATION				
Acres Restored Annually	400	800	1,200	1,600
Staff and Operations	1.5 FTE (current)	2.5FTE	3.5 FTE	4.5 FTE
Annual Cost	$220,000	$363,000	$506,000	$650,000
Acres Restored in Ten-Years	4,000	8,000	12,000	16,000
Ten-Year Cost	$2,200,000	$3,630,000	$5,060,000	$6,500,000

Please see Appendix 5 for additional information on cost analyses.

3. Grant Opportunities

Successful land conservation efforts require sufficient funding, typically sustained through collaboration and robust grant opportunities. An inventory of available funding programs follows.

A. FEDERAL FUNDING

U.S. Department of Agriculture-Natural Resource Conservation Service:

Conservation Easements

- The **Agricultural Conservation Easement Program (ACEP)** consists of the Agricultural Land Easements (ALE) Program and the Wetlands Reserve Program. ACEP provides matching funds that can be used to purchase permanent conservation easements on agricultural land, grasslands, and wetlands and to assist with grassland and wetland restoration.

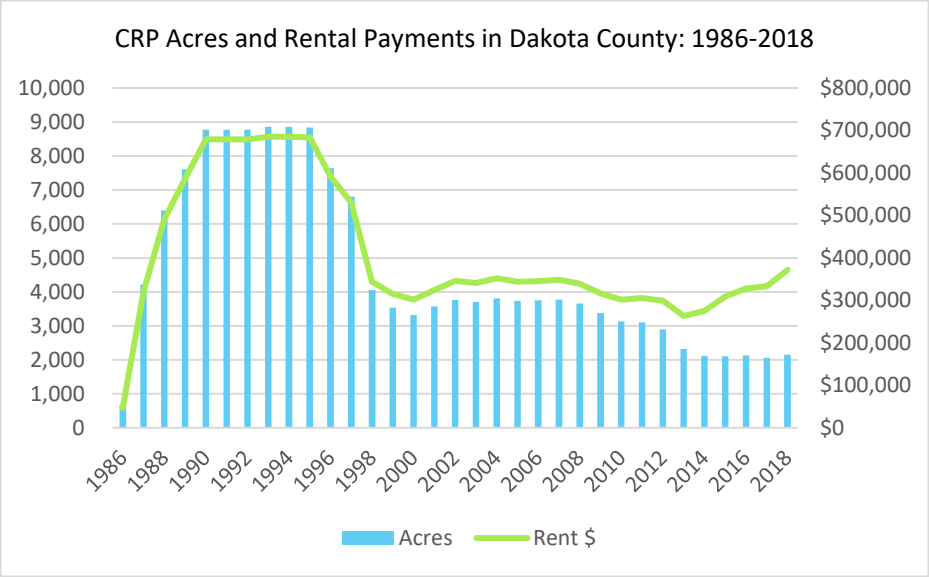
- The **Healthy Forest Reserve Program** helps protect and restore forest lands. Conservation projects must benefit endangered species, improve biodiversity, or enhance carbon sequestration. This program funds restoration activities as well as permanent or 30-year easements.
- The **Forest Legacy Program** protects private forest land by purchasing conservation easements or land in fee from voluntary landowners.
- The **Community Forests Program** provide financial assistance to local governments, tribal governments, and qualified nonprofit entities to establish community forests that provide continuing and accessible community benefits.

Regional Conservation Partnership Program (RCPP)

- The **RCPP** enlists local governments, state agencies, tribes, and other groups to coordinate conservation on a national or state scale and also engages landowners and agricultural producers in conservation activities that improve water, soil, wildlife habitat, or other natural resources. Conservation easements may be acquired using RCPP funds and cost-share funding is available.

Conservation Practices

- The **Environmental Quality Incentives Program** provides financial and technical assistance for activities on agricultural lands that benefit air quality, water quality, soil and water conservation, and wildlife habitat.
  - The **Conservation Stewardship Program** helps maintain, improve, and expand activities that benefit natural resources (including soil, water, air, and wildlife habitat) or conserve energy.
  - The **Conservation Reserve Program (CRP)** is the largest land conservation program in the United States, signed into law in 1985 and administered by the USDA Farm Service Agency. In exchange for a yearly rental payment, farmers enrolled in the program agree to remove environmentally sensitive land from agricultural production and establish vegetative cover that will improve environmental health and quality. CRP contracts are 10-15 years in length. The long-term goal of the program is to re-establish land cover to help improve water quality, prevent soil erosion, and reduce loss of wildlife habitat. CRP participation in Dakota County reached a peak in the 1990's, with nearly 9,000 acres enrolled. From 1986 through 2018, the Program paid more than $13 M in rent to Dakota County landowners.



- The **Conservation Reserve Enhancement Program (CREP)**, a part of CRP, is a partnership between state and federal government. CREP targets specific State or nationally significant conservation concerns and addresses them using federal funds to supplement non-federal funds. Farmers and ranchers who remove environmentally sensitive land from agricultural production and establish permanent resource-conserving plantings are paid an annual rent and other incentives, per each CREP agreement. Participation is voluntary, and the contract period is typically 10-15 years. CREP participation in Minnesota requires that property to go into a perpetual easement through Reinvest in Minnesota at the end of the CREP contract period.

U.S. Fish and Wildlife Service

- The **North American Wetlands Conservation Act (NAWCA**) provides competitive matching grants to increase bird populations and wetland habitat, while supporting local economies, hunting, fishing, bird watching, family farming, and ranching.
- The **Partners for Wildlife Wetlands Restoration Program** provides cost-share for wetland restoration, preferably large drained wetlands or multiple basins, using ten-year agreements. There are no restrictions on haying or grazing.
- The **Partners for Wildlife Grasslands Restoration Program** provides cost-share for grassland restoration, preferably adjacent existing or restorable wetlands, using fifteen-year agreements. Haying and/or grazing are typically not allowed.
- The **Habitat Easement Program** provides funds for permanent easement on existing or restorable wetlands and grasslands, preferably close to other protected lands. Haying and/or grazing may be allowed.
- The **Wetland Easement Program** provides payment for permanent easements on existing or restorable wetlands. Haying, grazing and/or farming wetlands may be allowed.

B. STATE FUNDING

Environment and Natural Resources Trust Fund

In November 1988, Minnesota voters passed a constitutional amendment that permanently established the Environment and Natural Resources Trust Fund (ENRTF). In 1998, voters passed another constitutional amendment extending the dedication through December 2024. This constitutionally dedicated fund originates from a combination of Minnesota State Lottery proceeds and investment income. The ENRTF supports projects with the public purpose of protection, conservation, preservation, and enhancement of the state's air, water land, fish, wildlife, and other natural resources. The Legislative-Citizen Commission on Minnesota Resources (LCCMR) governs this fund and makes annual funding recommendations to the legislature.

The County has received past ENRTF funding for development of the Farmland and Natural Area Protection Plan, development of the Farmland and Natural Areas Program Guidelines, Vermillion River Corridor Plan, funding to acquire conservation easements, and funding through the Metropolitan Council to acquire greenway and regional parkland.

Clean Water, Land and Legacy Fund

In November 2008, Minnesota voters approved the Clean Water, Land and Legacy Amendment, which dedicated a sales tax increase of 3/8 percent (0.375) to clean water, natural areas, parks, arts education and history. Three primary funds can be used for conservation purposes:

- **Outdoor Heritage Funds** (OH) are used to restore, protect and enhance wetlands, prairies, forest and habitat for fish, game, and wildlife. The Lessard-Sams Outdoor Heritage Council (LSOHC) oversees this fund and makes annual recommendations to the legislature. The County has received a total of $8.867 million in OH funds since 2008 and currently has $5.8 million of OH funds appropriated by the 2018 and 2019 Minnesota Legislatures for natural resource protection, restoration and enhancement.

- **Clean Water Funds** are used to protect, enhance, and restore water quality in surface and groundwater. The Clean Water Council, as well as an interagency committee of state agencies, makes funding recommendations to the governor.

- **Parks and Trails Funds** support parks and trails of regional or statewide significance. Funds are divided among the ten Metropolitan Regional Park Implementing Agencies (including Dakota County), the Minnesota Department of Natural Resources for state parks and trails, and Greater Minnesota Regional Parks and Trails Commission for grants to counties and cities outside the metropolitan area.

- **The Conservation Partners Legacy (CPL) Grant Program** funds projects that restore, enhance, or protect forests, wetlands, prairies, and habitat for fish, game, and wildlife in Minnesota. Funding for the CPL program is from the Outdoor Heritage Fund. The CPL Program has been reviewed by the LSOHC and approved by the MN Legislature annually since 2009. The MN DNR manages this reimbursable program to provide competitive matching grants from $5,000 to $400,000 to local, regional, state, and national nonprofit organizations, including government entities. Since 2009, more than $5 M has been awarded to Dakota County and other jurisdictions and organizations working within the County.

Minnesota Department of Natural Resources (DNR)

- The **General Operating Fund** includes direct appropriations for managing state parks and trails, minimizing the spread of invasive species, managing the state's forests and lands, protecting water, providing outdoor recreation opportunities, and enforcing natural resource laws.
- The **Game and Fish Fund** supports management, monitoring, and protection of fish and wildlife resources as well as the enforcement of game and fish laws. Sales of hunting and fishing licenses and federal sport fish and wildlife federal grants provide a significant portion of this funding.

- The **Natural Resources Fund** supports the development and maintenance of Minnesota's natural resources and the enforcement of natural resource laws. This fund consists of 20 accounts dedicated for specific purposes ranging from water-based recreation to forest management to state parks.
- A range of **Local Park and Natural Area Grant Programs,** such as the Conservation Partners Legacy Grant Program, Federal Recreational Trail Program, Local Trail Connections Program, National Outdoor Recreation Legacy Partnership Program, Natural and Scenic Area Program, No Child Left Inside Grant Program, and Outdoor Recreation Grant Program provide matching funds to local governments and organizations for a variety of conservation and recreation projects.

Reinvest in Minnesota

The Reinvest in Minnesota (RIM) conservation easement program permanently protects habitat and water resources. It is primarily funded through legislative bonding, and the Clean Water and Outdoor Heritage Fund. It is administered by the Board of Water and Soil Resources. The Re-Invest in Minnesota Critical Habitat Match program is administered by the DNR for the protection of wildlife habitat. It is funded by legislative bonding, license plate sales and private donations.

C. REGIONAL FUNDING

The Metropolitan Council (MC), the planning agency serving the Twin Cities seven-county metropolitan area, works with ten Regional Park Implementing Agencies (IAs) to award grants to finance land acquisition and development of the parks system.

- The **Acquisition Opportunity Fund (AOF)** assists IAs in acquiring land for the Regional Parks System. The AOF comprises state and regional funding sources in two separate accounts:
  - The Parks and Trails Legacy Fund / Park Acquisition Opportunity Fund account funded by state Legacy dollars and regional park bonds.
  - The ENRTF / Park Acquisition Opportunity Fund account funded by ENRTF dollars and MC funds.
- **Operation and Maintenance (O and M)** funding is appropriated by the State of Minnesota from the General Fund and "Lottery in lieu of sales tax" to the MC for distribution to the IAs to assist in operating and maintaining the Regional Parks System. O and M can include natural resource restoration and maintenance, which is up to individual Agency discretion.
- The **Regional Parks Bonding Program** is intended for acquisition, development, and redevelopment projects. The State of Minnesota can issue bonds appropriated for the Regional Parks System matched with MC-issued regional park bonds. The funds are disbursed to IAs according to the population within the jurisdiction of each IA and the number of visits an IA hosted from people who live outside the Agency's jurisdiction.
- Approximately 59,000 acres of agricultural land in the County is currently enrolled in the **Metropolitan Agricultural Preserves Program,** which is administered by individual townships. The Program stipulates that development cannot occur for eight years after "un-enrolling" and it provides a $1.50 per acre property tax reduction. The Legislative Auditor concluded that the program has been effective in preserving agricultural land, but it should not be considered as permanent protection.

D. COUNTY FUNDING

Environmental Legacy Fund

The Environmental Legacy Fund (ELF) was established in December 2015 for the specific purpose of protecting, preserving, and enhancing the environment in the County. The ELF receives revenue from two primary sources:

- **Host Fees** are negotiated with the six landfills located in the County, including two municipal solid waste landfills, an industrial waste landfill, and three construction/demolition landfills. Host fee agreements were updated in 2017, with an increase in most of the fees that have an annual escalator. However, revenues are also based on the volume of waste and can fluctuate considerably. Host fees generated about $8.9 million in 2018.
- **Gravel Tax Revenues** generate fifteen percent of the annual funding deposited in ELF. The Gravel Tax is also based on volume and has fluctuated based on markets. The gravel tax generated about $181,000 in 2018.

Most of the ELF funding is used for County programs, including matching dollars for grants or funding to partners for projects that directly relate to County goals and objectives. Specific County activities that are eligible for ELF support include brownfield redevelopment, environmental capital projects, Environmental Resources Department operations, gravel pit remediation, natural area and shoreland conservation, park/greenway master plan improvements, and implementation of the County's Natural Resource

Management System Plan and Solid Waste Master Plan. ELF funding is also used for the Landfill Host Community Grant Program. One grant cycle has been held and the selection process is continuing to evolve. The following table summarizes various grant sources for Land Conservation Program activities.

Potential Funding Sources	Acquisition	Restoration	Maintenance
U.S. Department of Agriculture, Natural Resources Conservation Service			
Agricultural Conservation Easement Program	X	X (Wetland)	
Community Forests Program	X		
Conservation Reserve Program (CRP)		X	X
Conservation Reserve Enhancement Program (CREP)		X	X
Conservation Stewardship Program			X
Environmental Quality Incentives Program			X
Forest Legacy Program	X		
Healthy Forest Reserve Program	X		
Regional Conservation Partnership Program			X
U.S. Fish and Wildlife Service			
Habitat Easement Program	X		
North American Wetlands Conservation Act	X	X	
Partners for Wildlife Grasslands Restoration Program		X	X
Partners for Wildlife Wetlands Restoration Program		X	X
Wetland Easement Program	X		
State of Minnesota			
Clean Water Fund	X	X	
Conservation Partners Legacy Program	X	X	
Environmental and Natural Resources Trust Fund	X	X	
Outdoor Heritage Fund	X	X	
Parks and Trails Legacy Fund	X	X	
Reinvest in Minnesota	X		
Minnesota Department of Natural Resources			
General Operating Fund	X	X	
Game and Fish Fund		X	
Local Parks and Natural Area Grant Program	X	X	
Natural Resource Fund (20 specific-purpose accounts)		X	
Metropolitan Council			
Regional Parks Acquisition Opportunity Fund	X		
Regional Parks Operation and Maintenance Fund		X	
Regional Parks Bonding	X		
Metropolitan Agricultural Preserves Program	X		
Dakota County			
Environmental Legacy Fund	X	X	X

Potential County Funding Options

The County could issue **General Obligation Bonds** for parks and natural area capital projects. For example, a $20 million bond would add $1.3 million to the County's annual debt service and cost the owner of a median-valued home an average of $11 per year in property taxes for ten years. Voter approval is required. General Obligation Bonds typically do not cover operational costs.

The County could issue **Capital Improvement Bonds** for parks and natural area capital projects. For example, a $20 million bond would add $1.3 million to the County's annual debt service and cost the owner of a median-valued home an average of $11 per year in property taxes for ten years. Adoption of a Capital Improvement Plan and approval by at least four members of the County Board is required.

The County could increase its **Property Tax** levy through the standard budget process or by seeking voter approval. Revenue could be used for capital projects, as well as operations and maintenance. For example, a $10 million levy increase would cost the median household $42 per year in property taxes. Alternatively, a voter-approved $10 million levy increase (levied against referendum market value instead of tax capacity) would cost the median homeowner $55 per year in property taxes. In both cases, the tax could have a sunset after a certain number of years or continue in perpetuity.

The County could seek authority from the state Legislature to impose a local **Sales Tax**. For example, a 0.15 percent sales tax would generate more than $7.6 million annually and cost the typical household $30 per year. Visitors would also pay a sales tax. While there is no limit on the number of years this tax can be in effect, in most cases, the duration of the tax is determined by the time necessary to generate enough revenue to finance general obligation bonds for a project and will terminate upon raising that amount. Voter approval is required after the County receives taxing authority from the state.

4. Funding Policy

As Plan implementation proceeds, cost-sharing formulas will be explored to match the needs of various project types (e.g., wetland restoration or upland habitat protection and improvement). In general, the preferred policy option for land protection is to use County-available funding to maximize the use of non-County funding.

Funding for short- and long-term natural resource management will also consider the ability to leverage outside funding and protect public investments. Formulas for restoration, enhancement, and maintenance will be developed for private and non-County public lands.

D. Land Conservation Program Operation

1. Land Protection Tools

The Land Conservation Program seeks to continue offering multiple options for land protection and is considering new options to increase landowner participation and awareness of the program's benefits. Determining which protection scenario is the best option will be determined by:

- Individual landowner wishes
- County authority, interest and purpose
- Funding sources/requirements
- Funding availability

Expanding the mechanisms for land protection, to include tools available from all project partners, can contribute to the success of land conservation efforts and reduce participation barriers for willing

landowners. An inventory of the Program's existing land protection tools and potential new opportunities are identified below:

Park Dedication
Park dedication is an important tool available to municipalities in securing land protection. It is typically used in conjunction with city parks at the time of surrounding development to fulfill a neighborhood's recreation needs. In some situations, it is used to meet the shared vision of a greenway system. In other situations, park dedication can be used to protect land for conservation purposes in addition to the recreation benefit that city parks offer. In some cases, dedicated land becomes publicly owned parks, where the municipality would be the primary agent of stewardship. In other cases, neighborhood or Homeowner Associations may be the property owner. In any case, the conservation collaborative would exist to offer support for land stewardship.

Comprehensive Planning and Zoning
Municipal land use guidance and zoning could define and help protect high priority or ecological value lands by designating them in comprehensive plans and zoning codes. Examples include establishing special zoning designations, such as overlays, and coupling land conservation areas with otherwise protected lands, such as floodways and bluffs.

Official Mapping
Conservation areas could be officially mapped by government entities as a public record of their intent to acquire land for conservation that has a public benefit. Dakota County adopted Ordinance No. 130 on official mapping in 2008.

Acquisition
There are several approaches to acquiring land, each of which has its own set of activities, advantages and limitations. The major approaches are described below. There are numerous potential conservation partners, both public and private, that may be able to assist in acquisition. Potential new options include phased acquisition, life estate, restoration easement, and land registry.

Fee Title
The County can acquire fee title for specified reasons or assist another public entity in acquiring fee title from a willing seller. Another option may be to "Buy-Protect-Sell" where an entity acquires the entire property, places restrictions on all or portions of the property, and then sells the entire or portions of the property.

Land Donation/Bargain Sale
Landowners may choose to donate land or reduce the sale price below the appraised value. The landowner may be able to receive tax benefits for land donation or reduced land value to a qualified public or conservation partner.

Phased Acquisition (*Proposed*)
Landowners and purchasers may agree that acquisition of land or an easement can be completed through more than one transaction over a specified period of time – months or years – resulting in a complete acquisition by a specified time.

Option or First Right of Refusal
A landowner that chooses to initially sell only partial interest in property to the County or other conservation entity may be willing to sell the remaining property interest at a future date. A landowner could choose to execute a purchase option that offers full ownership, with or without additional

payment, to the County or other conservation entity; or execute a first right of refusal, granting the County or other conservation entity the first opportunity to purchase the property, before it is marketed to other buyers. Terms and potential payment are variable.

Life Estate

This option allows the landowner to continue to live on the land after selling the fee title. Life estates can be structured in numerous ways (e.g., the landowner can live on the land for the rest of their life or any mutually agreed upon timeframe). Life estates will reduce the value of the property in amounts proportional to the length of the life estate.

Permanent Conservation Easements

A voluntary legal transaction between a landowner and a qualified buyer (governmental unit or private land conservation organization) to protect the natural, scenic, cultural, historic or open space values of the property to achieve specified conservation purposes. The seller retains underlying fee title to the protected property and continues to pay all or reduced property taxes. The easement establishes allowed and prohibited activities. Easements may be unique or customized to reflect individual landowner needs and property characteristics.

Conservation Easements are valued-based on the difference between the fee title value of the property without any restrictions and the value of the property with the easement restrictions in place. The seller can sell the easement at the full or partial appraised value or donate the entire appraised value (Bargain Sale). Land with a conservation easement provides additional potential benefits to the landowner, because the easement area is eligible for public investments in restoration and management at no cost or at a significantly reduced, shared cost to the landowner. Many different types of easements can be used for conservation purposes:

Agricultural Easement

A permanent easement that allows agricultural activities and requires a Stewardship Plan with a NRMP, as appropriate. Use of this type of easement will be very limited in the Land Conservation Program, used only when it provides high priority ecological and/or enhances the recreational experience on adjacent publicly-accessible protected lands, including:

- Protecting open space lands adjacent to County parks and greenways, wildlife management areas, protected natural areas on public and private land, and wetland restoration areas to prevent non-compatible development that could significantly impact associated natural resource value or the users visual experience
- Maintaining open space connectivity between protected natural areas

Buffer Easement

A permanent easement that restricts certain types of non-compatible residential, commercial or industrial development adjacent to existing public land.

Flowage Easement (Proposed)

A permanent easement that allows new surface water to flow across private property. This type of easement has been used by the County for transportation and other types of development projects but has not been used for conservation purposes. It is anticipated that large-scale wetland restoration projects will require these types of easements to address hydrologic changes to the landscape. It would allow the County and its contractors to perform restoration,

management and maintenance activities within existing or proposed natural portions of the easement at no or significantly reduced cost to the landowner.

Wetland Easement (Proposed)
A permanent easement to be used for projects that primarily involve the protection and restoration of existing and former wetlands to retain water on the land, increase infiltration and provide important wildlife habitat. This type of easement would be a hybrid of federal Wetland Reserve Program, state Reinvest in Minnesota and Minnesota Board of Water and Soil Resources wetland bank easements that would also include and define how much upland buffer would be required and the maximum amount of associated agricultural land allowed.

Greenway Corridor Easement
A permanent easement on a linear corridor that provides a combination of habitat, water quality and recreational benefits. The easement would allow for the future development of a recreational trail and amenities, such as rest areas, kiosks and benches, but no other non-recreational development. A jointly developed NRMP would be required. It would allow the County and its contractors to perform restoration, management and maintenance activities within the easement area at no or significantly reduced cost to the landowner.

Greenway Trail Easement
A permanent easement on a narrow, linear corridor that allows for the future development of a recreational trail and amenities -- such as rest areas, kiosks, and benches -- often associated with a specific funding source.

Natural Area Easement
A permanent conservation easement focused on protecting and improving the natural resources and conservation values of the property. No residential, commercial, industrial or new utility-related development is allowed. Temporary agricultural use may be allowed. A jointly-developed NRMP is required. It would allow the County and its contractors to perform restoration, management and maintenance activities within existing or proposed natural portions of the easement at no or significantly reduced cost to the landowner.

Park Easement
A permanent easement on private land within existing County park boundaries that preserves the natural features of the property but restricts future development that could negatively impact the park's natural resources or park-user recreational experiences. It would allow the County and its contractors to perform restoration, management and maintenance activities within the easement area, at public expense, requiring no landowner contribution.

Restoration Easement (Proposed)
A voluntary transaction between a landowner and the County (in this case), through which a landowner agrees to convey a permanent restoration easement in a defined area to the County at no cost, agrees to conservation purpose restrictions on the easement area, and agrees to allow the County and its contractors to perform restoration, management and maintenance activities within the easement area, at public expense, requiring no landowner contribution.

***Land Registry** (Proposed)*
A voluntary action taken by a landowner who agrees to register land for conservation purposes. A Land Registry Program is a unique, flexible option to assist private landowners in managing the natural resources on their property. The program would provide general information and technical assistance to landowners in developing and implementing long-term plans for restoring, enhancing or maintaining their property and could lead to permanent protection. A County Land Registry Program would request that a landowner:

A. Manage and conserve the land to the best of their ability
B. Notify the program of significant planned changes or natural changes that occur
C. Notify the program of intent to sell the registered property

2. Annual Work Planning Process
Due to the voluntary nature of participation in conservation activities, it is not possible to estimate landowner response to Land Conservation Program opportunities, partner involvement, or the number of conservation projects the County will receive or implement each year.

Annual budgeting and Program-level work planning will begin with the implementation timeframes identified for Plan strategies and tactics – such as outreach to all CFA landowners in 2020 and initiating one to three CFA pilot studies in 2021. These and other new priority initiatives will be facilitated through annual budgeting processes, subject to County Board approval.

E. Public Information and Education
1. Program Information
The Land Conservation Program has relied on direct communication with landowners and potential project partners, and it will be important to maintain a contemporary Communications Strategy for the Program moving forward. The strategy will need to use a variety of accessible outreach media and have clear information on the Program for its primary audiences. The Communications Strategy should address the following needs:

a. Audiences -- who might be interested and how they prefer to receive information
b. Media – how information should be shared (e.g., web, social media, print, news releases)
c. General Program information, eligibility, contacts, events, and landowner opportunities
d. Current project information
e. Annual reporting on Program activities
f. Information referrals and links to other webpages for natural resources information

2. Engagement Activities
In addition to providing accessible information for the public and specific audiences, other activities may be added to the Program, including interactive events, such as tours, speaking engagements, and volunteer opportunities. Volunteer activities could include assistance in natural resource restoration, data collection, vegetation and wildlife monitoring and sharing observations, seed collection, and photographing sites.

F. Progress Measurement and Reporting

Progress measurement and reporting will be based on the following three sets of outcomes:

- **Plan implementation:** Dakota County will track and periodically report implementation progress against the proposed timeframes included in this Plan.

- **Land protection outcomes:** Dakota County and partners will track and periodically report progress on the priorities established by the County, partners, CFA landowners and stakeholders for protection of priority natural areas and connection corridors.

- **Natural resource management outcomes:** Dakota County and partners will track and periodically report progress on the priorities established by the County, partners, CFA landowners and stakeholders for the restoration and long-term management of priority natural areas and connection corridors.

The following table includes examples of performance measures for the three sets of outcomes, packaged by three questions used in Dakota County's Program and Service Inventory: *1) How much did we do? 2) How well did we do it? and 3) Was anyone better off?*

Example Performance Measures for Implementation of the Land Conservation Plan			
	Plan Implementation	**Land Protection**	**Natural Resource Management**
How much did we do?	• CFA Landowners contacted • Number of CFA profiles completed • Program Guidelines (Criteria, funding, application process) updated • City-County Conservation Collaborative (CCCC) organized • Property Tax Study Group recommendations • Number of CFA landowners interviewed/ convened • Natural Resource Restoration Standards established	• Applications received from within and outside of CFAs • Projects initiated • Acres of wetland protected • Acres of natural area protected • Acres of critical infiltration areas protected	• Acres of protected private land restored • Acres of non-County public lands restored • Miles/acres converted to pollinator habitat • Acres of protected private land enrolled in long-term management
How well did we do it?	• Implementation timeframes met • CCCC participation rates	• Establishment of CFA priorities • Transactions completed in a timely manner	• Ecosystem recovery indicators • Use of non-County funding
Is anyone better off?	• Landowner satisfaction surveys • Partner satisfaction surveys	• Number of new/ expanded public use areas	• Public feedback • Number of enhanced public use areas

APPENDIX 1. PLANNING PROCESS AND BACKGROUND

A. Planning Process Summary

The plan development process occurred over three phases:

PROJECT ORGANIZATION: late 2018

- Identify scope of plan
- Identify stakeholders and interests and develop the Public Engagement Plan
- Identify and organize research topics
- Coordinate with County Groundwater Plan effort on research and public engagement
- Present project intro and scope to County Planning Commission
- Present project intro and scope to County Board

RESEARCH AND VISIONING: 2019

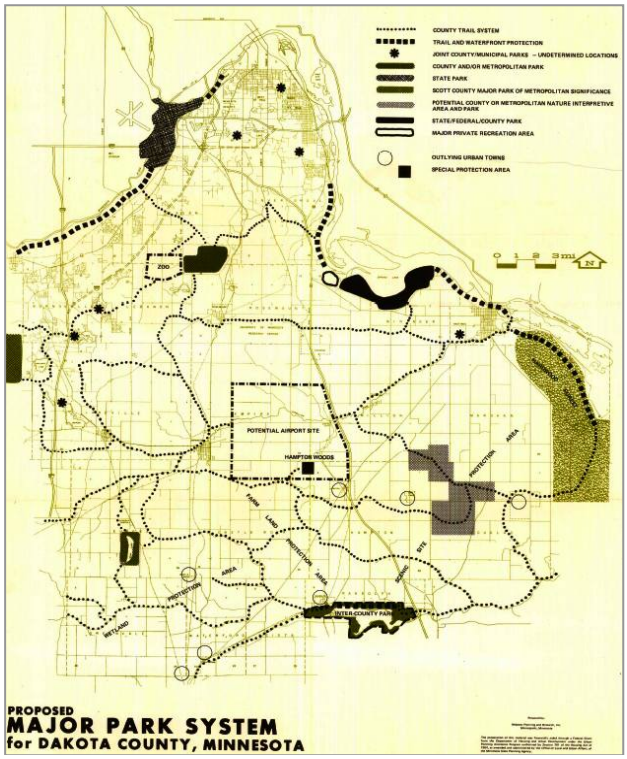
- Conduct research on land conservation and natural resource management topics
- Conduct stakeholder and public engagement on interests, opportunities, and program needs
- Synthesize research and engagement findings with preliminary opportunities and recommendations
- Identify draft goals and potential strategies
- Review findings and preliminary recommendations with County Planning Commission
- Review findings and preliminary recommendations with County Board
- Post findings and recommendations for public

DRAFT PLAN REVIEW AND ADOPTION: 2019-late 2020

- Develop and refine draft goals and strategies based on Planning Commission and County Board comments
- Conduct targeted stakeholder engagement on priorities and program refinements
- Refine plan outline and prepare draft Plan chapters
- Review draft Plan with County Planning Commission
- Review draft Plan with County Board, request release for public review (30 days)
- Sixty-day public review period with Plan posted online and stakeholder engagement, per engagement plan
- Compile comments from stakeholder input and complete plan modifications, as needed
- Hold additional discussions with Township officials, as requested
- Review comments with Planning Commission, seek recommendation on Plan adoption
- Review comments with County Board, request adoption. Plan adopted on November 17, 2020.

B. County Land Conservation Overview

The Dakota County Park System marked the County's first effort in permanently protecting natural resource lands, starting in the late 1960's. The Dakota County Farmland and Natural Areas Program began to take shape 30 years later, in response to accelerated residential growth in Dakota County over the 1980's and 1990's when more than 4,000 new homes were being constructed each year. Farms and natural areas were rapidly giving way to expanding suburbs and residents consistently expressed concern about the loss of open space in County surveys.

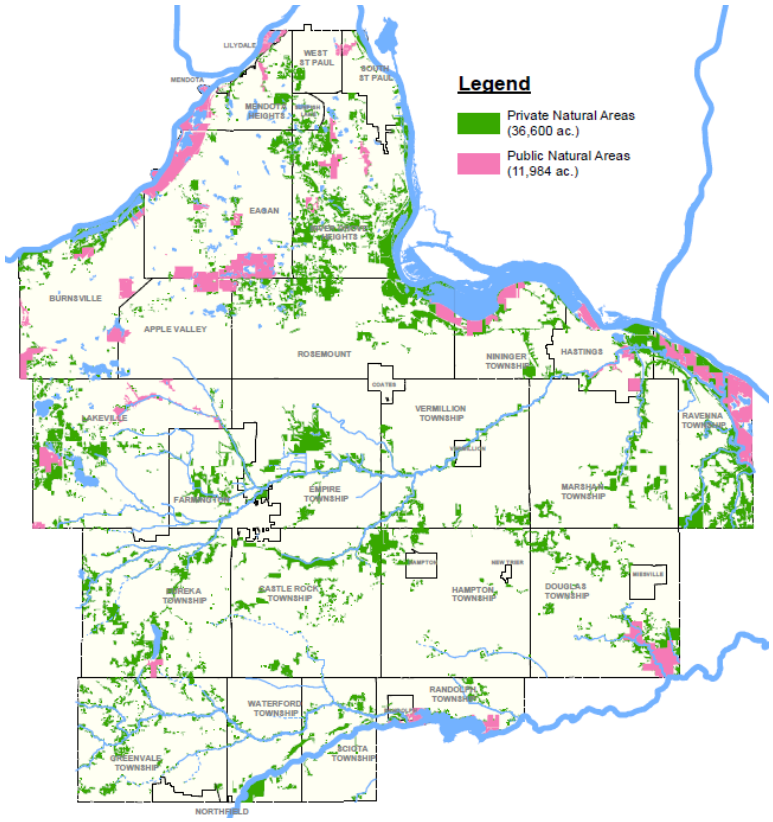


1970 Dakota County Park System Plan

A regional study in the 1990's was exploring relocation of the Minneapolis-St. Paul International Airport (MSP) to a site in south central Dakota County. A new airport would have further reshaped the Twin Cities, drawing hotels, restaurants, warehousing, and airport-supported businesses to a largely rural area. Investments in new freeway, sewer, and water improvements likely would have attracted more residential development.

A citizen group, "The Dakota County Agricultural Protection Task Force," organized in opposition to the airport move and met regularly on protecting farmland and farming as a way of life in the County. Although the MSP did not relocate, an organized farmland protection effort was underway. The County began to evaluate potential farmland protection tools, including "Purchase of Development Rights" (PDR), which uses conservation easements to permanently protect land, while allowing the land to remain in private ownership and stay in agricultural production.

Recognizing shared interest in land protection between urban and rural residents, the County worked with land protection groups and agencies on a plan to

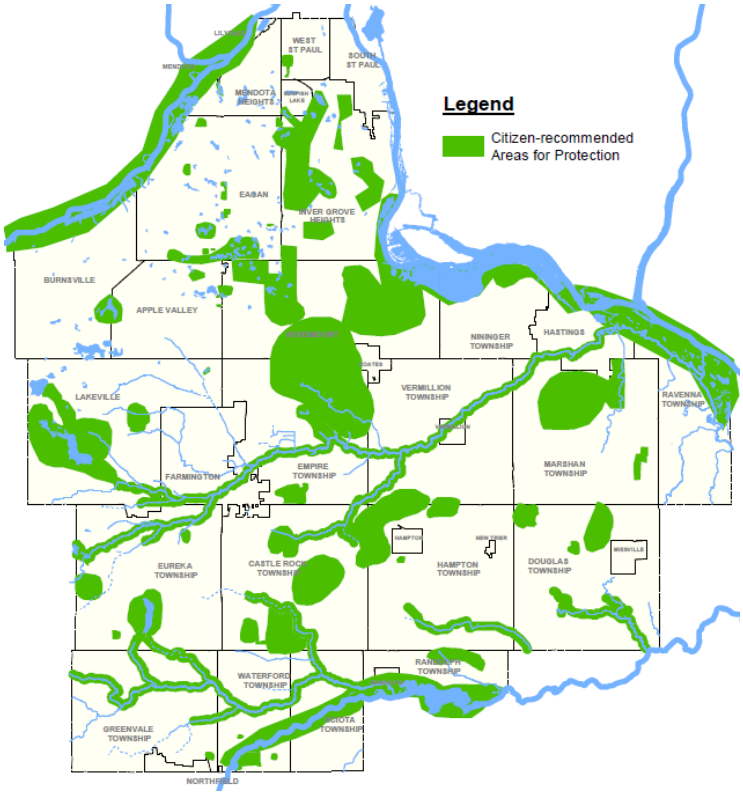


Publicly-Protected and Privately-Owned Natural Areas, 2002

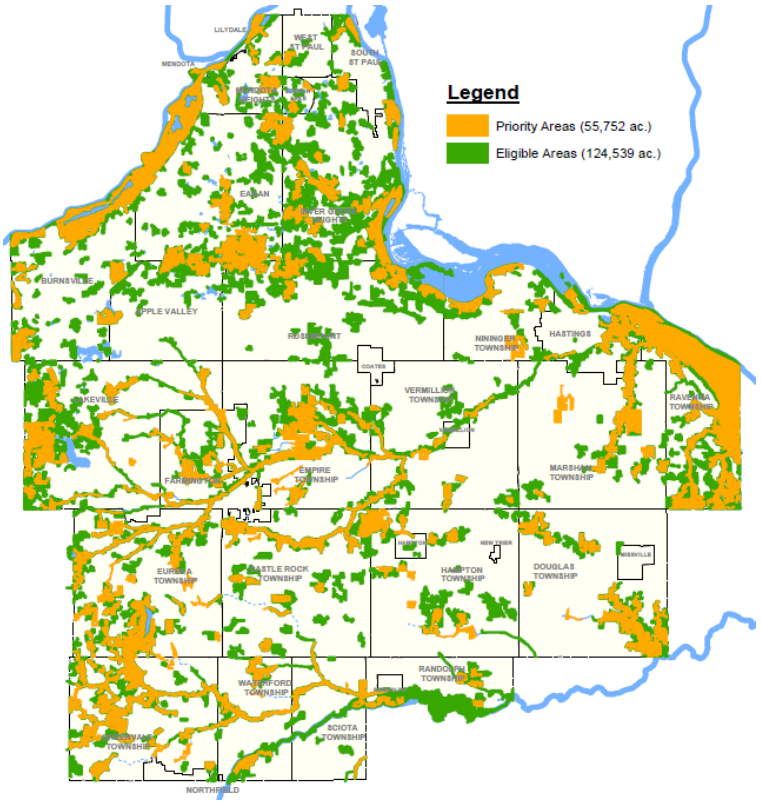
protect natural areas and farmland, with a grant from the Legislative Commission on Minnesota Resources (LCMR). The County's first Farmland and Natural Area Protection Plan was adopted in early 2002, identifying 42,000 acres of priority farmland and 36,000 acres of priority natural areas for potential protection. In November of that year, County voters approved a $20 million, non-binding bond referendum for farmland and natural area protection, with 57 percent support. The Farmland and Natural Areas Program (FNAP) was underway by the following year and held its first application round in November 2003.

Since 2003, the County has completed 121 projects totaling more than 11,500 acres and including 95 miles of protected shoreline. In 2005, the Program was one of six recipients from across the country to receive an inaugural County Conservation Leadership Award from the National Association of Counties and the Trust for Public Land. It has also received awards from the American Planning Association, Minnesota Association of Counties, and the Minnesota Environmental Initiative. In 2009, the FNAP received a Governor's Award for Pollution Prevention.

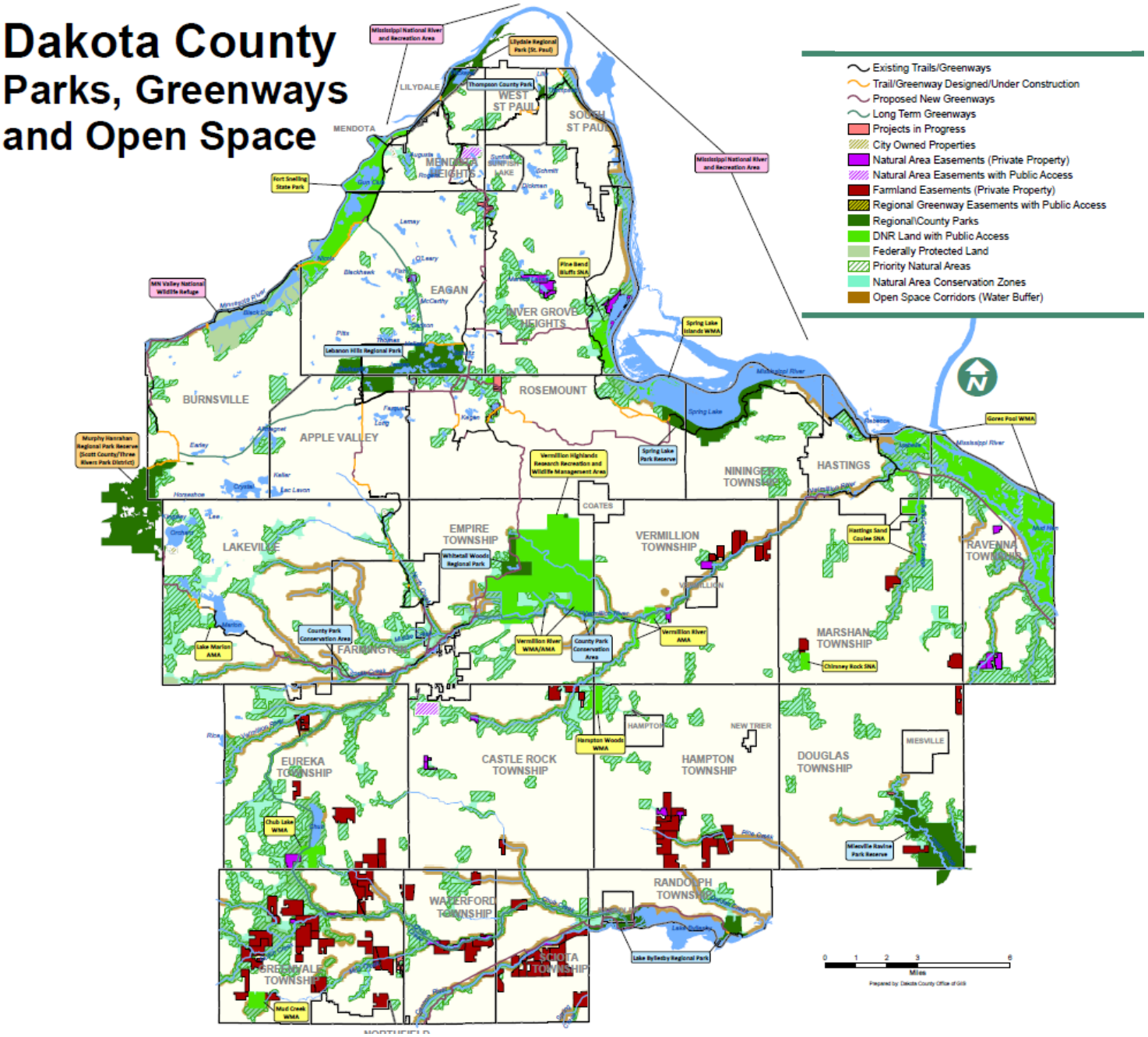
Over time, Program priorities were adjusted in response to new information, shifts in available funding, and emerging issues of concern. The following map shows the status of land protection in the County as of 2019.



Resident-Identified Natural Areas to Protect, 2002



Refined Priority Natural Areas, 2010


Dakota County
Parks, Greenways
and Open Space
Existing Trails/Greenways
Trail/Greenway Designed/Under Construction
Proposed New Greenways
Long Term Greenways
Projects in Progress
City Owned Properties
Natural Area Easements (Private Property)
Natural Area Easements with Public Access
Farmland Easements (Private Property)
Regional Greenway Easements with Public Access
Regional\County Parks
DNR Land with Public Access
Federally Protected Land
Priority Natural Areas
Natural Area Conservation Zones
Open Space Corridors (Water Buffer)
LILYDALE
MENDOTA
WEST ST PAUL
SOUTH ST PAUL
MENDOTA HEIGHTS
EAGAN
RIVER GROVE HEIGHTS
ROSEMOUNT
BURNSVILLE
APPLE VALLEY
LAKEVILLE
EMPIRE TOWNSHIP
VERMILLION TOWNSHIP
NININGER TOWNSHIP
HASTINGS
RAVENNA TOWNSHIP
MARSHAN TOWNSHIP
FARMINGTON
EUREKA TOWNSHIP
CASTLE ROCK TOWNSHIP
HAMPTON TOWNSHIP
DOUGLAS TOWNSHIP
RANDOLPH TOWNSHIP
WATERFORD TOWNSHIP
GREENVALE TOWNSHIP
NORTHFIELD
Miles

C. Refining the Direction of Land Conservation

Over two decades of operation, the FNAP, now Land Conservation Program, priorities have evolved to reflect concerns related to surface and groundwater quality, groundwater recharge, non-native invasive species, and the loss of native species diversity. Changes to external funding also have contributed to greater emphasis on improving countywide environmental quality.

Research and public engagement on natural resource issues and concerns, now and for the future, provided a foundation for formulating new land conservation approaches. Key findings are presented in this section, with more detailed information provided in other Plan Appendices.

1. Research Conclusions

Broad research on countywide conservation topics produced the following key conclusions:

1. **A more integrated approach is needed** to protect water quality and supply, mitigate climate impacts, support declining native species, control invasive species, and address public concerns in these areas.
2. **Natural resource needs are shared.** Plans from state, federal and other entities identify similar needs, presenting opportunities to collaborate on protection and natural resource management.
3. **Participation barriers can be reduced** for private landowner conservation and management

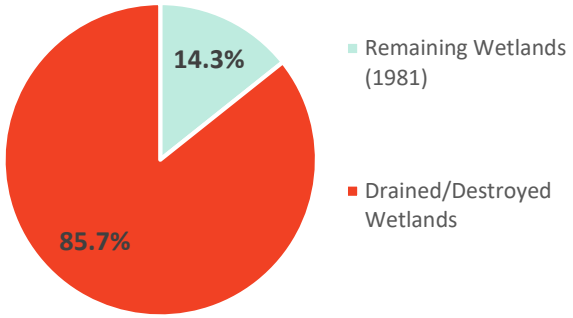
A. MORE INTEGRATED APPROACH IS NEEDED

Environmental Needs

Key indicators of environmental quality provide a snapshot of water quality, natural vegetation status, wildlife populations and biodiversity, and County residents concern.

Native Wetlands

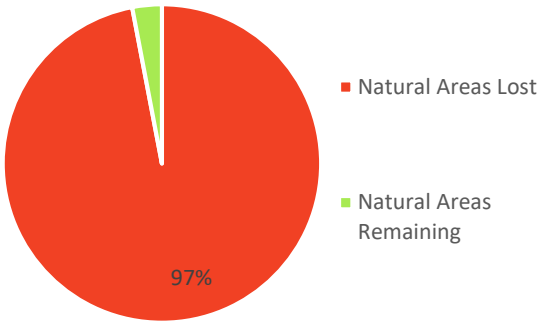
Wetlands are critical to overall water quality and flood control. More than 85 percent of Dakota County's settlement-era wetlands have been lost.[10]



[10] Minnesota Wetlands Conservation Plan, Version 1.02, 1997, Minnesota Department of Natural Resources, St. Paul, Minnesota.

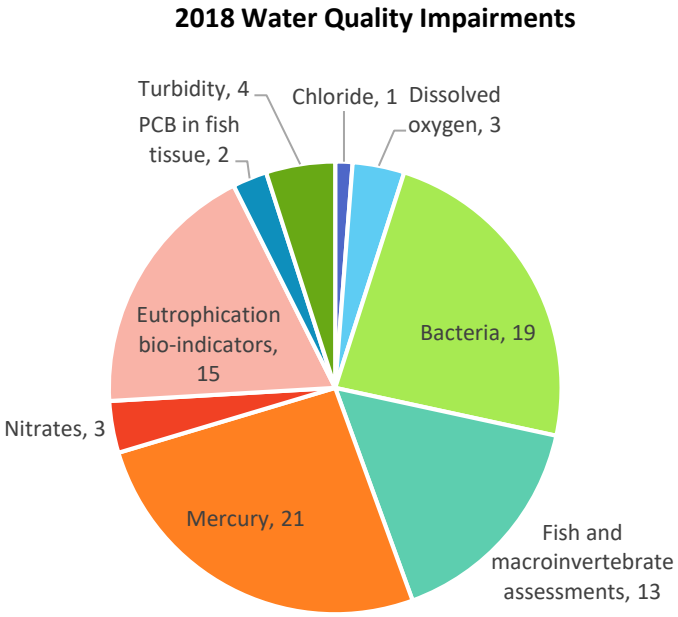
Pre-settlement Natural Areas

Despite having a highly diverse mix of landscapes and ecosystems in the mid-1800s, only an estimated three percent of Dakota County's natural landscapes from the pre-settlement era remain.



Water Quality

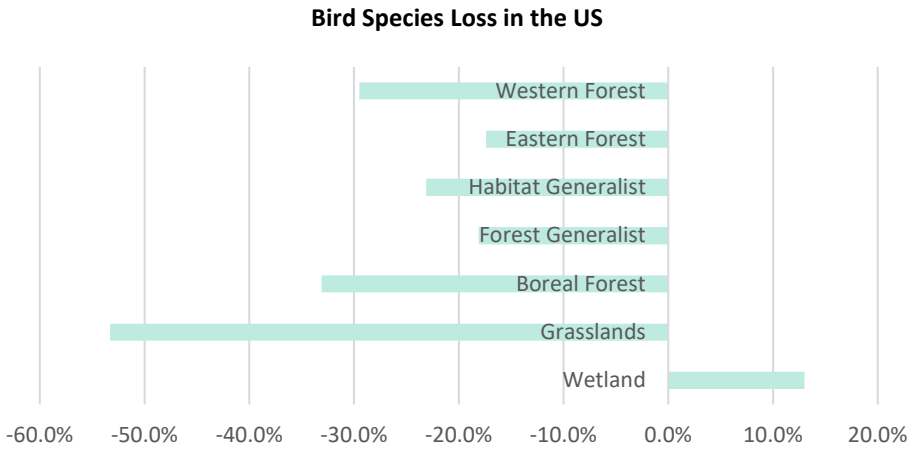
Monitoring and assessing Minnesota's water quality produces updated listings of impaired waters that no longer provide for their designated uses, such as fishing, swimming or drinking. The number of impaired waters in the County has increased over time. In 2018, testing found at least one impairment for every tested water body, totaling 81 documented impairments.[11] The number of quality issues has also grown, as new problems emerge, and new impairments are defined.



Oheyawahe or Historic Pilot Knob, Mendota Heights

[11] https://www.pca.state.mn.us/water/2018-impaired-waters-list

Species and Biodiversity
Habitat loss and other issues have contributed to a decline in wildlife populations as well as the number of species found in Minnesota and Dakota County. Bird populations dramatically illustrate this, with declines in grassland bird populations of more than 50 percent since the 1970s.[12]



Resident Opinions
Scientific surveys of County residents consistently show strong support for land protection and management, with the strongest support for water quality, wildlife habitat, and natural areas.

2019 Survey, Percent identifying preserved land management as "Essential" or "Very Important"

Approach	Percent
1. Protecting and improving water quality	92%
2. Protecting and improving wildlife habitat	84%
3. Protecting and improving natural areas	83%
4. Increasing access for outdoor recreation	73%
5. Protecting and improving land used for agriculture/specialty crops	71%

Land Protection Status

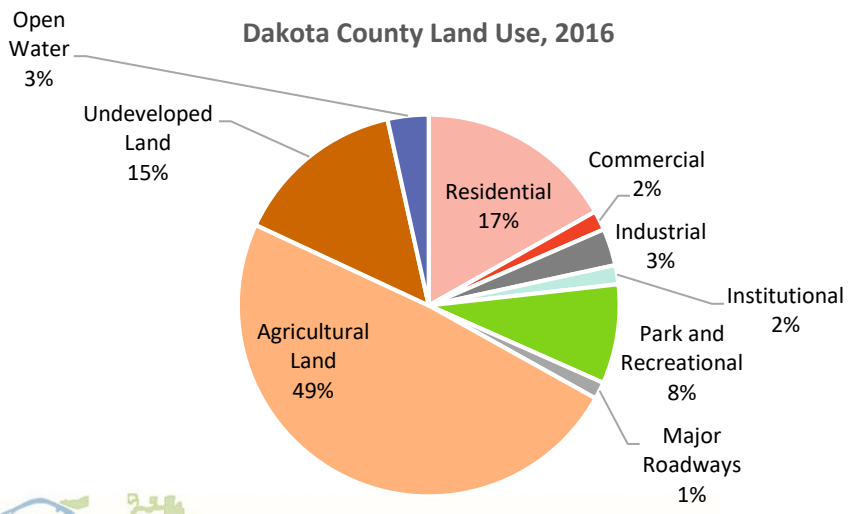
Although many significant natural resource areas in the County have been protected, additional significant opportunities exist and include enhanced natural resource management. Nine percent (33,875 acres) of Dakota County's total land area is currently protected for natural resource value and/or public use, including parks, natural resource management areas, and private easements. These protected lands represent some of the best of the best natural areas in the County, including federal, state, and local parks, reserves and other natural resource areas. Of the protected lands that are publicly-held, roughly 73 percent allow public access and use.

Summary of Protected Lands

PROTECTION TYPE	ACRES
Federal Lands (National Wildlife Refuge, Waterfowl Production Areas)	1,643
State (Park, Wildlife Mgmt. Areas, Scientific and Natural Areas, Aquatic Mgmt. Areas, Zoological Gardens)	12,297
Dakota County Parks and Park Conservation Areas	6,136
Other Agency Regional Parks	404
City Park Natural Areas and other City Conservation Areas	4,215
Private Permanent Easements, through Dakota County	8,874
Private Permanent Easements, MN Board of Water and Soil Resources' Reinvest in Minnesota, Minnesota Land Trust	76
Total	**33,875**
Total for Public Lands with Public Access (73 percent of total)	**24,836**

[12] Decline of the North American Avifauna, Science, Sept. 2019

For context, roughly 24 percent of land in the State of Minnesota is publicly protected, excluding private easements. At a national level, 14 percent of land is publicly protected, also excluding private easements. Wide variation in protected land percentages across counties in one state or across states is expected, reflecting dominant land uses and the extent of urbanization.



Protected Lands in Dakota County

Critical Protection Elements

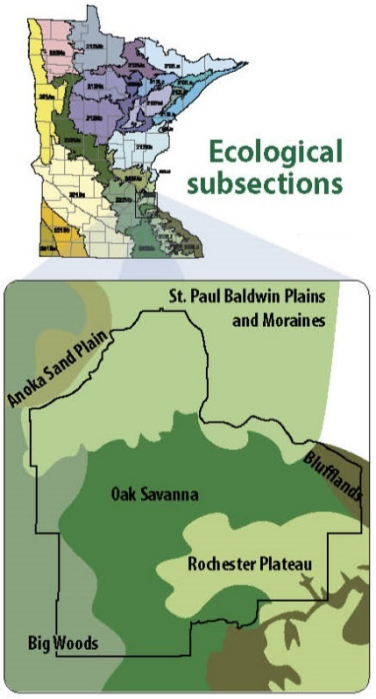
Additional protection opportunities for the County and partners include:

A. Unprotected natural areas, representative plant communities, and landscapes of Dakota County

Dakota County originally had some of the richest ecological diversity in the state, due to its location within five major ecological subsections. The subsections and pre-settlement conditions are:

- *Big Woods:* predominantly forested
- *Blufflands:* bluff prairies, steep bluffs, river valleys
- *Oak Savanna:* Bur oak savanna, some tallgrass prairie, and forest
- *Rochester Plateau:* riverine with tallgrass prairie and oak savanna
- *St. Paul Baldwin Plains and Moraines:* Oak and aspen savanna, some tallgrass prairie and forest

Only three percent of the original pre-settlement native plant communities remain intact, with many already publicly protected. Outside of these rare places, other unprotected natural areas of varying quality remain and represent fourteen major communities once found throughout the County. Scenic landscapes shaped by topography, water, and natural communities are culturally valued and present another protection opportunity.



Representative Native Plant Communities in Dakota County

Wetlands
Wet Meadow (Sedge and Fen)
Shallow Marsh
Deep Marsh
Shallow Open Water
Swamp (Shrub, Alder, Hardwood)

Grasslands
Dry Prairie
Mesic Prairie
Wet Prairie

Oak Savanna

Woodlands

Forest
Oak Forest
Maple-Basswood Forest
Hardwood Forest (Lowland, Aspen)
Floodplain Forest

B. Connecting corridors between natural areas

Protected lands in the County typically often are separate and function ecologically as islands, as shown in the preceding map. Even large ”islands” need interconnectivity to other areas to sustain wildlife health and diversity. County greenways are planned and designed to provide connectivity between natural areas for recreational and ecological benefits. Additional connection corridors and corridors of an ecologically optimal width should be considered for protection to allow greater species movement between natural areas.

C. Natural area buffers to improve ecological functions and habitat

The publicly protected lands in the County often represent the “best of the best” ecologically. However, the boundaries used in protecting these lands have been based on parcel (ownership) rather than natural features. Because of this, boundaries of some protected areas are not always adequately protecting the resources. Land conservation tools to permanently protect appropriate buffers should be considered.

D. Wetlands and shorelines for surface and groundwater quality

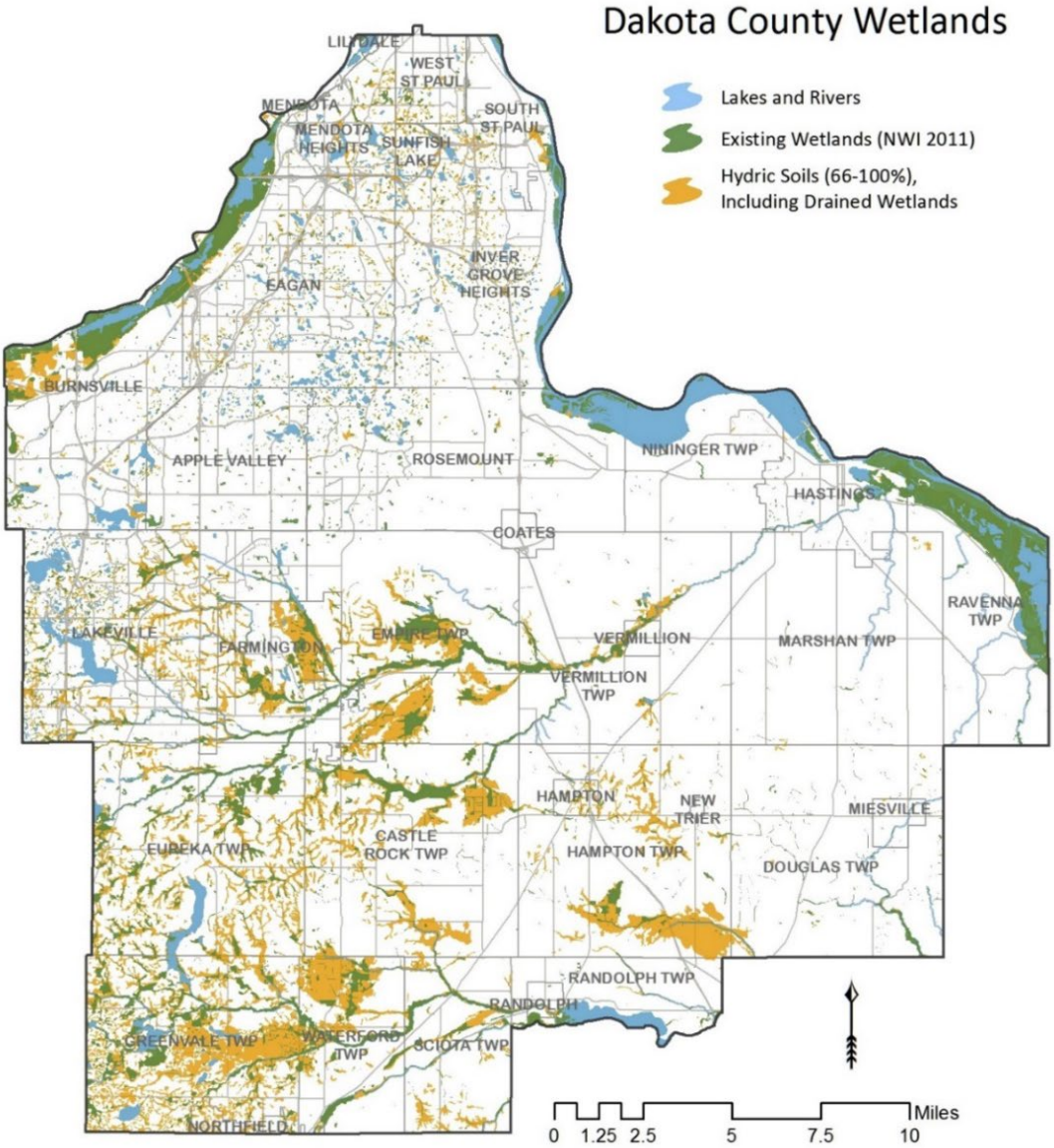
Wetlands form when hydric soils, aquatic/wetland plants, and wetland hydrology are present. Wetlands provide many benefits, including:

- Storage for excess stormwater water during flooding and wet cycles
- Filtering out pollutants before they enter lakes, rivers and streams
- Infiltration and groundwater recharge (depending on wetland type)
- Fish and wildlife habitat
- Public recreation

Wetlands can take a wide variety of forms, ranging in appearance from shallow lakes to meadows to woodlands. The following map shows existing wetlands (green) as well as hydric soil areas where wetlands likely once existed (orange). An estimated 85 percent of the County's original wetlands have been drained or filled, but in many cases, could be restored as functioning wetlands.

According to the *Minnesota Wetlands Conservation Plan*[13], restoration should be the primary wetland management strategy in Dakota County. This will require detailed analysis and close coordination and partnerships with agencies, organizations, and adjacent landowners. In addition to the County's wetland banking program, the County's Land Conservation Program has unique land protection tools that can assist permanent wetland protection and restoration.

Wetlands and Wetland Soils/Drained Wetlands, 2011



[13] Minnesota Wetlands Conservation Plan, Version 1.02, 1997, Minnesota Department of Natural Resources, St. Paul, Minnesota.

E. Source water protection and recharge areas

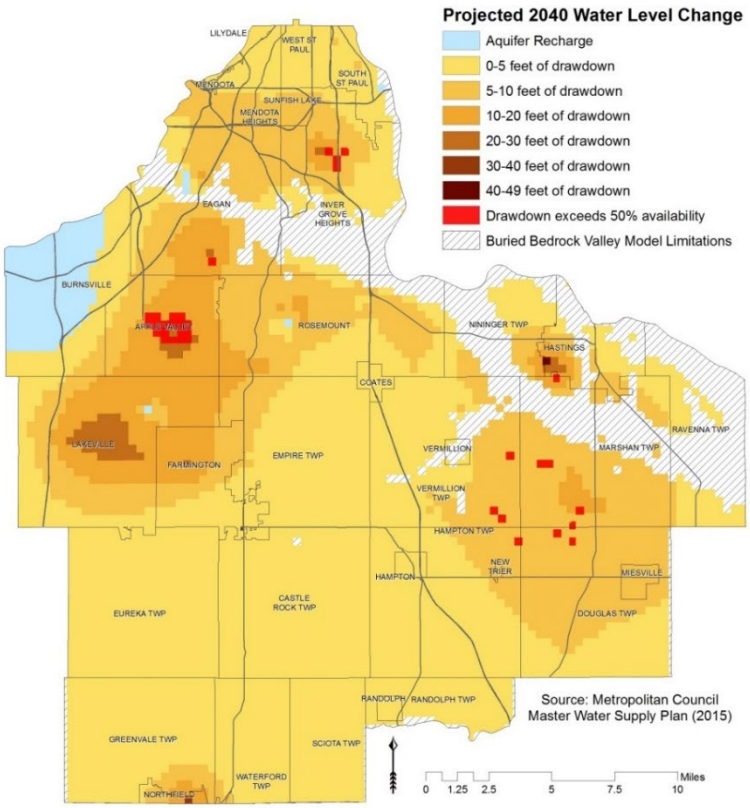
Dakota County is updating its *Groundwater Protection Plan*, which will identify opportunities for land protection to be used as a tool in improving the County's groundwater quality and supply. Emerging issues for groundwater include *quantity* and *quality*.

Quantity: concerns are growing about groundwater withdrawal rates that exceed the rates at which some aquifers can recharge. Dakota County residents use more groundwater per capita than any other Metro county, and most residents are served by public supplies that pump groundwater.

Aquifer drawdown becomes more of a threat as development and overall consumption rates increase. The adjacent map shows the Metropolitan Council's forecast areas for significant drawdown by 2040, which include communities projected to have significant population growth (e.g., Lakeville, Apple Valley). Protection of significant recharge areas and water conservation will continue to be essential.

Quality: Drinking water safety is a concern due to contaminants in groundwater, including compounds related to land use activities (e.g., nitrogen fertilizers, pesticides, de-icing salt, and perfluorochemicals) and naturally-occurring elements (e.g., manganese and arsenic). Agricultural chemical use in eastern Dakota County has been linked to increasing nitrate and pesticide levels in well water. Adoption of chemical best management practices has not always been effective with the coarse, highly permeable soils and fractured bedrock in these areas.

Projected Groundwater Drawdown



F. Climate Adaptation

Climate change is requiring society to re-evaluate its notion of "normal" conditions and adapt to some consequences that are reasonably certain and others that are largely unknown. A primary challenge will be building resilience into natural systems in the face of changing precipitation, temperature, and severe weather regimes. As climate shifts to warmer and wetter with more frequent severe weather events[14] in Dakota County, the concept of "native" species also will likely change over time. Land protection with natural resource management can help efforts to mitigate climate change and lessen its impacts.

[14] Minnesota State Climatology Office, https://www.dnr.state.mn.us/climate/climate_change_info/climate-trends.html

2. Natural Resource Needs are Shared

In addition to land protection opportunities, long-term natural resource management was a recurring theme heard from a variety of stakeholders throughout the planning process. The idea that land is not fully protected unless its natural resources are managed over time also guided the development of Dakota County's 2017 *Natural Resources Management System Plan*. Long-term efforts to improve and stabilize natural resource quality can protect the public's investments in land protection.

A broad range of local, state and federal plans speak to land protection and natural resource management needs for geographic areas that include Dakota County:

- Plans identify many overlapping areas of interest and need related to habitat protection, conservation efforts for targeted species, and approaches to protect biodiversity.
- Current focus areas include Species of Greatest Conservation Need, pollinators, and invasive species.
- Climate uncertainty is recognized in some of the more recent plans, although how to address this uncertainty is still evolving.
- Most plans speak to the need for interagency and partnership approaches that engage the public.

Plans and reports specific to water resources (e.g., Soil and Water Conservation District, watershed, other agencies) also cover geographies that include Dakota County and illustrate the need for partnership approaches:

- The general plan focus is on water quality and quantity, although some of the newer plans also discuss wildlife habitat and climate resilience.
- The plans make limited reference to land protection and easement acquisition; but the needs exist, and most watershed management organizations historically have not protected land.
- Sub-watershed analyses will help identify specific areas for enhanced conservation practices targeting sediment and phosphorus loading within sub-watersheds.

Progress has been made in managing natural resources on park lands in recent years, but the County recognizes a need to do more and sustain efforts over time. Interviews and surveys with city, state and federal agencies indicated a similar interest in doing more natural resource management on their lands to protect long-term resource quality. Constraints they identified include lack of staffing, time, and budget to do more. The most commonly cited natural resource management needs on public lands include invasive species, water quality, and the impacts of altered hydrology, such as increased and repetitive flooding.

City park land in Dakota County includes roughly 8,100 acres of land. City Park Directors interviewed in 2019 about their natural resource management efforts expressed strong interest in partnership approaches to expand their resource management efforts (e.g., share knowledge, skills, and equipment).

City Park Natural Resource Management

TOTAL CITY PARK ACRES	PARK NATURAL AREAS AND CONSERVATION AREAS, ACRES	ACTIVELY MANAGED NATURAL AREAS, ACRES	RESTORED NATURAL AREAS, ACRES	PLANNED NATURAL AREAS TO MANAGE, ACRES
8,100	4,215	1,279	556	757
		28% of park natural areas	**12%** of park natural areas	**18%** of park natural areas

3. Participation Barriers Can Be Reduced

Landowners are ultimately responsible for long-term natural resource management on their land. A 2019 survey of rural agricultural landowners (with 20 acres or more of cultivated land in the county) received 245 responses (26 percent response rate) and reflected the diversity of the County's farm operations, owner interests in their farms, and preferred types of conservation incentives and natural resource management assistance.

Respondents rated the importance of a range of potential County roles in land conservation and natural resource management, summarized in the following table. The most important roles were in cost sharing for water quality and flood control and purchasing permanent easements for wellhead and groundwater protection.

Importance of Potential County Roles in Conservation

Potential County Roles in Conservation	1=Very unimportant	2= Unimportant	3= Important	4=Very important	Not sure	Total	Weighted Average
a. Cost-share contracts to implement water quality and flood control practices (structural)	28	12	87	58	27	212	**2.57**
b. Permanent easements to protect well head protection areas and groundwater	32	21	86	52	19	210	**2.57**
c. Permanent easements that protect existing natural areas such as woodlands or wetlands	39	22	74	59	20	214	**2.53**
d. Cost-share contracts to implement native plantings or cover crop practices (non-structural)	29	27	88	42	24	210	**2.45**
e. Permanent easements to restore drained agricultural land to wetlands primarily for flood control purposes	41	25	76	43	27	212	**2.32**
f. Permanent easements to convert cultivated land to native perennial vegetation	58	55	50	19	30	212	**1.86**

A majority of respondents cited the ability to generate an income, continued farming, and family farming traditions as the most important features of their property to protect. Soil health, which is linked to farm profitability, was cited by 63 percent of respondents.

The most-favored type of conservation incentive was a reduction in property tax, followed by incentive payments for a range of different practices. Incentive payments for soil health received the most support (roughly 50 percent), with slightly lower degrees of support for water-protective practices.

D. New Recommendations

From targeted research and stakeholder engagement, several new recommendations emerged that refine priority areas for protection, facilitate landowner participation in the program, and improve management of natural resources on a countywide basis:

Refine Land Protection Priorities with Preliminary Conservation Focus Areas

Land protection priorities will be based on natural features, connectivity, hydrology, and land ownership with renewed emphasis on water. The resulting 24 Preliminary Conservation Focus Areas total 82,000 acres, of which 22,874 acres are already protected, and provide a framework for landowner outreach, collaborative landscape conservation and public investments.

Develop a City-County Conservation Collaborative

Form a City-County collaborative to more effectively protect critical undeveloped areas, increase natural resource restoration and management, and share information and financial and staff resources within all incorporated areas.

Establish a County Conservation Private Funding Partner

Continue evaluating models for raising and distributing private funds for natural resource restoration, enhancement and maintenance on protected private lands.

Restore Large-Scale Wetlands and Assist in Implementing the new Dakota County Groundwater Plan

Strategically protect and restore existing and former wetlands, recharge areas and sensitive groundwater resources.

Improve Conservation in Agricultural Use Areas

Assist the Dakota County Soil and Water Conservation District as they work with rural landowners and agricultural operators to improve management practices and convert marginal farmland to natural vegetation.

Chub Creek, Waterford Township

APPENDIX 2. COMMUNITY ENGAGEMENT HIGHLIGHTS

As part of the planning process, a public engagement plan was developed to gain insight from the public and specific stakeholders on a range of issues related to the Plan, including:

- Continued land conservation efforts in Dakota County
- Emerging land and natural resource issues to address
- Priorities and focus areas for the next five to ten years
- Partnership approaches
- Funding, fiscal tools and incentives
- Draft Plan vision and goals

Six public events, surveys and agency meetings were conducted as part of the project research:

- Online public survey and written version sent to all program participants - 125 responses
- 2019 Residential survey questions, and previous years
- Two open houses (held jointly with the Groundwater Plan effort) - 80+ participants
- U.S. Fish and Wildlife Service, Minnesota Valley National Wildlife Refuge staff meeting
- MN DNR Central Region Managers meeting
- Two Land Conservation Workshops in a Rural Setting -21 participants
- Two Countywide Conservation and Natural Resources Management Workshops - 16 participants
- Survey of City park directors on natural resources management and land protection - 10 participants
- Agricultural Landowner questionnaire – 250 participants

General promotion of the online survey, open houses, and workshops occurred through media releases, County webpage, social media, and targeted mailings to past Land Conservation Program participants. Direct invitations to participate in workshops were sent to past Land Conservation program participants; local, state, and federal agencies; and environmental and agricultural organizations.

From surveys, open houses, and dialogues with various stakeholders, several themes emerged:

1. **Dakota County's land conservation efforts are supported by residents**.
   Over successive, statistically-representative residential surveys, residents have supported efforts to protect open space and natural areas in the County. The following table of relative-importance scores, calculated from residential surveys in 2011, 2013, and 2016, shows a trend of increasing importance in public opinion over the years.

   2011-2016 Importance of investing in open spaces and parkland (adapted to a 1-100 scale)

How important is it to invest County funds for each of the following?	2011	2013	2016
1. Protect lakes, streams and wetlands from pollution	72	79	80
2. Protect the highest-rated natural areas	63	75	79
3. Protect farmland from future development	50	65	N/A

2. **The location, associated goals and prioritization of different land conservation efforts has become increasingly important**.
   Residents and stakeholders have expressed concern about several environmental issues and see an important role for the County's Land Conservation Program in mitigating some of these issues, such as improving water quality by retaining water on the land and providing habitat for declining wildlife species.

While not considered statistically representative, the Land Conservation Planning 2019 online survey results mirror the County's Residential Survey results and further emphasize the importance of land protection to improve water quality. Lands that improve water quality and quantity and unique/high quality natural areas were the most important types of land protection efforts, followed by land protection for wildlife benefits (habitat and movement corridors). Although ranking lower in importance, all other types of land protection still scored well above the rating scale's midpoint value (2.5), indicating that respondents regarded all land protection purposes as having some importance.

Importance of protecting different types of land (weighted average scores on 1-5 scale)

Type of Land to Protect	Score
Natural areas that can improve surface water quality or groundwater quality/availability	**4.4**
Shoreland along lakes, rivers and streams to improve water quality	**4.3**
Unique and high-quality natural areas	**4.3**
Wetlands to improve surface water quality, recharge groundwater, provide wildlife habitat, and reduce flood impacts	**4.3**
Wildlife habitat for species with declining populations	**4.1**
Connecting corridors for wildlife movement	**3.9**
Agricultural lands that are adjacent to waterbodies and natural areas	**3.8**
Larger (65+ acres) natural and/or restorable areas	**3.8**
Lower quality natural areas that could be restored to improve their quality	**3.7**
Open space or undeveloped land	**3.7**
Small natural areas in more densely populated areas	**3.7**
Scenic landscapes	**3.4**

3. **Long-term management of natural resources is vitally important.** Ongoing natural resource management will require assistance and incentives to protect public interests and investments. The following table from the 2019 Residential Survey shows that residents identified water quality, followed by habitat and wildlife as the most important reasons for managing protected (preserved) lands.

2019 percent rating preserved land management as "Essential" or "Very Important"

Approach	Percent
1. Protecting and improving water quality	92%
2. Protecting and improving wildlife habitat	84%
3. Protecting and improving natural areas	83%
4. Increasing access for outdoor recreation	73%
5. Protecting and improving land used for agriculture/other specialty crops	71%

Long-term natural resource management for public and private lands likely will be different and may be addressed through different funding streams. The 2019 online survey, while not statistically representative, demonstrated 50 percent or greater support for County program funding and/or incentives for:

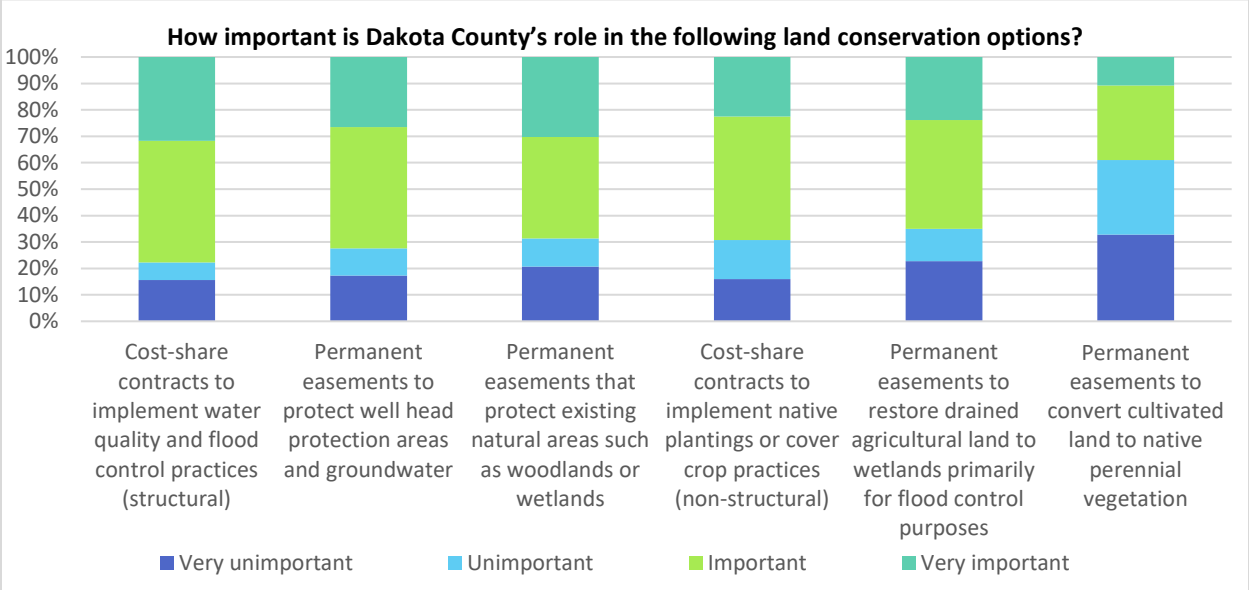
- Private landowners to restore and manage natural resources on their property
- Restoration and management of natural resources on permanently protected private lands

4. **Collaboration among agencies and organizations is needed.**
A key finding from city and agency interviews is that inter-agency partnerships will continue to be important in protecting and improving the natural resource base throughout the County. Public agencies identified constraints (time, staff, and budget) as the greatest limitation on their ability to do the level of natural resource management they believe would be beneficial.

5. **More comprehensive incentives for agricultural land stewardship are needed.**
A questionnaire designed to gain insight from agricultural landowners on their preferences and interests in land conservation received 250 responses in late 2019. The overall response rate was just over 26 percent. The responses represented a wide diversity of farm types, acres operated, land rentals, concerns for the future, environmental interests, and best practice adoption. Farm sizes ranged from under 50 acres to more than 1,000 acres, with 63 percent of respondent farms comprising less than 180 acres. Sixty percent of respondents rent out farmland to other farmers of operators.

Highlights from Agricultural Landowner questionnaire include:

How important is Dakota County's role in the following land conservation options?
Cost shares and easements to protect water quality were the most strongly supported roles. The only potential Dakota County role deemed relatively unimportant was "Permanent easements to convert cultivated land to native perennial vegetation," with an average weighted score below the midpoint of 2.0.



Local issues that create challenges:
Respondents checked off their top three challenges from a list. Property tax was the only issue cited by a majority of respondents (65 percent). Soil loss and erosion followed at 47 percent.

Challenge	Responses
Property taxes	65%
Soil loss and erosion	48%
Flooding or weather (repeated or delayed planting)	30%
Land availability or loss of agricultural land due to development	27%
Irrigation and water appropriation regulations	26%
Crop pests, diseases, and pesticide resistance	23%
Fertilizer or pesticide regulations	22%
Lack of profitable alternative crops	20%
Lack of programs for marginal crop land	18%
Soil health incentives that not available or profitable	15%
Other (please specify)	7%

What kinds of voluntary conservation incentives would you be most interested in?
The most-favored type of conservation incentive was a reduction in property tax, followed by all types of incentive payments for different practices. Incentive payments for soil health received the most support (roughly 50 percent), with lesser degrees of support for water-protective practices. Easement purchase was the least supported form of incentive payment, with the strongest support for natural area easements (24 percent).

Voluntary Incentives	Responses
Reduced property taxes for landowners that protect land or implement conservation practices	73%
Incentive payments for soil erosion control projects	50%
Incentive payments for soil health practices such as reduced tillage or cover crops	48%
Incentive payments for setting aside marginal cropland	40%
Incentives for reduced fertilizer or chemical management	38%
Incentives for irrigation or groundwater management programs	37%
Easement for protecting natural areas	23%
Easement for wetland restoration	13%
Easement for flood control	10%
Other (please specify)	5%

In general, what are the greatest barriers to adopting conservation practices?
Although no single answer choice was selected by a majority of respondents, the most frequently cited barrier was a lack of financial incentives for installing conservation practices, followed by a lack of information on available programs. Least cited barriers include the notion that practices are already well adopted and provide no benefits to the land or farm operation.

Barriers to Conservation Practice Adoption	Responses
Lack of financial incentives to install conservation practices	46%
Lack of information about what programs are available and appropriate	38%
Compatibility of conservation practices with current farming systems	36%
Conservation practices take land out of production	28%
People often prefer to manage their property year to year and conservation practices would be too restrictive	26%
Need for specialized equipment (e.g. no-till planter or reduced tillage equipment)	26%
Programs are too complicated or time consuming	26%
Conservation practices add to the complexity of farming with today's technology and equipment	20%
Lack of interest in conservation practices	20%
Conservation practices are already well-adopted	19%
Conservation practices do not have a direct benefit to one's land or operation	18%
Other (please specify)	6%

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APPENDIX 3. PLAN RESEARCH HIGHLIGHTS

This section summarizes key findings from research conducted as part of the planning process.

1. Economic and other benefits of conservation

To identify benefits associated with land protection, studies on the economic value of benefits provided by natural systems were reviewed. The degree to which these types of benefits can be described and quantified can help advance public investments in land protection and natural resource management. Economic benefits related to land protection and natural resource management are often categorized and discussed as ecosystem services (ES), and generally appear in this context.

> *Ecosystem services are the benefits people receive from nature. They encompass nature's contributions to the production of food and timber; life-support processes, such as water purification…; and life fulfilling benefits, such as places to recreate or to be inspired by nature's diversity.* [15]

ES are often categorized according to the Millennium Ecosystem Assessment,[16] created by an international scientific assessment. The four overlapping categories are:

- *Regulating services* - benefits obtained from the regulation of ecosystem processes
- *Supporting services* - services necessary for the production of all other services
- *Provisioning services* - the products obtained from ecosystems
- *Cultural services* - nonmaterial benefits obtained from ecosystems

Economic Services Often Cited in Research

Regulating services: benefits obtained from regulation of ecosystem processes
• Air quality maintenance
• Climate regulation, e.g., carbon sequestering; local change to temperature and/or precipitation
• Water regulation, e.g., aquifer recharge; flood control; timing and/or magnitude of runoff
• Water purification and waste treatment
• Erosion control
• Regulation of human disease, e.g., cholera and vectors and biological control of pests and diseases
Supporting services: services necessary for the production of all other services
• Soil formation and nutrient cycling
• Primary production
• Oxygen production
• Water cycling
• Habitat for wildlife
• Photosynthesis
• Decomposition of waste
• Pollination of crops and plants
• Seed dispersal
Provisioning services: products obtained from ecosystems
• Fresh water
• Clean air
• Agricultural and forestry products (food, fiber, fuel, and wood)

[15] Olander, L. P., D. Urban, R. J. Johnston, G. Van Houtven, and J. Kagan. 2016. "Proposal for Increasing Consistency When Incorporating Ecosystem Services into Decision Making." National Ecosystem Services Partnership Policy Brief 16-01. Durham, NC: Duke University, www.nicholasinstitute.duke.edu/publications.

[16] Millennium Ecosystem Assessment, 2005. "Ecosystems and Human Well-being: Synthesis". Island Press, Washington, DC.

• Fertile and productive soil
• Biodiversity and wild genetic material
Cultural services nonmaterial benefits obtained from ecosystems, more difficult to quantify
• Recreation, e.g., hiking, fishing, hunting
• Educational value (formal and informal)
• Aesthetic value (beauty)
• Cultural heritage
• Physical and mental health

That ecosystem services have economic value is not questioned, but the methods of value identification, valuation estimates, and local factors to consider can vary widely. Interest in ES quantification has grown among national and international governing bodies and agencies, as well as some local government entities and non-profits active in conservation. ES quantification may provide the metrics to improve project prioritization, such as prioritizing wetlands restoration. While technically complex, technological advances and ongoing research are making ES approaches a more relevant component to consider. Research, case studies, toolkits, and software continue to be developed by the scientific and academic community.

While the research conducted for this report did not involve quantification of ES economic benefits or define the best methods for doing so, example findings from ES quantification studies may have relevance for Dakota County:

Middle Cedar River Watershed, Iowa, 2011[17]
A valuation study of ecosystem service benefits in the Middle Cedar River Watershed in Iowa identified 14 categories of ES across eight land cover classes in the 1.5 million-acre (~2,400 square miles) watershed. The study estimated that the ES generated between $548 million and $1.9 billion in goods and services. Wetlands constitute only 2.3 percent of the land cover in the watershed but were found to contribute 16.5 to 30.1 percent of the total ES value. The top-ranking ES provided by wetlands was flood risk mitigation, valued at $2,544 to $3,651 per acre per year.

Global estimates of the value of ecosystems and their services in monetary units, 2012[18]
An international study team analyzed more than 320 publications over 300 case study locations around the world to yield an overview of ecosystem service values for ten major biomes. Their analysis showed that the value of ecosystem services is considerable, although values are variable due to the contextual nature of studies and inherent uncertainties in valuation.

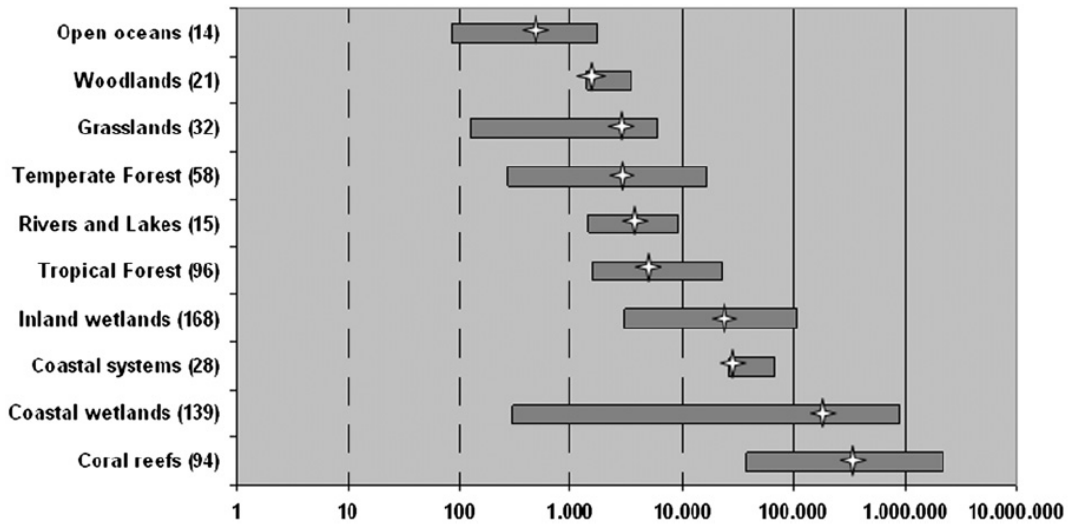
Comparative ranges of values for each biome are shown in in the following chart. Values are expressed in "international dollars" (Int. $), a hypothetical unit of currency that standardizes monetary values across countries by correcting to the purchasing power of the US dollar at a given time (2007). Benefits are stated in Int. $ / hectare (2.47 acres) / year. The numbers of studies reviewed are provided in parentheses with each of the ten biomes. Of note, inland wetlands were the most studied of the ten biomes, with 168 valuation case studies reviewed.

The reviewed studies calculated the highest ES economic values for coral reefs, coastal wetlands and coastal systems, followed by inland wetlands, which had an ES mean value of Int. $25,682/hectare/year, or

[17] Kocian, M., Traughber, B. Batker, D. (2012). "Valuing Nature's Benefits: An Ecological Economic Assessment of Iowa's Middle Cedar River Watershed." Tacoma: Earth Economics
[18] deGroot, R., Brander, L., van der Ploeg, S., Costanza, R., Bernard, F., Braat, L., Christie, M., et. al. (2012). "Global Estimates of the Value of Ecosystems and their Services in Monetary Units." Elsevier B.V

Int. $10,397/acre/year. Comparing ES valuations among biomes present in Dakota County, the reported mean ES valuation for inland wetlands was higher than for rivers and lakes, temperate forest, grasslands, and woodlands.

Range of Valuations for Ten Biomes in International$ per Hectare per Year



Summary

- A well-established body of research has established consensus that natural resources and systems provide significant societal and economic benefits
- ES valuation methods, contexts, and metrics vary
- Based on several studies, wetlands may provide more relative economic benefits than forest and grasslands

2. Context provided by related plans and programs

A. COUNTY PLANS

Dakota County's activities related to land protection and natural resource quality are mostly governed by the following plans:

Dakota County 2040 Comprehensive Plan (DC2040): adopted 2019. DC2040 identifies high-level goals and strategies for protection of natural resource quality on a county-wide basis, such as natural area protection and surface- and groundwater protection and enhancement. DC2040 also addresses natural resources protection and management in the County Park System and the Mississippi River Corridor Critical Area.

Dakota County Natural Resources Management System Plan: adopted 2017. Addresses long-term management needs and actions in the Dakota County Park System and on private land conservation easements held by the County. Greater detail is provided in individual park and greenway natural resources management plans as they are developed or updated.

Dakota County Park System Plan: adopted 2008. The Plan identifies high-level land protection and natural resources management needs and priorities for parks and greenways in the Park System. Greater detail is provided in master plans and natural resources management plans as they are developed or updated for individual parks and greenways.

Dakota County Farmland and Natural Area Protection Plan: adopted 2002. The Plan identified 36,000 acres of priority natural areas and 42,000 acres of priority farmland for voluntary protection by landowners, and established protection tools and strategies. The Farmland and Natural Areas Program required preparing individual natural resource management plans for easements enrolled in the program. This Land Conservation Plan replaces the Farmland and Natural Area Protection Plan; and the Land Conservation Program is the current version of the Farmland and Natural Areas Program.

B. STATE, FEDERAL, AND REGIONAL CONSERVATION AND WILDLIFE PLANS AND PROGRAMS

Existing plans authored by state and federal agencies and conservation organizations address conservation and wildlife issues that are relevant to the County's land conservation planning efforts. The following table highlights the reviewed plans, key recommendations or goals, notes on how the plans relate to County planning, and the potential for a County collaborative role in implementing the plans.

Conservation and Wildlife Plans and Programs Reviewed

Plan	Key Conservation and Wildlife Recommendations and Goals	Relevance to the County	County Role?
MN Statewide Conservation and Preservation Plan, MN DNR, 2008	1. Protect priority land habitats (native prairie, savanna, old-growth forest, connections) 2. Protect critical shorelands of streams and lakes 3. Improve connectivity and access to outdoor recreation 4. Restore and protect shallow lakes 5. Restore land, wetlands, and wetland-associated watersheds 6. Protect and restore critical in-water habitat of lakes and streams 7. Keep water on the landscape 8. Protect large blocks of forested land	**Y** Conservation planning and implementation	**Y** Contributor
Minnesota's Wildlife Action Plan, MN DNR, 2015	1. Ensure the long-term health and viability of Minnesota's wildlife, with a focus on species that are rare, declining, or vulnerable to decline. 2. Enhance opportunities to enjoy Species of Greatest Conservation Need and other wildlife and to participate in conservation 3. Acquire the resources necessary to successfully implement the Minnesota Wildlife Action Plan	**Y** Recommended actions for each County Conservation Focus Area	**Y** Vermillion River Watershed Conservation Focus Area
Minnesota Prairie Conservation Plan, MN DNR, 2011	1. Prairie core area–based conservation: areas of at least 10,000 acres are most functional 2. Corridor-based conservation: between core areas allows species movement 3. Local conservation: is essential and a minimum of 10% of the terrestrial lands in each major watershed outside the core areas, corridors and strategic habitat complexes should be set aside for soil, water and wildlife conservation purposes	**Limited** Western MN is the Plan focus	**N**
Strategic Habitat Conservation. Our Conservation Approach, US Fish and Wildlife Service (USFWS), 2016	1. Start with ecologically meaningful scales: larger vs smaller, may cross jurisdictional boundaries 2. Work in partnership to maximize effectiveness and efficiency: involve a diversity of partners 3. Use Adaptive Management Framework: with biological planning, conservation design, monitoring and research, science and tools 4. Use Surrogate Species to Implement Strategic Habitat Conservation: focus on outcomes for a limited number of species	**Y** Plan applies to the MN Valley National Wildlife Refuge	**Potential** Working to reduce stormwater reaching the MN River
Scientific and Natural Areas Strategic Land Protection Plan, MN DNR, 2008	1. The state's natural heritage is not lost from any ecological region of Minnesota, including: • Plant and animal communities • Rare species (endangered, threatened, special concern, and Species of Greatest Conservation Need) and supporting habitat • Places of biodiversity significance	**Y** Analyses on Biodiversity Significance Ranking, specific SNAs in County. Source of	**Y** Future SNA additions as opportunities occur

Plan	Key Conservation and Wildlife Recommendations and Goals	Relevance to the County	County Role?
	• Geological features (significantly illustrate geological processes, are of statewide significance, and significant fossil remains) • Other natural features of state or regional significance (illustrating succession of plant communities, relict flora or fauna persisting from an earlier period, and seasonal havens for wildlife) 2. The SNA system provides people with opportunities for scientific purposes and compatible nature-based recreation and education.	parallel metrics for the County	
Managing Minnesota's Shallow Lakes for Waterfowl and Wildlife, MN DNR, 2010	Increase grassland and wetland restoration and protection of native habitats in the direct contributing catchment basins of shallow lakes. • Shallow lakes provide important habitat to many environmentally sensitive species, including over 20 species listed as a Species of Greatest Conservation Need (SGCN)	**Limited** County has few shallow lakes as identified by the Plan	**N**
Metro Conservation Corridors Program, MN DNR, to 2006	1. Establish priorities, coordinate work by the partner organizations and focus on areas with greatest regional importance as core habitat, habitat corridors, buffers for existing protected land, and increase public access to nature-related recreation. 2. Protect and restore priority natural lands in focus areas: • Restore habitat on up to 1,700 acres of private and public land. • Protect land by acquiring fee title and conservation easements from willing landowners on about 600 acres. Note: Program is currently not active and has not been funded since 2011	**Y** Areas in County identified by Program	**Potential** Depends on Program status in the future
Federal Species Listing, USFWS, 2016	Dakota County is home to several species on the federal threatened and endangered species list: • Northern Long-Eared Bat • Higgins Eye Pearly Mussel • Rusty Patched Bumble Bee • Prairie Bush Clover (potential) Plans provide guidance for protection and management of these species	**Y** Areas of County provide habitat for these species	**Y** County owns-manages land that could provide habitat for these species
MN White-Tailed Deer Management Plan, MN DNR, 2019	Plan Goals most relevant to Dakota County 1. Healthy Habitat: Maintain natural wildlife habitat by protecting, enhancing and restoring habitat and by managing for an appropriate number of deer. 2. Impact of Deer on Other Resources: Reduce negative impacts of deer to the land, resources and other species, including people.	**Y**	**Y** As manager of public lands in County
Urban Bird Conservation for the Twin Cities and Surrounding Area, Audubon Minnesota, 2012	The guide draws on expertise of agencies, municipalities and conservation organizations to ensure that: • key habitats are protected or enhanced • threats and hazards to birds are identified and reduced • residents and citizens are engaged in conservation action • scientific monitoring needs are identified and supported	**Y** Identifies mgmt. goals and habitat in County, includes Important Bird Area	**Y** As manager of public lands in County
Blueprint for Minnesota Bird Conservation, MN DNR, 2014	Identifies target bird conservation species and outlines habitat protection and management goals for these species in the MN Prairie Hardwood Transition Region, including Forster's Tern, Red-Headed Woodpecker, Wood Thrush, Louisiana Waterthrush, Prothonotary Warbler, Cerulean Warbler, Eastern Meadowlark, Yellow-Headed Blackbird, Loggerhead Shrike, Black Terns, Trumpeter Swans, Henslow's Sparrows, and Wood Ducks	**Y** Identifies habitat in County	**Y** As manager of public lands in County
Birds of Conservation Concern, USFWS, 2008	Identifies the migratory and non-migratory bird species (in addition to federally threatened or endangered) that represent the Service's highest conservation priorities.	**Y** Helps determine land protection and restoration goals	**Y** As manager of public lands in County
Specific Bird Species	A number of species-based plans prepared by organizations and agencies address habitat protection and management for the Upland Sandpiper,	**Y**	**Y**

Plan	Key Conservation and Wildlife Recommendations and Goals	Relevance to the County	County Role?
Conservation Plans, various	Grasshopper Sparrow, Loggerhead Shrike, Red-Headed Woodpecker, Cerulean Warbler, and Henslow's Sparrow.	Helps determine land protection and restoration goals	As manager of public lands in County
Long-Range Duck Recovery Plan, MN DNR, 2006	Increase breeding population of waterfowl 1. Importance of protection and restoration of wetlands 2. Importance of protection and restoration of adjacent grasslands	**Y**	**Y** Contributor
The Wisconsin Pollinator Protection Plan, WI DATCP, 2016	1. Expand the quality and quantity of habitat for managed and wild pollinators (includes road right-of-way) 2. Minimize stressors on managed and wild pollinators 3. Increase managed beehive health and survival 4. Outreach (Spread the word on pollinator friendly practices)	**Y** Specific methods apply to the County	**N**
Pollinator Plan, MN Board of Water and Soil Resources, 2019	1. Protect pollinator habitat through wetland protection and restoration. 2. Incorporate pollinator habitat protection and restoration planning into conservation easement projects. 3. Incorporate pollinator habitat into agricultural conservation practices. 4. Incorporate pollinator habitat into urban water quality projects	**Y**	**Y** In the selected goals listed
Mid-America Monarch Conservation Strategy, Midwest Assn. of Fish and Wildlife agencies, 2018	Presents approaches to increase Monarch Butterfly in the Upper Midwest-Great Plains and identifies supporting programs and funding sources. Minnesota goal is to add 187,200,000 milkweed stems in the Core Conservation geography of the state by 2038. MN strategies include: • Conduct pollinator habitat inventory and analysis to identify existing habitat for conservation and high-priority areas for protection, restoration, and enhancement. • Maintain, restore and enhance monarch habitat on permanently protected lands. • Maintain, restore, and enhance monarch and pollinator habitat in rights-of-way. • Maintain, restore, and enhance monarch and pollinator habitat on agricultural lands. • Maintain, restore, and enhance monarch and pollinator habitat on urban and developed lands and other private, non-agricultural lands.	**Y** Potential habitat is present in the County	**Y** As manager of public lands in County

Summary

- Plans identify many overlapping areas of interest and need
- Current focus areas include Species of Greatest Conservation Need and pollinators
- Climate uncertainty is recognized in some of the more recent plans, although the best way to address this uncertainty is still evolving
- Most plans speak to partnership opportunities and needs

C. WATER PLANS IN DAKOTA COUNTY

The purpose of the inventory and assessment was to research existing comprehensive planning documents as they relate to developing long-term land protection goals for water or wildlife management purposes. The following plans were reviewed:

Dakota County Soil and Water Conservation District (SWCD)

The SWCD Comprehensive Plan (2016-2025) identifies a number of county-wide objectives and strategies to protect and restore surface water quality, groundwater quality and supply, restore wildlife habitat and improve soil health. Specifically, the Plan indicates the SWCD will work with Dakota County to:

- Develop a conservation easement program for wetland restorations to reduce flood impacts

- Develop a conservation easement program for riparian areas to reduce flood impacts
- Establish conservation easements over designated floodplain areas currently in either agricultural production or urban use to reduce flood impacts
- Collaborate on easement programs to install pollinator plant communities to restore habitats.

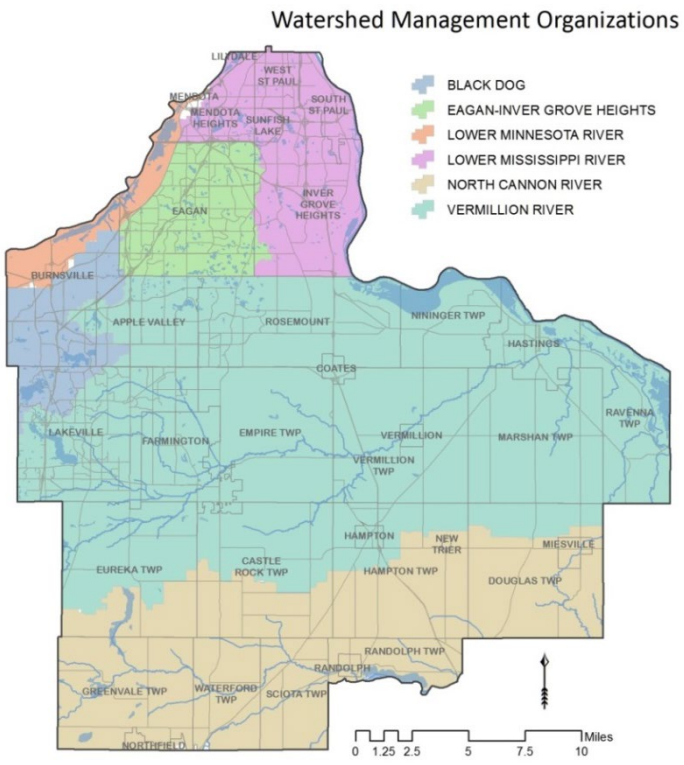
The SWCD is responsible for assisting the Minnesota Board of Water and Soil Resources to implement State easement programs such as the Reinvest in Minnesota, Conservation Reserve Enhancement Program and Wetland Banking easements under the Minnesota Wetland Conservation Act.

The SWCD Plan identified the need to develop individual sub-watershed analysis (SWA) whereas water quality improvement projects are identified at a smaller watershed scale to prioritize projects with the highest estimated cost/benefit. Four SWAs were completed by the end of 2019. The SWAs primarily look at soil loss and phosphorus loading since current modeling tools are most appropriate for those pollutant indicators.

Black Dog Watershed Management Organization (BDWMO)

The BDWMO Comprehensive Water Management Plan (2012-2022) has multiple water quality initiatives, identifies priority resources and seeks to protect and enhance fish and wildlife habitat. However, it does not specifically identify locations or land areas to pursue long-term protection options. Rather it includes more general statements such as it will preserve and enhance the quality of open space, protect and enhance fish and wildlife habitat and protect and increase recreational opportunities.

WMOs in Dakota County



North Cannon River Watershed Management Organization (NCRWMO)

The NCRWMO Comprehensive Water Management Plan (2013-2023) has multiple water quality initiatives, identifies priority resource areas and seeks to protect and enhance fish and wildlife habitat. It identifies the goal of wetland restoration projects within the Chub Creek Watershed but does not specify a method of protection such as easements, acquisition or cost share contracts. The NCRWMO Plan also identifies working with the DNR to develop a management plan for the Chub Lake Wildlife Management Area and to advocate with Dakota County the preservation and protection of critical natural areas, farmland and wetlands in the watershed for wildlife, habitat and recreation.

Eagan-Inver Grove Heights Watershed Management Organization (E-IGHWMO)

The E-IGHWMO Comprehensive Water Management Plan (2016-2025) has multiple water quality initiatives, identifies priority resources and seeks to protect and enhance fish and wildlife habitat. However, it does not specifically identify locations or land areas to pursue long-term protection options.

Rather it has more general statements such as it will protect and enhance fish and wildlife habitat and water recreational facilities.

Lower Minnesota River Watershed District (LMRWD)
The LMRWD Comprehensive Water Management Plan (2018-2027) has a number of water quality initiatives. Namely, it has listed strategies to develop a mechanism for identifying and acquiring high value natural area conservation easements and encouraging wildlife connectivity projects that achieve multiple goals such as water quality improvements, fen and steep slope protection. Of note, it also includes a strategy to develop vegetation management standards. Since the LMRWD Plan also includes significant portions of Hennepin, Scott and Carver counties, it is unknown what opportunities exist within the Dakota County portion of the watershed.

Lower Mississippi River Watershed Management Organization (LMRWMO)
The LMRWMO Comprehensive Water Management Plan (2011-2021) has multiple water quality initiatives, identifies priority resources and seeks to protect and enhance fish and wildlife habitat. However, it does not specifically identify locations or land areas to pursue long-term protection options. Rather it has more general statements such as it will evaluate and pursue locations to conduct wetland restoration projects or reduce future flood potential. The LMRWMO does not identify a specific method of protection.

Vermillion River Watershed Joint Powers Organization (VRWJPO)
The VRWJPO Comprehensive Water Management Plan (2016-2026) has multiple water quality initiatives, identifies priority resource areas and seeks to protect and enhance fish and wildlife habitat. It identifies the goal of establishing wetland banks in the watershed, which is a State sponsored easement program. The VRWJPO Plan does not identify specific locations or methods for the long-term protection of water or wildlife management but does identify collaboration with others including Dakota County to evaluate long-term land and water protection opportunities. It was noted that the VRWJPO Plan also includes the development of SWAs mentioned above and has collaborated with the SWCD under this initiative.

Key Findings for Water Plans

- The general plan focus is on water quality and quantity, although some of the newer plans also discuss wildlife habitat.
- The plans make limited reference to land protection and easement acquisition, but the need exists, and most watershed management organizations do not acquire land.
- Sub-watershed analyses will help identify specific areas for enhanced conservation practices specific to sediment and phosphorus loading within sub-watersheds.

D. CITY AND TOWNSHIP PLANS IN DAKOTA COUNTY

Staff reviewed current 2018-2019 comprehensive plans prepared by the eleven large cities, several small cities, and 13 rural townships in Dakota County for land protection and natural resource goals.

City Plans
Most of the larger cities in Dakota County have some staff dedicated to land protection and natural resource management, most typically in parks departments.

Land Protection: the following themes were noted related to permanent land protection:

- More than half of the city plans identified the need for open space/natural area protection not related to parks acquisition, and some referenced working with Dakota County on land protection.

- Roughly half of the large city plans called for connecting habitat corridors linking natural areas, not necessarily greenways as defined by County plans.
- Fewer city plans identified protection needs for wetlands and floodplain. At least one city seeks permanent protection of floodplain.
- Six cities are within the Mississippi River Corridor Critical Area (MRCCA) and their Comprehensive Plans included a MRCCA component. Several city plans considered protection of bluffs, steep slopes, and floodplain within their MRCCA section.
- Relatively fewer cities in Dakota County have farmland or are adjacent to farmland, and a few of the cities include a goal of protecting prime farmland or farming in their comprehensive plans.
- Most city plans referenced land protection as part of their parks system chapter, either acquiring land for existing parks or adding new parks in response to population growth and development.
- Most city plans also referenced working with the County Greenway Collaborative on protecting land for greenways in their cities.

Natural Resources Management: Greater variability was seen among city plans related to natural resources management, in part related to the community's vision, location, natural resource base, age and degree of development. Relatively few cities appear to have a stand-alone natural resources management plan for either their park systems or at a community wide level. Burnsville is an exception, with a citywide Natural Resources Management Plan and a citywide Wetland Management Plan. Several city comprehensive plans called for future development of either a park system natural resource management plan or a citywide environmental plan.

Common natural resource management goal areas presented in city comprehensive plans include:

- Invasive species management
- Native species enhancement (more commonly in parks)
- Surface water quality
- Sustainability (e.g., waste reduction, energy conservation)
- Education to residents on a range of environmental topics

Rural Collaborative Plan

Most townships in Dakota County (with the exception of Eureka and Sciota) participated in the Rural Collaborative Comprehensive Planning process. The Collaborative Plan land protection and natural resource management policies are highly consistent with the County's, as the following excerpt shows:

Environmental Resources Policies:

- Work cooperatively with Dakota County and other organizations that support the goals of protecting natural areas and corridors in southern Dakota County.
- Develop and implement a protection and management plan for natural areas that includes:
  - A cohesive system of natural areas connected by natural corridors
  - Areas identified and prioritized for preservation, protection, or restoration
  - A functional classification of natural areas based upon appropriate use, including recreation, preservation, hunting, agricultural, private
  - Land protection strategies for targeted areas, including voluntary conservation plans, donation or purchase of conservation easements, transfer of development rights, purchase of development rights, acquisition

  - Strategies and standards for the long-term management of natural areas
  - A description of partnerships with other units of government to protect shared natural areas
  - Innovative and appropriate natural area agricultural practices
  - Funding and funding sources
- Work with Dakota County and Dakota SWCD to identify, evaluate, and map locally important natural areas.
- Enforce provisions in local ordinances that provide for and promote the protection of regionally and locally-important natural areas, including:
  - Protection of undisturbed natural areas in southern Dakota County
  - Protection of natural areas with scientific, cultural, or local significance
  - Protection and enhancement of the ecological diversity of southern Dakota County
- Involve citizens and stakeholders in the planning process and in programs for managing and restoring natural areas
- Use park dedications or cash-in-lieu donations in new cluster developments to acquire high quality natural areas
- Encourage permanent set-aside programs to create and protect open space, create wildlife habitat, protect surface and ground water quality, and reduce erosion and sedimentation in streams
- Encourage the use of native species in plantings where soil disturbance requires long-term erosion control, through local ordinance regulation and WMO standards, on public lands, reclamation projects on private land, natural areas, and similar projects
- Actively seek funding to acquire priority areas
- Support education of residents to increase the knowledge, skills, motivation, and commitment to work individually and collectively toward protecting natural resources

3. Program Opportunities

Program refinements to assist participating landowners were explored. Known gaps to address include:

- Adequately addressing the long-term natural resources management needs on private easements. Most funding sources currently used by the Program do not cover long-term management costs.

- Seeking greater tax equity for easement lands that no longer generate income. Land enrolled in the program continues to be taxed at its pre-enrollment rate, typically the tax rate for agricultural land. At the same time, local governments depend on existing tax base.

A. POTENTIAL LANDOWNER INCENTIVES

As noted in discussing program gaps, landowners are ultimately responsible for long-term natural resource management on their land protected by easements, and funding to assist them is often limited to initial restoration. The gap occurs when ongoing maintenance of restored areas continues beyond a required three-year period, after which funding assistance may no longer be available to landowners. In addition, landowners often continue to pay the same level of property tax on land in easements, whether or not the land is in agricultural production and generating income. Staff from Dakota County's Office of Performance Analysis explored two potential means of reducing tax burden to encourage residents to participate in conservation easements or transfer of fee title for conservation easements:

- Targeted reduction in property taxes for those with conservation easements
- County tax credits for residents participating in the conservation easement program, similar to federal income tax deductions for charitable contributions

Reduction in Taxes: Minnesota Statutes 2018, section 273.117, Conservation Property Tax Valuation, rules out property tax reduction for conservation easement purposes, but subsection (b)(2) provides Dakota County a unique exception as the County adopted the Farmland and Natural Areas Program (FNAP) via referendum. As a result, Dakota County has the option and authority to reduce valuations of property subject to a conservation restriction or easement. Dakota County makes some use of this, re-classifying the property tax of parts of some private lands with conservation easements in order to reduce the fee title owner's associated property taxes and provide a financial incentive to landowners to participate in the conservation easement program.

Property tax assessments are based on the "highest and best use" of a parcel, and the restrictions placed on parts of a property by a conservation easement reduce the potential "highest and best use" of that given parcel. Assessing staff noted that property tax reductions that are granted result in a *de mimimis* shift of the tax burden to the rest of Dakota County taxpayers. In other words, the difference between the assessed highest and best use property tax valuation prior to the conservation easement and following a conservation easement will be shared and paid by the other county taxpayers.

Potential Tax Credits: Like other charitable contributions, the donation of a conservation easement may allow the landowner to claim a federal income tax deduction for the value of the easement.[19] Perpetual conservation easements can be used to gain up to a 50% federal income tax deduction off of adjusted gross income in a given year, with a carry-forward of an additional 15 years, and up to a 100 percent federal tax deduction for 16 years in the case of agricultural lands. [20]

Minnesota is not one of the 15 or so states that provides landowners with state income tax credits for gifts of land or easements.[19,21] Attempting to change Minnesota state law is not likely to be successful at this time, but is an area to keep an eye on for the future as a number of other states do have relevant state statutes in place.

There is precedent for offering tax credits at a county-level, but no examples were found of counties that offer such credits that were not located in states with state-level income tax credits for such a purpose. For example, of the 24 counties in Maryland, 10 counties offer county property tax credits for perpetual conservation easements.[22] These vary in their terms, with lengths ranging from 1 to 5 years and amounts of the credit ranging from a set percent of associated county property tax obligations (e.g., 75-100 percent) to a set dollar amount cap (e.g., up to $500). As a result, it appears there is no precedent for a county offering tax credits for easements when there is not a related state income tax credit in place.

Summary

- Tax credits may be the most feasible option that would not impact tax base for LGUs or shift taxes to other payers

[19] Helland, J. Conservation Easements. *Information Brief.* (2005). Minnesota House of Representative Research Department.
[20] Hendrickson, V.L. What are the tax perks of donating land in the U.S.? *Mansion Global.* January 3, 2019.
[21] The history of Colorado's state income tax credit, as well as unintended consequences such as the fragmentation of property by landowners to maximize eligibility for the tax credit and the creation of pass through LLCs by non-Colorado residents for the sole purpose of qualifying for the credit, is described in: Jay, J. Changes to Colorado's Conservation Income Tax Credit Law. *Real Estate Law Newsletter*. 2003. 32(2).
[22] County Property Tax Credits. Maryland Environmental Trust Fund. September, 2015.
http://dnr.maryland.gov/met/Documents/PDFs/County%20Tax%20Credit%20Embedded%20Links9.14.15.pdf

APPENDIX 4. PUBLIC REVIEW COMMENTS

A. COMMENTS FROM INDIVIDUALS

206 individuals, including residents of Dakota County or adjacent counties, wrote to express their support for the Land Conservation Plan. Support statements include open-comment letters and template letters developed by two environmental organizations, Conservation Minnesota and Friends of the Mississippi River.

Open Comments

47 people wrote open letters expressing support for the draft Land Conservation Plan, and of these, two commenters had questions about aspects of the draft Plan. Staff responses are included with these letters.

Name	Comments
Alexis Ludwig-Vogen, Mendota Heights 5/24/20	To the Dakota County Planning Commissioners, I recently read through the Dakota Country Draft Land Conservation Plan and am very pleased with the increased focus on restoration and conservation of the county's natural spaces. When my spouse and I were searching for a place to raise our family, the surrounding natural environment was a key deciding factor. We've now lived in Mendota Heights for fifteen years and have frequented Dakota County parks, trails, equipment rentals and events. Having access to see and explore those natural spaces greatly enriches our lives and makes us dedicated Dakota County residents. It's so important to make sure that conservation keeps pace with the rapid development expected in Dakota County. It's critical that all Dakota County residents - whether now or in 50 years - have access to natural spaces. Equally critical is to ensure that the natural resources - air, water, land - can sustain the growing population. I've always been proud of Dakota County and its bounty of natural space. Seeing this plan come to fruition will only deepen that pride. It's well worth the investment. Thank you,
Amy Storbakken Saint Paul 5/18/20	Friends and I regularly go to Spring Lake Park to ski, bird watch, enjoy the view and prairie. It's a scenic drive and feels like getting away. We usually eat out in Hastings afterward. Visiting parks is my go-to activity with friends and family. There is always something to enjoy. In years past I worked at Three Rivers Parks and at Itasca State Park. Visitors often commented that parks were the best thing done by government. People came on their anniversaries, for family reunions, and to enjoy a few last moments with a dying relative. Thanks for working on parks and open spaces.
Brian Huberty Marshan Township 4/29/20	Hi Dakota County Planning, Overall the plan is good, but there are two major gaps. As the report states: "Identify and prioritize significant natural areas and connecting corridors for voluntary protection and increased resource management, especially for wetland restoration and water retention on the land." 1) The plan should use the latest Minnesota version of the National Wetland Inventory for a base map https://gisdata.mn.gov/dataset/water-nat-wetlands-inv-2009-2014 PLUS the potential Restorable Wetland Inventory Map from the U of MN NRRI: https://mnatlas.org/ Not listing these sources under the Conservation Focus Areas discussion is a bit embarrassing. Both of these sources provide a finer scale of derived products.

Name	Comments
	However, the plan does mention the lack of drain tile data which is very good! But there needs to be a plan on how to rectify this problem. Good luck with trying to make drain tile maps. Not trivial as you well know. 2) The other gap is Dakota County's position in the migratory bird flyway. Every year, I watch flocks of ducks, swans, geese detour around Minneapolis, St. Paul by heading west from Hastings to avoid the metro area. This is where the wetlands or lack thereof are needed as stop over points for migratory birds. This should be a major part of the plan. ***Staff Response*** Thank you for reviewing the draft Land Conservation Plan and for your comments. Our experience is that the National Wetland Inventory is always a good starting point, but often misses many wetland areas. We did review the Restorable Wetland Inventory in our first phase of our restorable wetland inventory. We used a very similar process, but fortunately have even better MLCCS data for the County. We also used an additional, innovative GIS tool developed by the DNR/BWSR/MN IT Services. We went through an intensive process by manually "burning in" all major culverts into the County's one-meter resolution LiDAR digital elevation model to ensure water was routed properly. This is an important step since LiDAR data effectively shows all roadways as dams and therefore modeling water flow without manually entering culverts is problematic. We also removed man-made structures (e.g. roads, railroads, etc.) and smoothed out ditch features. We then ran the GIS process to systematically identify historic natural depressions and potentially drained wetlands across the County. Drain tile is still an unknown, but we can often assume where a property is in agricultural use and features hydric soils, drain tile is likely present and there is a restorable wetland opportunity. Currently, there are other GIS tools being developed to predict which fields are tiled. In the end, the largest projects in our inventory were quite similar to those we knew from the start - large tracts of currently cultivated parcels with underlying hydric soils. We certainly recognize that the County is located within this incredibly important flyway for all types of birds, including waterfowl. We'll look for the right place in the Plan to highlight that fact. The Plan includes increasing biodiversity as one of our key goals and we believe that this can best be accomplished by protecting, restoring and improving connected habitat throughout the County. With regards to waterfowl, we believe the major emphasis that we are placing on restoring larger tracts of wetlands in the rural portions of the County will create those important stop-over areas so important to migratory birds, as well as providing many other public and ecological benefits. This is going to be challenging work, but it is critical if we are going to successful. Please let me know if you have additional questions or comments. We hope that you can support this Plan and also participate in some way during its implementation.
Chris Erickson Dakota County 4/28/20	Thank you so much for your hard and thoughtful work on this Land Conservation Plan. When we first moved into the County, there was still a lot of undeveloped land here. Now we are getting so big, and we are afraid of losing the natural beauty that attracted us here. I am especially distraught about the new housing developments that clear-cut all the old trees. Even if they are replanted, it will take years and years to restore their value. Keep up the good work and help us to do a better job of caring for this beautiful gift of land.
Chris Erickson Lakeville 5/13/20	I would like to see more emphasis on regenerative agriculture as a conservation measure for the County's land use plan. Thank you.

Name	Comments
David Hohle South St. Paul 5/11/20	I continue to value the Mississippi River Regional Trail and frequent both South St Paul and Inver Grove sections. It's great to see how much usage it gets, and I enjoy being along the river and open spaces. I've been an advocate for the river trail for years and support the co sections and amenities that continue to enhance the experience. I strongly support the continued funding and investment in the natural resources. Thank you for your work on behalf of all citizens, but especially the local people.
Dawn Gaetke Inver Grove Heights 5/14/20	I write in support of the Draft Land Conservation Plan for Dakota County. I believe that the proposed CFAs are a necessary step to preserving water quality, both surface and ground water, in our county. I also laud the partnering approach taken by the county in the plan. I believe that only county, state, and city agency cooperation with private land owners and citizens will give any plan a fighting chance. As a County plan this is an excellent base from which cities can enhance individual city plans should they so choose.
Deborah Churchill Burnsville 4/28/20	Lebanon Hills is a treasure! I love the miles of natural trails for hiking, skiing and snowshoeing. The open areas, lakes, trails, birds, visitor center, picnic shelters are all wonderful! Spending time in nature is therapeutic -- and the open spaces are great habitats for animals. I strongly support continued funding and investment in our Dakota County parks. The parks are one of the main reasons I remain in Burnsville, rather than move to St. Paul. Thank you so much for your careful stewardship of these green spaces in our county.
Denise Louis Apple Valley 6/25/20	Dear Office of Planning, I was active in 4 years of information and planning and the campaign for the Dakota County land preservation referendum in 2002. We were amazed not only for buy-in but people actually wanting to donate land. Protecting open space is very important to residents and more crucial now more than ever! PLEASE make the investment and act quickly to implement the Land Conservation Plan. I'm proud to live in our county and want to thank you all for doing a great job! Finding ways to protect the areas identified in the plan now will yield dividends for many years to come, helping to protect Dakota County's water resources, wildlife habitat and quality of life for our residents and others who make special trips to visit. I'm surprised how many in my Facebook groups visit our area because of these efforts (and no doubt spend money at local businesses).
Derek Nelson Inver Grove Heights 5/18/20	I love going to Lebanon Hills Park to immerse myself in the native prairie and oak savanna restoration that has occurred. Such high-quality ecosystems are hard to find in the metro area. The protection and conservation of natural areas has never been more urgent given accelerating habitat loss and climate change that threatens extinction of many species. I support continued investment in our natural areas and believe it will pay dividends for future enjoyment and health of Dakota County residents. Thank you for the opportunity to express my support for the continued funding of natural area conservation efforts in Dakota County.
Diane Horsager Lakeville 4/13/20	Please support the Dakota Co Land Draft Plan in preserving our parks and refuges and clean water. These are among Minnesota's most valued resources. I'm a Lakeville resident.
Gail Lewellan Mendota Heights 5/22/20	The Draft Land Conservation Plan for Dakota County is comprehensive, ambitious, and professional in its identification of the scope, challenges and goals for conservation in our county. I support its adoption as a plan for Dakota County. Many thanks to the staff of Dakota County and all of the collaborators who worked to develop the Plan. As a citizen of Mendota Heights, I hope that our city will be out front in working with Dakota County within the framework of a City-County Conservation Collaborative. The presence of two Dakota

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	County staff members on the Mendota Heights Pilot Knob/Oheyawahe Task Force is a good step in that direction. I am grateful to live in a County that conscientiously devotes resources to the stewardship of the land we occupy. These efforts will improve our health, our quality of life, and our legacy for future generations.
Jamie Nicolai West St. Paul 6/30/20	Dear Office of Planning, Within Dakota County, one of the natural areas that I especially value is Thompson County Park. When I was working as a teacher in Independent School District 197, I had the opportunity to take kids to the lake to conduct water quality testing. It was such a powerful experience for both me and the students, putting them in a position in which they were citizen scientists, using their data to determine the health of the lake in order to make recommendations to better protect or maintain the quality of the water and aquatic habitat. Parks, greenways and natural areas are so vitally important to me. My husband and I have regularly commented that we are fortunate to live where we do in the cities, expressly because we have these green spaces in our community. It is a luxury that we have such ease of access to tracts of trees, ponds and wildlife. Having a place to go in which the noise of traffic disappears and is replaced by the sounds of birds and squirrels chatting as the breeze ripples through tall grasses and leaves, is an effective balm for soothing the stress of everyday life. As populations continue to rise, there has been an increased demand on property development. While in the short term it may appear more lucrative to use available land for new construction, it is in fact the preservation of green space or perhaps the conversion of empty lots to lush and natural spaces that add value to communities. As we continue to preserve and develop our green spaces, we increase the monetary value of existing properties. By striving to protect our parks and waterways, we also do our part to mitigate the ill effects of climate change. My hope is that while you are continuing to plan for the development of green space, you actively seek out reliable, sustainable sources for funding. It is not enough to plan, though careful deliberation is a necessary step, but you must also have an eye towards securing the funds to pay for these essential projects. While federal and state grants are a critical source of funding, please know that as a resident and tax payer in Dakota County, I am proud to have a portion of my taxes used on the betterment and protection of our natural spaces. I thank you for taking the time to read this letter and allowing me the opportunity to share my thoughts. Your public service and commitment to our communities is greatly appreciated.
Jayne Hager Dee 5/15/20	Thank you for the opportunity to comment on the Land Conservation Plan for Dakota County. Of course, I am in favor of preserving quality natural resources in Dakota County. Of course, I am in favor of protecting groundwater for the future. And, of course, I am in favor of county, city and township collaborations to encourage the wise use of taxpayer funds. In concept, I am in favor of the Land Conservation Plan, but the elements of why new natural or agricultural areas would be protected, who would be able to access these areas for public use and when is not clear. I have some questions and comments after reading the document: The impression given by some of the interested statewide conservation/environmental groups to the public is that this Plan will lead to more parks for recreation in Dakota County. I don't specifically see that in the Plan. If that is true, how will these parks be organized? How will they be prioritized? I see this Plan protecting or restoring natural areas, not creating recreational parkland. That then raises the question, are we looking at preserving this property for longer term preservation's sake? Or is

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	there a Part II Plan coming that will specifically reveal the future uses for this preserved land? Will that include parks? If the Plan is to preserve property for a longer term vision without or limited public access for the near future, then the Plan should indicate that. How will this land be acquired? Before any land transfer is discussed, there must be willing landowners. Are there willing landowners within the Conservation Focus Areas? Most landowners are willing, if the price is right. Will there be differences in landowner compensation between Focus Areas? Are landowners already identified? How were they identified? Funds from the 2002 Dakota County Farmland and Natural Areas Protection Program have been spent. Where will funding for this program come from? Assuming that there is funding available, will access to the land be done through the use of easements? How would the county find willing landowners? Who would conduct the rural outreach? If a landowner wants to pursue an easement but the community and land use authority sees the easement as a detriment to long term planning, how will that be addressed? What activities could legally be conducted on these easements? The landowner still owns the land. Activities would be dependent upon what that landowner would allow. Would hunting be allowed? Could I fish on that little stream that runs along the edge of the easement? Could I hike on the land? Could I bring my dogs for a run? My husband and I own agricultural land in another state. Our land is posted "No Trespassing." Even with an easement, public use would not be permitted on our property. I don't think we are much different than a typical rural landowner in Dakota County. So, again, besides protecting these parcels of land, for what public use are they being protected? How does this Plan interface with the pending Groundwater Plan? In my mind, clean surface water, ground water and improving natural areas should be Dakota County's long-term priority. There are mechanisms (and existing county departments/organizations) to continue this work already in place. If Dakota County is looking to continue with a farmland and natural area easement program, it should be more clear on what the public purpose and public use will be for these easement areas. *Staff response:* The intent of this Plan is to protect existing, unprotected natural areas; additional areas that might connect, expand or buffer these lands and other lands that could provide other public benefits such as infiltrating/retaining surface water. The other primary focus is to improve natural resource restoration and management on public and protected private land. There is also an intent to protect and expand multi-purpose corridors that may be the site of planned, future regional greenways. While the plan focus is not to create new parks, there may be opportunities to work with cities to create expand existing parks or create new local parks. While some level of public access to newly protected private lands may be in the public interest, individual landowners will make those decisions which is not a condition of program participation. Language will be strengthened to reinforce this message. All land acquisition will be based on decisions made by landowners who choose to voluntarily participate in the Land Conservation Program. Land protection will utilize the types of approaches the county has relied on for its efforts over nearly 20 years, as well as new options that may be more appealing to landowners. Fee title acquisition by other public entities with assistance by the county or thought outright acquisition by the county will also be considered as it has in the past. Landowner compensation within and between CFAs will be based on appraisals conducted by individual appraisers following accepted professional practices. The Plan also contemplates developing and applying consistent valuation formulas similar to what is used by the State Reinvest in Minnesota Program.

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	Landowner information is readily available as part of the county's tax parcel data. Contact information from this source will be used to conduct outreach to all landowners eligible for the Land Conservation Program, focusing on the new CFAs as a primary eligibility area. Program funding is anticipated to come from varied external and County sources, although financial implications of the COVID-19 pandemic to program funding are unknown at this time. Public access to any protected private will be discussed with every landowner during the initial and final stages of the land protection process. One such approach is to acquire an access easement where, for example, an angler could gain access to fish along a stream or river. Ultimately, any public access will only occur with the permission and approval of landowner. As mentioned previously, if any land acquired in fee by another public entity or the County public access would be provided according to individual jurisdictional rules and policies. Program staff will initiate landowner outreach efforts after Plan approval to gauge their interest in working with the County and other partners to explore conservation options. Initial CFA planning and individual land protection projects would be coordinated with the local governmental unit to minimize existing or future conflicts which, if they exist, require additional discussion. There is an extensive list of prohibited and allowed uses as part of every conservation easement that the landowner, family and guests must follow. This is designed to protect the conservation values while allowing the landowner to still use and enjoy the property. Public use is typically not welcomed by owners of protected private land except in special cases. Easements will accommodate the activities that the landowner wishes to allow within the easement requirements. Passive recreational activities such as fishing, wildlife observation and hiking would be the most common uses where landowners are willing to allow some level of public access. Although the majority of the important groundwater protection/ recharge areas identified in the Groundwater Plan are outside of the preliminary CFAs, there are some overlapping areas. The Land Conservation Program has experience and tools that could benefit the County's efforts to protect groundwater, such as permanently protecting highly vulnerable or significant recharge areas, or funding larger scale, wetland restoration projects. The intent of this plan is to use a variety of conservation approaches with willing landowners to provide a wide range of public benefits which are described in the Plan. These potential goals and benefits, which can include enhance public access, will vary greatly between different areas of the county and different landowner objectives. The Plan is to more effectively continue the work that the County and others are doing in a more integrated and comprehensive manner with additional innovative approaches. Ultimately, since this is a voluntary plan, the outcomes will depend on private and public landowner interest and participation. Plan language will be clarified and strengthened.
Jean Zacharias Apple Valley 6/2/20	Hello, Dakota County Planning Team! That is quite a document that you put together and I truly appreciate all of the time and effort that went into it. The area that really caught my attention had to do with the Projected Groundwater Drawdown, which if memory serves me correctly at one time I read someplace that even places like California wanted to start taking some of the water from Dakota County for their purposes, but I can't recall where I read that. There are a few things that got me thinking about water in particular and it's understood that cities may balk at the idea of this purely from a revenue generating perspective, but I can't help but wonder how many water parks need to be within Dakota County and what type of water saving practices are already in use within pre-existing water parks. The other part of water consumption that got me to think twice had to do with people watering their lawns, which is something that I've never done because I learned from my parents decades ago that

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	not watering your lawn teaches the grass roots to truly go down to find water and not up; even if it goes dormant, it will come back. I have a vegetable garden and any watering that I do, which is actually quite rare is always done by hand. It seems that watering lawns especially needs to be something that needs to be rethought. Private in-ground pools are another story. I live in Apple Valley and my guess is that as accurate as the new water meters are that have been installed that there is no way to specifically figure out exactly how water is used within any given household--unlike how they seem to be able to figure that out for natural gas usage. Exactly how water is used at any given address can't really be monitored, but if Dakota County could put a number to how many people and pets live/work at a particular address it may be possible to come up with a realistic water usage number based on that information and when excessive amounts are used that a household/organization pays a higher price for water usage above that amount. That may already be something that's done, so I apologize if that's the case, but I had to bring it up nonetheless. It's also known (since I've done storm drain stenciling before in my neighborhood) that a lot of people that have storm drains in front of their property don't properly clean the drains out on a regular basis, which leads to flooding and unwanted things beyond foliage and dirt going down those drains during storms. I wish that more people would take responsibility for said storm drains. Realistically, I don't know if I came up with any ideas and/or comments that you haven't already heard, but because I know that Dakota County means it when they ask for comments, I'm willing to share my comments even if they repeat anything you've already seen and/or thought of. Keep up the good work and know that the foresight that you're putting into the future of the County for generations to come is greatly appreciated. We all need to be good stewards on many levels for the present and future.
JoAnn Pasternak Mendota Heights 4/20/20	Dear Commissioner Egan, I just skimmed the draft of the County Land Conservation Plan and was very impressed with the thought and research that went into preparing it. I am exceedingly concerned with the degradation of land and water quality in Dakota County and beyond. I feel that this plan will be a giant step forward to maintaining and/or restoring them. Please support the approval of this Plan to improve and preserve natural resources in our county. Everything we do here helps, in a small way, to protect and save the entire planet. Thank you.
Joe Beattie Hastings 5/11/20	I would like to thank you for all of your good and diligent work in protecting land throughout Dakota County. My students have been reading *The Sixth Extinction* by Elizabeth Kolbert during this school year. They are coming to understand the plight of life on planet Earth and the need to put protections in place. I would like to encourage you to continue to protect special places in Dakota County and even expand the amount of land under protection. **Reason no. 1** My field biology students have the opportunity to study special places in the Hastings vicinity. They visit the white pine forest and black ash seepage swamp at Pine Bend Scientific and Natural Area, the alder thicket at Lebanon Hills Regional Park, the maple-basswood forest at Hastings SNA, and the floodplain forest at the Vermillion River bottoms. They survey fish and benthic macroinvertebrates in the Vermillion River. They monitor wetland quality at Lake Rebecca. I would offer that the chance for students to immerse themselves in the study of unique and special places is invaluable. **Reason no. 2** My wife and I need time to disconnect from our chaotic and frenetic world. The Dakota County park and trail system offers opportunities to relax, decompress, and find precious solitude. We look forward to the completion of the Mississippi River Trail and the expansion of protected corridors throughout the County.

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	Reason no. 3 My wife and I have a grandson. In a time of climate change and loss of critical habitat, we worry about what type of Earth our grandson will inherit. It is perhaps more important than ever to protect and manage the special places that remain in our degraded and mistreated Earth. It is my opinion that we need to act now. "Plants and insects are the fabric of this planet. We're ripping it to shreds and we need to knit it back together." Scott Black, The Xerxes Society
Jon Kerr Northfield 6/23/20	Dear Commissioner Slavik: I have reviewed the Dakota County Land Conservation Plan and strongly urge you to support the Plan and the necessary funding to make the Plan a reality over the next decade. We need to invest in our future to help restore our farm soils, underground water and beautiful lands in Dakota County. A healthy environment will support healthy farms, healthy families and encourage more businesses to locate in a county where people commit to a better future for everyone. This plan provides an excellent and important way to protect water and critical habitat lands today and into the future. The Plan gives us the opportunity to come together as communities to support the county's 2040 Comp Plan and Strategic Goals that residents and businesses overwhelmingly support. Financing a plan like this is key to providing a true legacy for future generations of farmers, urban residents and local businesses and it deserves your support. Your support for the values expressed in the Land Conservation Plan will help Dakota County continue to be a leader in the state on soil and water protection. You have the power to keep our residents safe, and our lands and waters protected, by supporting this plan. Land stewardship and healthy farms and families are important to our family, and one of the main strengths we have found while living in Dakota County! The county has accomplished many great things for its residents and this Plan will continue that leadership. Now, more than ever, we need to adopt the Land Conservation Plan and provide the funding to continue our commitment to abundant clean water, natural lands and greenways. Thank you for your consideration. Please feel free to call or contact me via email if you have questions or concerns.
Judy and Jerry Hoffman 4/17/20	So proud of this plan, and its implications for our future. We're behind it.
Karen Humber Apple Valley 4/9/20	Want to thank you for the plan. Read over it. A lot of info to digest. I live in Apple Valley and my main concern is overdevelopment and the impact it has on wildlife and plant life. Stop building and expanding. Ask the cities in Dakota county to stop building. We need to limit human imprint. We don't do that by continuing to clear land and erect buildings. It is really bad when you have a bald eagle foraging for food (dead animal in road) in a busy intersection. I used to like living in Apple Valley but not anymore. Too many people and roads. Preserving land doesn't help if you don't give animals a safe corridor to travel. Too many dead animals on the road. I do hope your plan helps but I probably won't be around to see it. As I said above stop developing land. Go back into the cities and leave the land for plant life and wildlife. That is how we preserve our resources so we can have clean water and air. Thanks for allowing me to comment.
Karen Schik Scandia 5/27/20	I am especially fond of Spring Lake Park for the amazing vistas over the river, the diversity of habitat, and the abundance of migratory birds. I also love that the park is large enough, and long enough, that it's not hard to get away from the more heavily visited areas and have a quiet nature experience.

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	The connection of Spring Lake Park to other natural areas is one of the reasons why it is so important. Greenway corridors are vital for the movement of plants and animals across the landscape. The ever increasing pressures that humans put on the landscape make it more important than ever to protect remaining natural areas and expand on them. One of the most important ways to help reduce carbon in the atmosphere and offset the effects of the warming climate is by increasing the amount of plant cover. And native vegetation is especially vital for protecting the pollinators that help to supply us with food. Thank you for the leadership that Dakota County has shown in natural resource protection. Please continue by supporting the Dakota County Parks Plan.
Karl Hochsprung South St. Paul 6/30/20	Dear Office of Planning, Any natural area is especially valuable to me. My wife and I enjoy the Kaposia landing area since it's close to our home but Lebanon hills is an incredible place to disconnect from the hectic world and reconnect with nature and I'd like to see more areas like that across the county. As more and more research is done we find out how incredibly valuable for our health it is to be in nature. Not only that but the more interconnected natural areas we can provide the more biodiversity we create to preserve all life for animals, birds, pollinators, etc. These natural areas are invaluable and we should be doing everything we can to preserve and restore them. I feel like preservation and restoration of natural areas is incredibly important for the future of the planet. To have these spaces is to remind people there is more to life than the typical work day. The more we can be reminded of this the more we can put thought into reimagining our world to make the earth a healthier place. We also have an incredible duty to preserve wildlife for future generations and we cannot shirk that duty. Thank you for your ongoing service to the public and allowing this opportunity for the public to share our thoughts.
Katherine Clayton South St. Paul 4/28/20	Thompson Ravine as it is a wonderful place to walk and connects to many other wonderful parks. Thank you.
Kay Erickson Lakeville 5/5/20	I just read through your draft plan and would be curious to know what changes occur to it after the public comment period. It is a wonderful plan, and I thank those who certainly worked hard to put it together. My concern is increased public access/recreation. **I would like to see most of the conserved land kept completely free of human activity.** Whatever access is allowed/increased should be carefully evaluated. Thank you for listening.
Kayla Williams St. Paul 5/11/20	Parks, greenways natural areas in general are extremely important to me. They make me feel hopeful, provide a place to explore, and nature adds beauty to wherever it is placed. Spending time outside and in the natural areas that are provided should be a right for all, not a privilege. Our planet is increasingly sending us signals that our time is up, and we must act soon. Global warming is going to disproportionately impact certain groups of people, and it is important for those who can fight to do so. I support continued funding and investment. Thank you for the opportunity to share my thoughts and for all you are doing in your service to the public.
Leslie Pilgrim Mendota Heights 4/17/20	Greetings: I am writing in enthusiastic support of the draft Land Conservation Plan for Dakota County. This long-needed plan is crucial for the vibrancy, viability, future, and integrity of our local ecosystem as well as for future generations who will live in this county. We are at a crucial inflection

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	point in our county (as well as our world) to move forward on plans to restore, manage, maintain, and improve our aquatic and terrestrial open spaces/natural resources. I also support a small tax increase for this endeavor. Note: while much of the focus of this plan is in the central and south of this county, please do not overlook the northern urban ring of the county, too.
Lisa Weiberg South St. Paul 5/19/20	We enjoy all the county parks, but the one we have probably spent the most time at is Lebanon Hills. Our family has done many activities there including cross-country skiing, snowshoeing, hiking, swimming and nature classes. Parks and natural areas are very important to me because they help me not only physically with the exercise I can get, but also mentally and emotionally. During this time of closings and quarantines due to the pandemic, I have realized even more how important it is to my well-being to be able to get outside in the natural areas. I enjoy seeing a variety of birds along the Mississippi River. It is important to keep enough natural areas, especially wetlands, for the birds and other wildlife in the area. I support continued funding and investment in the parks and natural areas of our county. Thank you for your time in considering the land conservation in Dakota County.
Mary Ellen Nichols Eagan 5/16/20	I support the Land Conservation Plan. We need to protect and improve our land. Thank you
Lucy Kennedy West St. Paul 6/28/20	Dear Office of Planning, My family and I visit the Dakota County parks on a regular basis. Our favorite has always been Lebanon Hills, where we love to go swimming, canoeing, and crosscountry skiing. We are so grateful to have the ability to enjoy being in Nature and teaching our grandchildren about wildlife and stewardship of unspoiled, undeveloped land. I recently saw an article about the draft conservation plan and wanted to offer my thoughts. Such lands- unspoiled, undeveloped, and open to the public, are crucial for a high-quality environment, and are thus worthy of continued investment. Dakota County has to date done a good job of protecting natural areas, but we can't afford to overlook the reality that it's also one of the fastest-growing counties in the state. Development of housing and commercial buildings is gobbling up natural areas at an alarming rate.We need to act quickly to implement the Land Conservation Plan. The last time Dakota County voted to invest in land conservation was back in 2002 - almost 20 years ago. I believe that it was very successful, because by January 2020, it had protected an impressive 11,536 acres! The new Land Conservation Plan lists over 40,000 acres in townships across the county that are ecologically valuable and need protecting. This is sbout 4 times the acreage goal set out in 2002. I strongly recommend that the Land Conservation Plan be implemented in order to protect the entirety of this acreage as quickly as possible. Protecting these identifed lands now, before they are lost to development, would help to preserve the water resources in our county, as well as wildlife habitat and beautiful, untouched natural areas that are so important to our quality of life. I believe that the Land Conservation Plan will help assure that Dakota County will continue to be the desirable place it is now for living and raising our children. Again, I strongly encourage you to implement the Land Conservation Plan. Thank you!
Mary Weber Mendota Heights 5/26/20	We love visiting Lebanon Hills in every season! It has vast and varied trails for hiking. We love to meet our son and his family there. We have had so many adventures and made wonderful memories there. We love cross country skiing and snow shoeing on the well groomed trails. It’s just a beautiful

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	beautiful area. Many years ago, when we first moved here, we discovered Holland Lake. Our family spent countless hours floating around on that lake, fishing, splashing around, making memories. 25 years later, it still comes to the forefront as the of best times. We value the natural world and are very aware of how important it is to our health and well being. We were drawn to live in this area because of access to its high quality and abundant wildlife areas. No matter what is going on in our individual lives, nature offers an antidote to stress and anxiety. There is solace and recreation and it is equally available to everyone. As housing and urban areas keep encroaching upon wild areas, it's important to protect wilderness from development. We need access to wilderness because it feeds our souls. Being around its flora and fauna restores balance in our lives. Nature is an antidote to whatever ails our spirit. Dakota County parks are a priceless treasure. We applaud the foresight shown by the leadership, we support the resources given over to protect and expand natural areas, and we look forward to sustaining and enriching the great resources we have here. We happily support this plan with our voice and our tax dollars. It is worth every penny of taxpayer investment. Thank you for your dedication to this effort, for the hours spent in dry and at times boring meetings, reading reams of technical data, and standing up to those who want to downplay the value of parks and recreational areas. We really appreciate your service. Thank you for investing in the future.
Michael Deeny Apple Valley 5/16/20	I am glad to support more Dakota County parkland, but you need to stop over developing the parklands. The regional parks seem to be more of a gravy train for local construction than about environmental protection.
Michael Huber Eagan 5/9/20	I've been a resident of Dakota County for 19 years, and I've worked within the county for 22. As I move toward retirement I now live within .1 miles of the entrance to Lebanon Hills Park, and my wife and I plan to stay here as long as we can because we so treasure the park and other natural resources within Eagan and the county as-a-whole (specifically, Miesville Ravine, and Whitetail Woods ... but there are other treasures in the Mississippi valley that we enjoy visiting). Preservation of our natural resources (water, wetlands, woodlands, etc.), and the thoughtful designation of strategically located future natural areas will ensure the appeal of Dakota County as a destination and place of residence for people going forward. We wholeheartedly support the proposed Land Conservation Plan. Please make it happen.
Patty Rutz Inver Grove Heights 5/11/20	I really love Spring Lake Park. I am concerned we are over developing natural areas. Natural areas are disappearing and we need to act quickly to implement the Land Conservation Plan.
Paula O'Keefe Burnsville 5/22/20	Hello Al, Thanks for re-sending the link to me. I read the plan and have included my comments below. I don't have any concerns about the plan itself. It all sounds great, so I mostly just emphasized some aspects that jumped out at me that seemed vital. In general, this project sounds great and is very ambitious! Page 14, Goal #2 - Utilizing and encouraging agricultural practices is a very important component to improving water quality even though the survey ranked it last at 71%. Page 17, Goal #5 A and B - I think this is very important for the project's future! Get awareness and buy in from the citizens and that's half the battle for success!

Name	Comments
	Page 17, Goal #6 - Good to have recreation aspects and to encourage it because people will care more for an area that they can gain something from and experience. However, it's always important to keep that balance of recreation and conservation. Page 26 - I like the emphasis and the inclusion of groundwater protection in this project Page 29 - Good to see #4 - the invasive species section, esp. buckthorn. Management of these species is so critical. Page 33 - A 10-year plan and 2030 sounds so far away...but I know how fast it goes! Page 36, B. - Doing 1-3 pilot projects next year is a great idea. Page 37, C. - a typo: "example....that that" Page 38 B. - The more partnerships the better, as long as one agency or entity is ultimately in charge to keep things moving and have authority for some decision making. Page 41- 50 - As I read this section, the costs seem overwhelming, but hopefully there will be enough support and opportunities for funding. The listings of possible sources looks very promising. Page 63 - Are there any answers or explanations as to why Dakota County residents use more groundwater per capita than any other metro county? I'm very curious about this. Is it because of agriculture? Specific industries? If so, then maybe include that as an explanation. If there are other reasons, then this is concerning...Some increased education definitely needs to done for our residents to conserve water. If we don't know why, then that has to be addressed also... Page 71 Chart - "38% Lack of information about what programs are available and appropriate" - this seems like a good place to start educating agricultural landowners and then maybe there would be more interest in these programs. Page 73 - I love the economics section! I was an Econ major along with Bio and Environmental Studies, so reading this section brought all that back. The economic value of environmental protection is not always highlighted or discussed, but it is so important. Page 74 - typo: last paragraph - "Comparative...in in" Page 75 - The biome chart is very interesting and helps make the case for the need to preserve wetlands. Thanks for sharing this draft plan. I enjoyed reading it and learning about the new initiatives. Good luck with all of it! I'm looking forward to hearing about and seeing the results of all of your hard work and efforts during the next 10 years!
Phil Anderson Burnsville 5/11/20	I am a runner, so selfishly I love being able to run in green spaces. From a societal standpoint, having green spaces to "escape to" from the busy urban environment allows us to "slow down and exhale" from our daily lives. Green spaces are nature's mental health providers. Global warming makes caring for our green spaces all the more critical. Please continue the funding for our parks and natural areas. Thank you for taking the time to read this and know how important your actions on funding are to our societal health.
Philip Vieth Hastings 5/11/20	I visit Whitetail woods in the winter weekly at least because I love to X-country ski and love the options for skiing and snowshoeing. It keeps me active and provides a healthy pasttime. I also visit Spring Lake park for hiking and skiing. These places have enough wild character that I can observe the natural world. I think everyone needs these areas to realize that it is the basis for life. Vegetation, water, wildlife, insects are all the

Name	Comments
	foundation of our world and we need to appreciate and protect them for our health and the health of our surroundings, county, state, nation and our world. When I see trash in our rivers, on the landscape I realize we are not there yet as a society. When I see erosion from fields and sediment building in Spring Lake, I realize we are not there yet. We need the parks and wild places to provide us with a target to strive for more awareness by more people of the need to keep and improve our natural resources. Without wild places most of us have no way to measure the potential losses if we don't do things right and make every decision based on preserving and improving on our natural world. We depend on the natural world for our lives. Parks and wild places are supremely important to help us keep that in perspective. increasing population growth make the preservation of wild areas more important than ever. There are so many other concerns that many people are not aware of the importance of our natural world. Parks help people focus on the natural world and the importance of it to our well being. I definitely feel that continued funding and investment for purchasing and preserving wild areas as being of the utmost importance.
Rosemary Husbands Mendota Heights 4/20/20	I am so proud to be a resident of Dakota County. To have leaders that value our natural resources the way this plan indicates is truly inspiring. In many parts of my life, I worry, what will be left of the natural gifts we have been given for future generations. Here is a plan that attempts to answer that question and plan for its implementation. Please continue on the path to making this plan a reality and let me know how I can help.
Russ Yttri St. Paul 5/26/20	Dear Office of Planning, I ride the bike trail along the river and look forward to being able to ride all the way to Hastings from St. Paul. Recently I have been visiting the prairie sights at Vermillion Highlands and love it. I love to be outside on foot or bicycle exploring the world around me and getting exercise. A big reason I chose to live in the metro is it's ready many bike trails and attention to our natural world. Corridors for human and other animal movement is important. Invasive species control is critical. I support advancing our Park system. I spend a lot of time volunteering in our natural areas. Thanks for recognizing how critical open space is and maintaining it. Also we have a severe shortage of public restrooms and waste containers. Litter is way too common and a human controlled problem.
Sarah Norman Inver Grove Heights 5/18/20	Dear Office of Planning, Pine Bend SNA in Inver Grove Heights, Spring Lake Regional Park in Hastings, Lebanon Hills, the regional trail in Mendota Heights and Lilydale are important biodiversity stewards and provide critical habitat for resident and migrating species, especially species in peril like the monarch butterfly and certain species of woodpeckers with declining numbers. There are few undisturbed, quiet, serene areas left in the Twin Cities metro where one can take a walk and hear oneself think, and all four areas (Pine Bend, Lebanon Hills, Spring Lake Regional Park, the Mendota Heights/Lilydale paved trail) provide a rare degree of solitude. With the city parks in St. Paul and Minneapolis being dangerously overrun with people flouting hygiene and distancing recommendations, these natural areas and parks in Dakota County are especially important in helping with social distancing when folks venture outdoors right now. Natural areas, regional parks, county parks, and SNAs also encourage homeowners and apartment dwellers to become acquainted with native plant species which they may want to incorporate into their balcony plantings and home landscaping as alternatives to high-maintenance non-native flowers, annuals, and shrubs.

Name	Comments
	As density increases in Dakota County, it is important to parcel out natural lands and parks while the opportunity still exists. With Dakota County having some of the lowest property taxes in the entire state, continued development in the county is inevitable and it is all the more important to parcel out appropriate acreage dedicated to native habitat for people, plants, and animals. With so much local housing development in Dakota County being done in an unsustainable way that obliterates every remaining tree and blade of grass to create identical Levittowns devoid of native habitat, it can take years to repopulate even a portion of the pre-existing trees that were once in the neighborhood. Housing and commercial developers need to find efficient ways to both preserve and incorporate native habitat when they strip the land for more beige housing developments. 100+ year old oak trees were preserved on my street in Inver Grove Heights when the houses were built in the year 2000 - this type of thoughtful and intelligent habitat preservation needs to happen more widely throughout Dakota County. I support continued funding and investment in Dakota County parks and natural areas. Thank you for your continued thoughtful public service in these difficult and trying times. I appreciate the opportunity to provide input on the Dakota County parks system.
Susan Landberg Rosemount 4/24/20	Dear Dakota County Land Conservation Manager, I support the full implementation of the Draft Land Conservation Plan and the focus on improving and expanding parks, natural areas, and greenways. I have lived in Lakeville for 30 years, and have been very proud of how well Lakeville is run. In this time of global warming, I believe we all must do everything we can to support the planet and preserve nature. In this time of Covid 19, I believe we must do all we can to support people who are struggling with depression and the isolation of it. There is no better remedy than getting back to nature. Thank you for all your hard work on these objectives.
Susan Light Mendota Heights 5/24/20	I am writing to voice my support of the Land Conservation Plan for Dakota County. A compelling argument for adopting this Plan is made in the Executive Summary for Natural Resources Conservation - only 3% of our county's natural landscapes remain. The Land Conservation Plan Goals are important and achievable. Developing a City-County Conservation Collaborative is a good way to help the cities in Dakota County with goal setting and prioritizing. I live in Mendota Heights and volunteer with the city working on water quality, invasive species, community education and more. Small cities don't have the resources and staff to pay attention to all that needs to be done. Goal # 4 is especially important to me. **Biodiversity is restored and sustained.** Working with cities in the county to establish wild life corridors is important. We know that managing habitat here and there doesn't work if they are not connected. I support adding a 1.0 FTE Acquisition Specialist and 3.0 FTE Restoration Specialists. This is necessary because land protection must be accompanied by long term NR management. The operating principles on page 11 of the document are excellent. I am looking forward to seeing this plan adopted and appreciate the opportunity to share my comments of support.
Tamara Will Mendota Heights 5/20/20	Dear Dakota County Board of Commissioners: Thank you for your diligent and comprehensive work on the Land Conservation Plan. You have given the topic the attention and respect it deserves. If only it could get the funding it deserves - that is my only concern as we do not have the luxury of an extended period of time. There are so many positives about this plan; therefore, I will highlight only a couple of my favorites.

Name	Comments
	1) Collaboration and shared resources - vital to get info to and help from as many as possible to create change - solutions not so daunting when there is a roadmap and help. 2) Love Goal 4, strategy C, tactic 2: "Partner with transportation and utilities to improve pollinator habitat within the right-of-way and corridors." Turf grass is harmful to the environment in so many ways and has a significant impact that is too often overlooked. Think about how many lawn mowers, weed whackers, and leaf blowers you hear every day of the week. (see item 3 below) 3) Reading through the plan, there are a few things I would like to mention: a) Can the items covered in this plan be made mandatory at the city/township level - to include in their comprehensive plans? b) Agriculture: i) Would like to see more attention given to crops/sustainable farming - growing crops that can be consumed locally (addressing food scarcity issues) and promoting personal vegetable gardening. ii) Goal 2 description (p 14) states, "To improve water quality in these areas, it will be important to work with willing landowners to improve agricultural management practices, potentially convert row crop agricultural lands to less impactful crops, or even restore natural areas." I didn't see this addressed in the strategies and tactics portion. c) Replace turfgrass with native plants - checks all the boxes: water quality and supply, reduce GHGs, ecology, biodiversity, enhanced recreation, and addresses public concerns. i) **It would be great to mandate that native plants rather than turfgrass be planted after construction projects on roadways, government buildings, and public lands (unless it is absolutely necessary for sports or other uses). And to have a phase-in plan for the remaining land and retire gas-powered equipment in favor of electric.** ii) Labor and money saved from equipment purchase and maintenance, gas, and chemicals can be diverted to replacing with natives. Government serves as an example for residents and when natives are seen in our communities they become the new normal. – iii) Lawns are extremely costly in dollars spent, consequences of fertilizers and pesticides, watering, mowing. -- Some lawn-care facts and estimates*: (1) Standard grass lawns require more equipment, labor, fuel and use more agricultural toxins than industrial farming, therefore making them the largest agricultural sector in the US. (2) Use of synthetic nitrogen fertilizer - nitrogen not used by plants is converted into nitrous oxide, a GHG 300 times more potent than CO2, leading to an estimated total equivalent of about 25 million tons of CO2 each year in the US (i.e. a 2.47-acre plot of lawn produces GHG equivalent to the amount produced by a flight more than halfway around the world). - damage soil by causing the loss of soil carbon and organic nitrogen leading to erosion and runoff. (3) Manufacturing of synthetic fertilizers - for every ton of fertilizers manufactured, two tons of carbon dioxide are produced. (4) Lawn chemicals tracked into our homes are dangerous to human health.

Name	Comments
	(5) Water: A large amount of energy is used in purifying, transporting, and irrigating with water which is provided by local governments. Thus, our lawns are subsidized by the government. Much of that water is wasted as studies have found that twice as much water as lawns need is used on lawns. Most municipalities use 30 to 60% of their water on lawns. (6) The total estimation of GHG from lawn care, which includes fertilizer and pesticide production, watering, mowing, leaf blowing and other lawn management practices, was found to be four times greater than the amount of carbon stored by grass. In other words, our lawns produce more CO2 than they absorb. (7) CO2 released in mowing: 16 billion to 41 billion pounds of CO2 every year - hour-for-hour, gasoline powered lawn mowers produce 11 times as much pollution as a new car. (8) Refilling lawnmowers spills 17 million gallons of gas annually (Exxon Valdez spilled 11 million gallons). (9) Yard waste makes up 20 to 50% of US landfills and produces methane, a GHG 21 times more potent than CO2. (10) Time-consuming and noise polluting - 2008 Consumer Reports study found that 58% of those polled do not enjoy mowing their lawns. * https://www.onlynaturalenergy.com/grass-lawns-are-an-ecological-catastrophe/ Very well done plan. I look forward to its implementation
Thomas Sutton Lilydale 5/10/20	Dear Commissioners, I am writing to express my support for a vigorous and active Land Conservation Plan for our County. I am on the Lilydale Planning Commission, am the LMRWMO commissioner for Lilydale, am an MPCA lake monitor, and a member of the Friends of the Mississippi River. Water quality and conservation issues are very important to me and all of us.
Tina Folch, City of Hastings Councilmember 5/20/20	Hello - I've reviewed the Dakota County Land Conservation Plan and write today to express my solid support. We need to do more to protect natural resources, water, wildlife and open space as our county continues to grow. As the Land Conservation Program has been a great success and I support full implementation of the draft updated plan, I strongly encourage you to find ways to fully fund this plan. The public supports strong investment in natural resources and parks that bring so many important benefits to our communities.
Trilva Melbo Hampton 5/13/20	I am writing to encourage your support for the land conservation plan. It is critical to endorse this plan to preserve our natural areas in Dakota County. Most residents have moved here with the hope of living in a more natural area. If we wanted asphalt, we'd have moved to Minneapolis. Natural areas add unmeasurable benefits to our lives and health. With the current pandemic we realize how important for our mental and physical health to get outside and enjoy nature. With the increase in people visiting parks and other areas, the need for these areas is clearly evident. From hiking to dog walking to observing birds, flowers and animals to hunting, there is a plethora of ways to enjoy the outdoors. There certainly is something for everyone.

Name	Comments
	With the efforts made to reclaim natural areas by the county and state, I see private land owners having more incentive to reclaim their own areas as well. There is great work being done by conservation groups to learn how best to combat invasive species and make our natural areas thrive. We need to save our natural areas so our descendants can appreciate and benefit from them as well. Once lost, they can never be regained. Please do your part to support our quality of life in Dakota County. Thank you for reading this appeal.
Vicki O'Day Burnsville 5/20/20	Dear Liz, Dakota County Land Planning Commission, and Environmental Resources Team, et all, Thank you for assembling a comprehensive conservation plan to care for the lands of our amazing county! In these challenging times of COVID19 this draft plan creates a vision of necessity for the future of Dakota County. I am grateful for your thoughtful leadership and political will to fund and implement it in the coming years. I strongly support this plan as it rescues our beautiful home lands, agriculture, wildlife, and natural areas from further damage, degradation, and disappearance! As responsible stewards our land and water for future generations it is our civic duty to value land and water conservation as a TOP priority. The vision and goals laid out in the plan must be implemented to live into creating a future where Dakota County is a premier place to live and work. Thank you for all you do to partner in care for the lands and waters of Dakota County.
Walt Popp Hastings 5/25/20	As a former biologist with the Minnesota DNR and a Dakota County resident, I would like to commend the County on what is an excellent and forward-thinking plan that will protect and enhance the health and future of the County's diverse natural resources. As our population increases in the future it is vital to both restore and sustain the biodiversity our parklands and the quality of our surface and groundwater resources. Far too many of our native ecological communities have been impaired or destroyed by development. I applaud the County's endeavors to work with private landowners to provide wise stewardship of remaining natural areas on non-public land and to partner with other private and governmental entities to leverage their resources. Having worked at a governmental agency for 31 years, I have seen and participated in a number of plans that were never implemented, but rather gathered dust on a shelf. After all of the time-consuming detail and thoughtful planning that went into this effort, it would be a shame and waste of resources if that were to be the fate of this plan. However, if the County follows through in implementing this conservation plan, it will greatly help stem the loss of our native forests, grasslands and wetlands, advance the conservation of our water resources, and provide a sustainable natural environment with vital ecosystem services for future generations.

Conservation Minnesota Letter

The following 107 people signed the support letter developed by Conservation Minnesota, with four adding their own comments.

Dear Dakota County Land Conservation Manager,
I support the full implementation of the Draft Land Conservation Plan and the focus on improving and expanding parks, natural areas, and greenways. The current plan will benefit every corner of the county and some of my most cherished places like the Cannon, Mississippi, and Minnesota Rivers, and Lebanon Hills, Whitetail Woods, Sand Coulee, and Chimney Rock.

Aaron Mainz, Hastings, 4/25/20
Agatha Smolecki, Eagan, 4/29/20
Allen Lajiness, Farmington, 5/16/20
Amy Goerwitz, Northfield, 4/26/20
Barb Mager, West St. Paul, 4/26/20
Barb Zeches, Eagan, 5/16/20
Barbara Edson, Rosemount, 4/25/20
Barbara Neal, Farmington, 5/16/20
Barbara Olson, Eagan, 4/25/20
Brooke Asleson, Inver Grove Heights, 4/26/20
Cathleen Harris, Eagan, 5/16/20
Cathy Johnson, West St. Paul, 5/16/20
Cecelia Fogarty, Rosemount, 5/16/20
Charlotte Svobodny, Inver Grove Heights, 5/16/20
Cheryl Downey, Burnsville, 5/1/20
Christa Ragatz, Burnsville, 4/25/20
Christine Nelson, Apple Valley, 4/25/20
Cole Williams, Cottage Grove, 4/28/20
Daniel Dummer, South St. Paul, 5/17/20
Darnell Barsness, Hastings, 4/25/20
Deborah Nelson, Lakeville, 4/25/20
Denise Thomas, St. Paul, 4/25/20
Dorothy Hammer, Northfield, 5/16/20
Douglas Moran, Rosemount, 4/25/20
Elsie Hafen, Lakeville, 4/28/20
Emma Banks, Apple Valley, 4/25/20
Emmett Horwath, West St. Paul, 5/7/20
Franklin Nelson, St. Paul, 4/26/20
Gary Seibert, Hastings, 4/29/20
Greg Kruse, Burnsville, 5/16/20
Hayden Clark, Inver Grove Heights, 4/25/20
Iris Condon, Eagan, 5/16/20
James Kotz, Rosemount, 4/29/20
Jeanette Fordyce, West St. Paul, 5/16/20
Jennifer Montano, Rosemount, 4/29/20
Jerry Nelson, Hastings, 4/27/20
Jjohn Boubel, Burnsville, 5/17/20
Jodi Taylor, Cannon Falls, 5/9/20
John Enblom, Hastings, 4/26/20
John Fleming, Lakeville, 4/25/20
John Winslow, South St. Paul, 5/16/20
Jonathan Wilmshurst, Rosemount, 4/25/20
Judith Urban, Eagan, 5/14/20
Julie Bresin, Eagan, 4/25/20
Karl Hochsprung, South St. Paul, 5/16/20
Kathryn Granados, South St. Paul, 5/16/20
Kathryn Mosher, Eagan, 5/25/20
Kay Erickson, Lakeville, 4/30/20
Kelley Erickson, Apple Valley, 4/25/20
Kevin Smith, Hastings, 4/25/20
Laine Crump, Hastings, 4/28/20
Lisa Baldwin, Lakeville, 5/16/20
Lori Nagel, Prior Lake, 4/25/20
Marcia Bailey, South St. Paul, 5/8/20
Mark Sanstead, Hastings, 4/30/20
Martha Keil, Farmington, 5/7/20
Mary Johanns, Eagan, 4/28/20
Mary Loven, Northfield, 5/16/20
Matthew Smith, Burnsville, 5/16/20
Megan Braun, Burnsville, 5/7/20
Michael Gofman, Rosemount, 4/30/20
Michael Oberle, Eagan, 5/17/20
Mike Farrell, Burnsville, 4/29/20
Mike Foreman, Lakeville, 5/16/20
Mike Fricke, Burnsville, 4/28/20
Mike Slawin, Inver Grove Heights, 5/11/20
Myrna Docherty, Apple Valley, 5/16/20
Nancy Burns, Apple Valley, 4/29/20
Nora Ramirez-Pena, Eagan, 4/26/20
Patricia Leaf, Hastings, 4/29/20
Patricia Stevesand, Burnsville, 5/16/20
Patty Brown-Jaros, Eagan, 6/19/20
Peggy Roeske, White Bear Lake, 4/25/20
Ray Kennedy, Hastings, 4/25/20
Rebecca Lystig, Eagan, 4/25/20
Renee Portillo, Burnsville, 5/18/20
Robert Bryant, Eagan, 4/27/20
Robert Wellemeyer, Hastings, 4/25/20
Roger Everhart, Apple Valley, 5/21/20
Roxanne Flett, Eagan, 5/16/20
Sally Nichols, Apple Valley, 4/30/20
Sally Smith, Eagan, 4/29/20
Sara Brice, Northfield, 5/16/20
Shannon Darsow, Rosemount, 4/30/20

Shannon O'Connor, Farmington, 4/26/20
Sharon Bassett, Apple Valley, 4/25/20
Shelley O'Neill, Apple Valley, 4/25/20
Stacy Camp, Rosemount, 4/27/20
Stacy Miller, Eagan, 4/25/20
Sue Kirchberg, Northfield, 5/3/20
Sue LeGros, Burnsville, 4/25/20
Sundae Morse, Northfield, 5/16/20
Susan Estill, Burnsville, 4/30/20
Susan Wehrenberg, Apple Valley, 4/26/20
Suzanne Hansen, South St. Paul, 5/16/20
T Mo, Inver Grove Heights, 4/26/20
Terri Tilotta, Lakeville, 5/16/20
Thomas Bullington, Hastings, 4/28/20
Tracy Morics, Eagan, 5/16/20
Val Jackson, Eagan, 5/19/20
Valerie Eastland, Apple Valley, 4/26/20
Virginia Knapp, Inver Grove Heights, 4/25/20
William Hodapp, Eagan, 4/25/20

Signer's Name	**Comments Added to Letter**
Brenda Mickens Mendota Heights 5/16/20	In these times, these are more needed and used than ever before!
Bill Middlecamp Apple Valley 5/1/20	The unit of survival is the organism AND its environment. The natural world supports all life, and we spoil it at our peril. I grew up exploring Kaposia Park in So. St. Paul, and developed a sense of awe and love for the natural environment. I want to see more restoration of the natural environment.
Douglas Marsh Eagan 4/28/20	Please take care of our wild lands and waters, which is always a challenge in our urban environment.
Ryan Ronchak Eagan 5/26/20	I support all these conservation efforts and have been so impressed by Eagan's park system!! Thank you for choosing to no longer use sprays on weeds in key wildlife areas and switch to natural gentler methods. Please consider water catchment areas to catch excess runoff fertilizers with the use of plants such as cattails & grasses which continues to be a problem for our lakes. Increased rain garden areas are also so helpful with these things and help me. Please consider the possibility of implementing some food forest areas as a demonstration and place for community interaction with the abundance of healthy food that can be generated in a small space. Please support the profligate of diverse species of beautiful plants we have available in our local ecosystems & growth region. Feel free to call anytime. I study Permaculture, Horticulture and Conservation. THANK YOU FOR ALL YOUR EFFORTS IN CREATING A HEALTHY BIOREGION

Friends of the Mississippi River (FMR) Letter

The following 52 individuals signed the FMR support letter, with 32 adding their own comments.

Dear Office of Planning,
I saw an article about the draft conservation plan and wanted to weigh in. Parks, greenways and natural areas are important to me and worthy of continued investment. Dakota County has done a good job of protecting natural areas, but it's also one of the fastest-growing counties in the state. Natural areas are disappearing, and we need to act quickly to support and implement the Land Conservation Plan.
The last time Dakota County voted to invest in land conservation was in 2002. The goal was to protect 5,000-10,000 acres – and by January 2020, an impressive 11,536 acres were protected! It's time to build on that success. The new Land Conservation Plan identifies over 40,000 acres in townships across the county that are ecologically valuable and would benefit from protection. Finding ways to protect them now would yield dividends for years, helping to protect Dakota County's water resources, wildlife habitat and quality of life. Thank you!

Amanda Squires, Farmington, 6/13/20
Ann Marie Sunderland, Apple Valley, 5/18/20
Carolyn Sanders, Burnsville, 5/21/20
CJ Bahan, Inver Grove Heights, 5/19/20
Debbie Nelson, Lakeville, 4/18/20 and 6/18/20
Denise Wilkens, Inver Grove Heights, 5/17/20
Eoghan O'Neill, St. Paul, 5/26/20
Heather Klein, Minneapolis, 6/18/20
Iris Condon, Eagan, 5/16/20
Jeanne Ronayne, St. Paul, 6/18/20
Joey Pederson, Burnsville, 5/26/20 and 6/16/20
Katy Bauer, Eagan, 6/29/20
Mary Feterl, Eagan, 6/29/20
MaryJo Wiatrak, Minneapolis, 6/23/20
Michael Barrett, Minneapolis, 6/18/20
Nicki Weber, Farmington, 5/18/20
Scott Rockvam, Rosemount, 6/25/20
Shirley Bauer, Inver Grove Heights, 6/20/20
Tamera Miller, Hastings, 6/26/20
Tyler Swenson, South St. Paul, 6/15/20

Signer's Name	**Comments Added to Letter**
Alex Reich Minneapolis 6/24/20	I'm emailing you today because as a local Twin Cities resident who loves our natural spaces, I'd like to weigh in on the draft conservation plan.
Barbara Andersen Crystal 6/18/20	I often visit parks and woodlands and rivers in Dakota County with my friend, John Masengarb who lives in West St. Paul. I am a Minnesota Master Naturalist and I have documented species as we visit natural sites using iNaturalist app on the iPhone.
Brad Snyder Maple Grove 6/23/20	As a Science Teacher/Environmental Educator, Science/STEM Professional, and an Environmental/Biodiversity/Natural World Advocate, I wholeheartedly support the development, restoring and conserving of parks, greenways and natural areas!! They are definitely important to me and worthy of continued investment!!
Candace Hard Farmington 4/19/20	I have volunteered with Friends of the Mississippi for several years. Keeping our County healthy is important to me.
Catherine Brown Eagan 5/17/20	I am a recent transplant to Eagan , four years ago, and my family has deeply appreciated the wild places of Dakota County.
Cathleen Marquardt Eagan 6/18/20	I have been participating in volunteer restoration work in the Vermillion River watershed and Lebanon Hills Park and want you to know how vitally important it is to protect natural areas. Preservation of more public land for future generations is a top priority for me. Please continue this vital investment for your children to enjoy! Dakota County can be proud of this work to date and can continue to be a leader in land conservation.

Signer's Name	Comments Added to Letter
Chris Johanns Minneapolis 6/18/20	I regularly read the Friends of the Mississippi River newsletter and they recently posted some info about protecting natural areas in Dakota County and i wanted to weigh in.
Connie Thiewes Apple Valley 5/23/20	Personally, life and my family's well-being depend of the park systems that flourish in our community. YES!! Do continue to care and support our natural resources, parks and habitat for everyone's benefit!
Eileen Darnell Burnsville 6/28/20	I saw an article about the draft conservation plan and wanted to weigh in, as I live in Dakota County and spend a lot of time outdoors with my dogs.
Emilee Martell Somerset, WI 6/18/20	Although I am a Wisconsin resident, I frequently come to Dakota County for recreation purposes and would love it if there were more green spaces there to explore.
Heidi Wojahn Prior Lake 6/28/20	Even though I don't live in Dakota County, I still use and enjoy Dakota County parks.
Jean Abbott Lakeville 5/17/20	I am a long-time resident of Dakota County and value our natural areas, whether parks, greenways, or other outdoors space. You can find us outdoors year-round, enjoying the many natural areas our area offers. These are reasons we chose, and continue to choose, to live here.
Joseph Boyle Minneapolis 6/22/20	As a concerned citizen, I found out today that Dakota County plans to protect more natural areas. It makes me proud to have forward thinking leaders.
Julia Bohnen Bloomington 5/21/20	In a handful of years down the road, when the county finds itself built up, citizens from around the metro area will be grateful for the foresight of county leaders to preserve land before it was paved or built over.
Karen Lunde Minneapolis 6/22/20	Hi, I live in Linden Hills in Minneapolis. To get out of the house, I walk around Lake Harriet. That's great that you plan to preserve some natural area! The little animals can live there. Maybe I can even hike through it!
Karla McKenzie Apple Valley 7/2/20	I saw an article about the draft conservation plan and wanted to weigh in. Our parks are a treasure. The tamaracks absolutely glow golden in the fall. The lakes provide recreation, fishing, swimming, etc. I have been volunteering a lot with Dakota County Parks in helping restore plant-life to pre-settlement conditions. It's a lot of work, but a labor of love.
Laura Zanmiller West St. Paul 6/22/20	Living in a first ring suburb, it is important to be able to get to nature quickly. Natural areas are special places for many people-helps to deal with stress, relax, and excites curiosity.
Lindsay Egge Lakeville 6/24/20	Greetings, I am a proud Dakota County and Lakeville, MN resident. I love all the outdoor space in this county that I have to choose from every day. As the population continues to grow, it is so important to protect natural areas.
Lois Swanson South St. Paul 6/19/20	I strongly support this plan.
Marilynn Torkelson Eden Prairie 6/20/20	Please protect the health of our soil, air, water and wildlife by protecting the ecosystems that sustain us!

Signer's Name	Comments Added to Letter
Maya Vellicolungara Eagan 5/26/20	Minnesota's natural areas are the best thing about the state! Places like the boundary waters make it even more special.
Patricia Huberty Mendota Heights 4/22/20	I am deeply concerned about conservation and have been volunteering for many years in restoration projects in the county. We have done a good job in the past but can and should be doing more. As we continue through this time of the virus, our parks and open land are being used even more than before. I feel they are one of the best ways to spend our tax dollars.
Patty Combs Minneapolis 7/1/20	I love the Dakota County Parks and use them often.
Rae Phillips Lakeville 6/26/20	It is important that you hear people's thoughts.
Robert Kiner Eagan 4/29/20	My name is Bob Kiner. I'm a resident in Eagan. I am an outdoor enthusiast and I am proud to be a Dakota County resident. You have done a super job of establishing and maintaining greenways and parks in Dakota County. I hope you support the Land Conservation Plan.
Sean Esslinger Eagan 5/16/20	My name is Sean Esslinger and I am a 24-year old male. I want to see the conservation of this great state's wildlife continue to thrive throughout. What difference does it really make to you where funding goes to??? It doesn't affect your family, life, job, retirement, at all. It would be a good idea to put more money towards the conservation efforts. I am concerned about the future of this plan and want my children to experience Minnesota in full one day.
Shirley Bauer Inver Grove Heights 5/16/20	I feel this is important!
Stacy Enzmann Minneapolis 6/18/20	I saw an article about the draft conservation plan and wanted to share my thoughts. Please grant me some of your valuable time. Parks, greenways and natural areas are important to me, and are worthy of continued investment. As a Minnesotan, I can assuredly say that one of our state's best aspects are the wild spaces that everyone can access. Our dedication to natural areas make this a state I am proud to live in, so please continue this mindset.
Susan Simon West St. Paul 5/16/20	I have lived in Dakota county for 15 years, being initially drawn in by the parks and natural spaces. I've also seen the demolition of some areas for development, leaving large stark "lawnscape" where we had valuable, much needed breathing room. I feel strongly that our natural, wild spaces will create stronger, healthier communities. Quantity is important in this case. The more, the better! I will support any movement to keep up the good work!
Tom White Lakeville 6/24/20	I have lived in Dakota County for over 30 years.
Tom Wilkens Inver Grove Heights 4/18/20	My wife and I took part in the creation of the Farmland and Natural Area Plan in 2000, 2001. Attended and spoke at a County Commissioners hearing on the Plan

Signer's Name	Comments Added to Letter
	and referendum, September 11, 2001. Later on worked informational tables at different events, lobbying citizens for its passage.
Virginia Windschitl, Farmington 5/17/20	I enjoy hiking in Dakota County parks seeing the wildlife and native flora.

B. AGENCY AND ORGANIZATION COMMENTS

Comment letters were received from seven agencies and organizations during the public review period.

Chris Jenkins, City of Hastings Parks Director 4/16/20

Al –
Thanks for the opportunity to review the draft plan. Certainly the City of Hastings would provide support for the plan and for future collaborative projects.

If there is anything specific you are looking for with regard to support, please let me know. I look forward to seeing this plan implemented and the projects that will be included! There is a lot of work out there, this is a great plan to manage that work! Thanks.

Terry Holmes, Empire Township Board Chair, 5/14/20

Dear Mr. Singer,
Thank you for presenting the draft Land Conservation Plan to the Empire Town Board on May 12, 2020. While we appreciate the intent of this plan, the Town Board has serious concerns with it as it relates to Empire Township.

Empire Township is currently home to 1,700 acres of UMore Park land, over 4,000 acres of wildlife Management Areas, 456 acres of Dakota County parks, and 460 acres of Metropolitan Council land for the wastewater treatment plant. In addition, over 850 acres of land in northern Empire Township are currently being mined. Together, these areas comprise more than 37% of the total land area in Empire Township. It should also be noted that the gravel mining operations are expected to expand, and remain in place for the next 20-30 years.

The current draft of the Land Conservation Plan identified a large Conservation Focus Area (CFA) within Empire Township. More than 2,000 acres of the CFA is located south of County Highway 66, west of Ahern Boulevard, east of the Farmington city limits, and north of the Township line. While some of this area is wetland and floodplain, most of the area is upland and is currently farmed.

The CFA is also land that could potentially be developed in the near future. The City of Farmington is expanding to the east, and development in Empire Township is a logical extension of this growth. Public sewer and water can be extended to serve this area.

The Empire Town Board is opposed to adoption of the plan, with the CFAs located as shown in Empire Township. IF these areas are placed in conservation easements, more than 47% of the land in the Township will be encumbered. This will have a detrimental impact on the Township's ability to grow, and to the potential tax base. This will further impact our ability to provide a variety of services to our residents. We believe the goals and intent of the plan in this area can be accomplished through development best practices, including stormwater management, and floodplain and wetland requirements.

Terry Holmes, Empire Township Board Chair, 6/29/20

Dear Mr. Singer,

The Dakota County Township Officers' Association discussed the draft Land Conservation Plan on June 25, 2020. We also reviewed the additional information you provided in your email dated June 11, 2020. The DCTOA and the Empire Town Board continue to have serious concerns with this plan. In addition to the concerns expressed in our May 14, 2020 letter, additional concerns are summarized below.

1. Placing land that might otherwise be slated for development into conservation as shown on the proposed maps will create a scenario for leapfrog rather than orderly development. This is especially true in Empire Township. This type of development is inconsistent with Metropolitan Council policy and with the goals of our recently adopted 2040 comprehensive plans.
2. The plan does not have clearly stated goals for large portions of the land that may go into conservation in many of the townships.
3. The plan does not clearly identify the public benefit for putting this much rural land into conservation. Further, much of this land lacks public access so will not be of use to Dakota County residents.

4. The plan was developed with little, if any input from the Townships, which are most impacted by this plan. Outreach and discussion with the Townships would have provided a better understanding of the impacts on the rural Townships.
5. Land put into conservation will have long term impacts on the Townships. The plan must include a process for review and approval of placement of land into conservation, and how these impacts will be mitigated.

Overall, out concern with the plan has not changed. If these areas identified as CFAs are placed in conservation easements, it will have a detrimental impact on the Township's ability to grow, and to the potential tax base. This will further impact our ability to provide a variety of services to our residents. We continue to believe the goals and intent of the plan can be accomplished through development best practices, including stormwater management, and floodplain and wetland requirements.

Joe Lynch, Administrator, City of Inver Grove Heights, 5/28/20

Thank you for allowing the City of Inver Grove heights to review and comments on the draft Land conservation Plan dated March 9, 2020. The City of Inver Grove Heights values a balance of developed and protected land and understands the importance of preserving open space.

- We have reviewed the document on a staff level and have the following comments:
- We request a GIS layer be created and provided to the city of the proposed Conservation Focus areas (CFAs) so we can determine more specifically the land proposed to be protected. It is likely that the City will not want some of the land in the proposed CFAs to be included because of its development potential. The City reserves the right to ask that the CFAs be modified based on more detailed review.
- We request a GIS layer that shows the difference between land that may already have a conservation easement placed on it vs land that does not so it can be determined what is being added.
- A conservation easement is shown on Marianna Ranch (Inver Grove Heights Park). A conservation easement over this park property cannot limit the city's ability to develop the park for more active public park uses yet to be determined.
- A conservation easement should not conflict with Inver Grove Heights zoning/land use plans for and in the NW area and reserves the right to modify the CFA based on this review.
- Does the County propose to compensate the City for lost tax revenue for land placed in CFAs?
- Do the CFAs conflict with future transportation plans at a County level? The City will review GIS data provided to determine any conflict with City transportation planning and reserves the right to modify the CFAs based on this review.
- The County proposes the program will take millions of dollars to implement and suggests the County will invest 20-25%. Given the demand on taxes and services the City would be challenged with investing resources into this program and suggests the County increase their investment.
- The City requests a written response regarding the compensation for property(ies) lost to CFAs and the County's responsibility for funding the program.

Again, thanks for allowing the City to review the draft document and we appreciate the time and energy put into developing the draft.

Angela Torres, Patrick Boylan, Metropolitan Council, May 26, 2020

Dear Mr. Singer:

The Metropolitan Council received the Dakota County Land Conservation Plan (Plan) on April 10, 2020. The Plan is a shared vision for Dakota County, to be implemented with partners, to guide future land protection efforts, and to strengthen natural resource management on protected lands.

Council staff review finds that the Plan is complete and accurate with respect to regional concerns and does not raise major issues of consistency with Council policies. The following comments are offered for your consideration.

Regional Parks and Trails *(Colin Kelly, 651-602-1361)*

Dakota County references the regional parks and greenways in the County on multiple instances in the Plan, including in the sections on Conservation Focus Areas and funding. Generally, the Council does not have any specific concerns with regard to regional parks and trails; Staff applauds the work that Dakota County has done and continues to do with regard to natural resource protection and management. Council staff look forward to working with the County to implement the Plan.

Stormwater & Natural Resources *(Cameran J. Bailey, 651-602-1212)*

Council staff are pleased to highly commend the County on its progressive thinking in the development of this ambitious Plan and look forward to its implementation. Council staff encourage the County to seek opportunities to coordinate on projects at Council facilities applicable to the Plan as opportunities arise.

This concludes the Council's review of the Dakota County Land Conservation Plan. The Council will not take formal action on the Plan. If you have any questions or need further information, please contact Patrick Boylan, Principal Reviewer, at 651-602-1438.

Dan MacSwain, Natural Resources Coordinator, Washington County, May 28, 2020

1. Page 1-6: Consider shortening the Executive Summary to two pages.
2. Page 8: Consider adding or revising title to include "Progress on Protecting" to title 3, Farmland, Natural Areas and Land Conservation.
3. Page 14: A potential tactic to add under Goal #2 would be to identify drainage tile networks through GIS to assist with restoring hydrology and identifying future Flowage Easements. Here is a great example of an effort to identify these areas in Wright County, Iowa. https://www.iowaview.org/wp-content/uploads/2018/03/Tutorial 3 TileMapping.pdf.
4. Page 16: Under Goal #3, Strategy B, consider adding a tactic on restoring natural processes.
5. Page 28: The text box on Economic Valuation of Ecosystem Services was important to include.
6. Page 29: Under Natural Resource Management Issues and Opportunities, there is a great section on systemic changes that are contributing to the decline of native species, ecosystems and water quality. Under 2, Removal of natural regulatory processes, grazing is mentioned, but only mentioned in background and under USFWS programs. Is this process something that the plan is going to try and restore? Currently, it is not discussed later in the plan.
7. Page 49: The Flowage easement will be a great tool to help reduce the # of water quality impairments, and aid in downstream flood mitigation efforts.
8. Page 64: Related to the recommendation on developing a City-County Conservation Collaborative. It was interesting to see that City Park Directors wanted assistance in managing natural areas. Did this recommendation originate from requests from the Cities? How many of the cities are supportive of this effort? Are they willing to contribute funds? Or is the County going to assist with management and stewardship efforts? Slightly more detail related to this collaborative may be helpful in understanding how it will function.

Mark Zabel, Vermillion River Watershed Joint Powers Organization, 5/14/20

1. Page 2, Land Conservation in the County: This section speaks to the amount of land protected but says nothing about land management the County or landowners have performed to date and the direct benefits and outcomes derived from such efforts. If the plan is to focus on both protection and management, the management outcomes should also be listed.
2. Page 4, Restore Large Scale Wetlands and Assist in Implementing the New Dakota County Groundwater Plan: VRWJPO staff recommend the focus of this approach should be on restoring former wetlands and improving conditions of existing wetlands. Existing wetlands are already protected by laws that the Federal and State government implement

(Clean Water Act, Wetland Conservation Act), so spending money to protect existing wetlands that are already protected by existing laws would be better spent on protection and restoration of former wetlands or restoration of existing wetlands.

3. Page 5, Potential Outcomes and Estimated County Cost: The table provides reasonable estimates for protection and restoration costs, though they could be higher based on costs restoration work the VRWJPO has performed. The table assumes the County to provide approximately 5% of the cost of protection and 5% of the cost for restoration. The VRWJPO is not aware of funding sources that would pay 95% of protection or restoration costs, and fear the estimate is too low. We are of aware of some grant sources paying up to 90% of these costs, but other grant sources provide 50%-75% of the restoration cost. An estimate of the County contributing 10%-25% of the protection and restoration costs seems more reasonable.
4. Page 10, item 5.4: The 2040 Dakota County comprehensive Plan states that productive farmland and minerals (bedrock, sand, gravel aggregates) are considered a natural resource. However, in the context of this plan, these are potential sources of water and land degradation, contamination, or impairment and doesn't seem to match the goals of this plan. While these may be identified as natural resources in the County's Comprehensive Plan, sources of potential degradation should not be a preserved natural resource and it should be stated that this plan is not going to focus on protecting prime farmland or mining areas for the benefit of those systems continuing to operate as is.
5. Page 12. Restored Prairie, Miesville Ravine Park Reserve Picture. The caption doesn't appear to match picture. The picture appears to be a soybean field, not a restored prairie.
6. Page 13, Goal 1, A: The VRWJPO disagrees that CFAs should be used as the framework for protecting and connecting natural areas and habitat. While these may indeed be areas of importance, this assumes that CFAs are already the highest priority lands for protection and restoration, which may not be the case considering the goals of the plan and doesn't provide for transparency on the process of prioritizing areas for projection and restoration. Rather than using CFAs as the framework, the VRWJPO suggests developing a new framework. The new framework would use stakeholder-developed criteria that would result in lands that achieve the various goals of the plan. These criteria would be applied to all potential lands within the County and land would be scored and ranked, and the resulting outcomes from the ranking would be a prioritized list of lands for protection and restoration.
7. Page 14, Goal 1, A, 8: We agree that tax modifications would be an incentive that would appeal to many landowners. It should be explained how the technical advisory group would help move forward the idea of tax modifications beyond activities that have been explored and performed to date.
8. Page 14, Goal 2: The VRWJPO would like more detail on how the Land Conservation Program will assist the Dakota County Soil and Water Conservation District (SWCD) with improving agricultural land management as the VRWJPO already has a well-established funding and project partnership with the SWCD and policies or assistance provided by the Land Conservation Program could impact SWCD and VRWJPO program implementation.
9. Page 15, B, 2: The VRWJPO requests more detail on new cost share funding streams provided to the SWCD for BMPs. Please be specific on what these potential funding streams would be as some existing programs have requirements and funding streams that may conflict with the source of the new funding.

   As important as on-going maintenance is for ecological restoration, there is the same maintenance need for structural and ecological conservation projects implemented through the SWCD. Perhaps a funding stream to pay for landowner maintenance of the practices implemented through the SWCD should be considered (e.g. sediment cleanout of water and sediment control basins, native vegetation management, rain garden cleanouts, etc.).
10. Page 15 Goal 3: The last sentence of the last paragraph states: "Precedent research did not identify a County-affiliated entity for natural resource management of private lands." Natural resource management through conservation programs on private lands has traditionally been the role of SWCDs, often in partnership with state and federal agencies.

11. Page 16, A, 7: Please provide examples of relevant private funding entities that perform this type of work. Explain what the incentive is for a private entity and why they would have an interest in securing or disbursing private funds for natural resource work on other private lands.
12. Page 17 Goal 4, C: Pollinator habitat is good, but perhaps too narrow. Providing habitat that supports pollinators leverages creation of habitat that benefits native species in general if directed towards creation or enhancement of native landscapes. A pollinator focus may encourage importation of non-native species or varietals if not explicitly addressed.
13. Page 17, C. 2: From experience on projects associated with right-of-way, there are significant challenges in the knowledge of staff who maintain right-of way with regards to identification and management of native plants versus turf grass. We have found right-of-way areas that were seeded in native species and being mowed weekly or bi-weekly, which resulted in the death of the native plants and weeds taking over. We suggest incorporating some training opportunities into this list of tactics to increase the knowledge of those organizations performing right-of-way maintenance. We would also suggest working with right-of-way maintenance authorities on inventorying areas that require different kinds of maintenance and developing a maintenance plan for those areas.
14. Page 18, B, 1 & 2: The VRWJPO views public trails as an important resource for public use and recreation. However, staff have seen trails developed, specifically within greenways, that lack consideration or adequate funding for water quality and habitat improvement, do not consideration appropriate trail placement near sensitive resources, and only focus on the trail development and improvements. We suggest being very clear that these items would only construct trails where it's feasible and allowed within current regulations and incorporates specific water quality and habitat improvements along the trail corridor.
15. Page 19, CFA Definition: The third paragraph indicates that for private lands already under permanent protection, this plan suggests greater outreach and collaboration with landowners on restoration, enhancement and long-term natural resource management. While the VRWJPO would like to see this happen, lands that are already protected have agreements established that dictate the expectations for those protected lands. Unless the County is willing to perform additional enhancement on these lands without any cost or contribution from the landowner, there is little to no incentive for a landowner to contribute voluntarily.
16. Page 22 CFAs: CFAs could be further refined using processes identified in the Ecological Classification System used by the Department of Interior nationally and by the Minnesota DNR to guide management of natural resources. Minnesota DNR has identified down through Land Type Associations (LTAs). Land Types and Land Type Phases below LTAs have been identified for specific purposes – Land Types in Chippewa National Forest and Land Type Phases for portions of that forest and in some State Parks.
17. Page 25 Marcott Lakes CFA: This profile describes the CFA, which illustrates what's contained in the CFA. What this profile does not indicate are the highest priority areas for protection or restoration need within the CFA. Prioritization of areas within the CFAs is needed to focus resources on those most important within each CFA.
18. Page 26, 2, A: It's unclear to the VRWJPO why significant aquifer recharge areas are not identified within the CFAs. The potential wetland restoration areas were included in the CFAs, but these recharge areas were not. While the recharge areas encompass a large area, the VRWJPO recommends these areas be included. Once included, prioritization of all CFAs can occur that uses stakeholder-developed criteria to identify the highest priority areas within CFAs for protection or restoration.
19. Page 27, B: The same comment mentioned above for the aquifer recharge areas should be applied for these other natural feature areas.
20. Page 28, D, 1. Third paragraph, second sentence: It appears this sentence is missing a word regarding the "measurable" economic benefit. If we were to guess, the word "is" would be inserted between "that" and "measurable."

21. Page 29, 3: We recommend changing "drain tile" to "artificial drainage" to be a bit broader on types of drainage. We would also recommend changing the last sentence to state, "Water from streets and fields are capable of carrying various types of pollutants to lakes, streams, and wetlands.
22. Page 32, E: Why acquisition and restoration for regulatory buffers? (50' and 16.5") If considering stream buffers for natural resource protection, preservation, or restoration shouldn't it be driven by underlying natural resource criteria such as soils, native vegetation, or wildlife. Acquisition and restoration of riparian buffers is appropriate as an action in and of itself without connection to a separate regulatory program.
23. Page 33, 1: The timeframes listed indicate a 2020 start. While not being completely familiar with the County Board's budget, budgeting for a program before the plan is adopted is contrary to the Board's normal planning and program implementation process. If a budget hasn't yet been established for program implementation in 2020, we suggest shifting the timeframes to start in 2021, when and if the Board considers a budget that includes funding for this plan's implementation.

    As mentioned in previous comments, the table is separating CFAs from wetland basins and groundwater recharge areas. The VRWJPO feels they should all be considered as one CFA with a prioritization strategy to identify those that are most important to protect and restore.
24. Page 34, Goal 3, B: There doesn't appear to be a direct implementation activity with regards to restoration, enhancement, and maintenance of natural resources on public lands. We suggest something similar to item A, 3., where ongoing maintenance, management, and maintenance is a tangible activity that can be accounted for.
25. Page 35, Goal 4, B. 2: We suggest adding in training for transportation and utilities' staff to identify and properly manage native plant communities.
26. Page 35, Goal 4, B: Based on the tactics listed, right-of-way and smaller scale pollinator habitats would have tangible outcomes. We suggest adding large scale pollinator habitats so that pollinator enhancements within existing natural areas could also be something implemented (e.g. increasing forb number and diversity within an existing native plant community).
27. Rather than just promoting SWCD's Conservation Landowner of the Year program, we suggest the County start a program of their own that recognizes landowners for their efforts toward items like pollinator habitat establishment/improvement, protection and restoration of wetlands, etc.
28. Page 36, 2: This method of prioritization assumes that landowners will still be submitting projects to the County for consideration of protection or enhancement. This model should be changed to a model where the evaluation and prioritization takes place across all CFAs, and the highest priority areas' landowners are targeted for protection and implementation.
29. Page 36, 2, A: This section includes the statement: "CFAs with greater interest among landowners would move up in priority for convening the CFAs landscape conservation dialogues." Shouldn't the natural value of the resource be the primary consideration and drive the program prioritization over landowner interest? And shouldn't there be more criteria to be considered beyond the size of the wetland as noted in the next paragraph in the document?
30. Page 36, 2, B: As mentioned in the previous comment, we suggest conducting outreach to the landowner's who have the highest priority lands within CFAs as opposed to outreach to all landowners within CFAs. The bullets listed show additional consideration would be given to certain areas that have already been prioritized. We suggest the prioritization of CFAs to incorporate these additional consideration criteria so that the resulting ranking of prioritized projects already takes these benefits into account.
31. Page 37, C: If these areas outside of the existing CFA framework are important enough to be considered for protection or restoration, we suggest identifying these areas and incorporating them into the CFA framework and then prioritize CFA areas.
32. Page 37, D: Ninth bullet under Ecological identifies:" Reinstatement of hydrologic conditions". This might be better described: "Mitigation of hydrologic changes to address habitat maintenance or improvement"
33. Page 38, B. 1: We think having a collaborative makes a lot of sense in getting work done. Keep in mind that groups often need an organization that takes the lead on many of the activities the collaborative plans and implements. We

suggest specifying if Dakota County will be the lead organization or if it varies depending on the land in question. Regardless of who the lead organization is, it's likely a leader will need to be identified for a collaborative to be successful.

34. Page 39, table: Why is there a division between the large group collaborative and project partnerships?
35. Page 42, Staffing: This section states that an additional 1.0 FTE will double the land protection capacity. It's unclear to us how 4.0 FTE of existing staff are currently working on Land Conservation projects and an additional 1.0 FTE would double land protection capacity. We feel this section will need additional details to avoid scrutiny about the capacity of existing staff or the assumed capacity of an additional 1.0 FTE. The same can be said for an additional 3.0 FTE being able to quadruple the restoration work.
36. Page 47, Potential New County Funding Options: We realize the title of this section is trying to convey that funding for this program would need to be generated or "new," but the title may lead the reader to believe these are revenue streams that haven't been explored in the past. We suggest simply leaving the title as "Potential County Funding Options."
37. With regards to General Obligation Bonds and Capital Improvement Bonds, the revenue doesn't appear to cover operations and maintenance, only capital costs. This should be specifically called out so that the reader knows that these types of bonds would also need some type of supplementary revenue to cover the costs of operations and maintenance.
38. Page 49, Agricultural Easement: The idea of protecting a large tract of land with an agricultural easement seems unnecessary when the County is only interested in the protection and restoration of the lands that provide ecological and recreational benefits. We suggest removing this option as the other types of easements listed can protect the specific areas of interest.
39. Page 49, Buffer Easement: It appears the word "develop" should be "development."
40. Page 50, Restoration Easement: It appears the primary upside to securing land in one of the easement types listed is the ability for the County or its contractor to perform restoration, management, or maintenance at no cost to the landowner. However, most easements have restrictions on the ability of a landowner to use their land for their various wishes or needs. This particular type of easement appears to allow the County or its contractor to perform work without putting any perceived land restrictions or costs on the landowner. We're unsure why this type of easement wouldn't be used in most cases if it provides more freedom to a landowner regarding rights and restrictions on their property.
41. Page 50, Land Registry: This type of approach provides significant freedom to the landowner and wouldn't cost nearly as much to implement compared to other protection measures. However, this approach doesn't appear to establish restoration targets to be achieved, which seems contrary to the overall goals of the plan with regards to restoration.
42. Page 52 Property Tax Study Group: The table of example performance measures provided includes a measure for a property tax study group. Was this study group cited in the plan goals, strategies, or tactics?

Brian Ross, The Great Plains Institute, May 28, 2020

The Great Plains Institute (GPI) is a 20-year old non-profit organization focused on transforming our energy systems to be beneficial to the economy and environment. GPI is a national leader in setting best practices and providing assistance to local government in the intersection of renewable energy development and land use regulation and programs. GPI has reviewed the draft Land Conservation Plan for Dakota County, and has identified a number of opportunities in the plan where habitat-friendly solar energy development could leverage the County's planned work in protecting natural resources, restoring eco-system services, and improving agricultural practices and economics.

Minnesota is the national leader in developing habitat-friendly solar site designs that successfully co-locate eco-system restoration with solar energy development.[23] The Minnesota Board of Soil and Water Resources (BWSR) administers the Minnesota Habitat Friendly Solar Program, which certifies solar developments that are designed and maintained to provide pollinator, songbird, and gamebird benefits.[24] GPI is working with a national organizations, state agencies and

[23] Center for Pollinators in Energy, https://fresh-energy.org/beeslovesolar/

[24] Minnesota Habitat Friendly Solar Program website, https://bwsr.state.mn.us/minnesota-habitat-friendly-solar-program

local governments to further enhance local co-benefit opportunities by identifying siting and design standards that capture surface water, ground water, and agricultural diversification benefits that can be captured as part of solar development.

Dakota County has already seen the rapidly growing development pressure associated with the burgeoning solar industry in MN. The County has over 60 community solar installations, almost 60 MW of solar capacity. The amount of solar deployment in MN is expected to increase four-fold over the next ten years, so the development pressure in the County's rural areas will continue, adding to the housing and urban expansion pressure on the County's natural systems, habitat, and watersheds.

Solar Development for Conservation Co-Benefits

Unlike most forms of development, solar development (particularly at the community scale) can be readily designed and sited to enhance or restore some eco-system functions. The critical point, however, is that purely market driven solar development will not achieve the Plan's goals; a deliberate approach to guiding and designing solar development can not only help meet Plan goals, but accelerate opportunities and leverage funding and staff time to increase impact. Such solar development opportunities fit into the following Plan ownership scenarios:

1) **Publicly-owned conservation land within Preliminary CFAs**. Solar development has limited opportunity to contribute to Plan goals in this scenario. Some individual opportunities may exist along the edge of such CFAs where solar development can provide an edge buffer to other forms of development.
2) **Protected private lands within Preliminary CFAs**. Similar to scenario 1, solar development has limited opportunity to contribute to Plan goals, and existing protections will generally limit solar development from occurring. However, solar development is a potential tool in existing protected areas with limited or problematic funding or commitment to on-going maintenance (a necessary element of conservation noted in the draft Plan). Both the lease provisions and the conditional use permit standards by the local government can stipulate management practices that meet natural resources goals.
3) **Non-protected private land with Preliminary CFAs.** Appropriately sited and designed solar development has great potential in this scenario to leverage resources and accelerate protection and restoration efforts. The categories of protection or restoration, and the siting priorities for solar in these areas are noted below:
    a. Removing all or most economic value from private lands for the purpose of eco-system protection of restoration can be a difficult and expensive proposition. Where solar development can be successfully co-located and managed consistent with the CFA conservation goal, solar development can provide an attractive revenue stream to the land owner, and ensure long-term protection of the site or project area. Solar development can also be used as a form of limited (conservation) development where a large area is permanently protected while a small area (10 acres) is developed under solar.
    b. CFA goals that can be compatible with solar include protection or restoration of grassland habitat and pollinator habitat. BWSR and DNR are learning from early habitat-friendly solar development to tailor the seed mixes and maintenance practices to maximize value for these habitat outcomes. Solar development that is designed consistent with BWSR standards and designed to a specific goal are successfully restoring habitat or creating buffers to similar natural areas.
    c. Solar development can be designed as green infrastructure to mitigate surface water impairments or watersheds that are impacted by agricultural practices. GPI is currently working with national laboratories and stormwater regulators at the federal and state level to document the runoff co-efficients for solar development under specific soil conditions, topography, hydrologic regimes, and solar designs.[25] Preliminary analysis shows that replacing agricultural uses in strategic areas with solar designed as green infrastructure can create water quality benefits.[26]

[25] The Photo Voltaic Stormwater Management Research and Testing (PV-SMaRT) project is a Dept of Energy funded project managed by the National Renewable Energy Lab, with field test sites in five case study states across the nation, one of which is Minnesota.

[26] Unpublished research by the University of Minnesota Energy Transition Lab (a partner on the PV-SMaRT project, stormwater modeling from multiple MN and WI sites comparing before and after stormwater impacts.

4) **Non-protected private land outside Preliminary CFAs**. Several categories of protection goals for land outside of Preliminary CFAs can be enhanced by planned and carefully designed solar development. The greatest opportunity is on parcels that meet the following protection categories and are currently in agricultural use:

   a. Creation of connected corridors for pollinators or some species of birds

   b. Conversion of cultivated lands in vulnerable or highly vulnerable DWSMAs or recharge areas. GPI is helping coordinate several projects that are assessing opportunities and conducting field tests to use solar development as groundwater protection in nitrate management areas. Particularly for higher value land in agricultural production, the cost of taking it out of production can be prohibitive, and some programmatic tools are of limited duration. Solar development provides an income stream to the land owner that is (currently) substantially higher than agricultural rents or returns on investment. A number of rural water suppliers are investigating how to leverage these returns to accelerate their programs to limit nitrate contamination for vulnerable recharge areas.

   c. Solar as green infrastructure for surface water protection, as described above.

   d. Providing a pathway for agricultural operators to improve management practices and convert marginal farmland to natural vegetation.

Implementation

The Plan describes a number of implementation priorities, partnerships, and funding options. Solar development as a plan strategy has clear viability to leverage County funding with private sector funding, to ensure long-term (25 years) management of the site particularly on private lands, and to meet Minnesota's clean energy and GHG reduction goals as a co-benefit of protection and restoration.

However, using solar development as a strategy for meeting Plan goals is not an intuitive opportunity, particularly given the perspective of many residents and decision-makers that solar development is an industrial land use, or at least is akin to grey infrastructure. And unless the solar development is deliberately sited and designed to function as green infrastructure or habitat for compatible species, the view of solar as a hardscape or infrastructure is a reasonable one.

Dakota County can follow the lead of a number of natural resource agencies and NGOs that are now acknowledging the opportunity to build solar as green infrastructure. BWSR and DNR[27] are actively promoting these opportunities in guidance documents and programs. Organizations such as The Nature Conservancy are mapping out development and eco-system restoration opportunities for renewable energy.[28] The Minnesota Rural Water Association is actively investigating solar as groundwater protection.

The Great Plains Institute is working with local governments and state agencies on the co-benefits approach to solar development, and would be able to offer some technical assistance to Dakota County to develop a programmatic approach to solar as green infrastructure. Funding for developing pilot initiatives for particular goals may be available, such as MN Department of Health innovation funding for drinking water protection.

[27] DNR Commercial Solar Siting Guidance, https://files.dnr.state.mn.us/publications/ewr/commercial_solar_siting_guidance.pdf

[28] https://www.nature.org/en-us/about-us/where-we-work/united-states/north-carolina/stories-in-north-carolina/making-solar-wildlife-friendly/, https://energynews.us/2020/05/18/southeast/conservation-group-plots-solar-potential-for-retired-appalachian-coal-mine-land/,

APPENDIX 5. CAPITAL AND OPERATIONAL COST ANALYSIS

This appendix provides more detailed analyses of estimated costs for protection and restoration across four categories of land:

- Public conservation lands in preliminary CFAs
- Protected private lands within preliminary CFAs
- Non-protected private lands within preliminary CFAs
- Additional lands outside of preliminary CFAs

A. County Land Protection: 2003-2019

Initial Protection Goal:	5,000 - 10,000 acres
Completed, Non-Park/Greenway Projects:	137 (9.5 per year)
Ongoing Non-Park/Greenway Projects:	17
Acres Protected:	11,536 (fee title/conservation easements)
County Funds:	$20.6M (25%)
Non-County Funds:	$34.7M
Landowner Donated Value:	$26.3M
	$81.6M Average cost per acre: $7,100

B. Preliminary Conservation Focus Area Summary

Land Cover	Public	Protected Private Land	Private Land	Total	Percentage
Floodplain - Natural vegetation	7,163	1,107	6,418	14,688	20
Cultivated - Non-hydric	2,442	3,405	6,833	12,680	17
Upland Forest/Woodland	3,975	366	6,240	10,581	14
Cultivated Wetlands	389	1,873	5,200	7,462	11
Floodplain - Cultivated	218	752	5,518	6,488	9
Grassland/Pasture	3,002	478	2,951	6,431	9
Open Water	2,318	136	3,482	5,936	8
Designated Wetlands	1,151	498	3,053	4,702	6
Artificial*	1,044	48	1,896	2,988	4
Public Right-of-Way	1,834	0	0	1,834	2
Designated 50- and 16.5-foot wide Stream Buffers	65	28	365	438	<1
Totals	**23,824**	**8,697**	**42,342**	**74,863**	**100**

**Combination of vegetative and developed portions of floodplain, parks/trails, residential, commercial, and industrial properties.*

C. Public Conservation Lands in Preliminary CFAs

Land Cover	County Acres	Other Public Acres	Restoration Cost/Acre	Acres to Restore	Sub-Total
Floodplain - Natural	445	6,720	$1,000	715	$715,000
Floodplain - Cultivated	0	218	$2,000	21	$42,000
Floodplain - Other	21	201	$1,000	22	$22,000
Cultivated - Non-hydric	0	2,442	$1,000	2,442	$2,442,000
Cultivated - Hydric	0	389	$3,000	389	$1,167,000
Upland Forest/Woodland	2,187	1,787	$4,000	2,385	$9,540,000
Grassland	1,287	1,716	$1,000	2,000	$2,000,000
Open Water	337	1,980	$0	0	$0
Transportation Right-of-Way	69	1,765	$1,000	183	$183,000
Designated Wetlands	168	983	$1,500	345	$517,500
Artificial*	363	682	$2,000	145	$290,000
Designated 50- and 16.5-foot wide Stream Buffers	35	29	$1,000	65	$65,000
Sub-totals	**4,912**	**18,912**		**8,712**	
Total Cost					**$16,983,500**

**Combination of non-native vegetative and developed portions of open space, residential, commercial, and industrial properties.*

Assumptions

- Ten percent of floodplain is restorable
- Forty percent of woodlands have already had some level of restoration
- Sixty-six percent of grasslands continues/begins the restoration process
- Thirty percent of designated wetlands begins the restoration process
- Ten percent of artificial lands (turf) begins the restoration process
- Ten percent of public right-of-way begins the restoration process
- Eighty percent of public agencies willing to restore their land
- Restoration funding ratio of 10% County, 80% State and 10% LGU/Agency
- $0.4M of existing County funds

Estimated County Capital Cost for Restoration of 8,712 acres

$16.98M x 80% x 10% minus $0.4M = $0.96M

D. Protected Private Lands in Preliminary CFAs

Land Cover	Acres	Added Protection Cost/Acre**	Protect Acres	Cost to Protect	Restore Cost/Acre	Restore Acres	Cost to Restore
Cultivated-Non-hydric	3,405	$5,000	1,020	$5,100,000	$2,000	1,020	$2,040,000
Cultivated-Hydric	1,873	$6,000	562	$3,372,000	$3,000	562	$1,686,000
Floodplain-Natural	1,107	$0	0	$0	$1,000	111	$111,000
Floodplain-Cultivated	752	$4,000	226	$904,000	$2,000	226	$452,000
Floodplain – Other	5	$0	2	$0	$2,000	2	$4,000
Grassland/Pasture	478	$2,000	143	$286,000	$1,000	143	$143,000
Upland Forest-Woodland	366	$0	0	$0	$4,000	110	$440,000
Designated Wetlands	498	$0	0	$0	$1,500	149	$223,500
Open Water	136	$0	0	$0	$0	0	$0
Artificial*	48	$0	0	$0	$2,000	16	$32,000
Designated 50- and 16.5-foot Stream Buffers	28	$0	0	$0	$1,000	8	$8,000
Sub-totals	**8,696**		**1,953**	**$9,662,000**		**2,347**	**$5,139,500**
							$14,801,500

** Non-natural, vegetative portions of residential, commercial, and industrial lands*

*** Compensation for additional easement restrictions*

Assumptions

- Thirty percent of landowners willing to additionally protect and restore their land
- Ten percent of floodplain is restorable
- Funding ratio for additional protection: 25% County and 75% State
- Restoration Funding ratio: 20% County, 70% State and 10% Landowner
- $0.6M of existing County funds

Estimated County Land Capital Costs for Protecting 1,951 acres

$9.66M x 25% minus $0.3M = $2.12M

Estimated County Capital Costs for Restoring 2,347 acres

$5.14M x 20% minus $0.3M = $0.73M

E. Non-Protected Private Land in Preliminary CFAs

Land Cover	Acres	Protect Cost/A. ***	Acres	Cost to Protect	Restore Cost/ Acre	Restore Acres	Cost to Restore
Cultivated – Non-hydric	6,833	$4,000	1,367	$5,468,000	$2,000	1,367	$2,734,000
Cultivated –Hydric	5,200	$6,000	1,040	$6,240,000	$3,000	1,040	$3,120,000
Floodplain –Natural	6,417	$2,000	1,283	$2,566,000	$1,000	128	$128,000
Floodplain –Cultivated	5,518	$4,000	1,104	$4,416,000	$2,000	1,104	$2,208,000
Floodplain –Other	382	$3,000	76	$228,000	$2,000	76	$152,000
Upland Forest/Woodland	6,244	$3,000	1,249	$3,747,000	$4,000	1,249	$4,996,000
Open Water	3,482	$0	0	$0	$0	0	$0
Designated Wetlands	3,053	$1,000	611	$611,000	$1,500	611	$916,500
Grassland/Pasture	2,951	$4,000	590	$2,360,000	$1,000	590	$590,000
Artificial*	1,896	$3,000	379	$1,137,000	$2,000	379	$758,000
Designated 50-and 16.5-foot wide Stream Buffers	365	$1,000	73	$73,000	$1,000	73	$73,000
Sub-totals	**42,342**		**7,772**	**$26,846,000**		**6,617**	**$15,675,500**
Total Cost							**$42,521,500**

** Non-natural, vegetative portions of residential, commercial, and industrial lands*

**** Estimated average cost for easement or fee title acquisition*

Assumptions

- Twenty percent of landowners willing to protect their land
- Ten percent of floodplain is restorable
- Sixty percent of newly protected land begins the restoration process
- Acquisition funding ratio: 25% County and 75% State
- Restoration funding ratio: 20% County, 70% State and 10% Landowner
- $0.4M of existing County funds

Estimated County Capital Cost for Protecting 7,772 Acres

$26.85M x 25% minus $0.2M = $6.51M

Estimated County Capital Cost for Restoring 6,617 Acres

$15.68M x 20% minus $0.2M = $2.94M

F. Non-Protected Private Land Outside of CFAs

Land Cover	Acres	Protect Cost/A.	Protect Acres	Costs to Protect	Restore Cost/Acre	Restore Acres	Restore Costs
Forest/Woodlands	1,800	$4,000	360	$1,440,000	$4,000	360	$1,440,000
Cultivated – Hydric	400	$8,000	80	$640,000	$3,000	80	$240,000
Regional Greenway Corridors	100	$40,000	20	$800,000	$3,000	20	$60,000
Other Locally Significant	100	$30,000	20	$600,000	$3,000	20	$60,000
Sub-totals	**42,342**		**480**	**$3,480,000**		**480**	**$1,800,000**
Total							**$5,280,000**

**** Estimated average cost for possible easement or fee title acquisition*

Assumptions

- Twenty percent of landowners willing to protect and restore their land
- Eighty percent of newly protected land begins the restoration process
- Acquisition funding ratio: 25% County, 75% State
- Restoration funding ratio: 20% County, 70% State and 10% Landowner

Estimated County Capital Cost for Protecting 480 Acres
$3.48M x 25% = $0.87M

Estimated County Capital Cost for Restoring 480 Acres
$1.8M x 20% = $0.36M

G. Summary of Estimated Total Capital Costs

1. Protection Estimated Costs	Acres	Costs
Public Land in CFAs	0	0
Protected Private Land in CFAs	1,953	$9,662,000
Non-Protected Private Land in CFAs	7,772	$26,846,000
Non-CFA, Non-Protected Private Land	480	$3,480,000
TOTAL	**10,205**	**$39,988,000**

2. Restoration Estimated Costs	Acres	Costs
Public Land in CFAs	8,712	$16,983,500
Protected Private Land in CFAs	2,347	$5,139,500
Non-Protected Private Land in CFAs	6,617	$15,675,500
Non-CFA, Non-Protected Private Land	480	$1,800,000
TOTAL	**18,156**	**$39,598,500**

3. Estimated Total Costs by Land Category	Estimated Costs
Restoration of Public Land in CFAs:	$16,983,500
Additional Protection and Restoration of Protected Private Lands in CFAs:	$14,801,500
Protection and Restoration of Non-Protected Private Lands in CFAs:	$42,521,500
Protection and Restoration of Non-Protected Private Lands outside of CFAs:	$5,280,000
TOTAL	**$79,586,500**

4. Estimated Additional County Funding Required	Protection	Restoration
Restoration of Public Land	$0	$958,680.0
Additional Protection/Restoration of Protected Private Lands in CFAs	$2,115,500	$727,900.0
Protection/Restoration of Non-Protected Private Lands in CFAs	$6,511,500	$2,935,100.0
Protection/Restoration of Non-Protected Private Lands outside of CFAs	$870,000	$360,000.0
	$9,497,000	**$4,981,680.0**
TOTAL		**$14,478,680.0**

H. Operational Funding Considerations

- Typical acquisition projects require 18 to 24 months
- Typical restoration projects require three or more years

The majority of past land protection projects consisted of large tracts of agricultural easements, with:

- Lower average acreage per project
- Lower average cost per acre and lower total cost per project
- Less complexity and reliance on partners requiring less average time per project
- Initially no natural resource restoration requirements

Based on past performance, expected land protection and associated restoration will likely result in:

- Lower average number of acres per project
- Higher average cost per project
- Greater complexity and reliance on partners, including adjacent landowners, and required natural resource management will require more staff time per project and a longer duration

Estimated Potential Ten-Year Land Protection Outcomes: 10,205 acres
Estimated Potential Ten-Year Restoration Outcomes: 18,156 acres

<u>Current Staffing</u>

- Ten acquisition projects/year x 25 acres = 250 acres or an estimated 2,500 acres in ten years
- Ten restoration projects/year x 40 acres = 400 acres or an estimated 4,000 acres in ten years.

<u>Additional Staffing</u>

- An additional 1.0 FTE Acquisition Specialist could increase land protection from an estimated 2,500 acres over ten years to an estimated 5,000 acres over ten years, with an increase in the annual staffing budget of $170K.

- An additional 2.0 FTE Restoration Specialists could increase restoration from an estimated 4,000 acres over ten years to an estimated 12,000 acres over ten years, with an increase in the annual staffing budget of $286K.

Pine Bend Bluffs State Scientific and Natural Area, protected with assistance from Dakota County