



Invasive and Noxious Species Management Plan

Line 5 Wisconsin Segment Relocation Project

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Acronyms and Abbreviations

Name	Description
BMPs	best management practices
CLL	construction line list
Enbridge	Enbridge Energy, Limited Partnership
EPP	Environmental Protection Plan
HDD	horizontal directional drill
INS	invasive and noxious species
L5R or Project	Line 5 Wisconsin Segment Relocation Project
PCMP	Post-Construction Wetland and Waterbody Monitoring Plan
Plan	Invasive and Noxious Species Management Plan
USDA	U.S. Department of Agriculture
WDNR	Wisconsin Department of Natural Resources

1. INTRODUCTION

Enbridge Energy, Limited Partnership (“Enbridge”) is committed to minimizing the spread of invasive and noxious species (“INS”) as defined by law or regulation, including invasive and noxious terrestrial plants, invasive aquatic species, and tree pests, along the construction right-of-way and associated access roads and haul routes where improvements are needed due to construction of the Line 5 Wisconsin Segment Relocation Project (“L5R” or “Project”). The L5R route extends approximately 41 miles through Ashland and Iron counties, Wisconsin.

1.1 Purpose of the Plan

The goal of this Invasive and Noxious Species Management Plan (“Plan”) is to outline the INS management strategies that will be used to minimize the introduction and spread of INS identified within the Project construction workspace, access roads, and improved haul routes in compliance with applicable laws or regulations. Management strategies will be implemented where applicable and appropriate prior to construction, and during Project construction, restoration, and post-construction monitoring phases. Existing INS occurrences will be documented throughout the construction workspace, and access roads, through pre-construction surveys, publicly available datasets, or monitoring. This Plan is complimentary to Enbridge’s Environmental Protection Plan (“EPP”).

Enbridge would like to emphasize that the treatment method selected for an INS population will be dependent on a number of factors, including the time of year and species-specific biology, proximity to sensitive species, and construction activities and the timing of those activities as further explained in the following sections. Although this Plan describes a preference for herbicide pre-treatment, it will not be feasible in all locations; in those situations, a different methodology will be selected by Enbridge at the time of construction. Should treatment not be possible during construction, Enbridge will manage INS as appropriate during the restoration and/or post-construction monitoring phases. The Post-Construction Wetland and Waterbody Monitoring Plan (“Monitoring Plan”) establishes performance standards for the management of the INS to ensure that these infestations are appropriately managed.

Management strategies for INS on the Project are outlined below by INS group: terrestrial plant species and aquatic species.

2. TERRESTRIAL PLANT INVASIVE AND NOXIOUS SPECIES

This Plan defines terrestrial plant INS as any species that is listed by the U.S. Department of Agriculture (“USDA”) as Noxious or Wisconsin Department of Natural Resources (“WDNR”) as Prohibited or Restricted Noxious Weeds.

2.1 Wisconsin Regulations

In Wisconsin, the management objectives for INS within the Project area are to minimize the spread of documented occurrences of terrestrial plant INS that are: 1) listed as Noxious by the USDA; or 2) listed as “Restricted” or “Prohibited” (see Table 1) under the Wisconsin Chapter NR40 Invasive Plant Species rule.

Table 1: Wisconsin Restricted or Prohibited Noxious Weeds

Species	Common Name	Species	Common Name
<i>Abutilon theophrasti</i> ^b	Velvetleaf	<i>Epipactis helleborine</i> ^a	Helleborine orchid
<i>Aegopodium podagraria</i> ^a	Bishop's goutweed	<i>Eriochloa villosa</i> ^b	Woolly cupgrass
<i>Agropyron repens</i> ^b	Quackgrass	<i>Euphorbia esula</i> ^{a,b}	Leafy spurge
<i>Alliaria petiolata</i> ^a	Garlic mustard	<i>Frangula alnus</i> ^a	Glossy buckthorn
<i>Amaranthus palmeri</i> ^b	Palmer amaranth	<i>Galeopsis tetrahit</i> ^a	Hemp nettle
<i>Amaranthus tuberculatus</i> ^b	Waterhemp	<i>Linaria dalmatica</i>	Dalmatian toadflax
<i>Ambrosia trifida</i> ^b	Giant ragweed	<i>Linaria vulgaris</i>	Yellow toadflax
<i>Artemisia absinthium</i>	Absinth wormwood	<i>Lonicera complex</i> ^a	Non-native honeysuckles
<i>Avena fatua</i> ^b	Wild oat	<i>Lythrum salicaria</i> ^a	Purple loosestrife
<i>Bassia scoparia</i>	Kochia	<i>Myosotis scorpioides</i> ^a	Aquatic forget-me-not
<i>Berberis thunbergii</i> ^a	Japanese barberry	<i>Panicum miliaceum</i> ^b	Wild proso millet
<i>Berteroa incana</i> ^b	Hoary alyssum	<i>Pastinaca sativa</i> ^a	Wild parsnip
<i>Campanula rapunculoides</i> ^a	Creeping bellflower	<i>Plantago lanceolata</i> ^b	Buckhorn
<i>Caragana arborescens</i> ^a	Siberian peashrub	<i>Polygonum perfoliatum</i> ^b	Mile-a-minute weed
<i>Carduus nutans</i>	Musk thistle	<i>Pueraria montana</i> var. <i>lobata</i> ^b	Kudzu
<i>Centaurea diffusa</i>	Diffuse knapweed	<i>Raphanus raphanistrum</i> ^b	Wild radish
<i>Centaurea jacea</i> ^a	Brown knapweed	<i>Rhamnus cathartica</i> ^a	Common buckthorn
<i>Centaurea maculosa</i> / <i>C. stoebe</i> ^{a,b}	Spotted knapweed	<i>Robinia pseudoacacia</i> ^a	Black locust
<i>Centaurea repens</i> / <i>C. picris</i> ^b	Russian knapweed	<i>Silene alba</i> ^b	White cockle
<i>Cirsium arvense</i> ^{a,b}	Canada thistle	<i>Sinapis arvensis</i> ^b	Wild mustard
<i>Cirsium palustre</i> ^a	European marsh thistle	<i>Sonchus arvensis</i> ^b	Perennial sowthistle
<i>Convolvulus arvensis</i> ^b	Field bindweed	<i>Tamarisk</i> spp.	Saltcedar
<i>Coronilla varia</i> ^a	Crown vetch	<i>Tanacetum vulgare</i> ^a	Common tansy
<i>Cuscuta</i> spp. ^b	Dodder	<i>Typha complex</i> ^a	Hybrid cattail
<i>Cynoglossum officinale</i>	Houndstongue	<i>Valeriana officinalis</i> ^a	Garden heliotrope/Valerian

Source: WDNR, 2015; USDA, 2022.

^a Indicates species that have been documented in the Project area based on pre-construction surveys.

^b This species is listed as noxious by the USDA in Wisconsin.

2.2 Terrestrial Plant Invasive and Noxious Species Surveys

Enbridge conducted terrestrial INS plant surveys in 2021 along approximately 41 miles of a 170-foot-wide survey corridor for construction of the pipeline, approximately 28 miles of a 30-foot-wide corridor for access roads, seven valve sites, and four pipe yards. Table 1 notes invasive terrestrial species identified during surveys.

Enbridge survey crews identified 23 terrestrial plant INS (Attachment A). Three USDA Noxious Weeds were observed, including spotted knapweed (*Centaurea maculosa* or *C. stoebe*), leafy spurge (*Euphorbia*

esula), and Canada thistle (*Cirsium arvense*). The most commonly observed INS were tansy (*Tanacetum vulgare*), Canada thistle (*Cirsium arvense*), and common buckthorn (*Rhamnus cathartica*).

2.3 Management Strategies for Terrestrial Plant Invasive and Noxious Species

Two primary strategies are developed to minimize the spread of INS within the Project Area. The first strategy is application of prevention measures to limit spread of INS through establishment of INS Best Management Practices (“BMPs”). The second strategy is active management to minimize the spread of documented occurrences of terrestrial INS. Active management practices will be selected based on the site-specific conditions, timing, and INS ecology.

2.3.1 Prevention Measures

Prevention measures will be employed to limit spread and introduction of INS through activities such as construction or site management. The following BMPs will be implemented during construction and site management activities.

2.3.1.1 Identification of INS Populations

Prior to clearing, Enbridge will flag the boundaries of known INS populations that overlap with the construction workspace. For INS populations larger than 10,000 square feet or at INS sites where flagging is not practical, the boundaries will be marked by a series of flagged wooden stakes.

2.3.1.2 Movement of Equipment

Equipment used during construction and restoration activities includes trucks, tractors, off-highway vehicles, heavy equipment, tools, personal gear, etc.

1. Before leaving an INS site, inspect the equipment and remove visible plants, seeds, mud, dirt clods, and animals.
2. Equipment will be cleaned prior to arriving to the Project.
 - a. Construction mats will be new/unused, or cleaned, prior to arriving to the Project.
3. If pre-treatment of INS is not possible and mitigation measures such as topsoil segregation and construction mat or ice/frost road installation cannot practicably be employed, Enbridge will conduct additional cleaning of equipment (see cleaning stations section in Section 2.3.2.4 of the Plan), as prudent and feasible.

2.3.1.3 Movement of Material

Materials include organisms and organic and inorganic material including plants, mulch, soil, gravel, rock, etc.

1. Enbridge will not plant or knowingly introduce prohibited or regulated INS.
2. To reduce the likelihood of introducing or spreading INS, Enbridge will employ the following measures:
 - a. Use only weed-free mulch and hay.
 - b. Stored topsoil in heavily infested areas will be covered or sprayed with tackifier or mulch to reduce the viability of INS seeds and rootstock prior to the restoration phase and prevent transport by wind. Weed-infested stockpiles will be marked with clearly visible signage until the restoration phase. During restoration, Enbridge will return topsoil and vegetative material from

INS sites to the areas from which they were stripped and will not move soil and/or vegetative matter outside of the identified and marked weed infestation areas.

- c. For revegetation, Enbridge will utilize seed mixes labelled “Noxious Weed Free” as required by regulations (Section 21.1 of the EPP).
3. Enbridge will not knowingly move soil, dredge material, or raw wood products that may harbor invasive or noxious species from INS sites except under contract specifications, permit, or compliance agreements.
 - a. Enbridge will generally dispose of non-merchantable timber and slash by mowing, cutting, chipping, grinding, and mulching and broadcasting the mulch in upland areas (Section 7.1 of the EPP). Alternatively, it will be hauled off-site to an approved location or disposal facility. All merchantable timber will be managed in accordance with Enbridge contract specifications and applicable permits and licenses.

2.3.1.4 Standard Best Management Practices

Enbridge has also committed to several BMPs described in the EPP that will limit the amount of disturbance associated with construction activities and assist with managing terrestrial INS infestations. These BMPs include:

- Reducing the width of the construction workspace in wetlands and near waterbodies;
- Limiting grading and topsoil segregation to trench-line-only in wetlands and forested vegetation communities;
- Installing construction mats for travel lanes in wetlands and other specific locations;
- Utilizing weed-free mulch;
- Removing accumulated sediment from silt fence when depth reaches one-third of height;
- Stabilization of all exposed areas, including spoil piles, must be initiated immediately to limit soil erosion when construction activity has permanently or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed no later than 14 calendar days after the construction activity has ceased;
- Utilizing Natural Resources Conservation Service guidelines for seed mixes and adapted restoration guidelines;
- Decompacting subsoil; and
- Construction activities in agricultural lands will proceed as described in the Agricultural Protection Plan.

Enbridge has also prepared a Monitoring Plan that includes monitoring and performance standards for INS within these features.

2.3.2 Active Management Strategies

Where existing INS occurrences have been documented, pre-treatment management will be implemented where possible. The pre-treatment objective will be to reduce the observable aboveground vegetative growth and seed production by INS at known locations. The intended effects of pre-treatment are to reduce potential spread of INS plants, seeds (observable on above-ground seed heads), and propagules by reducing INS populations prior to clearing and ground-disturbing activities. Prior to conducting pre-treatment, the herbicide contractor or vegetation management specialist will verify identification to species

level. Following pre-treatment, a visual assessment will be conducted to evaluate whether herbicide treatment has had the intended effects; where this is not the case Enbridge will consider implementing additional BMPs.

Enbridge will implement active management strategies and BMPs during one or more of the following phases as appropriate:

- Prior to clearing: Where practicable and feasible, Enbridge will implement BMPs prior to initiating clearing of the construction workspace. However, the ability to implement BMPs is dependent upon the timing of the receipt of required permits and authorizations, landowner or land-managing agency permissions, seasonality, INS ecology (e.g., maturity of plant, aggressiveness), and the proposed treatment method, effectiveness, and frequency of application.
- During clearing or other construction activities: Should the implementation of certain BMPs not be feasible prior to clearing (e.g., herbicide treatment), alternative BMPs (e.g., cleaning stations) may be implemented during clearing or other construction activities to minimize the spread of INS.
- Restoration: Once construction activities are complete, and final grading and permanent seeding is complete as described in the EPP, Enbridge will continue to monitor and manage terrestrial INS until the revegetation performance standards have been met.
- Post-Construction Monitoring: Enbridge will perform post-construction monitoring at wetlands and waterbodies as described in Enbridge's Monitoring Plan. Enbridge will manage INS until the performance standards described in the PCMP have been met.

As described in the EPP, construction, restoration, and post-construction monitoring activities are restricted to the construction right-of-way, approved access roads, and additional temporary workspace. Once restoration and/or post-construction monitoring activities are complete, terrestrial INS will be managed by Enbridge Operations within the 50-foot-wide permanent right-of-way easement.

The following sections provide a general overview of the active management strategies that will be implemented on the Project to minimize the spread of documented occurrences of terrestrial plant INS.

2.3.2.1 Personnel Training

Enbridge will provide terrestrial plant INS awareness training that:

- Ensures that personnel conducting monitoring and terrestrial plant INS treatments are qualified to distinguish between INS and commonly mistaken native species. This may include, for example, documentation of personnel experience with control of the target INS and their INS control work in similar environments with sensitive resources.

2.3.2.2 Pre-Treatment

Pre-treatment will be prioritized for INS listed by the WDNR as Restricted Noxious Weeds that must be eradicated or controlled in Wisconsin (Table 1). Where possible, Enbridge will pre-treat known locations of terrestrial plant INS by flagging the populations, spot mowing, mechanical removal (e.g., hand-pulling, digging), spot herbicide application, prescribed burning, spot propane weed torching, or an integrated management approach that combines one or more of these techniques prior to clearing. Any of these methods or a combination thereof may also be used during construction, restoration, and/or post-construction monitoring as needed. The pre-treatment objective will be to reduce the observable aboveground vegetative growth and seed production by INS at known locations and reduce the likelihood that plants, seeds (observable on aboveground seed heads), and propagules are viable when clearing and ground-disturbing activities begin. Where possible, Enbridge will attempt to minimize the spread of INS by first managing the outlying populations, and then working toward the center of an infestation. The

chosen method(s) will be species-specific and will consider the timing of implementation, quality of the surrounding vegetation, proximity to water resources, and other considerations as noted below. Pre-treatment will commence when all necessary permits and authorizations, and the necessary landowner or land-managing agency permissions are in place and will continue until the start of clearing or other construction activities.

A treatment method or combination of methods will be selected based on several considerations, including WDNR status (i.e., prohibited or restricted) and/or land-managing agency specifications, biological characteristics, and season, and will be based on consultation with the appropriate state and local agencies. Specific site factors such as topography, soil types and condition, water table level, open bodies of water, domestic water wells, and precipitation rates must also be taken into consideration when deciding the appropriate treatment option for a site. Additional important ecological and local land use factors that will be considered in designing and implementing treatment methods will include:

- Aquatic or wetland environments;
- Presence of federal or state-listed species or species of concern;
- Desirable existing vegetation community;
- Areas used for wildlife habitat or grazing;
- Recreation areas (e.g., campsite or picnic areas); and
- Residences.

2.3.2.3 Pesticide Use and Application

Enbridge will only utilize those pesticides (including herbicides) and methods of application approved by the WDNR and the U.S. Environmental Protection Agency in the state of Wisconsin. Selective foliage or basal application will be used when practicable. All pesticides will be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, gardens, or sensitive environmental resources. Enbridge's selected contractor(s) will obtain necessary permits and/or certifications for the use of the applicable herbicides, will be responsible to limit off-right-of-way overspray, and will comply with product labels and as specified by local, state, and federal regulations. Pesticide application will be completed by knowledgeable and licensed personnel. Records of herbicide applications will be kept in accordance with WDNR requirements.

Upon treatment, signage will be posted after pre-treatment with information on the species, when it was treated, and recommended timeframe to leave vegetation and soils undisturbed for herbicide uptake and plant activity (see Attachment B). This information will also be recorded in an electronic reporting system that will be used to monitor and communicate the management of INS populations between the Enbridge Environmental Compliance Team and the Enbridge Construction team.

Enbridge will contact the landowner or designee to obtain approval for the use of pesticide (including herbicides) at least 14 days prior to any application on their property. A minimum of 14 days prior to the proposed application of herbicide, the Enbridge right-of-way agent assigned to the affected tracts will provide a map of the proposed herbicide treatment location on the property in question and describe the type(s) of pesticides proposed for use and approximate application timeframe. The landowner may request that there be no application of herbicides on any part of the site within the landowner's property. A contact note showing that contact was made, whether the landowner has approved or denied herbicide application, and any application specifications or concerns that arose will be tracked in Enbridge's database system and will be identified in the construction line list ("CLL"). If a landowner does not respond within the required timeframe, it will be recorded as "herbicide application prohibited" on the CLL.

The following best management practices will be considered for herbicide use:

- Integrate biological controls instead of, or to complement, herbicide use, if available;
- Select spot treatments over broadcast applications when practicable to minimize potential impacts on pollinators and associated nectar or host plants;
- Products should be selected to be the most target-specific and applied on the smallest area practical to meet management objectives;
- The type of herbicide and treatment method will be selected to minimize impacts to wildlife (e.g., spot treatment, herbicides appropriate for application near aquatic resources); and
- Follow herbicide label instructions and industry standard practices to minimize non-target damage.

Cut stump or basal treatments may be used within the 75-foot vegetative buffer zone of aquatic resources. If herbicide treatment is necessary near rare species or rare natural communities or in or near aquatic resources, the herbicide must be designed for such use as designated by the manufacturer's specifications and federal and state regulations. Additional restrictions will be followed for INS control as required by federal, Tribal, and state permits or other environmental plans.

If herbicide treatment is limited due to landowner restrictions, or proximity to sensitive resources, an alternative treatment method may be selected.

2.3.2.4 Alternative Best Management Practices

In areas where INS occurrences have been documented and pre-treatment cannot be implemented prior to clearing or between clearing and construction, or pre-treatment has not had the intended effect, a combination of the following BMPs may be implemented, where appropriate and as determined to limit spread of INS.

Topsoil Segregation

Enbridge may implement topsoil segregation of the infested area to minimize the spread of INS and to allow equipment to work through the area after topsoil has been stripped, as long as equipment stays on the subsoil (clearing, grading, and restoration equipment will still be cleaned as described in the "Cleaning Stations" section or other BMPs will be implemented as appropriate).

Stored topsoil in heavily infested areas will be covered or sprayed with tackifier or mulch to reduce the viability of INS seeds and rootstock prior to the restoration phase and prevent transport by wind. Weed-infested stockpiles will be marked with clearly visible signage until the restoration phase. During restoration, Enbridge will return topsoil and vegetative material from infestation sites to the areas from which they were stripped and will not move soil and/or vegetative matter outside of the identified and marked noxious weed infestation areas.

Installation of Construction Mats

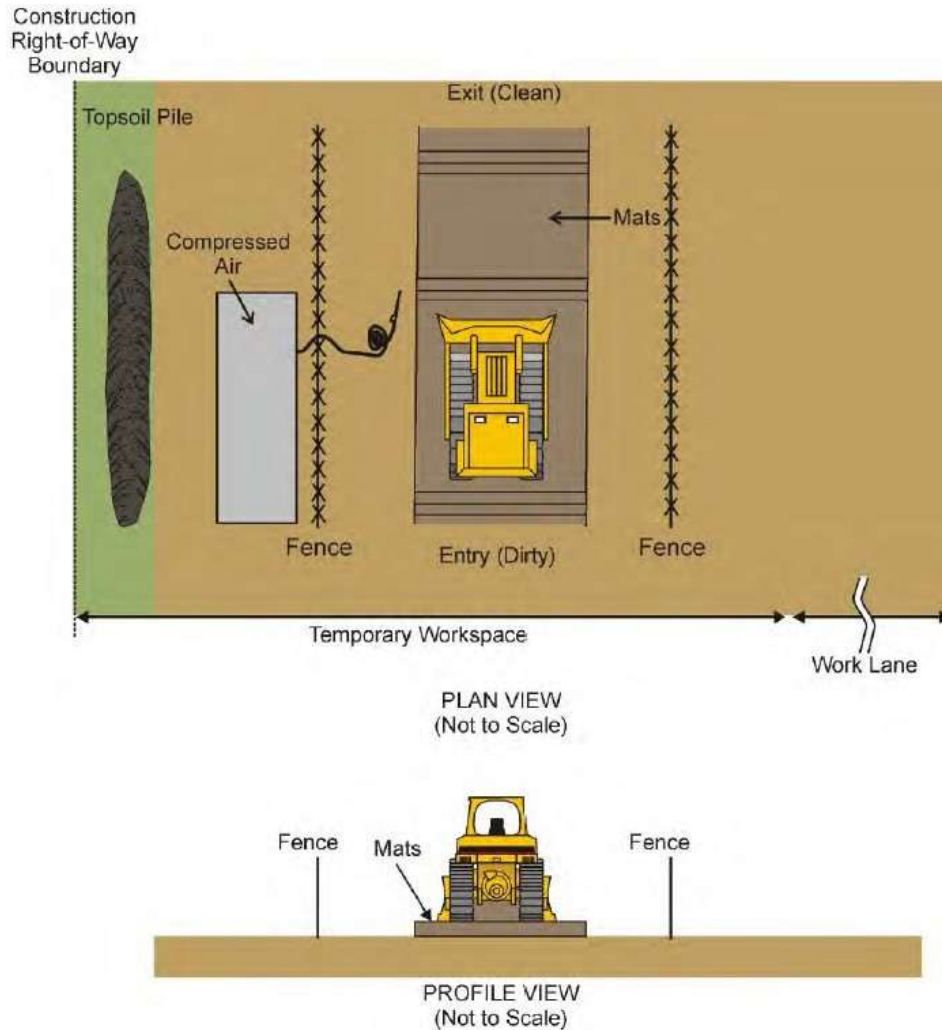
In areas of the construction workspace where pre-treatment of the INS population or topsoil segregation is not feasible, Enbridge will install and work off of construction mats or equivalent to cover the INS source. Construction mats will then be cleaned before use at another non-infested site as described in the "Cleaning Stations" section. Enbridge will also consider the use of construction mats in pre-treated areas with heavy infestations of INS.

Cleaning Stations

In areas where pre-treatment of terrestrial plant INS has not been implemented prior to clearing, Enbridge may establish cleaning stations to remove visible dirt and plant material from equipment and mats when exiting a known terrestrial INS infestation area along the construction workspace (Section 4.1 of the EPP). Cleaning stations may also be implemented at select sites during construction, restoration, or post-construction monitoring, as needed. Construction mats utilized in an INS site will either be cleaned at designated cleaning stations or will be transported to construction yards for storage and/or cleaning prior to re-use. Construction mats will be covered and contained in plastic tarps or geotextile fabric when they are transported and stored to minimize the spread of INS seeds. See Figure 1 for a typical drawing of a cleaning station.

Mechanical means (initial scrape down followed by blow down with air or water) will be the primary method used to remove dirt and plant materials from vehicles, equipment, and construction mats at the cleaning stations or construction yards. Enbridge does not propose the exclusive use of high-pressure wash stations due to the need for additional water and space, and the challenges with containing and disposing of the cleaning water. Removal of dirt and plant material will be documented in a cleaning log (see Attachment C). Off-site cleaning stations will be placed in existing disturbed areas (e.g., construction yards that were previously used as construction yards, rail yards, sand/gravel mines) that are clearly designated as a cleaning station area, and where the appropriate erosion and sediment control BMPs have been implemented to prevent off-site surface run-off.

Figure 1: Typical Compressed Air Cleaning Station



Representation Only

2.3.2.5 Order of Active Management Protocols

The protocols discussed above will be prioritized in the following order:

1. Pre-treatment when possible based on construction schedule, access, and INS treatment timing. If clearing begins during winter months, there will be no pre-treatment until the following spring/early summer as appropriate. Pre-treatment would then occur as feasible and appropriate during the growing season.
2. Topsoil segregation of the infested site if pre-treatment cannot be completed. During winter/frozen conditions, topsoil segregation may be implemented along areas of the construction workspace or temporary access roads at INS locations where soil movement (e.g., grading or trench excavation) is proposed, where feasible.

3. Installation of construction mats may be used where pre-treatment of the INS population or topsoil segregation is not feasible (e.g., wetlands and access roads). Installation of mats may also be used at heavy INS occurrence locations that have been pre-treated, but where a post-treatment evaluation reveals that the herbicide application did not achieve the intended effect. During winter/frozen conditions, ice/frost road development or construction mat installation may be implemented as a BMP where feasible and appropriate for the portions of access roads that overlap with INS infestations where grading would otherwise be required to develop the road.
4. Cleaning stations may be used when other BMPs are deemed insufficient to minimize the spread of INS.
5. Finally, in some areas where pre-treatment is not feasible, implementation of INS treatments may be proposed during restoration and post-construction monitoring. In all cases, INS infestations along the construction workspace and temporary access roads will be managed until the performance standards established in Enbridge's PCMP have been met.

The decision on which treatment method will be implemented will be made collaboratively between Enbridge's Environmental Inspection Team, Enbridge's contractor(s), and the Construction Team in the field during construction.

Protocol for Unanticipated INS Populations

It is anticipated that Enbridge will encounter previously undocumented INS populations. When unanticipated populations of INS are found, they will be documented and reported to Enbridge. Enbridge Environmental Inspectors that encounter unanticipated INS populations will document occurrences through an electronic reporting system. Documentation will include species, approximate size, Global Positioning System location, and inspector name. This information will be communicated to the contractor conducting INS active management for species verification and incorporation into treatment plans. In addition, signage will be installed to notify the Construction Team of the INS occurrence and treatment status (Attachment B). As with prior to clearing, flagging will be used to delineate the INS population within the Project. For INS populations larger than 10,000 square feet or at INS sites where flagging is not practical, the boundaries will be marked by a series of flagged wooden stakes.

3. AQUATIC INVASIVE SPECIES

The WDNR regulates non-native and invasive aquatic plants and wild animals and tracks infested waters. Aquatic invasive species are typically spread via movement of equipment used in infested waters, such as boats, docks, and other equipment.

Based on publicly available data, only one of the waterbodies that the Project crosses has been documented to contain an aquatic invasive species. This waterbody is Tyler Forks, which has been documented as containing the Banded Mystery Snail (*Viviparus georgianus*). Enbridge proposes to cross this waterbody using the HDD method and to install a clear span bridge; therefore, no equipment is expected to come into contact with the water as part of pipeline installation. Enbridge has proposed Tyler Forks as a source for hydrostatic test water appropriation. Water withdrawn from Tyler Forks will be discharged into an upland discharge structure near Tyler Forks and will not be discharged into other streams. Enbridge's EPP contains best management practices to minimize potential impacts to aquatic species associated with water withdrawal.

The Project crosses multiple waterbodies using a variety of technique including open cut (wet trench), dry crossings and trenchless methods. Most equipment and construction activities will be in the water (either for crossing or water appropriation) for 72 hours or less.

3.1 Management Strategies for Invasive Aquatic Species

To minimize the spread of invasive aquatic species in Wisconsin, Enbridge will implement the following procedures when working in waterbodies in compliance with Wisconsin Admin. Code NR 40, and Wisconsin Manual Code 9183.1.

Equipment will not be allowed to operate within waterbodies until verification by the Environmental Inspector or Site Inspector that the appropriate inspection and/or decontamination procedures described in Sections 3.1.1 through 3.1.3 have been implemented.

3.1.1 Procedures at Any Watercourse

- Equipment intended for use at the Project site will be free of invasive species prior to being transported to the worksite. Equipment (e.g., hoe stick and bucket, pumps, hoses) used in any watercourses, regardless of infestation status, will be inspected for invasive aquatic species prior to and following in-water work.
- Pumps, hoses, and other equipment with water intakes will be drained of water after use. Enbridge will remove plants, mud, debris, and organisms from the exterior of the equipment (e.g., hoe stick and bucket).
- If aquatic invasive species are identified during inspection of the equipment, Enbridge will implement one or more of the following decontamination procedures before use in another waterbody (WDNR, 2016):
 - dry for 5 consecutive days after cleaning with soap and/or high-pressure water prior to using at another waterbody;
 - wash equipment (e.g., pumps) with heated water (greater than 140 degrees Fahrenheit);
 - apply a 500 parts per million (ppm) Chlorine (sodium hypochlorite) solution for 10-minute contact time; or
 - apply a 2:100 solution of Virkon Aquatic for 20-minute contact time.
- For crossings of completely frozen waterbodies during winter, if no liquid water comes in contact with equipment, no decontamination will occur.
- Decontamination water will be allowed to infiltrate in an upland area at least 300 feet from any watercourse, or within 300 feet of the aquatic invasive species source water in accordance with applicable permits.
- If personnel enter any state watercourse, personnel will scrub clothes, waders, boots, and other personal gear with a stiff bristled brush to remove debris.
- Enbridge will notify the WDNR if any aquatic invasive species are identified in a watercourse not previously designated as an infested water.

3.1.2 *Infested Waters*

- If equipment has been used in an infested water, Enbridge will implement one or more of the decontamination procedures outlined in Section 3.1.1 before use in another waterbody.
- For crossings of completely frozen waterbodies during winter, if no liquid water comes in contact with equipment, no decontamination will occur.
- Decontamination water will be allowed to infiltrate in an upland area at least 300 feet from any watercourse, or within 300 feet of the aquatic invasive species source water in accordance with applicable permits.
- If personnel enter infested waterbodies, personnel will scrub clothes, waders, boots, and other personal gear with a stiff-bristled brush to remove debris.

3.1.3 *Surface Water Appropriation Sites*

- Enbridge will implement the procedures described in Section 3.1.2 at surface water appropriation sites for in-water construction activities and for the equipment used at HDD installations.
- Enbridge will discharge appropriated water for HDD and hydrostatic testing activities either back to the source or infiltrate in an upland area in accordance with applicable permits.

3.1.4 *HDD Drilling Mud Preparation*

During the execution of an HDD, equipment will not come into contact with the surface water of the waterbody being crossed, except where surface water is utilized to prepare the drilling mud that is utilized throughout the drilling process. To prevent the need for decontamination of equipment after an HDD, Enbridge may instead pre-treat the surface water utilized to prepare the HDD drilling mud by either:

- Using Enbridge's filtration system; or
- Heating the water to the temperature prescribed in Section 3.1.1 for the Soaking Decontamination and Pre-Treatment Activities.

4. REFERENCES

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ATTACHMENT A DOCUMENTED INVASIVE SPECIES

Enbridge conducted surveys for state-listed invasive species, pursuant to the Wisconsin Chapter NR 40 Invasive Species Rule, within the Project's proposed workspaces including mainline workspaces, access roads, valve areas, and pipe yards. Surveys were specific to regulated plant species in the restricted category, which is a list of 63 species (Attachment A).

Surveys resulted in the documentation of 23 different invasive species at over 900 locations throughout the survey area (Table 1).

Table 1. Invasive Species Occurrences

Scientific Name	Common Name	Plant Type	Occurrences
<i>Aegopodium podagraria</i>	Bishop's goutweed	Herbaceous	1
<i>Alliaria petiolata</i>	Garlic mustard	Herbaceous	4
<i>Berberis thunbergii</i>	Japanese barberry	Woody/Shrub	2
<i>Campanula rapunculoides</i>	Creeping bellflower	Herbaceous	2
<i>Caragana arborescens</i>	Siberian peashrub	Woody/Shrub	1
<i>Centaurea jacea</i>	Brown knapweed	Herbaceous	19
<i>Centaurea stoebe</i>	Spotted knapweed	Herbaceous	102
<i>Cirsium arvense</i>	Canada thistle	Herbaceous	165
<i>Cirsium palustre</i>	European marsh thistle	Herbaceous	9
<i>Coronilla varia</i>	Crown vetch	Herbaceous	12
<i>Epipactis helleborine</i>	Helleborine orchid	Herbaceous	3
<i>Euphorbia esula</i>	Leafy spurge	Herbaceous	9
<i>Frangula alnus</i>	Glossy buckthorn	Woody/Shrub	36
<i>Galeopsis tetrahit</i>	Hemp nettle	Herbaceous	59
<i>Lonicera complex</i>	Non-native honeysuckles	Woody/Shrub	72
<i>Lythrum salicaria</i>	Purple loosestrife	Herbaceous	2
<i>Myosotis scorpioides</i>	Aquatic forget-me-not	Herbaceous	42
<i>Pastinaca sativa</i>	Wild parsnip	Herbaceous	15
<i>Rhamnus cathartica</i>	Common buckthorn	Woody/Shrub	160
<i>Robinia pseudoacacia</i>	Black locust	Woody/Shrub	4
<i>Tanacetum vulgare</i>	Tansy	Herbaceous	201
<i>Typha complex</i>	Hybrid cattail	Herbaceous	83
<i>Valeriana officinalis</i>	Garden heliotrope/Valerian	Herbaceous	18

The three most commonly observed invasive species were tansy (*Tanacetum vulgare*), Canada thistle (*Cirsium arvense*), and common buckthorn (*Rhamnus cathartica*). Nine of the mapped invasive species occurrences are considered major infestations (greater than 0.5 acre with interrupted (50-75%) or continuous (75-100%) cover), five of which primarily contain spotted knapweed (*Centaurea stoebe* L.).

The documented invasive species are generally located along roadsides, field edges, and other disturbed openings such as existing utility corridors, trails, and the proposed pipe yards. Invasive species were also more frequently documented near population centers, including the cities of Ashland and Mellen.

ATTACHMENT B PESTICIDE APPLICATION SIGNAGE

Invasive Species Alert

Species:

Treated Date:

Do Not Disturb Marked Area Until:

ATTACHMENT C CLEANING LOG



Equipment Cleaning Log

Form Completed By: _____

Date: _____ Time: _____

Location of Equipment (tract & milepost): _____

Equipment Type: _____

Equipment ID (e.g., company, unique ID number): _____

Cleaning Method: (check all that apply)

- ☐ Scrape Down
- ☐ Steam Wash Blow Down (compressed air)
- ☐ Power/Pressure Wash (water)
- ☐ Other (Describe): _____

Comments: _____

December 9, 2022 USACE Data Request

Data Request Response #12

Excerpted Pages from DNR's Invasive Species List
Restricted Category

PROHIBITED/RESTRICTED CATEGORY:

1. *Anthriscus sylvestris* (Wild chervil)^A restricted in Adams, Barron, Chippewa, Crawford, Columbia, Dane, Dodge, Dunn, Fond du Lac, Grant, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Lacrosse, Lafayette, Marquette, Milwaukee, Monroe, Ozaukee, Polk, Racine, Richland, Rock, Sauk, Sheboygan, Taylor, Vernon, Walworth, Waukesha, and Washington counties; prohibited elsewhere – Updated county list in 2015
2. *Bunias orientalis* (Hill mustard)^A restricted in Dane, Grant, Green, Iowa, Lafayette, and Rock counties; prohibited elsewhere – Updated county list in 2015
3. *Cirsium palustre* (European marsh thistle)^A restricted in Ashland, Bayfield, Chippewa, Clark, Door, Florence, Forest, Iron, Langlade, Lincoln, Marathon, Marinette, Menominee, Oconto, Oneida, Price, Rusk, Sawyer, Shawano, Taylor and Vilas counties; prohibited elsewhere – Updated county list in 2015
4. *Conium maculatum* (Poison hemlock)^A restricted in Buffalo, Crawford, Dane, Grant, Green, Iowa, Jefferson, Kenosha, La Crosse, Lafayette, Milwaukee, Monroe, Ozaukee, Racine, Richland, Rock, Sauk, Sheboygan, Trempealeau, Vernon, Walworth, and Waukesha counties; prohibited elsewhere – Updated county list in 2015
5. *Epilobium hirsutum* (Hairy willow herb)^A restricted in Brown, Calumet, Door, Kenosha, Kewaunee, and Manitowoc counties; prohibited elsewhere – Updated county list in 2015
6. *Glyceria maxima* (Tall or reed mannagrass)^A restricted in Brown, Calumet, Columbia, Dane, Dodge, Door, Fond du Lac, Green, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago counties; prohibited elsewhere – Updated county list in 2015
7. *Humulus japonicus* (Japanese hops)^A restricted in Buffalo, Crawford, Dane, Grant, Green, Iowa, Jackson, La Crosse, Lafayette, Monroe, Pepin, Richland, Sauk, Trempealeau, and Vernon counties; prohibited elsewhere – Updated county list in 2015
8. *Leymus arenarius* or *Elymus arenarius* (Lyme grass or sand ryegrass)^A restricted in Door, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, and Sheboygan counties; prohibited elsewhere – Updated county list in 2015
9. *Linaria dalmatica* (Dalmatian toadflax)^C restricted in Juneau and Bayfield counties; prohibited elsewhere
10. *Lonicera maackii* (Amur honeysuckle)^A restricted in Adams, Brown, Buffalo, Calumet, Columbia, Crawford, Dane, Dodge, Fond du Lac, Grant, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Kewaunee, La Crosse, Lafayette, Manitowoc, Marquette, Milwaukee, Monroe, Outagamie, Ozaukee, Racine, Richland, Rock, Sauk, Sheboygan, Vernon, Walworth, Washington, Waukesha, Waupaca, Waushara and Winnebago counties; prohibited elsewhere – Updated county list in 2015
11. *Phragmites australis* non-native ecotype (Phragmites or Common reed non-native ecotype)^A restricted in Brown, Calumet, Columbia, Dane, Dodge, Door, Florence, Fond du

Lac, Forest, Green Lake, Jefferson, Kenosha, Kewaunee, Langlade, Manitowoc, Marathon, Marinette, Marquette, Menominee, Milwaukee, Oconto, Outagamie, Ozaukee, Portage, Racine, Rock, Shawano, Sheboygan, Walworth, Washington, Waukesha, Waupaca, Waushara, and Winnebago counties; prohibited elsewhere - Moved to Prohibited/Restricted from Restricted in 2015

12. *Solidago sempervirens* (Seaside goldenrod)^C restricted in Kenosha, Milwaukee and Racine counties; prohibited elsewhere
13. *Torilis japonica* (Japanese hedgeparsley or erect hedgeparsley)^A restricted in Adams, Brown, Calumet, Columbia, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Kewaunee, La Crosse, Lafayette, Langlade, Manitowoc, Marathon, Marinette, Marquette, Menominee, Milwaukee, Monroe, Oconto, Outagamie, Ozaukee, Portage, Racine, Richland, Rock, Sauk, Shawano, Sheboygan, Vernon, Walworth, Washington, Waukesha, Waupaca, Waushara, and Winnebago counties; prohibited elsewhere – Updated county list in 2015
14. *Vincetoxicum nigrum* or *Cynanchum louiseae* (Black or Louise's swallow-wort)^A restricted in Columbia, Crawford, Dane, Grant, Green, Iowa, Jefferson, Juneau, Kenosha, La Crosse, Lafayette, Milwaukee, Monroe, Racine, Richland, Rock, Sauk, Vernon, Walworth and Waukesha counties; prohibited elsewhere

RESTRICTED CATEGORY:

1. *Acer tataricum* subsp. *ginnala* (Amur maple)^C *except all cultivars
2. *Aegopodium podagraria* (Bishop's goutweed)^C
3. *Ailanthus altissima* (Tree of heaven)^A
4. *Alliaria petiolata* (Garlic mustard)^A
5. *Alnus glutinosa* (Black alder)^C *except all cultivars and hybrids
6. *Artemisia absinthium* (Wormwood)^C
7. *Berberis thunbergii* (Japanese barberry)^C *This restriction only applies to the parent type, the variety atropurpurea, the hybrid of B. thunbergii x B. Koreana, and the following cultivars. Berberis thunbergii cultivars: Sparkle, 'Anderson' Lustre Green™, Erecta, 'Bailgreen' Jade Carousel®, Angel Wings, Painter's Palette, Inermis ('Thornless'), Pow Wow, Golden Ring, Kelleriis, Kobold, 'JN Variegated' Stardust™ and Antares. Variety atropurpurea cultivars: Marshall Upright ('Erecta'), Crimson Velvet, 'Bailtwo' Burgundy Carousel®, Red Rocket, 'Monomb' Cherry Bomb™, 'Bailone' Ruby Carousel®, JN Redleaf, Rose Glow and Silver Mile. Hybrid of B. thunbergii x B. koreana cultivars: Tara and 'Bailseil' Golden Carousel®
8. *Butomus umbellatus* (Flowering rush)^A
9. *Campanula rapunculoides* (Creeping bellflower)^A
10. *Caragana arborescens* (Siberian peashrub)^C *except the cultivars Lorbergii, Pendula, and Walkerii
11. *Carduus acanthoides* (Plumeless thistle)^A
12. *Carduus nutans* (Musk thistle or Nodding thistle)^A
13. *Celastrus orbiculatus* (Oriental bittersweet)^A
14. *Centaurea biebersteinii*, *Centaurea maculosa* or *Centaurea stoebe* (Spotted knapweed)^A

15. *Centaurea jacea* (Brown knapweed)^C
16. *Centaurea nigra* (Black knapweed)^C
17. *Centaurea nigrescens* (Tyrol knapweed)^C
18. *Chelidonium majus* (Celandine)^A - Moved to Restricted from Prohibited/Restricted in 2015
19. *Cirsium arvense* (Canada thistle)^A
20. *Coronilla varia* (Crown vetch)^C
21. *Cynoglossum officinale* (Hound's tongue)^A
22. *Dipsacus laciniatus* (Cut-leaved teasel)^A
23. *Dipsacus sylvestris* or *Dipsacus fullonum* (Common teasel)^A
24. *Elaeagnus angustifolia* (Russian olive)^A
25. *Elaeagnus umbellata* (Autumn olive)^A
26. *Epipactis helleborine* (Helleborine orchid)^A
27. *Euonymus alatus* (Burning bush)^C *including the cultivar 'Nordine' and excluding all other cultivars
28. *Euphorbia cyparissias* (Cypress spurge)^A
29. *Euphorbia esula* (Leafy spurge)^A
30. *Fallopia japonica* or *Polygonum cuspidatum* (Japanese knotweed)^A
31. *Filipendula ulmaria* (Queen of the meadow)^C
32. *Galeopsis tetrahit* (Hemp nettle, brittlestem hemp nettle)^A
33. *Galium mollugo* (White bedstraw)^C
34. *Hesperis matronalis* (Dame's rocket)^A
35. *Impatiens balfourii* (Balfour's touch-me-not)^C
36. *Iris pseudacorus* (Yellow iris)^C
37. *Knautia arvensis* (Field scabiosa)^C
38. *Lonicera morrowii* (Morrow's honeysuckle)^A
39. *Lonicera tatarica* (Tartarian honeysuckle)^A
40. *Lonicera x bella* (Bell's or showy bush honeysuckle)^A
41. *Lysimachia nummularia* or *L. nummelaria* (Moneywort)^A *except the cultivar Aurea and yellow and gold leaf forms
42. *Lysimachia vulgaris* (Garden yellow loosestrife)^C
43. *Lythrum salicaria* (Purple loosestrife)^A
44. *Morus alba* (White mulberry)^C *except male cultivars
45. *Myosotis scorpioides* (Aquatic forget-me-not)^C
46. *Myosotis sylvatica* or *M. sylvaticum* (Woodland forget-me-not)^C
47. *Myriophyllum spicatum* (Eurasian watermilfoil)^A
48. *Najas marina* (Spiny naiad)^C
49. *Pastinaca sativa* (Wild parsnip)^A *except for the garden vegetable form
50. *Phalaris arundinacea* var. *picta* (ribbon grass or gardener's garters and other ornamental variegated varieties and cultivars)^C *this restriction does not include the parent type - reed canary grass.
51. *Pimpinella saxifraga* (Scarlet pimpernel or Burnet saxifrage)^C
52. *Populus alba* (White poplar)^C
53. *Potamogeton crispus* (Curly-leaf pondweed)^A
54. *Rhamnus cathartica* (Common buckthorn)^A
55. *Rhamnus frangula* or *Frangula alnus* (Glossy buckthorn)^A *including the Columnaris (tall hedge) cultivar but excluding the cultivars Asplenifolia and Fineline (Ron Williams)
56. *Robinia hispida* (Rose acacia or Bristly locust)^C

57. *Robinia pseudoacacia* (Black locust)^C *except all cultivars
58. *Rosa multiflora* (Multiflora rose)^A
59. *Tanacetum vulgare* (Tansy)^A *except the cultivars Aureum and Crispum
60. *Typha angustifolia* (Narrow-leaf cattail)^A
61. *Typha x glauca* (Hybrid cattail)^A
62. *Ulmus pumila* (Siberian elm)^C *except hybrids and individuals used as rootstock
63. *Valeriana officinalis* (Garden heliotrope or Valerian)^C

Phase-out: Restricted only plants located in Wisconsin prior to their effective listing date may be transported, transferred, and introduced without a permit for a period not to exceed 3 years for herbaceous plants and woody vines, or 5 years for trees and shrubs, from their effective listing date.

FISH AND CRAYFISH

PROHIBITED CATEGORY:

1. Channidae (Snakehead family)^A including *Channa argus* (Northern snakehead), *Channa bleheri* (Rainbow snakehead), *Channa gachua* (Dwarf snakehead), *Channa maculata* (Blotched snakehead), *Channa marulius* (Bullseye snakehead), *Channa punctata* (Spotted snakehead), and *Channa striata* (Chevron snakehead)
2. *Ctenopharyngodon idella* (Grass carp)^A
3. *Cyprinella lutrensis* (Red shiner)^A
4. *Hypophthalmichthys molitrix* (Silver carp)^A
5. *Hypophthalmichthys nobilis* (Bighead carp)^A
6. *Mylopharyngodon piceus* (Black carp)^A
7. *Sander lucioperca* (Zander)^A
8. *Scardinius erythrophthalmus* (Rudd)^A
9. *Tinca tinca* (Tench)^A
10. All other nonnative fish and nonnative crayfish except:
 - a. Established nonnative fish species and established nonnative crayfish species
 - b. Nonnative viable fish species in the aquarium trade
 - c. Nonnative fish species in the aquaculture industry
 - d. Nonviable fish species
 - e. Genetically modified fish species

RESTRICTED CATEGORY:

1. Established nonnative fish species and established nonnative crayfish species
 - a. *Alosa pseudoharengus* (Alewife)^A
 - b. *Cyprinus carpio* (Common carp)^A
 - c. *Gambusia affinis* (Western mosquitofish)^A - Moved to Restricted from Prohibited in 2015
 - d. *Gambusia holbrooki* (Eastern mosquitofish)^A - Moved to Restricted from Prohibited in 2015
 - e. *Gasterosteus aculeatus* (Three-spine stickleback)^A
 - f. *Gymnocephalus cernuus* (Ruffe)^A
 - g. *Morone americana* (White perch)^A
 - h. *Neogobius melanostomus* (Round goby)^A
 - i. *Orconectes rusticus* (Rusty crayfish)^A
 - j. *Osmerus mordax* (Rainbow smelt)^A