

Ottawa Non-native Invasive Plant Priority List 2018

Priority	Common name	Scientific name	Contract Reporting Requirements [#]
High	Garlic mustard	<i>Alliaria petiolata</i>	A
High	Japanese barberry	<i>Berberis thunbergii</i>	A
High	Bell's honeysuckle	<i>Lonicera × bella</i>	A
High	Morrow's honeysuckle	<i>Lonicera morrowii</i>	A
High	Tartarian honeysuckle	<i>Lonicera tartarica</i>	A
High	Purple loosestrife	<i>Lythrum salicaria</i> *	A
High	Spike (Eurasian) watermilfoil	<i>Myriophyllum spicatum</i> *	A
High	Common buckthorn	<i>Rhamnus cathartica</i>	A
High	Glossy buckthorn	<i>Frangula alnus (Rhamnus frangula)</i>	A
New Invader/High	Siberian peashrub	<i>Caragana arborescens</i>	A
New Inv/High	Gypsyflower (hound's-tongue)	<i>Cynoglossum officinale</i>	A
New Inv/High	Autumn olive	<i>Elaeagnus umbellata</i>	A
New Inv/High	Leafy spurge	<i>Euphorbia esula</i>	A
New Inv/High	Giant hogweed	<i>Heracleum mantegazzianum</i> **, *	A
New Inv/High	Dames rocket	<i>Hesperis matronalis</i>	A
New Inv/High	Paleyellow iris	<i>Iris pseudacorus</i> *	A
New Inv/High	Purple moorgrass	<i>Molinia caerulea</i>	A
New Inv/High	Common reed	<i>Phragmites australis</i> *	A
New Inv/High	Japanese knotweed	<i>Polygonum cuspidatum (Fallopia japonica)</i> *	A
New Inv/High	Giant knotweed	<i>Polygonum sachalinense</i>	A
New Inv/High	Curly pondweed	<i>Potamogeton crispus</i> *	A
New Inv/High	Stinking willie (tansy ragwort)	<i>Senecio jacobaea</i>	A
New Inv/High	Erect (Japanese) hedgeparsley	<i>Torilis japonica</i>	A
Medium	Wild chervil	<i>Anthriscus sylvestris</i>	A
Medium	Marsh thistle	<i>Cirsium palustre</i>	B
Medium	Purple crownvetch	<i>Securigera (Coronilla) varia</i>	A
Medium	Flat pea	<i>Lathyrus sylvestris</i>	A
Medium	Yellow and white sweet clovers	<i>Melilotus officinalis (M. alba subsumed)</i>	B
Medium	Wild parsnip	<i>Pastinaca sativa</i>	A
Medium	Reed canarygrass	<i>Phalaris arundinacea</i>	B
Medium	Scots pine	<i>Pinus sylvestris</i>	A
Medium	Garden valerian	<i>Valeriana officinalis</i>	A

*Michigan listed noxious weed, or Michigan prohibited or restricted species.

**Federally listed noxious weed.

#A = Complete the ONF NNIP Reporting Form and GPS the location for each site; notify COR within 7 days.

B = If there are few scattered plants or a small area infested, note taxon, abundance and approximate location in the stand notes; record a representative lat-long; if it is a pure patch greater than 0.1 to 0.2 acres (use professional judgement), then complete the ONF NNIP form and GPS the location for each such site.

Low priority species: *Aegopodium podagraria*, *Arctium minus*, *Berteroa incana*, *Bromus inermis*, *Centaurea biebersteinii*, *Chrysanthemum leucanthemum*, *Cirsium arvense**, *Cirsium vulgare*, *Dactylis glomerata*, *Daucus carota**, *Galeopsis tetrahit*, *Hieracium aurantiacum*, *Hieracium piloselloides*, *Hypericum perforatum*, *Lapsana communis*, *Linaria vulgaris*, *Lotus corniculata*, *Lupinus polyphyllus*, *Myosotis scorpioides*, *Ranunculus acris*, *Robinia pseudoacacia*, *Rumex crispus*, *Salix fragilis* / x *rubens*, *Solanum dulcamara*, *Sonchus arvensis**, *Tanacetum vulgare*, *Vinca minor*. Other exotics are not ranked.

Low priority species do not require reporting. You can make notes in the stand tracker if there is something unusual about the infestation.

Ottawa National Forest Weed Reporting Form

Weed Species: _____ **Occurrence number:** _____

Project name: _____ **Site name:** _____

Location (Fill in either the legal description, latitude and longitude, UTM, or attach a map)

Legal Description: Twp _____ Rng _____ Sec _____ $\frac{1}{4}$ sec _____ $\frac{1}{4}\frac{1}{4}$ sec _____

Latitude _____ Longitude _____

UTM _____

District: _____ Compartment: _____ Stand: _____

Directions to site (or include a detailed map) : _____

Owner: _____ County: _____

Infested gross area (acres): _____

% Gross Area Infested (typically 100%): _____

living room = .004 acres (12' x 16')
baseball diamond = 0.2 acres (90' x 90')
football field = 1.1 acres (300' x 160')

% **Cover** (canopy cover of the weed, 1 to 100): _____

Count: _____ (Circle one: plants or stems)

Dominant life form (circle one): Forbs, Graminoids, Nonvascular plants, Shrubs, Trees

Phenology (circle one): Pre-flowering , Flowering , Fruiting , Senescent

Distribution (circle one): Clumpy , Scattered patchy , Scattered even , Linear

Observer: _____ **Date observed:** _____

Address: _____ Phone: _____

Comments: _____

Ottawa National Forest Weed Reporting Form: Field Definitions

These definitions are primarily taken from the 2005 Invasive Plant Inventory, Monitoring and Mapping Protocol Field Guide, available at the NRIS FSWeb web page: <http://fsweb.nris.fs.fed.us/index.shtml>

Weed species: Enter the scientific or common name for the weed species observed. Priority weeds to report include garlic mustard, Japanese barberry, non-native honeysuckles, purple loosestrife, non-native buckthorns, Eurasian water-milfoil, curlyleaf pondweed, Japanese knotweed, giant knotweed, wild chervil, crown vetch, garden valerian, leafy spurge, autumn olive, large knapweed or thistle infestations, and major infestations of any other non-native species.

Project name: If the observation of this weed was not associated with any specific project or inventory, then enter "None".

Occurrence number: Will be completed in the office.

Site name: Enter a name for the site. For example, "Bobcat Lake Campground."

Location: Fill in either the legal description, latitude and longitude, or UTM. If using GPS, set your receiver to map datum = NAD83.

Directions to site: Include other location details, such as the name of an associated road, lake, or stream.

Owner: Record the landownership where the site is located. For example, "USFS" for Ottawa National Forest land.

Infested gross area: Defined by drawing a line around the general perimeter of the infestation.

Percent (%) gross area infested: Proportion of the gross area that contains the target invasive weed. Typically = 100%. If, for some reason, your polygon is larger than the infestation boundary, use less than 100% (e.g. linear infestations within a larger area).

Percent (%) cover: The canopy cover of the weed within the infested gross area. Use a whole number, 1 to 100.

Infested area: Not on the form. Gross area X percent infested = Infested Area. Infested Area was refined in 2009 as the area of land, in acres, containing a single invasive species delineated by the actual perimeter of the infestation or population as defined by the outer edge of the canopy cover of the plants or the visible population of other taxa, excluding adjacent areas not infested and outside the perimeter of the population. Now infested area will usually equal gross area.

Count: The total number of plants or stems across the population or infestation. Estimates are okay, although we cannot enter a range of numbers.

Dominant life form: Dominant life form on the site (not the life form of the weed). Dominant life form is defined as the characteristic form or appearance of a species at maturity.

Phenology: The stage of plant development of the weed related to buds, flowers, or fruit. The field indicates the phenology of most of the plants at the time of sampling.

Distribution: The spatial distribution of individual plants within a population and across the landscape

Comments: Include other details, such as a description of the habitat and surroundings, associated species, and specific resource concerns. Please note if you conducted any treatment (pull, spray) of the weeds.

**2018 List of Rare Plants for the Ottawa NF
(Regional Forester's Sensitives, State listed,
and other species of potential viability
concern, known or likely to occur on the
Forest)**

Adlumia fungosa
Allium schoenoprasum
Amerorchis rotundifolia
Armoracia lacustris [*Neobeckia aquatica*]
Artemisia ludoviciana
Artemisia serrata
Asplenium rhizophyllum
Asplenium trichomanes-ramosum [*A. viride*]
Astragalus canadensis
Astragalus neglectus
*Bidens discoidea**
Botrychium acuminatum
Botrychium ascendens
Botrychium crenulatum
Botrychium hesperium/michiganense
Botrychium lunaria
Botrychium minganense
Botrychium mormo
Botrychium oneidense
Botrychium pallidum
Botrychium pseudopinnatum
Botrychium rugulosum
Botrychium simplex
Calamagrostis lacustris [*C. stricta* ssp.
inexpansa]
Callitriche hermaphrodita
Callitriche heterophylla
Calypso bulbosa
Carex assiniboinensis
Carex gynocrates
Carex livida
Carex michauxiana
Carex trichocarpa
Carex vaginata
Ceratophyllum echinatum
Clematis occidentalis
Collinsia parviflora
*Conopholis americana**
Crataegus douglasii
Cryptogramma stelleri
Cypripedium arietinum
Cypripedium parviflorum v. *pubescens* and
v. *makasin*

Cypripedium reginae
Cystopteris laurentiana
Danthonia intermedia
Dentaria [*Cardamine*] *maxima*
Disporum [*Prosartes*] *hookeri*
Drosera anglica
Dryopteris expansa
Dryopteris filix-mas
Dryopteris fragrans
*Dryopteris goldiana**
Dryopteris marginalis*
Eleocharis olivacea
Eleocharis quinqueflora
Elymus glaucus
Erigeron acris
Eriophorum chamissonis
Erythronium albidum
Galearis [*Orchis*] *spectabilis*
Galium brevipes
Gentiana linearis
Geocaulon lividum
Gnaphalium sylvaticum
Gratiola aurea [*G. lutea*]
Gymnocarpium robertianum
Helianthus mollis
*Hierochloa odorata**
Huperzia appalachiana
Huperzia selago
Hypericum prolificum
Juglans cinerea
Juncus stygius
Listera auriculata
Liparis loeselii
Littorella uniflora
Lycopus virginicus
Lysimachia hybrida
Malaxis brachypoda [*M. monophylla* var.
brachypoda]
Mimulus guttatus
*Mimulus moschatus**
Moehringia [*Arenaria*] *macrophylla*
Muhlenbergia uniflora
Myriophyllum farwellii
Nuphar pumila [*N. lutea* ssp. *pumila*]
Ophioglossum pusillum
*Orobancha uniflora**
Oryzopsis [*Piptatherum*] *canadensis*
Panax quinquefolius
Parnassia palustris

Pellaea atropurpurea
Petasites sagittatus
Phegopteris hexagonoptera
Pinguicula vulgaris
Polemonium occidentale ssp. *lacustre*
Polygonum careyi
Potamogeton confervoides
Potamogeton vaseyi
Primula mistassinica
Pterospora andromedea
Pyrola asarifolia
Pyrola minor
Ranunculus cymbalaria
Ranunculus gmelinii
Ranunculus rhomboideus
Rhynchospora fusca
Ribes oxyacanthoides
Sagina nodosa
Salix pellita
Senecio indecorus
Silene nivea
Sisyrinchium strictum [*S. montanum* var. *montanum*]
Streptopus amplexifolius *
Thalictrum venulosum var. *confine* *
Thelypteris noveboracensis
Tiarella cordifolia
Trisetum spicatum
***Ulmus thomasi* NEW 2016**
Utricularia geminiscapa
Utricularia gibba
Utricularia resupinata *
Vaccinium cespitosum
***Veronicastrum virginicum* ***
Viola lanceolata *
Viola novae-angliae ssp. *grisea*
Viola novae-angliae ssp. *novae-angliae*
Woodsia alpina
Woodsia obtusa
Zizia aptera
Zizania palustris *

* No MNFI form required, just a GPS reading for the location, short note on habitat, and estimated population size

**Ottawa National Forest Botany Program
Protocol for Rare Plant Surveys**

2/16/16 Update S. Trull

I. Survey Protocol

Pre-field review

Review topographic maps; aerial photographs; compartment maps; stand type and other information prior to field work to select the most likely rare plant habitat areas within your survey area. Use rare plant guides; element stewardship abstracts; floras; and other relevant information to determine which listed species are likely to occur in the project area. Review locations of documented element occurrences in/near your survey area. Select access routes and check with COR or District personnel regarding condition of roads, trails, location of gates, etc. Contact Ranger or COR if administrative use of roads not on MVUM is needed.

Stand type legend:

Code	Forest/Cover Type
01	jack pine
02	red pine
03	white pine
04	white pine-hemlock
05	hemlock
11	balsam fir-spruce-aspen-birch
12	wetland black spruce & tamarack together >70% (BS>T)
14	wetland northern white cedar >50%
15	tamarack & black spruce together >70% (T>BS)
16	white spruce >50%
17	upland black spruce >50%
18	mixed swamp conifer (fir, hemlock, black spruce, tamarack >60%, white cedar <50%)
19	upland northern white cedar >50%
20	hardwoods-hemlock (hemlock 20-50%)
41	northern red oak-white ash-white pine
48	jack pine-oak >80% (oak at least 20%)
49	red pine/white pine-oak >80% (oak at least 20%)
55	northern red oak
71	black ash-elm-red maple >50%
76	red maple (wet site) >75%
79	mixed lowland hardwoods
80	hardwoods-northern red oak (oak 20-50%)
81	hardwoods-yellow birch (yellow birch >20%)
82	hardwoods-basswood (basswood >20%)
84	red maple (dry site)
85	sugar maple >75%
89	mixed hardwoods (red & sugar maple, yellow birch, basswood, ash, elm, paper birch, aspen, bigtooth aspen =80%)
91	quaking aspen >50%
92	paper birch >50%

93	bigtooth aspen >50%
95	aspen-birch-white spruce-balsam fir (aspen & PB>WS & fir)
97	lowland brush (alder, dogwood, willow)
98	upland brush (hazel, blueberry, sweetfern, cherry, elderberry, sumac, blueberry, raspberry)
99	open (water, wet grass, leatherleaf, labrador tea, sedge meadow, grass & fern)

Stand size density legend:

Code	Stocking
0	nonstocked (<16% stocked)
1	seedling/sapling (16-39%)
2	seedling/sapling (40-69%)
3	seedling/sapling (>70%)
4	poletimber (16-39%)
5	poletimber (40-69%)
6	poletimber (>70%)
7	sawtimber (16-39%)
8	sawtimber (40-69%)
9	sawtimber (>70%)
poletimber = 5-8.9" DBH for aspen & conifers; 5-10.9" DBH for hardwoods	
sawtimber = >= 9" DBH for aspen & conifers; >= 11" DBH for hardwoods	

Field surveys

Conduct field surveys on a controlled intuitive or meander basis. That is, crisscross the survey stands while detouring to the most likely habitats for listed plants, such as rock outcrops, wetland inclusions, etc. Check both homogenous and heterogenous parts of stands, paying particular attention to ecotones. Sample the full range of habitats and site conditions included in the survey stands. Conduct surveys in spring, summer, and fall to observe plants that bloom in different seasons; follow different routes each time (except for rechecking specific areas). For a few habitats in the project area, surveys may not be needed in all three seasons, but this should be the exception.

Mark in the field (e.g. with flagging tape) and/or take a GPS waypoint for particular areas or plant populations noted while surveying that need special attention in a subsequent survey, so you can easily relocate them. Use Botany assigned-color flagging: yellow/black diagonal stripe (can be tied with orange for greater visibility but do not flag with orange alone). Do not extensively mark populations of listed plants other than temporarily, to avoid drawing undue attention to these areas.

Record a GPS track for your survey (use NAD83 datum). Submit tracks in format compatible with the Ottawa GIS, showing dates surveyed. Check with COR to ensure compatibility of computer systems.

II. Plant Survey General (aka Habitat) Form

Complete the form as described below:

Post survey edits completed: after all seasons' surveys are complete, and you have checked the forms for completeness and legibility, including the associated species forms, write your name and the date. Make sure

you have identified all remaining unknowns. (For plants too immature to identify, check in a subsequent season or ensure your identification to genus or subgenus level sufficient to know the plant is not a listed taxon. Note this in comments.) Make sure you have submitted all photographs (see below) and completed any MNFI forms (see below). Make sure any collected specimens have a "final"/office ID and label provided. This field is the last one to be completed on the form by the original surveyor. This field signifies that the project survey records are ready for review by staff botanists.

Reviewed: An ONF botanist signs and dates this form after review, checking of any tentative ID(s), confirmation or change of ID(s) by experts (MICH), confirming any unclear data with original surveyor. When completed, this field signifies that the project report is complete and may be used in biological evaluations, NEPA documents, etc.

Project: List the project name, including type such as vegetation management project (VMP), gravel pit, land exchange (LX), trail, etc.

District: Use a 3-letter abbreviation for the Ranger District where the project occurs, as follows:

BER = Bergland	BES = Bessemer	IRN = Iron River
KEN = Kenton	ONT = Ontonagon	WAT = Watersmeet.

Quad(s): List the name(s) of the topographic quad(s) which cover the project area. For large timber sale projects under contract, this block may be skipped since this information is in the contract.

T, R, Sec(s), (QQ), Compartment(s) and stand number(s): List the township, range, sections, partial sections, compartments, and stand numbers which cover the survey area, as applicable. Quarter-quarter designations may only apply to smaller projects, like gravel pit surveys. For large timber sale projects under contract, this block may be skipped since this information is in the contract.

Total ac/mi surveyed: List the total acres (most projects) or miles (e.g. for linear features like trails) which have been covered by one or more surveys in the project area. Circle the units used. This number is **not** a sum of the acreage or miles covered each time surveys occurred. (This number is used to calculate the percent of the project area which was surveyed.) For large timber sale projects under contract, this block may be skipped since acreage is in the contract.

Project area acres/mi: List the size of the project in acres or miles (linear projects). Circle the units used. This information should be provided by the staff botanist/COR.

Hours by survey fields: List the hours spent for each survey (spring, summer, fall) as follows:

1-way travel hrs: list hours (to nearest quarter) spent to get to the project area from your duty station/office, in one direction. If you begin travel somewhere other than your duty station, estimate the time as if you had started at your normal duty station. If you travel to a second project area on the same day, estimate the one-way travel time to the second site from your duty station. If more than one botanist is participating in the survey and surveying different areas, count the time as if each person traveled separately to reach the site. If you, or a second botanist, goes to the site on another day, count the travel time again. (These data are used to estimate unit survey costs and effort expended on surveys). For large timber sale projects under contract, this block may be skipped.

Survey hrs: list hours spent on site, actually surveying (i.e. exclude lunch break). If more than one botanist is participating in the survey (without completing his/her own set of forms), list the total botanist-hours (e.g. 2 botanists are on site from 10 a.m. to 4 p.m. with a ½ hour lunch; survey hours = 11). List total for all the days spent in a given season.

Key hrs: list hours spent keying out unknown plants (off-site; keying time while in field is included in survey hrs), summed for all botanists participating in the survey under one set of field forms.

TES plants, Taxon, and MNFI forms done fields: Circle Y for yes or N for no. If TES plants are found, list the taxa. MNFI forms must be completed before the project is complete.

Photos taken etc. fields: If you take photographs/slides of plants during a survey, circle Y for yes. Otherwise circle N for no. Staff botanists should record where they are filed (e.g. the District Office or Supervisor's Office). Be sure photo filename or properties includes species or topic of photo. Provide photos in .jpg format **at resolution no greater than 2400x3000 pixels (less is fine for habitat photos)**. Typically this equates to a camera setting of ~7 mp; 4-5 megapixel setting will suffice for habitat shots.

Description of area: Note directions to site, a general description of the project area, its landscape context, any access complexities (e.g. need to cross private land), general features.

HABITAT 1. In this field, describe the first habitat you encounter during the survey, giving information on overstory and community types, topography, aspect, drainage features, geology, soils, seral state, disturbance, etc.

HABITAT 2-5. In these fields, record similar information for the second, third, fourth, fifth habitats you encounter. Consider it a new habitat if a major change in vegetation occurs, such as the following:

- a) a change from forest to non-forest, from shrub to herb domination, or vice versa;
- b) within forest, a change from one overstory series to another, such as from hardwood to pine or aspen, or from upland hardwoods to lowland hardwoods, or from jack pine to red pine;
- c) in herbaceous areas, a change from forb dominated to graminoid dominated or to moss-lichen dominated, or from terrestrial herbaceous to aquatic herbaceous dominated.

For small inclusions, you do not need to start a new habitat block, but note in the description that the habitat includes inclusions of specified type (e.g. "several small vernal pools occur in this habitat"). However, if you expect to encounter the inclusion type elsewhere in the project area, start a new habitat block, and use it and the associated species form each time you cross into it (e.g. you may have a habitat block for intermittent drainage riparian areas).

If you need more than five habitat blocks, use a second general form and change the numbers to Habitat 6, 7, etc. Record the project name at the top, and write CONTINUED. You do not need to repeat the information at the top of the continuation form, just skip to the habitat blocks.

COMMENTS: Record any other relevant information, such as stand health, understory regeneration, other projects surveyed in the area, unique features, invasive plant or worm infestations, threats to the site, deer herbivory levels, whether additional surveys are needed (e.g. beyond the scheduled spring, summer, fall

surveys), rare animals seen (report to District Biologist), heritage sites seen (report to Forest Archaeologist), etc. For timber project contract surveys, most of this type of information should be put in the Stand Tracker form.

NOTE: Some of the above fields may be completed partially before going to the field, and partially afterwards, in the office. All fields MUST be legible. If your field copy is not legible, prepare a clean copy after field surveys are complete. Turn in all forms, survey routes, pressed specimens, and photos/slides to staff botanists by the end of the field season. **Electronic versions of the forms, with information typed in, are preferred for the final forms.**

III. Plant Survey Species Form

Project: Write project name.

Habitat #: List the habitat number from the general form to which the species list corresponds. You may cross in and out of this habitat during your survey: switch to another page for the new habitat, and then return to your original page when you cross back into the original habitat.

Survey extent: only use this field for surveys where stand acreage is NOT provided in contract. List the total extent of acres or miles covered by surveys each time you survey, separated by semicolons. Circle the units used. Consider survey extent to include actual acreage examined as well as immediately adjacent comparable habitat. That is, you are listing the acreage/miles to which the species list applies. This total will usually be a larger number than the summary acres on the general form.

Surveyor(s) and survey dates: List the surveyor(s) names and dates of surveys, separated by semicolons. This block may be skipped for contracts. Example:

survey extent (miles/acres): 60; 46; 29; 100

surveyor(s) and survey dates: SJ Trull 5/25/98; Trull/C Matula 6/19/98; Matula 6/20/98; Trull 8/31/98.

Species Rows

Mark the taxa observed in the subject habitat. Use a different symbol for different seasons as shown in legend on form. You do not need to mark a second or third time if you note a species already observed in a previous season, just mark those species newly observed each season. Write in species epithets as needed (e.g. *Carex intumescens*). If you find a species not listed, list it on the blank lines. If you can only identify a plant to genus, note it as sp. and **check** in the next season. Finish the identification if you find the plant the next season. If you still cannot identify it to the species level, describe in the comments field why you can't and justify how you know the plant could not be a listed taxon (e.g. an orchid too immature to identify past *Cypripedium*, but the leaves are not right for *C. arietinum*). This is a last resort and you should get an identification to species in nearly all cases. Collect samples to identify in the office as needed. Some lines show multiple species epithets. This is done to save space on the form, it does not mean to lump these taxa together; be sure to mark which were observed.

Back side: Collected Species Data

For those species that you collect to press and submit to an herbarium (as opposed to those you collect or "top-snatch" to identify in the office, which are already represented in our herbarium, are not unusual, and you just need reference books, a microscope, or more time to identify), complete the fields on the form (for tracking specimens).

For such specimens, also record, **while in the field**, the following information which is needed for the herbarium label: **collector's name, collection number; tentative ID; precise location where the plant is collected, including township, range, section, lat-long as well as relevant details such as road numbers or local landmarks; habitat; topography; geology; soil moisture or water regime; aspect; associated species; color; abundance; apparent health or vigor; anomalies**, etc. You may record this information in your bound collecting record book if you carry one, or on the field form, or on field notepaper you are carrying. Subsequently, you must prepare a **typed** label for the voucher specimen and include it in the newspaper with the plant. **FOLLOW ETHICAL COLLECTING PRACTICES** and take good care of your specimens so that the herbarium sheet prepared with them will be as informative as possible. Specimens should easily fit within a standard folded ½ page of newspaper; do not extend the newspaper folder with additional paper. Please review Dr. Ed Voss' article on labeling prior to preparing labels. Typed labels may be submitted on paper or electronically; if the latter, the Forest will print onto high quality paper and submit with specimens.

NOTE: As a federal employee, or contractor to the Ottawa National Forest, you do not need a permit to collect plants on the Ottawa National Forest, even if the plants are included on the State of Michigan special plants list. Michigan Natural Features Inventory (MNFI) disagrees with this. The issue has been discussed and no agreement reached with MNFI, but this is USDA Forest Service policy verified by the Office of General Counsel.

Collector and number: List your name and the collection number using your chosen numbering system.

Field ID: List a tentative ID and any needed notes.

Final ID: List the ID you determine after consulting reference books, herbarium specimens, other Ottawa botanists, etc. This may be changed after submission to an expert on the genus, but will be the name put on the specimen's label.

Post-survey edits completed

Reviewed

(name, date): _____

(name, date): _____

Project				District	Quad(s)
T	R	Sec(s)	(QQ)	Compartment(s) and stand number(s)	tot ac/mi surveyed (1+ times)
					project area acres/mi
	1-way travel hrs	survey hrs	key hrs	TES plants: Y N	Photos taken? Y N
spring				Taxon: _____	filed at:
summer				Taxon: _____	date filed:
fall				MNFI Forms done: Y N	

DESCRIPTION OF AREA (directions to site, etc.):

HABITAT 1 (describe community type, aspect, topography, drainage features, geology, soils, seral stage, etc.):

HABITAT 2 (describe community type, aspect, topography, drainage features, geology, soils, seral stage, etc.):

HABITAT 3 (describe community type, aspect, topography, drainage features, geology, soils, seral stage, etc.):

HABITAT 4 (describe community type, aspect, topography, drainage features, geology, soils, seral stage, etc.):

HABITAT 5 (describe community type, aspect, topography, drainage features, geology, soils, seral stage, etc.):

COMMENTS (other projects in area, special features, threats, invasive species, additional surveys needed, etc.):

Surveyor(s)/dates:

GRAMINOIDS

Agrostis peren./hyemalis/_____

Brachyleytrum erectum _____

Bromus ciliatus/inermis/_____

Calamagrostis canadensis _____

Carex arctata/brunnescens/canesc. _____

C. crinita/deweyana/disperma _____

C. gracillima/gynandra/intumescens _____

C. lacustris/leptonervia/pedunculata _____

C. pensylvanica/retrorsa/scabrata _____

C. stipata/stricta/trisperma _____

Carex _____

Carex _____

Carex _____

Cinna latifolia _____

Festuca rubra/_____

Glyceria canadensis/grandis/striata

Juncus effusus/tenuis/_____

Luzula acuminata

Milium effusum

Muhlenbergia _____

Oryzopsis asperfolia

Phleum pratense

Poa alsodes/compressa/palustris

Poa pratensis/saltuum./_____

Schizachne purpurascens

Scirpus atrovirens/cyper./_____

ADDITIONAL SPECIES

Survey symbols: Spring /
Summer X Fall o

[illegible]

SENSITIVE PLANT SEARCH TIMES

SPECIES	LIST	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER			
<i>Amerorchis rotundifolia</i>	RFSS-L									X	X	X	X	X	X	X	X																
<i>Moehringia macrophylla</i>	RFSS									X	X	X	X	X	X	X	X																
<i>Armoracia lacustris</i>	RFSS-L									X	X	X	X	X	X	X	X	X	X	X	X												
<i>Asplenium rhizophyllum</i>	RFSS-L					+	+	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	+	+	+	+				
<i>Astragalus canadensis</i>	RFSS									+	+	+	+	X	X	X	X	X	X	X	X	X	X	X	X	X							
<i>Astragalus neglectus</i>	RFSS									+	+	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
<i>Bidens discoidea</i>	pRFSS															+	X	X	X	X	X	X	X	X	X	X							
<i>Botrychium hesperium</i>	RFSS									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
<i>Botrychium lunaria</i>	RFSS-L							+	+	X	X	X	X	X	X	X	X	+	+														
<i>Botrychium minganense</i>	RFSS-L								X	X	X	X	X	X	X	X	X	+	+	+	+												
<i>Botrychium mormo</i>	RFSS											+	+	+	+	X	X	X	X	X	X	X	X	X	X	X	+	+	+	+			
<i>Botrychium oneidense</i>	RFSS					+	+	+	+	Old leaves?						+	+	X	X	X	X	X	X	X	X	X	X	X	X	+	+		
<i>Botrychium pallidum</i>	RFSS-L								+	X	X	X	X	X	X	X	X																
<i>Botrychium rugulosum</i>	RFSS								X	X	X	+	+	+	+	+	+	+	X	X	X	X	X	X	X	X	+	+	+	+			
<i>Calamagrostis lacustris</i>	RFSS									+	+	+	+	X	X	X	X	X	X	X	X	X											
<i>Calypso bulbosa</i>	RFSS							+	X	X	X	+																					
<i>Carex backii</i>	RFSS-L									X	X	X	X	X	X	X	X																
<i>Crataegus douglasii</i>	RFSS-L				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	X	X	X	X	X	X	+	+	+	+	+	+	+	
<i>Cynoglossum boreale</i>	Delisted					+	+	X	X	X	X	X	X	X	X	+	+	+	+	+	+	+											
<i>Cypripedium arietinum</i>	RFSS							+	X	X	X	+																					
<i>Cystopteris laurentiana</i>	RFSS-L											X	X	X	X	X	X	X	X	X	X	X											
<i>Cardamine maxima</i>	RFSS					+	X	X	X	X	+	+	+	+	+	+																	
<i>Disporum hookeri</i>	RFSS									X	X	X	X	+	+	+	+	+	+	+	+	+	+	+	+	+							
<i>Dryopteris expansa</i>	Delisted																																
<i>Eleocharis olivacea</i>	RFSS-L															X	X	X	X	X	X	X	X	X	X	X	X	X	X				
<i>Erythronium albidum</i>	RFSS-L				+	X	X	X	X	+	+	+																					
<i>Galearis spectabilis</i>	RFSS							+	X	X	X	X	+																				
<i>Geocaulon lividum</i>	RFSS-L											+	+	X	X	X	X	X	X	X	X	X	X	X	X	X							
<i>Huperzia selago</i>	RFSS					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	+	+			
<i>Juglans cinerea</i>	RFSS							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
<i>Juncus stygius</i>	RFSS-L													X	X	X	X	X	X	X	X	X	X	X	X	X	X						
<i>Juncus vaseyi</i>	RFSS-L									+	+	+	+	X	X	X	X	X	X	X	X	X	X	X	X	X							
<i>Listera auriculata</i>	RFSS-L											X	X	X	X	X	X	X	X	X	X												
<i>Littorella uniflora</i>	RFSS												+	+	+	X	X	X	X	X	X	X	+										
<i>Malaxis brachypoda</i>	RFSS-L										+	X	X	X	X	X	X	X	X	X	X	X	+										
<i>Mimulus guttatus</i>	RFSS									+	+	X	X	X	X	X	X	X	X	X	X	X	+	+									
<i>Muhlenbergia uniflora</i>	RFSS												+	X	X	X	X	X	X	X	X	X	+	+									
<i>Myriophyllum farwellii</i>	RFSS									+	+	+	+	X	X	X	X	X	X	X	X	X											
<i>Nuphar pumila</i>	RFSS									+	+	+	+	X	X	X	X	X	+	+													
<i>Orobanche uniflora</i>	RFSS									+	X	X	X	+	+																		
<i>Oryzopsis canadensis</i>	RFSS-L										X	X	X	X	X	X	X	+	+	+	+	+	+	+	+	+	+	+					
<i>Panax quinquefolius</i>	RFSS									X	X	X	X	X	X	X	X	+	+	+	+	+	+	+	+	+	+						

X = Optimum time to search

+ = OK time with good conditions, or search time is uncertain

SENSITIVE PLANT SEARCH TIMES

SPECIES	LIST	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER			
<i>Petasites sagittatus</i>	RFSS					+	+	X	X	X	X	X	X	X	X	X	X	X	+														
<i>Phegopteris hexagonoptera</i>	RFSS-L							+	+	X	X	X	X	X	X	X	X	X	X	X	X	X											
<i>Polemonium occidentale</i>	Watch											+	X	X	X	+	+																
<i>Polygonum careyi</i>	RFSS									+	+	+	+	X	X	X	X	X	X	X	X												
<i>Potamogeton confervoides</i>	RFSS-L													+	X	X	X	X	X	X	X	X	X	X	+	+							
<i>Pterospora andromeda</i>	RFSS			Old stems		+	+	+	+	+	+	X	X	X	X	X	X	X	X	X	X												
<i>Pyrola asarifolia</i>	RFSS										X	X	X	X	X	X	X	+															
<i>Pyrola minor</i>	RFSS-L												+	X	X	X	X	X	+														
<i>Ranunculus gmelinii</i>	RFSS-L												+	X	X	X	X	X	X	X	X	+	+										
<i>Ranunculus rhomboideus</i>	RFSS					X	X	X	X	X	X	X																					
<i>Salix pellita</i>	RFSS							+	+	+	+	+	+	+	+	X	X	X	X	X	X	X	X	+	+								
<i>Scirpus subterminalis</i>	RFSS											+	+	X	X	X	X	X	X	X	X	X	X	X	X	X							
<i>Silene nivea</i>	pRFSS													X	X	X	X	X	X	X	X	X	X	+	+								
<i>Thelypteris noveboracensis</i>	RFSS							+	+	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
<i>Tiarella cordifolia</i>	RFSS					+	+	X	X	X	X	X	X	+	+	+	+	+	+	+	+	+	+										
<i>Utricularia geminiscapa</i>	RFSS-L											+	+	X	X	X	X	X	X	X	X	+	+										
<i>Vaccinium cespitosum</i>	RFSS					X	X	X	X	X	X	X	X	X	X	X	X	+	+	+	+	+	+										
<i>Viola lanceolata</i>	RFSS								+	+	X	X	X	X	X	X	X	X	X	X													
<i>Viola novae-angliae</i>	RFSS							+	X	X	X	+	+																				

X = Optimum time to search

+ = OK time with good conditions, or search time is uncertain

							Survey Dates (MM/DD/YY)										
	Com-part-ment	Stand	Acres	Forest Type	Year of Origin	Size Density					Wormed? (Y/N and list evidence: worms seen, depleted duff, castings, etc.)	Asclepias ? (list species, coords, patch size)	Carex pensylvanica lawn? (Y/N and % of stand affected)	Comments (large trees, rock outcrops, fire scars, down wood, slope, embedded wetlands, etc.)	Plants of Interest (put * if MNFI form completed)	NNIP (put * if reporting form completed)	
District							1st survey	2nd survey	3rd survey	Habitat #							
3	107	36	13	91	1961	9											
3	107	37	17	11	1922	9											
3	107	39	1	91	1961	9											
3	107	42	12	91	1958	6											
3	107	48	20	89	0	6											
3	107	51	37	85	0	9											
3	107	52	10	16	1930	9											
3	107	53	7	85	0	9											
3	107	60	7	11	1953	6											
3	107	62	9	91	1943	6											
3	107	66	1	95	1953	6											
3	107	67	5	91	1951	6											
3	107	69	5	85	1938	2											
3	107	72	3	95	1900	8											
3	107	76	43	95	1923	9											
3	107	80	8	5	1910	8											
107 Total			773														
3	108	2	27	91	1932	9											
3	108	3	25	91	1956	9											
3	108	8	12	11	1898	6											
3	108	9	13	91	1952	6											
3	108	10	33	89	0	9											
3	108	11	29	91	1965	6											
3	108	12	25	91	1941	9											
3	108	13	11	91	1960	6											
3	108	14	29	89	0	6											
3	108	15	42	91	1953	6											
3	108	19	107	89	0	9											
3	108	20	9	89	0	6											
3	108	21	54	91	1970	3											
3	108	22	25	91	1962	6											
3	108	24	89	89	0	6											
3	108	25	9	91	1961	6											
3	108	29	11	1	1950	6											
3	108	30	15	85	0	6											
3	108	31	14	3	1828	9											
3	108	33	109	85	1890	9											
3	108	34	11	85	0	9											
3	108	35	29	5	1828	9											
3	108	36	24	85	1910	6											
3	108	39	32	85	1948	6											
3	108	40	29	16	1900	8											
3	108	41	12	16	1964	3											
3	108	43	16	95	1961	2											
3	108	44	7	11	1928	5											
3	108	48	4	5	1858	8											
3	108	49	4	5	1828	8											
3	108	55	9	95	1928	5											
3	108	59	9	11	1948	3											
3	108	61	10	91	1928	5											
3	108	62	11	91	1965	6											
3	108	64	6	11	1928	6											
3	108	66	25	95	1920	5											
3	108	72	18	85	1900	9											
3	108	73	22	91	1928	5											
108 Total			967														
3	109	1	117	85	1930	9											
3	109	2	18	11	1954	6											
3	109	3	35	89	0	9											

[illegible]