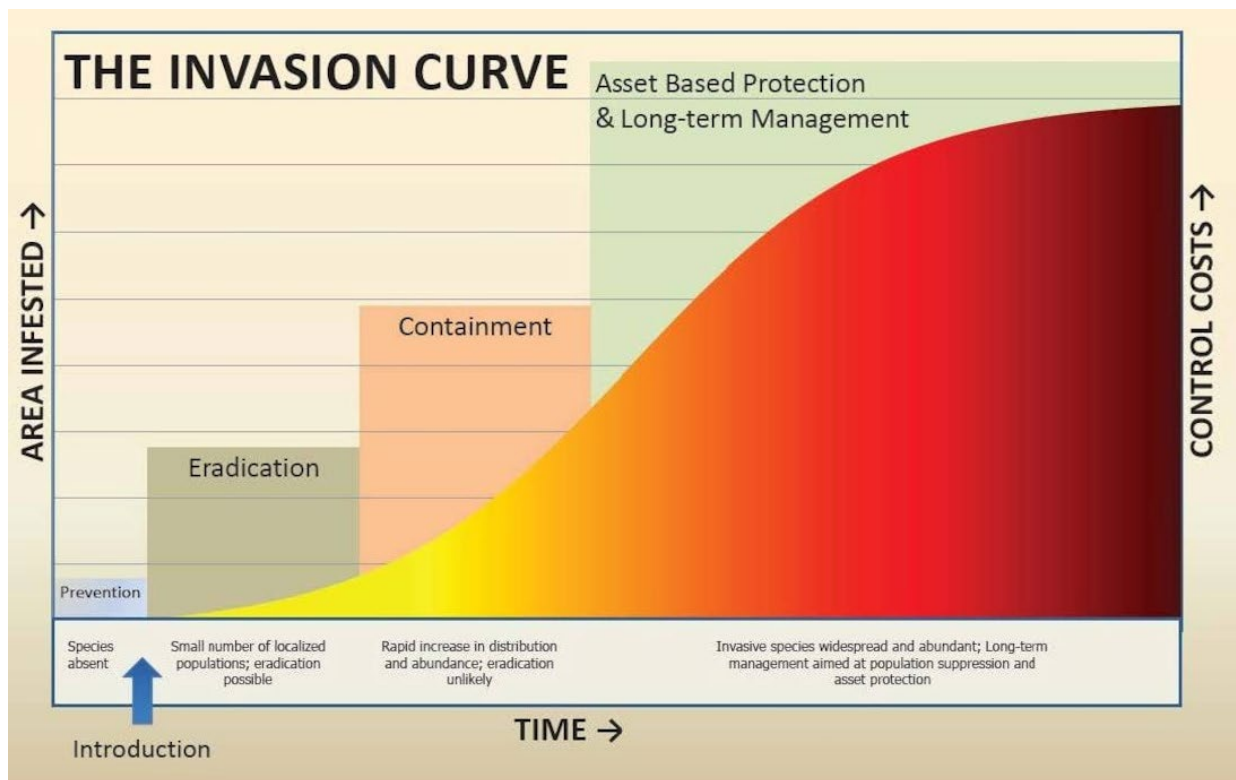




Capital Region PRISM Tier List for Ranking Invasive Species 2021

The PRISM has categorized invasive species based on known populations into a tier ranking system. The purpose of the tier system is to focus attention on high threat species that are not found in our region or are appearing in small populations that are manageable with limited resources. Preventing the introduction of new species is the most cost effective strategy in controlling invasive species. Early identification and rapid response to new infestations that are found in small populations can result in successful eradication that are cost effective. When an invasive species is found regionally over a widespread area the cost to control populations can become prohibitive.

The Invasion Curve below demonstrates that prevention is the most efficient and cost-effective method of controlling invasive species. As invasive species becomes more established over time, the effort and associated costs of addressing infestations increases significantly.



(Photo by: USDA Forest Service 2005 Invasive Plant Environmental Impact Statement) VIRIN: 140305-A-CE999-053.JPG

Capital Region PRISM: Regional Invasive Species Tier List Defined and Ranked

(March 2020 Last Revision)

Tier 1 - Prevention / Early Detection

Not in yet PRISM, with anticipated high or very high impacts. Highest level of survey efforts. Should conduct delineation surveys and assign to appropriate Tier if detected.

Tier 1a: Species not in the PRISM, but in the buffer (surrounding PRISM)

Tier 1b: Species not in PRISM or the buffer, but in Eastern North America (with potential for establishment) Tier 1c: Species far outside PRISM and buffer (not in east NA), but introduction pathway exists

Tier 2 – Eradication / Full Containment may be Feasible

High and very high impact species with low enough abundance to make eradication feasible within the PRISM. Highest level of response efforts. Need delineation surveys to determine full extent.

(at the low end of invasion curve)

Tier 3 – Containment / Strategic Management

High and very high impact species that are likely too widespread for eradication, but low enough abundance to think about regional containment. Target strategic management to slow the spread since many surrounding regions could be at risk if left unattended.

Tier 4 – Local Control / Exclusion or Suppression

Well-established species with high and very high impacts. Eradication efforts not feasible; only localized management over time to contain, exclude, or suppress, if justified to meet local management goals. (Suppression efforts) *Subcategory: Not established outside of PRISM, manage to contain within PRISM.

Tier 5 - Research:

Tier 5a: Species in our PRISM that need more research, mapping, and monitoring to understand invasiveness and impacts.

Tier 5b: Species surrounding our PRISM that need more research, mapping, and monitoring to understand invasiveness and impacts.



New York
Natural Heritage
Program

*Thank you to the New York Natural Heritage Program
in creating the methodology of the Tier System*



Department of
Environmental
Conservation

The New York State Department of Environmental Conservation provides financial support to The Capital Region PRISM via the Environmental Protection Fund

Invasive Species Tiers
Standardized species lists for each PRISM

		Difficulty of Eradication / Cost of Control Abundance (In PRISM plus Buffer)			
		None in PRISM	Low (Eradication/ Full containment may be feasible)	Medium (Strategic management to contain infestations and slow spread in PRISM)	High (Established/widespread in PRISM; only strategic localized management)
Impact (current and future)	Very High or High	TIER 1 <i>Early Detection/Prevention</i> Highest level of early detection survey efforts. Should conduct delineation surveys and assign to appropriate Tier if detected. a) Inside buffer, but not in PRISM b) Outside PRISM and Buffer, but close (eastern North America) c) Far outside PRISM and buffer (not in east NA), but introduction pathway exists	TIER 2 <i>Eradication</i> Highest level of early detection response efforts. High impact species with low enough abundance and suitable treatment method available to make eradication feasible within the PRISM. Need delineation surveys to determine extent.	TIER 3 <i>Containment</i> Target strategic management to slow the spread, as likely too widespread for eradication, but many surrounding regions could be at risk if left unattended. For plants, use the IPMDAT. Possible eradication candidate only if adequate resources and effective control methods available.	TIER 4 <i>Local Control</i> Eradication from PRISM not feasible; focus on localized management over time to contain, exclude, or suppress to protect high-priority resources like rare species or recreation assets. Be strategic when deciding if / where to control.
	Medium	<i>Evaluate (Medium Impact)</i> Further evaluate impacts and PRISM resources to see if the species should be assigned to one of the other lists. If this species could feasibly become high impact with climatic or other environmental changes, consider moving to the appropriate High Impact row based on abundance. If too little is known, consider moving to "Monitor".			
	Unknown	X	TIER 5 <i>Monitor</i> Species that need more research, mapping, and monitoring to understand their invasiveness. This includes naturalized species and cultivated-only species that are known to be invasive in other regions but are not yet invasive here. Invasiveness may change with environmental or genetic changes. Should monitor populations on a regular basis to see if they are starting to become invasive and assign to appropriate Tier if invasive infestations detected.		

Buffer: An area chosen by the PRISM that surrounds the PRISM and takes in certain counties, states and provinces. Most PRISMs are using about 100 miles as the buffer.

Impact: Use the PRISM-specific invasiveness rankings if available, or use NYS ranks (see nysis.info for existing ranks). For species that are not ranked yet, or PRISM-specific adjustments of state ranks are deemed necessary, use expert opinion and document justification. Low-impact species not included since cannot justify spending resources to control these.

Abundance: This is left as a qualitative metric, since assigning standardized values to categories is not feasible due to the diversity of species dispersal strategies and data gaps.

This ranking system takes into account populations that have escaped into natural areas, but not intentionally (and legally) distributed individuals. For example, a landscape planting would not be counted.

The Capital Region tier list is not comprehensive. The tier list focuses on invasive species found within or near a PRISM that have a high or very high invasiveness ranking, or are found to act aggressively enough in our region to be on the tier list. This is only a subset of all invasive species and does not include all regulated and prohibited species. For a full list of NYS prohibited and regulated species as per NYCRR Part 575, please visit [here](#). For a full list of all currently ranked invasive species for NYS visit the New York Invasive Species Information website [here](#).

Aquatic Invasive Plant Species

Scientific name	Common name	Prohibited/ Regulated	2021 Tier Rank
<i>Cabomba caroliniana</i>	Carolina fanwort	Prohibited	1a
<i>Ludwigia peploides ssp glabrescens</i>	Floating primrose willow	Prohibited	1a
<i>Hydrilla verticillata</i>	Hydrilla	Prohibited	1a
<i>Nasturtium microphyllum</i>	Onerow yellowcress		1a
<i>Myriophyllum aquaticum</i>	Parrot feather	Prohibited	1a
<i>Nelumbo nucifera</i>	Pink lotus, Sacred lotus		1a
<i>Ludwigia grandiflora</i>	Uruguayan primrose willow	Prohibited	1a
<i>Eichhornia crassipes</i>	Water hyacinth		1a
<i>Pistia stratiotes</i>	Water lettuce		1a
<i>Aldrovanda vesiculosa</i>	Waterwheel plant		1a
<i>Salvinia molesta</i>	Giant salvinia		1b
<i>Glyceria maxima</i>	Reed mannagrass, Tall mannagrass	Prohibited	1b
<i>Stratiotes aloides</i>	Water soldier		1b
<i>Salvinia minima</i>	Water spangles, Common salvinia		1b
<i>Lagarosiphon major</i>	African elodea, oxygen weed		1c
<i>Crassula helmsii</i>	Australian swamp stonecrop		1c
<i>Nymphoides cristata (Roxb.) Kuntze</i>	Crested floating-heart		1c
<i>Hygrophila polysperma</i>	Indian swampweed		1c
<i>Egeria densa</i>	Brazilian waterweed	Prohibited	2
<i>Hydrocharis morsusraeae</i>	Common frogbit	Prohibited	2
<i>Nitellopsis obtusa</i>	Starry stonewort		2
<i>Myriophyllum heterophyllum</i>	Variable-leaf watermilfoil, Broadleaf watermilfoil	Prohibited	2
<i>Butomus umbellatus</i>	Flowering rush		3
<i>Nymphoides peltata</i>	Yellow floating-heart	Prohibited	3
<i>Nasturtium officinale</i>	Watercress		3
<i>Najas minor</i>	Brittle naiad		4
<i>Phragmites australis</i>	Common reed	Prohibited	4
<i>Potamogeton crispus</i>	Curly-leaf pondweed	Prohibited	4
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil	Prohibited	4
<i>Lythrum salicaria</i>	Purple loosestrife	Prohibited	4
<i>Trapa natans</i>	Water chestnut	Prohibited	4
<i>Iris pseudacorus</i>	Yellow iris	Prohibited	4
<i>Alternanthera philoxeroides</i>	Alligatorweed		5b
<i>Marsilea quadrifolia</i>	European water fern		5b

Aquatic Invasive Animal Species

Scientific name	Common name	Prohibited/ Regulated	2021 Tier Rank
<i>Rhodeus sericeus</i>	Bitterling		1a
<i>Gambusia holbrooki</i>	Eastern mosquitofish	Prohibited	1a
<i>Valvata piscinalis</i>	European stream valvata		1a
<i>Cercopagis pengoi</i>	Fishhook waterflea	Prohibited	1a
<i>Pylodictis olivaris</i>	Flathead catfish		1a
<i>Poecilia reticulata</i>	Guppy		1a
<i>Oreochromis mossambicus</i>	Mozambique tilapia		1a
<i>Potamopyrgus antipodarum</i>	New Zealand mudsnail	Prohibited	1a
<i>Channa argus</i>	Northern snakehead	Prohibited	1a
<i>Procambarus clarkii</i>	Red swamp crayfish		1a
<i>Lepomis microlophus</i>	Redear sunfish		1a
<i>Melanoides tuberculata</i>	Red-rim melania		1a
<i>Tinca tinca</i>	Tench	Prohibited	1a
<i>Hypophthalmichthys molitrix</i>	Silver carp	Prohibited	1b
<i>Mytilopsis leucophaeata</i>	Dark false mussel, Conrad's false mussel, Brackish water muscle		1c
<i>Limnoperna fortunei</i>	Golden mussel		1c
<i>Dikerogammarus villosus</i>	Killer shrimp		1c
<i>Procambarus virginalis</i>	Marbled crayfish		1c
<i>Orconectes limosus</i>	Spinycheek crayfish		1c
<i>Crassostrea ariakensis</i>	Suminoe oyster		1c
<i>Alosa pseudoharengus</i>	Alewife		2
<i>Dreissena bugensis</i>	Quagga mussel		2
<i>Neogobius melanostomus</i>	Round goby	Prohibited	2
<i>Petromyzon marinus</i>	Sea lamprey		2
<i>Bythotrephes longimanus</i>	Spiny waterflea	Prohibited	2
<i>Morone americana</i>	White perch		2
<i>Corbicula fluminea</i>	Asian clam	Prohibited	3
<i>Viviparus georgianus</i>	Banded mysterysnail		3
<i>Hemimysis anomala</i>	Bloody red shrimp	Prohibited	3
<i>Eriocheir sinensis</i>	Chinese mitten crab	Prohibited	3
<i>Cipangopaludina chinensis</i>	Chinese mysterysnail	Prohibited	3
<i>Didymosphenia geminata</i>	Didymo		3
<i>Bithynia tentaculata</i>	Faucet snail, Mud bithynia	Prohibited	3
<i>Lepomis cyanellus</i>	Green sunfish		3
<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	Prohibited	3
<i>Trachemys scripta elegans</i>	Red-eared slider	Regulated	3
<i>Ctenopharygodon Idella</i>	Grass carp		3
<i>Cyprinus carpio</i>	Common carp	Prohibited	4
<i>Carassius auratus</i>	Goldfish	Prohibited	4
<i>Scardinius erythrophthalmus</i>	Rudd	Prohibited	4

Scientific name	Common name	Prohibited/ Regulated	2021 Tier Rank
<i>Orconectes rusticus</i>	Rusty crayfish	Prohibited	4
<i>Dreissena polymorpha</i>	Zebra mussel	Prohibited	4
<i>Orconectes virilis</i>	Virile crayfish		5a
<i>Gambusia affinis</i>	Western mosquitofish	Prohibited	5a
<i>Piaractus brachypomus</i>	Pacu		5a
<i>Proterorhinus semilunaris</i>	Tube-nose goby	Prohibited	5b
<i>Cipangopaludina japonica</i>	Japanese mysterysnail	Prohibited	5b
<i>Etheostoma caeruleum</i>	Rainbow darter		5b
<i>Hypophthalmichthys nobilis</i>	Bighead carp	Prohibited	5b
<i>Mylopharyngodon piceus</i>	Black carp	Prohibited	5b

Terrestrial Invasive Plant Species:

<i>Scientific Name</i>	Common Name	Regulated/Prohibited	2020 Tier
<i>Acer pseudoplatanus</i>	Sycamore Maple	Prohibited	1a
<i>Actinidia arguta</i>	Hardy Kiwi; Taravine		1a
<i>Actinidia polygama</i>	Silver Vine		1a
<i>Akebia quinata</i>	Chocolate Vine; Fiveleaf		1a
<i>Arum italicum</i>	Italian Arum		1a
<i>Brachypodium sylvaticum ssp sylvaticum</i>	Slender Falsebrome	Prohibited	1a
<i>Broussonetia papyrifera</i>	Paper-mulberry		1a
<i>Carum carvi</i>	Common Caraway		1a
<i>Clematis terniflora</i>	Japanese Virgin's-bower, Sweet Autumn Clematis, Yam-leaf clematis, Japanese virgin's bower	Regulated	1a
<i>Cytisus scoparius</i>	Scotch Broom		1a
<i>Deutzia scabra</i>	Fuzzy Deutzia; Pride-of-Rochester		1a
<i>Eragrostis curvula</i>	Weeping Lovegrass		1a
<i>Euphorbia virgata</i>	Slender Leafy Spurge		1a
<i>Heracleum mantegazzianum</i>	Giant Hogweed	Prohibited	1a
<i>Kalopanax septemlobus</i>	Castor-Aralia		1a
<i>Koelreuteria paniculata</i>	Golden-rain Tree		1a
<i>Lepidium latifolium</i>	Perennial Pepperweed; Broadleaf pepperweed	Prohibited	1a
<i>Lespedeza cuneata</i>	Asian Bush Clover; Chinese Lespedeza; Chinese Bushclover; Sericea Lespedeza		1a
<i>Macleaya cordata</i>	Plume Poppy		1a
<i>Ornithogalum nutans</i>	Drooping Star-of-Bethlehem; Star-of-Bethlehem		1a
<i>Perilla frutescens</i>	Beefsteak Plant		1a
<i>Photinia villosa</i>	Oriental Redtip		1a
<i>Phyllostachys spp.</i>	Bamboo	Prohibited	1a
<i>Primula japonica</i>	Japanese primrose		1a
<i>Rubus caesius</i>	European Dewberry		1a
<i>Rubus laciniatus</i>	Cutleaf Blackberry		1a
<i>Saccharum ravennae</i>	Ravenna Grass		1a
<i>Salix atrocinerea</i>	Gray Florists Willow	Prohibited	1a
<i>Salvia glutinosa</i>	Sticky Sage		1a
<i>Symplocos paniculata</i>	Sapphireberry		1a
<i>Viburnum dilatatum</i>	Linden Arrow-wood		1a
	Beech Leaf Disease***		1a

<i>Oplismenus hirtellus</i>	Wavyleaf Basketgrass	Prohibited	1b
<i>Acer palmatum</i>	Japanese Maple		2
<i>Anthriscus sylvestris</i>	Wild Chervil	Prohibited	2
<i>Aralia elata</i>	Japanese Angelica Tree	Prohibited	2
<i>Arthraxon hispidus</i>	Small Carpetgrass; Joint-head Arthraxon	Prohibited	2
<i>Eleutherococcus pentaphyllus</i>	Five-leaf Aralia		2
<i>Euonymus fortunei</i>	Winter Creeper, Climbing Euonymus, Wintercreeper	Regulated	2
<i>Euphorbia esula</i>	Leafy Spurge, Wolf's Milk	Prohibited	2
<i>Impatiens glandulifera</i>	Policemen's Helmet, Ornamental Jewelweed, Himalayan Balsam, Purple Jewelweed		2
<i>Lamium galeobdolon</i>	Yellow Arch-angel		2
<i>Lespedeza bicolor</i>	Shrubby Lespedeza; Shrubby Bush Clover		2
<i>Lysimachia vulgaris</i>	Garden Loosestrife, Yellow Garden Loosestrife	Prohibited	2
<i>Malus toringo</i>	Toringo crabapple		2
<i>Miscanthus sinensis</i>	Chinese Silver Grass; Eulalia; Chinese Silvergrass; Maiden Grass	Regulated	2
<i>Persicaria perfoliata</i>	Mile-a-minute Weed, Mile-a-minute Vine, Asiatic Tearthumb, Mile a minute weed	Prohibited	2
<i>Phellodendron amurense</i>	Amur Corktree	Prohibited	2
<i>Polygonum nepalensis</i>	Nepal Smartweed		2
<i>Pueraria montana var lobata</i>	Kudzu, Japanese arrowroot	Prohibited	2
<i>Pyrus calleryana, Callery Pear</i>	Bradford Pear		2
<i>Reynoutria sachalinensis: Fallopia sachalinensis</i>	Giant Knotweed	Prohibited	2
<i>Rhodotypos scandens</i>	Black Jetbead		2
<i>Salix cinerea</i>	European Gray Willow; Gray Florist's Willow		2
<i>Silphium perfoliatum var perfoliatum</i>	Cup-plant, Indian Cup-plant, Cup plant	Prohibited	2
<i>Spiraea japonica</i>	Japanese Spiraea, Japanese Meadowsweet		2
<i>Syringa reticulata</i>	Japanese-Tree Lilac		2
<i>Typha x glauca</i>	Blue Cat-tail, Hybrid Cat-tail		2
<i>Viburnum plicatum</i>	Japanese Snowball		2
<i>Viburnum sieboldii</i>	Siebold's Viburnum		2
<i>Wisteria spp</i>	Wisteria		2
<i>Ampelopsis brevipedunculata</i>	Porcelain Berry; Amur Peppervine	Prohibited	3

<i>Cardamine impatiens</i>	Narrowleaf Bittercress, Bushy Rock-cress	Prohibited	3
<i>Dipsacus fullonum</i>	Wild Teasel; Fuller s Teasel		3
<i>Ficaria verna ssp verna</i>	Lesser celandine, Fig Buttercup	Prohibited	3
<i>Frangula alnus</i>	Glossy Buckthorn		3
<i>Humulus japonicas</i>	Japanese Hops	Prohibited	3
<i>Ligustrum spp</i>	Privet	Prohibited	3
<i>Lonicera japonica</i>	Japanese Honeysuckle	Prohibited	3
<i>Lonicera maackii</i>	Amur Honeysuckle	Prohibited	3
<i>Lychnis floscuculi</i>	Ragged Robin		3
<i>Microstegium vimineum</i>	Japanese Stiltgrass, Nepalese Browntop, Japanese stilt grass, Nepalgrass	Prohibited	3
<i>Pachysandra terminalis</i>	Japanese-spurge		3
<i>Rubus phoenicolasius</i>	Wineberry	Prohibited	3
<i>Acer platanoides</i>	Norway Maple	Regulated	4
<i>Aegopodium podagraria</i>	Bishop's Goutweed; Goutweed		4
<i>Ailanthus altissima</i>	Tree-of-heaven; Chinese Sumac; Ailanthus		4
<i>Alliaria petiolata, Garlic Mustard</i>	Garlic Mustard	Prohibited	4
<i>Alnus glutinosa</i>	European Alder, Black Alder		4
<i>Artemisia vulgaris var vulgaris</i>	Mugwort	Prohibited	4
<i>Berberis thunbergii</i>	Japanese Barberry	Prohibited	4
<i>Celastrus orbiculatus</i>	Oriental Bittersweet	Prohibited	4
<i>Centaurea spp.</i>	Brown Starthistle, Brown knapweed	Prohibited	4
<i>Cirsium arvense</i>	Canada Thistle, Creeping Thistle	Prohibited	4
<i>Dipsacus laciniatus</i>	Cut-leaved teasel; Cutleaf teasel	Prohibited	4
<i>Elaeagnus umbellata</i>	Autumn Olive	Prohibited	4
<i>Euonymus alatus</i>	Burning Bush, Winged Euonymus, Winged Burning Bush, Winged Spindletree	Regulated	4
<i>Euphorbia cyparissias</i>	Cypress Spurge	Prohibited	4
<i>Glechoma hederacea</i>	Ground Ivy; Gill-over-the-ground		4
<i>Lonicera spp</i>	Bush Honeysuckle		4
<i>Lythrum salicaria</i>	Purple Loosestrife	Prohibited	4
<i>Morus alba</i>	White Mulberry		4
<i>Pastinaca sativa</i>	Wild Parsnip		4
<i>Phalaris arundinacea</i>	Reed Canarygrass		4
<i>Phragmites australis ssp australis</i>	Common Reed, phragmites, Common reed grass	Prohibited	4
<i>Reynoutria spp</i>	Knotweed	Prohibited	4

<i>Rhamnus cathartica</i>	Common Buckthorn	Prohibited	4
<i>Robinia pseudoacacia</i>	Black Locust	Regulated	4
<i>Rosa multiflora</i>	Multiflora Rose; Rambler Rose	Prohibited	4
<i>Ulmus pumila</i>	Siberian Elm		4
<i>Vincetoxicum spp</i>	Swallowwort	Prohibited	4
<i>Commelina communis</i>	Asiatic Dayflower		5a
<i>Daphne mezereum</i>	February Daphne		5a
<i>Epilobium hirsutum</i>	Hairy Willow Herb		5a
<i>Hedera helix</i>	English Ivy		5a
<i>Lupinus polyphyllus</i>	Bigleaf Lupine		5a
<i>Malus baccata</i>	Siberian Crabapple, Crabapple		5a
<i>Populus alba</i>	White Poplar		5a
<i>Salvia refulxa</i>	Lanceleaf Sage		5a
<i>Viburnum lantana</i>	Wayfaring-tree		5a
<i>Viburnum opulus var opulus</i>	Guelder Rose; European Cranberrybush		5a
<i>Carlina vulgaris</i>	Carline Thistle		5b
<i>Dioscorea polystachya</i>	Chinese Yam	Prohibited	5b
<i>Fallopia baldschuanica</i>	China Fleece Vine		5b
<i>Sorghum halepense</i>	Johnsongrass		5b

Terrestrial Invasive Animal Species:

Scientific Name	Common Name	Regulated/Prohibited	2020 Tier
<i>Anoplophora glabripennis</i>	Asian Longhorned Beetle	Prohibited	1a
<i>Dendroctonus frontalis</i>	Southern Pine Beetle		1a
<i>Lycorma delicatula</i>	Spotted Lanternfly		1a
<i>Myrmica rubra,</i>	European fire Ant		1a
	Beech Leaf Disease***		1a
<i>Lymantria dispar asiatica</i>	Asian Gypsy Moth	Prohibited	1b
<i>Myocastor coypus</i>	Nutria	Prohibited	1b
<i>Sus scrofa</i>	Eurasian Boar	Prohibited	1b
<i>Ceratocystis fagacearum</i>	Oak Wilt		2
<i>Adelges tsugae</i>	Hemlock Woolly Adelgid	Prohibited	3
<i>Amyntas agrestis</i>	Crazy Snake Worm	Prohibited	3
<i>Agrilus planipennis</i>	Emerald Ash Borer	Prohibited	4
<i>Adelges piceae</i>	Balsam Woolly Adelgid		5a
<i>Amyntas Metaphire spp</i>	Jumping Worms	Prohibited	5a
<i>Fiorinia externa</i>	Elongate Hemlock Scale		5a
<i>Lymantria dispar</i>	Gypsy Moth	Prohibited	5a
<i>Phytomyza gymnostoma</i>	Allium Leaf Miner		5a
<i>Popillia japonica</i>	Japanese Beetle		5a

<i>Pyrrhalta viburni</i>	Viburnum Leaf Beetle	5a
<i>Lipoptena cervi</i>	Deer ked	5b

