



# HOOVER MEADOWS NATURE PRESERVE MANAGEMENT PLAN

2023



# **HOOVER MEADOWS NATURE PRESERVE**

# **EXECUTIVE SUMMARY**

### **Columbus Nature Preserves**

The Columbus Recreation and Parks Department has 20 designated nature preserves that encompass over 2,850 acres across Franklin and Delaware County. Nature preserves provide for the conservation, protection, and enhancement of ecologically significant land through research, awareness, and education. The first city nature preserves were adopted in 1988 with additional preserves added in 2004, 2010, and 2016. In 2022, the designation process of nature preserves was added into Columbus City Code.

### **Hoover Meadows Nature Preserve**



### 3715 Sunbury Road. Westerville, OH 43082

Hoover Meadows Nature Preserve features 75 acres of diverse habitat types including woodland, wetland, vernal pool, grassland, and stream. The wetlands provide good habitat for migrating birds such as soras and bitterns. A large vernal pool nestled in the woods provides vital breeding ground for amphibians.





### **Features and Amenities**

### **Features**

- Large population of bluebirds and tree swallows
- Extensive wetlands and vernal pools
- Breeding populations of spotted salamanders
- Numerous frog species, including the northern leopard frog and western chorus frog

### **Amenities**

- Natural Trails
- Parking

### **Listed Species**

- Indiana bat\* (Myotis sodalist)
- Northern long-eared bat\* (Myotis septentrionalis)
- Monarch butterfly<sup>^</sup>
   (Danaus plexippus)

\*Endangered \*\*Threatened \*\*\*Species of Concern ^Candidate Species

### Habitat



### Recommendations

To maintain, conserve, and restore Hoover Meadows Nature Preserve:



Keep the Nature Preserve in its original state and limit activities to pedestrian trail use only. Hoover Meadows is a popular birding spot and provides habitat for a number of salamander and frog breeding populations.



Remove invasive callery pear, and other invasive plants. Invasive species are present, including callery pear, narrow-leaf cattail, reed canary grass, common reed, and multi-flora rose. Removal of callery pear should be the first priority, due to its aggressive nature and extensive coverage within the grassland/herbaceous area. Remove other invasive species as resources allow.



Install additional signage. Provide signage about the Nature Preserve and its boundaries, educational signage on park features, and to prohibit feeding wildlife.

### **EXECUTIVE SUMMARY**

- Address 3715 Sunbury Road Westerville, OH 43082
- Community n/a

### Columbus Nature Preserves

The Columbus Recreation and Parks Department (CRPD) has 20 designated nature preserves that encompass over 2,850 acres across Franklin and Delaware County. Nature preserves provide for the conservation, protection, and enhancement of ecologically significant land through research, awareness, and education. The first city nature preserves were adopted in 1988 with additional preserves added in 2004, 2010, and 2016. In 2022, the designation process of nature preserves was added into Columbus City Code.

### HOOVER MEADOWS NATURE PRESERVE

Hoover Meadows Nature Preserve ("Hoover Meadows") features 75-acres of diverse habitat types including woodland, wetland, vernal pool, grassland, and stream. The wetlands provide good habitat for migrating birds such as soras and bitterns. A large vernal pool nestled in the woods provides vital breeding ground for amphibians.

### **FEATURES**

- Large population of bluebirds and tree swallows
- Extensive wetlands and vernal pools
- Breeding populations of spotted salamanders
- Numerous frog species, including the northern leopard frog and western chorus frog

### AMENITIES

- Parking
- Natural Trails

### LISTED SPECIES

- Indiana bat (*Myotis sodalist*) (Endangered)
- northern long-eared bat (*Myotis septentrionalis*) (Endangered)
- monarch butterfly (*Danaus plexippus*) (candidate considered Federally Threatened or Endangered)

### HABITAT GRAPH

- Upland Forest 47.8-acres
- Forested Wetland 4.3-acres
- Emergent Wetland 7.7-acres
- Grassland/Herbaceous 13.1-acres
- Maintained Lawn 2.5-acres
- Impervious 0.3-acre



### RECOMMENDATIONS

To maintain, conserve and restore Hoover Meadows Nature Preserve:

- Keep the Nature Preserve in its original state and limit activities to pedestrian trail use only. Hoover Meadows is a popular birding spot and provides habitat for a number of salamander and frog breeding populations.
- Remove invasive callery pear, and other invasive plants. Invasive species are present, including callery pear, narrow-leaf cattail, reed canary grass, common reed, and multiflora rose. Removal of callery pear should be the first priority, due to its aggressive nature and extensive coverage within the grassland/herbaceous area. Remove other invasive species as resources allow.
- **Install additional signage.** Provide signage about the Nature Preserve and its boundaries, educational signage on park features, and to prohibit feeding wildlife.



### **ACKNOWLEDGMENTS**

This Nature Preserve Management Plan is the culmination of efforts of the Columbus community, individuals, and groups who devoted their time and energy to the future of the City of Columbus nature preserves. We sincerely appreciate everyone who made this plan possible through their enthusiasm, commitment, creative input, and support. A special thank you to the following organizations for their leadership throughout the planning process:

Columbus Recreation & Parks Department

Columbus City Council

Columbus Mayor's Office

Columbus Department of Public Utilities, Division of Water

Columbus Recreation and Parks Commission

Nature Preserve Advisory Council

Prepared By:

Stone Environmental Engineering & Science, a division of CAP-STONE & Associates, Inc.



### **TABLE OF CONTENTS**

### HOOVER MEADOWS EXECUTIVE SUMMARY

1 IN	TRODUCTION	1
1.1 1.2	COLUMBUS NATURE PRESERVES OVERVIEW	
2 SI	TE HISTORY AND DESCRIPTION	2
	PRESERVE HISTORY LOCATION DESCRIPTION	
3 AN	MENITIES AND NATURAL RESOURCES	4
3.2 3.3 3.4	AMENITIES LANDSCAPE CONTEXT VEGETATION AND HABITAT LISTED/PROTECTED PLANT AND WILDLIFE SPECIES WILDLIFE	7 12
4 RE	ECOMMENDATIONS	13
	PROTECTION	14
	<b>OF MAPS</b> r Meadows Nature Preserve	3
	r Meadows Stream & Wetlands	
Hoover	r Meadows Habitat Types & Invasive Species	11

## **ATTACHMENTS**

Hoover Meadows Known Species List (2022)



### 1 INTRODUCTION

### 1.1 Columbus Nature Preserves Overview

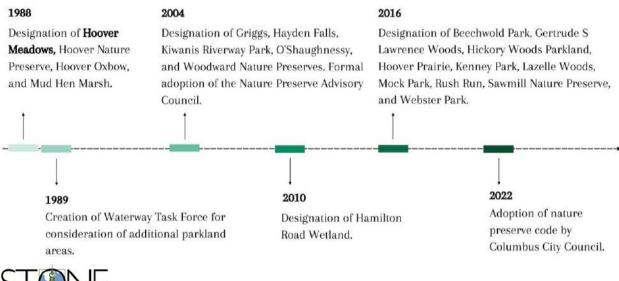
The Columbus Recreation and Parks Department (CRPD) works to preserve the local natural heritage for the Columbus community to enjoy. CRPD recognizes environmentally unique and sensitive areas as designated nature preserves. The Columbus Nature Preserve system is one of a few city nature preserve programs in the state of Ohio.

All Columbus nature preserves are managed by CRPD and advised by the Nature Preserve Advisory Council (NPAC). The NPAC, previously known as the Hoover Nature Preserve Advisory Council, was formally created by City Resolution with the designation of Hoover Nature Preserve, in 1988. In 2004, it was formally renamed by Resolution. The council is composed of nine (9) members. Within the Columbus Nature Preserves, the purposes and objectives of the NPAC are to:

- 1. Advise and make recommendations to the Executive Director of CRPD concerning the management and wise use of the natural resources.
- 2. Advocate for the conservation, protection, enhancement, and wise use of the natural resources.
- 3. Foster the development and application of science-based resource policies and practices and to promote through education and example, and ethic that recognizes the interdependence of people and the environment.

The first city nature preserve was adopted in 1988, for the purpose of protecting and maintaining the drinking water supply at Hoover Reservoir. Additional preserves were designated in 2004, 2010, and 2016. The timeline below lists the year each nature preserve was designated. Note that these properties were acquired years prior to their designation. To date, the system includes over 2,850 protected acres across 20 nature preserves. Of the 20 nature preserves, ten are adjacent to Griggs, Hoover, or O'Shaughnessy Reservoirs and therefore, jointly managed by Columbus Department of Public Utilities (DPU) Division of Water.

### **Columbus Nature Preserve Timeline**



Portions of Nature Preserves located adjacent to Hoover, Griggs, and O'Shaughnessy Reservoir qualify for inclusion in the city's Land Stewardship Program. Any landowner participating in the Land Stewardship Program must comply with the standards regarding nature preserves in the Land Stewardship Design Standards (2020). The city's Land Stewardship Program allows for authorized activities and limited access for adjacent landowners. The program provides a balanced approach to protect the long-term health of the reservoirs while maintaining public recreational access. DPU remains committed to maintaining the reservoirs for the primary function of providing a quality drinking water supply, while also providing the community with compatible recreational access.

### 1.2 Management Plan Purpose

This management plan details the site history, amenities, landscape context, habitat types, plant and wildlife species, and recommendations. This plan fulfills Columbus City Code 919.27's requirement for a management plan to provide the framework for management, restoration, and protection of the nature preserve. The intent is to ensure the long-term viability of the nature preserve's natural resources while allowing visitors to experience nature.

### 2 SITE HISTORY AND DESCRIPTION

### 2.1 Preserve History

Hoover Meadows Nature Preserve ("Hoover Meadows") is approximately 75.8-acres in size, consisting of a portion of the 2,072-acre Delaware County Parcel ID #31713004001000. Hoover Meadows was designated a Preserve in 1988. Hoover Meadows has been a popular birding destination since its establishment. Several birding boxes were installed throughout the area in 1991. The wetlands located within the western portion of Hoover Meadows were constructed by the Ohio Department of Transportation in 2000 as part of a mitigation project.

### 2.2 Location Description

Hoover Meadows' address is 3715 Sunbury Road, Westerville, Ohio 43082. Hoover Meadows is located in Westerville, north of Harlem Road, east of Sunbury Road and Hoover Reservoir, south of Sage Creek Drive, and west of Miller Paul Road.

Surrounding land use includes residential housing, agriculture, forested area, and Hoover Reservoir. See "Hoover Meadows Nature Preserve" location map.



Large wetland area which provides habitat for numerous wildlife species within Hoover Meadows Nature Preserve.





# **Hoover Meadows Nature Preserve**



Preserve Boundary



Nearby CRPD Properties

3715 SUNBURY RD, WESTERVILLE OH 43082



### 3 AMENITIES AND NATURAL RESOURCES

### 3.1 Amenities

Several maintained lawn trails exist throughout Hoover Meadows, with boardwalks over low water areas. A parking lot on the west side has clear signage identifying the area as a nature preserve. Hoover Meadows is a wetland mitigation area and the western portion of the nature preserve contains human-created wetlands.

### 3.2 Landscape Context

Hoover Meadows contains slightly rolling hills, depressions, and small stream valleys. The Federal Emergency



Signage for the prairie habitat restoration within Hoover Meadows Nature Preserve.

Management Agency (FEMA) Regulatory Floodway, 100-year floodplain, and 500-year floodplain exist within Hoover Meadows. These floodplain areas provide habitat for fish and wildlife, recharge groundwater, and improve surface water quality.

The following soils are mapped within Hoover Meadows:

- Amanda silt loam has well drained soils formed in loamy till with steep to very steep slopes.
- Benington silt loam described as somewhat poorly drained soils formed in loamy till of medium lime content in relatively flat areas.
- **Centerburg silt loam** has minimal slopes and is associated with ground and end moraines.
- **Condit silt loam** described as very poorly drained soils in relatively flat areas formed in loamy till deposited by glaciers.
- Latham-Brecksville complex has very steep slopes consisting of well drained soils formed of thin-bedded shale with minor amounts of siltstone.
- **Pewamo silty clay loam** is very poorly drained soil typically found in flat areas, which is ideal for wetland formation.

Pewamo silty clay loam is the only soil unit listed as hydric, an indicator of wetlands.

### 3.2.1 Streams

Hoover Meadows is located in the Hoover Reservoir-Big Walnut Creek Watershed (Ohio Environmental Protection Agency (EPA) Hydrologic Unit (HUC) #050600011308). This watershed includes Hoover Reservoir, a major water source for Columbus that was created by the Hoover Dam on Big Walnut Creek.



Hoover Meadows contains approximately 1,155 linear feet of perennial stream that are unnamed tributaries to Hoover Reservoir. These streams are classified as Ohio EPA Headwater Habitat Evaluation Index Class 3, meaning they are the highest quality headwater streams based on physical habitat. The streams contain good physical habitat and are able to flow freely and flood the surrounding landscape as needed. Hoover Meadows also contains 1,889 linear feet of ephemeral stream. See "Hoover Meadows Streams & Wetlands" map.



Perennial stream within the western portion of Hoover Meadows.



Perennial stream within the eastern portion of the Hoover Meadows.

### 3.2.2 Wetlands

Hoover Meadows includes approximately 4.3-acres of forested wetland and approximately 7.7-acres of emergent wetlands. Dominant species include box elder (*Acer negundo*), black willow (*Salix nigra*), cottonwood (*Populus deltoides*), pin oak (*Quercus palustris*), buttonbush (*Cephalanthus occidentalis*), white grass (*Leersia virginica*), softstem bulrush (*Juncus effusus*), and boneset (*Eupatorium perfoliatum*).

Using the Ohio EPA Ohio Rapid Assessment Method, these wetlands are considered higher quality having good habitat. These wetlands are desired to be protected, with a preliminary Ohio EPA wetland category of 2.

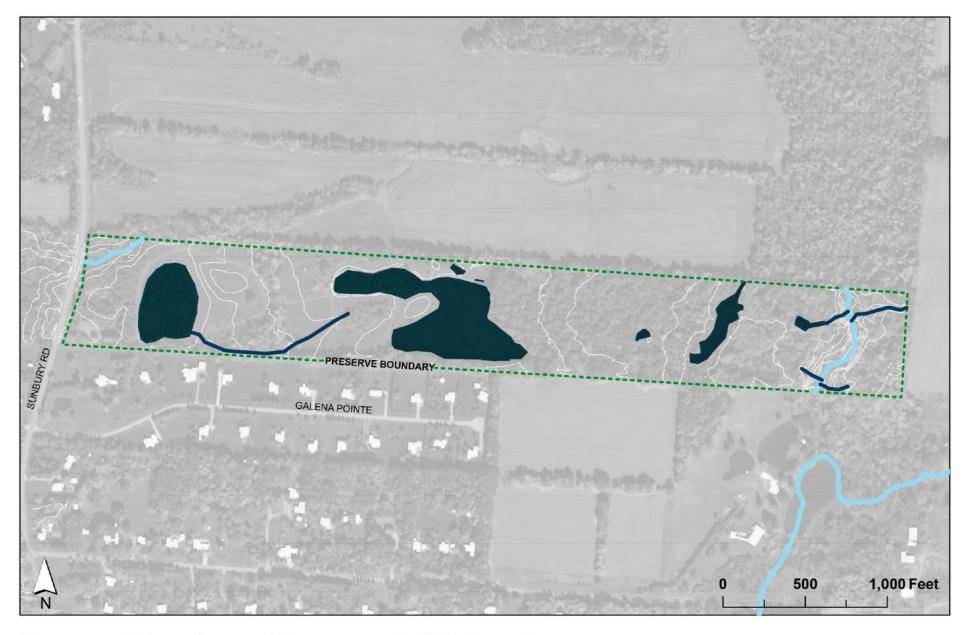
These wetlands receive water from adjacent streams, flood events, and drainage from the surrounding landscape. In the spring, these wetlands contain depressions which serve as vernal pools for breeding



Forested wetland area that contains vernal pools.

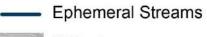
amphibians. In addition, the wetlands filter the intermittent stream and other drainage prior to entering Hoover Reservoir. See "Hoover Meadows Streams & Wetlands" map.

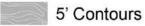




# **Hoover Meadows Streams & Wetlands**



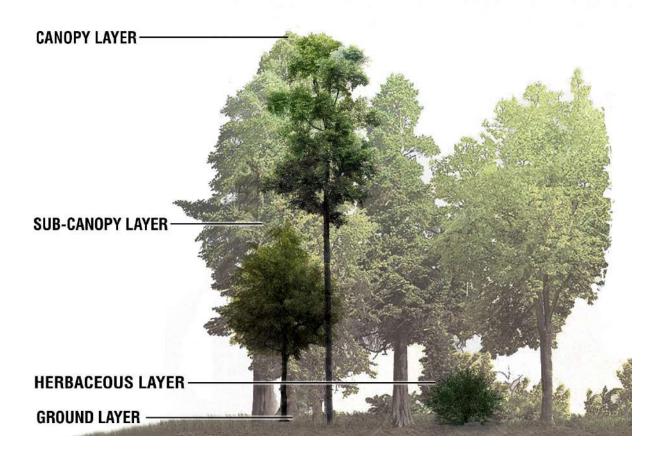






### 3.3 Vegetation and Habitat

Commonly observed native tree species include sugar maple (*Acer saccharum*) and American beech (*Fagus grandifolia*) trees. In addition, a dominant stand of eastern white pine (*Pinus strobus*) exists within the western upland forest.



Very little native sub-canopy exists within Hoover Meadows.

Commonly observed species in the herbaceous and ground layer at the time of field review was Virginia creeper (*Parthenocissus quinquefolia*) and poison ivy (*Toxicodendron radicans*).

See "Hoover Meadows Habitat Types & Invasive Species" map that illustrates the general vegetation coverage within Hoover Meadows. The following habitat types were identified:

- 1. Upland Forest
- 2. Forested Wetland
- 3. Emergent Wetland
- 4. Grassland/Herbaceous
- 5. Maintained Lawn
- 6. Impervious

The "Hoover Meadows Known Species List (2022)" is included as an attachment.



### 3.3.1 Upland Forest

Hoover Meadows consists of a contiguous 47.8-acres of upland forest, which includes portions of mature forest. This forest serves as an important riparian area, a forested area surrounding streams, for the headwater stream and is habitat for a number of plant and animal species, including potential habitat for protected bat species. Bats utilize forests during the summer to roost and often prefer to forage along riparian stream corridors that Hoover Meadows provides.



**Upland Forest** 



Large mature tree with several cavities, providing suitable habitat for roosting bats.

### 3.3.2 Wetland

Hoover Meadows includes several forested wetlands totaling approximately 4.3-acres in size and emergent wetlands totaling approximately 7.7-acres (see section 3.2.2 for details). Wetlands filter water and improve downstream water quality. They reduce flooding and store carbon. Wetlands also serve as wildlife habitat.



Forested Wetland



Emergent Wetland with open water areas





**Emergent Wetland** 

### 3.3.3 Grassland/Herbaceous

Hoover Meadows includes approximately 13.1-acres of grassland/herbaceous vegetation, consisting of goldenrod (*Solidago* spp.), swamp agrimony (*Agrimonia parviflora*), deer tongue grass (*Dichanthelium clandestinum*), blackberry (*Rubus fruticosis*), and dogbane (*Apocynum cannabinum*).



Grassland/Herbaceous



Typical grassland/herbaceous habitat.

### 3.3.4 Maintained Lawn

Approximately 2.5-acres of Hoover Meadows is moved walking trails.





Maintained Lawn

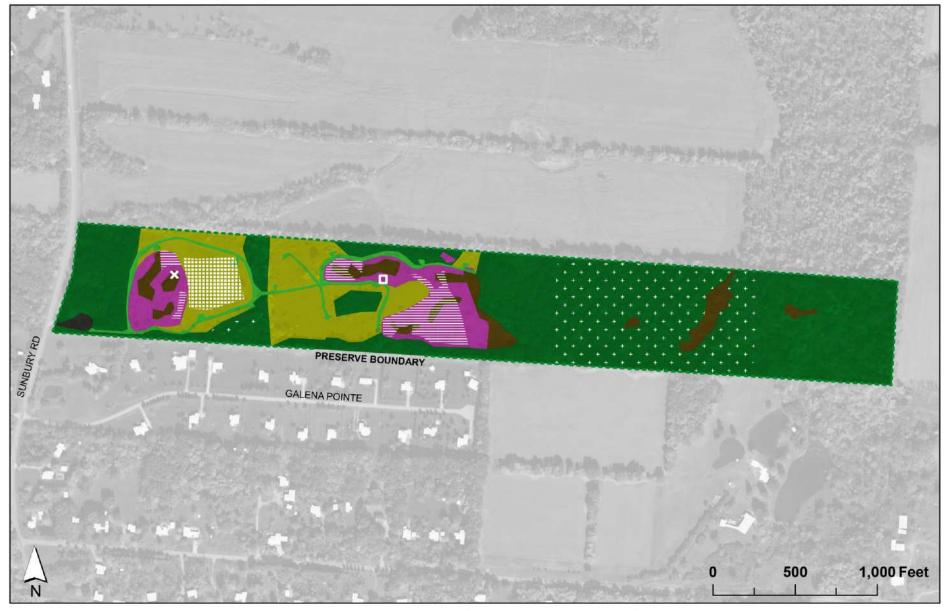
### 3.3.5 Impervious

Approximately 0.3-acre of impervious area—namely a gravel parking lot, is present within Hoover Meadows.

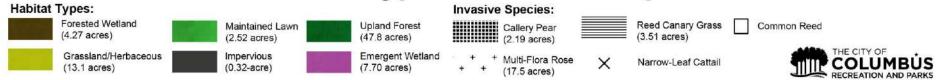
### 3.3.6 Invasive Vegetation

Dominant invasive species vary by habitat type. Callery pear (*Pyrus calleryana*) grows within the grassland/herbaceous habitat. Narrow-leaf cattail (*Typa angustifolia*), reed canary grass (*Phalaris arundinacea*), and common reed (*Phragmites australis*) are dominant in the wetland areas. Multi-flora rose (*Rosa multiflora*) is present within the eastern upland forest. The first priority in invasive plant removal is to remove callery pear to limit the spread of this species into other areas, including the upland forest. Callery pear trees grow fast and are early bloomers, crowding out native species, and shading out native spring wildflowers. See "Hoover Meadows Habitat Types & Invasive Species" map.





# **Hoover Meadows Habitat Types & Invasives Species**



### 3.4 Listed/Protected Plant and Wildlife Species

Plant and wildlife species data below were requested from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) data and the Ohio Department of Natural Resources (ODNR) Natural Heritage Data (NHD). Hoover Meadows is within the potential habitat ranges of the following endangered, threatened, or species of concern plants and/or wildlife. Therefore, these species may be found within the Nature Preserve.

### **Plants**

No USFWS federally listed plant species or ODNR state listed plant species ranges or records are known to exist within Hoover Meadows.

The following records or ranges for wildlife were identified within Hoover Meadows:

### **Mammals**

The Federally endangered Indiana bat (*Myotis sodalist*) and northern long-eared bat (*Myotis septentrionalis*) are found in Ohio. These bats face extinction due to the range-wide impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent.

These species hibernate, therefore are not typically found in trees in the winter. However, when not in hibernation, they use the trees within forests for foraging, roosting, and raising their young in the summer, and often return to the same forests. The mature forest in Hoover Meadows provides suitable habitat for the bats.

### **Insects**

The monarch butterfly (*Danaus plexippus*) is a candidate for being considered Federally Threatened or Endangered (due to the significant decline in their numbers). Monarchs seek milkweed plants for food and laying eggs as part of their annual migration from as far north as Canada down to central Mexico. The diversity of wildflowers present in Hoover Meadows provide suitable food sources for monarch butterflies.

### 3.5 Wildlife

With its wide range of habitat types, Hoover Meadows supports healthy and diverse populations of mammals, birds, reptiles, and amphibians. A species list of wildlife documented in Hoover Meadows is attached.

Vernal pool surveys were conducted in 2017 by the Ohio Environmental Council. In addition to several aquatic macroinvertebrates, these surveys revealed breeding populations of:

- American toad (*Anaxyrus americanus*)
- bullfrog (*Lithobates catesbeianus*)
- gray treefrog (*Dryophytes versicolor*)
- green frog (Lithobates clamitans)
- northern leopard frog (*Lithobates pipiens*)
- spring peeper (*Pseudacris crucifer*)
- spotted salamander (*Ambystoma maculatum*)



- western chorus frog (*Pseudacris triseriata*)
- wood frog (*Lithobates sylvaticus*)

Hoover Meadows has a history of bird diversity and provides critical habitat for birds, as it is adjacent to Hoover Reservoir. The preserve is considered a bluebird sanctuary, and bluebird boxes have been installed throughout Hoover Meadows. Populations of bluebirds and tree swallow populations have been documented within Hoover Meadows since 1991.

### 4 RECOMMENDATIONS

In 2022, Columbus City Code was amended by enacting Section 919.27 - Nature Preserve Code, to designate portions of parks as nature preserves for the benefit of present and future residents of the City of Columbus. The purpose of the Nature Preserve Code is to identify, protect, and manage Nature Preserves. The management of Nature Preserves includes ensuring it is maintained in its existing, near-natural, or restored state. In order to continue to benefit the residents of Columbus and follow Nature Preserve Code, the following actions are recommended.

### 4.1 Protection

### 4.1.1 Maintain Pristine, Native Habitat

Hoover Meadows Nature Preserve contains a mature forest containing high quality, free-flowing streams, forested and emergent wetlands, high quality vernal pools, and important habitat for birds. Continued protection of the natural resources within Hoover Meadows is vital, to ensure these resources remain for future generations. Visitor impacts should be limited to pedestrian trail use only. No additional amenities are recommended.

It is important to understand the natural resources within Hoover Meadows and the rarity of these resources, in order to prioritize management activities. One consideration would be to update the listing of observed species of flora and fauna within Hoover Meadows once every five years. This update should include a thorough survey of species through multiple seasonal field visits. Documenting the specific location of sensitive species and habitat in GIS could be used to protect the most rare or sensitive resources.

### 4.1.2 Plant Management

All native plants are to be left alone in their original state. If trees naturally fall, they are to remain where they land to provide habitat for wildlife. If trees are designated as a severe risk, trees should be cut to the remainder of a 20-to-30-foot stump of standing dead habitat.

The grassland/herbaceous areas are currently on a mowing schedule to maintain habitat and species diversity. It is recommended this schedule continue.

### 4.1.3 Invasive Species Removal

Invasive plant species, including callery pear, multi-flora rose, narrow-leaf cattail, reed canary grass, and common reed are present in Hoover Meadows. Although eradication of invasive species is desirable to preserve the native biological diversity, extensive time and effort, as well



as costs, are involved. If addressing the invasive species at Hoover Meadows is pursued, removal of callery pear should be the first priority. This is due to the aggressive nature of callery pear and extensive coverage within the grassland/herbaceous area.

Removal efforts may be accomplished by the continued organization of volunteer events. The application of pesticide should follow the standards described in the CRPD Integrated Pest Management Policy Statement. In some cases, planting of native species may be required once invasive plants are removed. Conservation

### 4.1.4 Visitor Management

To provide a safe and enjoyable visitor experience while protecting the Hoover Meadows' natural resources, CRPD will use strategies to achieve resource protection. These practices may include visitors having minimal impact on the natural area by respecting plant and wildlife, disposing of waste properly, and being considerate of others.

### 4.1.5 Community Involvement

Engage neighbors and community members around Hoover Mthrough volunteer event signs posted in Hoover Meadows and posted on social media. Events may include education on encroachment, invasive species removal, litter pick-up events, plantings, and others.

### 4.2 Enhancement

### 4.2.1 Signage

One Hoover Meadows Nature Preserve sign is present. Install signs identifying Hoover Meadows as a Nature Preserve at all access points, along with a summary of the Nature Preserve regulations. Additional signage along the preserve boundaries is recommended to aid in limiting encroachments. Educational signage may also be installed, regarding some of the unique natural resources.





Hoover Meadows Known Species List (2022) Plants				
Acer negundo	Boxelder			
Acer saccharum	Sugar Maple			
Agrimonia parviflora	Swamp Agrimony			
Apocynum cannabinum	Dogbane			
Cephalanthus occidentalis	Buttonbush			
Dichanthelium clandestinum	Deertongue			
Dipsacus fullonum	Wild Teasel			
Eupatorium perfoliatum	Boneset			
Fagus grandifolia	American Beech			
Juncus effusus	Softstem Bulrush			
Leersia virginica	White Grass			
Parthenocissus quinquefolia	Virginia Creeper			
Phalaris arundinacea	Reed Canary Grass			
Phragmites australis	Common Reed			
Pinus strobus	Eastern White Pine			
Populus deltoides	Eastern Cottonwood			
Pyrus calleryana	Callery Pear			
Quercus palustris	Pin Oak			
Rosa multiflora	Multiflora Rose			
Rubus fruticosis	Blackberry			
Sagittaria latifolia	Broadleaf Arrowhead			
Salix nigra	Black Willow			
Solidago canadensis	Canada Goldenrod			
Toxicodendron radicans	Poison Ivy			
Typha angustifolia L.	Narrow-leaved Cattail			

Hoover Meadows Known Species List (2022)  Birds				
Agelaius phoeniceus	Red-winged Blackbird			
Baeolophus bicolor	Tufted Titmouse			
Botaurus lentiginosus	American Bittern			
Grus canadensis	Sandhill Crane			
Phasianus colchicus	Ring-necked Pheasant			
Poecile carolinensis	Carolina Chickadee			
Porzana carolina	Sora			
Sialia sialis	Eastern Bluebird			
Tachycineta bicolor	Tree Swallow			
Troglodytes aedon	House Wren			

Hoover Meadows I	Known Species List (2022)			
Macroinvertebrates				
Scientific Name	Common Name			
Ampipoda	Amhipods			
Anostraca spp.	Fairy Shrimp			
Chaoboridae	Phantom Midge			
Chironomidae spp.	Chironmid Midge			
Copepods	Copepods			
Culicidae spp.	Mosquito Larva			
Daphnia magna	Daphnia			
Dytiscidae	Water Tiger			
Gastropada spp.	Aquatic Snail			
Gerridae	Water Strider			
Haliplidae	Crawling Water Beetles			
Hydrachnidia spp.	Water Mite			
Hydrophilidae	Water Scavenger Beetle			
Isopoda spp.	Isopod			
Lethocerus americanus	Giant Water Bug			
Notonecta glauca	Backswimmer			
Oligochaeta spp	Aquatic Worm			
Ostracoda	Ostracods			
Palinuridae spp.	Crayfish			
Pisidium moitessierianum	Fingernail Clam			
Planeria spp.	Planeria			

Hoover Meadows Known Species List (2022)  Amphibians				
Ambystoma jeffersonianum	Jefferson Salamander			
Ambystoma maculatum	Spotted Salamander			
Ambystoma texanum	Smallmouthed Salamander			
Anaxyrus americanus	American Toad			
Dryophytes versicolor	Gray Tree Frog			
Lithobates catesbeianus	Bullfrog			
Lithobates clamitans	Green Frog			
Lithobates pipiens	Northern Leopard Frog			
Lithobates sylvaticus	Wood Frog			
Pseudacris crucifer	Spring Peeper			
Pseudacris triseriata	Western Chorus Frog			