Frequently Asked Questions

10/17/22—The City has received a variety of questions and comments from residents. In order to ensure everyone is receiving the same information, we are posting an FAQ to address common questions and concerns. For more information about the project, please visit the Sauk Creek Greenway Restoration project webpage.

Contents

Timing

1. Question: When will the City start engagement for the neighborhood to give feedback on the specific design?

   Response: We will begin engagement on the project in late spring 2023 following the end of the Pheasant Branch Watershed Study. The City expects the engagement process to last the majority of 2023 and will be more robust than a standard City construction project.

2. Question: When will construction begin?

   Response: The City expects the public engagement and design process to take the majority of 2023 and therefore construction isn't likely to begin until 2024.

Tree Removals

1. Question: How many trees will be removed with the project?

   Response: The City does not have an estimate of how many trees will need to be removed, as there is not a preliminary design. However, once the project begins, the City plans to utilize environmentally friendly stormwater design that will create a stable stormwater channel and prevent erosion. The Sauk Creek greenway project proposes to address two major environmental issues that are ongoing in the greenway—stabilizing an eroding channel that is sending sediment and nutrients downstream to our lakes, and investing in a high value wooded area so that future generations can continue to enjoy native habitat.

   Erosion: At the time of development of the Sauk Creek area the existing farm ditch was not required to be stabilized to accommodate urban stormwater flows. As development of the upper reaches of this watershed has progressed, flows have increased resulting in active and aggressive erosion in the channel. The ongoing erosion has resulted in many trees adjacent to the channel, falling across the channel and forcing runoff water to move and create new and unstable channels in the greenway. This channel movement causes further erosion in a self-reinforcing cycle. One result of this is that the downstream Wexford pond is filling with sediment from the

channel and now requires dredging. The sediment laden water also impacts water quality in Old Sauk Trails Business Park ponds, Pheasant Branch Creek, and Lake Mendota.

Wooded areas: A certified arborist consultant completed a tree inventory of the entire greenway to help inform the channel project. The results of the inventory highlighted habitat opportunities and documented the ecological degradation that has occurred in these woods due to a lack of invasive management. The youngest oaks in the forest are 80-100 years old. On the current trajectory, the mature oaks will slowly die off without being replaced. The City plans to create a sustainable, long-term restoration plan with help from experts (arborists, landscape architects, greenway vegetation coordinators) and input from the community that will promote new oak growth and maintain this quality resource for future generations.

The arborist's ecological summary states "On the majority of the property, the youngest oak trees are approximately 80-100 years old. There is considerable mortality amongst mature oaks in the woodlot. Some of this mortality may be due to root rot. Little oak regeneration was observed in the woodlot. On the current trajectory, the mature oaks will slowly die off without being replaced. Oak is a light-loving species that requires direct sunlight to regenerate and be healthy. At present, most areas are too overcrowded for general health, let alone regeneration of a new cohort of young trees. Thinning or girdling less desirable species...and creating large openings, at least 200-300 feet across, would reinvigorate existing trees and facilitate reproduction. Restoration plantings would also be of benefit." You can find a hyperlink to the ecological summary on the Sauk Creek Greenway Restoration project webpage.

2. Question: Why can't trees be used to hold soil in the banks instead of native grasses?

Response: If you walk along the channel, you might notice that under trees along the banks there is often bare ground, and there are many locations where the soil has been completely washed away exposing many of the tree roots. This is because the tree roots are larger than the roots of native grasses and sedges and do not hold soil in place as effectively as smaller, deeper and denser root systems of native grasses and sedges.

Within this greenway, the shear stresses from the stormwater moving through the main channel are high enough that in order to stabilize the main channel, the City will install riprap (boulders), similar the east-west Owen Park channel. For areas where the water will regularly leave the channel and flow over the maintenance access path, a buffer strip of native vegetation will help hold the soil in place and keep the access path from washing out. The native vegetation both helps hold the soil in place as well as helps infiltrate stormwater by creating little pathways through the soil for water to soak through faster. Additionally, the native grasses and sedges are beneficial for biodiversity and wildlife, which you can read about under the "Habitat, wildlife etc." section below.

Pheasant Branch Watershed Study

1. Question: What does the Pheasant Branch Watershed Study say about the design of the Sauk Creek Greenway?

   Response: You can view the Draft Final Report on the Pheasant Branch Watershed Study project website. A few notable items that have been confusing to residents are that the greenway system will need to accommodate higher flows once regional flooding issues are fixed—this is a result of the greenway being a part of the main spine of the stormwater system. Once we are able to move stormwater into the system more efficiently, the greenway will have more stormwater moving through it.

   Additionally, any increases in stormwater retention would be pond storage in existing pond areas that are adjacent to the greenway—not within the channel itself. There would not be additional stormwater retention in the greenway. The existing ponds are located just north of St. Lawrence Cir, and just north of Sauk Creek Circle. These two pond areas were historically designed to treat stormwater (remove sediment and nutrients) from the development to the west of the greenway, primarily the Sauk Creek Neighborhood.

2. Question: Can you store more water in the existing ponds to minimize the size of the proposed greenway channel?

   Response: As part of the greenway design process, the City would analyze if modifying the existing ponds could help reduce downstream flows by storing additional water in the ponds. This could potentially decrease the size of the proposed downstream cross section of the channel. If that isn't possible, the City would look to improve the ponds effectiveness at treating the stormwater entering the ponds from the neighborhoods (reducing the sediment and nutrients that flow downstream).

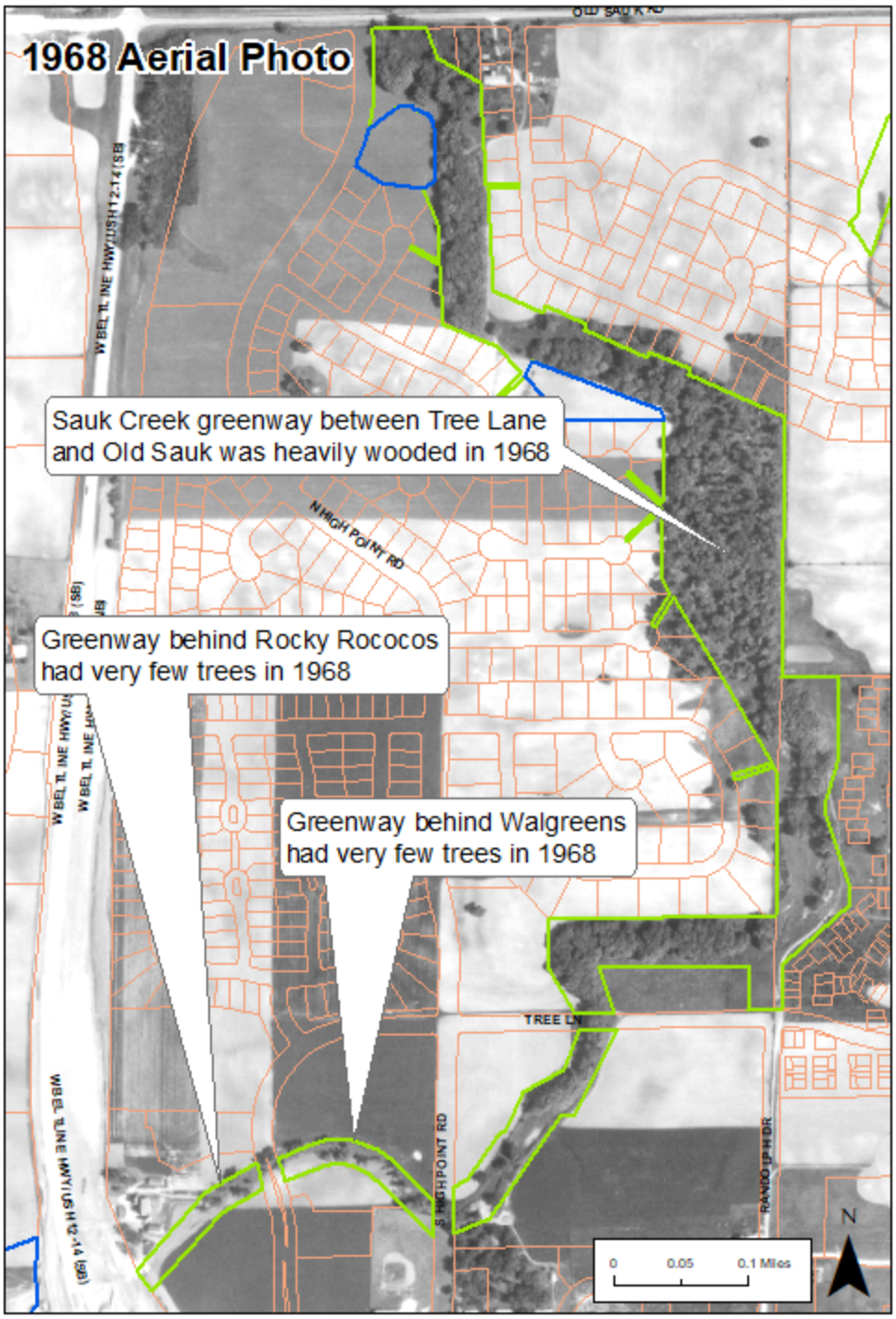
3. Question: Why is the Sauk Creek Greenway proposed to be constructed prior to the pipe upsizing under the beltline, on High Point, and Old Sauk Road?

   Response: The Sauk Creek Greenway is proposed to be constructed in 2024 because the greenway was budgeted to fix the large erosion issues within the greenway prior to completing the flood study. Learn more under the "budgeting" section below.

Other Greenway Projects

1. Question: Will the Sauk Creek greenway will look like the 2 upstream sections of Sauk Creek between Tree Lane and the Beltline (behind Rocky Rococo's), and between Tree Lane and High Point Rd (behind Walgreens).

   Response: The completed greenway projects on Tree Lane were very different from the proposed project between Tree Lane and Old Sauk Road. The previous greenways on Tree Lane had been cleared of most trees when they were surrounded by farms prior to development which you can see on the map below.



By removing all the trees in this drainage areas, it allowed for a near complete canopy of invasive, aggressive tree species to establish that are not conducive to stormwater management and are bad for native habitat. This negatively impacts insects and pollinators all the way up the food chain to small mammals. The proposed greenway area between Tree Lane and Old Sauk Rd was not clear-cut prior to development, so the older trees in the proposed greenway project consist of more native, higher quality species and the City will be working to reduce the footprint of the channel and maintenance access path in order to save as many high quality, native trees as possible.

Additionally the 2 upstream sections of greenways function more like ponds than channels—a deep, wide channel fills up and drains with a very small ditch. The Sauk Creek greenway between Tree Lane and Old Sauk

Road has a more defined channel with an elevated floodplain, especially in the southern section. This is better for oak trees so they don't get wet roots as frequently.

2. Question: Will the greenway be designed like the greenway at Owen Park?

   Response: In many ways the Sauk Creek Greenway could look similar to the east-west channel in Owen Park in that there would be a riprap (large boulder) channel with an adjacent maintenance access path. The channel would be designed to be stable (non-erosive) while conveying the modeled stormwater flows. There would be woods on either side of the channel and access road where the City-owned land is wide enough—which we anticipate will be the majority of the greenway. It is likely there would be a vegetated strip between the rock riprap channel and the maintenance access road. This is because we anticipate the Sauk Creek riprap channel will overtop more frequently than the Owen Park channel which is much steeper, so it can move more water through faster. However, there is not a specific design to share.

   The other channel in Owen Park that runs north-south and joins the riprap channel is a Regenerative Stormwater Conveyance (RSC) channel. The Sauk Creek greenway cannot be designed similarly to this channel because the Sauk Creek greenway is part of the spine of the City's stormwater system, so too much water is moving through it to utilize RSC. Per the Regenerative Stormwater Conveyance System design practices, the longitudinal slope needs to be greater than it is in Sauk Creek, and the drainage area shouldn't be greater than 50 acres. The drainage area to the Sauk Creek greenway is more than 1,200 acres. While the design details are not known for Sauk Creek, the design would consider what natural features could be sustainably included into the system.

Habitat, Wildlife etc

1. Question: How will the project impact the existing habitat and wildlife in the greenway?

   Response: Current sub-canopy conditions on this greenway have greatly minimized plant diversity. Where a healthy oak woodland has a diverse and well-vegetated groundlayer, the Sauk Creek Greenway is so densely shaded by invasive sub-canopy shrubs such as buckthorn, honeysuckle, and quick-growing tree species such as box elder, black locust and ash, that much of the groundlayer is bare, exposed soil. Without a healthy groundlayer, erosion is accelerated. Southern Wisconsin oak woodlands classically have a thinner canopy that allows more light to reach the groundlayer. Removing the invasive sub-canopy and thinning aggressive species, will allow more light to penetrate to the groundlayer. With the assistance of follow-up restoration efforts, a diverse groundlayer of native herbaceous species could be established, and young oak trees could be planted to help spur regeneration.

   City Engineering understands the benefits of using native plants on stormwater land and has been incorporating native plants in stormwater design for decades. Many native plants have deep and extensive root systems that make them resilient in Wisconsin's variable climate. Deep roots not only prevent erosion, but also create many small channels within the soil structure that measurably assist in infiltration. A joint City of Madison, U.S. Geological Survey study of rain gardens of two soil types vegetated with either turf, or native prairie species, confirmed that native plants infiltrate more water, faster. Though the study was focused on prairie species, herbaceous species native to oak woodlands range from prairie-like savanna species, to long-lived spring ephemerals, are also deep-rooted.

   Ponds and greenways provide habitat to urban-adapted wildlife such as turkeys, deer, coyotes, foxes and many other mammals, birds and insects. While reconstructions of wooded greenways may displace these animals, such impacts are usually mitigated by several factors.

First, ponds and greenways complement shorelines, parks, golf courses, other stormwater land and private land as a system of wildlife habitat corridors able to serve as refuges for displaced urban wildlife. Degraded woodlands similar to a typical wooded greenway are a common habitat type within this corridor system.

Second, species that thrive in these densely wooded novel ecosystems tend to be those that are more generalist in their habitat needs. These generalist species are well-suited to finding alternative resources when faced with a disturbance such as reconstruction. For example, The Urban Canid Project has tracked foxes denning under porches as readily as in greenways and parks. Finally, reconstruction and subsequent restoration can provide habitat for a wider variety and a greater density of wildlife species, some of whom even have specialized habitat requirements.

The Sauk Creek Greenway restoration project will also preserve many mature trees, so mobile wildlife such as mammals and birds will be able to return to the greenway soon after construction ends.

Similar reconstruction and restoration efforts are underway on other greenways across the City. Some greenways host a similar suite of wildlife and care has been taken to mitigate effects on wildlife. For example, on the Mendota-Grassman Greenway, the City has consulted with Dr. Drake's Urban Canid Project out of UW-Madison. Efforts are being made to track potential fox or coyote populations within the greenway and care will be taken if denning populations are found on site during construction periods.

Ecological restoration efforts following construction will add native shrubs, trees and herbaceous plants back to the greenway system. With the restoration of plant species that may not have thrived here in decades, we can expect to see new wildlife species using the greenway. This group should notably contain pollinators, usually habitat specialists, as densely wooded greenways do not typically provide suitable habitat for such species. Pollinators play a key role in ecosystem function and human health but face the threat of habitat loss, introduced diseases and increased pesticide use. Such is their significance and fragility that the City of Madison, following the lead of the Federal government, created a Pollinator Protection Task Force in 2015. The Task Force outlined strategies to help Madison become a more pollinator-friendly city. In 2019, the City became a Bee City USA . In 2022, the City joined the Mayors' Monarch Pledge – a program launched by the National Wildlife Federation as part of a tri-national partnership to prioritize monarch conservation.

Ponds and greenways rich in native species are an increasingly important refuge for pollinators and can support surprising diversity. For example, urban areas may have higher rates of pollination than rural areas in the same region due to a greater density of flower-rich areas in cities (Halle-Jena-Leipzig, 2020). Increasing the biodiversity of the Sauk Creek greenway as a whole will support not only pollinator health, but the wildlife, plants and people that depend on the pollinators.

City Engineering has been increasingly using the principles of ecological restoration to guide the creation and maintenance of stormwater land and in the last five years, created two permanent positions and two seasonal internships devoted entirely to ecological restoration. The work of these staff members focuses primarily on how to maximize biodiversity and ecosystem services on stormwater land. See the Ecological Restoration in Stormwater Ponds and Greenways Story Map for more information.

Budgeting

1. Question: Why is the City asking for more money for the greenway right now?

   Response: The City completes very high level estimates on projects in order to get out-year funding planned. As the project progresses, the estimates and timeframes are modified accordingly. Projects are always budgeted

prior to the start of engineering design work. $1.7M have already been budgeted in previous years. The 2022 budget request includes an additional $1.5M in the next 4 years as a place holder if the project moves forward.

2. Question: How can the City base a budget estimate off a design if there isn't a design to share with the public?

   Response: This budget was based on the design of previous greenway projects—which is how budgeting is typically done. There isn't a detailed design of this project available. As the design gets more refined the budgets will too. The "out year" budgets are placeholders and guides for what is anticipated. The previously budgeted amounts will be used to support staff time, permitting and work such as topographical and boundary surveys as well as tree assessments.

Bike Paths

1. Question: Why is a bike path proposed with this project?

   Response: The MPO and Madison in Motion Plan include a north-south path through the greenway as part of citywide master planning to enhance the multi-use path network within the City.