



Maplewood Nature Center Master Plan

June 2019





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**This plan was adopted by the
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Juneth, 2019.**



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01. INTRODUCTION

The Nature Center's Visitor Center Building

History & Background

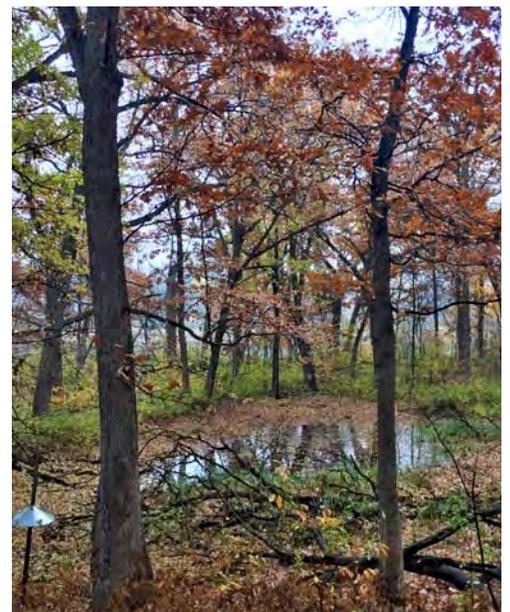
At 40 acres, Maplewood Nature Center (MNC) is “tiny but mighty,” and is looking to plan for the future. MNC was established in 1979 to provide natural history and environmental programs for the citizens of Maplewood. Owned and operated by the City of Maplewood, the Nature Center is part of the Parks and Recreation Department.

The Nature Center has offered a diverse range of outdoor education and nature-based programming over the past 40 years, in addition to operating a Visitor Center and caring for the surrounding land. Nature Center program topics include a variety of natural history, environmental, recreational, and multi-cultural topics for all ages from preschool through adult. One full-time lead naturalist, two part-time naturalists and one part-time secretary make up the staff, with up to three very part-time seasonal naturalists and park maintenance support. Annual visitation averages about 9000-10,000 people, not including trail use. The City owns several Neighborhood Preserves where the Nature Center does programming, outreach, and natural resource management.

In 2017, the Nature Center made improvements to the building's siding, flooring, roofing, and amphitheater in order to address critical recommendations made in the City's 2015 Asset Detail Report. In 2018, CIP funds were to be made available for a new storage building; however, these funds were diverted to the creation of a master plan, guided by the foresight of staff who understood that completing a master plan for the Nature Center before pursuing any additional improvements would ensure that future investments are grounded in a strategic vision that guides the Nature Center's evolution over the next 20 years.



Maplewood Nature Center Staff and Volunteers



View from the Nature Center Trails



Figure 1.1 Maplewood Nature Center's 40-acre Site and Entrances

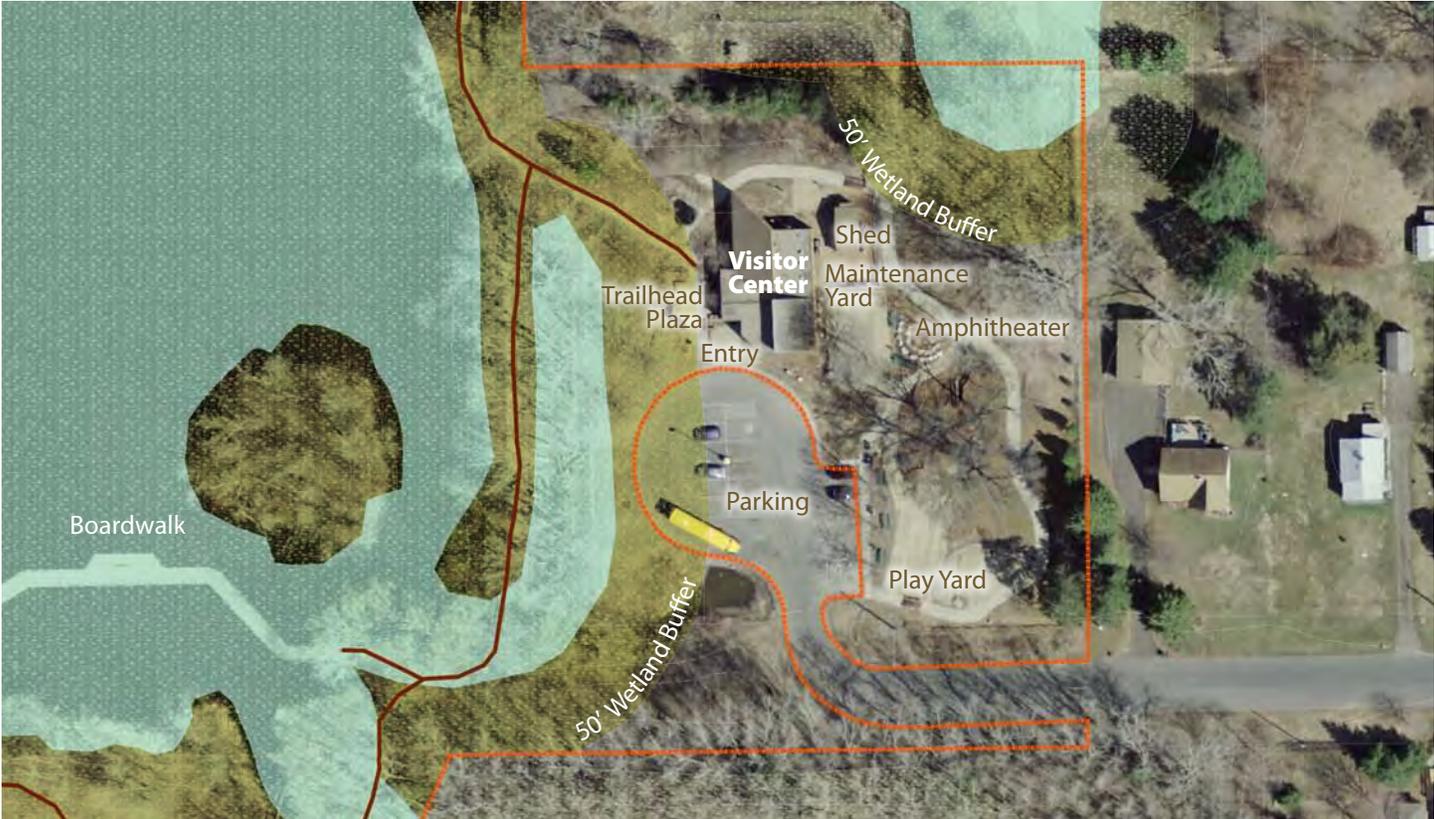


Figure 1.2 Main Entrance to Maplewood Nature Center

Purpose of the Master Plan

This master plan takes a comprehensive look at the Nature Center's operations and facilities, suggests updates or additions to programming and interpretation in order to address topical subjects, explores opportunities to make the Center more attractive to visitors and school groups, and offers dynamic, flexible, and adaptive ways for visitors to participate in outdoor education and explore Maplewood's many ecosystems.

The master plan addresses maintenance and operations of the Nature Center and works to ensure that the facilities are not only adequate, but positioned to meet the demands of the next 20 years efficiently and effectively.

Nature Center Description

Maplewood Nature Center is centrally located in Maplewood on East 7th Street, west of Century Ave. The 40-acre preserve has four entrances, with the main entrance off of 7th Street. The locations of the three neighborhood entrances can be seen in Figure 1.1. The site, which operates as an outdoor learning laboratory, includes 1.5 miles of trails, a 600-foot floating boardwalk, 21 acres of wetland, 18 acres of woodland, observation decks, demonstration gardens, and a picnic area with play yard.

Visitor Center

At 3,030 sf, Maplewood Nature Center's Visitor Center is the smallest in the Twin Cities Metro. The building includes a classroom/exhibit space, reception desk, staff offices, a meeting room, storage, and restrooms, as shown in Figure 1.3. Staff are available Tuesday-Saturday from 8:30 am-4:30 pm year-round to offer educational materials, snowshoe rentals, and in-person resources for the public.

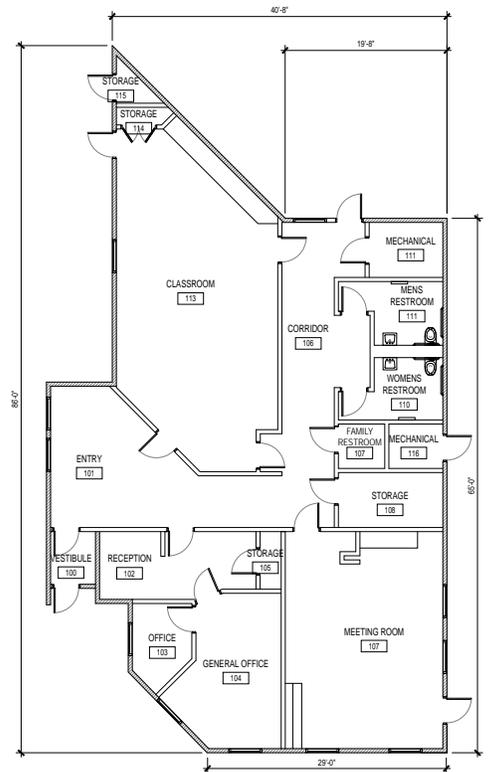
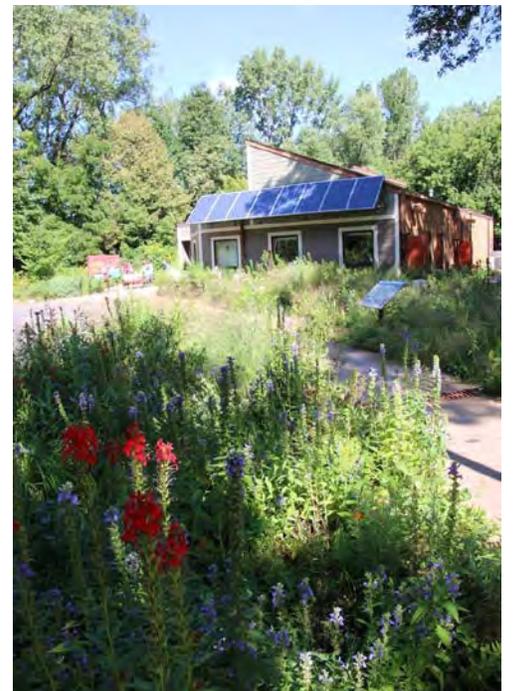


Figure 1.3 Existing Visitor Center Layout



The Visitor Center's Exhibit Room



Demonstration Gardens & Solar Panels

MAPLEWOOD NATURE CENTER
IMPACT SNAPSHOT
SPREADING KNOWLEDGE

Staff have led nearly **1,150**
group presentations
 since 2014 (that's **230 per**
year on average!)



**Cleaning Up
 Impaired Waters**

By Virginia Gaynor, Natural Resources Coordinator

It would go back in time, to the 1940s, 50s, or 60s, armed with our current knowledge, we'd design our stormwater system differently. But that's the goal of engineers, insulation planners was to quickly remove stormwater from neighborhoods to prevent flooding. The solution was to pipe it to creeks, lakes, streams, and wetlands. Fair faced control—to protect people and property—was our first water quality.

The Federal Clean Water Act requires states to adopt water quality standards for surface waters. In Minnesota, the Minnesota Pollution Control Agency (MPCA) sets water quality standards and is responsible for maintaining a list of waters that do not meet standards. Minnesota, the MPCA has designated two creeks one that of our nine lakes as impaired.

Poor water quality is caused by pollutants. Stormwater runoff transports our lawns, driveways, and sidewalks, and with it: nutrients, sediments, organic materials,

pesticides, metals, petroleum, trash, and debris. Many of these pollutants deposit in our lakes and is consumed by fish. Choices such as water saving, recycling, and making it easy to reuse water and impact results in cleaner water. Sediments can release nutrients and degrade water quality.

For Minnesota's impaired waters, Ramsey-Washington Metro Watershed District (RAMWSD) is responsible for preparing a list of impaired waters (IWL) study to submit to the MPCA. This team of study identifies and quantifies the pollutants, determines how much pollution needs to be reduced to meet standards, and recommends strategies to achieve the reductions. You'll have to go up to the City, RAMWSD, and partners to implement projects to reduce the specific pollutants and improve water quality (see article on page 2).

Algae blooms and excessive vegetation in Maplewood lakes is a common complaint based by City staff. Nutrients in stormwater runoff, especially phosphorus, act as fertilizers and drive algae and plant growth. Aquatic plants are a natural part of the lake ecosystem, but algae and excessive vegetation can degrade the lake by aquatic

life, recreation, and aesthetics. The MPCA updates the list of impaired waters every five years. Three Maplewood lakes that were on the 2016 list but have improved enough to be deleted in 2018 include Keller Lake, Carter Lake, and Geneva Lake. The improvement in water quality can be attributed to stormwater management projects that have been implemented over the past several years.

Most Maplewood watersheds are familiar with rain gardens—shaded basins that capture stormwater and allow it to infiltrate. But the City, RAMWSD, and developers have installed many other types of structures or systems to treat Maplewood stormwater: open line ponds, non-outletted pond basins, grass channels and sump basins, and large underground infiltration systems. Strategies implemented while lakes are down include: marsh, sediment removal, and cog ponds. RAMWSD is testing the effectiveness of these best practices. And the City, businesses, and homeowners employ best management practices such as erosion control and sustainable lawn care to help reduce pollutants (see article on page 3). If we all work together, we can clean up impaired waters.

Impaired Waters in Maplewood



Keller Lake, identified as an impaired water in 2016

Lake/Creek

Cornell Lake
 Hutchinson Lake
 Monona Lake
 Lake Phalen
 Buffalo Creek
 Park Creek

Impaired For

Aquatic Consumption (Impaired in 2016)
 Aquatic Life (Impaired in 2016, 2017)
 Recreation (Outdated)
 Aquatic Consumption (Impaired in 2016)
 Aquatic Life (Impaired, poor aesthetic quality)
 Recreation (E-Cat)

2016 MPCA list of impaired waters

Programming & the Current Role of the Nature Center in Maplewood

An Environmental Resource for the City of Maplewood

More than just a visitor center, Maplewood Nature Center's professional naturalists offer valuable guidance on issues around environmental sustainability, helping to craft meaningful policies and practices in other City departments and forge partnerships with local organizations. Nature Center staff have provided support for many City programs, including:

- coordinating the Edgerton Community Garden
- coordinating the City-wide buckthorn program
- Maplewood rainwater garden projects
- writing the Seasons insert for the Maplewood Living newsletter, which reaches up to 17,000 households 4 times/year
- helping to facilitate Maplewood's Green Team
- assisting with the City's Tree Program
- engaging in dozens of activities that assisted Maplewood in achieving 5-step recognition as a MN GreenStep City (only 12 of 3,761 Minnesota communities have achieved this)
- providing educational support for environmental ordinances (trash, recycling and organics, energy policies, tree disease management, sustainable landscape practices, stormwater management, pollinator landscapes, urban agriculture, etc.)
- participating in the noxious weed early detection monitoring program
- the Sustainable Maplewood Project 2050

Through these efforts and the development and administration of programs, classes, and demonstrations on topics like stormwater management, pollinators, energy efficiency, and gardening, MNC's professional staff have helped Maplewood to stay ahead of trends and establish itself as a leader in environmental sustainability.

City-wide Programming

Maplewood Nature Center serves as the "program hub" for nature-based education in the City, offering over 200 programs in 2018. It also functions as the gateway to Maplewood's Neighborhood Preserves, 14 properties totalling over 300 acres, which offer visitors places to explore Maplewood's natural heritage. Nature Center staff coordinate remote programming and events throughout the City at the Preserves, local and regional parks, and at civic destinations (see Figure 1.4). Programs both at the Visitor Center and at locations around Maplewood are available to suit environmental exploration at any age, from ECFE programs and naturalist-led birthday parties, to phenology walks, to demonstrations on sustainable practices for property owners.



Gardeners at Edgerton Community Garden

MAPLEWOOD NATURE CENTER IMPACT SNAPSHOT

VOLUNTEERING

Nature Center staff trained and coordinated volunteers that contributed more than **2,100 hours** of labor on projects across Maplewood in 2018.

These hours, calculated at the National Volunteer Wage Estimate (\$24.69/hr), represent **a gift of nearly \$52,000 to the City** last year!

Volunteering & Service Learning Projects

Maplewood Nature Center has a focus on service learning, volunteering, and building individual stewardship that makes the Center stand out among other nature centers. Staff aims to provide hands-on learning opportunities that enable people to build skills and make a positive impact in the community. Each year, the Nature Center connects hundreds of people to the world around them through volunteering events and service learning projects. Staff identify projects throughout the City, organize events, mobilize participants, gather and transport materials and equipment, offer training, supervise, and direct volunteers to accomplish the desired tasks.

Learning in the field and coming away from an activity with newfound knowledge and a sense of accomplishment has immeasurable benefits to those involved and helps to build a conservation ethic that can last a lifetime. Research shows that volunteering teaches new skills, expands social connections, and offers health and wellness benefits including boosted self-confidence, improved self-esteem, better reported life satisfaction, and stress reduction.

Volunteerism also provides great economic value to communities. Volunteers have 27% higher odds of finding a job after being out of work than non-volunteers, and have a 51% greater chance of obtaining employment even without a high school diploma (*Source: Minnesota Association of Volunteer Administrators*). In 2018, volunteers contributed more than 2,100 hours of labor on projects across Maplewood.

Service learning groups combine learning about the value and ecology of Maplewood's many natural areas with a service project. Regular participants include Century College biology classes, Scout Groups, elementary classrooms, middle schools, high school seniors, honors societies, church groups, summer Junior Volunteers (ages 10-14), and corporate groups. Countless staff hours are spent preparing for and coordinating projects in order to make these experiences possible.

Projects and programs include:

- » Native plantings & maintenance
- » Tree plantings
- » Prairie seed collection
- » School program trail guide
- » Buckthorn and other invasive plant monitoring and removal
- » Trail clearing
- » Raingarden plantings and maintenance
- » Frog monitoring
- » Monarch tagging
- » Bluebird monitoring
- » Prep and cleanup at Edgerton Community Garden
- » Nature Center trail monitoring
- » Open space monitoring



Service Learning at Edgerton Community Garden



Century College Program Participants

INDIVIDUAL VOLUNTEERS

Individual volunteers are interviewed, background checked, and trained to:

- Implement Nature Center programs and events
- Maintain trails, children's play yard, demonstration gardens, and exhibits
- Provide receptionist work and online program publicity
- Care for the live display animals
- Document Citizen Science observations (bluebird monitoring, frog monitoring, invasive plant patrol, iNaturalist, pollinator monitoring)

CASUAL VOLUNTEERS

Do not require background checks or special training:

- Monitor the neighborhood preserves (walk the trails, report issues, and pick up litter)
- Perform court-ordered service
- Attend public Nature Center programs with a service component (weed native gardens, remove buckthorn, spring cleanup)



Planting at Edgerton Community Garden



5th Graders from Carver Elementary helping with plantings at Fish Creek



The Nature Center offers opportunities for kids and community members of all ages to make a positive impact in Maplewood through restoration and management of habitat, creation of raingardens, spring cleanups, wildlife surveys, and open space monitoring



Needs Assessment

Visitor Center Building Condition

Having undergone a renovation in 2017, the condition of the various building systems is generally good; however, there are some minor issues that were not resolved as part of that renovation. Comments are as follows:

Foundation (visible part): There are a few locations where pointing is missing.

Walls and exterior materials: There were no apparent flaws in the siding, and no cracks, open seams, or flaking of the finish surfaces. Walls appear to be true and uniform.

Doors and windows: The main entry door is not ADA compliant. Other doors have gaps which prevent a good seal. The four windows in the meeting room were replaced in 2017 and are in good shape; however, some of the remaining original windows are showing signs of water damage. The lack of properly fitting windows and doors has resulted in uneven heating throughout the reception area and offices.

Interior walls, surfaces, and built-in components: Interior walls indicate minor use and wear typical of the Visitor Center's public use. Counters and cabinetry in the exhibit room are warped and chipping. Tile and baseboards in the storage closet were not replaced after the last renovation, leaving the flooring unfinished and susceptible to water damage.

Roof: Roofing appears to be in good condition. There were no leaks mentioned by staff during the assessment.



Cabinet / Counter Damage



Unfinished Storage Room Floor



The Exhibit Room struggles to accommodate full school classes



The exterior of the Visitor Center Building



Access to the mop sink in the maintenance closet is limited

Visitor Center Building Function & Limitations

The Visitor Center's operations and programs have outgrown the building's useful capacity. With just a single rental room for meetings/classes and an exhibit room that cannot accommodate program attendees and public visitors simultaneously, MNC has severe space limitations that affect the experience of the general public, prohibit many schools from being able to bring a full grade of classes for programs, and hinder the staff's ability to efficiently and effectively work. Despite efforts to make interior spaces more efficient and store items at other facilities, room for staff, visitors, and supplies has reached its max, limiting existing use and prohibiting expansion of program offerings. The following comments expand on how the building functions to serve the Nature Center's staff and visitors:

- » The exhibit room can accommodate small groups of people, but if large groups or more than one group (as is the case for most school grades with multiple classes) desires to attend a program, the noise, commotion and available space is a challenge.
- » The exhibit room has less capacity for gathering than it used to, because its amphitheater seating had to be removed due to drainage issues.
- » The layout of the exhibit room works well, with the exception of the live animal displays. These terrariums are a focal point of the room (and much beloved by the public!), but sit on an open counter, with no hidden access for tank cleaning or animal care. Routine maintenance and cleaning must be done out in the open, which results in a utilitarian aesthetic highly visible to the public.
- » While the interpretation offered is interesting and explores a variety of topics, many of the exhibits are permanent. Room for a rotating or traveling exhibit, display of local art or merchandise, digital interpretation, or the ability to interchange interpretive content seasonally would better engage drop-in visitors and prompt return visits.
- » There is a severe lack of storage of all types, which limits staff's capacity to efficiently prepare for programs. Even the exterior shed is at capacity. Most supplies are currently stored off-campus at the Park Maintenance Building.
- » The office area is not sized appropriately for staff, files, and materials. The reception area functions as overflow office storage, which can make it appear unwelcoming to guests. The reception desk is not immediately visible from the entrance, making it difficult to greet and orient visitors.
- » The design of the structure and its location in a low area surrounded by wetlands limits opportunities for expansion. The interior layout, structural components, and overall shape make an addition trickier than it would be if the building had a simple box-like form. Any addition must consider the structure's irregular roofs, angled walls, and necessary wetland setbacks.
- » The HVAC system (gas-fired furnace type) is adequate, although residential in nature, with simple controls and system components. The equipment is stored in rooms which have little to no working space around the units. As a consequence, any additional or new HVAC equipment will need to be located in a new location. If the existing equipment remains in the case of an expansion, there could be some uneven heating and cooling.

SUMMARY OF BUILDING NEEDS:

- » More storage is essential, both inside and out (files, program materials, tools, maintenance supplies, etc.)
- » Better arrangement of the office area or additional space would help the cramped condition.
- » The reception area could be improved with more space and a better orientation to the entrance.
- » An expanded and reconfigured exhibit room, with improved live animal exhibits, flexible space for interpretation, and space for wildlife watching/reading would benefit the Nature Center's Mission and attract more and repeat visitors.
- » Another larger classroom is necessary to accommodate school groups or multiple programs at once.
- » A garage for a vehicle and service learning/volunteer programming supplies is desired.





Hauling supplies with personal vehicles



The Visitor Center's storage closet is over capacity

Improving Efficiencies in Operations

With a mission to “enhance awareness of land, water and wildlife resources, and to empower the community to become stewards of the environment,” Maplewood Nature Center has made great strides; but, without increasing efficiencies both operationally and in the physical building space, programming is largely at capacity and the Nature Center cannot expand its community outreach or plan to attract greater numbers of visitors. Several factors weigh into this assessment:

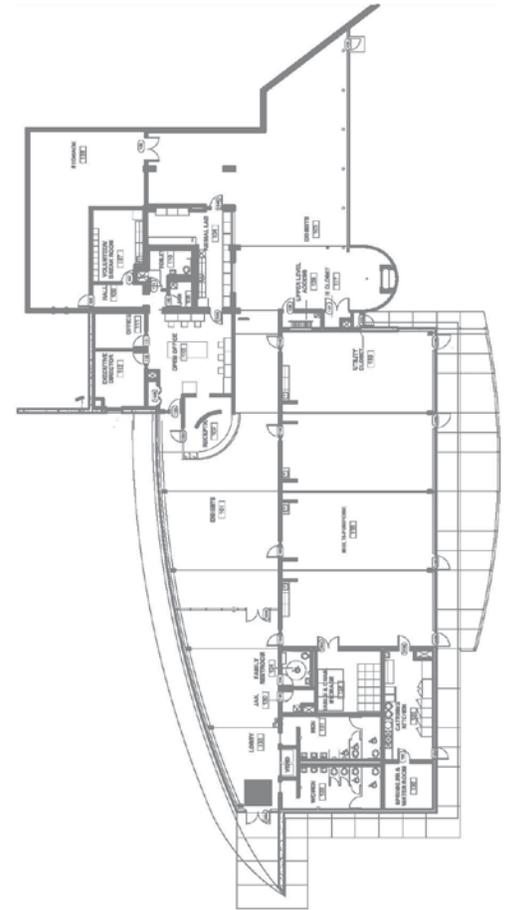
- Staff programming at satellite sites around Maplewood has helped to extend the reach of the Nature Center, but is challenging due to the need to haul supplies to remote locations without a designated vehicle or enough storage space for program materials at the Visitor Center. Nature Center staff utilize personal vehicles to transport supplies and store over half their materials at City Hall rather than the Visitor Center due to lack of space.
- Maintaining the demonstration gardens, native habitats, and restored natural areas of the Nature Center’s 40-acre grounds, and organizing monitoring and maintenance of the Neighborhood Preserves is no small task. Without a dedicated groundskeeper, it is up to staff to identify and relay the necessary technical information about maintenance of these sensitive habitats to Parks Maintenance staff, volunteers, or to take on maintenance themselves. A skilled groundskeeper devoted to management of the Nature Center and Preserves, knowledgeable in the maintenance of native landscapes, would be able to develop an intimate understanding of the needs of the land and maintain these resources throughout the City efficiently and effectively. Access to a dedicated groundskeeper (as was the case in the past), would free up additional time for staff to focus on expanding Nature Center programming and outreach.
- Nature Center staff should seek assistance from the City’s IT staff in order to better make use of interactive technology, scheduling/registration programs, and software for tracking and evaluating metrics
- Staff should work with Maplewood’s Communications Department to develop more robust branding/messaging, post informational videos, and identify marketing opportunities in order to expand its reach

Comparison to Other Metro Nature Centers

Maplewood Nature Center’s “tiny, but mighty” mantra is well-earned. In addition to having the smallest visitor center, the adjacent 40-acre site is also smaller than other nature centers in the region, most of which have 3-4 times more land to explore. At \$227,000 per year, MNC’s operating budget is less than half similarly-sized Wood Lake in Richfield. Despite its size and operating budget, Maplewood Nature Center still managed to offer more programs and draw more program participants than nearby Harriet Alexander Nature Center in 2017. Maplewood Nature Center programs, events, and drop-in visits to the Visitor Center have yielded about 10,000 visitors annually. However, use of the Nature Center’s trails- the most popular activity according to the General Use Survey- has not been tracked, and most certainly would result in a significant jump in attendance numbers.

In a meeting with local nature center administrators, discussion yielded several meaningful points:

- Conflicts between scheduled use and drop-in use (as is the case currently at MNC) are seen as a major justification for a new or expanded facility
- Visitors value consistency in hours (including weekend availability)
- Weekend hours are popular for birthday parties and other rentals, which generate revenue and provide guaranteed engaged program audiences
- Most Nature Centers have at least one vehicle for grounds maintenance, and all agree that a dedicated maintenance person is valuable because of the intimate knowledge and familiarity that they bring to operations
- In order to provide equitable access to information, having tablets available at the nature center provides support to visual/hearing impaired visitors and Google translate to non-english speakers
- Having exhibits with interchangeable (seasonally-themed) panels, interpretive dioramas, or displayed local art can help to provide ongoing interest for repeat visitors
- Drop-in or open house-style flexible start programs are becoming more popular, but require an on-call staff person in case of large attendance
- Memberships are one funding option that has worked locally (\$50/family or \$30/individual) and provide easy program access and benefits
- Other nature centers in the region typically have two or more classrooms and rentable spaces in order to be able to handle a full grade of multiple classes for school field trips. Being able to accommodate public school programs allows the nature center to form valuable relationships with local school districts, is a source of regular attendance, helps to fulfill necessary curriculum requirements in a memorable way, generates repeat family visits spurred by engaged students, and offers impressionable youth an approachable way to experience nature early on- a necessity to forming an attachment to nature and a stewardship ethic as one grows.

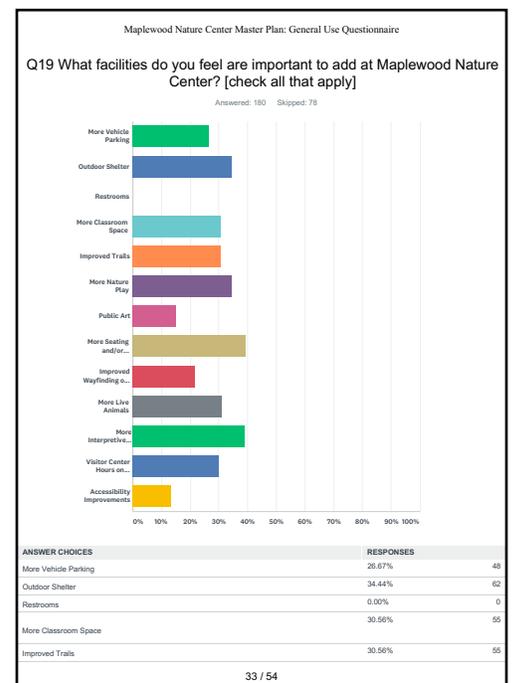


Springbrook Nature Center recently invested in expansion of their Visitor Center (now a 13,000 sf facility). Expanded capacity for program offerings and exhibit updates were large motivations to expand, and helped to raise funds for implementation.

Community Engagement Summary

Over the course of the master planning process, the project team sought to obtain feedback from a diverse array of stakeholders to learn how the Nature Center is currently used and perceived and what people would like to see and do in the future. The following community engagement methods provided major guidance on this master plan:

- A General Use Questionnaire was developed and posted on the City's website, Maplewood Nature Center's Facebook page, and sent to a diverse mailing list including teachers, past visitors and volunteers
- Hard copy questionnaires were available for visitors to fill out at the Visitor Center
- Program attendees were surveyed about their experience at the Nature Center and what they would like to see in the future
- Nature Center staff posted notifications and articles in Maplewood's Seasons Newsletter



A page from the General Use Questionnaire

THE GENERAL USE
QUESTIONNAIRE REACHED
**258 COMMUNITY
MEMBERS**, INCLUDING:

- » **People of Color:**
11% of respondents were people of color (another 10% preferred not to answer)
- » **Youth:**
9% were age 18 or under
- » **Older Adults:**
23% were age 65 or older
- » **Lapsed Visitors and Those Unfamiliar with the Nature Center:**
15% of respondents hadn't been to the nature center in the last 12 months (and of those, half had never been)
- » **Knowledgeable Visitors:**
16% of respondents had volunteered at the Nature Center

OF THE RESPONDENTS:

- » Roughly **half of visitors bring kids**
- » Visitors come to the Nature Center **alone, with one other person, and with a small group** in roughly equal proportions
- » **63% of visitors travel 0-5 miles** and 15% of visitors travel >10 miles
- » **10% of visitors walk and 75% of visitors drive.** Less than 1% bike.

- Three stakeholder input sessions with volunteers, Friends of Maplewood Nature Center, Parks Commission members, and visitors
- A peer group session with local Association of Nature Center Administrators (ANCA) members provided invaluable insights on the ways that other local nature centers advertise and run programming, use the resources they have at their disposal, advocate for themselves in their communities, and operate
- An Open House was held on May 23rd, 2019 to collect input from the public on the Master Plan

Results of the General Use Questionnaire

How the Nature Center is Used Currently

- » Most people spend most of their time on the trails and boardwalk
- » Participating in unstructured exploration and learning in the Visitor Center, wildlife watching, programs for adults, and self-guided tours are the next most popular activities
- » Of those who visit with children, nearly all spend some time at the Nature Play Yard and most use the picnic area
- » 85% of people spend at least some time in the Exhibit Room
- » Lapsed visitors haven't been to the Nature Center recently because their kids are grown and they don't perceive there to be enough for older kids or adults to do

Satisfaction Levels

- » Respondents are least satisfied with benches, parking, and the nature play yard
- » Many wish that the Visitor Center were open on Sundays, or would at least like a remote restroom for when the building is not open
- » People also want to see more seating/overlooks, more interpretive exhibits/displays (including live animals), outdoor shelter, more nature play, trail improvements, and more classroom space

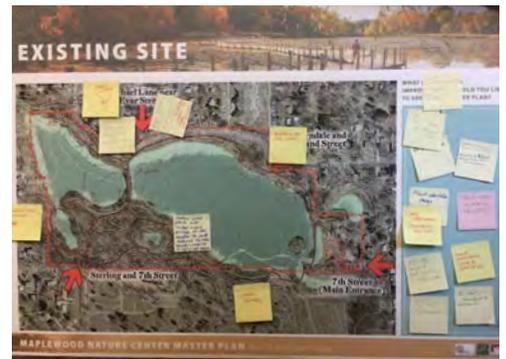
Programming Desires

- » Respondents are most interested in attending programming on:
 - *General nature study*
 - *Environmental practices for their home/yard*
 - *Luminary hikes*
 - *Learning about environmental issues like water quality, climate change, and pollinator health*
- » 92% of respondents are interested in attending at least one event or program a year at one of the City's Neighborhood Preserves. Nearly 50% said they would attend two or more.

May 23, 2019 Open House

Prior to drafting the Master Plan, a community open house was held at the Nature Center to collect feedback on the vision, guiding principles, strategic opportunities, proposed actions, and phasing developed over the course of the master planning process. Twenty-five attendees reviewed boards of the materials, participated in discussions, and shared their thoughts by placing post-it notes on the boards. Refreshments and kids activities were available to make the event a welcoming experience for participants. A summary of feedback received includes:

- » A desire for more specific trail improvements to be called out as part of the plan, such as:
 - *Replace and maintain the entry stairs off of Michael Lane and Evar Street*
 - *Improving water crossings through the south woods*
 - *Replacing the trail entry gate with a more welcoming gateway to the trails*
 - *Adding bird blinds and clearing brush to improve overlook views*
 - *Adding a portable restroom on the northwest side of the pond*
 - *Offering a rentable all-terrain wheelchair for disabled visitors*
 - *Adding movable seating / flexible gathering space at the trailhead near the wildlife watching area*
- » Concern about safety and security in the parking lot (ideas for a gate or updated security cameras)
- » Support for existing proposals, such as:
 - *Increased digital participation (trail cams, online bird observations and phenology logging, a youth online portal with monthly topics to explore)*
 - *Expanding program offerings to other Neighborhood Preserves to be able to highlight Maplewood's diverse habitats*
 - *Satellite restroom(s)*
 - *Building Expansion (more live animals, additional classroom(s))*
 - *Strengthening and expanding partnerships with schools and social service agencies (emphasis on east metro)*
 - *Accessibility improvements*
- » More specific building/exhibit ideas, including:
 - *Animal care/tank cleaning access behind live animal displays*
 - *An aquarium with native fish, and terrarium for caterpillars and butterflies*
 - *Display of local art and photography (rotating)*
- » Support for an additional full-time position, especially as programming expands
- » Support for a dedicated maintenance person/groundskeeper for the Nature Center and Preserves (intimate knowledge of the sites will improve quality of management)
- » Site design suggestions, including:
 - *A desire to remain open and flexible to expansion eastward, if adjacent properties can be acquired*
 - *Suggestion to move the garage farther south to shorten length of driveway*



PROGRAMMING SUGGESTIONS

FROM THE QUESTIONNAIRE AND OPEN HOUSE:

- » **Offer programs and events at the City's Neighborhood Preserves**
- » **Plan Luminary Hikes**
- » **Expand Programs about the Impacts of Humans on Nature**
 - » Composting Resources
 - » Recycling Impacts and Tips
 - » Pollinator and Insect Population Recovery Efforts
 - » Climate Change Mitigation
- » **Offer art/photography classes and display rotating works**
- » **Expand the Wildlife Viewing Area**
- » **Showcase More Live Animals**
- » **Offer more interpretation about the Dakota and other native cultures**



Maplewood Nature Center's Mission is to enhance awareness of land, water and wildlife resources, and to empower the community to become stewards of the environment.



Vision & Guiding Principles

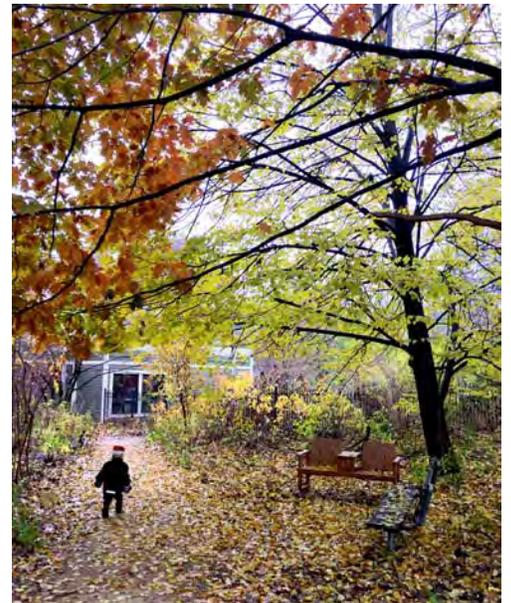
The vision for Maplewood Nature Center focuses on the future and serves as a source of inspiration and motivation.

Maplewood Nature Center's Vision:

Maplewood Nature Center is the City's hub for environmental education, natural resources management, and stewardship.

Guiding Principles focus on how the vision will be achieved.

- » Ensure the Nature Center is an inviting place to explore nature and learn about other community natural areas.
- » Empower visitors to make positive impacts in their own neighborhoods.
- » Conduct programming and provide service-learning opportunities throughout the community.
- » Ensure the Nature Center is equipped to adapt to the variety and diversity of visitors that it serves.
- » Develop new programming, initiatives, and partnerships to respond to issues, trends, and opportunities.
- » Provide opportunities for volunteers to contribute to the community's natural resource management.
- » Support the sensitive management of Maplewood's natural areas through technical assistance and volunteer oversight.
- » Contribute technical expertise to the development and implementation of City-wide sustainability policies and initiatives.
- » Cultivate partners to reach new audiences, improve efficiencies and influence broader policies.
- » Broadly market programming, the City's preserve system, volunteer opportunities, and available technical expertise.



The Maplewood Nature Center Master Plan

Because Maplewood Nature Center is both a physical place and an organization that provides a wide range of City-wide programs and functions, the Actions (page 19) that the Master Plan suggests include both physical investments (Chapter 2) and operational action items (see Chapter 3) that work together to achieve the Vision over the next 20 years. Figures 2.1 and 2.2 illustrate the proposed physical investments.

MAPLEWOOD NATURE CENTER MASTER PLAN

ALIGNMENT WITH SYSTEM PLAN PRIORITY ACTIONS & PROJECTS

Priority Actions

- Expand funding for regular park maintenance and equipment replacement
- Improve System Wayfinding
- Continue to expand neighborhood and community events
- Expand nature center programs

Priority Capital Improvement Projects

- Maintenance and Reinvestment (includes Nature Center upkeep, \$7m total projects)
- Actively manage high quality natural resources (\$600k)
- Update Park Signs (\$125k)
- Improve system wayfinding (\$300k)
- Improvements to Preserves and Open Spaces (\$800k)
- Replace/refurbish Nature Center (\$2.5m)

Basis in the 2015 Maplewood Park and Recreation System Master Plan

Creation of this Master Plan came as a result of the 2015 Maplewood Park and Recreation System Master Plan. The System Plan identified a series of actions, projects, and capital improvements intended to shape parks and recreation in Maplewood over the next 20 years. The Maplewood Nature Center Master Plan is grounded in the City's system-wide vision, and as it is implemented, will help to fulfill City-wide recreation initiatives.

SUPPORTING MAPLEWOOD NATURE CENTER **11/12**
PROGRAM RECOMMENDATIONS, AND
30 OF THE SYSTEM PLAN'S **PROGRAMMING**
STRATEGIES

Park and Recreation System Plan Programming Recommendations

- Program for community and neighborhood gathering
- Maintain and improve high quality, diverse program offerings for all ages (children, teens, adults, and seniors)
- Ensure equitable access to programs
- Promote performance arts and cultural events in parks and at recreation facilities
- Connect people with nature, including land, water, and wildlife resources, and empower them to be stewards of the environment
- Respond to changing recreation trends and ensure quality programming
- Use volunteers and service learning programs to support recreational, arts, cultural, and natural resource management programming
- Improve outreach to diverse populations and minority groups
- Become the "go to" parks and recreation clearinghouse
- Provide opportunities for community involvement in the design, development, and implementation of parks and recreation
- Make Sustainability Education/Outreach a Priority



Figure 2.1 Maplewood Nature Center Master Plan: Visitor Center & Entry Grounds

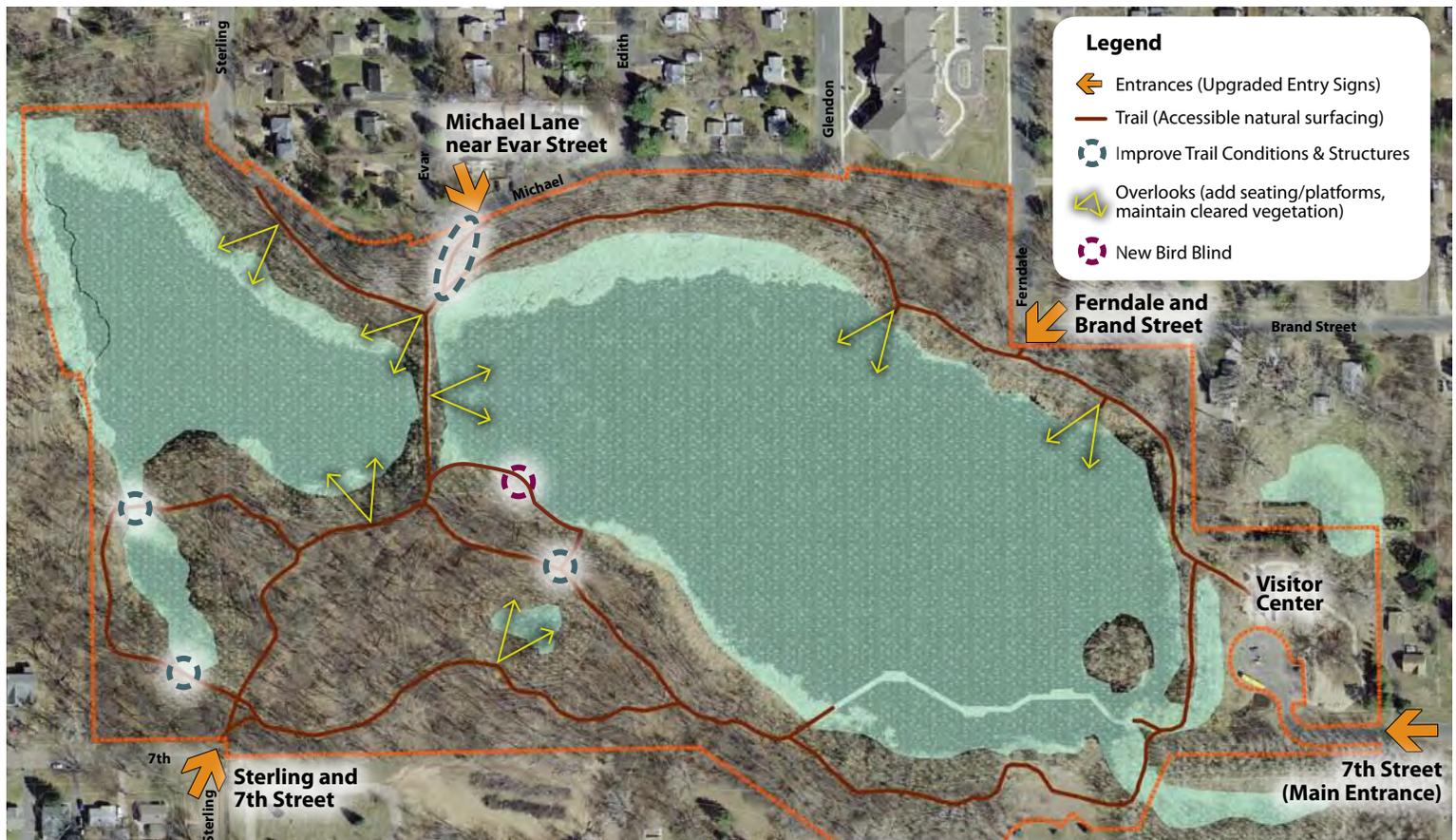


Figure 2.2 Maplewood Nature Center Master Plan: Overall Site Improvements

MAPLEWOOD NATURE CENTER
MASTER PLAN

STRATEGIC OPPORTUNITIES

- Improve Delivery Efficiencies & Effectiveness
- Expand the Impact of the Nature Center
- Improve the Visitor Experience

Working to achieve a new vision for Maplewood Nature Center offers several **Strategic Opportunities** for improvement. The **Actions** that follow each represent physical investments or operational adjustments that will help to realize these opportunities, making the Nature Center operate more efficiently, expanding its impact, and improving the visitor experience:

Improve Delivery Efficiencies & Effectiveness

- » Reconfigure storage to bring supplies and materials on-site to reduce staff time in gathering supplies from off-site storage
- » Explore opportunities to use technology and/or skills of administrative staff to more effectively manage registrations – school programming, community garden, buckthorn curb-side pick-up, etc.
- » Strengthen relationships between Nature Center Staff and other City departments so skills and resources can be better leveraged (i.e. parks maintenance, IT, communications)
- » Provide a vehicle that can be stored securely on site that can be loaded with equipment, supplies and presentation materials to facilitate mobile programming
- » Add a dedicated groundskeeper position to help maintain the Nature Center and Neighborhood Preserves

Expand the Impact of the Nature Center

- » Focus on cultivating partnerships with schools (see Figure 2.3) and continue to offer programming that serves underserved populations
- » Bring programs to the people by offering service learning and other experiences at the Preserves and locations around Maplewood
- » Lead by example: showcasing best practices, actively stewarding the City's natural resources, and assisting community members in adopting the City's sustainability practices on their own properties
- » Maximize hands-on learning opportunities
- » Pursue digital marketing, interpretation, and outreach in order to make knowledge more accessible to all
- » Seek opportunities to reconfigure presentation spaces and site design to maximize capacities
- » Reconfigure the building so that informal visitors can access exhibits while group programming occurs

Improve the Visitor Experience

- » Repair or replace boardwalk
- » Improve surfacing of existing trails, stairs, and water crossings to facilitate access, and add/replace benches for rest, maintaining clear views
- » Bring Nature Center entry into ADA compliance
- » Add a bird blind along the trails
- » Replace the trail entry gate with a more welcoming trailhead gateway
- » Improve community connections – update signs at all entrances; add signage on Century Ave and Minnehaha; support transit and non-motorized connections

PROXIMITY-BASED OPPORTUNITIES FOR SCHOOL PARTNERSHIPS AND PROGRAMMING AT NEARBY PRESERVES

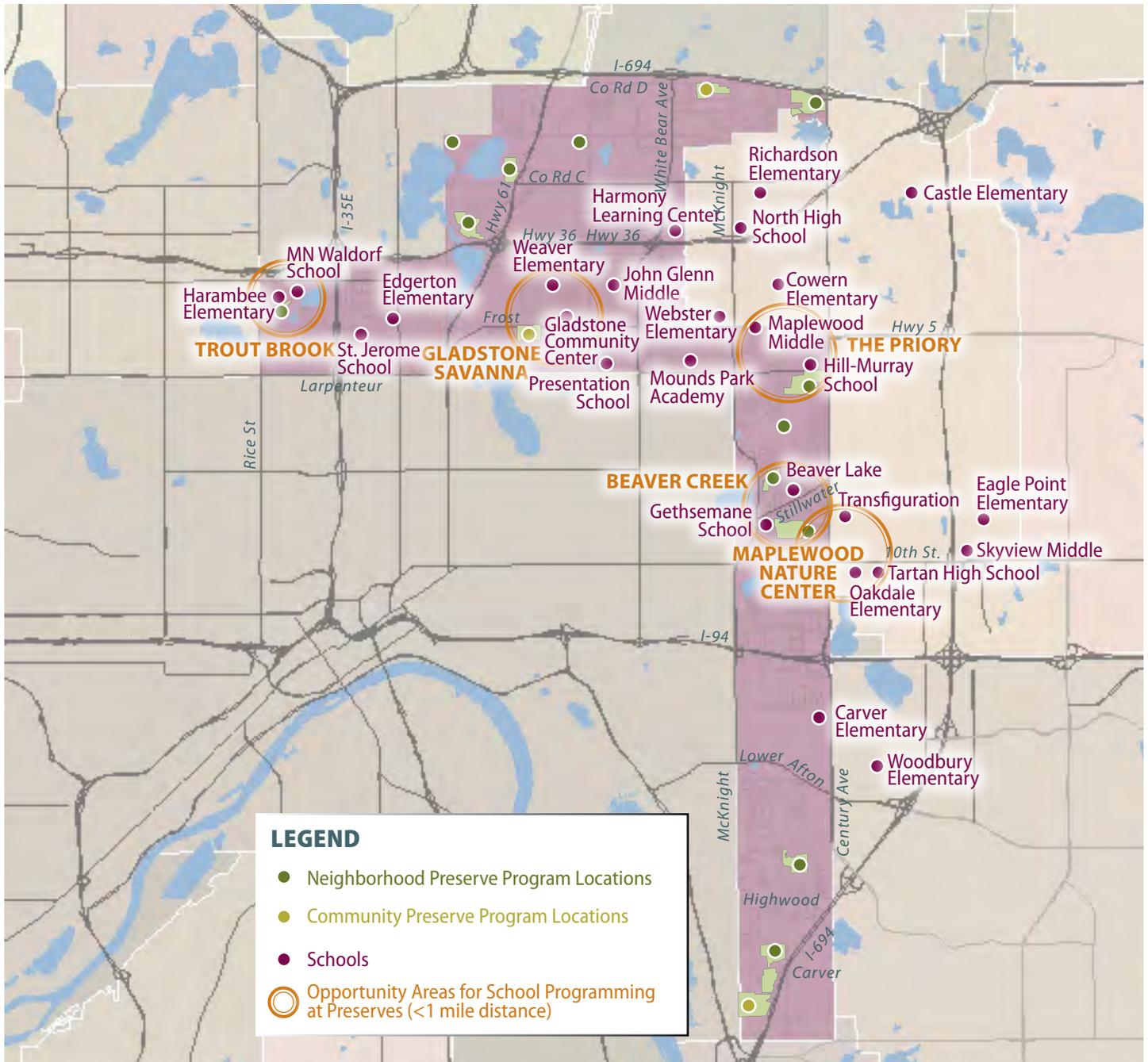


Figure 2.3 Proximity-based Opportunities for School Partnerships and Programming at Nearby Preserves

- » Explore multi-media/technology as means of deepening visitor engagement and multi-lingual access (offering tablets with Google Translate; mounting a screen in the Visitor Center for digital content & program advertising, and display of photography from Maplewood's Neighborhood Preserves)
- » Nature Play Yard improvements and upgrades
- » Update exhibits with an aim to make them easier to regularly change (seasonally) and incorporate interactive technology (trail cam footage, phenology tracking, etc.)



Figure 2.4 Phased Physical Investments: Immediate (0-1 Year)

Phasing of Physical Investments

The phasing of the master plan's proposed investments is subject to political will, financial availability, and logical sequential parameters, but is laid out according to the following strategy:

Immediate (0-1 Year):

These items are already funded in the City's current CIP:

- » Shed replacement
- » Boardwalk & observation deck repair/replacement

Other immediate actions:

- » ADA Entry Door

Near-term (1-6 Years):

These items are future CIPs and can take advantage of other funding/implementation resources:

- » Trail improvements
- » Technology upgrades
- » Kiosk & patio repairs including new trail entry gateway
- » Garage & leased vehicle
- » Upgraded welcome and entry signs at all entrances

Long-term (7+ Years):

These items are future CIPs and can take advantage of other funding/implementation resources:

- » Visitor Center expansion/reconfiguration
- » Exhibit updates
- » Parking expansion
- » Path connection to Century Ave
- » Signage additions along Century and Minnehaha
- » Nature Play Yard improvements and upgrades



Figure 2.5 Phased Physical Investments: Near-term (1-6 Years)

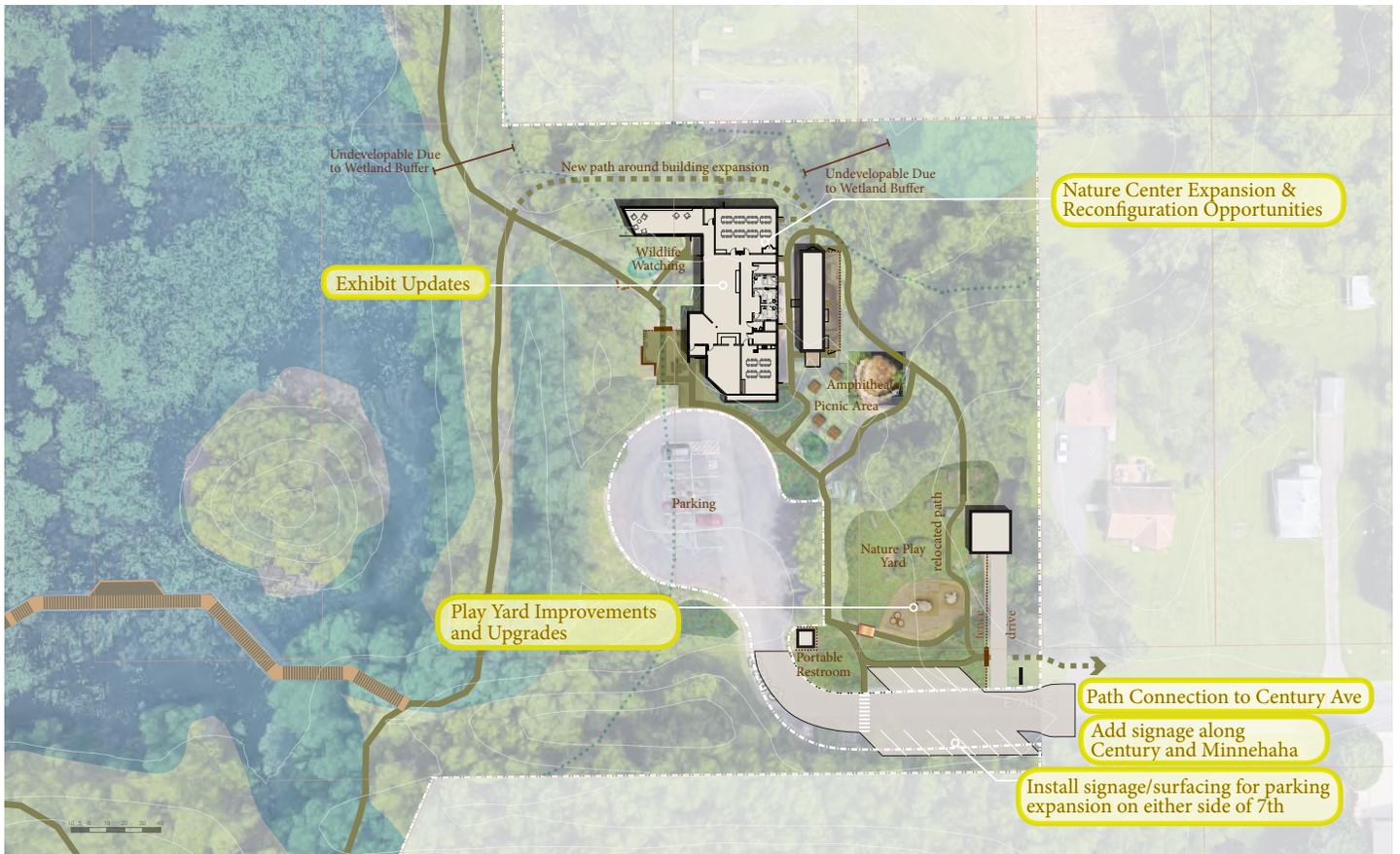


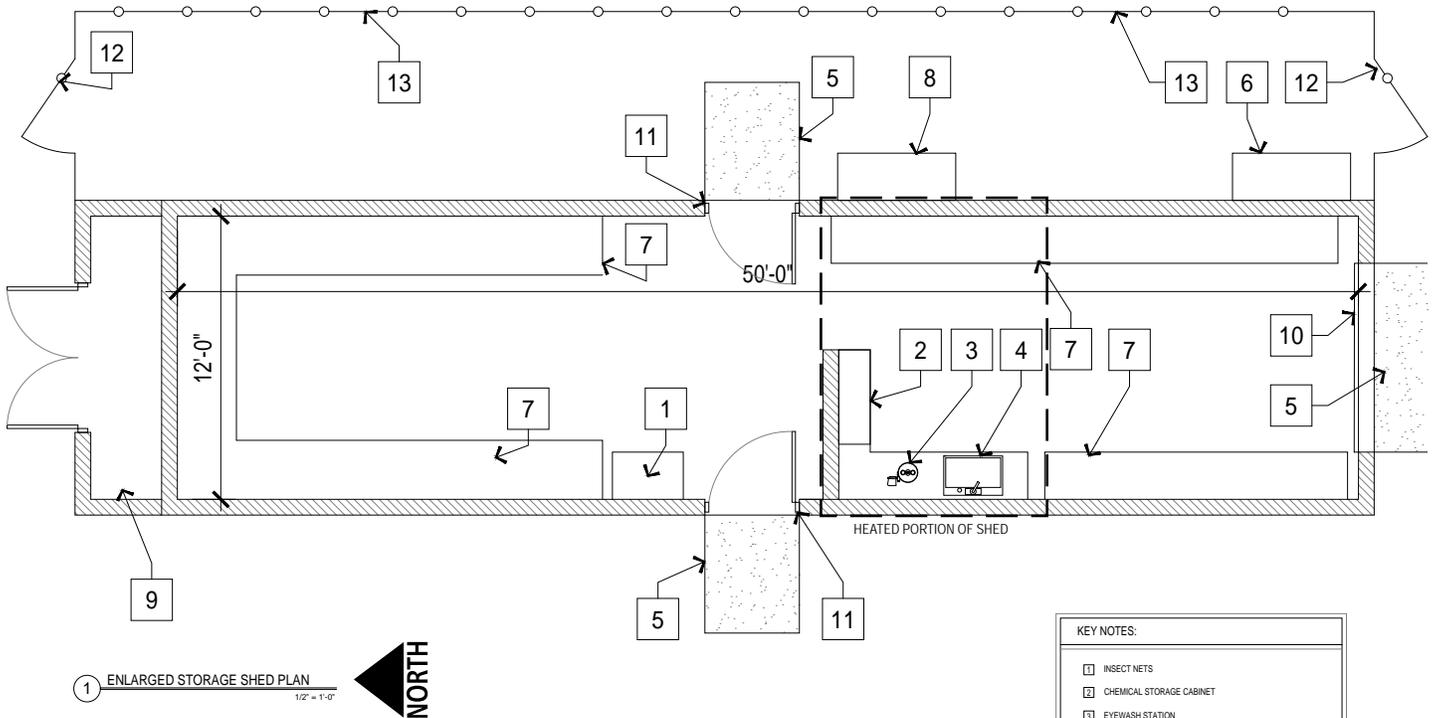
Figure 2.6 Phased Physical Investments: Long-term (7+Years)

Buildings

Shed Expansion & Reorganization

Utility setbacks limit the space available for a new shed. As such, Oertel Architects recommends replacing the existing shed with a new and expanded shed in the same location. This shed would have a number of access doors for storage, with direct access to various materials. It would also include a heating unit in a portion of the shed, along with a sink.

As a portion of this phase, some minor interior work might be done, dependent on funds available.



KEY NOTES:	
1	INSECT NETS
2	CHEMICAL STORAGE CABINET
3	EYEWASH STATION
4	UTILITY SINK
5	CONCRETE/GRAVEL
6	WHEELBARROWS
7	GENERAL STORAGE
8	WORK BENCH
9	EXTERIOR CLOSET
10	COILING SHUTTER DOOR
11	4' DOOR
12	4' SWING GATE
13	CHAIN LINK FENCE

Figure 2.7 Proposed Shed Layout

New Garage

In conjunction with procurement of a leased vehicle, a garage is proposed to be constructed to house the vehicle, tools, supplies, and materials needed to facilitate remote programming. The structure would not need to be climate controlled. The proposed garage is sited near the nature play area and set back from the entry drive which respects setbacks and easement requirements and ensures that the garage does not visually impact the entry experience. It is suggested that the facade be wrapped with playful design elements, in order to better integrate with the nearby nature play.

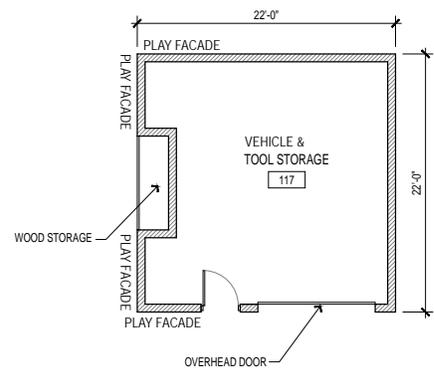
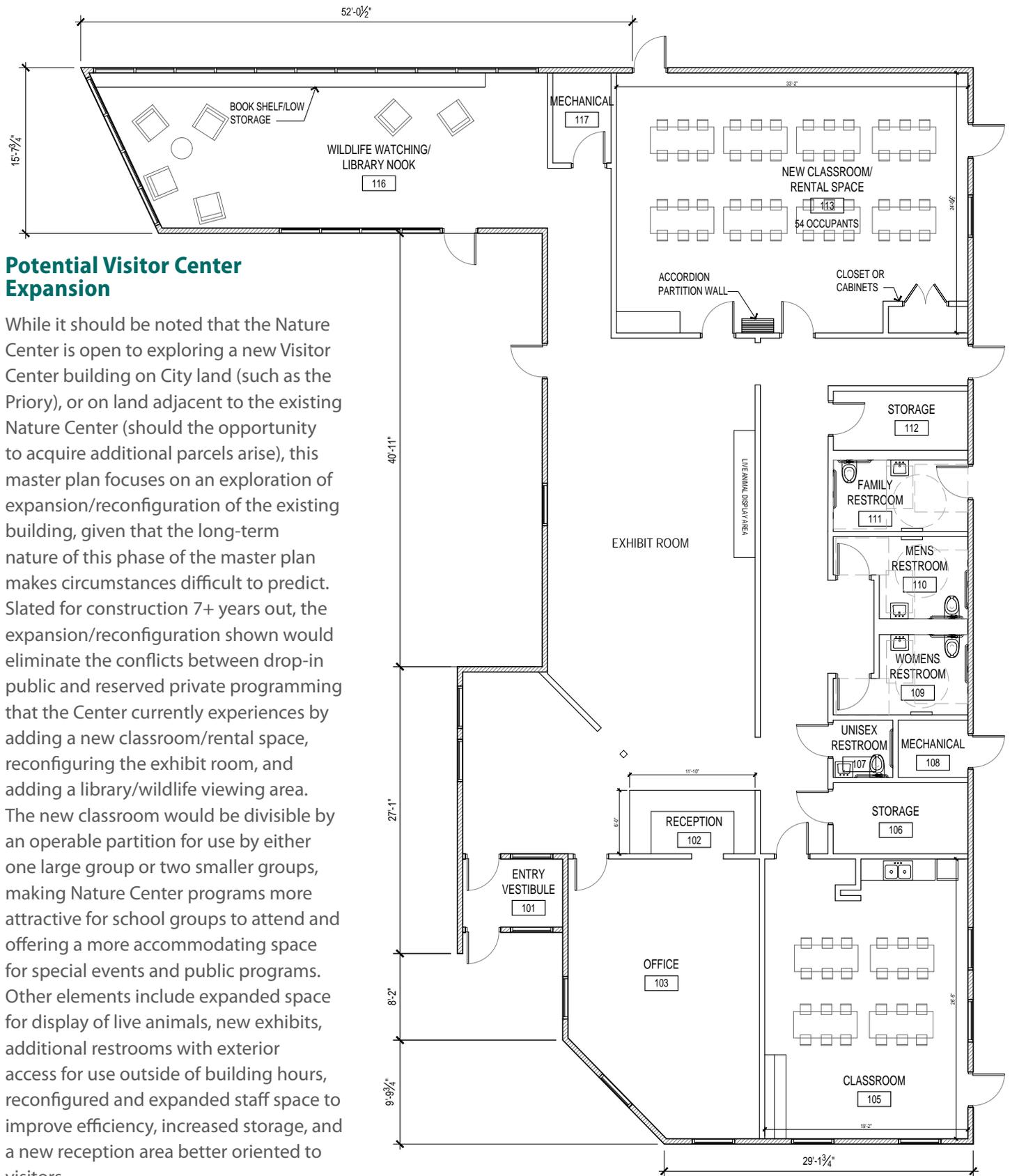


Figure 2.8 Proposed Garage Layout



Potential Visitor Center Expansion

While it should be noted that the Nature Center is open to exploring a new Visitor Center building on City land (such as the Priory), or on land adjacent to the existing Nature Center (should the opportunity to acquire additional parcels arise), this master plan focuses on an exploration of expansion/reconfiguration of the existing building, given that the long-term nature of this phase of the master plan makes circumstances difficult to predict. Slated for construction 7+ years out, the expansion/reconfiguration shown would eliminate the conflicts between drop-in public and reserved private programming that the Center currently experiences by adding a new classroom/rental space, reconfiguring the exhibit room, and adding a library/wildlife viewing area. The new classroom would be divisible by an operable partition for use by either one large group or two smaller groups, making Nature Center programs more attractive for school groups to attend and offering a more accommodating space for special events and public programs. Other elements include expanded space for display of live animals, new exhibits, additional restrooms with exterior access for use outside of building hours, reconfigured and expanded staff space to improve efficiency, increased storage, and a new reception area better oriented to visitors.

Figure 2.9 Proposed Visitor Center Expansion Plan





Strategy

This Master Plan was developed in order to make sure that future investments are grounded in a strategic vision for the Nature Center. By planning now, we can leverage a variety of funding sources and support, and ensure that we have enough time to mobilize the necessary resources to achieve the desired outcome.

The phasing explored in the previous chapter largely limits immediate actions to those already funded (shed and boardwalk). Investments in future phases of the plan have a variety of funding options that can be explored prior to use of general funds or pursuit of a park bond referendum. Potential sources that can defray the full cost of implementation from falling on the City of Maplewood include:

Outside Funding

- » Community and Friends Group support (fundraising events and donations)
- » Local business sponsorships
- » Public Health grants
- » Watershed District grants
- » State-funded outdoor recreation grants

Other “In-kind” Contributions

- » DNR Programs (Participation in the School Forest program to access maintenance and stewardship assistance at the Preserves and resources for schools interested in nature-based educational programming)
- » Service Learning Volunteers (bench replacement, clearing, natural resource management, restoration)

Being Efficient with Existing Resources

- » Utilizing existing City contracts and services (vehicle leasing, trail maintenance, communications and marketing)
- » Sentence to Serve (STS) Crews

Costs

Projected costs are for high level planning purposes only and take into consideration known conditions. The Nature Center is open to acquisition of adjacent properties in the case of a willing seller, which would present alternate options for Visitor Center expansion that should be studied at such time.

Table 3.1 Projected Costs

PHASE	INVESTMENT	COST	SOURCES
IMMEDIATE (0-1 YEAR)	Shed Replacement	\$75,000	Existing CIP
	Boardwalk + 3 Observation Decks Repair/Replacement	\$125,000	Existing CIP + Grants
	Entry door (ADA)	\$15,000	City
YEARS 0-1 INVESTMENT		\$215,000	
NEAR-TERM (1-6 YEARS)	Garage (include playful facade) + Driveway	\$25,000	Future CIP, City Crew labor
	Leased Vehicle for remote/mobile programming and service learning	*per City Contract	City Contract
	Portable Restrooms and gathering amenities at neighborhood preserves where programming takes place	*per City Contract	City Contract
	Trail Reconfiguration & ADA surfacing improvements	\$60,000	Future CIP, City Crew labor, Service Learning Volunteers, Public Health grant
	Technology Upgrades (Trail Cams & Visitor Center Digital Content Display, Tablets for translation)	\$15,000	Future CIP, Friends Group fundraising, Non-profit partnerships
	Kiosk and Patio Repairs at Nature Center Trail Entrance	\$25,000	Future CIP, City Crew labor, local business sponsorships
	Installation of New Entry Gateway at Trailhead	\$12,000	Future CIP, Friends Group fundraising
	Stairway repairs at Michael Lane Entrance	\$14,000	Future CIP, City Crew labor, Service Learning Volunteers, Non-profit partnerships
	Upgrades to Welcome & Entry Signs at all entrances	\$40,000	Future CIP, City Crew labor, Friends Group fundraising
	Bird Blind and connecting natural surface trail (275 lf)	\$15,000	Future CIP, City Crew labor, Service Learning Volunteers, local business sponsorships, Non-profit partnerships
YEARS 1-6 INVESTMENT		\$206,000*	(plus City Contract services)
LONG-TERM (7+ YEARS)	Visitor Center Expansion/Reconfiguration	\$750,000 - \$1,000,000	Future CIP, Friends Group/Community fundraising, local business sponsorships, Watershed District grant
	Exhibit Updates	\$100,000	Future CIP, Friends Group/Community fundraising, local business sponsorships, Watershed District grant, Non-profit partnerships
	Parking Expansion	\$30,000	Future CIP, City Crews
	ADA surfacing improvements	ongoing as needed	Future CIP, City Crew labor, Service Learning Volunteers, Public Health grant
	Nature Play Yard improvements and upgrades	\$30,000	Future CIP, Friends Group/Community fundraising, local business sponsorships, grant
	Signage Additions along Century and Minnehaha	\$15,000	Future CIP, City Crew labor, Friends Group fundraising
	Path Connection to Century Ave	\$50,000	Future CIP, City Crew labor
YEARS 7+ INVESTMENT		\$975,000 - \$1,225,000	
TOTAL MASTER PLAN IMPLEMENTATION COST (IN 2019 DOLLARS)		\$1,396,000 - \$1,646,000	



Operational Action Items

The Operational Action Items that follow complement the physical investments detailed in Chapter 2; together, these actions fulfill the Strategic Opportunities made possible by this master planning process (improving delivery efficiencies and effectiveness, expanding the Nature Center’s impact, and improving the visitor experience).

Improve Tracking of Metrics (Immediate/Ongoing)

While staff have been able to track some statistics, a solid baseline of Nature Center use has not yet been established, largely because trail visitors have not been able to be quantified. By investing in more comprehensive metrics tracking, Nature Center staff will be able to set attendance goals, adapt programs, evaluate successes, build targeted partnerships, determine capacity thresholds and triggers for additional staff/support needs, and will be able to better meet the needs of visitors overall. Proposed metrics include:

- » Visitor Center building attendance
- » Trail Use
- » Attendance of City-wide (remote) Programs and Events
- » Attendance of Nature Center Programs and Events
- » Volunteer Hours
- » Rentals
- » Types of programs and their popularity



Promote staff professional development training and continuing education (Immediate/Ongoing)

- » Maintains staff’s ability to stay ahead of trends
- » Helps keep Maplewood a leader in sustainability
- » Enables the Nature Center to continue to offer valuable technical expertise to Maplewood residents

Optimize the Visitor Center’s Use (Near-term: 2021-2026)

- » Study potential for expanded seasonal hours, or adjusting the days that the Visitor Center is open
- » Begin accepting on-call reservations for Visitor Center rentals during off-days

Expand City-wide (remote) Program and Event Offerings (Near-term: 2021-2026)

This operational action item first requires the physical investment in a garage, the leasing of a vehicle to transport supplies/equipment, and the addition of portable restrooms and gathering amenities at the Preserves where programs are to take place. Operational adjustments that will enable staff to be able to devote more time to expanded remote programming include:

- » Improved technology / administrative support that increases the efficiency of registration and coordination of programs and volunteers
- » Strengthening and expanding partnerships with Ramsey Washington Metro Watershed District and local school districts



- » Building targeted partnerships with schools located near Neighborhood Preserves to meet their curriculum needs through Nature Center program offerings (may include pursuing DNR School Forest designation)

Develop Best Practices for Integrating Technology into the Nature Center Experience (Near-term: 2021-2026)

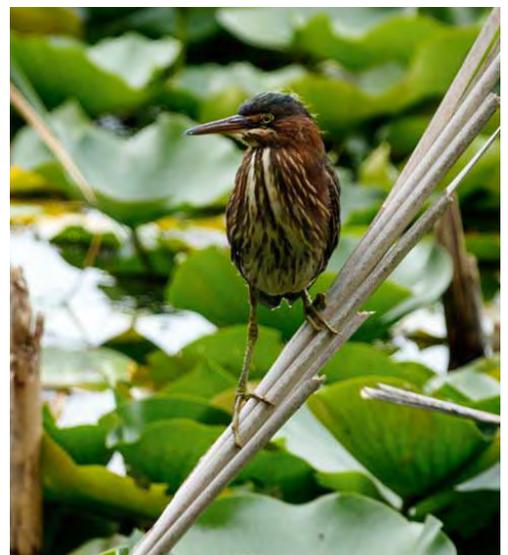
This operational action item requires physical investments in technology upgrades, including trail cams, a digital content display at the Visitor Center, and tablets. Incorporating these pieces of equipment serves multiple aims:

- » A digital content display will provide visitors to the Visitor Center with dynamic, ever-changing information and content that creates a unique experience each time and will encourage repeat visits without having to make a major investment in exhibits
- » Tablets provide non-english speakers the opportunity to interact with staff and understand exhibits through the use of Google Translate
- » Footage from trail cams can be used to track the animal kingdom's use of the the Nature Center and Preserves, but can also be streamed online, posted to a Maplewood Nature Center YouTube channel, and shared at the Visitor Center's digital content display. This technology expands the Nature Center's reach to those who can't necessarily visit, but still want to be able to access nature and learn about it from home. It can also increase visitors by generating interest and excitement.

Integrate Maplewood Nature Center into the Learning Experience of Maplewood Students (Long-term: 2027+)

Maplewood Nature Center is a great resource to the City's residents that aims to be enjoyed and shared by all. One of the surest ways to have a guaranteed impact is to get kids involved in Nature Center programs through their schools. Enthusiastic youth then share their experience with their families and generate repeat visits. The Visitor Center currently has space limitations that make taking field trips of full grades of students difficult; as such, this operational action item likely requires an expansion of the Visitor Center before it is achievable.

- » Reach out to Maplewood high schoolers by making service learning programs attractive and available
- » Establish partnerships and value within City and School District
- » Pursue grants and other funding to help with transportation costs
- » Invite all Maplewood students to the Nature Center for a school program by 5th grade
- » Assess the need for additional staffing to accommodate the increased capacity for programs and attendance



Maplewood Nature Center Master Plan

