



Wyomissing Parklands Natural Resources Stewardship Plan

August 2024

PREPARED FOR:

The Borough of Wyomissing

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The citizens, stakeholders, and visitors of Wyomissing who provided valuable feedback which shaped the plan.

Executive Summary

Background

The Borough of Wyomissing desires to protect and enhance the natural resources of the Wyomissing Parklands for current and future generations. The Borough commissioned Floura Teeter Landscape Architects and Berks Nature to prepare a Stewardship Plan which will establish a baseline inventory of park conditions and to develop strategic recommendations to enhance the quality of the parklands. The project team collaborated with the Borough, community, and stakeholders to perform site investigation, preliminary recommendations, and address amenities for visitor safety and comfort.

Management Recommendations

The study area comprises approximately 150 acres of woodlands, meadows, and riparian zones. Specific goals include the ecological management of plant communities, mitigation of and protection from regular flooding, and to ensure that the park and wildlife habitat remains a valuable recreational asset for residents and visitors. The Stewardship Plan details goals and methods for managing invasive species, the deer population, and recreational activities and infrastructure to work within the natural systems rather than against them.

The site assessment and community engagement efforts identified four management zones based on similar management needs, site characteristics, or community and stakeholder input:

- Zone 1 | Upland Meadows and Successional Fields
- Zone 2 | Riparian Buffer
- Zone 3 | Woodlands
- Zone 4 | Park Infrastructure

Path to Implementation

The recommendations and management guidelines identified within this plan can serve as preliminary steps to implementation. Additional studies to develop a deeper understanding of specific site constraints, combined with engineering drawings, is needed for a comprehensive management plan. The Borough is benefited by an active and engaged community, adept at pursuing and acquiring grant funding, and supported by numerous partnership organizations which will facilitate the process.

Conclusion

There are many management practices in place that are effectively preserving the Wyomissing Parklands for all. Incremental changes outlined in the Stewardship Plan, however, will improve the Borough ability to improve the parklands as an ecological wildlife habitat and passive recreational amenity in a cost and time efficient manner.



^ Typical stretch of Wyomissing Creek.

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^ Pinewood Trail.

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Background & Introduction

Park History

Purpose of the Plan

Plan Approach & Methodology

Background & Introduction

Wyomissing Park is a well-used, well-maintained, and well-loved asset for both residents and visitors. It is the objective of the Borough of Wyomissing to protect and enhance the natural resources of the parkland for current and future generations.

The Borough commissioned Floura Teeter Landscape Architects and Berks Nature to prepare a Stewardship Plan for the Wyomissing Park grounds located to the south of Old Mill Road and Cambridge Avenue. The study area comprises approximately 150 acres of woodlands, meadows, and riparian zones along the Wyomissing Creek.

The purpose of the Stewardship Plan is to create a baseline inventory of park conditions and to develop strategic recommendations to enhance the quality of the parklands. Specific goals include the ecological management of plant communities, mitigation of damage from frequent flooding, and to ensure that the park and wildlife habitat remains a valuable recreational asset for residents and visitors.

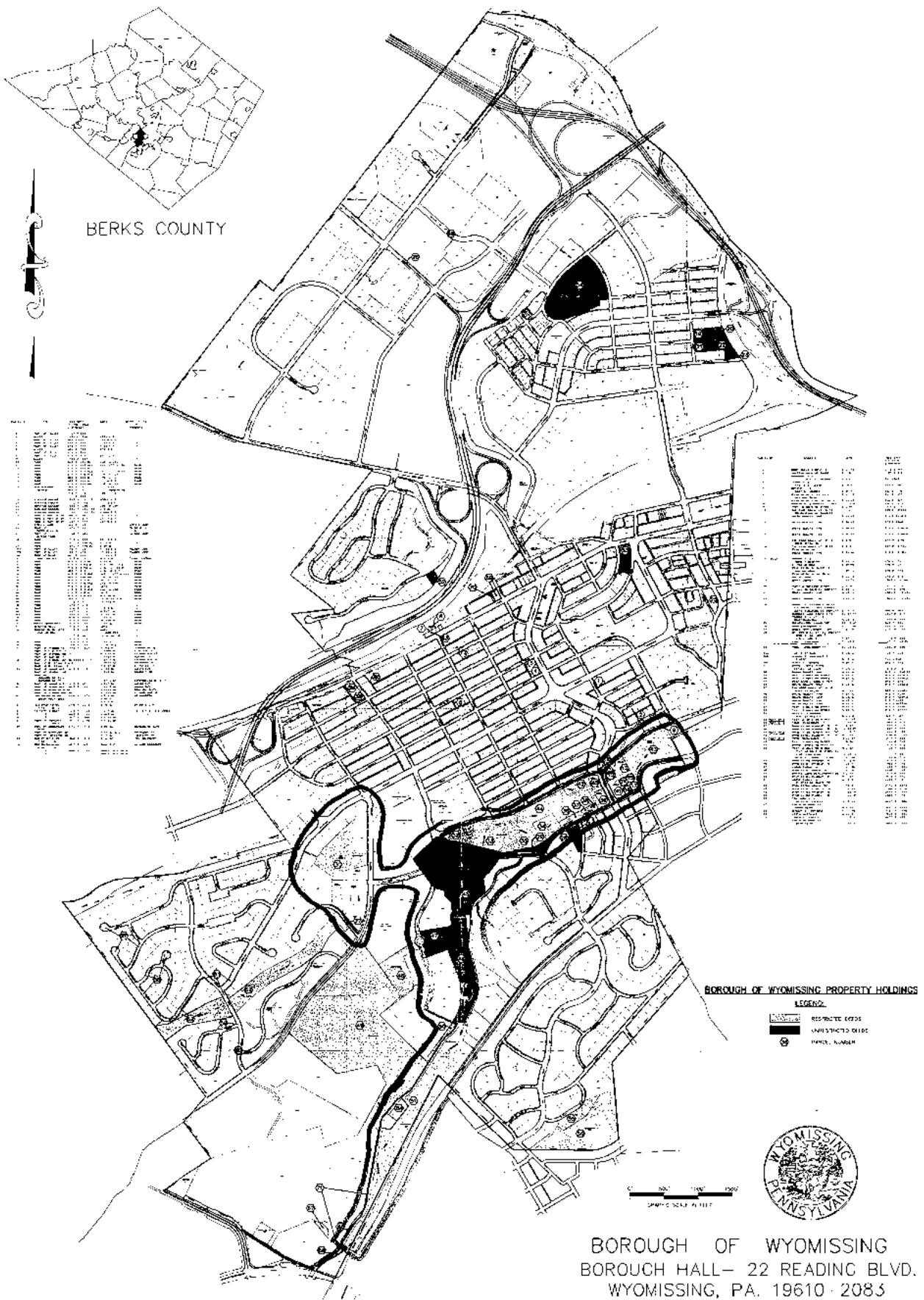
Park History

Like most of the region, the land that comprises Wyomissing Park was originally inhabited by Native Americans until European colonization in the late 1600's. In 1726, approximately 1000 acres along the Wyomissing Creek, including the present-day parkland, was founded and farmed by Hugh Jones. The land changed ownership throughout the following centuries but remained predominately agricultural in nature, a land use that is visible through the mature trees and fencerows present on site. For a brief time, the site was used for a commercial nursery which shaped the current landscape through the intentional planting and unfortunate escape of ornamental and invasive plant species.

Ferdinand Thun, one of Wyomissing's founders, purchased the land and structures on both sides of the Wyomissing Creek in 1929. These areas were carefully preserved. In the 1970s, the land was transferred to the Borough of Wyomissing, allowing it to be used as parkland. The Borough of Wyomissing currently maintains the park system and encourages Wyomissing residents and visitors to experience and enjoy this beautiful natural feature of the Borough.



[^] Historical aerial, taken between 1946-52 (left) and between 1967-71 (right), courtesy of Penn Pilot



^ Master parcel map for the Wyomissing Parklands, courtesy of the Borough of Wyomissing

From its inception, the parklands have been recognized as a public amenity. A condition of the land transfer restricted the land use as passive recreation only. A commitment that the Borough of Wyomissing has and continues to honor.

The Borough understands that too much active recreation or development (even public amenities) will dilute what is most special about the park – the opportunity to experience such a variety of “wild” environments – and a genuine connection with nature. Providing opportunities and programming for passive recreation and environmental education will further enrich this experience. The Wyomissing Parklands are so beautiful and unique.

Adding active recreation within the study area would negatively impact the experience. Active recreation is best served at either end of the study area – at the Wyomissing Quarry Soccer Fields to the south and the vicinity of the Wyomissing Pool to the north.

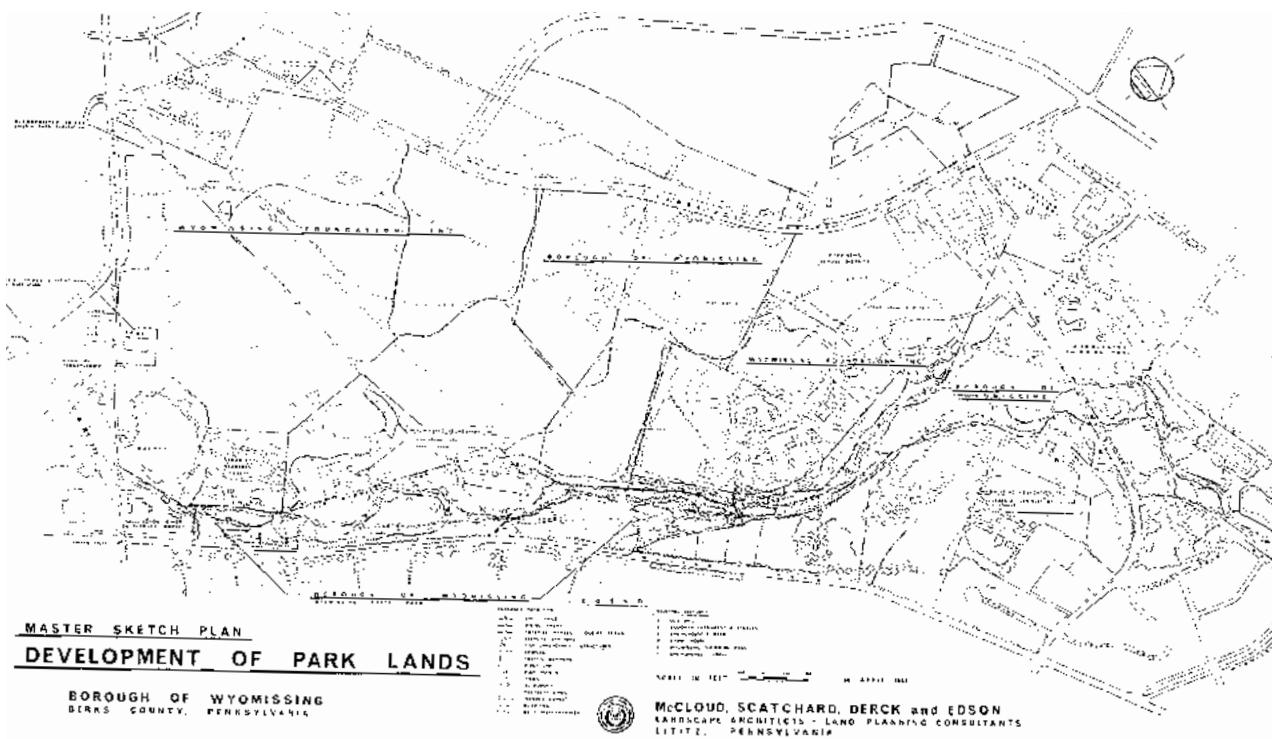
Purpose of the Plan

A Stewardship or Resource Management Plan is an extremely useful tool for both short- and long-term management of any preserve, park, open space, or campus. The plan will facilitate the development of a comprehensive land management approach based on the existing conditions, current management protocol, best practices, and available resources. This strategic approach is especially important for the Wyomissing Parklands because they are currently managed by four (4) full-time employees and several part-time employees who are occasionally assisted by volunteer efforts.

The Stewardship Plan identifies priority intervention areas, steps to implementation, and potential partnerships to best address the threats to the ecology and longevity of the Parklands such as overpopulation of deer, invasive plant species, and frequent flooding along the Wyomissing Creek. Implementing a management plan at the parklands will deliver the following benefits:

- Reduce maintenance and operational costs.
- Minimize energy use and fuel emissions from mowers or other equipment to reduce the carbon footprint.
- Conserve and improve the quality and quantity of habitat for wildlife and pollinators.
- Protect passive recreation opportunities such as bird watching or a trail network.
- Reduce impervious area and increase rainwater infiltration to mitigate flooding and the resulting property damage and for the benefit of water quality and quantity of the Wyomissing Creek.
- Support broader community initiatives through public education, volunteer support, and fostering the adoption of environmental stewardship principles.

The Stewardship Plan is intended as a guiding document for the Wyomissing Borough Council, Wyomissing Public Works Department, and the Park and Shade Tree Commission to determine and prioritize future resource management, maintenance, educational opportunities, and park uses. This plan lays the groundwork for further and more comprehensive studies, masterplanning, and engineering drawings to guide the management and preservation of the Parklands.



[^] Original Park Plan from 1981, courtesy of the Borough of Wyomissing

Plan Approach & Methodology

Project Initiation

At the onset of the project, the project team held a kick-off meeting with the Wyomissing Borough Manager, Public Works Director, Assistant Public Works Director, and the leader of the park maintenance staff. The kick-off meeting established a preliminary schedule for community engagement and project deliverables, identified stakeholders, and verified the intent of the plan.

Following the kick-off meeting, the project team and Wyomissing Borough staff met for a site walk to best identify areas of concern, review the maintenance capacity and operations, and identify previous, current, and potential future uses within the park.

Site Inventory & Assessment

The inventory and assessment of the watershed, park facilities, and naturalized areas was led by Berks Nature. The Berks Nature staff brought a depth of expertise informed by their work throughout the region as well as firsthand experience developed at their Angelica Creek Headquarters.

The team performed research and review of similar natural resource inventory and stewardship plans, related studies, and background material pertaining to the parklands and the Wyomissing Creek watershed. The MS-4 permitting requirements as they pertained to the Borough commitments and potential coordination with the Wyomissing Creek Watershed Coalition were a key focus topic.



[^] Initial site walk with Borough staff and project team.

Regular site visits were performed to collect firsthand observations and data in real-time. Existing conditions such as areas of regular flooding, presence of invasive species, trail erosion, and other points of interest were photographed, described, and mapped through Landscape Conservation, a GIS software program.

Trail counters, supplied and monitored by Berks Nature staff, were installed through the parklands to track the number of visitors and time of day trails were used. Trail counters were initially focused on parking areas and trail

heads to capture visitors as they entered. Throughout the planning process, the counters were moved to various trail locations to compare usage of paved and unpaved trails.

Community Engagement

Creating a plan that was approved by the community is critical for long term support and success. Team members attended multiple community events to inform the public about the plan process and receive feedback. Community events included:

- Earth Day Celebration at Happy Hollow Playground (April 20, 2024)
- The Trout Rodeo at the Stone House (May 11, 2024)
- A site walk with the Wyomissing Park and Tree Commission, which was open to the public (June 26, 2024)

Outreach to the critical stakeholders was part of the community engagement. Virtual interviews were conducted with stakeholders to capture current park uses as well as priorities for future park improvements.

An online survey was also developed to collect feedback about who is using the park, how they get there, what their primary concerns are, and what operation changes or improvements to amenities they would like to see. Response to the survey was robust, with 123 responses. Eighty-nine percent of respondents were residents of Wyomissing Borough. Most of the respondents arrived on foot and primarily enjoyed walking in the park. Park users generally felt that the existing parking areas were adequate with the Old Mill parking lot being the one most frequently used.



^ Community engagement & education at the Earth Day Celebration

When asked what additional amenities users would like to see in the park, the top three priorities, in order of magnitude of responses were as follows:

1. Drinking fountains and water bottle filling stations – (42.3%)
2. Dog waste bags / litter receptacles – (39.0%)
3. Accessible trails – (34.1%)
4. Nature Center and educational programming – (30.9%)

A write-in question, included in the survey, was provided to identify any amenities not considered within the survey. Public restrooms, Nature Center, and access to drinking water were the top three responses.

As mentioned above, a site walk was held with the Park and Shade Tree Commission. The walk allowed the project team to review preliminary recommendations and collect initial feedback with the Borough and Commission prior to assembling the final Stewardship Plan. The site walk yielded some strong sentiments for additional parking and identified the Cambridge Avenue parking area as the only viable option for expansion.

Draft Report

A Draft Report was prepared for review by the Borough staff, Park and Shade Tree Commission and the project team. The Draft Plan was imperative in capturing final comments from the Borough and stakeholders, supporting proposed recommendations with field observations and data, and ensuring completeness.

Final Report

The Final Report and Executive Summary were prepared as a guiding document for the Borough of Wyomissing.

When asked what issues in the park were concerning to users, the most popular responses were as follows:

1. Invasive species – (61.0%)
2. Wildlife habitat – (59.3%)
3. Flooding – (46.3%)
4. Stormwater Management – (46.3%)

Other community concerns included tree canopy, water quality, deer population, erosion, and safety – each topic being identified by at least a third of respondents. All these topics will be addressed in the Stewardship Plan.

Development of Preliminary Recommendations

Throughout the life of the project, Flouer Teeter Landscape Architects and Berks Nature regularly connected to discuss the success, opportunities, and threats facing the Wyomissing Parklands. The team identified a series of general recommendations, such as invasive species management, that would impact the entirety of the park. Additionally, and to best serve the Borough's purposes, more specific recommendations were tailored to three primary land uses – meadow, forest, and riparian zone. Each area was further divided into subzones to best address concerns and detail proposed recommendations. In addition to the land uses, detailed interventions for amenities such as parking and public facilities are covered in greater detail.



^ Larry Lloyd with Berks Nature discussing recommendations during the site walk with the Park and Shade Tree Commission.

Importance of Environmental Stewardship

Environmental stewardship generally refers to conserving, if not improving, the quality of the natural environment. "Stewardship" specifically calls to the responsibility held by individuals, communities, companies, and governments to protect the environment for current and future generations. Environmental stewardship can include broad activities such as planting trees, minimizing the use of harmful chemicals and pollutants, implementing sustainable agricultural practices, and beyond or specific actions such as ordinances or incentive programs.

Implementing principles of environmental stewardship delivers environmental, economic, and social benefits such as:

Environmental:

- Provide habitat and food sources for wildlife to increase diversity.
- Creating refuge for rare, threatened, or endangered plant and animal species.
- Mitigate the effect of pollution by reducing stormwater runoff, filter air pollution, and offsetting the urban heat island effect.
- Improve the water quality and quantity of the local streams and watershed.

Economic:

- Revenue generation through tourism and businesses supporting activities such as hiking, fishing, or bird watching.
- Reduced rainwater runoff will decrease the strain on public sewer systems and potential property damage or loss of life from flooding and erosion.

Social:

- Physical and visual access to green space has been linked to increased mental and physical health, reduced risk of chronic disease, and lower death rates by numerous studies completed worldwide.
- Develop and support a sense of community and togetherness coalescing around shared goals.
- Develop a sense of place, identity, and pride.
- Encourage healthy and sustainable lifestyles through increased activity (walking, biking, etc.)

Importance of Environmental Stewardship

Existing Conditions

Historic Land Use

Current Land Use

Geology & Soils

Utilities & Right-of-Way

Flood Plain & Riparian Zone

Plant Communities

Existing Conditions

Historic Land Use

Prior to becoming the verdant community amenity, the Wyomissing Parklands were used as farmland and livestock pastures. The Park Barn, Goodman Barn, Old Mill, and various spring houses are all reminders of the previous land uses. Education signage and building inscriptions throughout the parklands provide additional information on the park history.

For additional historical data, please refer to the appendices for historic aerial maps and the Park Concept map, from 1981, which established the park.

Current Land Use

As a result of the land transfer by Ferdinand Thun and the Thun Foundation, there are restrictions on how the parklands may be used. The deed transfer primarily protected the land from commercial or residential development and restricted the use for passive recreation and the infrastructure to support that use. The current land uses at Wyomissing Park fit into three general categories: passive recreation, infrastructure, and natural landscapes.

Passive recreation: referring to activities that are generally quiet, require minimal equipment or infrastructure, and have low impact on the surrounding environment. Passive recreation opportunities present in the parklands include walking, running/jogging, fishing, bird watching, and picnicking. The network of trails is the most notable passive recreation opportunity present. The trail surfaces vary between asphalt, crushed gravel/millings, grass, and unpaved footpaths. The trails are used heavily by walkers, runners, and cyclists.

Active recreation opportunities exist to the north (Wyomissing Pool, tennis courts, and ice skating rink) and south (Quarry Soccer Fields) and outside of the project study area.

Infrastructure: the basic systems supporting a community. Infrastructure onsite includes visible elements such as the trails, parking lots, and barns as well as unseen elements such as below grade utilities, rights of way, and easements.

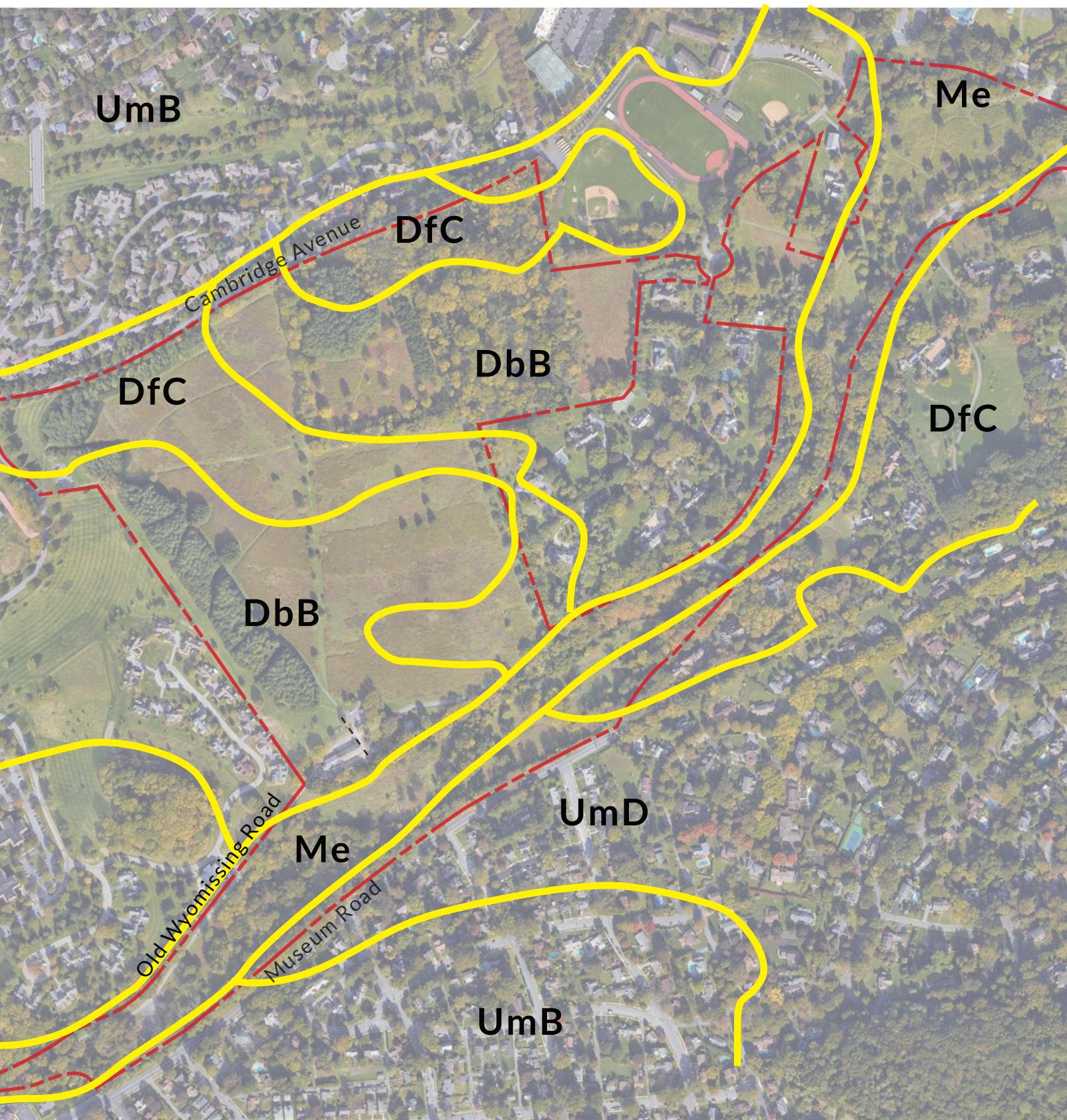
Natural landscapes: such as upland meadows, wet meadows, riparian buffers, wetlands, and wooded areas are present throughout the parklands.



^ Meadow areas looking towards the Goodman Barn.



^ Typical streambank area with signs of bank erosion limited native vegetation cover.



Geology & Soils

Per the Web Soil Survey (WSS), websoilsurvey.nrcs.usda.gov/app/, operated by the USDA Natural Resources Conservation Service (NRCS), the following soil classifications are present within the Wyomissing Parklands:

DBB - DARIEN SILT LOAM:

Most prevalent in the study area, it is considered to be prime farmland soil is well-draining with no ponding or flooding typical. It is an upland soil, not suitable for wetlands.

DFC - DUFFIELD-RYDER SILT LOAMS:

Includes farmland of statewide importance. Characterized by a higher moisture content and base saturation level but with no ponding or flooding. It is a mixed upland soil, derived primarily of limestone, with bedrock at a depth of 36 to 48 inches. This soil is well suited for mixed forest habitats of oaks, hickories, and conifers.

ME - MIDDLEBURY SILT LOAM:

Considered prime farmland receiving occasional flooding but best-suited for riparian habitats due to high base saturation level. Stratified sand to gravelly sandy loam composition makes this soil moderately well-drained with no ponding.

UMB & UMD - URBAN LAND DUFFIELD COMPLEX

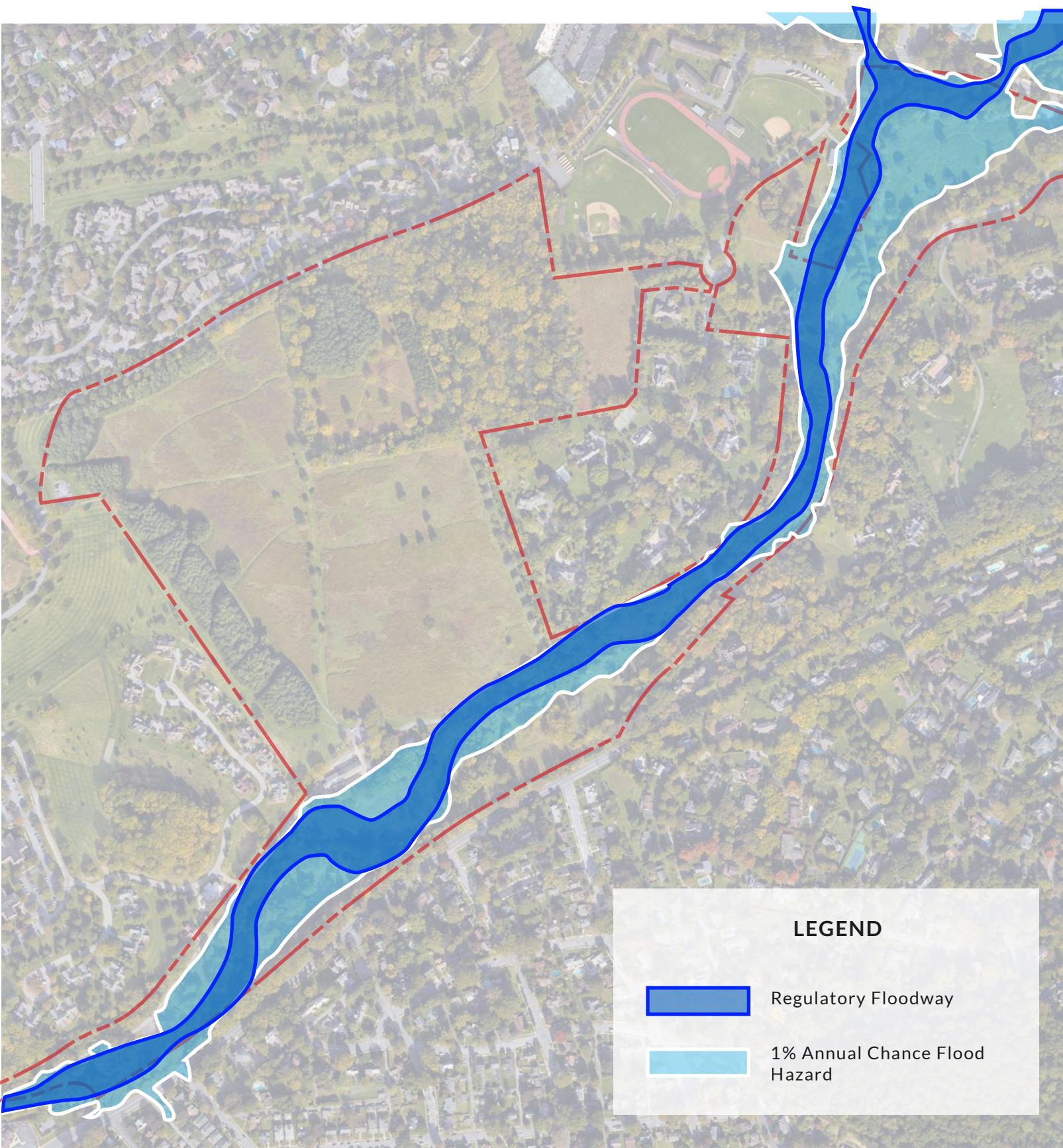
As suggested by the name, this soil is the result of urban conditions (pavements, buildings, and other artificial coverings). It is not suitable for farmland or wetlands. The key difference between these two soils is that UmB occurs on 0 to 8 percent slopes while UmD occurs on 8 to 25 percent slopes.

Utilities & Rights of Way

Multiple utilities zigzag throughout the parklands including a sewer, telecommunications line, and access easements for utility maintenance. Special consideration is needed for these corridors when any trail relocation, revegetation, or streambank stabilization efforts are explored. Trails and mowing regimens should be planned in a manner that easements appear intentional and are integrated into the parklands to minimize disturbance and maximize ecosystem services.

Floodplain & Riparian Zone

The parklands are heavily influenced by the health of the riparian zone along Wyomissing Creek as well as the frequency and severity of flood events. Flooding is a natural function within riparian zones and it is in the best interest of the Borough to allow and even encourage flood retention within the parklands. Flooding is likely to get worse as impervious areas increase and rain events become more intense. Natural flooding in wetlands, marshes, or other natural habitats within the parklands will protect downstream development such as the Wyomissing Pool, Reading Public Museum, or the many homes within the Borough.



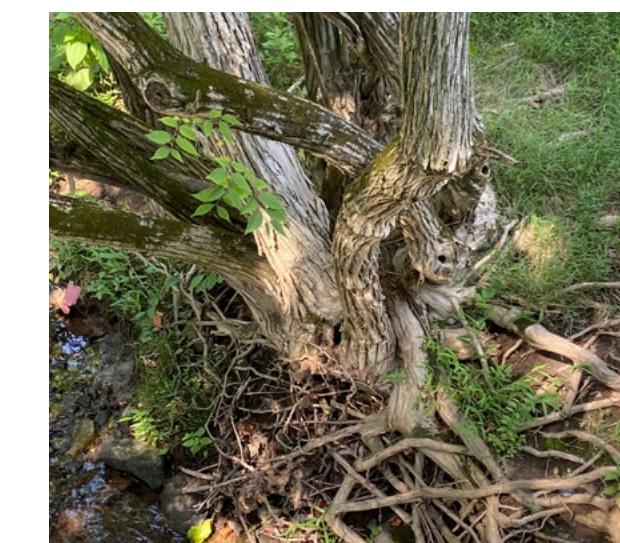
Floodplain Map

Plant Communities

There are several plant communities and ecosystems within the park. The plant communities are comprised of native and non-native generalist species that inhabited the site after farm and nursery crops were discontinued. Closest to Wyomissing Creek is floodplain, wetlands and riparian vegetation, all prone to frequent flooding. Much of the streambank vegetation consists of invasive bush honeysuckle which, while stabilizing the banks and providing seasonal flowers, is highly invasive. Upland plant communities include mixed hardwood forest, spruce and pine plantation woodlands, and seasonally managed meadows. Each of these communities is impacted by deer browse and are threatened by invasive herbaceous and woody plant species. Invasive species of note include the following:

- Bush Honeysuckle (*Lonicera maackii*)
- Chinese Silver Grass (*Miscanthus sinensis*)
- Japanese Knotweed (*Reynoutria japonica*)
- Japanese Stiltgrass (*Microstegium vimineum*)
- Mugwort (*Artemisia vulgaris*)
- Oriental Bittersweet (*Celastrus orbiculatus*)
- Phragmites (*Phragmites australis*)
- Poison Hemlock (*Conium maculatum*)
- Porcelain Berry (*Ampelopsis brevipedunculata*)
- Purple Loosestrife (*Lythrum salicaria*)
- Reed Canary Grass (*Phalaris arundinacea*)
- Tree of Heaven (*Ailanthus altissima*)

For additional information regarding locations species were observed, tips for plant identification, and control and removal measures, please refer to the appendices.



^ Invasive bush honeysuckle growing along the streambank.



^ Upland meadow and mown path.

General Recommendations

General Recommendations address conditions that occur in every part of the park, rather than being geographically specific.

Invasive Species Management

Deer Management

Environmental Education

Safety & Accessibility

Trails

Floodplain Function

Stormwater & MS4 Permitting

User Amenities

General Recommendations

Invasive Species Management

Invasive species are a concern throughout the Wyomissing Parklands. Developing and integrating a Vegetation Management Plan should be a top priority. Refer to Appendix D, Vegetation Management for greater detail on supporting native vegetation and specific management interventions for individual invasive plant species.

Invasive species of note include the following:

- Bush Honeysuckle (*Lonicera maackii*)
- Chinese Silver Grass (*Miscanthus sinensis*)
- Japanese Knotweed (*Reynoutria japonica*)
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- Tree of Heaven (*Ailanthus altissima*)

For additional information regarding locations species were observed, tips for plant identification, and control and removal measures, please refer to the Invasive Species Map in Appendix I.

Cleaning all maintenance equipment, including boots and gloves, would prevent the spread of plant diseases and the introduction of unwanted species. Cleaning is especially important after performing invasive plant removal.

Deer Management



^ Deer herd and herbivory in the parklands.

The USDA performed a deer density survey of the parklands in February 2021. The survey identified a population of approximately 89 deer per square mile. The recommended deer population carrying capacity is 10-20 deer per square mile. At present, no action has been taken by the Borough to reduce the deer population within the parkland although several adjacent property owners have permitted archery hunting on their private property.

With the extremely high deer density in the Wyomissing Parklands, vegetation composition is largely determined by deer herbivory. If greater native species diversity and composition is desired, deer management would need to be a precursor. Deer herbivory may be framed as a natural disturbance (refer to mowing, above), however, this approach often allows invasive species to flourish because they are unpalatable to deer.

An incremental approach is necessary. Limiting deer control measures, such as deer exclusion fencing, to small areas should be attempted with consideration for time and resources. See Appendices, Deer Management Options and Mid-Atlantic Meadow Guidelines for greater detail and discussion.



^ The Goodman Barn



^ Existing park signage at the Old Mill parking area.

Environmental Education

The experience of visiting the park and the commitment to its stewardship can be enhanced by additional environmental education programming and signage. The diversity and environmental performance of the landscape will be much more appreciated if people know and understand it. This could take the form of volunteer days, birding walks, planting projects or guided hikes through the park. Another opportunity for enriching the educational experience would be the establishment of a new nature center. There are several potential locations where this resource could be located: in the Goodman Barn, near the Old Mill Parking lot or in the stone house next to the Park Barn. The Goodman Barn has better access to adjacent neighborhoods and parking nearby. Using the stone house is less desirable as it has a smaller footprint and visitors would be required to walk through the park.

Potential signage topics could include:

- Understanding the watershed
- How deer impact plant communities
- How floodplains and riparian buffers work
- Birds of Wyomissing Park
- Cultural and historical elements within the park
- And many more.

Environmental education would support the stewardship initiatives detailed throughout this plan by inspiring visitors to manage their own properties for the benefit of the environment and wildlife. An overwhelming majority of the land east of the Mississippi is privately owned with the bulk of that land dominated by conventional lawn. Private lands present the greatest opportunity for increasing biodiversity and creating habitat that is rich with food sources for birds and pollinators. If each American landowner committed to replanting half of his or her lawn with native species, we could see ecosystem function restored to over 20 million acres that are currently an ecological wasteland.

Safety & Accessibility

The park is officially open from dawn to dusk but high levels of visitation still occurs after dusk, particularly in late fall through early spring when days are shorter. No specific concerns for safety were shared during stakeholder interviews or community engagement events, however, a number of survey responses suggested desired improvements.

Most notably, lighting is desired along paths and within parking lots. Some site lighting exists but it should be further evaluated to confirm appropriate levels are provided during dark hours. Any lighting should be dark sky compliant to minimize impact to natural habitats. Installing emergency call boxes along Old Wyomissing Road, at parking areas, or other prominent locations would improve the feeling of and reality of safety.

Trails

The trails are the most consistently used amenity with the Wyomissing Parklands. Trail counter data confirmed that visitation was highest on weekends and paved trails were traveled more frequently than gravel, turf, or packed earth trails. A surprising and positive finding was that inclement weather did not significantly impact park visitation.



^ Existing trail / wayfinding signage

The network of trails within the park should be studied to eliminate redundant and underused trails within natural habitats. Signage for trails and points of interest are generally needed to aid in wayfinding and to facilitate visitors who seek a circuit trail experience. Signage along trails should have minimal impact on the natural character of the park and be visible to visitors. Bright, color coded markings on trees or posts, aid visitors in identifying desired routes and remaining on designated paths. Signage should also indicate approximate distances and ADA accessible routes were provided. Directional arrows at trail intersections are a cost efficient but impactful improvement for the user experience. Finally, trail signage or markings aid in branding and a sense of place – for instance, the Creek Trail or Pinewoods Trail relate to the location unlike an unmarked or unnamed trail.

The trails additionally provide an opportunity to integrate cultural and environmental programming. Bird or plant identification walks or heritage tours of historic structures could be led by trail guides or self-guided with signage dispersed along marked paths.

Floodplain Function

Floodplains act as natural sponges which capture, retain, and infiltrate excess water during flood events. As a result, floodplains reduce the speed, volume, and intensity of water flowing or flooding downstream. The more water treated within floodplains, the greater reduction in the severity and frequency of floods and flood-related damage. Development directly within riparian zones, as well as wider spread development throughout a watershed, significantly alters and inhibits natural floodplain function and may lead to more frequent and severe floods, loss of wildlife habitat, and greater risk.

The Borough of Wyomissing should reduce impervious areas, mowing, or other disturbance within the riparian zone to maximize natural floodplain function. Future land management efforts should prioritize ecological restoration, trail abandonment or relocation, and habitat creation within the riparian zone as described throughout this report over structural mitigation.

Stormwater & MS4 Permitting

There are multiple opportunities to detain and infiltrate stormwater generated in the parklands as well as neighboring properties. Implementing best management practices, in conjunction with educational interpretation and signage, can yield water quality and quantity results which will contribute to Wyomissing Borough's MS4 responsibilities for reporting and for community education. Refer to Appendix F for MS4 and stormwater management opportunities and Appendix G for riparian and watershed information.

User Amenities

Current and new amenities within the Wyomissing Parklands are desired as passive recreation opportunities or infrastructure to support those activities. The community engagement survey identified the top three desired amenities as the following:

- Drinking Fountains / water bottle filling stations – 42.6%
- Dog waste bags – 39.3%
- Educational programming / Nature Center – 31.1%

Other popular topics included bathrooms, litter and recycling receptacles, and seating or picnic areas (for individuals and small groups). Currently, visitors access bathrooms across Old Mill Road at the Wyomissing Pool or Stone House or at the Wawa or Sheetz located on Lancaster Pike. Providing public facilities within the parklands would allow longer visits and serve future events and programming as described in this plan.

Site furniture throughout the parklands is in varying states of repair, accessibility, and style. Selecting and adhering to a coordinated family of site furniture as existing components are replaced or new ones are added will contribute to a sense of place with familiar elements, materials, and colors repeating throughout.



^ Typical mismatched, existing site furniture.



^ Pet waste station, water station (drinking, pet bowl, and bottle filler) and a coordinated family of site furnishings by Victor Stanley: Lily bench, Sage litter receptacle, and Circle bike rack.

Priority Management Zones

Zone 1 | Upland Meadows and Successional Fields

- Zone 1A | Golden Meadow
- Zone 1B | Successional Field at Clymer Bench
- Zone 1C | Successional Field at High Road

Zone 2 | Riparian Buffer

- Zone 2A | Wyomissing Quarry to the Park Barn
- Zone 2B | Park Barn to Creek Trail departure from Old Wyomissing Road
- Zone 3B | Creek Trail departure to Old Mill Road

Zone 3 | Woodlands

- Zone 3A | Mixed Woodland Block at Clymer Bench
- Zone 3B | Mixed Woodland Border along Cambridge Avenue
- Zone 3C | "Enchanted Forest" bordering the Highlands at Wyomissing

Zone 4 | Park Infrastructure

Priority Management Zones

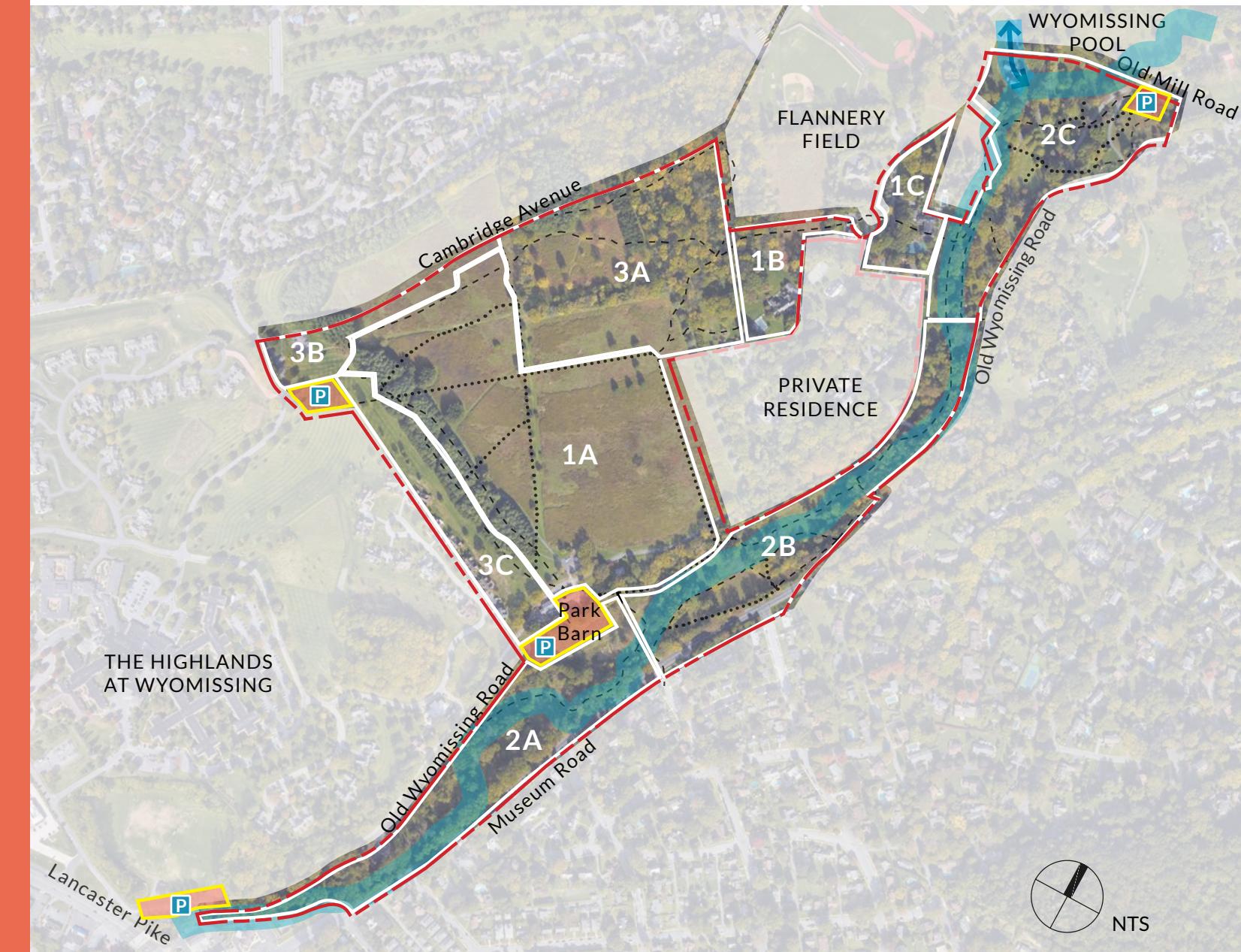
The site assessment and community engagement efforts identified four management zones. The zones were established based on areas with similar management needs, site characteristics, or community and stakeholder input. Each zone is further dissected to most effectively address site specific needs. The zones are as follows:

Zone 1 | Upland Meadows and Successional Fields

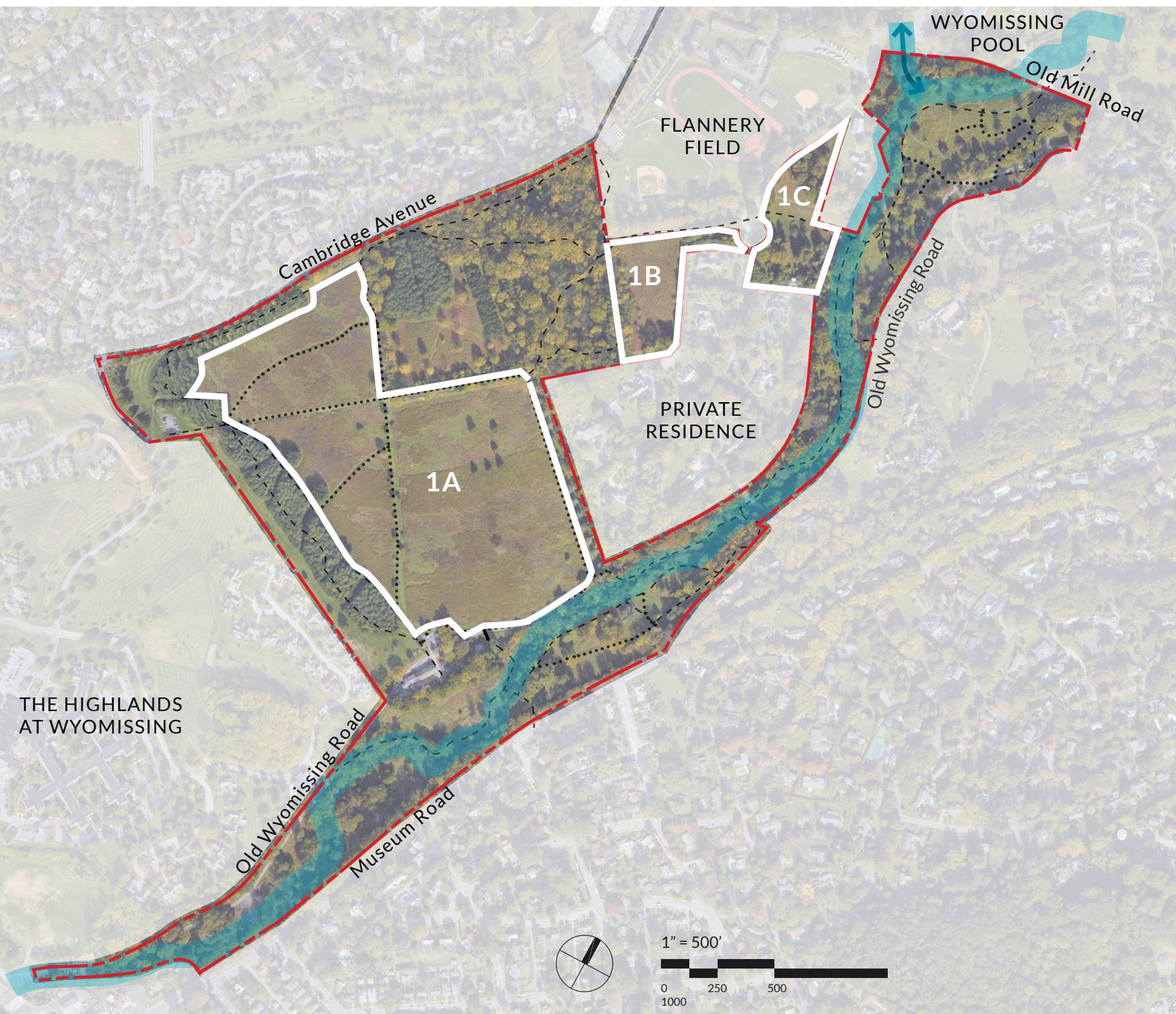
Zone 2 | Riparian Buffer

Zone 3 | Woodlands

Zone 4 | Park Infrastructure



^ Management Zone Map



Zone 1 | Upland Meadow & Successional Fields

Summary

Zone 1, including upland meadows and early successional fields, covers just over a third of the total study area. This zone is characterized by open habitats, consisting of grasses and other non-woody plant species. Trees and shrubs are sparsely present but typically at the field perimeters. In general, there is dense vegetative cover which aids in soil stabilization and limits soil movement of erosion.

Trails throughout Zone 1 consist of turf surfaces which are regularly mowed on their own schedule to provide access to park users. Minimal trail erosion is present near Clymer bench. Refer to Appendix H, Trail Design and Maintenance for general trail management information. Refer to the Trail Issues Map in Appendix I for specific trail locations in need of remediation.

Management Objectives

- Manage habitats in a natural state to maximize wildlife value and ecological function.
- Accommodate trails for passive recreation and to minimize ecological impact.
- Integrate educational interpretation and opportunities.
- Retain water within the soil to limit stormwater runoff and improve water quality.

Management Guidelines

MOWING

Fields and meadows benefit from a mowing regimen. Routine mowing replicates natural disturbances, such as fire, that prevent woody vegetation and will aid in controlling most invasive or weedy herbaceous species.

Timing maintenance mowing, or prescribed burning, is crucial. Mowing should be performed in late March to preserve winter food sources and cover for ground nesting bird season which begins in early April. Additionally, many beneficial insects overwinter in the sturdy stems of perennial plants. Mowing should be staggered and preserve 12 to 18 inches of plant stems until May for nesting insects to overwinter.

Finally, select mowing timing based on field conditions. Mowing while the ground is frozen or dry avoids excessive compaction. Use tracks or low impact tire equipment to minimize soil compaction.

Continue the existing trail mowing regime on paths to provide access to visitors. Maintain a minimum of 3" of vegetative coverage to avoid bare soil conditions which lead to erosion.



^ Approximately 40' wide trail to be reduced to 10' width.



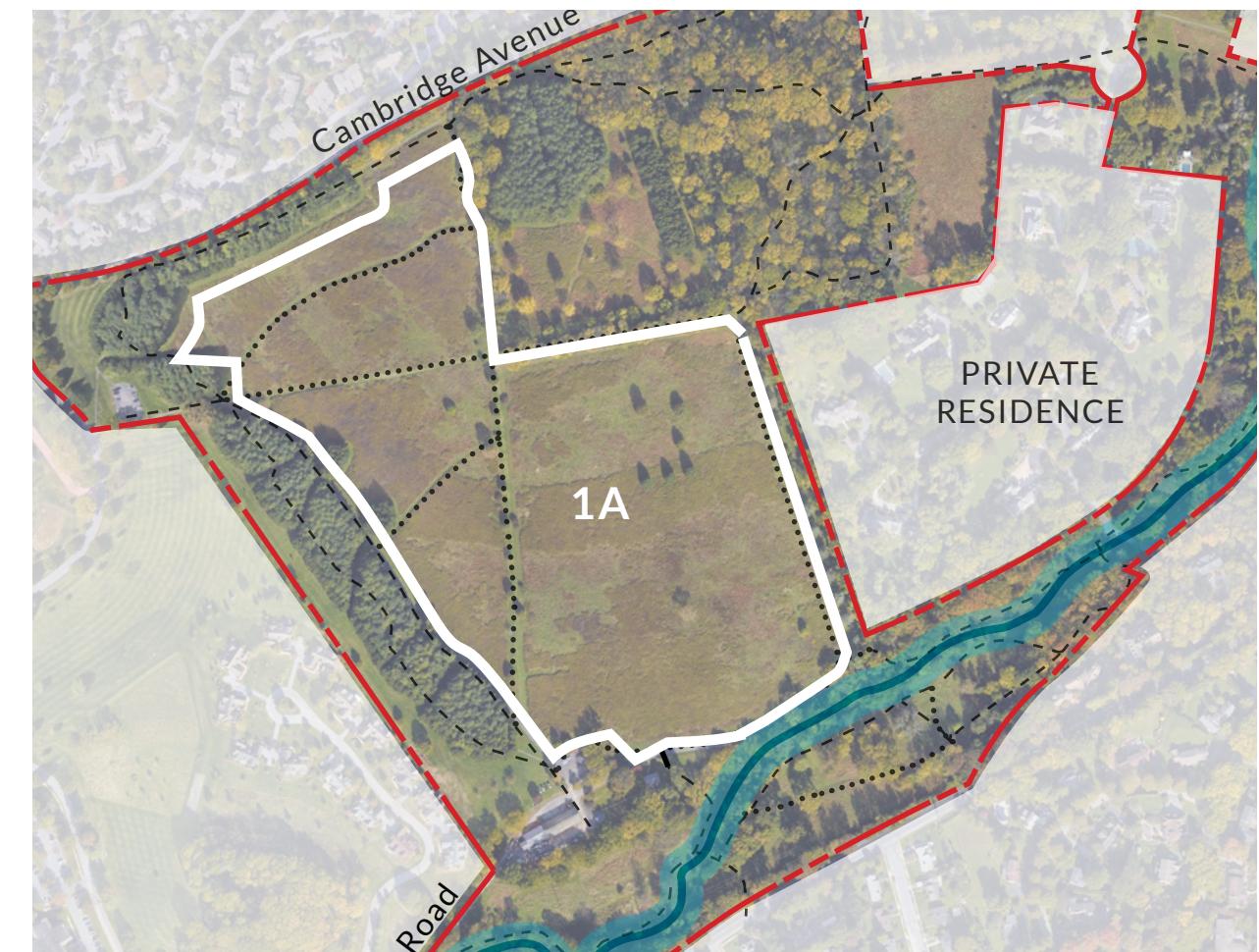
^ Existing bird house within the parklands.

INVASIVE SPECIES

Historically the fields have been managed with periodic or seasonal mowing. Unfortunately, the fields contain some invasive species which have benefited from a strictly mowing management regime. As a result, several species have spread more abundantly or developed denser, more widely spread root systems which will impede removal (such as porcelain berry).

For persistent invasive herbaceous and woody species, implement an Integrated Weed Management approach. This approach identifies the invasive plant and matches the plant's life cycle to appropriate control measures (mechanical, chemical, biological, and/or cultural). For instance, annual and biennial plants, such as garlic mustard (*Alliaria petiolata*) or poison hemlock (*Conium maculatum*), are most effectively controlled by mechanical means. Utilizing mechanical means (pruners, hedge clippers, or similar) to remove flowers and prevent the plants from developing seeds which will yield new plants the following growing season.

Cleaning all maintenance equipment, including boots and gloves, would prevent the spread of plant diseases and the introduction of unwanted species. Cleaning is especially important after performing invasive plant removal. Refer to Appendix D, Vegetation Management for greater detail on supporting native vegetation and specific management interventions for individual invasive plant species.



Zone 1A | Golden Meadow

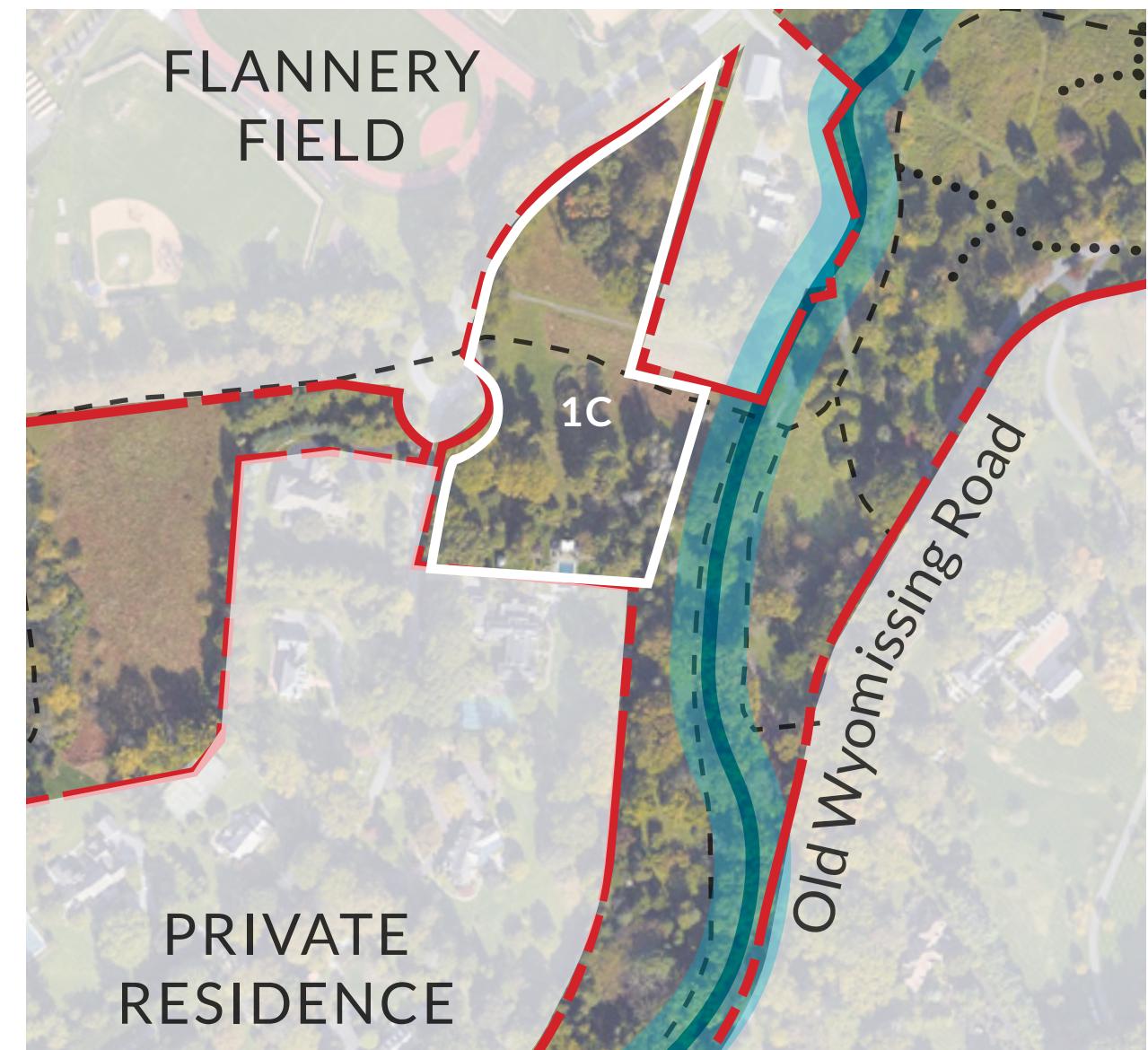
At nearly 45 acres, the Golden Meadow is the largest, most visited, and most well-known meadow in the study area. There are multiple trails, marked and unmarked, that crisscross the meadow. Trail widths should not exceed ten (10) feet and surfaces should remain as lawn with frequent mowing to prevent overgrowth. To avoid vegetation falling into trails, the meadow plantings adjacent to trails should be controlled by cutting to half the typical height with a side mower set at a 45-degree angle.

The size and natural topography of the Golden Meadow provides opportunities to integrate environmental education opportunities and develop community amenities. An observation deck or small picnic area would serve as a place for visitors to pause, engage with educational signage, or for hosting tours or other classes. Incorporating shade would extend functionality throughout the seasons and during inclement weather.

Educational signage interspersed along paths could include bird identification, plant identification, or historical background. A variety of nesting boxes would aid in attracting a diversity of species as well as educating the public on the nesting needs of each species. A deer exclusion area to demonstrate the impact of deer browse would create a visual aid and foster support to intervene in population control.

Zone 1B | Successional Field at Clymer Bench

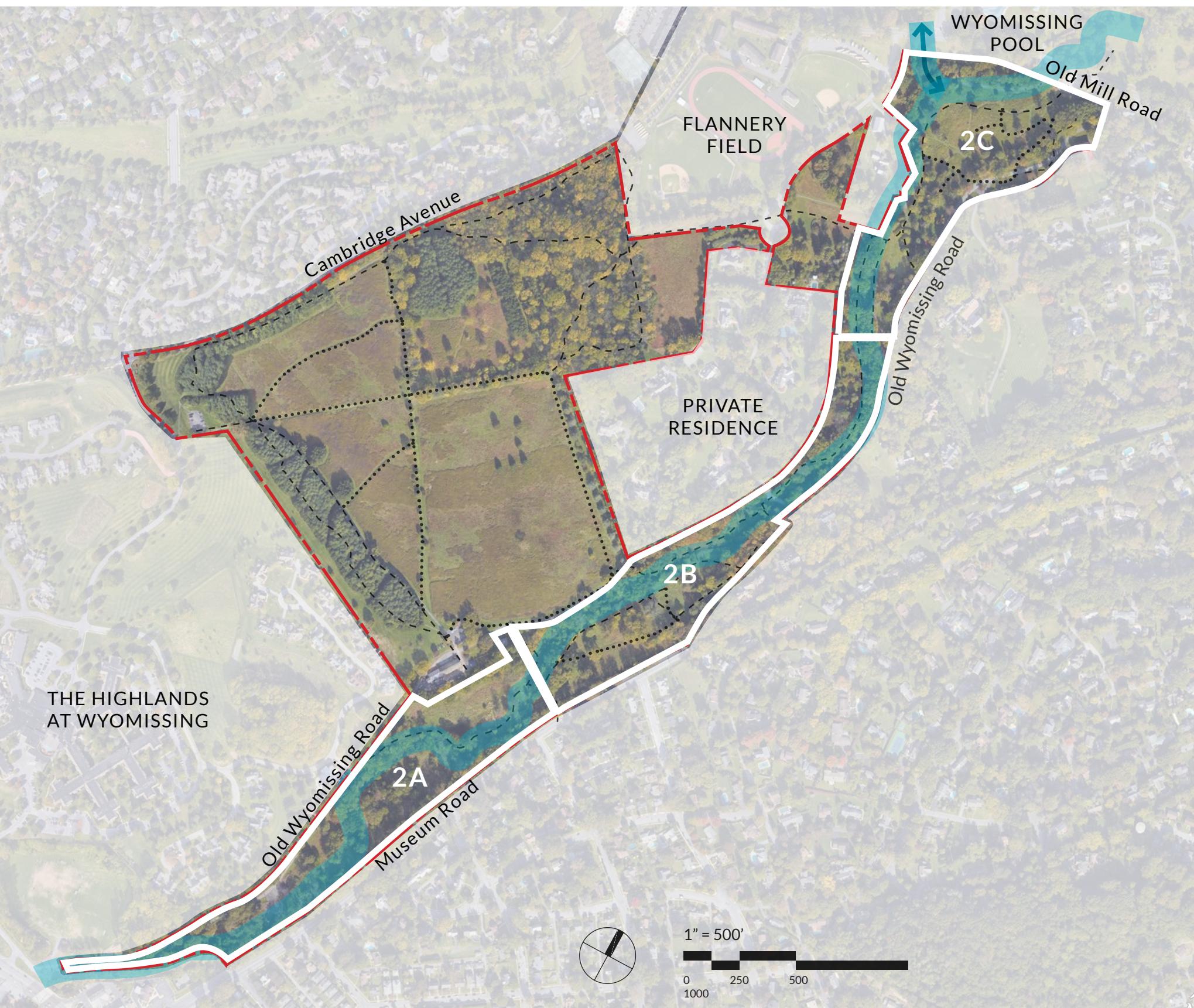
Nearby packed earth trails that provide access to this field are suffering from erosion. This location is well-suited for a series of waterbars that direct water runoff safely across or away from trails. Bonded aggregate or varying gravel sizes should be explored to limit erosion. Refer to Appendix H, Trail Design and Maintenance for general trail management information. Refer to the Trail Issues Map in Appendix I for specific trail locations in need of remediation.



Zone 1C | Successional Field at High Road

Although it is the smallest meadow habitat, it has the greatest potential to deliver efficient and impactful stormwater management improvements. There is existing stormwater infrastructure in place which is only partially functional. Work with the Wyomissing Creek Watershed Coalition to replace obsolete stormwater practices, revive inoperable infrastructure, and retain workable stormwater practices which connect to the School District retention basin. Further enhance stormwater recharge with additional detention devices such as a series of vegetative swales or rain gardens to minimize the quantity of stormwater reaching the Wyomissing Creek.

Removal of the invasive Chinese silver grass (*Miscanthus sinensis*) in this area will protect stormwater management facility function and longevity. Refer to the Invasive Plant Information Sheets, Appendix D, for silver grass management recommendations. Utilize native wildflower plantings for any disturbance generated from stormwater improvements or silver grass control.



Zone 2 | Riparian Buffer

Summary

Comprising nearly a third of the total study area, Zone 2 consists of the riparian zone and waters of the Wyomissing Creek. A riparian zone (sometimes area, corridor, or strip) is the area where a body of water interfaces with the adjacent land. Within the Wyomissing Parklands, the riparian zone includes Wyomissing Creek, the streambank, and several flood areas which are further identified and detailed below.

Within the study area, the riparian area is predominantly floodplains and wetlands. Stormwater and floodwater concerns are generated offsite and upstream. Trails within the riparian zone generally run parallel to the creek and are a mix of stable impervious surfaces, vegetative cover, and gravel or millings – which demonstrate propensity for erosion. Like the rest of the parklands, invasive species are a concern within the riparian zone (most notably bush honeysuckle).

Management Objectives

- Limit trails and amenities in flood areas to allow floodplain function.
- Integrate trails in a manner that minimizes erosion or sedimentation.
- Manage habitats to maximize wildlife value and ecological function.
- Provide safe and accessible crossings for pedestrians.
- Using an incremental approach to protect the stability of the streambank, replace the invasive honeysuckle with native shrubs and bio-engineering techniques such as log fascines and live stakes.

Management Guidelines

HOLISTIC APPROACH

The Wyomissing Creek is part of a much larger system – it flows to the Schuylkill River, which in turn joins the Delaware River near Philadelphia, and eventually empties into the Delaware Bay. Likewise, there is a diverse set of land uses upstream of the study area. The residential, commercial, and agricultural lands that drain to the Wyomissing Creek impact the health of the creek through either contributing or retaining floodwater and pollutants that flow downstream to the parklands. Considering this interconnected system, a holistic approach for the entire zone is necessary.

Engage the Wyomissing Creek Watershed Coalition to take action on stormwater management issues within the Wyomissing Parklands as well as other areas, upstream or downstream, which are owned and managed by the Borough. This partnership will aid in identifying and implementing an approach to better redirect, detain, and mitigate stormwater runoff and floodwaters.

MOWING

Refer to Zone 1 for mowing guidelines for fields, meadows, and turf trails.

INVASIVE SPECIES

Invasive species are a concern throughout the Wyomissing Parklands. Refer to Zone 1 for considerations regarding invasive species management in meadows and fields. Refer to Appendix D, Vegetation Management for greater detail on supporting native vegetation and specific management interventions for individual invasive plant species.

Within the riparian zone, bush honeysuckle (*Lonicera maackii*) is overtly present and shapes the character of the streambank. Removal should be approached cautiously, thoroughly, and incrementally to maintain streambank while native species are established. The plantings, though invasive, are providing ecological services by retaining the integrity of the streambank. Wholesale removal of the shrubs and root systems would lead to extensive erosion and sedimentation. Instead, cut every other or every third honeysuckle a few inches above the ground and treat cuts with an herbicide. Interplant native species which will stabilize the streambank as the honeysuckle root decay. Repeat this process each growing season while taking care to remove any new honeysuckle volunteers.

TREE PLANTING

Trees provide numerous ecological benefits - clean air, reduced temperatures, wildlife habitat, etc. Specifically within the Wyomissing Creek riparian zone, tree roots are needed to stabilize streambanks and tree canopies will provide thermal cover to protect trout waters from overheating.

There are numerous locations where native tree plantings can be installed throughout Zone 2 to increase tree canopy cover, reduce mowing maintenance, and to stabilize vulnerable riparian areas. Refer to Appendix I for a map indicating tree planting opportunities.

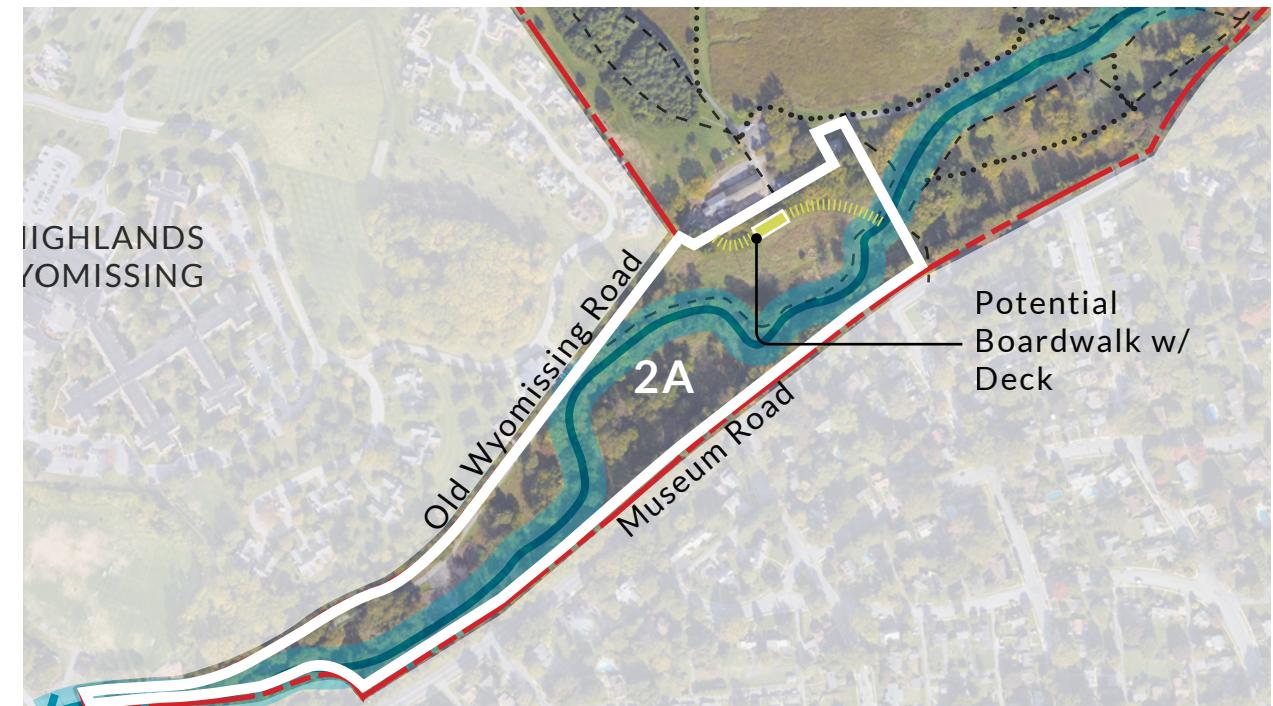
TRAILS

Throughout the riparian zone there are opportunities to reroute or refine the trail network. For instance, there are several trail segments that are redundant. The portion between the Park Barn and Ruth's Bridge is of particular note where there are a number of grass, packed earth, and paved trails. Duplicate trail segments should be closed where possible. Provide a physical barrier, such as a brush pile, along with informational signage to alert visitors to new trail layouts. Refer to Appendix I, Trail Issues Map for specific trail remediation locations identified in the field.

Additionally, the trail proximity to the creek creates a pinch point. The closeness of the stream and trail precludes the vegetative cover that is typically present along healthy waterways. Where feasible, and per public access and maintenance constraints, trails should be rerouted to provide a 35-foot riparian buffer. Native trees and shrubs should be installed within the buffer to prevent erosion along the streambank and to capture pollutants before reaching the creek. Refer to Appendix G, Riparian and Watershed, for riparian buffer benefits.

EDUCATIONAL INTERVENTIONS

The Wyomissing Creek provides a significant opportunity to incorporate interactive educational components on the creek's history, value as a natural resource, and the current efforts to protect it. The mill race, the spring house, and the ruins at Cambridge Avenue provide opportunities for cultural interpretation or a "heritage walk." Streambank restoration, invasive species management efforts, and value as a trout stream are opportunities to educate the public on the creek's ecological function and importance. Refer to Appendix G for the Wyomissing Creek Coldwater Heritage Plan and the Cultural Aspects Map in Appendix I for additional information.



Zone 2A | Wyomissing Quarry to the Park Barn

The portion of Wyomissing Creek within this zone should receive some specialized attention. As noted previously, pollutants, debris, and floodwaters collect upstream from the study area and Zone 2A is where they first enter the Wyomissing Parklands. Zone 2A is the first line of defense when addressing water volume, velocity, and quality.

To stabilize soil and filter nutrients, denser native plant growth, especially with interlocking root systems are needed. The wet meadows and forested wetlands within this zone should move to successional habitat with attention to remove and prevent invasive species. Tree plantings should be implemented wherever possible. Refer to Appendix I for a map indicating tree planting opportunities.

Trails and service access below the Park Barn should be developed to work with flood waters rather than against them. The regular flooding in this area has led to significant trail erosion in the wet meadow located between the Park Barn and the Wyomissing Creek. Trails within this location should consist of mowed paths only. Asphalt, millings, gravel, or other hardscapes are not suitable in this area as they washout and contribute to sedimentation in the creek. A boardwalk, connecting the main trail at the Park Barn to the footbridge near Museum Road and State Street would provide pedestrian access with minimal site disturbance, routine maintenance, or conflict with natural flood events. Service lanes within this area should be abandoned wherever possible and should be stabilized with native seed appropriate for floodplains to minimize erosion or invasive species. If needed, minimize mowing and maintain them as meadows and discontinue use as trails.

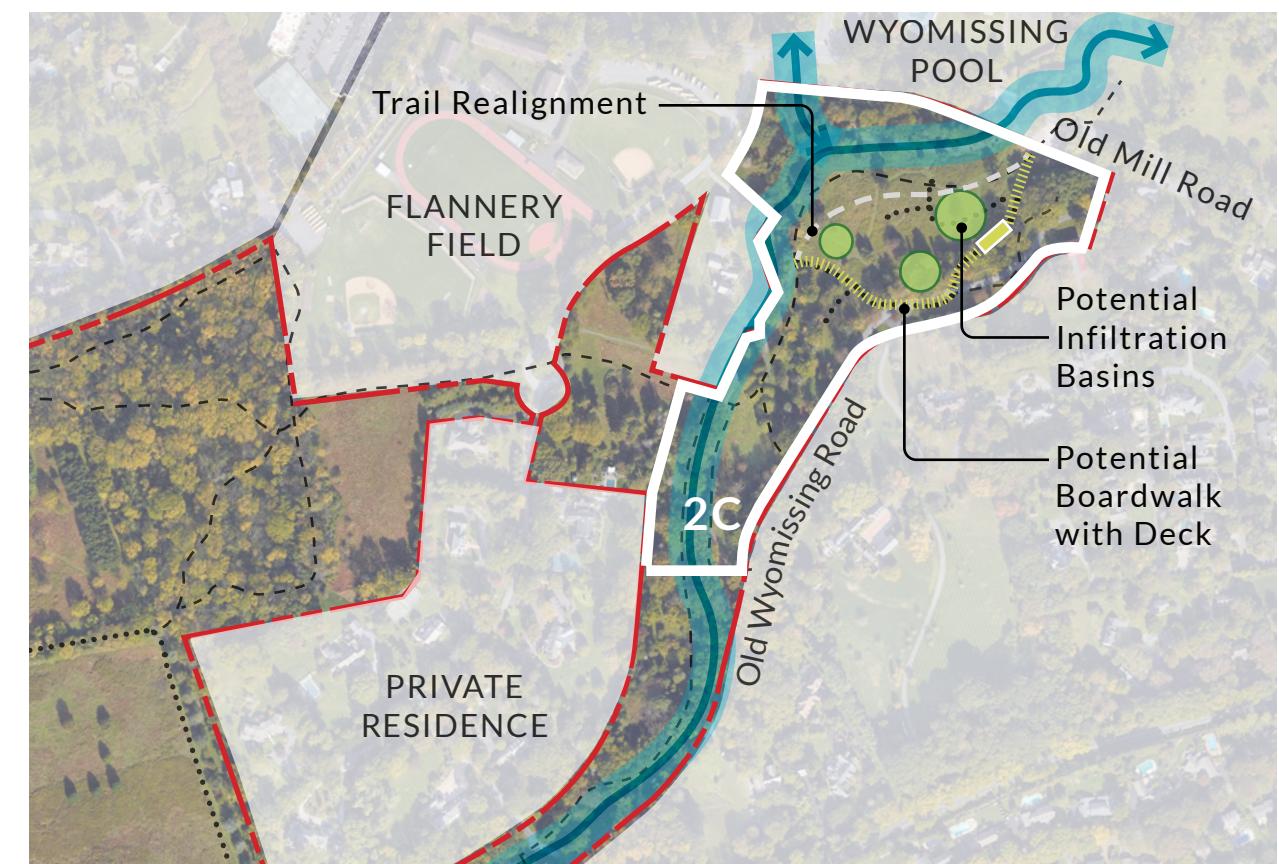
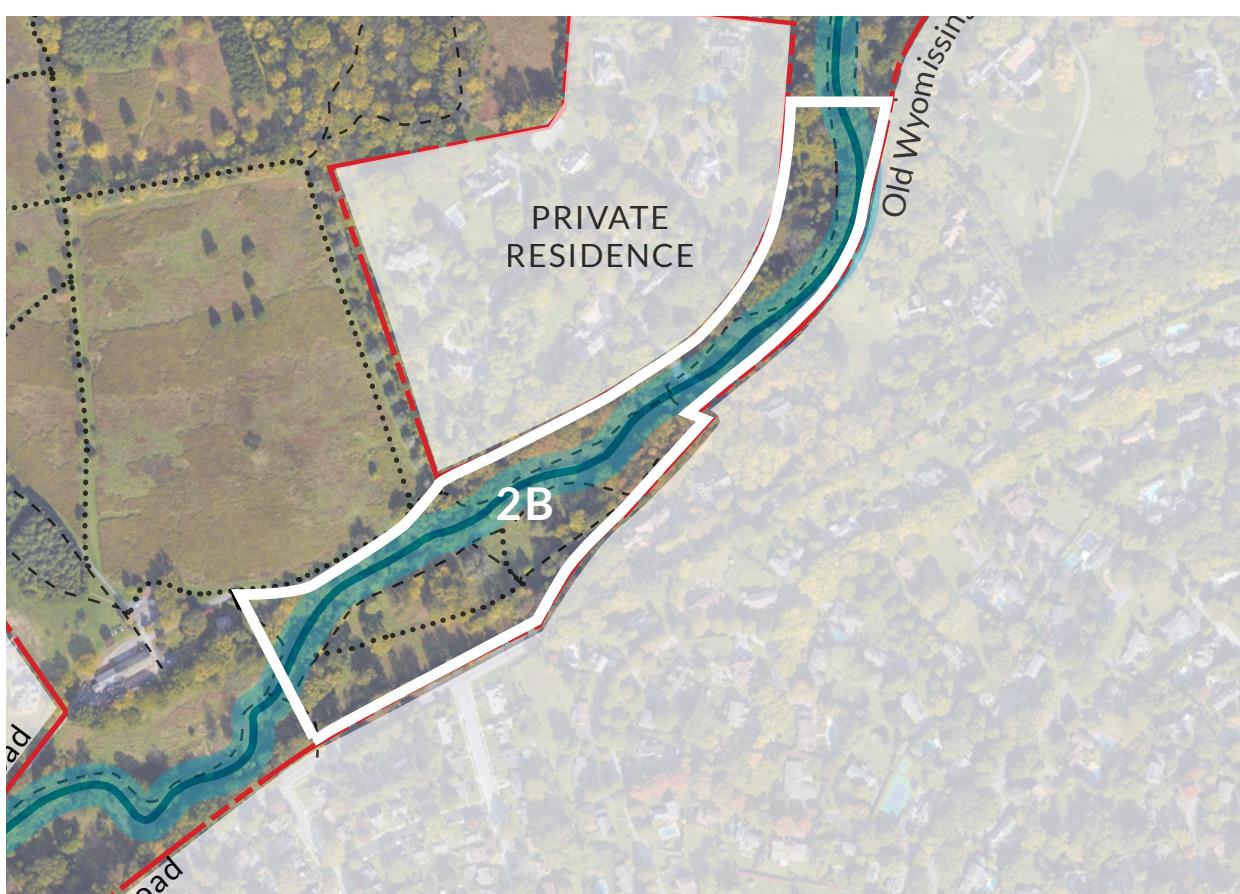
Municipal yard waste, leaf composting, and storage facilities are located in this zone midway between the Park Barn and the Wyomissing Quarry. All yard waste and leaf collections throughout Wyomissing Borough are brought to this location. The Borough should consider relocating these operations outside of the floodplain. Unfortunately, the parklands do not have a location that would meet this need without negatively impacting user experience or neighboring properties. Should these operations remain in place, retention facilities and walls to prevent debris reaching the creek are necessary. From a user experience perspective, screening - plantings or fencing - should be added to improve the aesthetics along the walking path.

Zone 2B | Park Barn to Creek Trail departure from Old Wyomissing Road

This stretch of the Wyomissing Creek is characterized by its proximity to trails and Wyomissing Road. The most notable pinch point is a portion of failing stone retaining wall along Wyomissing Road. The wall needs to be stabilized and supported through additional stabilization upstream of the wall. In lieu of a fence for pedestrian or vehicular safety, plant native trees which will stabilize the streambank as a living fence. Pursue General Permit 3 (GP-3) to facilitate streambank stabilization. Other riparian areas with the need for streambank stabilization could be combined under a single GP-3 permit if limited to 500 linear feet total.

The primary vegetative cover along this portion of the stream is well-maintained turf lawns dotted with trees. The goal is likely to maintain views between walking paths and the stream or ease access for fishing. Lawns and fields within this zone should be incrementally abandoned and transitioned to native riparian vegetation. A mowing regimen as outlined in Zone 1 would prevent woody vegetation from taking over. Alternatively, mowed grass paths could be incorporated at intervals to create viewing points or for anglers to cast and retrieve. Refer to Appendix I for a map indicating tree planting opportunities.

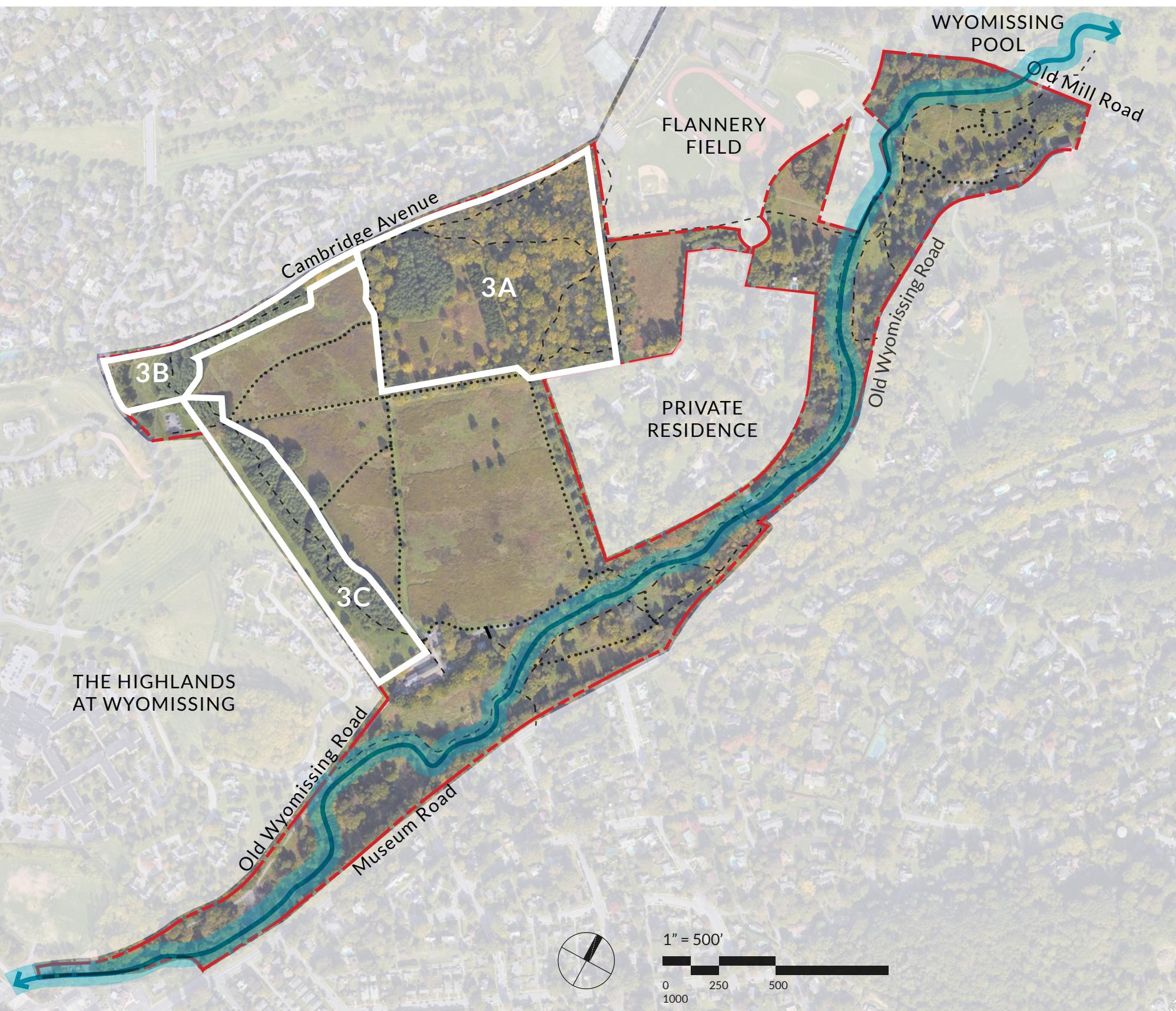
Within this zone, the Waverly Street stormwater outfall is the largest concern when addressing runoff, erosion, and water quality. The outfall requires regular observation and maintenance of the outfall pipe and the rock lined stormwater outfall to slow the velocity of stormwater and capture debris before it reaches the creek. For example, level spreader(s) and/or terraces would aid in slowing the velocity of water and capturing large debris before it reaches the creek. Work with the Wyomissing Creek Watershed Coalition establish a maintenance plan. Refer to Appendix I for mapping identifying stormwater and streambank erosion locations.



Zone 2C | Creek Trail departure to Old Mill Road

Zone 2C is the northern most riparian area and the furthest downstream within the full study area. Stormwater runoff and flooding pose threats due to the downstream position. Contributing factors include the abandoned bridge, the constriction of the stream channel, and the adjacent elevated trail and service road which effectively serves as a dam and diverts floodwater back into the creek. These factors, combined with greater water volume during and after storm events, lead to water overtopping the banks. A properly placed culvert would redirect floodwater into the floodplain. Refer to Appendix I for mapping identifying stormwater and streambank erosion locations. The Old Mill parking lot should continue to be utilized as a berm to detain stormwater and floodwater away from the parking area and street. As previously mentioned, a partnership with the Wyomissing Creek Watershed Coalition would facilitate this work. Coordinate with the Coalition to secure an engineered design, for the whole zone, to better direct, detain, and infiltrate stormwater and floodwater.

Similarly to Zone 2A, regular flooding in this area has led to significant trail erosion. Review trails to remove redundancy or relocate trails out of flood areas, as discussed in the Zone 2 Management Guidelines. Relocating trails away from the creek creates the opportunity to establish a wider riparian buffer (35 feet is the recommended width). Refer to Appendices for Streamside buffer fact sheet. Where trails are desired or needed for visitor or service access, the trail surface should be a mowed path or asphalt. Millings or gravel are not suitable they washout and contribute to sedimentation in the creek. Divert or minimize foot traffic in the existing wet meadow area serving as a detention basin by implementing a boardwalk connection between the Old Mill parking lot and trails beyond.



Zone 3 | Woodlands

Summary

Though smaller in area than either the meadows or riparian zone, woodlands comprise approximately a quarter of the study area. Native woodland habitats provide extensive benefits such as purifying air and water, reducing flood risks, providing barriers against sound or wind, and providing habitat for wildlife. The woodlands provide forest edge habitat due to their smaller size, often linear nature, and open canopy coverage.

Management Objectives

- Integrate trails for passive recreation and to minimize ecological impact.
- Manage habitats for native plant communities over time to maximize wildlife value and ecological function.
- Facilitate environmental educational opportunities and future passive recreation uses.

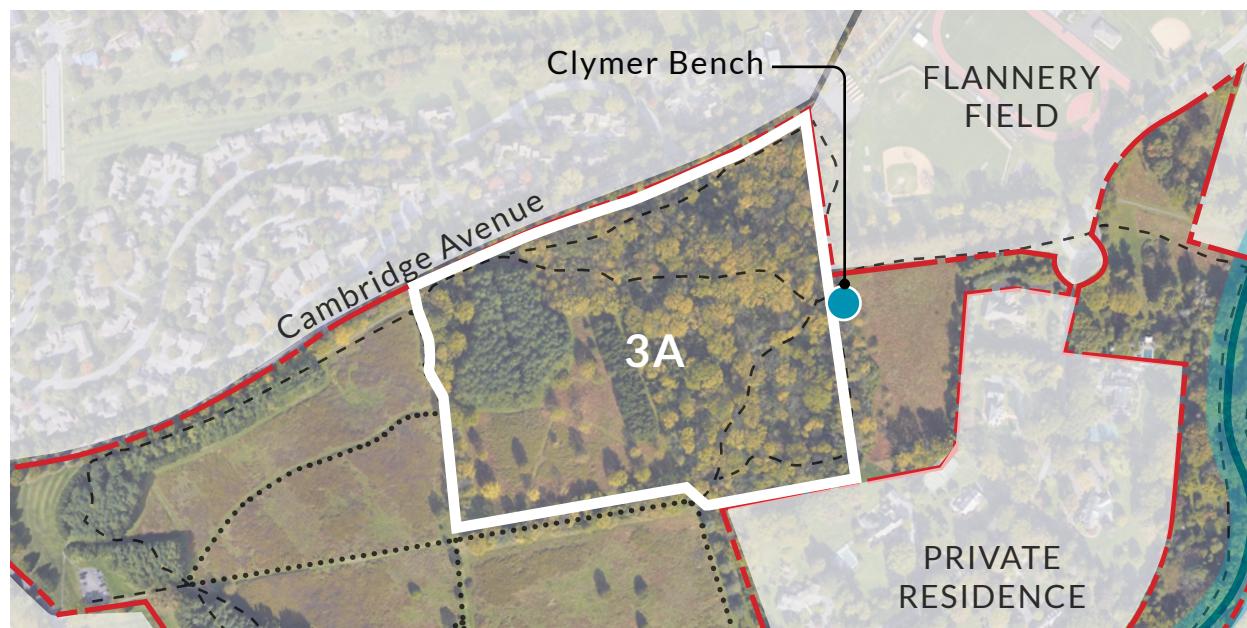
Management Guidelines

INVASIVE SPECIES

Prior to embarking on any forest regeneration efforts, invasive species and deer management need to be addressed. Refer to Appendix D, Vegetation Management for greater detail on supporting native vegetation and specific management interventions for individual invasive plant species. Refer to Appendix E, Deer Management, for additional information regulations and opportunities to manage the deer herd in the Parklands.

Invasive species management is an essential component for forest regeneration. Invasive plant species out-compete native species for resources and deer browse further exacerbates the issue. Species of concern within the woodlands include, but are not limited to, Japanese barberry, Callery pear, multiflora rose, autumn olive, porcelain berry, oriental bittersweet, shrub honeysuckle, and tree of heaven. Cleaning all maintenance equipment, including boots and gloves, would prevent the spread of plant diseases and the introduction of unwanted species. Cleaning is especially important after performing invasive plant removal.

Refer to Appendix C, Forest Management, for additional information and best management practices in Pennsylvania forests.



Zone 3A | Mixed Woodland Block at Clymer Bench

As the largest woodland tract within the study, Zone 3A faces the largest number of threats. Overall, the woodland has very low habitat value. The stand is overrun with invasive species and is highly degraded, partially due to ash mortality. Due to its scale and topography, accessibility for maintenance will be a challenge. An initial management activity is to establish maintenance access for the management of invasive species. Utilizing a forestry mulching mower, the invasive shrubs (primarily bush honeysuckle) that comprise the understory should be mowed to facilitate management actions. Reclaim the mulch produced by the shrubs as a groundcover to smother invasive and undesirable plant species that may emerge from the seed bed. Refer to Appendix D to guidelines and additional information on hazard tree monitoring and dead wood management. After invasive species are under control, plant native trees with protection from deer herbivory and sow native species seed as a herbaceous cover for soil stabilization. Refer to the Appendices and Native Plant materials

Engaging professionals beyond this study to pursue a forest management or forest stewardship plan which parcels the area in smaller tracts to prioritize and facilitate management strategies. Forest Stewardship Plans can be a prerequisite for forest management grant funding programs. The Pennsylvania Bureau of Forestry, William Penn Forest District 610.582.9660 is an essential adviser and resource for Forest Stewardship Plans. Refer to Appendix C for additional information.

Beyond the ecosystem management considerations, this woodland contains both official and unauthorized trails. The trails created and maintained by the Borough have eroded in places and are at risk of falling trees. Reconfigure trails to avoid steep slopes or follow contours as well as implementing waterbars or other devices to reroute water. Hazardous trees along the interior trails should routinely be inspected and any concerns be remedied.

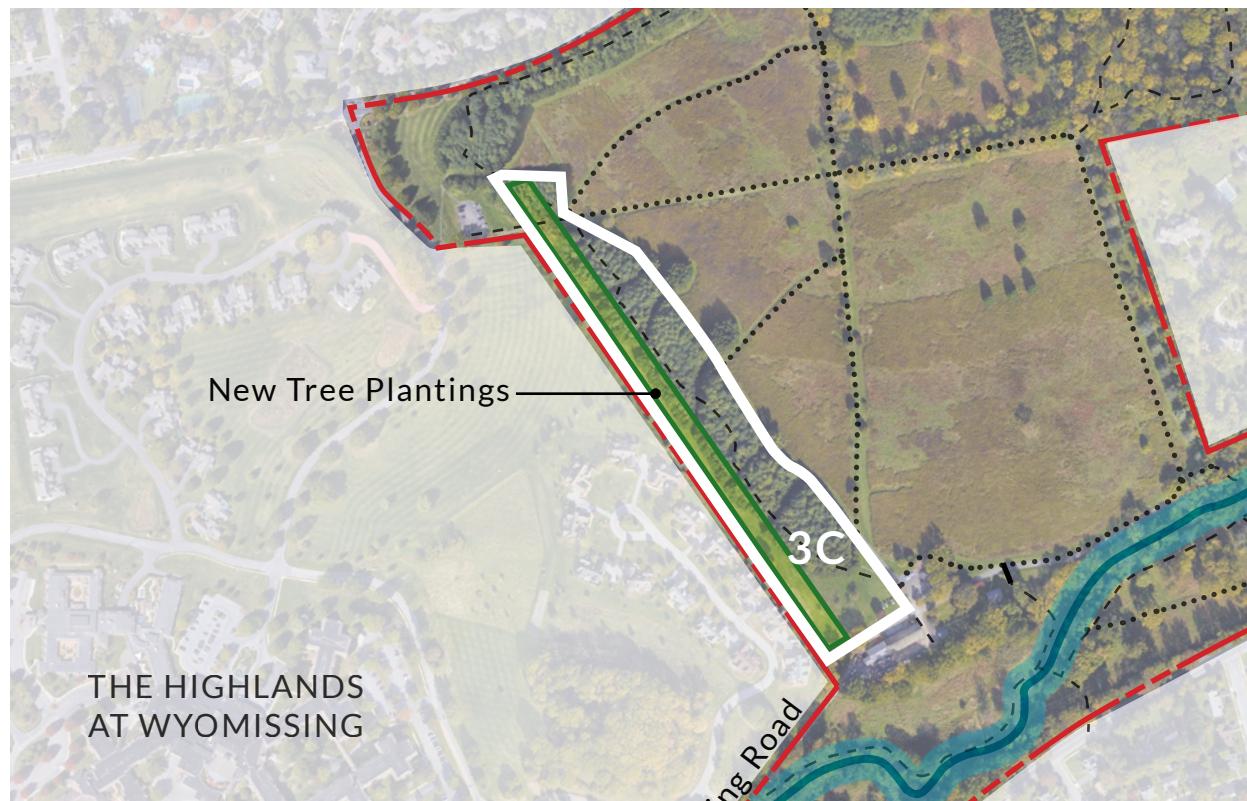
The unofficial trails within the stand are used for mountain biking. These trails are poorly located and lack considerations to protect from erosion. Due to the passive recreational nature of the parklands, these trails should be closed to avoid further impact to the woodland.

Zone 3B | Mixed Woodland Border along Cambridge Avenue

Measuring no more than 100' in width, this forest stand provides a border between the Golden Meadow and Cambridge Avenue. Plant composition includes mostly deciduous species adjacent to the road, including a row of sweetgum trees planted as street trees. Planting adjacent to the Golden Meadow has a richer mix of species but tends towards evergreens.

There is a series of existing swales located between Cambridge Avenue and the Pinewoods Trail. These are potential stormwater detention areas which could be utilized to accept stormwater runoff from trail and upland contributing areas. Refer to Appendix I for mapping identifying specific locations for trail remediation. The area north of the Parkview Drive intersection, which is currently lawn, should be converted to a vegetated stormwater detention with native species to treat stormwater runoff from the adjacent parking area and roads. Partner with the Highlands Grounds and Maintenance Committee as this area is currently mowed but not owned by the Highlands. Otherwise, management within this woodland tract is minimal. Hazardous trees along the interior trees should routinely be inspected and any concerns be remedied. Refer to Appendix D to guidelines and additional information on hazard tree monitoring and dead wood management. Additionally, invasive species should be monitored and removed as noted in previous sections.





Zone 3C | "Enchanted Forest" bordering the Highlands at Wyomissing

Woodland tract 3C is a maturing stand of mixed evergreen species. Dominant species are eastern white pine and Norway Spruce. The mature evergreens that characterize this stand allow very little light to reach the ground. The restricted access has shaped the stand as there is minimal vegetation – native or invasive – occupying the understory. There are a number of dead branches at head-height which can be hazardous. These branches should be regularly pruned to prevent injury. Hazardous trees along the interior trees should routinely be inspected and any concerns be remedied. Refer to Appendix D to guidelines and additional information on hazard tree monitoring and dead wood management.

All the trees appear to be relatively close in age. New plantings, of varying size and species, should be installed within the interior, especially where gaps in the canopy are present. Species diversity will increase the ability to withstand or adapt to disturbances. Monocultures, or single species plantings, are more likely to suffer total loss if a pest or disease is introduced. Incorporating trees of varying ages will allow younger trees to fill gaps left as mature trees are lost. Plantings of this nature also reduce the potential for invasive species to infiltrate.

Tree planting should also be implemented between the woodland stand and the Highlands at Wyomissing property. There is an expansive stretch of lawn, measuring 40' wide on average and stretching nearly a quarter mile. Converting this lawn to woodland habitat will deliver ecological benefits, reduce operational costs associated with gas powered mowers, and increase aesthetics by incorporating species with flowers and fall color. Tree planting should be performed incrementally to monitor success and meet maintenance capacity parkwide. A partnership with the Highlands Grounds and Maintenance Committee, an organization operated by Highlands residents, would be an opportunity to share installation and maintenance costs.

Zone 4 | Park Infrastructure

Summary

The Wyomissing Parklands provides immeasurable environmental and cultural benefits. Most importantly, it presents the opportunity for residents and visitors to be fully immersed in the natural environment. In order to achieve these services, the parklands require infrastructure to accommodate visitors and maintain both the natural and built environment.

Management Objectives

- Preserve the park as a natural landscape which provides passive recreational opportunities.
- Enrich the visitor experience with comfort amenities and environmental education.
- Integrate sustainable best practices in routine and long-term maintenance operations.

Management Guidelines

PARKING

The Wyomissing Parklands are primarily served by three designated parking areas: Old Mill parking area, Cambridge Avenue parking area, and the Park Barn parking area. The community survey completed as part of this study did not indicate that parking availability was limited or a concern. Three quarters of respondents stated walking was their primary means of arrival. However, Park and Shade Tree Commission members indicated that the park is also visited by many people who are not Borough residents and that additional parking may be required. Additional investigation, such as traffic counts, would shed more light on how effectively current parking configurations meet the demand for parking demands.

The parking areas are all compacted gravel with limited marking to delineate parking spaces. Including striping, curb stops, or other markers would lead to more organized parking arrangements as visitors and vehicles rotate in and out throughout the day. Fully paving the parking areas would facilitate the addition of pavement markings and decrease the potential for gravel erosion and deposit into the creek. The increased impervious area and resulting urban heat island effect should be mitigated to the fullest extent possible by incorporating native shade trees.

Of the three existing parking areas, the Cambridge Avenue lot is the only one with viable means for expansion. The current layout easily accommodates approximately twenty vehicles but there is an opportunity to expand parking within the surrounding turf areas. Refer to Appendix I for potential tree planting opportunities.



^ Park signage and information at Old Mill parking area.

Any parking reconfiguration or expansion should include stormwater management facilities to address sediment and pollutants from runoff. Planting of native trees around the parking area and in stormwater detention areas will increase stormwater recharge and decrease relative temperatures. Refer to Appendix I for tree planting opportunities and for specific locations for stormwater and streambank erosion. Collaborate with the Wyomissing Creek Watershed Coalition to implement an MS4 and stormwater detention plan.

Should the Borough determine expanded, paved, or new parking areas are not feasible, nearby opportunities to provide overflow parking include:

- Wyomissing Quarry Soccer Fields
- Wyomissing Swimming Pool*
- Wyomissing Junior/Senior High School*
- Wyomissing Foundation*
- Street parking along Parkside Drive and other nearby roads

*Locations may require a shared agreement based on hours of operation and peak visitation times.



P1 Cambridge Avenue- Existing - Approx.. 18 Spaces



P1 Cambridge Avenue- Proposed - Approx.. 36 Spaces



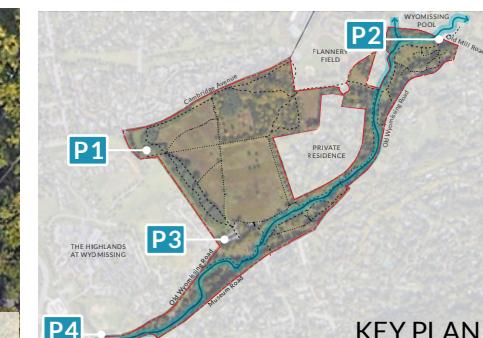
P2 Old Mill Parking Area



P3 Park Barn Area



P4 Old Mill Parking Area



^ Parking reconfiguration study for the Cambridge Avenue lot.

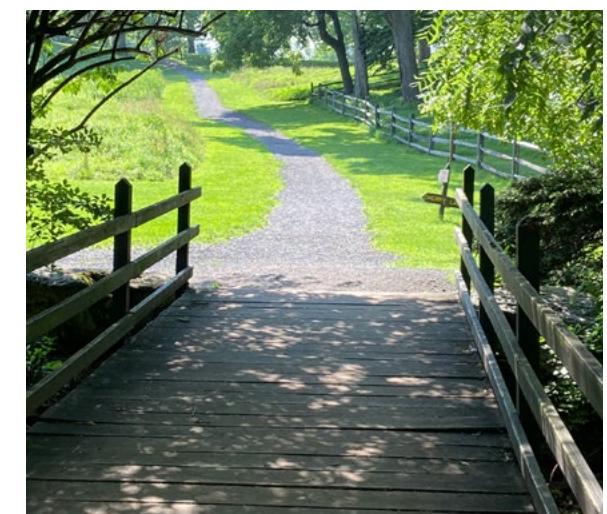
PEDESTRIAN & VEHICLE CONFLICTS

During the site assessment process, the project team installed and monitored trail counters to identify trail usage patterns. Old Wyomissing Road, which runs parallel to the creek for the full length of the study area easily received the heaviest use. Old Wyomissing Road also provides public vehicular access from Old Mill Road to the Park Barn. A locked gate restricts travel beyond the Park Barn to the Wyomissing Quarry when the park is closed. Accounting for this periodic road closure, the Borough should explore the elimination of vehicular access on Old Wyomissing Road. Road closures will require coordination with emergency services to maintain accessibility, maintenance operations, and the Highlands where their property accesses Old Wyomissing Road.

In the case a full or permanent road closure is not desirable or feasible, other alternatives to reduce pedestrian and vehicle conflicts should be explored. Traffic calming devices such as speed bumps, striping to delineate pedestrian spaces, or seasonal closures to correspond with periods of peak visitation should all be considered.

BUILDINGS & FACILITIES

A number of barns, spring houses, and other buildings are spread throughout the Wyomissing Parklands. Although the maintenance and management of buildings is not included in this plan, feasibility for an environmental or nature education center should be evaluated. The community survey completed as part of this study identified sizable interest for educational programming. The Goodman Barn is best suited for this purpose. The location provides easy access by car from Old Mill Road as well as a central location for pedestrians approaching from the parklands to the south or the Reading Public Museum to the northeast. Current equipment storage could be maintained in the lower levels with the upper floor as an opportunity to host small exhibits. Additional educational programming could be hosted outdoors and supported by educational signage throughout the parklands.



^ One of many bridges providing a pedestrian crossing point.



^ An old stone wall providing character near the Goodman Barn.



^ The Goodman Barn, currently used for storage.

Path to Implementation

Buildings & Facilities

Monitoring & Annual Reporting

Funding

Partnerships

Phasing

Additional Studies & Engineering Needed

Path to Implementation

The Borough of Wyomissing is well-equipped to implement the management actions outlined within this Stewardship Plan. The Borough is benefited by an active and engaged community, adept at pursuing and acquiring grant funding, and supported by numerous partnership organizations. Additionally, as the landowner, it is imperative that the Borough prioritize and direct decision making and communication between partners and the community.

Buildings & Facilities

Wyomissing Borough staff, park maintenance staff, and any other decision makers involved in implementing the Stewardship Plan should develop a 3-to-5-year work plan.

The work plan should address the following:

- Identify, prioritize, and implement management actions that do not require additional funding.
- Develop a strategy to identify and pursue grant applications with special attention to prerequisites (such as the Forest Stewardship Plan identified in Zone 3).
- Identify fundraising opportunities or budgetary efficiencies.
- Establish partnerships and volunteer programs to assist with public education, grant proposals, and implementation efforts.
- Determine feasibility and funding for additional studies and engineering drawings identified in this plan.

Monitoring & Annual Reporting

The Stewardship Plan should endure as a living document. Regular monitoring and annual evaluations (or more frequently) will determine the plan success, identify the need for more information or resources, and maintain public transparency and awareness. Monitoring the successes of the plan will aid the Borough in identifying future funding or staffing needs as well as provide information support for grant writing.

Funding

Unfortunately, time and material costs are an unavoidable obstacle to implementation. Some funding is likely available within current or future fiscal budgets as well as savings generated (fuel, work hours, etc.) by the proposed interventions such as mowing reduction. Regardless, additional funds are required to realize larger management goals. The Borough of Wyomissing should establish a "Friends of the Wyomissing Parklands" group which will advocate for and lead fundraising efforts, grant pursuits, volunteer events, community engagement.

Grant funding will be an invaluable tool for enacting proposed management activities and public amenity upgrades. Following the development of a work plan, pursue multiple grant opportunities which match the proposed improvement. Redundancy will provide greater funds for implementation and accommodate any potential grants that are not attained.

There are grant opportunities for many topics covered in this plan such as adaptive management on trails related to stormwater impacts; adaptive management for existing stormwater facilities; interpretative signage for the benefits of meadows, grasslands, pollination, wildlife habitat, and stormwater recharge.

The following grant opportunities are available and applicable to the work proposed in the Stewardship Plan:

- Schuylkill Highlands Mini-grant Program (www.schuylkillhighlands.org/mini-grants); awarded for supporting the Schuylkill Highlands Conservation Landscape goals. Most applicable goals include:
 - Connect Residents and Visitors to the Outdoors
 - Conserve, Protect, Restore, and Steward Resources
- America the Beautiful Challenge (www.nfwf.org/programs/America-beautiful-challenge) – for planting trees in parks with no matching required
- PA Native Plant Society (www.panativeplantsociety.org/grants.html) – for native plant installations in public parks
- Multiple PA DCNR Grants (dcnr.pa.gov/grants/)
 - Community and Watershed Forestry Grant; Provides financial assistance to identify, plan, and implement forest buffers, community-let planting, and lawn conversion within riparian zones.
 - Non-motorized Trails; Specifically intended for rehabilitation and maintenance for pedestrian only trails.
 - Park Rehabilitation and Development – Rivers Community Development (RCD); Intended to connect community to public waterways and restore the local watershed.

Partnerships

Luckily, the Borough of Wyomissing is not alone. Berks County is abundant with individuals and organizations that share the same values outlined in this Stewardship Plan. The community survey completed as part of this study, overwhelmingly identified Berks Nature (a third of all responses) as a partner and resource to implement environmental stewardship practices. The next most frequently suggested partner was Berks County Master Gardeners, identified by 8% of respondents.

Neighbors to the Wyomissing Parklands, especially larger institutions would be valuable partners as well. The Highlands, particularly the Landscape & Grounds Committee, has expressed interest in supporting Borough efforts however possible. Lucy Cairns, a member of both the Landscape & Grounds Committee and the Wyomissing Park and Shade Tree Commission would be a valuable liaison to unify efforts. Another neighbor, the Wyomissing School District, including the Environmental Club, STEAM Club, and Biology program expressed interest in using the parklands as an education tool. Additionally, many students interested in ecology and the environment would benefit from volunteer or work study programs within the parklands.



^ Berks Nature headquarters

Additional partnerships and organizations, in alphabetical order, for consideration include:

- Audubon Society (www.audubon.org)
- Berks County Conservation District (berkscd.com)
- Center for Watershed Protection (cwp.org)
- Fleet Feet and Running Clubs (www.fleetfeet.com/s/westreading)
- PA DCNR (www.dcnr.pa.gov)
- PA Game Commission (www.pgc.pa.gov)
- Penn State Extension
 - Berks County Master Gardeners (extension.psu.edu/programs/master-gardener/counties/berks)
 - Berks County Master Watershed Stewards (extension.psu.edu/programs/watershed-stewards/counties/berks-schuylkill)
- Reading Public Museum, especially the arboretum garden volunteers ([www.readingpublicmuseum.org/arboretum](http://readingpublicmuseum.org/arboretum))
- TCO Fly Shop (www.tcoflyfishing.com)
- Trout Unlimited (www.tu.org)
- Scout Groups
- Widoktadwen Center for Native Knowledge (widoktadwen.org)
- Wyomissing Creek Watershed Coalition
- Wyomissing Foundation (<https://wyomissingfoundation.org/>)
- Wyomissing Environmental Advisory Council (EAC)

Phasing

The top priority on the road to implementation is maintaining public awareness and support for the Stewardship Plan. The Borough of Wyomissing, residents, and visitors should have a shared vision for the future of the parklands and how to make that vision a reality. Maintain transparency and secure support for management operations – especially those that change existing conditions or procedures which are most likely to meet resistance to change. Establishing a Friends of the Wyomissing Parklands as previously detailed will

Prior to investing time or funds in habitat restoration efforts, both the deer population and the prevalence of invasive species needs to be addressed. Both threats require a consistent and dynamic approach to avoid backsliding to current conditions. Deer browse will heavily impact any planting efforts associated with revegetation or streambank stabilization and contribute to plant loss and potential failure. Invasive species management needs to be in place as well or disturbance for new plantings, trail realignments, or streambank work will provide an opportunity for invasive species to take hold.

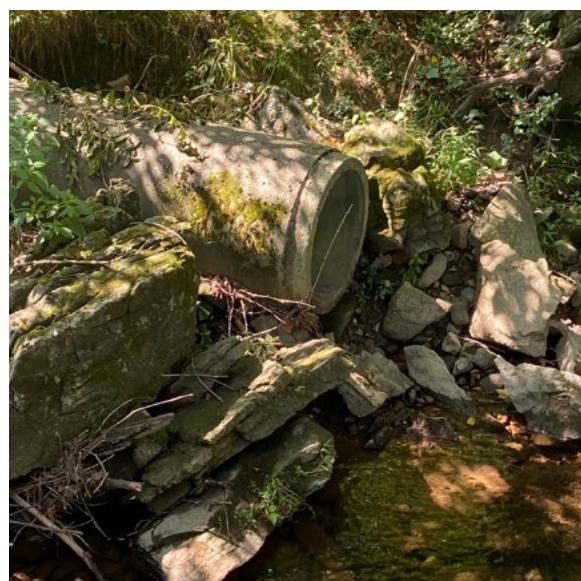
Additional Studies & Engineering Needed

A landscape management plan communicates the intent and framework for landscape maintenance. The Wyomissing Parklands Stewardship Plan should serve as a catalyst for deeper investigation and system-wide thinking regarding natural resource management.

As previously mentioned, the Stewardship Plan is intended as a guiding document to determine and prioritize future resource management, maintenance, educational opportunities, and park uses. While there are a number of initiatives that could result from this plan, a deeper understanding of the specific site constraints are needed to inform a comprehensive, holistic, and properly phased management approach. This plan lays the groundwork for further and more comprehensive studies, masterplanning, and engineering drawings to guide the management and preservation of the Parklands.



^ Trail erosion, typical throughout the study area.



^ Stormdrain outfall into Wyomissing Creek.

Additional Study

In depth studies will enhance the Borough's understanding of site constraints and the level of investment needed to meet current and future goals. Further study will also better define priorities and phasing for implementation. For instance, an Integrated Vegetation Management Plan would address site and habitat specific concerns for managing invasive species. This information would be most helpful prior to abandoning or relocating trails so that work could be completed with the least amount of ecological disturbance.

At a minimum, the following studies are recommended as future efforts:

FOREST MANAGEMENT PLAN (NRCS)

A Forest Management Plan will provide a deeper, site specific understanding of forest health including species composition, threats from disease or pests, and limitation or opportunities. This plan will inform the Borough's decision making around preserving, revegetating, or expanding the forested areas within the Parklands.

INTEGRATED VEGETATION MANAGEMENT PLAN

An Integrated Vegetation Management Plan will develop and promote stable native plant communities utilizing environmental, cost efficient, and site specific best practices. Specifically, this plan will identify management techniques tailored to individual species. For example, many invasive or undesirable plant species can be controlled through properly timed pruning or mowing to remove seed heads instead of relying on herbicides which far too often have adverse effects on nearby plant communities.

STREAMBANK STABILIZATION PLAN

The Streambank Stabilization Plan will identify site specific interventions to restore and stabilize streambanks. This plan will expand on generalizations identified in the Stewardship Plan and address methods to minimize disturbance to sensitive habitats should trails be relocated or the riparian zone impacted.

Engineering Drawings

Engineering drawings are necessary tools in developing specific costs, setting realistic timelines, and securing the required permits. Appropriate professionals should be engaged for the following:

- Stormwater or MS4 related efforts
- Renovation or expansion of parking areas
- New or realigned trails, including boardwalks
- Streambank stabilization or restoration projects
- Utility impacts or adjustments

Conclusion

Conclusion

Wyomissing Park is an amazing asset for the citizens of the Borough and the region. It is well used and much loved. As such, creating a sustainable stewardship program is critical to long term environmental function and preservation of the park.

The Stewardship Plan is intended to support both environmental systems and human enjoyment. The plan should help the Borough:

Celebrate Nature – Encourage volunteers, amateur scientists and others to participate in management of the park and provide educational programming while these hands-on activities are taking place.

Facilitate Enjoyment – Make use of the park comfortable, safe and seamless by providing amenities such as bathrooms, water bottle filling stations, shade, benches and trash cans.

Educate and Participate – Create a culture of stewardship among Borough residents and park users. Provide a new nature center as a central location where these activities and enhanced programming, such as camps, can take place. This can also provide support and a place to stage programs and volunteer activities as well as storage for materials

The section of the park from Old Mill Road to Lancaster Pike is one of the most beautiful and naturalized sections of the park. The presence of Wyomissing Creek adds the experience of the soothing presence of water, wildlife observation and additional recreational opportunities such as fishing. As a Class A, high quality trout stream, it is even more critical to ensure that the water quality is not impacted by flooding or by changes to water temperature. A long-term plan is needed to protect this valuable resource.

The Wyomissing Plan Stewardship Plan is the first step in that process. It sets a baseline against which to measure environmental performance as recommendations are implemented. Although more detailed study is needed in many areas, this plan organizes that process and outlines specific needs and tasks for the Borough to begin.

This plan is designed to support the Borough in management of the land by organizing the park into Priority Management Zones – each with its own plant community, character, and stewardship requirements. Priorities are established to help the Borough seek funding to conduct more in-depth studies, form partnerships with volunteers and like-minded groups such as the Wyomissing Creek Watershed Coalition, and to tailor maintenance activities to staff capabilities and resources.

The Wyomissing Park Stewardship Plan sets the stage for the park and the Borough to be resilient and responsive to environmental challenges and for the Borough to effectively manage both the natural systems and human use for greatest enjoyment.