General Vegetation Maintenance Plan

Cornerstone Solar Project
Jefferson Township,
Washington County,
Pennsylvania

October 2025

Cornerstone Solar Project

Prepared For:

Cornerstone Solar, LLC
520 Maryville Centre Drive, Suite 400
St. Louis, MO 63141

Prepared By:

TRC Environmental Corporation
317 East Carson Street
Suite 113
Pittsburg, PA 15219

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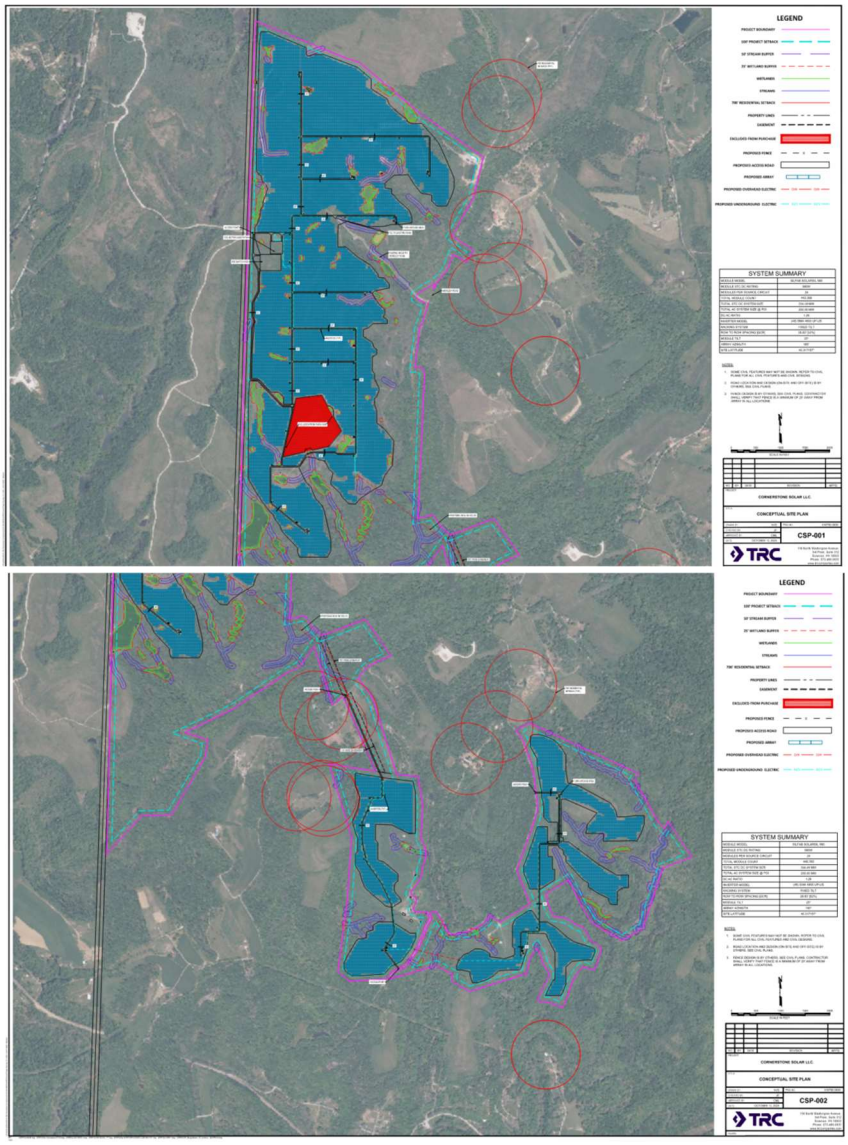
1.0 Introduction

On behalf of Cornerstone Solar, LLC (REV), TRC Companies, Inc. (TRC) has prepared this General Vegetation Maintenance Plan (VMP) to serve as a reference document that provides recommendations for operation and maintenance best practices. This VMP supports the proposed installation of the Cornerstone Solar Facility, located in Jefferson Township, Pennsylvania (Project Area).

The Project Area consists of approximately 730 acres within the fenced boundary of the property with a proposed solar generation of 200MWac. The Project Area is depicted below:



This VMP will describe appropriate procedures, best management practices for the existing vegetation that is to remain, and revegetation strategies to be implemented. This VMP will also describe appropriate procedures and provide strategies for invasive plants and noxious weed control, and maintenance and monitoring methods over the lifetime of the Project.

2.0 Purpose and Intent

Generally, this VMP outlines directives regarding the property grounds maintenance and management of existing and future vegetation found growing within the Project Area to ensure the safe and reliable production and delivery of electrical power consistent with responsible land use and minimal impacts for the benefit to the ecosystem in and around the Project.

Specifically, the purpose and intent of this VMP is to describe how the final design of the Project includes the planting, and maintenance of native plantings and outline plans to control planted and invasive vegetation during construction and operations.

3.0 Vegetation Planting and Revegetation Implementation

To the extent possible, the Project will implement vegetation management, maintenance, and landscaping measures including;

- planting of temporary groundcover (if applicable) and long-term groundcover
- planting of groundcover and pollinator-specific groundcover
- invasive weed control
- protection of woody vegetation
- vegetation monitoring, maintenance, and management

Temporary Vegetation

During construction and/or extensive maintenance activities, temporary stabilization practices must be implemented to reduce soil erosion during storm events and minimize damage to soils during intensive equipment traffic. Best management practices (BMPs) to address these concerns, including use of temporary (annual) seed mixes (if applicable), should be referenced in the Project's Erosion Control and Stormwater Management Plan under separate cover and shall be implemented to manage site conditions and erosion during construction and operations.

Additional guidance can be obtained from the Pennsylvania Department of Agriculture (PDA), the Washington County Conservation District (WCCD) and/or Penn State Extension.

For the recommended planting dates, seeding rates, and appropriate species for temporary vegetative cover, consult with the Washington County Conservation District for seeding guidelines or Penn State Extension's agronomic resources. It is also advisable to consult with a qualified seed supplier or agronomist for site-specific recommendations and temporary seeding

timelines.

According to Penn State Extension's guidelines for low-maintenance turf areas (such as service areas, utility areas), their recommended seed mix for temporary cover is below. They also provide specific seeding date recommendations for annual ryegrass. In Western PA, they recommend the latest fall seeding of September 1st, based on the latest fall seeding dates to ensure adequate establishment before winter.

Table A. Seed mixtures for temporary purposes (areas needing temporary cover for quick erosion and dust control)

Applicable to Area 2 as defined in Table B

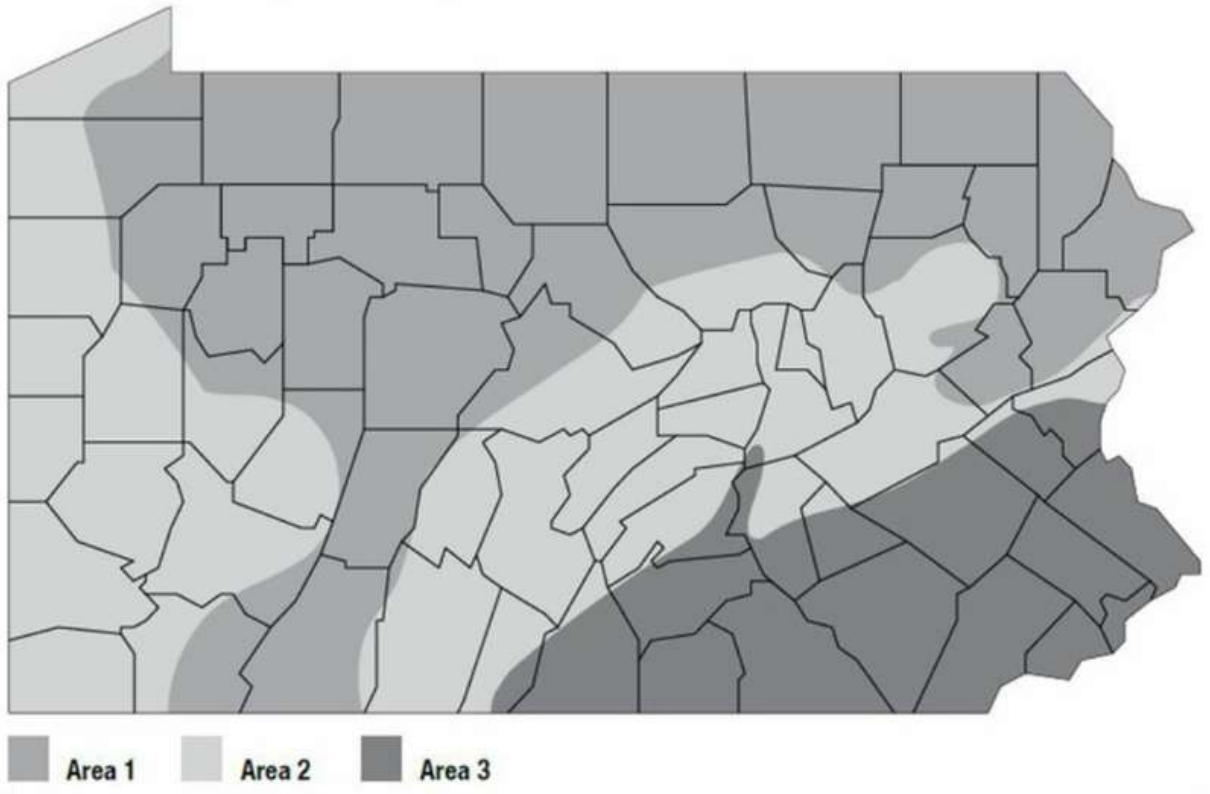
Turfgrass species	Percent	Seeding Rate
Annual or Italian ryegrass	100%	at 4-5 lb per 1,000 sq ft

Note: It is recommended that the contractor review the temporary seeding options with the seed developer prior to sowing seed.

Table B. Recommended latest fall seeding dates for cool-season annual cover crops by small grain management areas in Pennsylvania.

Species	Area 1	Area 2	Area 3
Winter rye	October 10	October 15	October 25
Winter wheat	October 1	October 5	October 15
Winter barley	n/a	September 25	October 1
Spring oats	September 1	September 10	September 15
Annual ryegrass	August 15	September 1	September 15
Crimson clover	n/a	September 1	September 15
Austrian winter pea	n/a	August 25	August 30
Hairy vetch	August 15	September 1	September 15
Forage radish	September 1	September 7	September 15
Rapeseed/canola	September 1	September 7	September 15
Turnip	September 1	September 7	September 15

Source: Penn State Agronomy Guide



Small Grain Management Areas in Pennsylvania. Source: Penn State Agronomy Guide (Figure 1.7-1)

Long-Term Vegetation

This section outlines the permanent groundcover strategy for disturbed areas within and adjacent to the solar array.

Solar Array Groundcover

Within the solar array, it is recommended that low-growing pollinator-friendly seed mixes specifically created for use under the arrays be used. These mixes may be comprised of warm- and cool-season grasses that do not typically exceed a height of two feet, thus eliminating concerns for shading.

Refer to ***Table 1. Suggested Solar Farm Seed Mix*** below for a suggested mix suitable for areas under the solar panels and within the fenced array perimeter. This grass seed mix is comprised of non-invasive, naturalized grasses that are well-adapted to the region and favorable for wildlife habitat and sustainable growth. It was developed specifically for low-maintenance grass plantings around solar array fields. It is intended to be installed inside the perimeter fencing and underneath the solar arrays. These grasses will mature to a height of approximately 2 to 2 ½ feet. This mix does not contain wildflowers but includes a low-growing pollinator-friendly species of white clover.

In addition, “pollinator pockets” can be created by using other pollinator-specific seed mixes and sown in locations throughout the site to promote a pollinator-friendly habitat. Note that the annual rye is an initial cover crop. Note that using a seed mix with shorter height varieties will reduce mowing regimens and allow the pollinator-friendly species to grow to their naturally occurring heights, resulting in optimum flower production in these areas.

It is recommended that pollinator seed mixtures for the vegetative buffer strips and pollinator pockets outside the perimeter fencing should be comprised of pollinator-friendly buffer seed mixes such as the example provided in ***Table 2. Suggested Pollinator Buffer Seed Mix***. These areas should establish a dense and resilient vegetative cover.

The seed mix in Table 2 is a native pollinator seed mix specifically designed to create high-quality habitat for pollinators and songbirds by providing season-long bloom, nectar sources, and shelter. It contains a balanced combination of native wildflowers and grasses, many of which are sourced from regional ecotypes (PA, WV, and NY). These species support a diverse range of pollinators and their larvae, including butterflies, bees, and other beneficial insects. This mix is intended for installation within designated pollinator pocket areas located outside the solar array’s perimeter fencing.

Table 1. Suggested Solar Farm Seed Mix

Table 1. Solar Farm Seed Mix – ERNMX - 186
Creeping Red Fescue
Hard Fescue, 'Sturgeon'
Hard Fescue, 'Sword II'
Chewings Fescue
Kentucky Bluegrass, 'Baron'
Kentucky Bluegrass, 'Navy'
White Clover, Dutch

Note: It is recommended that the contractor review these options with the seed developer prior to procurement and installation to confirm they remain appropriate based on current site conditions or any recent changes.

Table 2. Suggested Pollinator Buffer Seed Mix

Table 2. Pollinator Buffer Seed Mix – ERNMX - 610
Little Bluestem, Fort Indiantown Gap-PA Ecotype
Sideoats Grama, Butte
Partridge Pea, PA Ecotype
Lanceleaf Coreopsis

Purple Coneflower
Blackeyed Susan
Oxeye Sunflower, PA Ecotype
Swamp Milkweed, PA Ecotype
Tall White Beardtongue, PA Ecotype
Narrowleaf Mountainmint
Smooth Blue Aster, NY Ecotype
Marsh Blazing Star
Wild Bergamot, Fort Indiantown Gap-PA Ecotype
Wild Senna, VA & WV Ecotype
Golden Alexanders, PA Ecotype
Blue False Indigo, Southern WV Ecotype
Ohio Spiderwort, PA Ecotype
Gray Goldenrod, PA Ecotype
Flat Topped White Aster, PA Ecotype

Note: It is recommended that the contractor coordinate the procurement of any seed mix with a reputable seed developer after conducting on-site soil sample testing and sharing the results. The seed mixes recommended in this plan are preliminary, and we advise working closely with a reputable seed developer to refine the selections based on site-specific data and further validation prior to installation.

A desktop soil analysis for the Cornerstone Solar site in Jefferson Township (Appendix B), was conducted using the USDA NRCS Web Soil Survey. A total of 23 soil map units were identified within the approximately Project Area. The soils are primarily well drained (47.0%) and moderately well drained (43.4%), with smaller portions categorized as somewhat excessively drained (8.7%), somewhat poorly drained (0.8%), and unclassified (0.1%). Dominant soil textures include silt loams and silty clay loams, which are generally suitable for establishing native grasses and wildflowers.

Approximately six soil map units contain hydric soils or hydric inclusions, and disturbed soils such as Udorthents (strip mine soils) comprise over 34% of the site, particularly in gently sloping and steep terrain. These areas may require additional site preparation, such as decompaction or soil amendments, to support successful seed establishment.

Given the site's overall soil conditions, the seed mixes outlined in Tables 1 and 2 are generally appropriate for use under the solar arrays and within the designated buffer areas. However, some areas—particularly those with hydric soils or disturbed soils such as Udorthents—may require additional site preparation to support successful establishment. This may include soil decompaction, the use of recommended cover crops for rapid early stabilization, and the application of soil amendments in areas with poor fertility or compacted subsoils.

In wetter zones, supplemental seeding or species substitutions may be necessary to ensure adequate cover and long-term vegetation health. These adjustments should be made in coordination with a reputable seed developer, based on on-site soil testing and project-specific requirements.

The seed mixes in this plan serve as preliminary recommendations and may be refined based on soil testing data, input from seed suppliers, Township requirements, and practical considerations such as mowing

schedules, growth rates, and vegetation height limits. Final mix selection should be confirmed prior to installation to ensure compatibility with both ecological conditions and operational needs.

4.0 Vegetation Maintenance and Monitoring

The implementation of a vegetation monitoring program and schedule combined with appropriate vegetation management practices can provide numerous benefits to the Project, as well as minimize overall maintenance costs over Project life. Proper monitoring and maintenance techniques will help enhance the overall vitality of the existing or planted native vegetation located within the Project and limit the spread of unwanted, invasive, or noxious plant species in the Project Area.

Some maintenance activities, like tree protection, may occur during both construction and operations phases of the Project, while others, like monitoring for invasive weeds, begin as the long-term ground cover is being planted. Monitoring of the Project for invasive weeds and areas requiring vegetation maintenance shall occur at a minimum of in the spring and in the fall in the first two growing seasons following installation of the long-term ground cover. After the first two years, the vegetation within the Project will be monitored on an as-needed basis.

Additionally, recommendations from the Pennsylvania Department of Agriculture and Penn State Extension should be followed and incorporated in the VMP. These agency and institutional recommendations provide additional direction and insight regarding invasive species which include further guidance with respect to purpose, description, establishment, preparation, planting, evaluation/monitoring, structured goals of implementation, benchmarks for design, and program schedules regarding maintenance and monitoring activities.

Invasive Weed Control, Monitoring, and Management

The monitoring regime will include identifying the presence of invasive or unwanted species. During the first two growing seasons following construction, the Project is most vulnerable to invasive and/or noxious weed species infestation due to existing soil disturbance. Should invasive species be identified within the Project, the invasive species shall be removed according to methods most likely to be effective in controlling that species and, where necessary, supplementing its replacement with an approved vegetation and seed mix identified for the Project or an approved equal alternative option.

Two key plant lists should be referenced for identifying species of concern:

1. The Pennsylvania Department of Agriculture (PDA) Noxious Weed List, included in **Appendix A**, identifies plant species that are regulated by state law due to their harmful impacts on agriculture, ecosystems, or human health. These species may be prohibited from being sold, transported, or intentionally planted, and their control is required where present.

2. The Pennsylvania Invasive Species List, maintained by the Pennsylvania Natural Heritage Program (PNHP) and included in **Appendix B**, identifies non-native species that pose a threat to native ecosystems and biodiversity. While this list is not regulatory, it is a critical tool for guiding land management and restoration efforts.

Woody Vegetation

The Project includes planting new trees in select areas for screening purposes. These newly planted trees may be maintained throughout the life of the Project to promote healthy growth and ensure effective screening. Maintenance activities could include watering, pruning, mulching, and other standard horticultural practices.

Existing trees that remain within the Project area, such as those along roads or in buffer zones, may be preserved where feasible and maintained through routine landscaping as needed.

Maintenance of Vegetation

Maintenance responsibilities may include cultivating, mowing, spraying (when necessary), weeding, watering, tree guying, pruning, fertilizing, mulching, and any other operations needed to maintain healthy vegetation. Vegetation maintenance shall begin immediately after planting and continue periodically throughout the life of the Project to support sustainable site practices and long-term plant viability.

These responsibilities will extend from the start of construction through decommissioning, with the type and frequency of maintenance varying over time, based on site conditions. The proposed solar array seed mix (ERNMX-186) consists of low-growing grasses that typically reach a height of 2 to 2.5 feet, which may reduce the frequency of mowing. However, periodic mowing may still be necessary to manage vegetation height, control woody plant encroachment, and maintain stable groundcover.

Native perennial grasses or similar vegetation that establish on the Project site are recommended to remain in place to support ground stabilization. Where long-term groundcover is intentionally established, species should be selected to minimize the need for mowing while still achieving the desired ecological and operational outcomes.

Long-Term Vegetation and O&M Requirements

Labor, approved plants, and materials shall be provided in quantities sufficient to complete any revegetation work necessary prior to implementation, and all trees/shrubs being used for any/all revegetation efforts shall be acclimated by the supply nursery to the local hardiness zone and be certified that the planting material has been grown for a minimum of two (2) years at the source. The average frost-free growing season for the Project Area is early May through late October.

Plant material used for revegetation efforts within the Project Area shall be guaranteed upon installation and any/all plants, trees, and shrubs shall be healthy and free of disease before, during, and after substantial completion and acceptance by the Project Owner / Operator. Individual trees and shrubs shall be typical of their species or variety, with normal habit of growth. In addition, trees and shrubs shall be sound, healthy, vigorous, well-branched and densely foliated when in leaf, free of disease, insect pests, eggs or larvae and they shall have healthy and well-developed root systems. Dead or unhealthy plants shall be replaced following the guidelines and directives of guarantees provided and agreed upon. Final acceptance of any revegetation efforts shall be made only if plants meet the guarantee requirements including the maintenance directives put forth in this Vegetation Maintenance Plan.

Additionally, tree/shrub planting locations should be coordinated with Project utilities. A site layout, grading and/or utility plan will be referenced to locate gas, electric, telephone and water lines whenever possible and care should always be exercised when digging in areas of potential conflict with underground or overhead utilities.

Wherever necessary, topsoil can be installed as needed to establish proper planting conditions. Although no soil samples are referenced in this VMP, soil samples can help confirm suitable seed mixes are chosen. If the local plant provider determines this information is necessary to confirm appropriate selection, topsoil samples should be submitted to a certified testing laboratory to determine pH, fertility, organic content, and mechanical composition prior to any planting. The topsoil samples should be placed in a Ziplock plastic bag or a plastic bucket with sealed container lid and submitted within three months from the time the sample has been taken. The topsoil testing can be completed at a Regional Extension Office of the United States Department of Agriculture (USDA) or other qualified facility, and the resulting soil amendment recommendations for optimum pH range and good plant growth should be incorporated into the existing soil prior to any planting that is to occur.

Additionally, no phosphorous shall be used at the time of planting unless soil testing has been completed and tested by a horticultural testing lab and soil tests specifically indicate a phosphorous deficiency that is harmful or will prevent new grasses and plantings from establishing properly. If soil tests do indicate a phosphorous deficiency that will impact plant and grass establishment then phosphorous shall be applied at the minimum recommended level prescribed in the soil test following all applicable standards, requirements, and/or regulations.

Planting and Seeding Timing Guidance

While final seeding decisions should be based on site-specific conditions and made in coordination with a qualified seed developer such as Ernst Conservation Seeds, general guidance for the Project Area suggests the following:

- Warm-season grasses are best seeded between late April and early June, when soil temperatures begin to rise and before peak summer heat. These grasses require soil temperatures generally above 65°F to germinate effectively.
- Cool-season grasses are typically seeded in the fall, from late September through late October, ideally allowing at least 45 days before the first expected frost (usually late October) to establish roots. However, due to the frost-free growing season generally extending from early May through late October, there may be flexibility to seed certain cool-season species—such as fescues, bluegrasses, and perennial rye—in early spring as well, provided seedlings have enough time to establish before summer stress.

If cover crops are used to prepare the site for native seeding, their selection and timing should be coordinated with the seed provider. Recommendations may vary depending on site-specific goals, timing, and soil conditions.

Herbicide Considerations

Selective herbicide used to control weeds and unwanted vegetation growth may be necessary but will be avoided whenever possible and other options and/or methods to control vegetation will be considered prior to herbicide use. Guidelines and recommendations provided by The United States Environmental Protection Agency (USEPA) or Pennsylvania Department of Agriculture (PDA) regarding herbicide use should always be followed when herbicide use is implemented. Should herbicide use be necessary, herbicide will be applied by personnel qualified in its use to ensure proper selection and application, as treatment approach can vary greatly depending on target species, time of year, extent of area, or other factors. Additional herbicide safe work practices and guidance are as follows:

Where herbicides are deemed necessary, an effort should be made to minimize use and to only apply highly bio-degradable, USEPA registered and approved, organic solutions that are nontoxic to pets and wildlife. Under circumstances where herbicides are deemed necessary, herbicides will be applied according to USEPA Regulations. Precautionary measures and safety instructions should be observed.

5.0 Conclusion

Following proper maintenance guidelines, recommendations, and prescriptions can help ensure a safe and sustainable Project site that can also reduce the carbon footprint while simultaneously

maximizing electric energy output. The native plants are intended to provide additional wildlife food and shelter and potentially attract a variety of pollinators and songbirds.

Appendix A

Pennsylvania State Noxious Weed List
(Pennsylvania Department of Agriculture / PDA)

Pennsylvania State Noxious Weed List (Pennsylvania Department of Agriculture)

Noxious Weeds Lists
Class A Noxious Weeds

- Giant Hogweed - *Heracleum mantegazzianum* (Active Field Program)
- Goatsrue - *Galega officinalis* (Active Field Program)
- Kudzu - *Pueraria lobata*
- Palmer amaranth - *Amaranthus palmeri*
- Waterhemp - *Amaranthus rudis*
- Tall waterhemp - *Amaranthus tuberculatus*
- Animated oat - *Avena sterilis*
- Dodder - *Cuscuta spp.* (Except for native species)
- Hydrilla - *Hydrilla verticillata*
- Broomrape - *Orobanche spp.* (Except for native species)
- Wavyleaf basketgrass - *Oplismenus hirtellus*
- European frogbit - *Hydrocharis morsus-ranae*
- European water chestnut - *Trapa natans*
- Water primrose - *Ludwigia grandiflora ssp. hexapetala*
- Brazilian waterweed - *Egeria densa*
- Yellow floating heart - *Nymphoides peltata*
- Ravenna Grass - *Tripidium ravennae* [Synonym: *Saccharum ravennae*] [Synonym: *Erianthus ravennae*]
- Wild Chervil - *Anthriscus sylvestris*
- Chocolate vine - *Akebia quinata*
- Japanese privet - *Ligustrum japonicum*
- Parrot feather - *Myriophyllum aquaticum*
- Starry Stonewort - *Nitellopsis obtusa*
- *Imperata cylndrica* 'Red Baron'

Class B Noxious Weeds

- Bull thistle or Spear thistle - *Cirsium vulgare*
- Canada Thistle - *Cirsium arvense*
- Musk Thistle or Nodding Thistle - *Carduus nutans*
- Johnson Grass - *Sorghum halepense*
- Mile-a-Minute - *Persicaria perfoliata*
- Multiflora Rose - *Rosa multiflora*
- Purple Loosestrife - *Exotic Lythrum species*, including *Lythrum salicaria L.* (commonly known as purple loosestrife), the Lythrum salicaria complex and *Lythrum virgatum L.* (commonly known as European wand loosestrife), their cultivars and any combination thereof.
- Shattercane - *Sorghum bicolor*
- Poison hemlock - *Conium maculatum*
- Tree-of-heaven - *Ailanthus altissima*
- Wild parsnip - *Pastinaca sativa* (except for non-wild cultivated varieties)
- Japanese knotweed - *Reynoutria japonica*
- Giant knotweed - *Reynoutria sachalinensis*
- Bohemian knotweed - *Reynoutria x bohemica*
- Japanese Angelica Tree - *Aralia elata*
- Japanese hops - *Humulus japonicus*

- Oriental bittersweet - *Celastrus orbiculatus*
- Black swallow-wort - *Cynanchum louiseae/Vincetoxicum nigrum*
- Pale Swallow-wort - *Cynanchum rossicum/Vincetoxicum rossicum*
- Mugwort - *Artemisia vulgaris*
- Japanese Barberry - *Berberis thunbergii* (Approved exempted varieties)
- Garlic mustard - *Allaria petiolate*
- Japanese stiltgrass - *Microstegium vimineum*
- Callery pear - *Pyrus calleryana*
- Eurasian watermilfoil - *Myriophyllum spicatum*
- Common buckthorn - *Rhamnus cathartica*
- Glossy buckthorn - *Rhamnus frangula* [Synonym: Frangula alnus] (Rhamnus 'Fine Line'- Approved exempted variety)
- Lesser celandine - *Ficaria verna*
- Burning bush - *Euonymus alatus*
- Chinese privet - *Ligustrum sinense*
- European privet - *Ligustrum vulgare*
- Border privet - *Ligustrum obtusifolium*
- Amur honeysuckle - Lonicera maackii
- Morrow's honeysuckle - Lonicera morrowii
- Bell's honeysuckle - Lonicera x bella
- Tatarian honeysuckle - Lonicera tatarica
- Standish/Fragrant honeysuckle - Lonicera standishii

Class C Noxious Weeds

- Water soldier - *Stratiotes aloides*

Appendix B

Pennsylvania iMapInvasives Tracked Species List, September 2021

Administered by Pennsylvania Natural Heritage Program, part of the Western PA Conservancy

Pennsylvania *i*MapInvasives Tracked Species List

The following table comprises all invasive species currently reportable in the Pennsylvania iMapInvasives database.
(Tracked_ALL SPECIES | PA iMapInvasives)

Contact the state administrator if you would like to add a new species to our tracked list.

Early Detection species: Species not yet found in Pennsylvania, newly established in Pennsylvania, or thought to be in Pennsylvania but are not well-documented.

High priority species: Species found in Pennsylvania, but not widespread statewide (occurring in less than 1/3 of Pennsylvania counties).

Noxious weeds: Species designated by a country, state, provincial, or national agricultural authority as one that is injurious to agricultural and/or horticultural crops, natural habitats and/or ecocystems, and/or humans or livestock.

PFBC Banned: Species deemed by the Pennsylvania Fish and Boat Commission to be unlawful to possess, to introduce or import, transport, sell, purchase, or offer for sale or barter in the Commonwealth of Pennsylvania.
Note: Species list updated in September 2021.

The Pennsylvania *i*MapInvasives Program is a partnership of the Western Pennsylvania Conservancy, the Pennsylvania Natural Heritage Program, and NatureServe.
Funding for Pennsylvania *i*MapInvasives is provided by

Scientific Name	Common Name	Taxa		Early Detection	High Priority	Noxious Weed (PA)
Abutilon theophrasti	Velvetleaf	Terrestrial Plant		-	-	-
Acanthopanax sieboldianus	Five-leaf Aralia	Terrestrial Plant		-	High Priority Species	-
Acer campestre	Hedge Maple	Terrestrial Plant		-	High Priority Species	-
Acer ginnala	Amur Maple	Terrestrial Plant		-	High Priority Species	-
Acer palmatum	Japanese Maple	Terrestrial Plant		-	High Priority Species	-

Acer platanoides	Norway Maple	Terrestrial Plant		-	-	-
Acer pseudoplatanus	Sycamore Maple	Terrestrial Plant		-	High Priority Species	-
Achyranthes japonica	Japanese Chaff-flower	Terrestrial Plant		Early Detection Species	-	-
Acorus calamus	Sweetflag; Calamus	Wetland Plant		-	-	-
Actinidia arguta	Hardy Kiwi Vine	Terrestrial Plant		-	High Priority Species	-
Adelges tsugae	Hemlock Woolly Adelgid	Insect		-	-	-
Aegopodium podagraria	Bishop's Goutweed	Terrestrial Plant		-	-	-
Aethusa cynapium	Fool's-parsley	Terrestrial Plant		-	High Priority Species	-
Agrilus planipennis	Emerald Ash Borer	Insect		-	-	-
Agrostis capillaris	Colonial Bentgrass	Terrestrial Plant		-	-	-
Agrostis gigantea	Giant Bentgrass	Terrestrial Plant		-	-	-
Agrostis stolonifera	Creeping Bentgrass	Wetland Plant		-	-	-
Ailanthus altissima	Tree-of-Heaven	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Aira caryophyllea	Silvery Hairgrass	Terrestrial Plant		Early Detection Species	-	-
Ajuga reptans	Carpet-bugle	Terrestrial Plant		-	-	-
Akebia quinata	Five-leaf Akebia	Terrestrial Plant		-	High Priority Species	-
Albizia julibrissin	Mimosa	Terrestrial Plant		-	High Priority Species	-
Aldrovanda vesiculosa	Waterwheel Plant	Aquatic Plant		Early Detection Species	-	-
Alliaria petiolata	Garlic Mustard	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Allium vineale	Field Garlic	Terrestrial Plant		-	-	-

Alnus glutinosa	European Alder	Terrestrial Plant		-	-	-
Alopecurus carolinianus	Tufted foxtail	Terrestrial Plant		-	High Priority Species	-
Alopecurus geniculatus	Meadow Foxtail	Wetland Plant		Early Detection Species	-	-
Alosa pseudoharengus	Alewife	Fish		-	High Priority Species	-
Alternanthera philoxeroides	Alligator-weed	Aquatic Plant		Early Detection Species	-	-
Amaranthus palmeri	Palmer Amaranth	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class A)
Ameiurus catus	White Catfish	Fish		-	High Priority Species	-
Ampelopsis brevipedunculata	Porcelainberry	Terrestrial Plant		-	High Priority Species	-
Amynthas agrestis	Crazy Snake Worm; Alabama Jumper	Invertebrate		-	High Priority Species	-
Amynthas-Metaphire spp. (species unknown)	Jumping Worms (species unknown)	Invertebrate		-	High Priority Species	-
Anoplophora glabripennis	Asian Longhorned Beetle	Insect		Early Detection Species	-	-
Anthoxanthum odoratum	Sweet Vernal Grass	Terrestrial Plant		-	-	-
Anthriscus sylvestris	Wild Chervil	Terrestrial Plant		-	High Priority Species	-
Apocorophium lacustre	Scud	Invertebrate		-	High Priority Species	-
Aralia elata	Japanese Angelica Tree	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class B)
Arctium lappa	Greater burdock	Terrestrial Plant		-	-	-
Arctium minus	Lesser Burdock	Terrestrial Plant		-	-	-
Artemisia vulgaris	Mugwort	Terrestrial Plant		-	-	PA Noxious Weed (Class B)

Arthraxon hispidus	Joint-head Arthraxon	Terrestrial Plant		-	High Priority Species	-
Arundo donax	Giant Reed	Aquatic Plant		Early Detection Species	-	-
Berberis thunbergii	Japanese Barberry	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Berberis vulgaris	European Barberry	Terrestrial Plant		-	-	-
Betula pendula	European Weeping Birch	Terrestrial Plant		-	-	-
Bidens aristosa	Tickseed Beggarticks	Wetland Plant		-	High Priority Species	-
Bipalium spp. (species unknown)	Broadhead planarians (species unknown)	Invertebrate		-	High Priority Species	-
Bithynia tentaculata	Mud Bithynia	Invertebrate		-	High Priority Species	-
Bosmina coregoni	Water Flea; a Cladoceran	Invertebrate		-	High Priority Species	-
Brassica nigra	Black Mustard	Terrestrial Plant		-	-	-
Bromus inermis	Smooth Brome	Terrestrial Plant		-	-	-
Bromus sterilis	Poverty Brome	Terrestrial Plant		-	-	-
Bromus tectorum	Cheatgrass	Terrestrial Plant		-	-	-
Broussonetia papyrifera	Paper mulberry	Terrestrial Plant		-	High Priority Species	-
Buddleja davidii	Orange-eye Butterfly-bush	Terrestrial Plant		-	High Priority Species	-
Butomus umbellatus	Flowering-rush	Wetland Plant		-	High Priority Species	-
Bythotrephes longimanus	Spiny Waterflea	Invertebrate		-	High Priority Species	-
Cabomba caroliniana	Carolina Fanwort; Fanwort	Aquatic Plant		-	High Priority Species	-

Callitriche stagnalis	Pond Water-starwort	Aquatic Plant		-	High Priority Species	-
Cambarus robustus	Big Water Crayfish	Invertebrate		Early Detection Species	-	-
Carassius auratus	Goldfish	Fish		-	-	-
Carcinus maenas	Green Crab	Invertebrate		Early Detection Species	-	-
Cardamine hirsuta	Hairy Bittercress	Terrestrial Plant		-	-	-
Cardamine impatiens	Touch-me-not Bittercress	Terrestrial Plant		-	-	-
Carduus nutans	Musk Thistle	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Carex acutiformis	Lesser Pond Sedge	Wetland Plant		Early Detection Species	-	-
Carex kobomugi	Japanese Sedge	Terrestrial Plant		Early Detection Species	-	-
Catalpa speciosa	Northern Catalpa	Terrestrial Plant		-	-	-
Celastrus orbiculatus	Oriental Bittersweet	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Centaurea biebersteinii; Centaurea stoebe ssp. micranthos	Spotted Starthistle	Terrestrial Plant		-	-	-
Centaurea diffusa	Diffuse Knapweed	Terrestrial Plant		Early Detection Species	-	-
Centaurea jacea	Brown Starthistle	Terrestrial Plant		-	-	-
Centaurea spp. (species unknown)	Knapweed (species unknown)	Terrestrial Plant		-	High Priority Species	-
Centaurea x psammogena	Diffuse-Spotted Knapweed Hybrid	Terrestrial Plant		-	High Priority Species	-
Cercopagis pengoi	Fishhook Waterflea	Invertebrate		-	High Priority Species	-
Channa argus	Northern Snakehead	Fish		-	High Priority Species	-

Channa maculata	Blotched Snakehead	Fish		Early Detection Species	-	-
Channa marulius	Bullseye Snakehead	Fish		Early Detection Species	-	-
Channa micropeltes	Giant Snakehead	Fish		Early Detection Species	-	-
Chelidonium majus	Greater Celandine	Terrestrial Plant		-	-	-
Chenopodium glaucum	Oakleaf Goosefoot	Terrestrial Plant		-	High Priority Species	-
Cichorium intybus	Chicory	Terrestrial Plant		-	-	-
Cipangopaludina chinensis; Bellamya chinensis	Chinese Mysterysnail	Invertebrate		-	-	-
Cipangopaludina japonica	Japanese Mysterysnail	Invertebrate		-	High Priority Species	-
Cipangopaludina spp. (species unknown)	Mysterysnail spp. (species unknown)	Invertebrate		-	High Priority Species	-
Cirsium arvense	Canada Thistle	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Cirsium palustre	Marsh Thistle	Wetland Plant		Early Detection Species	-	-
Cirsium vulgare	Bull Thistle	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Clematis terniflora	Japanese Virgin's-Bower	Terrestrial Plant		-	High Priority Species	-
Clinopodium vulgare	Wild Basil	Terrestrial Plant		-	-	-
Codium fragile ssp. fragile	Dead Man's Fingers	Alga		Early Detection Species	-	-
Columba livia	Rock Pigeon	Bird		-	-	-
Commelina communis	Asiatic Dayflower	Wetland Plant		-	-	-
Conium maculatum	Poison-Hemlock	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Convallaria majalis	European Lily-of-the-valley	Terrestrial Plant		-	-	-

Convolvulus arvensis	Field Bindweed	Terrestrial Plant		-	-	-
Corbicula fluminea	Asiatic Clam	Invertebrate		-	-	-
Corydalis incisa	Incised Fumewort	Terrestrial Plant		-	High Priority Species	-
Craspedacusta sowerbyi	Freshwater Jellyfish	Invertebrate		-	-	-
Crassula helmsii	Swamp Stonecrop	Aquatic Plant		Early Detection Species	-	-
Cryptococcus fagisugae	Beech Scale	Insect		-	-	-
Ctenopharyngodon idella	Grass Carp	Fish		-	High Priority Species	-
Cygnus olor	Mute Swan	Bird		-	-	-
Cynanchum louiseae	Black Swallow-wort	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class B)
Cynanchum rossicum	European Swallow-wort	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class B)
Cynanchum spp. (species unknown)	Swallow-wort (species unknown)	Terrestrial Plant		-	High Priority Species	-
Cynanchum vincetoxicum	White Swallow-wort	Terrestrial Plant		Early Detection Species	-	-
Cyperus serotinus	Tidal-marsh Flatsedge	Wetland Plant		Early Detection Species	-	-
Cyprinella lutrensis	Red Shiner	Fish		Early Detection Species	-	-
Cyprinus carpio	Common Carp	Fish		-	-	-
Dactylis glomerata	Orchard Grass	Terrestrial Plant		-	-	-
Datura stramonium	Jimsonweed	Terrestrial Plant		-	-	-
Daucus carota	Wild Carrot (Queen Anne's lace)	Terrestrial Plant		-	-	-
Deutzia spp. (species unknown)	Deutzia (species unknown)	Terrestrial Plant		-	High Priority Species	-
Didymosphenia geminata	Didymo	Alga		-	High Priority Species	-

Digitalis lanata	Grecian Foxglove	Terrestrial Plant		-	High Priority Species	-
Dioscorea polystachya; Dioscorea batatas	Chinese Yam	Terrestrial Plant		-	High Priority Species	-
Diprion similis	Introduced Pine Sawfly	Insect		-	High Priority Species	-
Dipsacus fullonum	Wild Teasel	Terrestrial Plant		-	-	-
Dipsacus lacinatus	Cutleaf teasel	Terrestrial Plant		-	High Priority Species	-
Dipsacus spp. (species unknown)	Teasel (species unknown)	Terrestrial Plant		-	High Priority Species	-
Doronicum orientale	Oriental leopard's-bane	Terrestrial Plant		Early Detection Species	-	-
Dreissena bugensis	Quagga Mussel	Invertebrate		-	High Priority Species	-
Dreissena polymorpha	Zebra Mussel	Invertebrate		-	High Priority Species	-
Dreissena spp. (species unknown)	Dreissenid Mussel (species unknown)	Invertebrate		-	High Priority Species	-
Duchesnea indica	Indian Mock Strawberry	Terrestrial Plant		-	-	-
Echinogammarus ischnus	Scud; Amphipod; A Euryhaline Amphipod	Invertebrate		-	High Priority Species	-
Egeria densa	Brazilian Waterweed	Aquatic Plant		-	High Priority Species	PA Noxious Weed (Class A)
Eichhornia azurea	Saw-petal Water-hyacinth	Aquatic Plant		Early Detection Species	-	-
Eichhornia crassipes	Common Water-hyacinth	Aquatic Plant		-	High Priority Species	-
Elaeagnus angustifolia	Russian Olive	Terrestrial Plant		-	High Priority Species	-
Elaeagnus spp. (species unknown)	Oleaster (species unknown)	Terrestrial Plant		-	High Priority Species	-

Elaeagnus umbellata	Autumn Olive	Terrestrial Plant		-	-	-
Elatine triandra	Three-stamen Waterwort	Aquatic Plant		-	High Priority Species	-
Elsholtzia ciliata	Crested Elsholtzia	Terrestrial Plant		-	High Priority Species	-
Epilobium hirsutum	Great Hairy Willowherb	Wetland Plant		-	-	-
Epilobium parviflorum	Small-Flower Hairy Willowherb	Wetland Plant		-	High Priority Species	-
Epipactis helleborine	Eastern Helleborine	Terrestrial Plant		-	-	-
Eranthis hyemalis	Winter Aconite	Terrestrial Plant		-	High Priority Species	-
Eriocheir sinensis	Chinese Mitten Crab	Invertebrate		Early Detection Species	-	-
Etheostoma blennioides	Greenside Darter	Fish		-	-	-
Euonymus alatus	Burning Bush	Terrestrial Plant		-	-	-
Euonymus fortunei	Winter Creeper	Terrestrial Plant		-	High Priority Species	-
Euonymus hamiltonianus	Hamilton's spindletree	Terrestrial Plant		Early Detection Species	-	-
Eupatorium serotinum	Late-Flowering Thoroughwort	Terrestrial Plant		-	High Priority Species	-
Euphorbia cyparissias	Cypress Spurge	Terrestrial Plant		-	-	-
Euphorbia helioscopia	Sun Spurge	Terrestrial Plant		-	High Priority Species	-
Euphorbia lathyris	Caper Spurge	Terrestrial Plant		-	High Priority Species	-
Euphorbia virgata	Leafy Spurge	Terrestrial Plant		-	-	-
Fallopia convolvulus	Black Bindweed	Terrestrial Plant		-	-	-
Faxonius immunis	Calico Crayfish	Invertebrate		-	High Priority Species	-

Faxonius obscurus	Allegheny Crayfish	Invertebrate		-	High Priority Species	-
Faxonius rusticus	Rusty Crayfish	Invertebrate		-	-	-
Faxonius virilis	Virile Crayfish	Invertebrate		-	High Priority Species	-
Festuca filiformis	Hair Fescue	Terrestrial Plant		-	-	-
Festuca rubra	Red Fescue	Terrestrial Plant		-	-	-
Fiorinia externa	Elongate Hemlock Scale	Insect		-	-	-
Frangula alnus	Glossy False Buckthorn	Terrestrial Plant		-	-	-
Froelichia gracilis	Slender Cottonweed	Terrestrial Plant		-	High Priority Species	-
Galega officinalis	Goatsrue	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class A)
Galium mollugo	Great Hedge Bedstraw	Terrestrial Plant		-	-	-
Galium odoratum	Sweet Bedstraw	Wetland Plant		-	High Priority Species	-
Gambusia affinis	Western Mosquitofish	Fish		-	High Priority Species	-
Glaucium flavum	Yellow Hornpoppy	Terrestrial Plant		Early Detection Species	-	-
Glechoma hederacea	Ground-Ivy	Terrestrial Plant		-	-	-
Glossostigma cleistanthum	Mudmat	Aquatic Plant		-	High Priority Species	-
Glyceria maxima	Reed Meadowgrass	Wetland Plant		Early Detection Species	-	-
Gracilaria vermiculophylla	Red alga	Alga		Early Detection Species	-	-
Gymnocephalus cernuus	Ruffe	Fish		Early Detection Species	-	-
Hedera helix	English Ivy	Terrestrial Plant		-	-	-
Hemerocallis fulva	Orange Daylily	Terrestrial Plant		-	-	-

Hemigrapsus sanguineus	Asian Shore Crab	Invertebrate		Early Detection Species	-	-
Hemimysis anomala	Bloody-red Shrimp	Invertebrate		-	High Priority Species	-
Heracleum mantegazzianum	Giant Hogweed	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class A)
Hesperis matronalis	Dame's Rocket	Terrestrial Plant		-	-	-
Hibiscus syriacus	Rose-of-Sharon	Terrestrial Plant		-	High Priority Species	-
Hieracium aurantiacum	Orange Hawkweed	Terrestrial Plant		-	-	-
Hieracium caespitosum	Meadow Hawkweed	Terrestrial Plant		-	-	-
Hieracium pilosella	Mouse-ear Hawkweed	Terrestrial Plant		-	High Priority Species	-
Holcus lanatus	Common Velvetgrass	Terrestrial Plant		-	-	-
Humulus japonicus	Japanese Hop	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class B)
Hydrilla verticillata	Hydrilla	Aquatic Plant		-	-	PA Noxious Weed (Class A)
Hydrocharis morsus-ranae	Common Frogbit	Aquatic Plant		-	High Priority Species	PA Noxious Weed (Class A)
Hydrocotyle sibthorpioides	Lawn Pennywort	Terrestrial Plant		-	High Priority Species	-
Hygrophila polysperma	Indian Swampweed	Aquatic Plant		Early Detection Species	-	-
Hylotelephium telephium	Garden Stonecrop	Terrestrial Plant		-	-	-
Hypericum perforatum	Common St. John's-wort	Terrestrial Plant		-	-	-
Hypochaeris radicata	Spotted Cat's-ear	Terrestrial Plant		-	-	-
Hypophthalmichthys molitrix	Silver Carp	Fish		Early Detection Species	-	-
Hypophthalmichthys nobilis	Bighead Carp	Fish		Early Detection Species	-	-

Ictalurus furcatus	Blue Catfish	Fish		Early Detection Species		-
Ilex crenata	Japanese Holly	Terrestrial Plant		-	High Priority Species	-
Impatiens glandulifera	Policeman's Helmet	Terrestrial Plant		Early Detection Species	-	-
Imperata cylindrica	Cogon Satin-Tail	Terrestrial Plant		Early Detection Species	-	-
Ipomoea purpurea	Common Morning-Glory	Terrestrial Plant		-	High Priority Species	-
Iris pseudacorus	Yellow Iris	Wetland Plant		-	-	-
Juncus compressus	Flattened Rush	Wetland Plant		Early Detection Species	-	-
Knautia arvensis	Blue-button	Terrestrial Plant		-	High Priority Species	-
Koelreuteria paniculata	Golden rain-tree	Terrestrial Plant		-	High Priority Species	-
Lamiastrum galeobdolon	Yellow Arch-angel	Terrestrial Plant		-	High Priority Species	-
Lamium purpureum	Purple Deadnettle	Terrestrial Plant		-	-	-
Landoltia punctata	Dotted Water-flaxseed; Dotted Duckweed	Aquatic Plant		-	High Priority Species	-
Larinus turbinatus	Weevil	Insect		-	-	-
Lathyrus latifolius	Perennial Pea	Terrestrial Plant		-	-	-
Latrodectus geometricus	Brown widow	Arachnid		Early Detection Species	-	-
Lepidium latifolium	Broadleaf Pepper-grass	Terrestrial Plant		Early Detection Species	-	-
Lespedeza bicolor	Shrubby Bushclover	Terrestrial Plant		-	High Priority Species	-
Lespedeza cuneata	Chinese Bushclover	Terrestrial Plant		-	High Priority Species	-
Leucanthemum vulgare	Oxeye Daisy	Terrestrial Plant		-	-	-

Leuciscus idus	Ide	Fish		Early Detection Species	-	-
Ligustrum obtusifolium	Border Privet	Terrestrial Plant		-	-	-
Ligustrum ovalifolium	California Privet	Terrestrial Plant		-	High Priority Species	-
Ligustrum sinense	Chinese Privet	Terrestrial Plant		-	High Priority Species	-
Ligustrum spp. (species unknown)	Privet (species unknown)	Terrestrial Plant		-	High Priority Species	-
Ligustrum vulgare	European Privet	Terrestrial Plant		-	-	-
Lilioceris lilii	Lily leaf beetle	Insect		-	High Priority Species	-
Limnoperna fortunei	Golden Mussel	Invertebrate		Early Detection Species	-	-
Linaria vulgaris	Butter-and-Eggs	Terrestrial Plant		-	-	-
Litylenchus crenatae mccannii	Beech Leaf Disease Nematode	Roundworm		-	High Priority Species	-
Lolium arundinaceum	Kentucky Fescue	Terrestrial Plant		-	High Priority Species	-
Lonicera japonica	Japanese Honeysuckle	Terrestrial Plant		-	-	-
Lonicera maackii	Amur Honeysuckle	Terrestrial Plant		-	-	-
Lonicera morrowii	Morrow's Honeysuckle	Terrestrial Plant		-	-	-
Lonicera spp. (species unknown)	Honeysuckle (species unknown)	Terrestrial Plant		-	-	-
Lonicera standishii	Standish's Honeysuckle	Terrestrial Plant		-	High Priority Species	-
Lonicera tatarica	Tatarian Honeysuckle	Terrestrial Plant		-	-	-
Lonicera x bella [morrowii x tatarica]	Bell's Honeysuckle	Terrestrial Plant		-	High Priority Species	-
Lophopodella carteri	Carter's Moss Animal	Invertebrate		-	High Priority Species	-

Lotus corniculatus	Garden Bird's-Foot-trefoil	Terrestrial Plant		-	-	-
Ludwigia grandiflora	Large-Flower Primrose-Willow	Aquatic Plant		-	High Priority Species	-
Ludwigia grandiflora ssp. hexapetala	Large-Flower Primrose-Willow	Aquatic Plant		Early Detection Species	-	PA Noxious Weed (Class A)
Ludwigia peploides	Primrose-Willow	Aquatic Plant		-	High Priority Species	-
Ludwigia peploides ssp. glabrescens	Floating Seedbox	Aquatic Plant		Early Detection Species	-	-
Lumbricus rubellus	Red wiggler	Invertebrate		-	High Priority Species	-
Lumbricus terrestris	Green crawler	Invertebrate		-	High Priority Species	-
Lycopus europaeus	European Bugleweed	Wetland Plant		-	High Priority Species	-
Lycorma delicatula	Spotted Lanternfly	Insect		-	High Priority Species	-
Lymantria dispar	Spongy Moth	Insect		-	-	-
Lyngbya wollei (Plectonema wollei)	Black Mat Alga	Alga		Early Detection Species	-	-
Lysimachia nummularia	Creeping Jenny	Wetland Plant		-	-	-
Lysimachia vulgaris	Garden Loosestrife	Wetland Plant		-	High Priority Species	-
Lythrum salicaria	Purple Loosestrife	Wetland Plant		-	-	PA Noxious Weed (Class B)
Mahonia bealei	Leatherleaf mahonia	Terrestrial Plant		-	High Priority Species	-
Marsilea quadrifolia	European Water Fern	Aquatic Plant		-	High Priority Species	-
Medicago lupulina	Black Medic	Terrestrial Plant		-	-	-
Megacopta cribraria	Kudzu Bug	Insect		Early Detection Species	-	-
Melilotus albus	White Sweet-clover	Terrestrial Plant		-	-	-

Melilotus officinalis	Sweetclover	Terrestrial Plant		-	-	-
Mentha x gracilis	Gingermint	Terrestrial Plant		-	-	-
Mentha x piperita	Peppermint	Wetland Plant		-	-	-
Mentha x rotundifolia	Apple Mint	Terrestrial Plant		-	High Priority Species	-
Mentha x villosa	Foxtail Mint	Wetland Plant		-	-	-
Microstegium vimineum	Japanese Stiltgrass	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Miscanthus sacchariflorus	Japanese Silver Grass	Terrestrial Plant		Early Detection Species	-	-
Miscanthus sinensis	Chinese Silver Grass	Terrestrial Plant		-	High Priority Species	-
Miscanthus spp. (species unknown)	Silver grass (species unknown)	Terrestrial Plant		-	High Priority Species	-
Misgurnus anguillicaudatus	Oriental Weatherfish	Fish		-	High Priority Species	-
Monopterus spp. (species unknown)	Asian Swamp Eel (species unknown)	Fish		Early Detection Species	-	-
Morone americana	White Perch	Fish		-	High Priority Species	-
Morus alba	White Mulberry	Terrestrial Plant		-	-	-
Murdannia keisak	Asian Spiderwort	Wetland Plant		Early Detection Species	-	-
Muscari spp. (species unknown)	Grape-Hyacinth (species unknown)	Terrestrial Plant		-	-	-
Mycelis muralis	Wall-Lettuce	Terrestrial Plant		-	High Priority Species	-
Mylopharyngodon piceus	Black Carp	Fish		Early Detection Species	-	-
Myocastor coypus	Coypu	Mammal		Early Detection Species	-	-
Myosotis scorpioides	True Forget-me-not	Wetland Plant		-	-	-

Myosotis sylvatica	Woodland Forget-Me-Not	Terrestrial Plant		-	High Priority Species	-
Myosoton aquaticum	Giant-Chickweed	Wetland Plant		-	-	-
Myriophyllum aquaticum	Parrot Feather Water-Milfoil	Aquatic Plant		-	High Priority Species	PA Noxious Weed (Class B)
Myriophyllum heterophyllum	Broadleaf Water-milfoil	Aquatic Plant		-	High Priority Species	-
Myriophyllum spicatum	Eurasian Water-milfoil	Aquatic Plant		-	-	PA Noxious Weed (Class B)
Myrmica rubra	European Fire Ant	Insect		-	High Priority Species	-
Najas marina	Spiny Naiad; Hollyleaf Naiad	Aquatic Plant		Early Detection Species	-	-
Najas minor	Brittle Naiad	Aquatic Plant		-	High Priority Species	-
Nasturtium officinale	Watercress	Aquatic Plant		-	-	-
Nelumbo lutea	American Water Lotus	Aquatic Plant		-	High Priority Species	-
Nelumbo nucifera	Pink Lotus	Aquatic Plant		Early Detection Species	-	-
Neogobius melanostomus	Round Goby	Fish		-	High Priority Species	-
Nitellopsis obtusa	Starry Stonewort	Alga		-	High Priority Species	-
Nymphoides peltata	Yellow Floatingheart	Aquatic Plant		-	High Priority Species	PA Noxious Weed (Class A)
Oenanthe javanica	Java Water Dropwort	Wetland Plant		-	High Priority Species	-
Oncorhynchus gorbuscha	Pink Salmon	Fish		-	High Priority Species	-
Oplismenus undulatifolius	Wavyleaf Basketgrass	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class A)
Oreochromis aureus	Blue Tilapia	Fish		Early Detection Species	-	-

Ornithogalum nutans	Drooping Star-of-Bethlehem	Terrestrial Plant		-	High Priority Species	-
Ornithogalum umbellatum	Common Star-of-Bethlehem	Terrestrial Plant		-	-	-
Osmerus mordax	Rainbow Smelt	Fish		-	High Priority Species	-
Pachysandra terminalis	Japanese-Spurge	Terrestrial Plant		-	High Priority Species	-
Packera glabella	Grassleaf Ragwort	Wetland Plant		-	High Priority Species	-
Parthenocissus tricuspidata	Boston-Ivy	Terrestrial Plant		-	High Priority Species	-
Passer domesticus	House Sparrow	Bird		-	-	-
Pastinaca sativa	Wild Parsnip	Terrestrial Plant		-	-	PA Noxious Weed (Class B) (except for non-wild cultivated varieties)
Paulownia tomentosa	Royal Paulownia	Terrestrial Plant		-	High Priority Species	-
Perilla frutescens	Beefsteak Plant	Terrestrial Plant		-	High Priority Species	-
Persicaria hydropiper	Marshpepper Knotweed; Smartweed	Wetland Plant		-	-	-
Persicaria lapathifolia	Dockweed Smartweed; Curlytop Knotweed	Wetland Plant		-	-	-
Persicaria longiseta; Polygonum caespitosum var. longisetum	Creeping Smartweed	Terrestrial Plant		-	-	-
Persicaria nepalensis	Nepalese Smartweed	Wetland Plant		-	High Priority Species	-
Persicaria posumbu	Creeping Himalayan Smartweed	Terrestrial Plant			High Priority Species	
Petromyzon marinus	Sea Lamprey	Fish		-	High Priority Species	-

Phalaris arundinacea	Reed Canary Grass	Wetland Plant		-	-	-
Phellodendron amurense	Amur Corktree	Terrestrial Plant		-	High Priority Species	-
Phellodendron spp. (species unknown)	Corktree (species unknown)	Terrestrial Plant		-	High Priority Species	-
Phleum pratense	Meadow Timothy	Terrestrial Plant		-	-	-
Phragmites australis ssp. australis	Common Reed	Wetland Plant		-	-	-
Phyllorhiza punctata	Australian spotted jellyfish	Invertebrate		Early Detection Species	-	-
Phyllostachys aurea	Golden Bamboo	Terrestrial Plant		-	High Priority Species	-
Phyllostachys bambusoides	Japanese Timber Bamboo	Terrestrial Plant		-	High Priority Species	-
Phyllostachys spp. (species unknown)	Bamboo (Species Unknown)	Terrestrial Plant		-	High Priority Species	-
Pinus sylvestris	Scotch Pine	Terrestrial Plant		-	-	-
Pisidium amnicum	Greater European Peaclam	Invertebrate		Early Detection Species	-	-
Pistia stratiotes	Water Lettuce	Aquatic Plant		-	High Priority Species	-
Pityophthorus juglandis	Walnut Twig Beetle	Insect		-	High Priority Species	-
Plantago lanceolata	English Plantain	Terrestrial Plant		-	-	-
Poa compressa	Canada Bluegrass	Terrestrial Plant		-	-	-
Poa pratensis	Kentucky Bluegrass	Terrestrial Plant		-	-	-
Poa trivialis	Scribner's Bluegrass	Terrestrial Plant		-	-	-
Polygonum perfoliatum; Persicaria perfoliata	Mile-a-minute-weed	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Polygonum persicaria	Lady's Thumb	Terrestrial Plant		-	-	-
Potamogeton crispus	Curly-leaf Pondweed	Aquatic Plant		-	-	-

Potamopyrgus antipodarum	New Zealand Mudsnail	Invertebrate		-	High Priority Species	-
Procambarus acutus	White River Crayfish	Invertebrate		-	High Priority Species	-
Procambarus clarkii	Red Swamp Crayfish	Invertebrate		-	High Priority Species	-
Procambarus fallax f. virginalis	Marbled crayfish	Invertebrate		Early Detection Species	-	-
Proterorhinus semilunaris	Tubenose Goby (freshwater)	Fish		-	High Priority Species	-
Prunus avium	Sweet Cherry	Terrestrial Plant		-	-	-
Prymnesium parvum	Golden Algae	Alga		Early Detection Species	-	-
Pterois spp. (species unknown)	Lionfish (species unknown)	Fish		Early Detection Species	-	-
Pterois volitans	Red Lionfish	Fish		Early Detection Species	-	-
Puccinellia distans	Alkali Grass	Wetland Plant		-	-	-
Pueraria montana var. lobata	Kudzu	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class A)
Pylodictis olivaris	Flathead Catfish	Fish		-	High Priority Species	-
Pyrrhalta viburni	Viburnum Leaf Beetle	Insect		-	High Priority Species	-
Pyrus calleryana	Callery Pear	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class B)
Quercus acutissima	Sawtooth Oak	Terrestrial Plant		-	High Priority Species	-
Radix auricularia	Big-eared Radix	Invertebrate		-	High Priority Species	-
Ranunculus acris var. acris	Tall Buttercup	Terrestrial Plant		-	-	-
Ranunculus ficaria	Lesser Celandine	Terrestrial Plant		-	High Priority Species	-

Ranunculus lingua	Greater spearwort	Wetland Plant		Early Detection Species	-	-
Ranunculus repens	Creeping Buttercup	Wetland Plant		-	-	-
Rapana venosa	Veined Rapa Whelk	Invertebrate		Early Detection Species	-	-
Reynoutria x bohemica	Bohemian Knotweed	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class B)
Reynoutria japonica	Japanese Knotweed	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Reynoutria sachalinensis	Giant Knotweed	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Reynoutria spp. (species unknown)	Knotweed (species unknown)	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Rhamnus cathartica	Buckthorn	Terrestrial Plant		-	High Priority Species	-
Rhodotypos scandens	Black Jetbead	Terrestrial Plant		-	High Priority Species	-
Rorippa amphibia	Amphibious Yellowcress	Wetland Plant		Early Detection Species	-	-
Rorippa sylvestris	Creeping Yellowcress	Wetland Plant		-	-	-
Rosa canina	Dog Rose	Terrestrial Plant		-	High Priority Species	-
Rosa multiflora	Multiflora Rose	Terrestrial Plant		-	-	PA Noxious Weed (Class B)
Rubus laciniatus	Evergreen Blackberry	Terrestrial Plant		-	High Priority Species	-
Rubus phoenicolasius	Wineberry	Terrestrial Plant		-	-	-
Rumex acetosella	Sheep Sorrel	Terrestrial Plant		-	-	-
Rumex crispus	Curly Dock	Terrestrial Plant		-	-	-
Rumex obtusifolius	Bitter Dock	Terrestrial Plant		-	-	-
Saccharum ravennae	Ravenna Grass	Terrestrial Plant		-	High Priority Species	-

Salix alba	White Willow	Wetland Plant		-	-	-
Salix cinerea	European Gray Willow	Wetland Plant		-	High Priority Species	-
Salsola tragus	Russian-thistle	Terrestrial Plant		-	-	-
Salvinia minima	Common Salvinia	Aquatic Plant		Early Detection Species	-	-
Salvinia molesta	Giant Salvinia	Aquatic Plant		Early Detection Species	-	-
Saponaria officinalis	Bouncing-Bet	Terrestrial Plant		-	-	-
Scardinius erythrophthalmus	Rudd	Fish		-	High Priority Species	-
Schedonorus pratensis	Meadow Fescue	Terrestrial Plant		-	-	-
Schoenoplectiella mucronatus	Bog Bulrush	Wetland Plant		-	High Priority Species	-
Securigera varia	Common Crown-Vetch	Terrestrial Plant		-	-	-
Sedum acre	Gold-Moss	Terrestrial Plant		-	High Priority Species	-
Senecio jacobaea	Tansy Ragwort	Terrestrial Plant		-	High Priority Species	-
Sinanodonta woodiana	Chinese Pond Mussel	Invertebrate		Early Detection Species	-	-
Sirex noctilio	European Woodwasp	Insect		-	High Priority Species	-
Solanum dulcamara	Climbing Nightshade	Terrestrial Plant		-	-	-
Solanum dulcamara var. dulcamara	Climbing Nightshade	Terrestrial Plant		-	-	-
Solanum viarum	Tropical Soda-apple	Terrestrial Plant		Early Detection Species	-	-
Sonchus arvensis	Field Sowthistle	Terrestrial Plant		-	-	-
Sonchus arvensis ssp. uliginosus	Field Sowthistle	Terrestrial Plant		-	-	-
Sorghum bicolor	Shattercane; Broom-Corn	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class B)

Sorghum halepense	Johnson Grass	Terrestrial Plant		-	High Priority Species	PA Noxious Weed (Class B)
Sphaerium corneum	European Fingernailclam	Invertebrate		Early Detection Species	-	-
Spiraea japonica	Japanese Spiraea	Terrestrial Plant		-	-	-
Stellaria media	Common Chickweed	Terrestrial Plant		-	-	-
Stratiotes aloides	Water Soldier	Aquatic Plant		Early Detection Species	-	PA Noxious Weed (Class C)
Sturnus vulgaris	European Starling	Bird		-	-	-
Sus scrofa	Wild Boar	Mammal		-	High Priority Species	-
Syringa reticulata	Japanese-Tree Lilac	Terrestrial Plant		-	High Priority Species	-
Taxus baccata	English Yew	Terrestrial Plant		-	High Priority Species	-
Taxus cuspidata	Japanese Yew	Terrestrial Plant		-	High Priority Species	-
Tetradium daniellii	Bee-Bee Tree	Terrestrial Plant		-	High Priority Species	-
Thlaspi alliaceum	Roadside Penny-Cress	Terrestrial Plant		-	High Priority Species	-
Tilapia zillii	Redbelly Tilapia	Fish		Early Detection Species	-	-
Trachemys scripta	Slider (species unknown)	Reptile		-	High Priority Species	-
Trachemys scripta elegans	Red-eared Slider	Reptile		-	High Priority Species	-
Trachemys scripta scripta	Yellow-bellied Slider	Reptile		-	High Priority Species	-
Tragopogon dubius	Meadow Goat's-Beard	Terrestrial Plant		-	-	-
Trapa natans	Water Chestnut	Aquatic Plant		-	High Priority Species	PA Noxious Weed (Class A)

Trifolium hybridum	Alsike Clover	Terrestrial Plant		-	-	-
Trifolium repens	White Clover	Terrestrial Plant		-	-	-
Tussilago farfara	Colt's-Foot	Terrestrial Plant		-	-	-
Typha angustifolia	Narrowleaf Cattail	Wetland Plant		-	-	-
Typha x glauca	Blue Cat-Tail; Hybrid Cat-Tail	Wetland Plant		-	High Priority Species	-
Ulmus pumila	Siberian Elm	Terrestrial Plant		-	High Priority Species	-
Utricularia inflata	Floating Bladderwort	Aquatic Plant		-	High Priority Species	-
Valeriana officinalis	Garden Valerian	Wetland Plant		-	High Priority Species	-
Valvata piscinalis	European Stream Valvata	Invertebrate		Early Detection Species	-	-
Verbascum blattaria	White Moth Mullein	Terrestrial Plant		-	-	-
Verbascum thapsus	Common Mullein	Terrestrial Plant		-	-	-
Veronica anagallis-aquatica	Water Speedwell	Wetland Plant		-	-	-
Veronica beccabunga	European Speedwell	Wetland Plant		-	High Priority Species	-
Veronica officinalis	Common Speedwell	Terrestrial Plant		-	-	-
Viburnum dilatatum	Linden Arrow-Wood	Terrestrial Plant		-	High Priority Species	-
Viburnum opulus var. opulus	Guelder-Rose Viburnum	Terrestrial Plant		-	-	-
Viburnum plicatum	Japanese Snowball	Terrestrial Plant		-	High Priority Species	-
Viburnum sieboldii	Siebold's Viburnum	Terrestrial Plant		-	High Priority Species	-
Vinca major	Largeleaf Periwinkle	Terrestrial Plant		-	High Priority Species	-
Vinca minor	Lesser Periwinkle	Terrestrial Plant		-	-	-

Vitex rotundifolia	Beach Vitex	Terrestrial Plant		Early Detection Species	-	-
Viviparus georgianus	Banded Mysterysnail	Invertebrate		-	High Priority Species	-
Wisteria floribunda	Japanese Wisteria	Terrestrial Plant		-	High Priority Species	-
Wisteria sinensis	Chinese Wisteria	Terrestrial Plant		-	High Priority Species	-
Xenopus laevis	African Clawed Frog	Amphibian		Early Detection Species	-	-
Yucca flaccida	Weak-leaf Yucca	Terrestrial Plant		-	High Priority Species	-

Appendix C

Excerpts from Cornerstone Delineation Report (July 25, 2025) –Soils

Habitat Assessment Report (December 10, 2024) – Invasive Species

Soils

Graphical depiction of the soils described within this section can be found in **Appendix A, Figure 3**. A discussion of the soils located within the Study Area is provided below.

The USDA NRCS Web Soil Survey is an online resource mapping tool produced by the National Cooperative Soil Survey. Soil map units represent a type of soil, a combination of soils (map unit components), or miscellaneous land types. They are typically named for the predominant soil series or land types within the map unit.

Hydric Soil

Regulatory application of the 1987 USACE Manual hydric soil definition, criteria, and lists have been superseded and are now maintained by the National Technical Committee for Hydric Soils within the USDA NRCS. Their definition of hydric soils reads:

"...a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part".

The soil survey Hydric Soil Rating represents the percentage of map unit components, or soil types, which meet hydric soil criteria within a survey map unit. Map units may contain components of both hydric and non-hydric soils. As such, each map unit is rated based on its respective components and the percentage of each component within the map unit. Any ratings of one (1) or above are considered hydric soil. Ratings can also be grouped by classes: hydric (100%), predominantly hydric (66 - 99%), partially hydric (33 - 65%), predominantly nonhydric (1 - 32%), and nonhydric (0%). Hydric ratings are for reference only and do not overrule site-specific conditions of the soil profile described in the field. Due to limitations imposed by the small-scale mapping of the soil survey, it is not uncommon to identify wetlands within areas not mapped as hydric soil, while areas mapped as hydric often do not support wetlands due to other conditional factors. Sampling by trained professionals is needed to determine if soils possess indicators required to meet hydric soil criteria, as discussed in **Section Error! Reference source not found.**, below.

Study Area Soils

The WSS of the Study Area was consulted prior to conducting the delineation to determine the extent of mapped soil units meeting hydric criteria. Twenty-three (23) soil map units were identified by the NRCS within the Study Area, summarized in **Table 3**, below.

Soils in the Study Area are expected to be mostly well drained and moderately well drained, with approximately 47.0 percent of the Study Area classified as well drained, 43.4 percent classified as moderately well drained; 8.7 percent classified as somewhat excessively drained; 0.8 percent classified as somewhat poorly drained; and 0.1 percent not classified. Six (6) map units are classified as hydric or as having hydric inclusions. The predominant surface soil textures identified are silt loams and silty clay loams (USDA NRCS 2024).

Table 3 – Mapped Soils Within the Study Area

Map Unit Symbol	Map Unit Name	Drainage Class	Hydric Rating (%)	Acres in Study Area	Portion of Study Area
BoB	Brooke silty clay loam, 3 to 8 percent slopes	Well drained	0	23.5	1.8%
BoC	Brooke silty clay loam, 8 to 15 percent slopes	Well drained	0	23.5	1.8%
BoD	Brooke silty clay loam, 15 to 25 percent slopes	Well drained	0	23.8	1.8%
CaB	Culleoka channery silt loam, 3 to 8 percent slopes	Well drained	0	26.8	2.1%
CaC	Culleoka channery silt loam, 8 to 15 percent slopes	Well drained	0	17.2	1.3%
CaD	Culleoka channery silt loam, 15 to 25 percent slopes	Well drained	0	41.6	3.2%
DoB	Dormont silt loam, 3 to 8 percent slopes	Moderately well drained	0	24.6	1.9%
DoC	Dormont silt loam, 8 to 15 percent slopes	Moderately well drained	0	62.3	4.8%
DoD	Dormont silt loam, 15 to 25 percent slopes	Moderately well drained	5	3.1	0.2%
DtD	Dormont-Culleoka complex, 15 to 25 percent slopes	Moderately well drained	3	55.3	4.3%
DtF	Dormont-Culleoka complex, 25 to 50 percent slopes	Moderately well drained	5	228.7	17.7%
GeB	Guernsey silt loam, 3 to 8 percent slopes	Moderately well drained	0	57.6	4.5%
GeC	Guernsey silt loam, 8 to 15 percent slopes	Moderately well drained	0	58.1	4.5%
GeD	Guernsey silt loam, 15 to 25 percent slopes	Moderately well drained	0	71.5	5.5%
Hu	Huntington silt loam	Well drained	10	5.6	0.4%
LbB	Library silty clay loam, 3 to 8 percent slopes	Somewhat poorly drained	5	1.9	0.2%
Nw	Newark silt loam, 0 to 3 percent slopes, frequently flooded	Somewhat poorly drained	5	7.4	0.6%
UkB	Udorthents, strip mine, gently sloping	Well drained	0	301.5	23.3%
UkF	Udorthents, strip mine, steep	Well drained	0	146.8	11.3%

Map Unit Symbol	Map Unit Name	Drainage Class	Hydric Rating (%)	Acres in Study Area	Portion of Study Area
W	Water	N/A	0	0.9	0.1%
WeB	Weikert-Culleoka complex, 3 to 8 percent slopes	Somewhat excessively drained	0	46.4	3.6%
WeC	Weikert-Culleoka complex, 8 to 15 percent slopes	Somewhat excessively drained	0	23.5	1.8%
WeD	Weikert-Culleoka complex, 15 to 25 percent slopes	Somewhat excessively drained	0	43.1	3.3%
Total*				1,294.7	100.0%

*Due to WSS map scaling and figure rounding, summed soil unit areas may differ from the previously reported total Study Area acreage or not add up to 100% as presented within the table.

Invasive Species

"Invasive" as a descriptor is often reserved for nonnative human-introduced species with traits that allow populations to quickly establish, successfully spread, and most importantly impose significant negative impacts on the health of native communities. These species actively disrupt ecosystems and reduce biodiversity by outcompeting for resources or actively suppressing native species. Many are also understood to cause substantial damages to human property, crops, and human health. Other exotic or nonnative species that have naturalized are not necessarily considered invasive or may not yet be studied sufficiently to warrant the term. "Weeds" or "weedy" species are relative terms to generally describe an unwanted species by humans, applied indiscriminately to native and nonnative species alike.

The PA Controlled Plant and Noxious Weed Act (Act No. 46 of 2017, Agriculture Code [3 PA.C.S.]) provides legal controls over the sale and distribution of designated species, in addition to management plans and resources. Noxious weeds are those determined by the agricultural agency as species that are harmful not only to natural ecosystems, but humans, livestock, or crops. PDA Noxious weed classes are provided below:

Class A – established in Pennsylvania, geographically limited, and intended to be eradicated;
Class B – widely established in Pennsylvania, cannot feasibly be eradicated;
Class C – not known to exist within Pennsylvania, poses a potential threat if introduced, and is listed on the Federal Noxious Weed List (7 CFR 360.200); and
UR – Under Review.

The PADNR currently maintain their own non-regulatory Invasive Species List, which highlights and ranks invasives that pose substantial threats to native plant populations on state managed lands.
Rank 1 – Severe Threat to state lands and natural areas;
Rank 2 – Significant Threat;
Rank 3 – Lesser Threat; and
Watch – Potential threat in the Future.

There is currently no Partnership for Regional Invasive Species Management for Pennsylvania. Additional assessments, management plans, and information on invasives within PA are available from the Governor's Invasive Species Council. Table 4-6, below, provides a summary of invasive plant species that were directly observed within the Study Area, along with their PADNR invasive rank, noxious weed class, the areas they were typically observed, and a quantitative descriptor of how frequently and at what quantity or density of cover they were generally observed. Formal species surveys, detailed delineations, or enumerations of individuals/populations were not performed.

Table 4-6. Invasive Plant Species Observed with the Study Area

Common Name	Species Name	PADNR Invasive Rank	PDA Noxious Weed Class	Observed Habitat(s)	Observed Occurrence & Frequency
Poison Hemlock	*Conium maculatum*	1	B	Open/Grassland	Few, small patches
Narrow leaved cattail	*Typha angustifolia*	1	-	Emergent Wetland	Pervasive - high density
Mile-a-minute	*Persicaria perfoliata*	1	B	Wetland Edge	Small patches of high density
Japanese Stiltgrass	*Microstegium vimineum*	1	B	Forest/Wetland	Large patches of high density
Japanese Knotweed	*Reynoutria japonica*	1	-	Riparian/Wetland Edge	Large patches of high density
Japanese Barberry	*Berberus thunbergia*	1	B	Forest	Incidental
Multiflora rose	*Rosa multiflora*	1	B	Forest/Shrub-scrub/Open	Pervasive - low to moderate density
Morrow's Honeysuckle	*Lonicera morrowii*	1	B	Forest/Shrub-scrub/Open	Pervasive - low density
Oriental bittersweet	*Celastrus orbiculatus*	1	B	Forest Edge	Small patches of high density
Common reed	*Phragmites australis*	1	UR	Wetland	Small patches of high density
Canada Thistle	*Cirsium arvense*	2	B	Open/Grassland	Pervasive (all areas) - sparse to moderate cover
Brown Knapweed	*Centaurea jacea*	2	-	Open/Grassland	Small patches of moderate cover
Autumn Olive	*Elaeagnus umbellata*	2	-	Forest/Shrub-scrub/Open	Pervasive - low to high density
Russian Olive	*Elaeagnus angustifolia*	2	-	Forest/Shrub-scrub/Open	Pervasive - low to high density
Crown Vetch	*Coronilla varia*	2	-	Open/Grassland	Pervasive - moderate to high density
Chinese Bushclover	*Lespedeza cuneata*	2	-	Open/Grassland	Small patches
European privet	*Ligustrum vulgare*	2	B	Forest/Shrub-scrub/Open	Low density
Reed canary grass	*Phalaris arundinacea*	2	-	Wetland	Small patches of high density
Moneywort	*Lysimachia nummularia*	3	-	Wetlands/Stream	Pervasive - moderate to high density