



CARPENTER PRESERVE

RE-MASTER PLAN FINAL REPORT



NOVEMBER 13, 2023

Acknowledgments

All of the work produced through out this process could not have been possible without the countless feedback and input from City of Neenah Staff, the Park and Recreation Commission, and the numerous, dedicated neighbors and interested community members who joined us for the public open house.

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Park and Recreation Commission Members:

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- Ted Galloway
- Kate Hancock-Cooke
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What's in the plan?

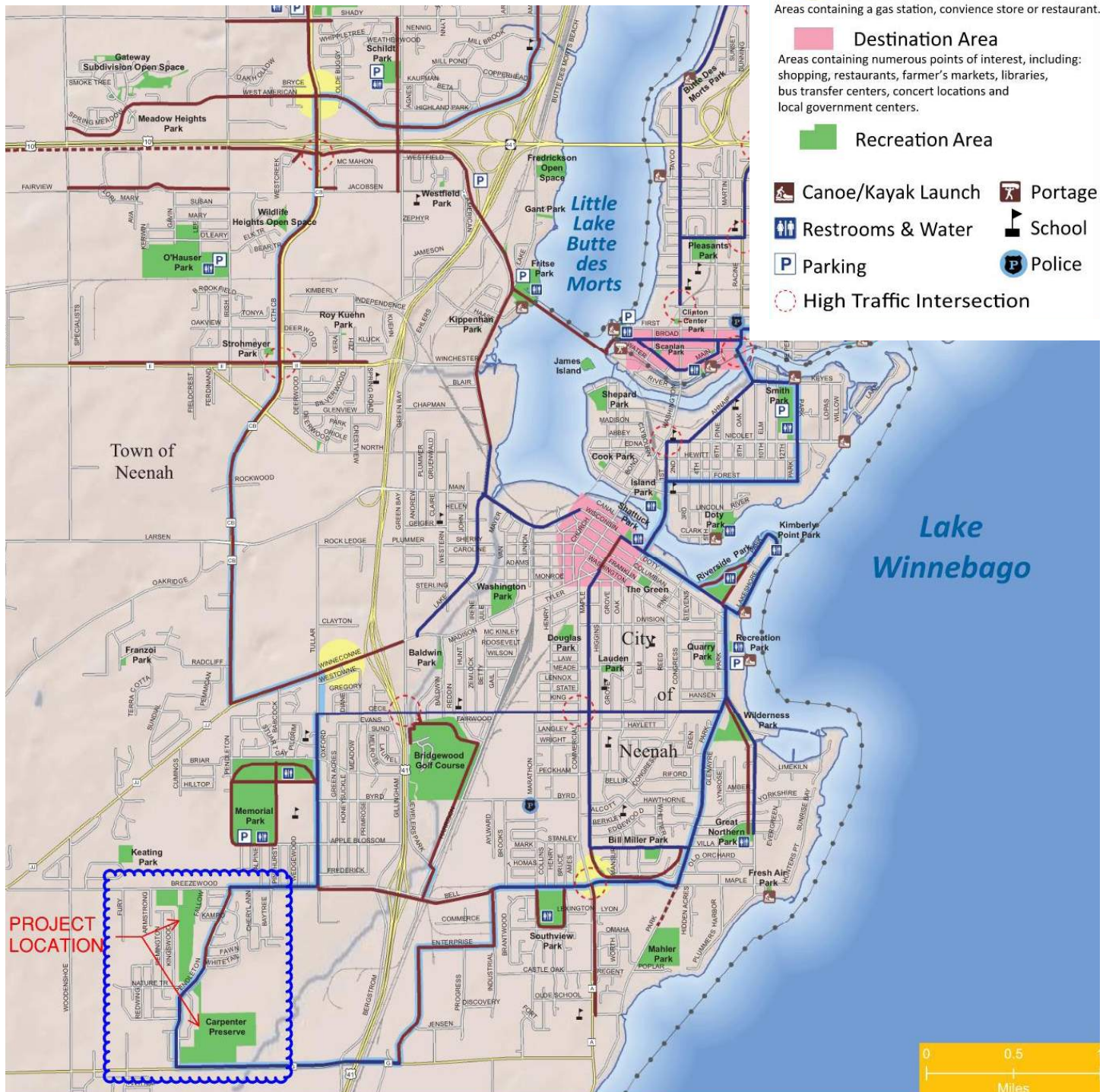
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A landscape photograph showing a pond with tall, dry reeds in the foreground. A tree with bare branches is on the left. In the background, there are several houses and a cloudy sky.

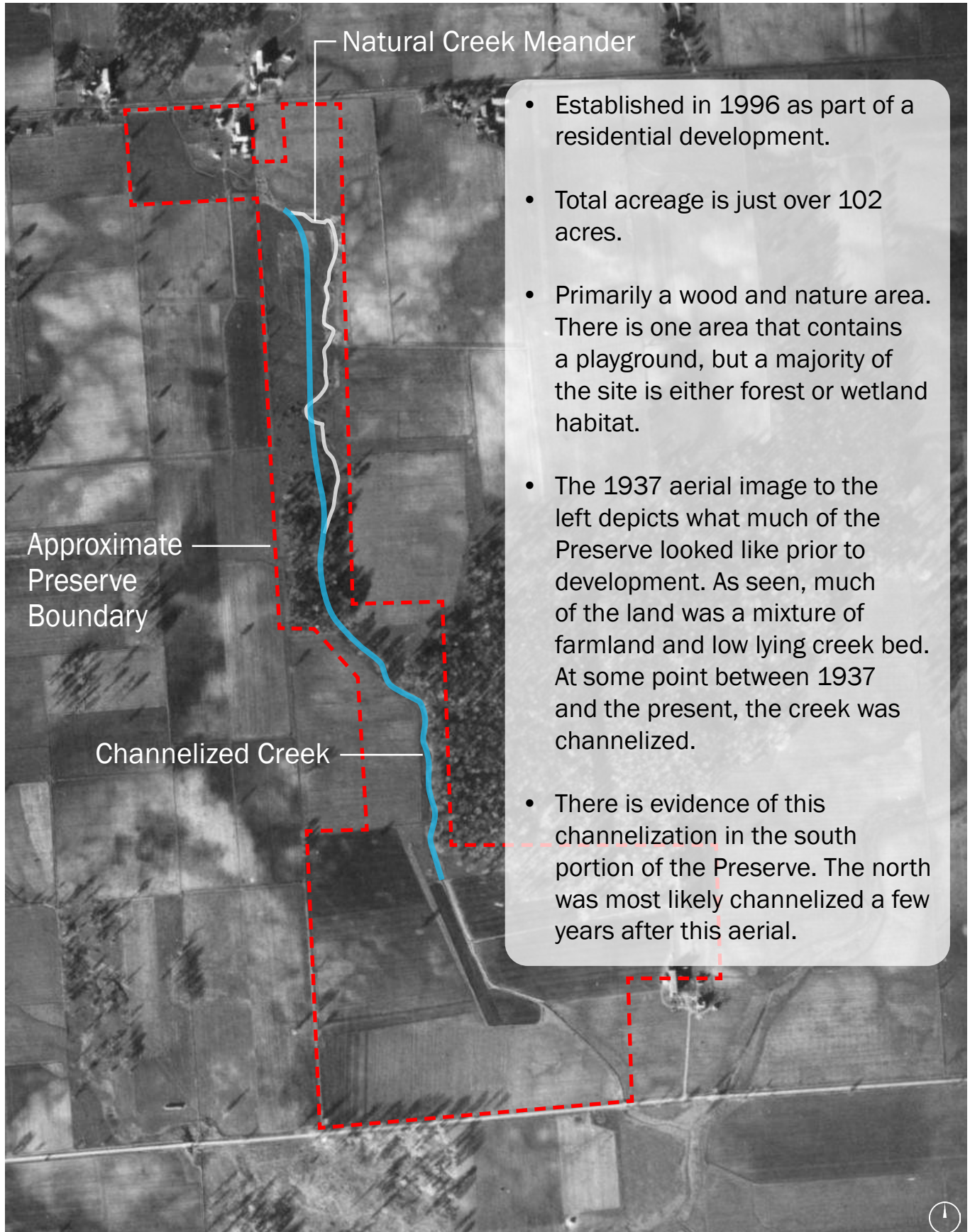
1 INTRODUCTION

Site Context

Located on the southwestern limits of Neenah Wisconsin, Carpenter Preserve is a woodland and wetland amenity surround by a few hundred single family homes. A very popular walking and passive recreational area, the purpose of the Re-Master Plan is to further evaluate the site and consult with public users on what they would like to see enhance the Preserve. The map below shows there are quite a few large recreational areas around the Preserve that could become part of a regional plan

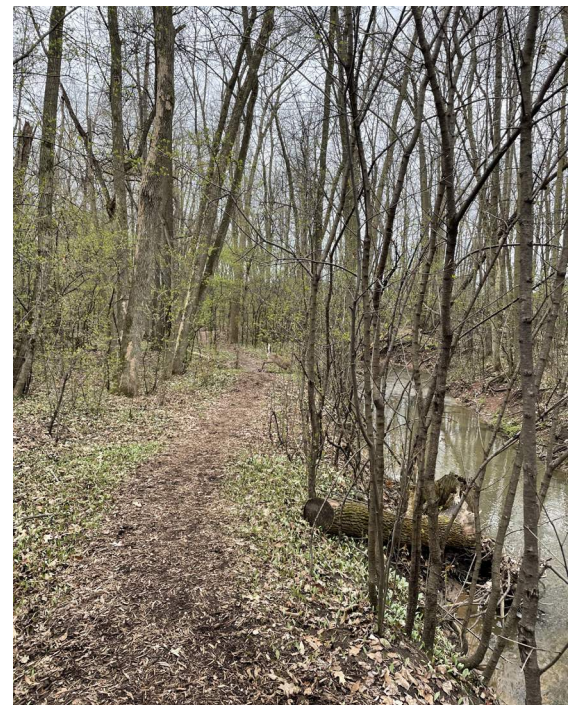


Site History



Existing Photos

Northern Unit





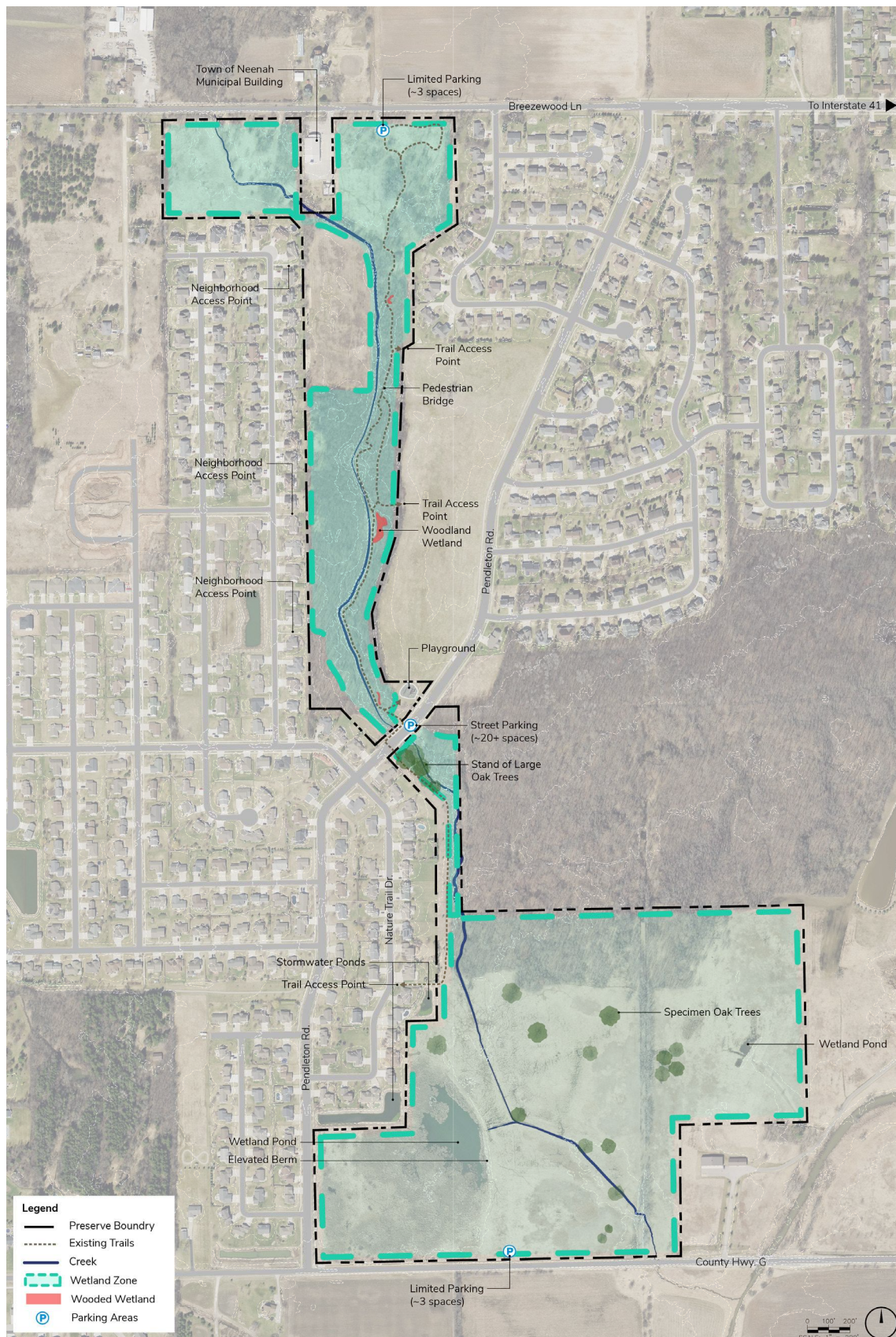
Southern Unit



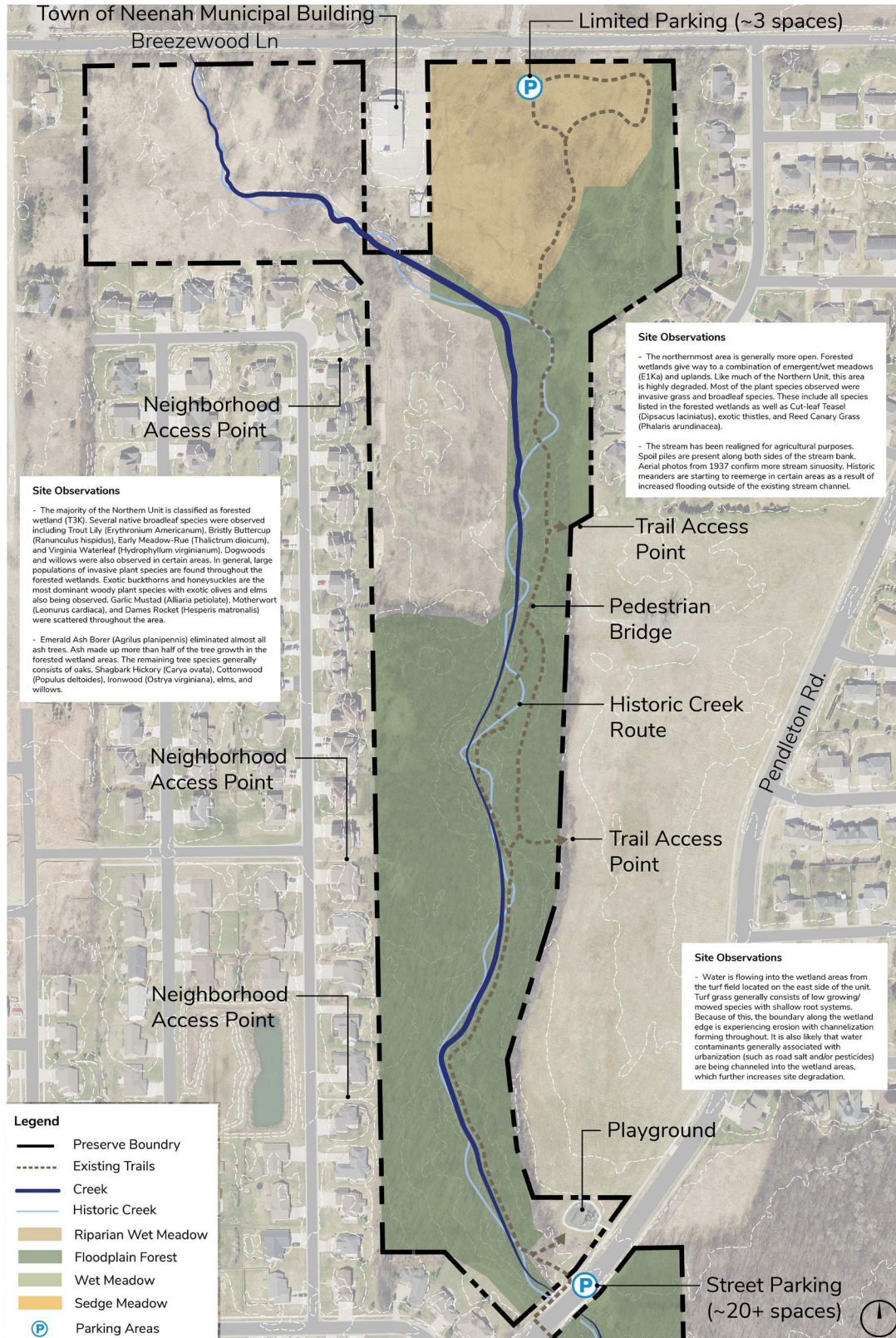


2 SITE ANALYSIS

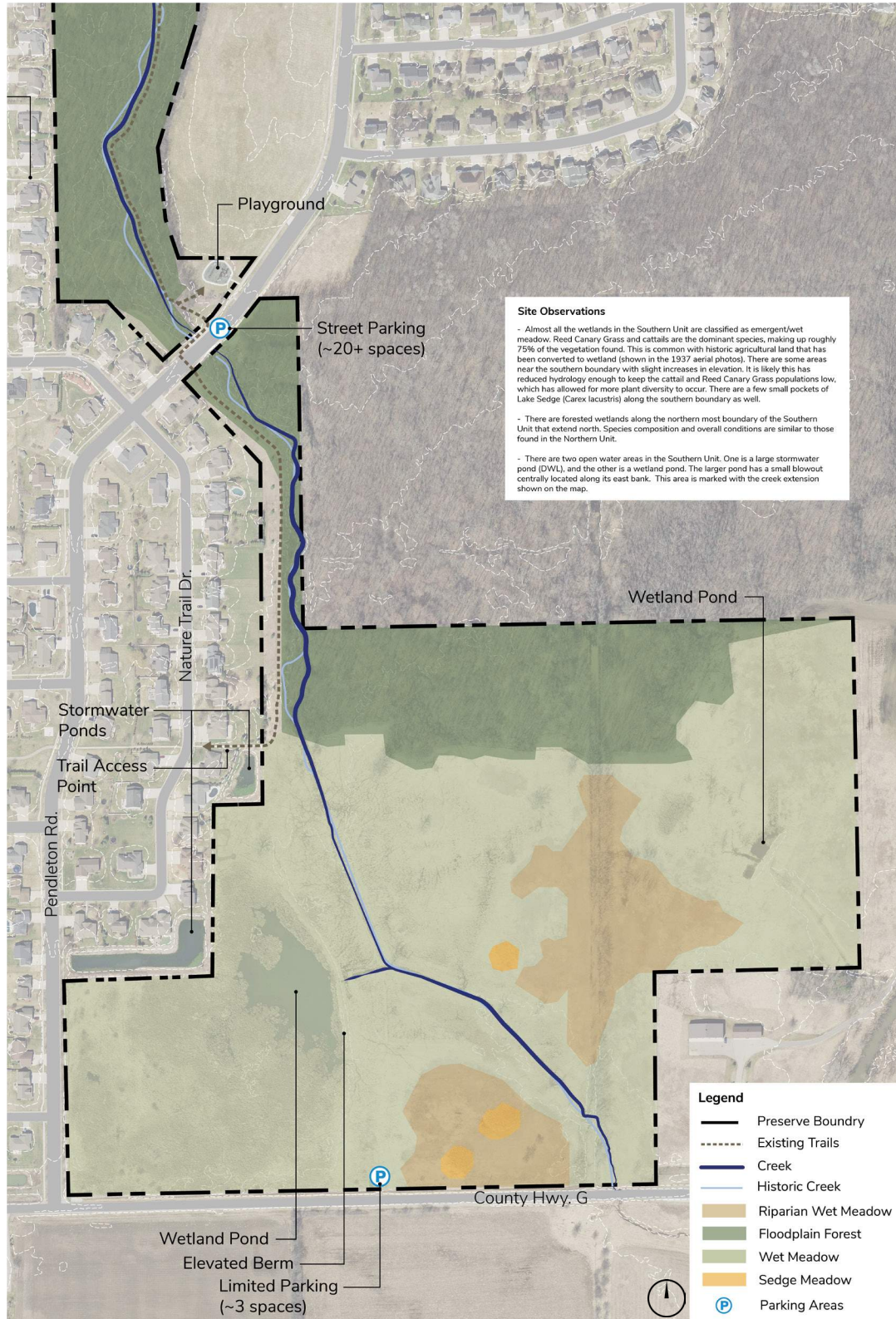
Existing Conditions Map



Wetland Communities & Enlargement Maps



Wetland Communities & Enlargement Maps



Note: Images of existing conditions can be seen on the Existing Photos board, and correspond to their number as identified above.

Invasive Species Documentation

Native Plant Species

(As identified on 5.2.2023 Site Visit)

- Virginia Waterleaf (*Hydrophyllum virginianum*)
- Trout Lily (*Erythronium americanum*)
- Bristly Buttercup (*Ranunculus hispidus*)
- Early Meadow Rue (*Thalictrum dioicum*)
- Wood Violet (*Viola sororia*)
- Blue Vervain (*Verbena hastata*)
- Lake Sedge (*Carex lacustris*)
- Agrimony spp
- Bedstraw spp

Native Tree/Shrub Species

(As identified on 5.2.2023 Site Visit)

- Oaks
- Ironwood (*Ostrya virginiana*)
- Dogwoods (red and grey)
- Willows
- Cottonwood (*Populus deltoides*)
- Shagbark Hickory (*Carya ovata*)
- Elm spp
- Box Elder (*Acer negundo*)

Invasive Plant Species

(As identified on 5.2.2023 Site Visit)

- Buckthorn
- Dames Rocket
- Teasel
- Honeysuckle
- Reed Canary Grass
- Thistles
- Garlic Mustard
- Motherwort
- Siberian Elm
- Olives
- Cattails

Early spring ephemerals:



Scattered throughout the Preserve are a mixture of some of the most common invasives found in similar woodland and wetland sites in Wisconsin. Observed were large thickets of buckthorn with sprinklings of Honeysuckle. Additionally, there were small, but abundant collections of thistles, garlic mustard, and motherwort. It was also noted that Siberian Elm was located on site.

Primarily found in the wetland areas of the Preserve, cattails and reed canary grass dominate much of the open wetland. While it offers the aesthetic of a wetland, these two species grow incredibly quick and thick, preventing native species from entering the picture.

It was also noted that there are many dead ash trees within the Preserve. There is no doubt that these trees succumbed to the devastating effects of the Emerald Ash Borer beetle.



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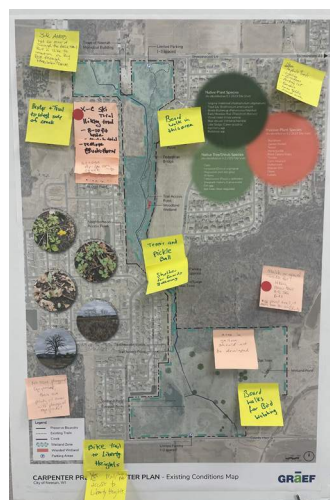
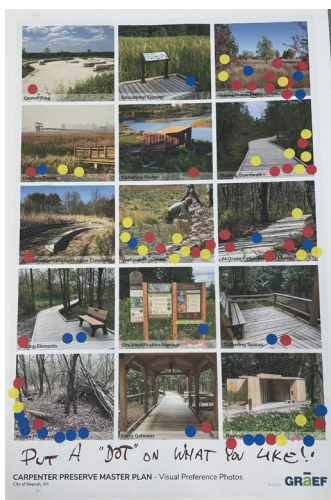
COMMUNITY ENGAGEMENT

Overview of Feedback

The below is a summarized list of the highest ranked amenities the public requested be a part of this Re-Master Plan. The data was collected through an online survey, as well as at the public open house held on June 22nd, 2023. The data shown here is a combination of both forms of information and simply illustrate how many “yes” answers were received for each particular amenity. As part of the exercise, there was not an option to specifically say “no” we do not want a particular element.



Image boards with data collected from the June 22nd open house.



Overview of Feedback

The following data summarizes all the public feedback gathered during the open comment period for the Carpenter Preserve Re-Master Plan project. This data came directly from the question and answer portion of the survey.

What are your overall goals and objectives for the Project? Near term? Long Term?

- Many people want to see enhanced nature areas. This would be accomplished through invasive species removal and restoration initiatives.
- Individuals also strongly want to see an enhanced pathway system. Nothing too elaborate, but more sturdy materials, better site location (avoid flooding), and added access for users. It was also noted many times that people want to preserve the sense of nature in the space, and that any development/enhancements should be respectful of the site.
- Upgraded parking is welcomed, however, it should not be excessive. There is plenty of street parking if larger volumes are needed.

What are some of the primary features or elements you are hoping to see in this Preserve?

- It was tabulated that a majority of respondents want to see the trails and habitat enhanced. This will primarily be through material enhancements, as well as alternative trail alignments to provide access to more of the Preserve.
- Boardwalks were also mentioned quite a few times. Boardwalks allow access to more remote areas of the Preserve that would not normally get visitors.
- Some comments identified the addition of a restroom or some sort of covered structure to provide shade and refuge.

Are active or passive activities preferred? What types of active features do you envision? What types of passive features do you envision?

- Passive uses are the primary focus of the public comment. This includes walking, bird watching, hiking, snowshoeing, etc.

What are the highest priority areas of the Preserve, in your opinion, and why?

- Based on the feedback, trails, added trails, restoration and preservation are deemed the highest priority areas.
- Making the Preserve more accessible was also seen as a high priority.

Is a nature center or main building facility important? Why or why not?

- Overwhelmingly the feedback states there is no need for a nature center or main building facility.
- It was mentioned, in lieu of a main building, shade structures or a possible restroom facility could be added.

Are bathroom facilities important? Why, or why not?

- The feedback is generally split on the need for restrooms.
- Some concerns regarding the restroom structure includes vandalism and maintenance.

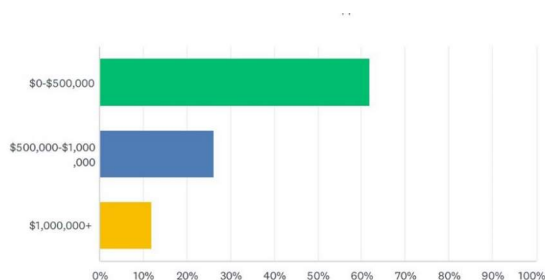
Should dedicated parking be considered? If so, where would you prefer to see it located?

- Generally, much of the feedback states that additional parking is not needed. A few of the comments iterate that current parking areas could be improved, but not enlarged.
- Many people seem to think that any additional parking areas could be confined to the available street parking in the neighborhood.

Are there any features that should not be part of this Preserve? Why?

- Comments varied for this answer. Some of the big take aways are that no structures should be included, minus a restroom. It was also identified that paved trails should be of a minimum or nonexistent. Other elements that should not be included are sports courts, large parking areas, and excessive lighting.

What do you feel is an appropriate investment (cost) into the Preserve? \$0 - \$500k? \$500k - \$1 million? Greater than \$1 million?



ANSWER CHOICES	RESPONSES
\$0-\$500,000	61.90%26
\$500,000-\$1,000,000	26.19%11
\$1,000,000+	11.90%5
TOTAL	42

An aerial photograph of a suburban neighborhood. The image shows a mix of residential development, including rows of houses with light-colored roofs, and large green spaces. A prominent feature is a large, dense wooded area in the center-right. To the left, there are several small ponds or wetlands. The overall layout suggests a planned community with integrated green spaces.

4 RE-MASTER PLAN



Program Elements



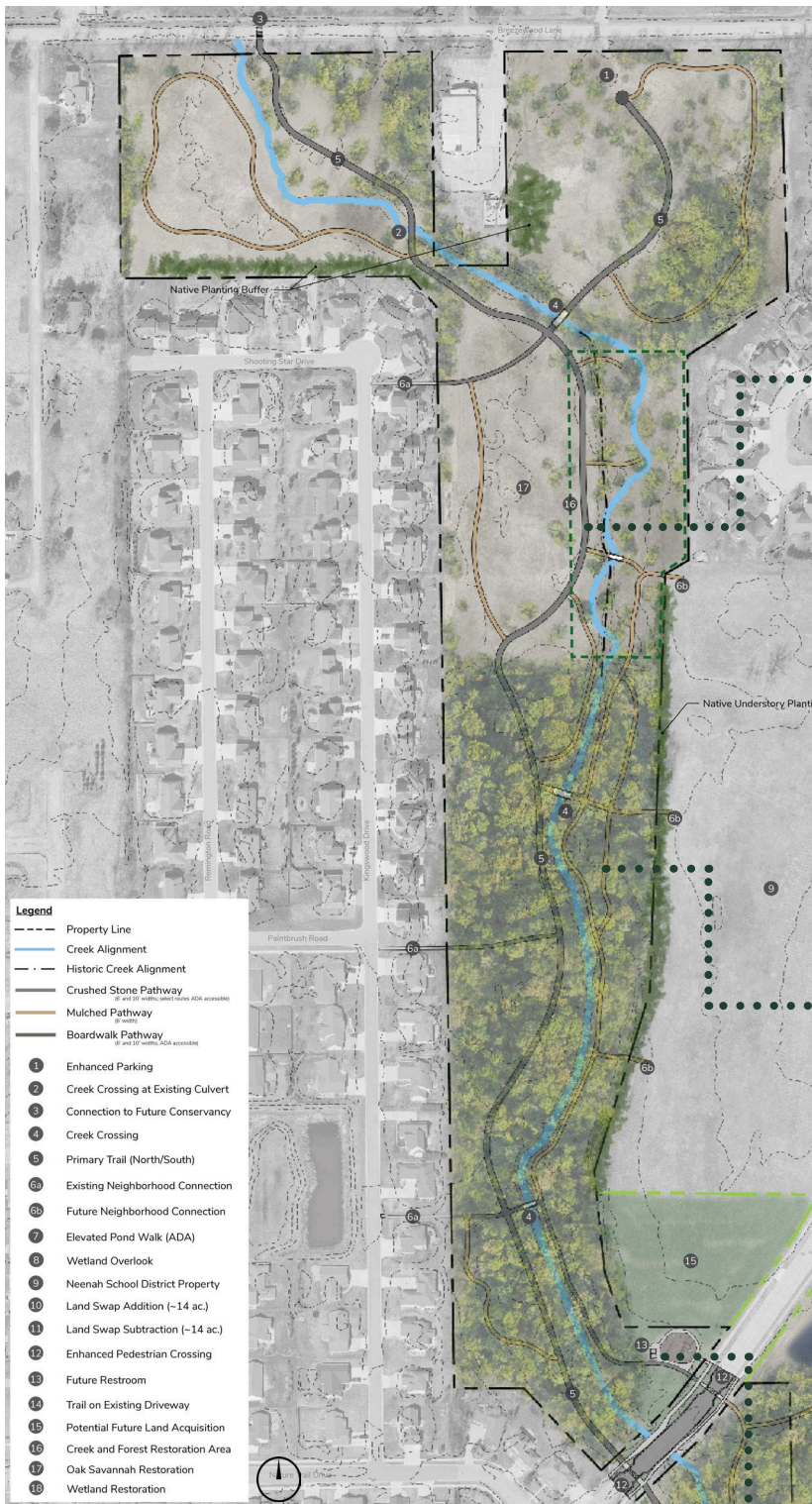
To keep with the theme of nature, wooden bridges similar to above would be used for all creek crossings. Each of these crossings will need to be evaluated in terms of impact on the flood way and the extents of structure needed.



Focused within this area is approximately 860' of creek and about 3 acres of forest restoration. This area was singled out as it is prone to high flooding. When the creek was channelized, the original low points still exist which invite water during heavy rain and snow events. Creek restoration will consist of armoring shorelines and providing proper vegetation to resist future erosion. By realigning the creek with its natural meander, flooding in this area should be reduced and the overall health of the creek improved.

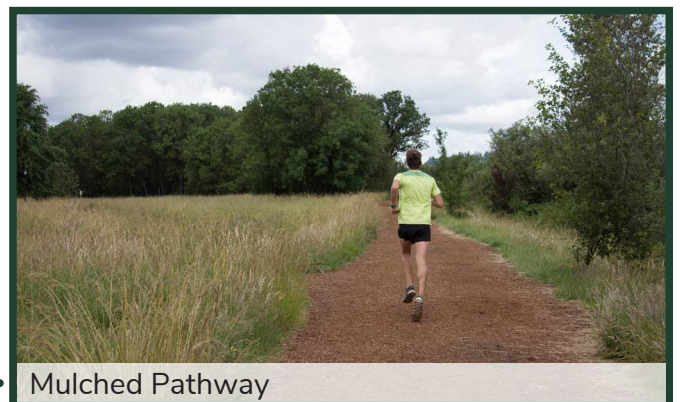
Forest restoration will consist of mechanically removing invasives such as buckthorn and the dead ash trees. The area selected coincides with the large open area to the west and provided a good marker for an initial restoration project. Over time, the hope is this area becomes one large restoration zone from the west boundary of the Preserve to the east boundary.

Program Elements



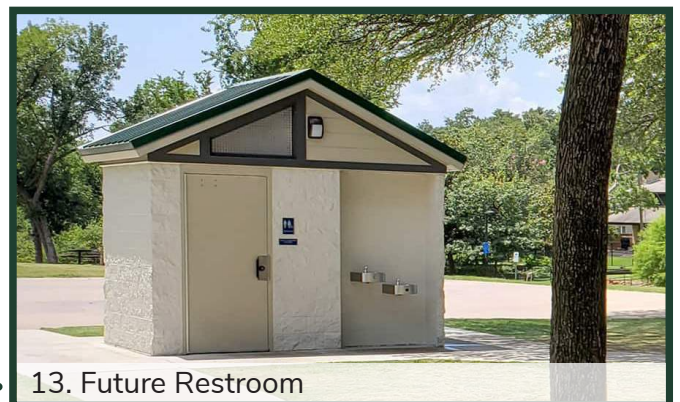
Crushed Stone Pathway

Crushed stone pathways are a great way to provide access to multiple users in a trail network. Stabilizer products can be added to limit erosion and maintenance needs. Stabilized paths are ADA compliant, but in an effort to control costs, only designated routes will receive a stabilizer treatment.



Mulched Pathway

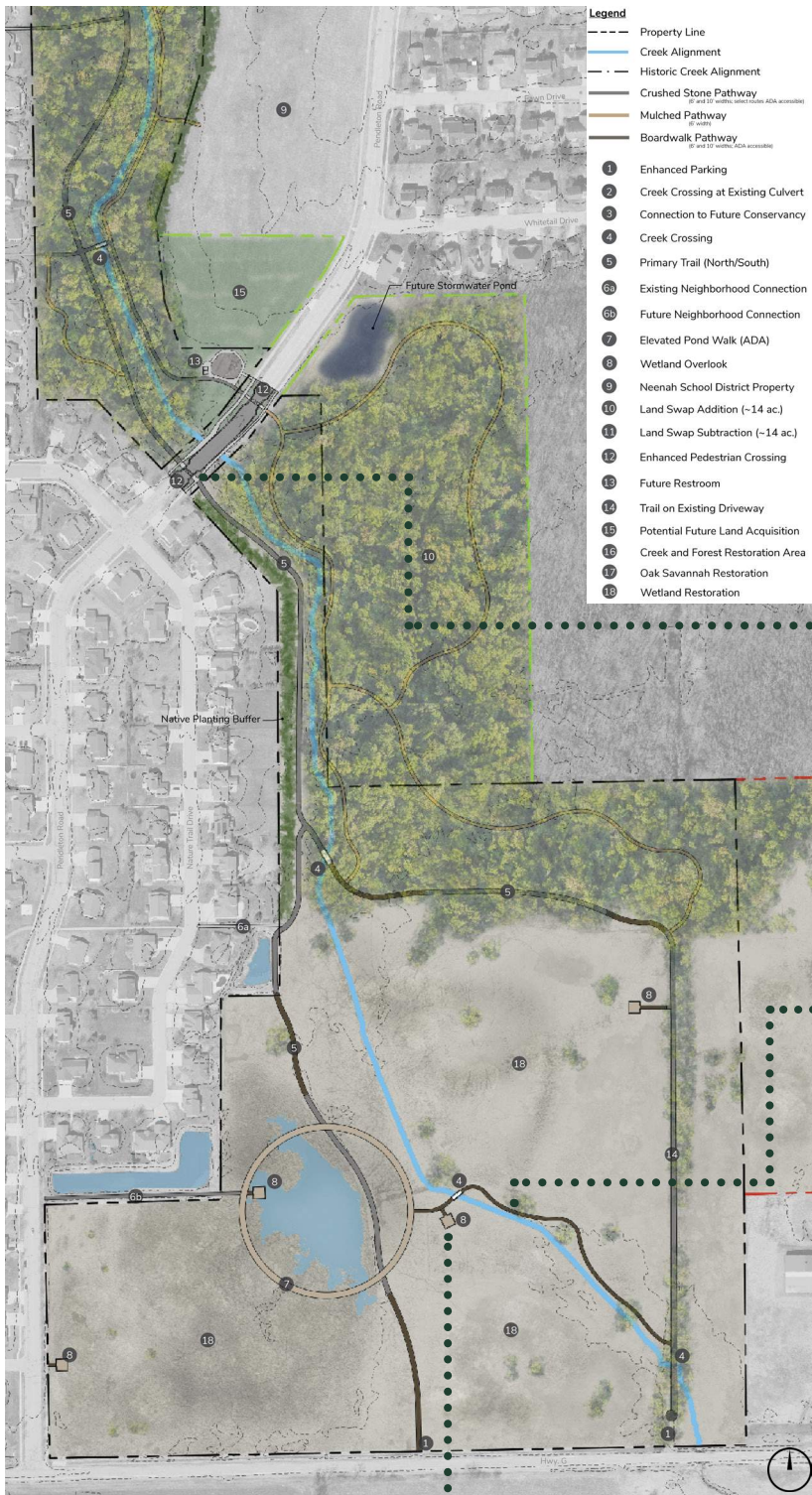
Mulch pathways are as rustic as they come. Easily maintained and usable by most. Volunteers may even be able to help spread new mulch.



13. Future Restroom

Through public input it was noted a restroom would be desirable. For the intents of the Re-Master Plan, only a location was selected. The type and style, as well as permanent vs. seasonal, will be determined during the implementation phase

Program Elements



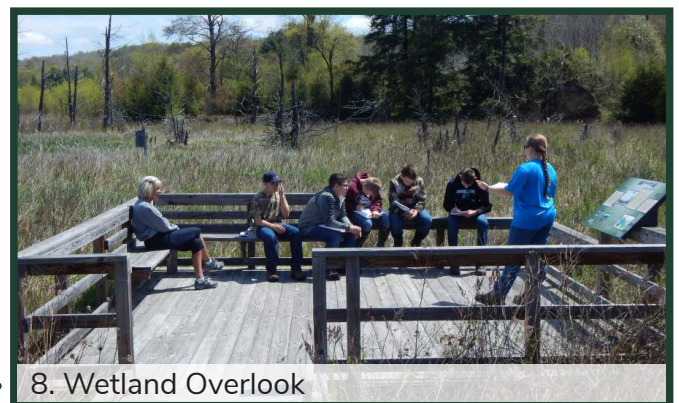
12. Enhanced Pedestrian Crossing

Enhanced pedestrian access is key to the successful use of any trail network. The Re-Master Plan looks at adding additional signage, stripping, and crosswalk bumpouts to minimize pedestrian crossing distances across Pendleton Road and improve safety.



Boardwalk Pathway

Boardwalks allow for users to access areas not typically accessible to everyone. The intent is to provide boardwalks where shown in a similar design as shown above. No railings with occasional seating elements.



8. Wetland Overlook

Overlook decks provide users to learn and rest while exploring the wetland trails.

Program Elements



Wetland restoration can be a large undertaking depending on the size of area and the amount of restoration needed. Areas were identified based on amounts of invasives and accessibility. Once specific funding is secured, areas can be targeted and more closely evaluated for their ultimate restoration plan.



The elevated pond walk is a unique feature to allow users to extend themselves out over an existing stormwater pond. The round shape of the pond walk allows for users to use it as a contemplation space or as a turn around if using the larger trail network as a loop. A simple amenity like this, has the potential to become a local and regional destination.

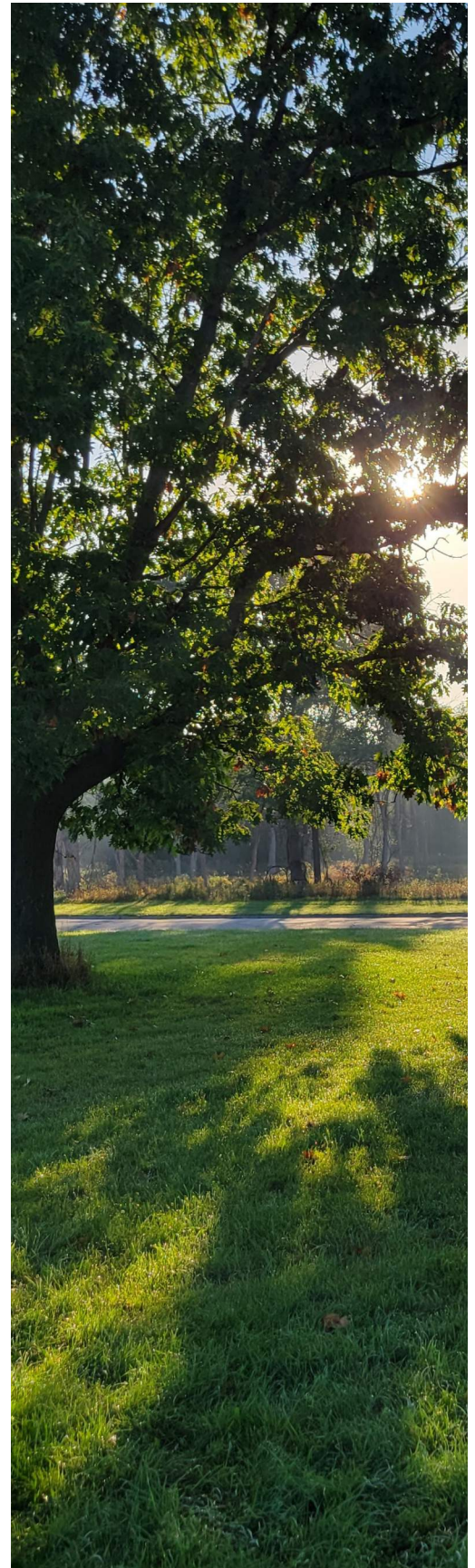
The design intent for the pond walk is shown above. Design specifics for Carpenter Preserve will be finalized in the next phase of design.

Narrative on Restoration & Process

In general, invasive plant species should be removed across the site. The northern unit (north of Pendleton Road) consists of species generally associated with forest environments. The southern unit (south of Pendleton Road) is dominated by reed canary grass and cattail. However, removal efforts for the southern unit will generally require a larger amount of time and effort than those in the northern unit. While incremental improvements can be made with modest, targeted efforts, a complete restoration is unlikely.

Removal efforts for the northern unit ideally would be completed in two phases. Phase One (initial removal) should be completed during the winter when frozen conditions are present to minimize ground impacts. This also reduces potentially negative interactions with priority plant and animal species. Target invasive species should include exotic buckthorns, honeysuckles, elms, and olives. Removal efforts should be completed using a combination of light duty machinery and hand removal. Light duty machinery consists of a skid steer with a forestry mower head to mulch larger populations. Hand removal consists of using a combination of brush saws and chainsaws to cut individuals in locations inaccessible to a skid steer, such as near save trees (native trees) or on steeper slopes (such as those located close to the creek). Stumps should be cut as low as possible (generally <3"). Cut stumps should be treated with a non-selective, aquatic approved herbicide such as glyphosate. It should be noted that non-aquatic herbicides will need to be avoided (primarily oil based) as they cannot be used in wetland environments.

Phase Two (follow up treatments) will need to be completed during the growing season. These should focus on treating plants (1) resprouting from winter clearing efforts and (2) additional invasive plant species as these generally increase in areas of high disturbance. Specific targets should include garlic mustard, dames rocket, and motherwort. Herbicide applications should be completed using low volume backpack sprayers. Because treatments are completed during the growing season, it will be important to minimize overspray to avoid off target damage to priority plant species. This is difficult to avoid using high volume treatments. Similar to stump treatments, aquatic approved herbicides must be used. However, these can be either non-selective and/or broadleaf specific herbicides. It should be noted that Phase Two generally requires multiple treatments cycles (typically spring and summer) across multiple growing seasons to achieve desired results.

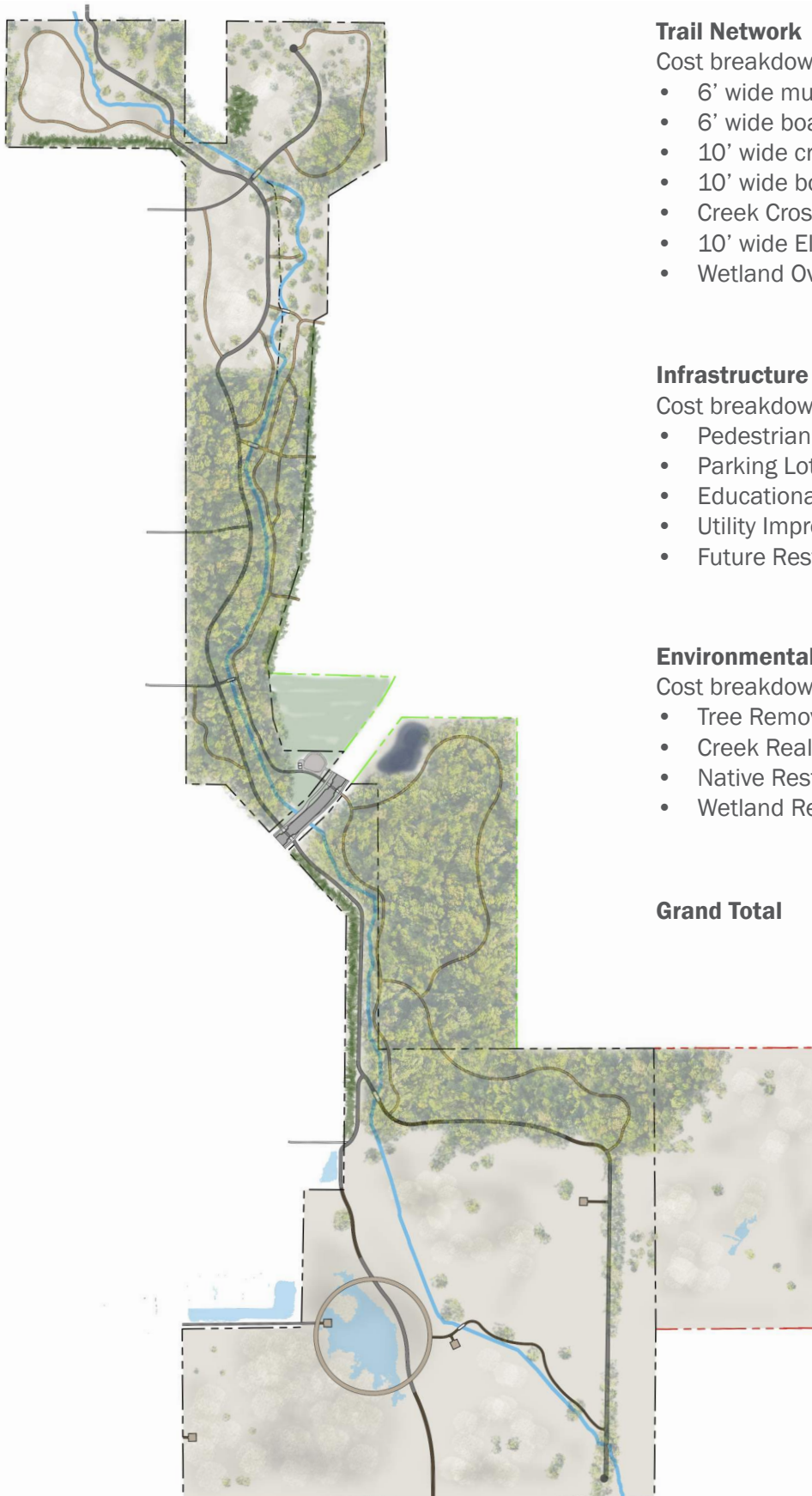


A landscape photograph showing a field of tall grass, with some green and some yellowed, suggesting a transition or seasonal change. In the background, there is a line of trees and a small building partially visible. The sky is filled with soft, grey clouds.

5

NEXT STEPS

Opinion of Probable Cost



Trail Network

Cost breakdown includes:

- 6' wide mulch trails
- 6' wide boardwalk system
- 10' wide crushed aggregate trail (ADA segments included)
- 10' wide boardwalk system
- Creek Crossing Bridges
- 10' wide Elevated Pond Walk
- Wetland Overlooks

Subtotal: \$1,585,000

Infrastructure

Cost breakdown includes:

- Pedestrian Crossing Enhancements
- Parking Lot Enhancements
- Educational Signage
- Utility Improvements (Future Restroom)
- Future Restroom

Subtotal: \$376,500

Environmental Restoration

Cost breakdown includes:

- Tree Removal
- Creek Realignment/Restoration
- Native Restoration (Oak Savannah)
- Wetland Restoration

Subtotal: \$470,000

Grand Total

Subtotal: \$2,431,500

Contingency (20%): \$607,875

Total Project Cost: \$3,039,375

This opinion of probable cost was put together with the best information available at the time of writing this report. Timelines, details, and final design will greatly affect the overall cost of the project shown. This cost opinion is to provide a initial overview of what things may cost, and a more refined cost estimate should be prepared during future phases of design and as elements are more refined.

Implementation Breakdown

Phase 1 (0-3 years)

The initial phases of realizing this Re-Master Plan should focus on immediate impact areas that contain minimal financial commitment. Phase 1 would focus on the creation of a new ADA walking loop off of Pendleton Road. This loop will act as a spring board to other elements of the plan. This initial phase will introduce the first of five total creek crossings, as well as allow individuals who might have never accessed the Preserve before the ability to enjoy it. This phase also includes a singular trail and overlook in the southern unit.

The highlighted areas are places where volunteer groups could have major impact on the plan. These areas highlight where volunteers could install simple mulch trails, as well as help with the initial stages of invasive species removals and restoration.

Estimated Cost: \$150,000 - \$500,000

*Cost depends on overall scope of final projects, as well as level of volunteer commitment.

Phase 2 (3-6 years)

After the completion of the initial project, momentum should be kept in expanding access to the rest of the Preserve. Phase 2 looks at completing user access to the southern unit and connecting up with Hwy. G. This route would build on the existing route, using a combination of new aggregate trail and boardwalk trail as dictated by the environment.

Additionally, further evaluation and invasive species removal efforts should be put into the highlighted areas. This is the phase where evaluation should be conducted on the feasibility of a creek and forest restoration. Subsequent phases to this plan will look to a completed restoration before their individual installations.

Estimated Cost: \$350,000 - \$500,000

*Cost depends on overall scope of final projects, as well as level of volunteer commitment.

Phase 3 (6-10 years)

After the completion of user access to Hwy. G, phase 3 focuses on a renewed user access route north to Breezewood Lane. This phase will focus on relocating the primary route of travel through the Preserve to the western side of the creek. This will help to mitigate flooding concerns as well as connect up to potentially new regional trail systems.

Once again, the highlighted areas show where volunteer groups might be able to assist in mulch trail development, as well as invasive species removal.

The final statement of phase 3, is the elevated pond walk. This stand alone feature will create an element not currently found in the community, and invite users of all abilities to come explore what Carpenter Preserve has to offer.

Estimated Cost: \$500,000 - \$1,100,000

*Cost depends on overall scope of final projects, as well as level of volunteer commitment.

Phase 4 (10+ years)

Phase 1-3 primarily establishes the main connections and systems of the plan. Phase 4 works to realize the entire vision and parts of the vision may be out in the future with unknown timelines. The highlighted areas shown in phase 4 are dependent on land acquisition, either purchase or through a land swap. Without either of those two things happening, no new trails will be constructed in these areas.

One element that can be completed, is the alternative route and boardwalk that gets users out over the wetland. Once the completion of this route is complete, users will have the option to enter the southern unit from two different locations off of Hwy. G. With the completion of phase 4, much of the planned pathway network will be complete.

Estimated Cost: \$250,000 - \$400,000

*Cost depends on overall scope of final projects, as well as level of volunteer commitment.

Funding Options

Potential Funding Sources

There are many different avenues that can be explored to provide funding for the Carpenter Preserve Re-Master Plan. Both private and public funding opportunities should be evaluated. Many of the programmatic elements of the plan qualify for some version of federal and/or state funding. The list below is by no means an exhaustive list, but it does highlight some of the most popular programs for trail development and restoration. The caveat to many public funding alternatives is that many of them do require some sort of matching funds, and that they do typically operate on an annual or biannual process. Timing of both the applications, dispersal and use of the funds should be monitored closely.

Program Name	Administrated By	Applies To	Matching Requirements
Stewardship Program	Wisconsin Department of Natural Resources	The development and land acquisition for public access to outdoor recreational purposes. Funds can be used for land acquisition for parks and trails, including riverfront property. Additionally, funds are to be used for the construction of park facilities and trails.	50% State 50% Local
Recreational Trails Program (RTP)	Federal Highway Administration/Wisconsin Department of Natural Resources	The maintenance and restoration of existing trails, construction of new trails, trailhead facilities and linkages, and acquisition of easements and fee simple title to property for recreational trails and corridors.	Up to 80% reimbursement
Transportation Alternatives Program (TAP)	State of Wisconsin Department of Transportation	The enhancement of surface transportation, including pedestrian and bicycle infrastructure, scenic and historic highway programs, landscaping and scenic beautification, and environmental mitigation.	80% State 20% Local
Active Transportation Infrastructure Investment Program	Federal Highway Administration (FHWA)	Focused on constructing projects to provide safe and connected active transportation facilities and or networks. Recreational trail networks fall within this category.	80% Federal 20% Local
Local/Regional Private Grants	Community Foundation for the Fox Valley Region, Natural Resources Foundation of Wisconsin	Grants can vary based on individual Foundation goals. Many target user access, habitat restoration, clean up, education, etc.	