Chequamegon-Nicolet National Forest
Non-native Invasive Species List
(Updates Feb 2014)

Invasive non-native plant species are plants that have the capacity to transform or dominate native plant communities. Although these "weeds" may be found anywhere, disturbed areas tend to be more susceptible to invasion and retention of many weed species. Activities that disturb the ground, such as road and trail building or skidding timber create an environment that encourages establishment invasive non-natives. Seeds are spread via equipment and motor vehicles, humans, animals, and wind.

Category A: Species of immediate concern. These species are documented on the Forest and are currently invading native plant communities. **Control is warranted.**

	Category A		NR40 class	Rounded I-Rank
1	Garlic mustard	*Alliaria petiolata*	*R*	*High*
2	Japanese barberry	*Berberis thunbergii*	*Proposed** R*	*High*
3	Siberian pea	*Caragana arborescens*	*Proposed** R*	*N/A*
4	Oriental bittersweet	*Celastrus orbiculata*	*R*	*High*
5	Spotted knapweed	*Centaurea biebersteinii* & Brown knapweed *C. jacea* (other *Centaurea* species possible)	*R*	*High*
6	Canada Thistle	*Cirsium arvense*	*R*	*High*
7	European Marsh thistle	*Cirsium palustre* **Prohibited west of Hwy 13/ Restricted east of Hwy 13*	*P/R*	*Medium*
8	Bull Thistle	*Cirsium vulgare*		*Medium*
9	Autumn olive	*Elaeagnus umbellata*	*R*	*High*
10	Cypress spurge	*Euphorbia cyparissias*	*R*	*High*
11	Leafy Spurge	*Euphorbia esula*	*R*	*High*
12	Buckthorn, Glossy	*Frangula Alnus (syn R. frangula)*	*R*	*High*
13	Brittle-stem hemp-nettle	*Galeopsis tetrahit (added 2008)*	*R*	*N/A*
14	Asiatic honeysuckles	*Lonicera tatarica, L. morrowii and L. x bella*	*R (all)*	*High*
15	Purple Loosestrife	Lythrum salicaria	R	*High*
16	Forget-me-not	*Myosotis arvensis M. scorpioides (2008)*	*Proposed** R*	*NA*
17	Eurasian water milfoil	*Myriophyllum spicatum*	*R*	*High*
18	Wild parsnip	*Pastinaca sativa*	*R*	*Low*
19	Reed canary grass	*Phalaris arundinacea*		*High*
20	Common Reed	*Phragmites australis*	*R*	*High*
21	Japanese knotweed	*Polygonum cuspidatum*	*R*	*High*
22	Curly Pondweed	*Potamogeton crispus*	*R*	*Medium*
23	Buckthorn, Common	*Rhamnus cathartica*	*R*	*High*
24	Common mullein	*Verbascum thapsus (added 2008)*		*Medium*

(Chapter NR-40 WI State Rule Adopted April 22, 2009 http://dnr.wi.gov/invasives/classification/
** Proposed NR-40 update 2015
***R= Restricted**: banned from transport, transfer (sale), and introduction; no control requirements*
***P=Prohibited**: banned from transport, transfer (sale), introduction, and possession. DNR may enter property with permission to inspect or control; may issue control orders and bill for same.*

***Rounded I-Rank**: **U.S. Invasive Species Impact Rank (I-Rank):** NatureServe Explorer Risk Assessment*

***High**: Species represents a severe threat to native species and ecological communities*
***Medium**: Species represents moderate threat to native species and ecological communities*
***Low**: Species represents a significant but relatively low threat to native species and ecological communities*
***Insignificant**: Species represents an insignificant threat to native species and ecological communities*
***N/A**: Not yet Assessed*
***Unknown**: if the maximum and minimum ranking do not exclude any of the four possible I-Ranks (High/Insignificant), the I-Rank should be listed as 'Unknown'.*

Category B Species known to be invasive and present within the forest; invasion in natural communities uncertain. Record and map all sites, monitor, control under certain circumstances such as high priority sites (see NNIS Strategy Chapter C). This list will change as new species are discovered.

Category B			NR40 class	I-Rank
1	Bishop's Gout-weed	*Aegopodium podagraria*	*Proposed** R*	*Low*
2	Lesser Burdock	*Arctium minus (added 2010)*		*Unknown*
3	Flowering Rush	*Butomus umbellatus*	*R*	*Medium*
4	Purple crown vetch	*Coronilla varia*	*Proposed** R*	*High*
5	Sweet William	*Dianthus barbatus*		*N/A*
6	Russian Olive	*Elaeagnus angustifolia (added 2011)*	*R*	*High*
7	Dame's Rocket	*Hesperis matronalis (added 2009)*	*R*	*Medium*
8	Orange Hawkweed	*Hieracium aurantiacum (added 2011)*		
9	Yellow Hawkweed	*Hieracium caespitosum (added 2011)*		
10	St. John's-wort	*Hypericum perforatum*		*High*
11	Yellow flag iris	*Iris pseudacorus (added 2008)*	*Proposed** R*	*High*
12	Butter-and-eggs	*Linaria vulgaris*		*Unknown*
13	White Sweetclover	*Melilotus alba (added 2011)*	*R*	*Unknown*
14	Yellow sweetclover	*Melilotus officinalis (added 2010)*		*Medium*
15	Burnet saxifrage (scarlet pimpernel)	*Pimpinella saxifraga (added 2011)*	*Proposed** R*	
16	Bristly locust	*Robinia hispida (added 2011)*	*Proposed** R*	*N/A*
17	Black locust	*Robinia pseudoacacia*	*Proposed** R*	*High*
18	Common tansy	*Tanacetum vulgare*	*R*	*Low*
19	Narrow-leaved cattail	*Typha angustifolia*	*R*	*High*
20	Garden valerian	*Valeriana officinalis (added 2008)*	*Proposed** R*	*Low*

Category C "Watch List" Species known to be ecologically invasive, but are not yet documented on the Forest. If found on the Forest, they need to be documented and mapped. If detected they will likely be added to the "A List".

Category C			NR40 class	I-Rank
1	Tree of Heaven	*Ailanthus altissima (added 2011)*	*R*	*Medium*
2	Porcelain berry	*Ampelopsis brevipedunculata*	*P*	*Medium*
3	Musk Thistle	*Carduus nutans (added 2011)*	*R*	*Unknown*
4	Black swallow-wort	*Cynanchum louiseae (syn. Vincetoxicum nigrum)*	*P (R So. WI)*	*High*
5	Pale Swallow-wort	*Cynanchum rossicum (syn. Vincetoxicum rossicum)*	*R*	*High*
6	Hound's-tongue	*Cynoglossum officinale (added 2011)*	*R*	*Medium*
7	Common Teasel	*Dipsacus fullonum*	*R*	*Medium*
8	Cut Leaved Teasel	*Dipsacus laciniatus*	*R*	*Medium*

9	Giant hogweed	*Heracleum mantegazzianum*	*P*	*Medium*
10	Japanese Hops	*Humulus japonicus*	*P (R SW WI)*	*Medium*
11	Dalmatian Toadflax	*Linaria dalmatica (added 2011)*		*N/A*
12	Japanese stiltgrass	*Microstegium vimineum*	*P*	*High*
13	Giant Knotweed	*Polygonum sachalinense (added 2011)*	*P*	*High*
14	Multiflora Rose	*Rosa multiflora (added 2011)*	*R*	*Medium*
15	Any other species known to be invasive in natural communities			

Control Objectives: One or more may apply to each "A" list species.

- **Eradicate** - Species that are able to be eliminated by various methods; may take a long time.
- **Suppress** - There are small populations that are able to be eradicated but there may also be widespread populations that are large and beyond reasonable eradication methods. We will accept low levels of these weeds.
- **Contain** (confine) - We will prevent the spread of these species beyond the perimeter of certain areas. These species will be suppressed or eradicated in some areas but tolerated outside those areas.
- **Tolerate** - Accept the continued presence of established infestations and the probable spread to ecological limits for certain species. We will try to exclude new infestations through prevention practices.

B. Ecological Information CNNF Non-Native Invasive Species

****Need to update these tables to reflect the 2011 changes in the lists above**

Category A			
Species	**Vectors**	**Habitat**	**Effect**
Garlic mustard, *Alliaria petiolata*	Equipment, vehicles, clothing, and wildlife	Shaded mesic forest, roadsides and trails	Dominates forest floor, may negatively impact some butterfly species including the rare West Virginia White, inhibits critical mycorrhizal fungi
Japanese barberry, *Berberis thunbergii*	Seeds dispersed by birds and mammals, Human planting.	Shaded - Forests, woodlands, and edge	Limits growth of herbaceous and woody species by shading out. Increased nest predation. Changes in soil properties and nutrient cycling.
Siberian pea shrub *Caragana arborescens*	Human –garden escapee and transport of seeds by tires, equipment, shoes	Open areas; semi-shaded woods	Displaces native shrubs
Oriental bittersweet, *Celastrus orbiculata*	Seeds dispersed by birds and mammals, Human planting.	Shaded - Forests, woodlands, and edge.	Vines can limit growth of herbaceous and woody species by shading them out
Spotted knapweed, *Centaurea biebersteinii* (other *Centaurea* species possible)	Seeds by equipment, humans, wildlife, fill, gravel, and soil	Open - grasslands, barrens, gravel pits, roadsides. Spreads readily following disturbance	Out-competes native plants. Reduces wildlife grazing, increases surface runoff and sedimentation
Canada Thistle *Cirsium arvense*	Transport of seeds and soil by tires, equipment. Short-distance wind dispersal	Open and edge habitat, variety of soils	Clonal nature out competes native species, reduce species diversity.
European Swamp thistle, *Cirsium palustre*	Humans, machinery, wind, birds	Open and semi-open moist areas; woods roads, edges of forest	Displaces native plants
Bull Thistle			
Autumn olive, *Elaeagnus umbellata*	Human - planted; spread by birds as seed	Open areas, road edges	Displaces native shrubs
Cypress spurge *Euphorbia cyparissias*			
Leafy Spurge *Euphorbia esula*	Transport of seeds and soil by tires, equipment, shoes, animal fur.	Variety of soils in open habitat – but most vigorous in dry sandy soils.	Out competes native species possibly allelopathic
Buckthorn, glossy Frangula Alnus	Seeds dispersed by humans and birds, human planting	Wetter areas than common BT but they can occur together	Changes soil chemistry (nitrogen), dominate forest to the exclusion of native species
Bristle-stem Hemp-nettle *Galeopsis tetrahit*	Tires, equipment, shoes, animal fur.	Shade - Forests, woodlands, and edge	Dominates forest floor,

Category A			
Species	**Vectors**	**Habitat**	**Effect**
Asiatic honeysuckles, *Lonicera tatarica, L. morrowii, and L. x bella*	Seeds dispersed by birds and mammals; Human planting.	Open and shaded - Forests, woodlands, edge habitat and openings	Suppression of forest regeneration, tree growth, and herbaceous layer. Increased nest predation. Poor food source for birds
Purple Loosestrife *Lythrum salicaria*	Transport of seeds and soil by water flow, equipment, wildlife	Open wetlands, water body edges, and wet disturbed areas like ditches	Crowds or shades out native species
Forget-me-not, *Myosotis arvensis Myosotis scorpoides*	Human –garden escapee	Shaded, semi-shaded forests, woodlands, and edge.	Dominates forest floor,
Eurasian water milfoil, *Myriophyllum spicatum*	Transport of plant parts by boating and fishing equipment, humans, and downstream flow	Heavily used fertile lakes, rivers, and other water bodies, highly disturbed lakebeds, lakes receiving nitrogen and phosphorus-laden runoff.	Shades out native aquatic plants, reducing biodiversity. Inhibits recreational uses, changes nutrient cycles, reduces water quality and precipitates algae blooms
Wild parsnip, *Pastinaca sativa*	Transport of seeds and soil by tires, equipment, shoes, animal fur.	Open sunny areas; road edges	phyto-photo toxin on skin. Displaces native species.
Reed canary grass *Phalaris arundinacea*	Movement of rhizomes, some seed, by equipment and human planting.	Open wetlands, riparian areas, wet fens, marshlands, floodplains, wet prairies, and wet ditches.	Out competes native plants, alters soil hydrology, and promotes silt deposition, erosion, and constriction of waterways.
Common Reed-grass, *Phragmites australis*	Rhizome spread; seed & rhizomes by equipment	open wet areas	Out competes native plants, alters soil hydrology, and promotes silt deposition, erosion, and constriction of waterways
Japanese knotweed *Polygonum cuspidatum*	Human – garden escapee, rivers carry viable plant parts	Open road edges, edge of woods, lakeshores, river banks	Aggressive vegetative spreader, forms dense thickets, shades out all other plants
Curly Pondweed, *Potamogeton crispus*	Boating and fishing equipment, humans, and downstream flow	Heavily used fertile lakes, rivers, and other water bodies, highly disturbed lakebeds, lakes receiving nitrogen and phosphorus-laden runoff.	Shades out native aquatic plants, reducing biodiversity and habitat heterogeneity. Inhibits recreational uses, changes nutrient cycles, reduces water quality and precipitates algae blooms.
Buckthorn, common *Rhamnus cathartica*	Seeds dispersed by birds and mammals; Human planting	Open and shaded - variety of disturbed woodlands and edges, sometimes open prairie	Can shade out herbaceous and woody species. Increased nest predation. Poor quality food source for wildlife
Common Mullein *Verbascum thapsus*	Birds, humans, tires, road equipment	Open, disturbed soil	prevent establishment of native herbs and grasses following fires or other disturbances

Category B			
Species	**Vectors**	**Habitat**	**Effect**
Bishop's Goutweed, *Aegopodium podagraria*	Human- garden escapee	Open areas, old home sites	Forms dense patches that exclude other plants
Lesser burdock *Arctium minus (2010)*			
Flowering rush *Butomus umbellatus*			
Purple crown vetch, *Coronilla varia*	Human – planted for soil stabilization	Open areas, road edges - persists	Aggressive vegetative spreader, forms dense thickets,
Sweet William, *Dianthus barbatus*	Human- garden escapee	Semi-shade -forests, woodlands, riparian areas	Dominates forest floor,
Russian olive *Elaeagnus angustifolia (2011)*			
Dame's rocket *Hesperis matronalis (2009)*	Human – garden escapee	Semi-shade, forests, woodlands, moist soils	Displaces native vegetation, fairly aggressive
orange hawkweed *Hieracium aurantiacum(2011)*		Open areas, dry, road edges	allelopathic
yellow hawkweed *Hieracium caespitosum(2011)*		Open areas, road edges	
St. John's-wort, *Hypericum perforatum*	road work, vehicles, shoes	open, and semi-open roadsides, forest edges, wildlife openings	displaces native species, mildly poisonous to wildlife
Yellow flag iris *Iris pseudoacorus(2008)*	already in Taylor, Marinette, Oconto, Douglas & Washburn counties	Open - wetlands	Displaces native wetland plants, aggressive
Butter-and-eggs *Linaria vulgaris*		Open areas, road edges	
White sweetclover *Melilotus alba (2011)*		Open areas, road edges	
Yellow sweetclover *Melilotus officinalis (2010)*		Open areas, road edges	
Burnet saxifrage *Pimpinella saxifraga (2011)*			
Bristly locust *Robinia hispida (2011)*			
Black locust, *Robinia pseudoacacia*	Planted by humans, spreads by root suckering and stump sprouting.	Open grasslands and forest edge habitat	Shades out native species.
Common tansy	Humans,	Open areas, mostly	Crowd out native open-land

Tanacetum vulgare	machinery, animals	disturbed sites such as roadsides	species
Narrow-leaved cattail *Typha angustifolia* and hybrid cattail	vegetative	Open - marsh, roadsides	more aggressive than T. latifolia, takes over quality marshland. Peatlands where hydrology is altered
Garden Valerian *Valeriana officinalis* *(2008)*	Wind, road machinery	Open, disturbed areas, dry to moist	Displaces native vegetation in some situations

Category C: "WATCH" LIST: currently not known to occur on the Forest			
Species	**Vectors**	**Habitat**	**Effect**
Japanese stilt-grass *Microstegium vimineum*	Human -seeds spread on hiking boots & vehicles	Riparian areas, forest, some light	Aggressive, out-competes native ground flora
Porcelain berry *Ampelopsis brevipedum*	Wildlife, humans (horticulture)	Open & semi-open, woods edges, disturbed areas	Vine blankets the ground or climbs trees, shades out plants
Black swallow-wort *Vincetoxicum nigrum*	Human, by seed picked up in soil	Open & semi-open; woods edges, old fields	Vines shade out native shrubs and herbs. May "confuse" monarch butterfly
Pale Swallow-wort *Vincetoxicum rossicum syn Cynanchum rossicum*	Human, by seed picked up in soil	Shaded forest, sometimes open areas, moist to dry	Forms dense stands, crowd out natives
Giant hogweed *Heracleum mantegazzianum*	Tires, equipment, clothing, animal fur	Open - moist areas, ditches	perennial 15 ft tall, out-competes native plants
Flowering Rush *Butomus umbellatus*	Human, for water gardens	Shallow water, ditches, shores	Out-competes native vegetation
Common Teasel *Dipsacus fullonum subsp. sylvestris*	Human, bird	Open, disturbed soil, wet to dry	Invades prairie, spreads from roads into natural areas
Cut-leaved teasel *Dipsacus laciniatus*	Human, bird	Open, disturbed soil, wet to dry	Invades prairie, spreads from roads into natural areas
Japanese Hops	As ornamental, not valued for brewing	Full sun to partial shade, roadsides, riverbanks	Dense stands out-compete native vegetation

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WIDNR Species Regulated under NR-40 (legislation enacted 2009) see DNR website; http://dnr.wi.gov/topic/Invasives/classification.html

NR-40 proposed (2013): http://dnr.wi.gov/topic/invasives/documents/ProposedSpecies1028.pdf

NatureServe Explorer http://www.natureserve.org/explorer/