



Pheasant Branch Conservancy 2019 Addition (former Acker Farm) Property Plan

April 2020, Updated May 2020

This property plan provides a vision and action plan for the future recreation use and restoration opportunities of a 160-acre Dane County property that was acquired in 2019 as an addition to Pheasant Branch Conservancy. This plan is intended to promote communication and collaboration among Dane County Parks staff, the Friends of Pheasant Branch Conservancy, conservation partners and the public by providing information on the current planning, development, and restoration activities associated with the property.

Property Overview

In June of 2019, Dane County purchased 160 acres of land from the Acker family who operated a dairy farm at the site. Costing nearly \$10 million, it was the largest conservation investment for a land acquisition in the county's history. The property was acquired as an addition to Pheasant Branch Conservancy and for the purpose of improving the water quality of Pheasant Branch Creek and ultimately Lake Mendota. Additional benefits of acquiring the property include: 1) expanded bird and other wildlife habitat; 2) enhanced groundwater recharge through establishment of a permanent prairie vegetative cover; 3) additional greenspace corridor between the urbanizing areas of the City of Middleton and the Village of Waunakee; 4) reducing large storm event downstream discharge through prairie restoration and stormwater management features; and 5) enhanced outdoor access and opportunities for public use including educational opportunities. The parcel is within the Pheasant Branch and Yahara River Watersheds and contains the headwaters of an intermittent stream that flows into Pheasant Branch Creek. The site is also located within the recharge area of Frederick Springs, found south of the parcel, making it important for groundwater protection.

Property Concept Plan

A concept plan was developed in 2019 to graphically convey a common vision for the property. The key aspects of the plan include:

- Demolition of all structures and use the concrete from the building foundations and farm for a future access site (parking lot).
- A 4-year phased approach for converting the crop fields to restored prairie, starting with the SE field in 2021, SW field in 2022, NW field in 2023, and ending with the NE field in 2024.
- A major wetland restoration and stormwater management project for flood control and improving the water quality of Pheasant Branch Creek and Lake Mendota.
- Perimeter hiking trails that would also serve as firebreaks and connect to the existing trail system at Pheasant Branch Conservancy.
- A proposed trail alignment for a future regional bicycle trail connection to Governor Nelson State Park.

Prairie Restoration

The prairie restoration will be implemented over a 4-year period following a phased approach as depicted on the property concept plan. It will be done in coordination with a cooperative farmer who will assist with site preparation by planting the fields in soybeans the year prior to the fields being planted to prairie. Clean Lakes Alliance has pledged \$100,000 to help cover the cost of the prairie seed, which will be purchased to supplement the seed that is collected by

Dane County Parks. Dane County Parks will coordinate with the Friends of Pheasant Branch Conservancy and other partners on volunteer activities and events to assist with prairie seeding, invasive species removal and other land management activities.

Restoring the fields to prairie will have multiple benefits, including the following:

- Improved soil infiltration rates that will significantly reduce storm runoff and improve the water quality of Pheasant Branch Creek.
- Establishment of a high quality native grassland habitat for birds, pollinators, insects and other wildlife. The plan is to use a seed mix that contains over 100 species that is heavy on pollinator plants.
- Creation of a seed collection site for obtaining more rare or less available prairie species to diversify the county's seed mix that is used throughout its park system.
- Serve as a method for combating climate change. After the prairies are restored they will sequester up to 1 metric ton of carbon per year.

Wetland Restoration and Stormwater Management Plan

The wetland restoration and stormwater management plan will be implemented in two stages. It's anticipated that the restoration practices will be installed in the summer/fall of 2020 after the concrete is removed from the farmstead. However, the restored wetlands won't be fully functional until the entire prairie restoration is complete in 2024. The primary objectives of the wetland restoration and stormwater management plan include:

1. *Trap nutrients and sediments entering the site from surrounding lands.*

A sediment basin will be constructed at the north end of the property to capture the runoff coming through the culvert under Balzer Road, where a large agricultural watershed drains into the restoration site. Sediment in the runoff will settle in the basin before it is further discharged into the restored wetlands on the property.

2. *Create wetlands to increase flood capacity and reduce sediment & phosphorus loading to Pheasant Branch Creek.*

Wetland pools will be created by constructing an upper and lower berm that will retain water on the site for longer periods of time. This will reduce peak runoff flow rates by about 85%, greatly reducing flood risk downstream. The wetland pools are designed to have a storm drawdown time of approximately 1 to 2 days for most storm events. The conversion of cropland to prairie will allow for more water to infiltrate into the soils and significantly reduce the volume of stormwater runoff (and associated pollutants) entering Pheasant Branch Creek. Additionally, the wetland pools will trap over 80% of sediment and over 20% of phosphorus entering those features, further reducing the sediment and nutrient loading to Lake Mendota.

The berms will have water control structures with stop logs that can be adjusted for manipulating the water levels or drawing down the pools for management purposes (i.e. mowing vegetation, invasive species removal, prescribed burning, etc.). The water control structures will be open or only partially closed until the site is fully restored to prairie.

3. *Create wetland habitat for birds, waterfowl and other wildlife.*

The varying depths of these wetlands will provide excellent habitat for migrating waterfowl, wading birds and shorebirds. These permanent wetlands will also provide nesting birds critical brood waters to rear their young. Species like reptiles and amphibians will find a home here as well. These wetlands suit both summertime loafing area's as well as a winter hibernaculum.

Action Plan and Schedule

Task	Priority	Task Description	Status
Vacate farm	I	The Acker family had until December 31 st , 2019 to vacate the property. They removed the cattle, abandoned the manure storage facility, and cleaned up the farmstead per purchase agreement.	Complete
Asbestos testing/abatement	I	Completed asbestos sampling, testing and necessary abatement for buildings.	Complete <i>Asbestos abated in house flooring.</i>
Use buildings for burn training	I	Partnered with the City of Middleton Fire Department to use the buildings for burn trainings as a time and cost saving measure for demolishing the buildings.	Complete <i>Trainings held on 12/14/2019 and 1/27/2020.</i>
Demolish remaining structures	I	Demolished and cleaned up remaining farm buildings and materials not burned by fire department.	Complete
Develop wetland restoration and stormwater management plan	I	Produced design and engineering plans for constructing the restoration project to bid out as part of concrete removal.	Complete
Hire contractor for concrete removal/crushing and wetland restoration project	I	Coordinate with Public Works Department to hire and oversee contractor for concrete removal and wetland restoration project.	Pending <i>June/July 2020 anticipated project start date.</i>
Convert crop fields to restored prairie	I	Restore all crop fields to native prairie and wetland species following a 4-year phased approach. Coordinate with farmer to plant fields in soy beans the year before seeding to prairie.	Pending <i>2024 anticipated completion date.</i>
Establish Hiking Trails	II	Mowed grass trails for hiking to connect with existing trail system at Pheasant Branch Conservancy.	Pending
Develop access and maintenance site	II	Develop parking area for the public and potentially a maintenance area with a temporary shed to support the Friends of Pheasant Branch Conservancy's volunteer efforts.	Pending
Develop regional bicycle trail	III	Develop a regional bicycle trail connection to Governor Nelson State Park.	Future