OPEN SPACE

Open Space Mission

Duluth will strive for a sustainable open space system that enriches the lives of all Duluthians. These open spaces will reflect the community's ecological, historical, cultural, and recreational values, and will contribute to its resilience to natural disasters.

Trees
Water
RECREATION

GOVERNING PRINCIPLES FOR OPEN SPACE

1 Reuse previously developed lands

2 Declare the necessity and secure the future of undeveloped places

6 Reinforce the place-specific

10 Take sustainable actions

13 Develop a healthy community

14 Integrate fairness into the fabric of the community

Introduction

Open spaces are more than undeveloped land. They provide places for people and wildlife to breathe, literally and figuratively. They are part of the character of the city, including the green hillside of western Duluth, wetland areas of Duluth Heights and Piedmont Heights, sheltered bays of the Saint Louis River, the ribbons of Skyline Parkway and the creek corridors that weave open space areas together. They are formal parks such as Bayfront, Lester, Enger, and Chambers Grove, the plazas of Downtown, the Lakewalk, and the neighborhood parks found throughout the city. Some of these open space areas were deliberately created, while others are the "left behind" areas of yesteryear.

It was William K. Rogers in 1889, the first president of Duluth's Board of Park Commissioners, who conceived the idea of linking the many stream corridors flowing through Duluth to a parkway spanning the city's bluff. Mayor Samuel F. Snively built upon Rogers' work and extended the boulevard and park system in the 1920s and 1930s, spanning from Kitchi Gammi Park to Fond du Lac Park. Millions of dollars were spent on facilities in Duluth's parks as part of the Works Progress Administration (WPA) programs to alleviate poverty after the Great Depression.

The Great Depression also brought waves of tax forfeited lands into government ownership. The Minnesota Legislature allows cities to request that lands needed for parks and other public purposes be transferred to the City; Duluth has obtained many park and trail areas through this program.

Throughout its history, Duluth has struggled to afford its vast holdings of park and open space land. In 1943, the park superintendent estimated the valuation of the park system at $6.7 million, but only had a $90,000 budget to maintain it. Today, Duluth's parks and open space system is still struggling, though less so since the establishment of a $2.6 million parks levy by City Council in 2011. Recently, funding has been dedicated to

parks construction from the "half and half" tax and the many grants obtained to fund park construction in the Saint Louis River corridor.

Where will Duluth's parks and open space go in the future? Imagine Duluth 2035 open space policies are based on the principles of providing for the current needs of the community while preserving the ability of future generations to meet their needs for jobs, housing, food, health, safety, recreation, and inspiration. Land is a limited resource that should be preserved in its natural state until needed for efficient public or private development. Some land should be permanently preserved to meet community goals.

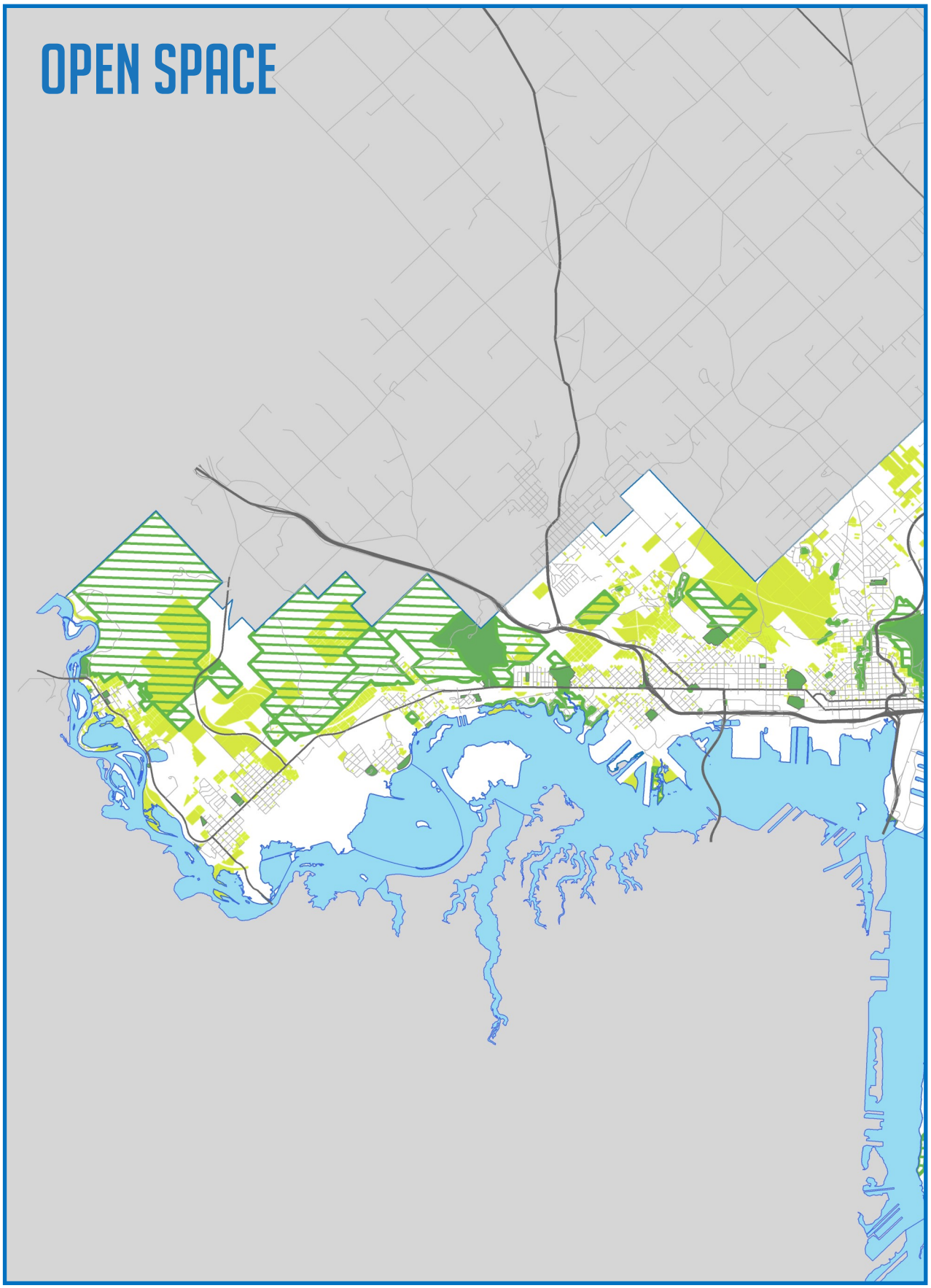
Open space areas play an important role in the city's resilience to natural disasters. These areas are the sponge that absorbs rain water above the bluff and retains it in wetland areas until it can be slowly released through Duluth's 42 streams. Without these open spaces, the more populated areas through which the streams flow on their way to the Saint Louis River and Lake Superior would be in danger of flooding and erosion. Unfortunately, many acres of this water-storing open space have been altered and flooding is a significant issue; noteworthy floods occurred in 1972 and 2012. This plan recommends additional means to improve Duluth's resilience to flooding through preservation of wetland areas.

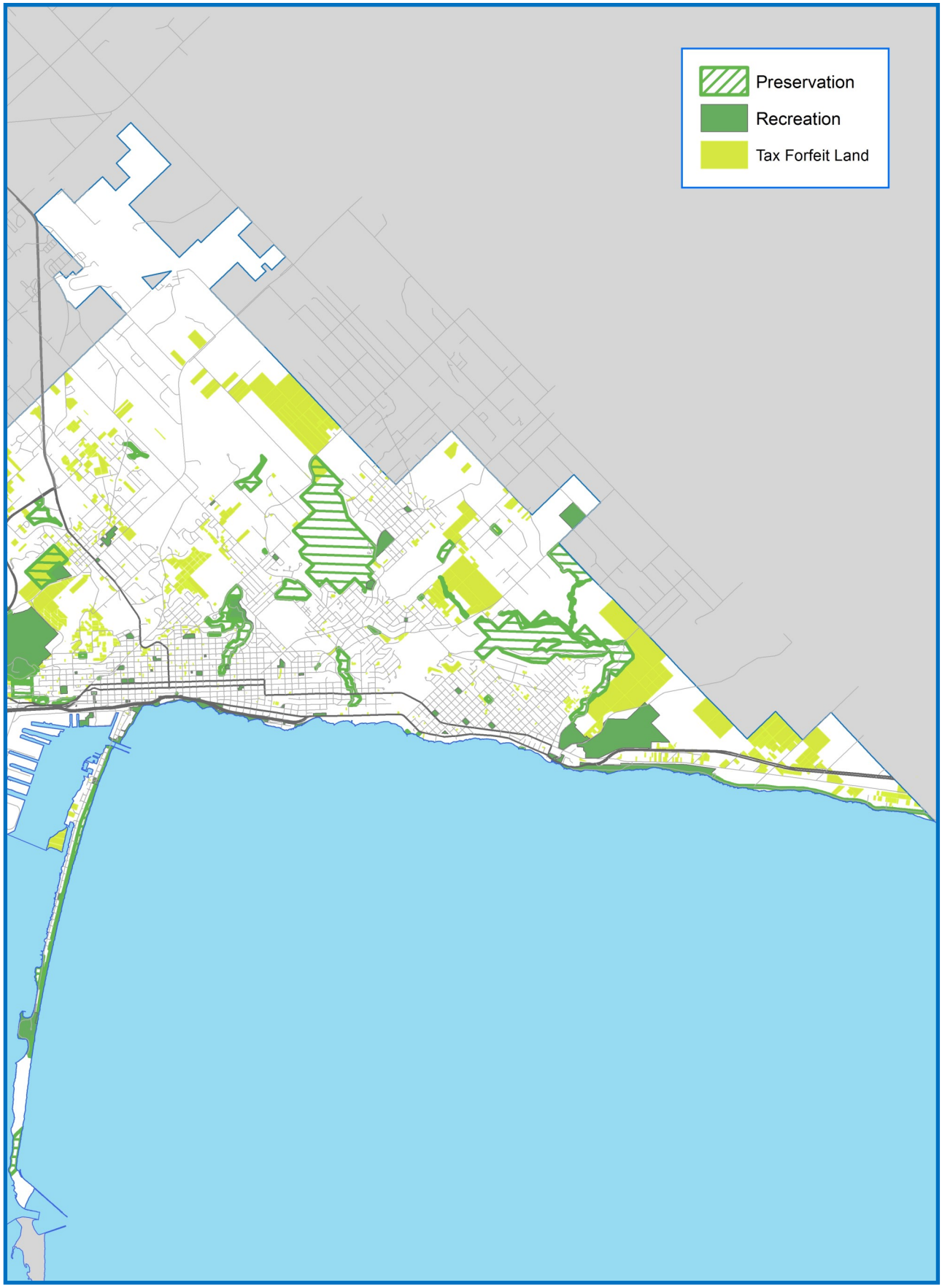
Duluth's parks and open spaces exist for the benefit of all its people, and access should be open to all. While physical barriers (including busy roads, topography, and water bodies) are the most evident, other barriers can be financial (such as lacking resources to purchase equipment or pay fees for programs) or cultural (where a resident doesn't see themselves or their values reflected in the facilities or activities programmed within the parks).

When surveyed about "best community assets in Duluth," the top four answers were related to open space:

1. **Proximity to Lake Superior**
2. **Natural scenery/great views**
3. **Parks and open space**
4. **Trails**

OPEN SPACE




Preservation
Recreation
Tax Forfeit Land

Where We Play

Duluth has substantial undeveloped lands within its boundaries. Some of this undeveloped land — 47% of the city — is tax exempt: publicly owned (parks, schools, trails, etc.), non-profit (churches and non-governmental organizations), or tax forfeit (state owned due failure to pay property taxes). Some of Duluth's tax forfeit land contains public trails (biking, skiing, hiking, etc.), and the community uses these resources quite extensively. To protect this investment, ownership of these resources needs to be fully delineated.

the Lake

Parks

As manager of tax forfeit lands, St. Louis County is mandated by the state to maximize their value through sale or timber harvesting. This creates a continuous challenge, intensified by the existence of vast areas outside of Duluth within St. Louis County that are in public ownership. These paired issues limit tax base growth, creating a unique political situation. Financially sustainable communities generally have much less tax exempt land area in order to balance out growth and good planning. A key factor to preserving the taxable resources will be clearly defining the ownership that is necessary to meet ongoing investment and ownership needs, while still incentivizing reinvestment of tax base growth.

Trails

Being "land rich" and challenged on a tax base side means the city has a high number of parks and open space for enjoyment by its residents. It also means the city is challenged for resources to complete ongoing maintenance or improvements that would enhance user experiences. In recent years, the City has developed collaborative partnerships with non-governmental organizations to meet recreation use needs and to create places for people to enjoy a healthy lifestyle.

Many residents relocate to Duluth for recreational and open space opportunities. Capitalizing upon this desire from an access and user experience is key for continued success in the future. Defining future use of resources will be a focus point in protecting critical sensitive areas.

Resilience

Adaptable

In 2012, Duluth experienced a flood that profoundly changed the landscapes of a number of neighborhoods. Homes and businesses near streams were impacted by rapid water release downstream to Lake Superior. A key takeaway from that event was to focus on resiliency in many forms, including right-sizing infrastructure to accommodate increased flooding events, removing homes near streams to reduce future damage costs, and other methods to promote stormwater retention. Development pressures in and near the Duluth International Airport and Miller Hill Mall area, as well as other areas on top of the hill, continue to drive questions regarding how development should be reviewed. A key outcome of the 2006 Comprehensive Land Use Plan was development of a Sensitive Lands Overlay that provided some geographic guidance for preservation. However, the guidance did not establish adequate development standards to ensure permanent preservation in all necessary locations. Focusing on these landscapes is important and challenging.

Duluth's location in the center of North America and its setting on a slope along Lake Superior has advantages and disadvantages. The city is far from oceans and their associated hurricane, tidal, and sea-level rise risks. It is located in a seismically inactive region free from earthquakes, and being in a northern latitude generally spares the city from extended extreme heat events. However, being sited on a steeply sloping bluff with shallow, poor soils presents risks to the community from flash flooding. Additionally, the vast forests in the region present a risk of wildfire. These trees can also disrupt the provision of electricity following windstorms or ice storms.

Duluth's open space policies have a large effect on the community's ability to endure natural hazards. According to the St. Louis County Hazard Mitigation Plan (2013),Duluth is rated at a moderate risk of wildfire, winter storms, summer storms, and flooding. These hazards are summarized below.

Wildfire

Fire is ranked as one of the greatest hazard threats in St. Louis County, an especially high concern in the Wildland– Urban Interface (WUI) where insect outbreaks and aging forest conditions contribute to heavy fuel load. Duluth's vast open spaces make it prone to wildfire, like the Cloquet-Duluth fire of 1918 that destroyed much of Cloquet and part of Duluth's Woodland neighborhood.

Access roads in wooded areas are critical for emergency response vehicles. To help reduce risks, the national Fire Wise Program educates residents about wildfire risk areas and how to make their structures safer from wildfire. Funding is available for local fire departments and other governmental units to inspect properties and advise residents. The program provides landscape design tips which include measures that can be taken in different "zones" around a structure to provide more protection from spreading fires.

Seasonal Storms

In winter storms, heavy accumulations of ice can knock down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days while utility companies work to repair damage. Duluth can reduce risks from winter storms by maintaining access corridors for utilities and locating utilities underground, where feasible.

Windstorms occur in all months of the year; however, the most severe windstorms usually occur in severe thunderstorms during warm months. The most common type of windstorm to affect St. Louis County are straight-line winds and downbursts associated with strong thunderstorms. Most of the Arrowhead Region , including St. Louis County, is located in Wind Zone II: a high wind speed area. Buildings in Wind Zone II should be constructed to withstand wind speeds of up to 160 M.P.H.

Windstorm damage in Hartley Park in 2016
Source: Duluth News Tribune

Flooding

Heavy rainfall is not an uncommon event throughout St. Louis County and can be hazardous due to local geography, shallow soils, and related weather effects. According to the Minnesota Pollution Control Agency, climate change increases likelihood of frequent incidents of this kind. The City can reduce the damage potential and risks to lives by limiting construction in flood-prone areas, protecting the flood storage capacity of wetlands and stream corridors above the bluff, and implementing appropriate water detention systems, including green infrastructure, where appropriate.

According to a National Oceanic and Atmospheric Administration (NOAA) study conducted after Duluth's 2012 flood, traditional "gray" infrastructure includes culverts, catch basins, and storm water pipes that discharge to streams without reducing the volume of runoff. In contrast, "green infrastructure can be broadly defined to include a variety of methods to manage water resources while providing benefits such as improved water quality" (Economic Assessment of Green Infrastructure Strategies for Climate Change Adaptation: Pilot Studies in the Great Lakes Region, May 2014, National Oceanic and Atmospheric Administration). The NOAA study went on to state that "green infrastructure includes engineered systems (e.g., bioswales, green roofs, or permeable pavement) as well as preservation or enhancement of existing natural flood storage provided by wetlands, floodplains, and open space." As this pertains to open space in Duluth, the study further states that "green infrastructure provides economic co -benefits, including aesthetics and a range of ecosystem benefits beyond

2012 Flood
Source: MPR News

flood protection such as water quality and wildlife habitat." Another co-benefit of green infrastructure is its value for regular and accessible human nature experience.

In addition to the green infrastructure tools listed in the table on page OS-11 the NOAA study suggested land use policy options that can have a positive impact on storm water detention, flood control, and open space, including "updating stormwater ordinances, using land-use tools such as zoning and Transfer of Development Rights (TDR) to shift development away from flood-prone areas to areas more suitable for development, and land preservation and restoration."

The NOAA study's purpose was to assess the economic benefits of green infrastructure as a method of reducing the negative effects of flooding. The Chester Creek watershed was used as a test case in this study, along with a watershed in Toledo, Ohio. The study found that "if green infrastructure was implemented to reduce the peak discharge in Chester Creek by 20 percent (which corresponds to 76 acre-feet of flood storage under current conditions and 86 acre-feet of storage under future conditions), . . . economic losses from flooding associated with a 100-year storm would decrease by 27 percent under current precipitation conditions and 16 percent under future precipitation conditions." Translated into dollars, the study found that "over a 20-year planning horizon, damage reductions (and hence economic benefits) equate to a total present value of approximately $1.63 million, or roughly $89,000 annually with green infrastructure implementation." This comes primarily from reduced damage to private property valued at an estimated $50,300 annually. However, there is also significant value (estimated at $21,000 annually) in not needing to restore damage to land near the stream, and reduced storm sewer maintenance and replacement costs, all which are directly borne by the City of Duluth. Additionally, there is benefit to the public in each

Type of Green Infrastructure	Benefits
Permeable/Porous Pavement	
Permeable pavers, porous asphalt, pervious concrete, porous concrete	Reduce runoff quantity during storm events. Can potentially reduce the need for road salt use. Improve water quality from underground media filtration.
Rainwater Harvesting/Storage	
Rain barrels, cisterns, underground tanks, added flow-control valves	Require minimal space and thus suited for urban residential, commercial, and/or industrial areas. Reduce water demand. Reduce runoff volume to conventional stormwater facilities, especially with flow-control valves.
Roof Systems	
Blue roofs, extensive green roofs, intensive green roofs	Green and blue rooftops reduce stormwater peak flow and runoff volume. Green roofs provide additional pollutant removal through uptake and filtering. Both can be used on many types of buildings. Green roofs can be designed for public access.
Infiltration Systems	
Infiltration trenches/basins, grass strips, biofilters/ sand filters	Improve stormwater quality. Provide temporary storage and help to reduce flooding during small storms. Promote infiltration and groundwater recharge.
Bioretention Systems	
Bioretention cells, tree filters, stormwater planters, rain gardens, bioswales, stormwater tree trenches	Maintain water balance and provide groundwater recharge. Promote pollutant uptake through vegetation. Utilize existing green space to serve a functional purpose while keeping aesthetic appeal.
Constructed Wetlands	
Shallow marsh wetlands, extended detention wetlands, and gravel wetlands	Improve water quality through pollutant removal. Reduce peak discharges. Provide flood control for higher magnitude storms. Subsurface gravel wetlands provide year-round stormwater treatment in colder climates.
Wet and Dry Ponds	
Wet ponds are similar to constructed wetlands but often don't include the wetland vegetation and differ in depth. Dry ponds offer temporary storage after storm events and drain almost completely after a specified period of time.	Provide flood control by including additional flood detention storage. Reduce peak discharges.

day Chester Park remains open for use simply because it hasn't been damaged by flooding (estimated to be worth $17,700 annually).

The study also estimated the costs of constructing and maintaining green infrastructure tools that could work in Duluth (see table below). If the least costly option (extended detention wetlands) were selected, the present value of the cost to construct this would be $4.17 million. Summing the benefits of this flood reduction for a 20-year planning horizon only yields $1.63 million, and therefore constructing these wetlands doesn't make economic sense. If the planning horizon is extended to 50 years, the costs remain constant at $4.17 million; however, the benefits grow to $4.68 million, and the project makes sense. The authors of the NOAA study pointed out that not all flood reduction benefits were able to be modeled, including damage to roads and bridges and that the cost to construct some green infrastructure may be offset by federal and/or state grants.

Invasive Species

Duluth's natural landscape has been substantially altered since pre-European settlement. Starting with removal of timber, the mix of native species has changed over the years. Some of the new species have natural limitations to their spread and can fit in with native species. Other species

Green Infrastructure Practice	Capital Costs		Operations and Maintenance Costs	
	Capital Cost per Square Foot of Surface Area[1,2] Installed ($/SF)	Capital Cost per Cubic Foot of Flood Storage[1,2] Provided ($/CF)	Annual O&M Cost per Square Foot of Surface Area Installed ($/SF/year)[1,2]	Annual O&M Cost per Cubic Foot of Flood Storage Provided [1,2] ($/CF/year)
Bioretention/Bioswale	26.0	21.2	0.9	1.3
Blue Roofs	4.0	6.0	0.2	N/A[3]
Permeable Pavement (Sidewalk)	7.6	16.8	0.02	N/A
Underground Storage[4]	N/A	41.3	N/A	1.3
Stormwater Tree Trench[5]	7500	N/A	N/A	N/A
Retention Pond	1.0	2.9	0.1	0.0
Extended Detention Wetland	2.6	1.3	0.03	N/A

Table Notes: All costs are in 2012 dollars. N/A indicates that costs were not available. The cost per cubic foot of storage is anticipated to be lower. One case study used to find average costs had a significantly higher $/CF values, which greatly increased the overall average. The median cost for underground storage in 2012 dollars was $17.2/CF. Tree trench cost is per unit rather than per SF.

spread more rapidly due to various characteristics that allow the non-native species to thrive more than the natives.

Eventually, the natural landscape is altered by replacement of native species with non-native and invasive species. In recent decades, the spread of invasive species has accelerated; this spread is currently expected to expand even further. Management practices can limit the spread and facilitate removal of invasive species. Collaboration with regional partners can increase the impact of these efforts.


Invasive Species: Japanese Knotweed

Intrinsic Value

Duluth has an asset many other cities would love to have: abundant open space. Many cities spend millions of dollars to buy land for parks and open space. Duluth benefits from thousands of acres including City land, tax forfeit land, and privately-owned, undeveloped land with wetlands, stream corridors, large forest tracts, and other important ecological features. While this land may be undeveloped now, some of it may not be permanently protected from development or environmental degradation.

On the other hand, some undeveloped land is located near infrastructure that could be used to meet the community's housing, economic development, and transportation needs. It will take a balanced approach of weighing the current and future needs of Duluth to prioritize if land should be marked for preservation or future development.

The community should consider the role open space plays in defining Duluth's urban form. This form includes a green belt along the bluff with green corridors flanking many of the streams flowing to the St. Louis River and Lake Superior.

Duluth is known as a scenic city with views from the hillside to the harbor and lake, views from the waterfront to the hillside, and views of important structures like the Lift Bridge, Civic Center, and Old Central High School, to name a few. The community should identify these important views and cultural sites and take steps to preserve the views to them.

In 2011, a Mayor's Task Force on Reuse and Protection of Public Lands addressed the idea that the city's extensive catalogue of publicly owned land should be reviewed for preservation and reuse. This resulted in creation of the following implementation steps for addressing public lands:

1. Create a holistic vision for a citywide network of “greenspace”
2. Institutionalize a formal program to implement and market this vision
3. Simultaneously develop a proactive plan for the strategic reuse of public land
4. Implement a process using publicly-vetted criteria for shaping this vision
5. Revise the City’s procedure for selling lands to increase public awareness

A formalized review structure has not yet been established. The report did create a framework for deriving public benefit from public lands, as well as determining the potential value from the sale of public land. All different forms of value should be considered when determining the future of open space, including ecological, recreational, and cultural. The same methodology used in this previous effort should be carried forward to evaluate future needs for open space. Public benefits derived from open space include:

- Important natural habitats
- Water resources, including stormwater management, water purification, and aquatic habitat
- Outdoor recreation
- Scenic and cultural benefits

Similarly, there are public benefits from the strategic sale/transfer of those public lands deemed not essential:

- Contribute to short-term financial resources of the City
- Contribute to longer-term resources by adding additional land to the property tax rolls
- Add development in important growth areas for the city

- Eliminate confusion over the ownership and management of certain public lands
- Use as a funding mechanism for additional acquisition, protection, or management of existing assets

When establishing a review structure for the potential reuse (or sale) of land, consideration should also be made of the historical and cultural significance of the land. Existing commissions, committees, and community groups should be consulted to understand the key cultural areas in Duluth. An important existing resource is *An Ethnographic Study of Indigenous Contributions to the City of Duluth* (2015), which identifies many important areas of indigenous significance to Duluth.

Barriers

Equally important as the amount of open space is the accessibility of these amenities for all people. While physical barriers, including busy roads, topography, and water bodies, are often the most evident, there are several other types of barriers to consider, including social, economic, and cultural barriers.

The National Recreation and Park Association identifies the following factors as limiting walkability to parks: proximity, lack of infrastructure, and crime and traffic safety. For example, the Munger Trail is separated from the Morgan Park neighborhood by dozens of feet of elevation change and busy Highway 23. Cascade Park, one of Duluth's oldest parks in the heart of the Central Hillside, is cut off from neighborhoods to the north and west by Mesaba Avenue, a four-lane trunk highway that carries 17,300 vehicles daily. The Lakewalk from 26th Avenue East to Downtown is a well-maintained trail along the scenic lakeshore connecting many neighborhoods, but there are access issues that include steep grades, perception of crime at access points, parking problems, and limited access to restrooms.

Duluth is known for its connected network of mountain biking trails and is actively working to connect more neighborhoods to this city-wide trail network. Once a trail is located near a neighborhood, there is still much work to be done to connect to the people in that neighborhood; this might include wayfinding to trailheads, access to equipment that can be expensive, providing mountain bike safety information, and increasing education on trail use.

The Parks and Recreation Master Plan (2010) addressed access to parks in Duluth which relates to the need for access to all open space in Duluth:

The large range in the quality and condition of parks across the system equates to inequitable access to premier facilities. In general, the higher quality signature parks (Chester Bowl, Hartley, Lester/Amity, Kitchi Gammi and Lakewalk, etc.) are located east of downtown. The western portion of Duluth has large areas of natural parkland (Fond du Lac, Magney-Snively and parts of Spirit Mountain Recreation Area), but lacks convenient access to signature community parks. Chambers Grove and Lincoln Park are the two quality community parks in the west part of the city.

There is also a lack of access to quality parks and recreation facilities in the central part of the city. This is a particular concern due to the lower mobility of some residents in this area. Areas of lower mobility have higher concentrations of seniors, youth under 16, and households without cars. Not all people can drive to parks or recreation facilities located across town.

There is a need for more access to gymnasiums for recreation. New and remodeled Duluth schools can help fill the indoor recreation gap by providing additional public access to schools and school gyms. Middle schools and elementary schools offer the best opportunities for community use. Community use of schools is a fundamental element of the school district's Long Range Facility Plan. The City and school district should continue to work together to assure the best community use of schools and parks.

There is a large need for handicapped accessibility (ADA) improvements within the parks and at recreation center buildings. Prioritize accessibility improvements and seek MnDNR grants for accessibility improvements to outdoor recreation facilities such as docks, trails and play areas. Use universal design principles in renovations and new construction.

Program Delivery

Duluth has received national recognition for being a city with tremendous outdoor and recreational opportunities. However, Duluth's park system is vast (128 parks with a total of 6,834 acres) and requires tremendous resources to maintain. Recent years have seen a dramatic increase in the provision of trails (now totaling 178 miles) for various user groups while existing recreation facilities continue to show their age and recreation services desired by many are left unfulfilled.

Duluth's 2010 Parks and Recreation Master Plan focused on three areas:

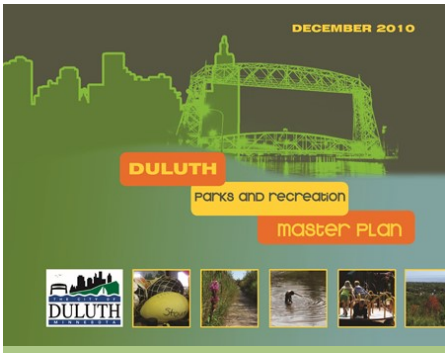
Cascade Park was originally very accessible and visible along Mesaba Avenue, but development of that roadway into a multi-lane highway removed both the access and visibility of this city park.

- park maintenance and stewardship
- trail and bikeway connections
- recreation facilities and programs

The master plan considered recreational, demographic, environmental, and economic trends at the time of writing. Some recreational trends still hold true eight years later, such as Duluthians being a mobile, health-conscious, dog-centric community that enjoys non-traditional sports. However, new forms of recreation that need to be considered have also evolved, such as E-bikes (motorized bicycles). Additionally, community members have recently been interested in the historic nature of park facilities, which is an issue not considered in the 2010 Parks Master Plan. An updated parks master plan could address which historic elements to prioritize.

Demographic trends: Trends of smaller and more diverse households appear to be continuing. The largest age cohort (people age 40-60) has moved further down the demographic curve and is now the largest is age 50-70. The Parks Master Plan was based on a 2003 demographic analysis and a more extensive review of current demographic data may identify additional trends, for example that millennials who came to Duluth for higher education may find reasons to stay after graduating. Additionally, the accessibility of parks to people of all means needs to be incorporated into the master plan, and parks that should be prioritized for accessibility should be identified.

Environmental trends: Trends in our parks, such as people seeking four-season recreation and an increased interest in nature, are continuing, but staff have noted the disconnect between the recreation that people want (ice skating, cross-country skiing, etc.) and what the current climate will allow. Additionally, with more frequent and severe summer storms, the city's parks are more at risk to damage by flowing water. The 2012 flood caused $4.56 million in damage to parks and park facilities and the community has spent $6.6 million on stream restoration. The 2016 windstorm caused $1.5 million in damage to parks, including more than 1,400 trees that had to be cleared from trails in Hartley Park. Such environmental trends point to the need to improve the resiliency of Duluth's parks in light of the changing climate.



"Recreation is dynamic and evolves rapidly. *A high performing recreation system regularly assesses community needs, measures satisfaction and responds to meet those needs. Inherently this means flexible and adaptive facilities and programs.* ***Recreation ten, even five years from now, will be different from today.***

(Duluth Parks and Recreation Master Plan – 2010)

Economic trends: Trends pointed out in the 2010 Parks Master Plan have continued, including people seeking quality experiences outdoors and the health challenges linked to sedentary lifestyles. Tourism has grown dramatically over the years from 1.3 million visitors to Duluth in 1991, doubling by 2000, and increasing to 6.7 million in 2015.

Fiscal trends: The fiscal picture for Duluth's parks has changed dramatically since 2010. In 2010, the City established the Parks Fund with $2.6 million dedicated annually to parks and recreation, and the St. Louis River Corridor Initiative, which has been investing up to $18 million in parks and trail capital projects through the "half and half" tourism tax approved by the Minnesota Legislature in 2014. The City's 2017 budget includes $2.9 million in parks capital spending, which will leverage another $2.6 million in state and federal grants.

Parks facilities trends: The 2010 Parks Master Plan laid out a system of recreation center hubs, primary and secondary recreation centers to prioritize resources spent on facilities. Several recent changes to the community are not consistent with the plan. Examples include the sale of Morgan Park Middle School and its upcoming redevelopment as housing, the Central Hillside Community Recreation Center no longer serving as a facility with City offices, and significant investments made in the Gary-New Duluth Community Recreation Center allowed it to remain open rather than being closed as the master plan suggested. These developments have changed the park system to the point where there may need to be a shift in focus for where resources should be allocated. An asset management plan is needed to understand the complete maintenance (including energy efficiency) and replacement costs for park facilities.

Integration of mini-master plans: Parks staff have completed more than 20 mini-master plans for parks since 2010. The plans have varying levels of support for and deviation from the 2010 Parks

Year	Parks and Recreation Division Budget	Parks Capital Improvements Budget
2010	$765,000	$342,000
2017	$2,700,000	$5,500,000

Master Plan. Additionally, the 2012 trails and bikeways plan was partially updated in 2017 for the west half of the city and an update of the east side is needed. It would be prudent to revisit the overall vision to assure the plans can form a cohesive parks system.

As mentioned above, the financial picture for Duluth's parks has improved since completion of the 2010 Parks Master Plan. With inflation, however, $2.19 million of parks improvements in 2011 will only buy $1.45 million. This erosion of value needs to be reversed if the community is to receive the full value they intended when voting for parks in 2011.

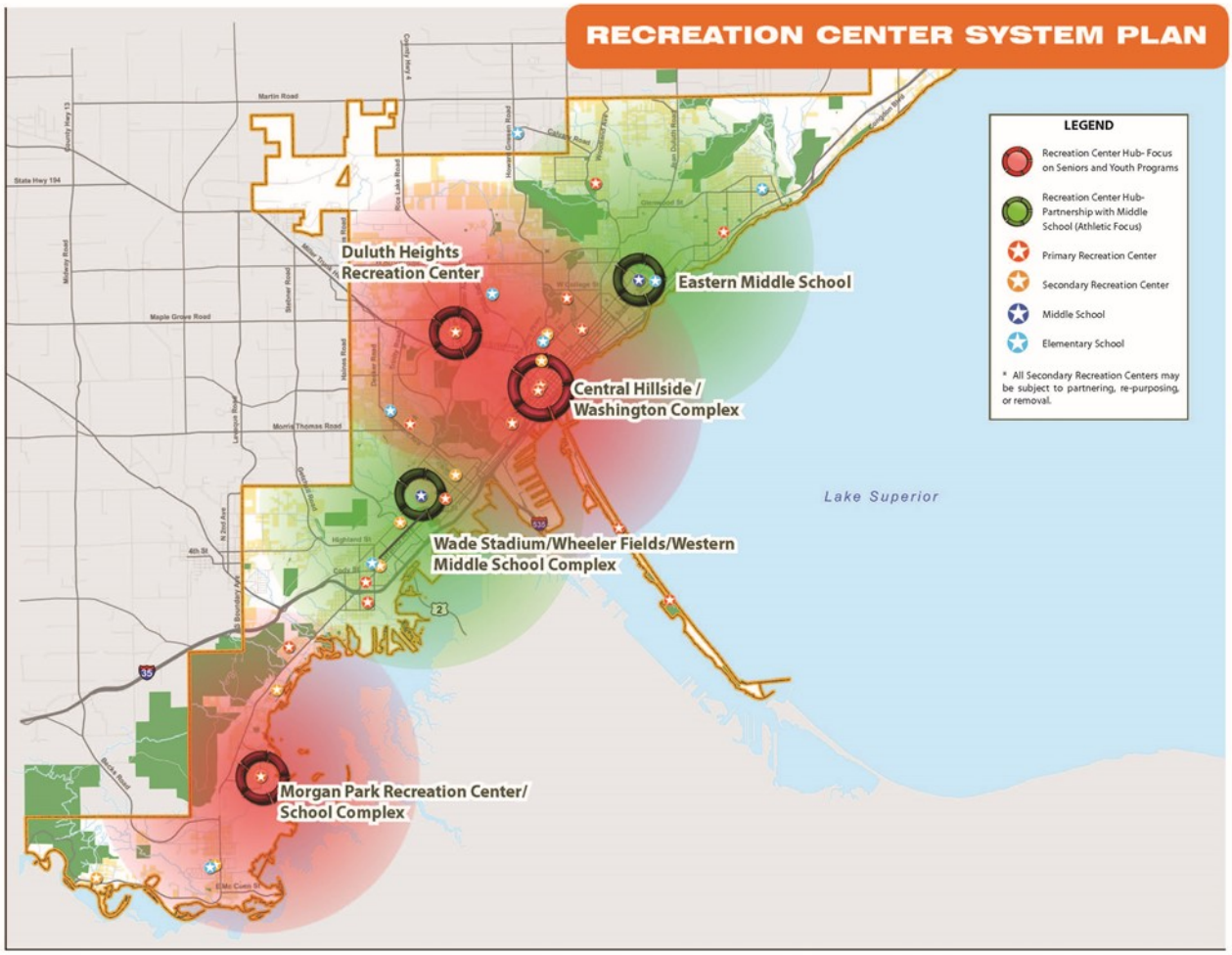
Duluth's parks and open spaces provide benefits to residents and non-residents alike. Surrounding communities have within their borders significant park and recreational resources that could be considered metro-wide assets. Duluth should consider the possibility of forming a regional parks district for larger parks and recreation facilities such as Canal Park, Lester-Amity, Hawk Ridge, Hartley, Enger, Wade-Wheeler, Magney-Snively, Fond du Lac Park, Egerdahl Park in Proctor, and Keene Creek Park in Hermantown.

Minnesota Statute 398 governs the creation and management of regional parks districts. The current statute would not permit creation of a district that includes the city of Duluth because it is a "city of the first class" and because there are not 350,000 people residing in the area proposed for the regional parks district. However, if appropriate, an amendment to the statute could be proposed.

Benefits of such a regional parks district may include coordination of facility planning and recreation service provision over a larger area, creation of a regional trail network, shared maintenance provision, and the ability to spread the cost (through tax levy) of managing these large parks over the area served by the parks. Concerns include loss of municipal authority over large park and open space areas in the community and the need to coordinate with a new level of government.

Preserving and maintaining trees is critical to many City policies, including beautification of neighborhoods and business districts, stormwater management, parks facility management, resident education, invasive species spread prevention, and reduction of tree loss from development projects. Trees are more under threat of disease and stress now than in the past. The City needs to dedicate appropriate resources to plan for and manage trees in street rights of way, parks, and public open space areas.

Year	Parks Fund Level (in 2011 dollars)
2011	$2,600,000
2016	$2,190,000
2025	$1,450,000
2035	$630,000



Some forest resources could be managed for timber value as part of managing a sustainable forest. Forests transition over time and need to be managed to remain healthy. Professional forest management would establish appropriate plans for each forest area in the city, in addition to creating plans and policies for trees in street rights of way and parks. Such plans and policies should address species selection and succession, appropriate regular forestry management policies, and emergency procedures for events such as wildfire, disease/insect infestation, and windstorms.

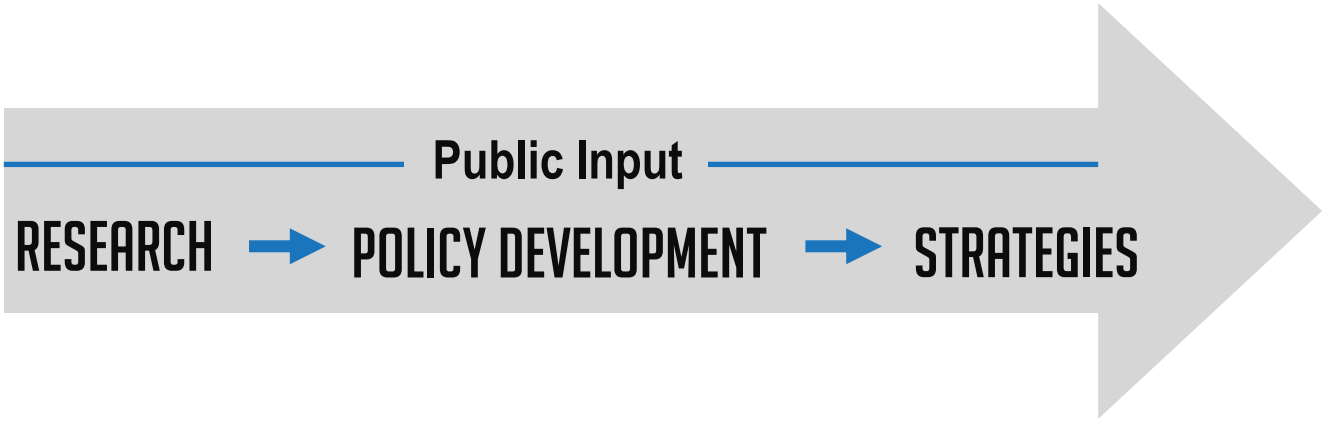
Health

Fresh food

Growing and distributing food locally strengthens communities in a variety of ways including eliminating food insecurity, providing places for neighbors to meet, positively influencing health, and creating economic opportunities. Not all Duluthians have access to food, particularly quality, affordable food. Over the years, grocery stores have gravitated to larger sites away from some of Duluth's core neighborhoods leaving a "food desert" behind. Producing food locally reduces energy inputs needed to transport food to consumers. Questions arise, such as where do animals fit into urban and rural food production in Duluth? Can downtown plazas be utilized for farmers' markets, community gardens, and edible landscapes? In addition, healthy lifestyles should be enabled through the prioritization of active transportation modes (walking/biking) in the built environment.

Policies & Strategies

The research and input throughout Imagine Duluth 2035 led to development of five broad policies that also reflect the Governing Principles. Each policy was then further expanded into specific strategies to be carried forward to implementation.



Policy #1 – Improve Duluth's resiliency to flooding and natural disasters

Duluth, like any community, is susceptible to natural disasters. Developing a resilient community will help keep the city safe during a disaster and assist with rapid recovery.

S1. Continue to support coordinated planning efforts for surface water management across jurisdictions through participation with the multi-jurisdictional Duluth Urban Watersheds Advisory Committee and the Regional Storm Water Protection Team.

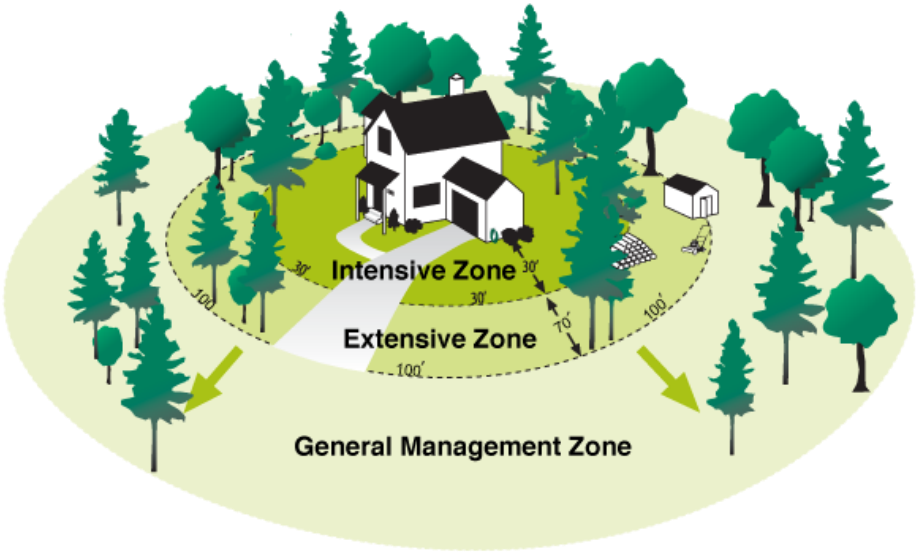
S2. Once Federal Emergency Management Agency (FEMA) flood plain maps are updated in 2019 the City should conduct a storm water infrastructure assessment to determine where improvements are needed to reduce flood risks and where additional resources should be sought to purchase flood-prone properties.

S3. Retain in City/State ownership or preserve through conservation easement those tax forfeit lands needed for stormwater

management purposes including important wetlands, flood plains, and stream corridors.

S4. Promote retention of stormwater above the bluff line to reduce flooding risks through land development controls and establishment of watershed-based storm water detention measures.

S5. Assess Duluth's wildfire risks and encourage existing rural residents and businesses to implement National Fire Protection Association (NFPA) Firewise principles to make their properties more resilient to wildfire. *(The following graphic is an example of implementing Firewise principles related to reducing vegetation near structures for protection from wildfire.)*

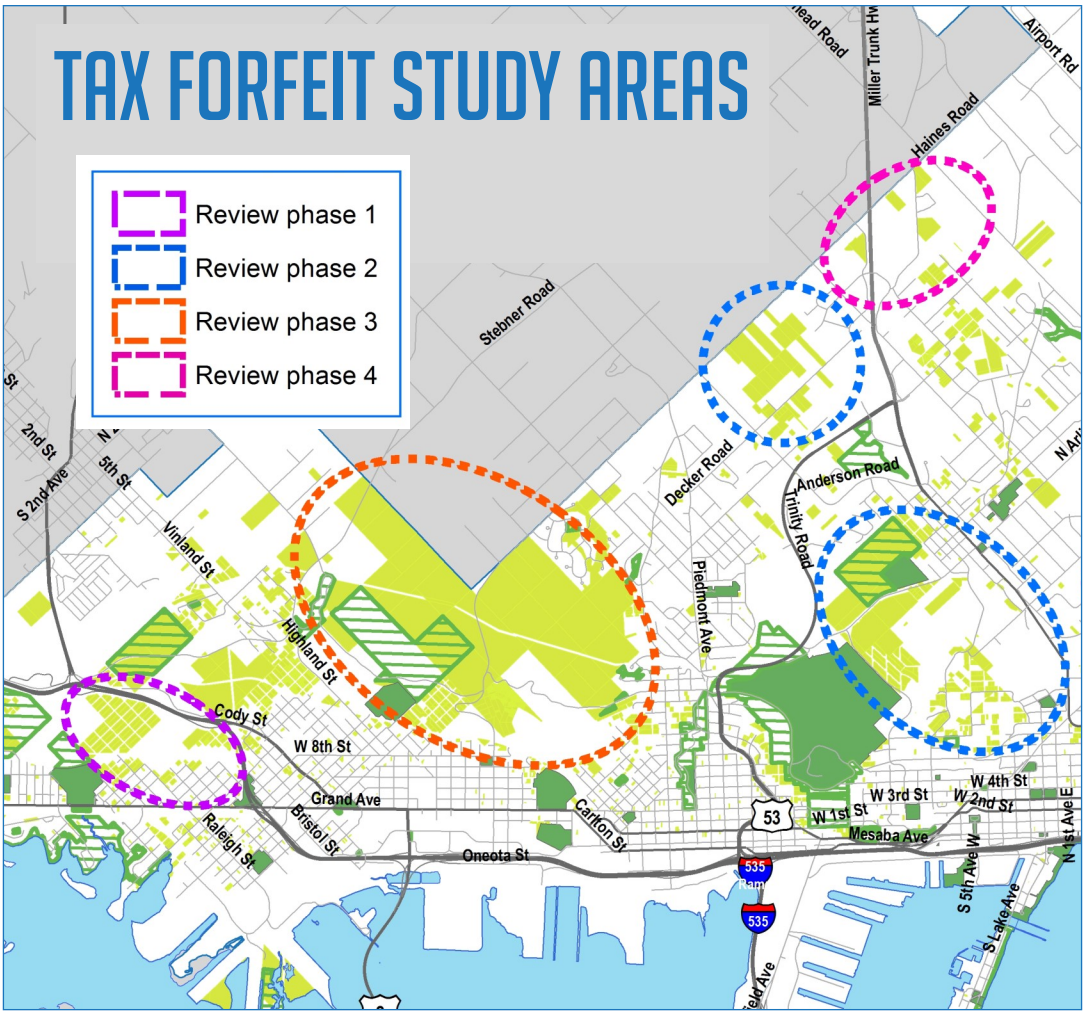


Source: www.dnr.state.mn.us

S6. The City should employ property and right of way management practices that limit the spread of and promote the removal of invasive species.

Policy #2 – Examine the value and need for all of Duluth's publicly owned open space

Open space land in Duluth is valuable in many ways. The strategies related to examining the value of land fall into two general categories; lands to preserve and lands to relinquish for other purposes.

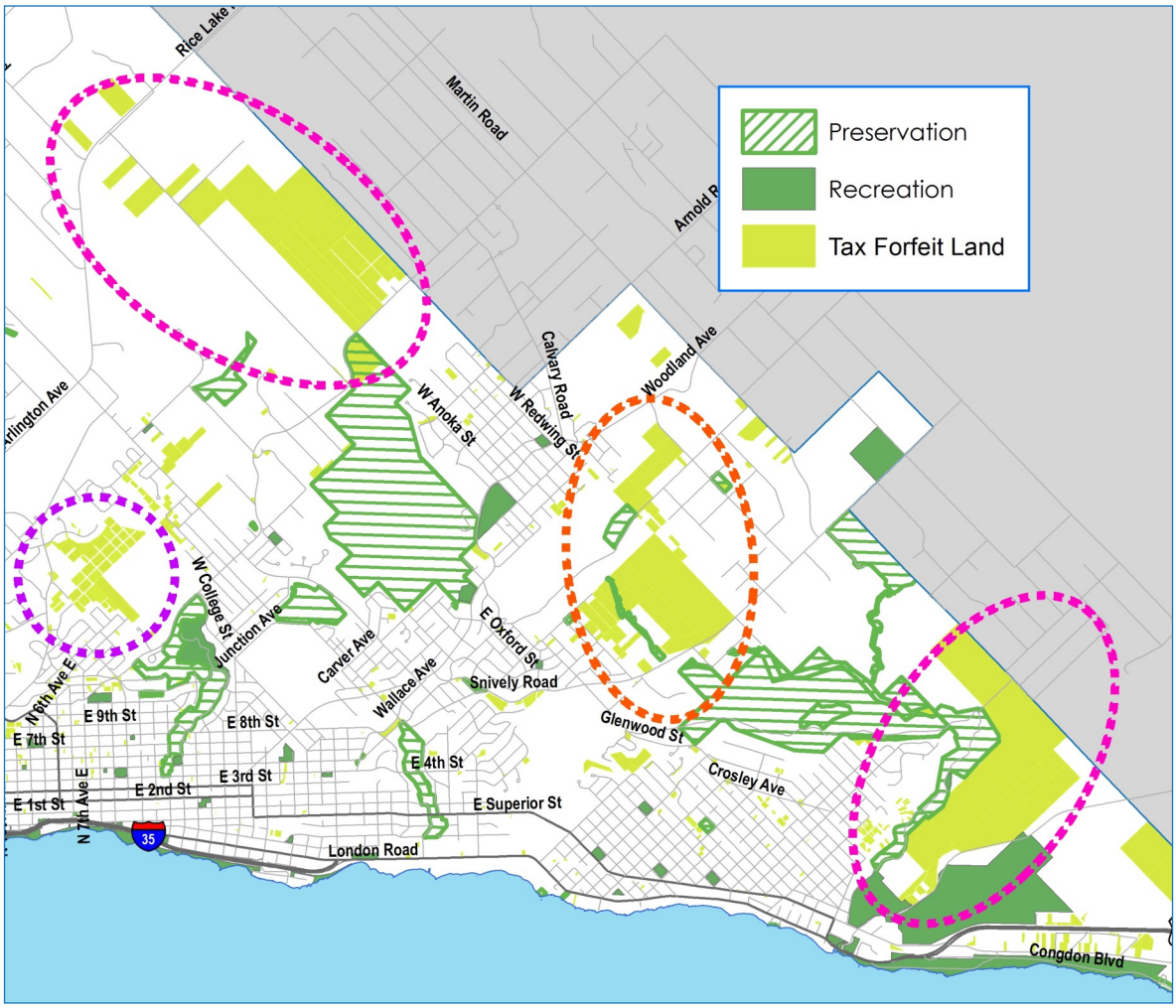


S1. Review all government-owned land in the city and prioritize lands according to ecological importance and other public uses (i.e. recreation, transportation, infrastructure) for more permanent protection. Areas to be protected include forested areas, wetlands, stream courses, and bluff areas as well as lands important in forming the green belt as part of Duluth's urban form. *(See map for identified review areas.)*

S2. Identify a means to hold and maintain those ecologically important lands that are not needed for active park purposes and lands that are needed for natural disaster resiliency (i.e. flood plains and wetlands). Options to consider include a private nonprofit entity or a City land classification system.

S3. Encourage the use of the Duluth Natural Areas Program to more permanently protect high-quality self-sustaining ecosystems where resource protection is prioritized over human use of the land, similar to the State's Scientific and Natural Areas Program.

S4. Increase efforts to streamline management of public lands within the City's borders.



S5. Work with tribal leadership, archaeologists, the State Historic Preservation Office and other partners to identify open space sites, districts, and structures of historic and cultural significance and utilize the Duluth Heritage Preservation Commission and Duluth Indigenous Commission to designate these structures and areas as landmarks.

S6. Partner with groups, public and private, with a mission of preservation and restoration of the Saint Louis River and Lake Superior.

S7. Amend the Unified Development Chapter (UDC) to require more permanent protection of ecologically significant lands (including wetlands, important forested areas, streams, etc.) during the development process.

S8. Review studies that have analyzed City-owned and tax forfeit land and prioritize lands according to ecological/recreational/cultural/historic importance and infrastructure availability. Lands not needed for protection should be made available for development after further ecological research, including on-the-ground analysis.

S9. Utilize City authorities such as the Duluth Economic Development Authority (DEDA) and the Housing and Redevelopment Authority (HRA) to package lands for sale or strategic development to implement housing, economic development, and transportation policies in the comprehensive plan.

Policy #3 – Remove barriers to accessing parks and open space

The open space and park amenities in Duluth should be easily and fairly accessible to all residents and visitors.

S1. Implement the City's *Gate, Wayfinding, and Signage Final Design Plan* to better identify parks and the resources within parks and potentially expand its principles to general wayfinding throughout the entire city.

S2. Create a wayfinding system directing residents and visitors to regional, community, and special use parks from within neighborhoods and business districts as well as outside the community. This should include roadway and pedestrian-scale signage, as well as internet resources.

S3. Enhance the physical connections from neighborhoods and business districts to nearby parks, including wayfinding signage, improved pedestrian connections, larger trail systems, and enhanced street crossings.

S4. Provide access to recreation equipment and instruction at community recreation centers. Include activities and playgrounds for all ages (including adults – see Copenhagen trampoline plaza example)

S5. Utilize public/private partnerships (YMCA at Woodland Community Center model) to expand programming in parks.

S6. Work with community partners to develop a parks ambassador program for outreach to people of all neighborhoods, encouraging the use of parks and recreation facilities and programs. Partnerships should promote the safe and appropriate use of parks to ensure new users understand potential dangers, but also help improve recreational experience.

S7. Ensure existing connections to Lake Superior and the Saint Louis River are protected and new connections are established to the waterfront, that avoid user conflicts.

Policy #4 – Improve the delivery of parks and open space services to the community

S1. Update the 2010 Parks & Recreation Master Plan to reflect environmental, economic, demographic, and recreation trends, to incorporate completed parks and trails projects, and shifts in recreation center hub status.

S2. Return Parks funding in the City budget to the level approved by the voters in 2011 ($2.6 million), when adjusted for inflation, and continue the inflation-adjusted funding level in the future while implementing planned facility reductions.

S3. Investigate the costs and benefits of regional coordination for delivery of parks and open space services through a regional parks district.

S4. Provide resources for the urban forestry management function within the City's organizational structure, to implement and enhance forest resources throughout the City according to the urban forest management plan.

Policy #5 – Encourage urban food growth

While acknowledging the costs to manage open space and parks and recreation services, the city will look to improve opportunities for all.

S1. Study the demand for community garden lots throughout the city and utilize existing public land where additional space is needed.

S2. Investigate the need for a coordinating body that maximizes efficiencies and assists in the development of community gardens, urban agriculture, and small-scale value-added food production.

S3. Study where the keeping of animals for food production fits into urban agriculture as well as rural areas and amend the Unified Development Chapter (UDC) accordingly.

S4. Work with the Parks and Recreation Division and community partners to incorporate edible landscapes in parks where appropriate.