Invasive plant resources

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What is an invasive species?

Species that is

1. Not native to the state of Wisconsin
2. Causes or has the potential to cause harm to
   - Wisconsin’s economy
   - Wisconsin’s environment
   - Citizens of Wisconsin

Examples of Potential Impacts of Invasive Bush Honeysuckles (non-native Lonicera spp)

- Economic
  - Slows timber regeneration 15-30%
  - >$14 billion timber sales in WI
- Environment
  - Outcompetes native species (extinct in 20 years)
  - Poor resource for wildlife
    - reductions in trout and nesting bird populations
- Human health
  - Improves habitat for the lone star tick
    - carries disease **ehrlichiosis**

Over 140 plants that are regulated by NR40

- Regulated categories
  - Prohibited:
    - Control **required**
    - Illegal to knowingly spread
  - Restricted:
    - Control **encouraged**
    - Illegal to knowingly spread
  - Split listed
    - Category changes depending on location in state

http://docs.legis.wisconsin.gov/code/admin_code/nr/001/40.pdf

Resources available to assist……

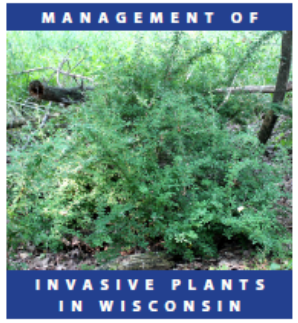
- Wisconsin First Detector Network (WIFDN): https://fyi.uwex.edu/wifdn/
- Invasive Plant Association of Wisconsin (IPAW): www.ipaw.org
- Wisconsin DNR: https://dnr.wi.gov/topic/invasives/
- Midwest Invasive Plant Network (MIPN): www.mipn.org

WIFDN RESOURCES

fyi.uwex.edu/wifdn

- Detailed information about each of these topics available
  - What are invasive species?
  - Invasive species identification and impacts
  - Tips for managing invasive species
  - Webinar video series
  - Volunteer opportunities
- Newsletter
- In person workshops
- Volunteer opportunities

Detailed Control information



Brendon Panke and Mark Renz

Invasive plants can thrive and aggressively spread beyond their natural range, disrupting ecosystems. The *Management of Invasive Plants in Wisconsin* series explains how to identify invasive plants and provides common management options. Management methods recommend specific timings for treatment, as well as expected effectiveness.

A3924-34

Japanese barberry
(Berberis thunbergii)

Japanese barberry is a round, dense, spiny shrub, typically 2–3' tall, though it may grow up to 6' tall and 6' wide. The branches are reddish brown and deeply grooved with a single, sharp spine at each node. The wood beneath the bark is yellow. It spreads vegetatively through branches that root freely when they touch the ground.

Legal classification in Wisconsin: All wild plants are restricted. Select varieties/hybrids are also restricted. Consult Wisconsin's invasive species rule (NR 40) for details.

Leaves: Alternate, 0.5–1.5" long, entire, and shaped liked a spatula with a narrow base and wide end (spatulate). Color varies depending on the cultivar, but includes green, bluish-green, or dark reddish-purple. Leaves are arranged in clusters above a spine.

Flowers: Mid-spring. Yellow, umbrella-shaped, 0.25" across with 6 petals. Flowers are found along the stem individually or in clusters of 2–4.

Fruits and seeds: Bright-red, oblong berries, 0.3" long. Fruit are found on narrow stalks along the stem individually or in clusters of 2–4. Fruit mature in mid-summer and can persist on shrub into winter.

Roots: Shallow root system. When scratched, the inner layer of the root is yellow.

Similar species: European barberry (*Berberis vulgaris*) is another introduced species that is sometimes invasive. European barberry spines occur in sets of 3, while Japanese barberry spines occur singly.

Ecological threat:

- Invades open and closed canopy forests, woodlands, oak savannas, wetlands, pasture, and meadows. Grows more vigorously on well-drained soils.
- Seeds are readily dispersed by birds.
- Sites infested with Japanese barberry have significantly more deer ticks (*Ixodes scapularis*) than sites where Japanese barberry control efforts have taken place or where barberry is not present.

Non-chemical control

Removal

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Pulling or digging up small- to medium-sized barberry any time of the year is an effective individual plant control strategy if soil conditions are amenable. Remove the root crown, as Japanese barberry resprouts from that area. Small bushes can be pulled by hand and larger bushes can be pulled using a leverage tool. Digging up soil surrounding larger bushes can facilitate plant removal. If fruiting, avoid movement unless material can be transported without spreading fruit to other locations.

Detailed info on

1. Identification
2. Methods
3. Effectiveness
4. Warnings

Mowing

Effectiveness in season: 50–70%
Season after treatment: < 50%

Mow or cut when flowering but prior to fruit production. Mow or cut plants as close to the ground as possible. Mowing or cutting will need to be repeated for a number of years to reduce established populations. Mowing resprouting barberry after initial removal of a plant can prevent reestablishment of the resprouting plant.

Prescribed burning

Effectiveness in season: 50–70%
Season after treatment: < 50%

Spring burns can kill germinating seedlings and suppress aboveground growth of established plants, depending on fire intensity. After fire, established plants will quickly resprout and reinvade areas. Cutting barberry in spring, followed by a summer burn is the most effective burning regime. Burns must be repeated annually for 2–5 years to suppress established populations. A hand-held propane torch can be effective for treating seedlings or barberry plants that are less than 4" in diameter.

Chemical control

Foliar

Apply directly to individual plants or broadcast across an infested area. Broadcasted foliar applications are typically the most cost-effective treatment in dense infestations. Use lower rates on smaller plants and less dense populations and higher rates on larger plants and denser populations. Absorption of herbicide can be limited with this species, resulting in reduced effectiveness. Including a surfactant at 0.25–0.5% can alleviate any potential reduction. If infestations are mixed with desirable vegetation, applications of herbicide without soil activity in the early spring or late fall can reduce injury to desirable plants, as barberry leafs out earlier and drops leaves later than most desirable vegetation.

dicamba + 2,4-D*

Effectiveness in season: 70–90%
Season after treatment: 70–90%

Common name: Outlaw

Rate:
broadcast: 28–44 fl oz/A (dicamba: 0.2–0.4 lb a.e./A + 2,4-D: 0.3–0.5 lb a.e./A)
spot: 0.8% (dicamba: 0.01 lb a.e./gal + 2,4-D: 0.01 lb a.e./gal)

Timing: Apply when target species is actively growing and fully leafed out. While plant is fruiting is the most effective treatment time.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided, as even minute quantities of the spray may cause severe injury to plants. Rates > 16 oz/A (0.5 lb a.e./A) may cause stunting and discoloration of sensitive grasses, such as smooth brome.

glyphosate*

Effectiveness in season: 70–90%
Season after treatment: 50–70%

Common name: Roundup

Rate:
broadcast: 1.5–3 lb a.e./A
spot: For a 3 lb a.e./gal product. 1–2% (0.03–0.06 lb a.e./gal)

Timing: Apply when target species is actively growing and fully leafed out. While plant is fruiting is the most effective treatment time.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground as glyphosate is not selective. Overspray or drift to desirable plants should be avoided, as even minute quantities of the spray may cause severe injury to plants.

metsulfuron*

Effectiveness in season: 70–90%
Season after treatment: 70–90%

Common name: Escort

Rate:
broadcast: 1.0–2.0 oz/A (0.6–1.2 oz a.i./A)
spot: 0.04 oz/gal (0.02 oz a.i./gal)

Timing: Apply when target species is actively growing and fully leafed out.

Caution: Do not apply directly to water or to areas where surface water is present. Remains in the soil for months depending on application rate. Overspray or drift to desirable plants should be avoided as even minute quantities of the spray may cause severe injury to plants.

tridopyr*

Effectiveness in season: 70–90%
Season after treatment: 70–90%

Common name: Element 4

Rate:
broadcast: 16–32 fl oz/A (0.5–1.0 lb a.e./A)
spot: 1–2% (0.04–0.08 lb a.e./gal)

Timing: Apply when target species is actively growing and fully leafed out. While plant is fruiting is the most effective treatment time.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided as even minute quantities of the spray may cause severe injury to plants.

Species with factsheets

- Amur honeysuckle
- Asian bittersweet
- Bell's honeysuckle
- bird's-foot trefoil
- black locust
- black swallowwort
- border privet
- bull thistle
- Canada thistle
- common buckthorn
- common privet
- common tansy
- common teasel
- creeping bellflower
- crown vetch
- cut-leaved teasel
- dame's rocket
- European marsh thistle
- field bindweed
- garlic mustard
- glossy buckthorn
- hill mustard
- hybrid cattail
- Japanese barberry
- Japanese hedge parsley
- Japanese honeysuckle
- Japanese hop
- Japanese knotweed
- Japanese stiltgrass
- leafy spurge
- Morrow's honeysuckle
- multiflora rose
- musk thistle
- narrow-leaved cattail
- plumeless thistle
- poison hemlock
- purple loosestrife
- quackgrass
- sericea lespedeza
- spotted knapweed
- spreading hedge parsley
- Tatarian honeysuckle
- tree-of-heaven
- white sweetclover
- wild chervil
- wild parsnip
- yellow sweetclover

MIPN.org
Midwest Invasive Plant Network

Wisconsin First Detector Network
2017 Summary

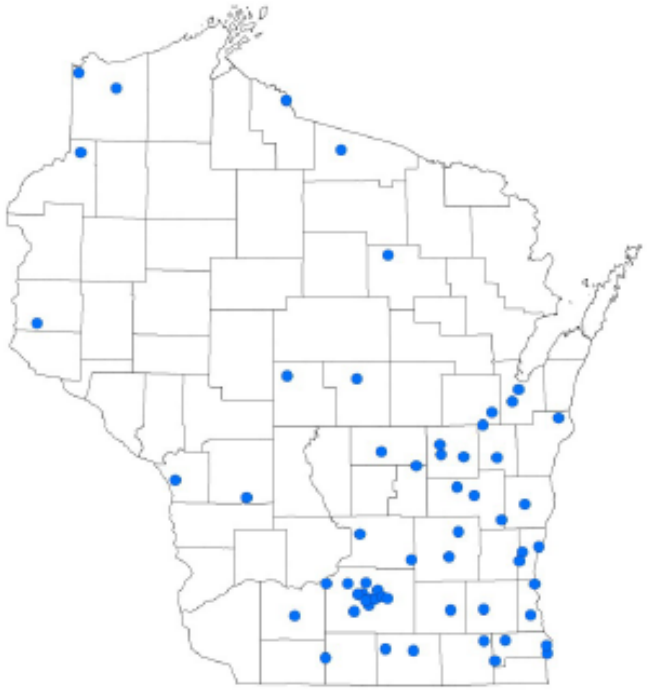
The Wisconsin First Detector Network (WIFDN) empowers people to take action against invasive species through education and volunteer opportunities related to invasive species surveying, management, and outreach. In 2017, WIFDN continued to grow in both volunteer and training efforts, with the highest numbers yet in areas like volunteer hours, invasive species reports submitted, and number of workshop participants.

Volunteer Efforts

4078
hours dedicated by volunteers to invasive species surveying, management, and outreach; a 37% increase from 2016

4400
invasive species reports submitted via the GLEDN app; more than twice as many as in 2016

2464
miles driven to volunteer activities



Invasive Field Days IPAW

1. Identifying and monitoring invasive plants
2. Management techniques and recommendations
3. Bring your invasive plant questions for our experts!

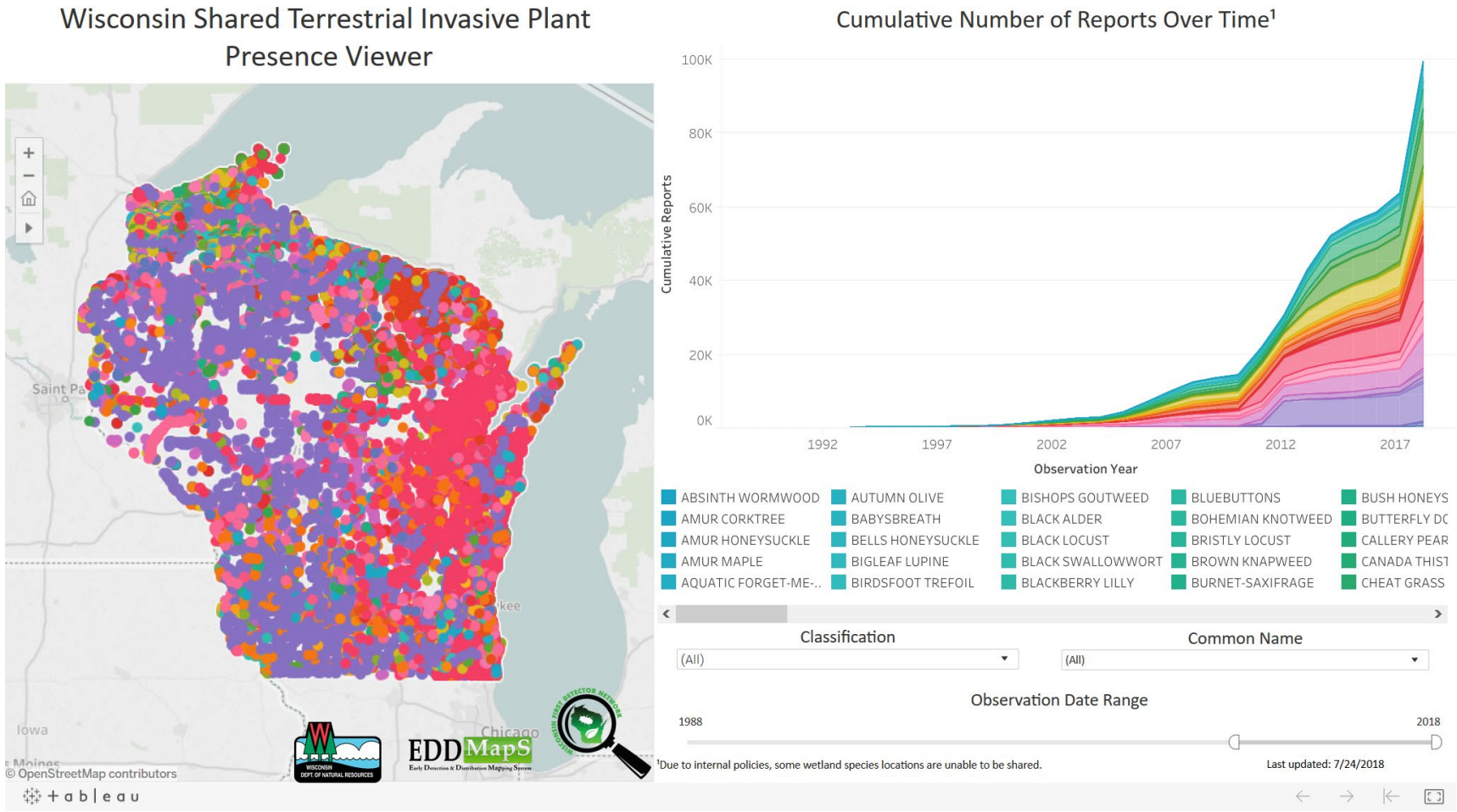
- **Madison, Wisconsin - August 22, 2018**
- **Cedar Grove, Wisconsin – Sept 19, 2018**
  - free to IPAW members. Small fee if not.

IPAW

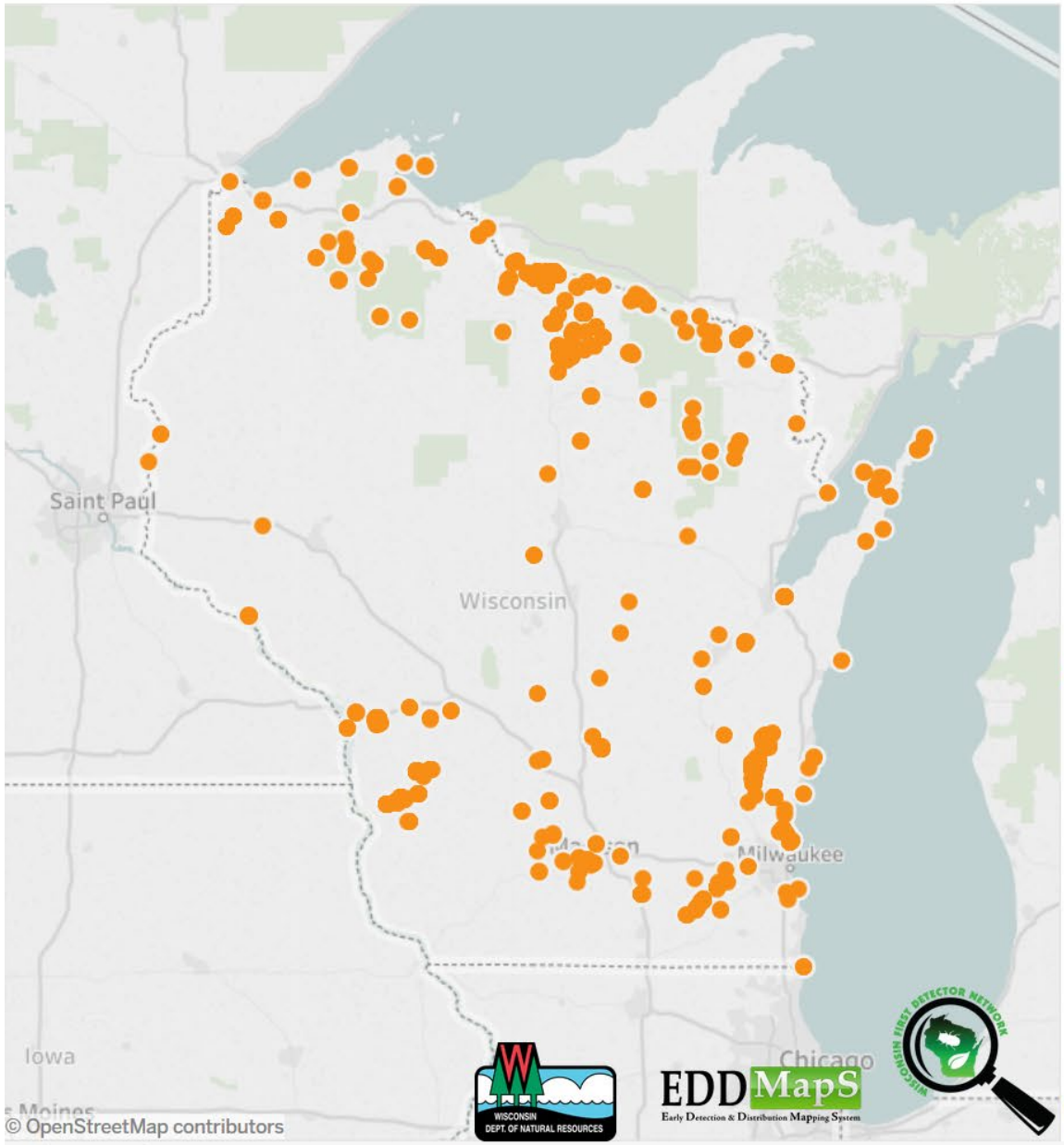
INVASIVE PLANTS
ASSOCIATION OF WISCONSIN

What's New? …….WISTIPP

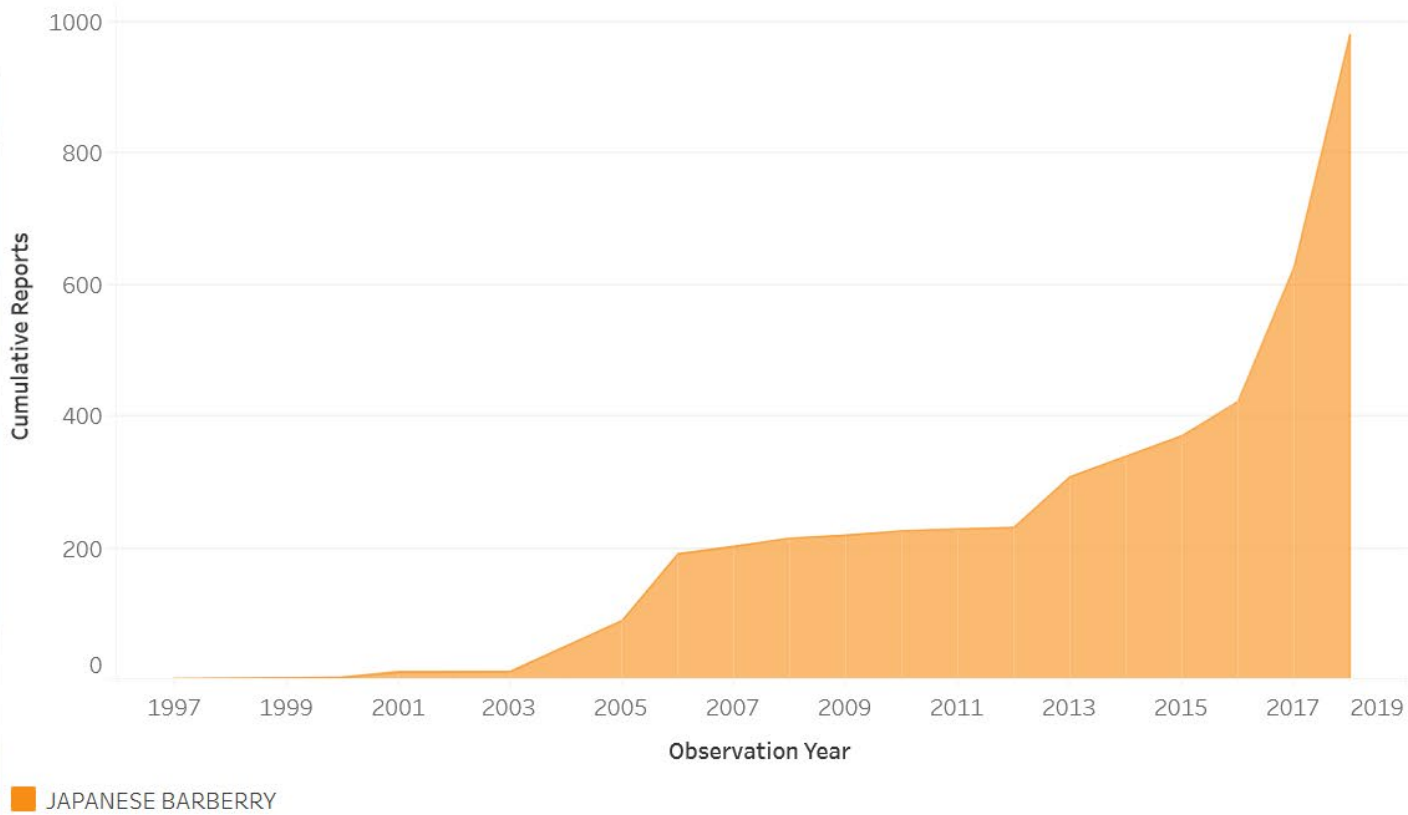
- WI Shared Terrestrial Invasive Plant Presence viewer
  - Soon to launch but here is a sneak peak



Wisconsin Shared Terrestrial Invasive Plant Presence Viewer



Cumulative Number of Reports Over Time[1]



JAPANESE BARBERRY

Classification

Restricted

Common Name

JAPANESE BARBERRY

Observation Date Range

1988 2018

[1]Due to internal policies, some wetland species locations are unable to be shared.

Last updated: 7/24/2018

Questions?