

WDNR/UWEX Wetland Invasive Plant* Program

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1. *WIP Strategy is on DNR web site:
prevent, contain, manage, restore

2. Program needs broad involvement, especially through local leadership!

- Great roles for local leadership in the program:
 1. Monitoring for and reporting WIPs
 2. Assisting with site management & restoration
 3. Involving citizens
 4. Suggesting how to improve the program!

3. Monitoring & Reporting

- Knowing location & severity of WIPs is crucial for developing sound control strategies
- Need for many people to be involved, both professionals and citizens, for complete info
- Professional roles: Be a
 - Resource & example—know & report most WIP species
 - Trainer—Finding potential volunteers, then appeal, educate, enlist, train and assist citizens

Citizen Science and Education

■ 1. Monitoring Wetland Invasive Plants

- Knowing location & severity of WIPs is crucial for developing sound control strategies

- Citizens must help to report high priority WIPs

- Students of all ages need to learn how to ID & report them

■ 2. Using the Purple Loosestrife Project for teaching about invasives & biocontrol

- Different from other IS activities described today since it includes both great teachable moments & actual, effective control work

- “See Cella Chow” has everything you need to accomplish both!

A. What do citizens need to know to care?



Wetlands have water at or slightly above the surface of the ground at least part of the year, support water-loving plants and develop special (“hydric”) soils...

What wetlands
are...
(pretty basic for most folks!)



Why we need wetlands!

- Most productive biological systems
- Greatest diversity of rare & endangered species!
- Store flood water, reduce erosion from flooding
- Filter pollutants, including silt and nutrients
- Produce oxygen & store carbon
- Playgrounds (& classrooms) for paddlers, hunters, birders, hikers—and kids of all ages

That wetlands are very special places...



...we often need to teach all this basic info!

Why and how invasive plants are a problem for wetlands...



Purple Loosestrife on Minocqua Lake

Species must cause human, economic &/or ecological harm to be “invasive”

Non-native Phragmites—common reed grass



Use PL & NN Phragmites as good examples of WIPs:

- They “replace large numbers of more desirable plants—and dominate in plant communities where they don’t belong”
- ...also eliminate native animals, reduce ecosystem services & cost mega \$ annually
- How?...as exotics they brought no controlling predators or diseases from home
- Are not often eaten by native bugs or animals
- Are very adaptable, grow faster and taller than native plants, & quickly reproduce & spread

How big a problem are WIPs in Wisconsin? Citizens need to know...

- Started with 10 million acres of wetlands in Wis.
- Half lost to ditching, filling...
- WIPs reduce all values of the remaining wetlands
- 3/4 of wetlands left are in private hands
- Citizens must be taught to care for them! ...and that's where you come in...



B. Monitoring WIPs: what does this entail?

- It's as simple as observing while out and about:



But citizens must learn to ID (priority) WIPs & plants out of place...

We need lists of area high priority
WIPs for citizens to ID (you
should know them all), and many
guides can help...

A FIELD GUIDE TO INVASIVE PLANTS IN WISCONSIN



Edited by: Thomas Boos, Kelly Kearns, Art Kitchen, Courtney LeClair,
Brendon Panke, Bryn Scriver, Patricia Trochlell, Bernadette Williams, & Brock Wood

Offer WIP ID Workshops !



Teach how to report WIPs as the next crucial step:

Report to the DNR: On WDNR webpage (dnr.wi.gov) search Keyword: **Invasives**, click Report for form (or use SWIMS or other data bases)

invasive_species@wisconsin.gov. Check the photos and descriptive webpage if you need help identifying the plant you have observed.' Below this text is a list of instructions for reporting invasive plants in wetlands and riparian areas. The 'Collector Information' section includes fields for State, County, Date Collected / Observed, Collector Name, Address, City, State, ZIP Code, Phone Number, and Email. The 'Characteristics & Location' section includes fields for Plant Name (Common and/or Latin name), Size & density of infestation, and Habitat description. The 'Geographic Coordinates' section includes fields for Latitude, Longitude, UTM, Township, Range, Section, and Part Section."/>

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Report Invasive species

We are working to keep invasive species out of Wisconsin. Early response is critical to control invasives before they spread into new areas. Use the tabs below to report invasive species you have found.

Aquatic **Wetlands** **Terrestrial** **NR40 species**

Wetlands

Please report invasive plants in wetlands and riparian areas. If you observe an invasive plant you can email its location and photo to invasive_species@wisconsin.gov. Check the photos and descriptive webpage if you need help identifying the plant you have observed.

- Please complete the [Invasive Plant Report Form \(pdf\)](#) to report plants growing in wetlands or on streambanks in Wisconsin. Provide population size/density, habitat type and landowner name.
- You must document the plant species. If possible, email with photographs of the plant showing its identifying characteristics for scale. (You may also send in plant specimens to document.)
- Please provide the most accurate location data you can. Use UTM being used (e.g. WGS 84, UTM, etc.). You may also note a link to the DNR's [Surface Water Data Viewer](#) to easily find the report.
- Send form and your identification evidence, either photos or instructions) to the DNR. Use the address provided on the form. Indicate on subject line that the report is for a species found on a streambank.

State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Invasive Plant Report

Form (700-055) (R 5/11)

Notice: Information provided on this form will be used in a statewide volunteer effort to locate, eradicate and monitor selected invasive plants. Your cooperation in reporting these species is much appreciated. Personal information collected may be provided to requestors to the extent required by Wisconsin's Open Records Law (Wis. Stats. § 19.31-19.39, Wis. Stats.).

Collector Information

State	County	Date Collected / Observed
<input type="text"/>	<input type="text"/>	<input type="text"/>
Collector Name <input type="text"/>		
Address <input type="text"/>		City <input type="text"/>
<input type="text"/>		State <input type="text"/>
<input type="text"/>		ZIP Code <input type="text"/>
Phone Number <input type="text"/>	Email <input type="text"/>	

Characteristics & Location

Plant Name (Common and/or Latin name)

Size & density of infestation. Describe spread and estimate numbers.

Habitat description. Describe general habitat type such as forest interior, forest edge, old field, prairie, wetland, lakeshore, crop field, pasture, disturbed ground, urban setting type. Is it public or private land?

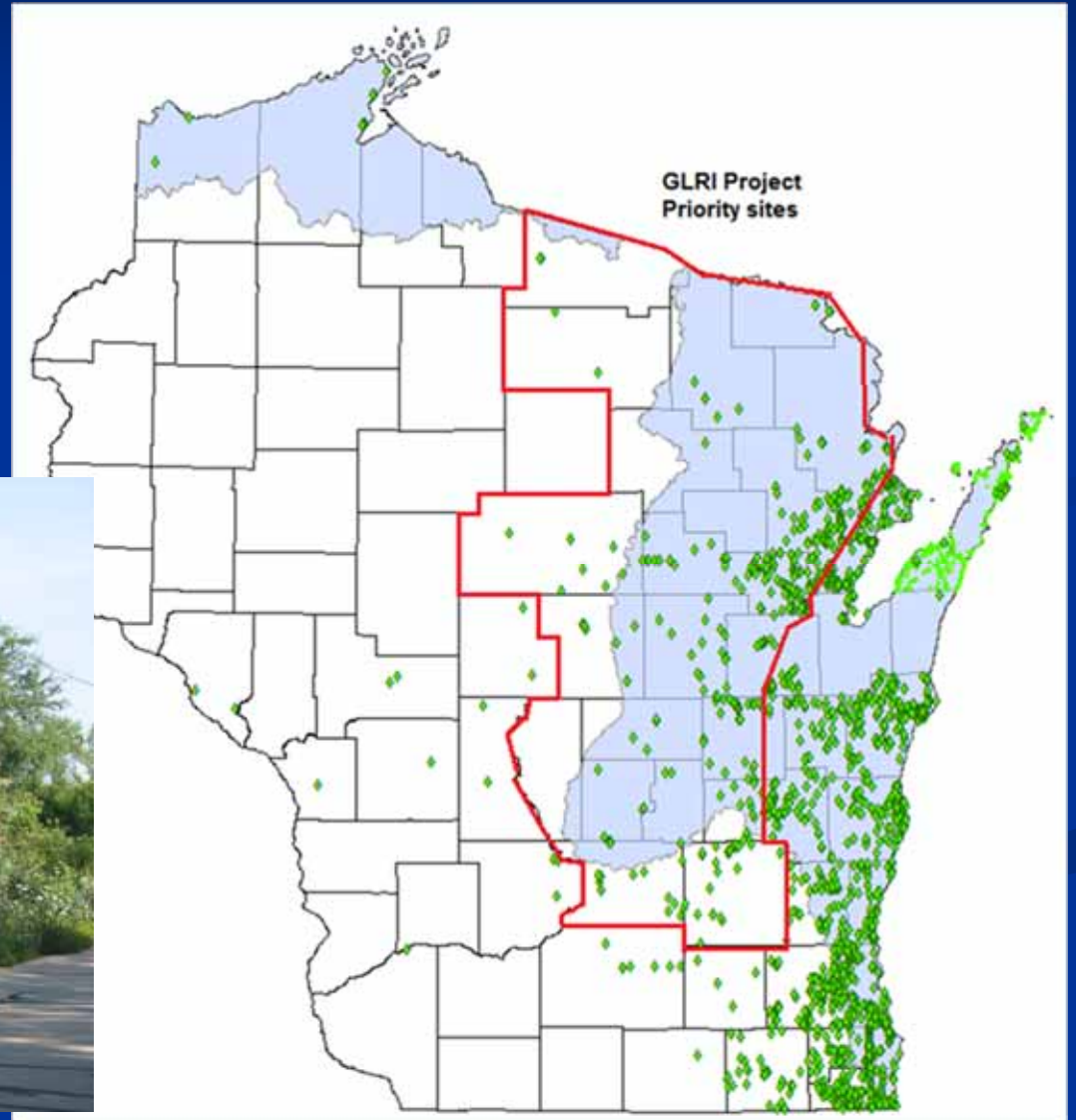
Location landmarks. Provide enough details so site can be found again. Note nearby landmarks such as city name, roads, interchanges, driveways, lake edges and other natural and cultural features.

Geographic Coordinates (Prepared table using <http://dnr.wisconsin.gov/location>)

Complete one:

- Latitude N Longitude W
- UTM E N
- Township N Range E Section Part Section

4. Mapping has led to a Statewide NN Phragmites strategy!*



Knotweed, giant *Polygonum sachalinense* (*Fallopia sachalinensis*)
Knotweed, Japanese *Polygonum cuspidatum* (*Fallopia japonica*)



Tall manna grass *Glyceria maxima*



European marsh thistle *Cirsium palustre*



Japanese hops *Humulus japonicus*



Male flowers



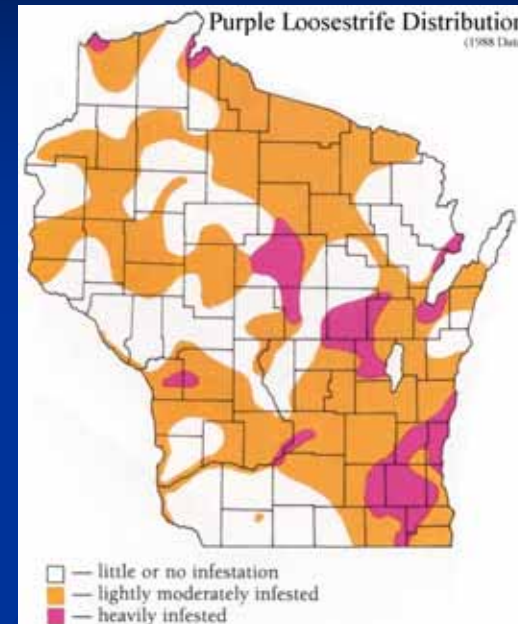
Female flowers

5. Purple Loosestrife Biocontrol Project

- Use the Purple Loosestrife Project for managing this plant in your area
- Use it for teaching about invasives & biocontrol
- -Different from other IS since it includes both great teachable moments & actual, effective control work
- -“See Cella Chow” used to have everything you need to accomplish both; now see WDNR web page

Purple Loosestrife Problem:

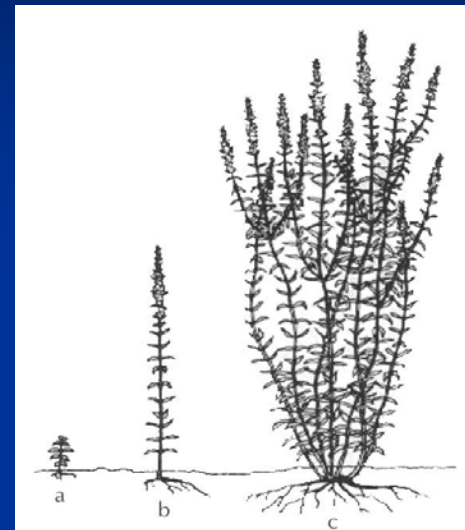
- Into Wis. around 1900
- By 1988 in almost every county, and occupied ~40,000 acres of wetlands
- Many control methods were tried, but all measures were unable to stop its expansion



Problem areas all over the state:



ID is critical

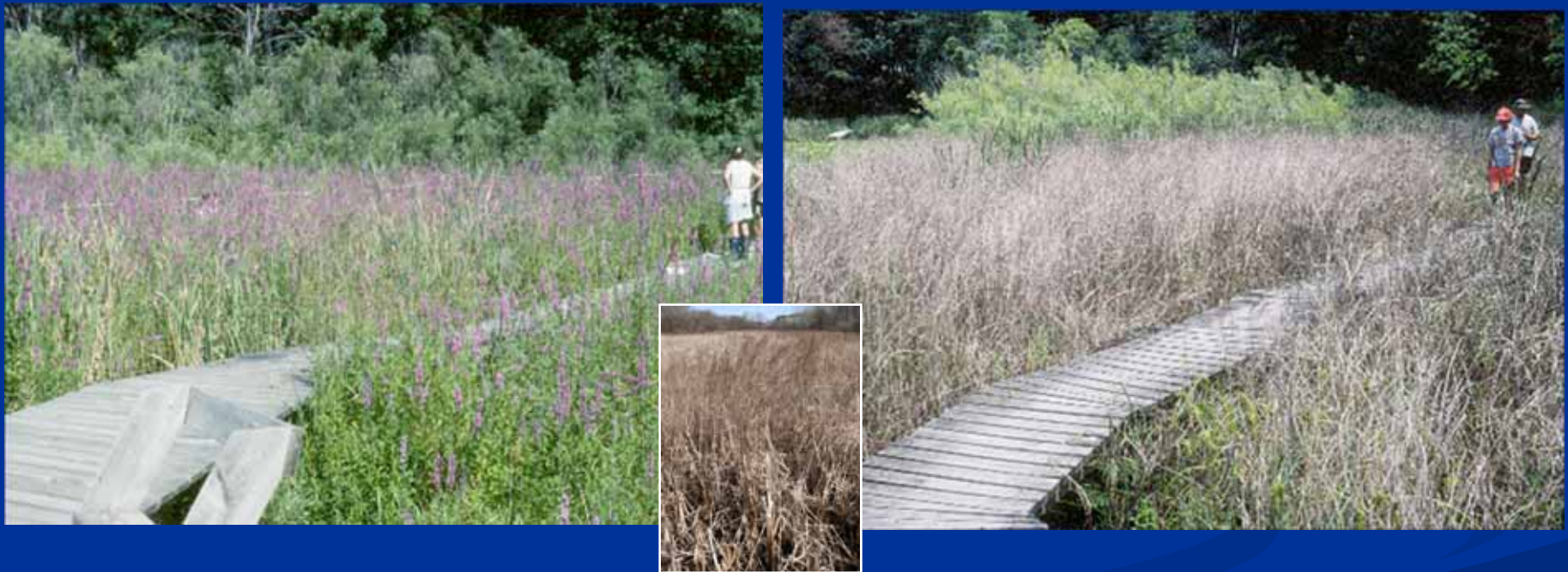


Biocontrol research gave us European “Cella” beetles to reduce plant size and seed output:

- Biocontrol = using one species to control another
- 2 very similar European beetle species eat PL leaves & stems
- Introduced together in 1994
- Years of monitoring has shown them to be both safe (reproduce only on PL) and effective



Cella beetles have been released at & reduced the PL in many wetlands around the state



- UW-Waukesha field site at Henrietta Lake over several years

Some PL projects are now moving into a restoration phase with promising futures



- Teachers and students at Waterford HS have reduced PL with beetles at Druid Lake & native plants are returning!

Over 90% of all beetles released have been locally raised by citizens (including teachers & students!) with a simple pool setup

- 700+ citizen groups involved so far
- 40 million beetles released
- Over 1700 release sites, but still need beetles
- Even if PL in your area is currently well controlled, the project is great for educational work!



Get program info on line--search
“purple loosestrife biocontrol” on
WDNR web site, click top reference:

Purple Loosestrife Monitoring and Biocontrol - Wisconsin DNR - Windows Internet Explorer provi...

http://dnr.wi.gov/topic/invasives/loosestrife.html

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Purple loosestrife biocontrol

There are a number of methods to control purple loosestrife, however biocontrol may be the most viable long-term control method, promising to greatly reduce the need for other more costly and disruptive control methods.

The DNR and University of Wisconsin-Extension (UWEX), along with hundreds of citizen cooperators, have been introducing natural insect enemies of purple loosestrife, from its home in Europe, to infested wetlands in the state since 1994. Careful research has shown that these insects are dependent on purple loosestrife and are not a threat to other plants. Insect releases monitored in Wisconsin and elsewhere have shown that these insects can effectively decrease purple loosestrife's size and seed output, thus letting native plants reduce its numbers naturally through enhanced competition.

A suite of four different insect species has been released as biological control organisms for purple loosestrife in North America and Wisconsin. Two leaf beetle species called "Cella" beetles that feed primarily on shoots and leaves were the first control insects to be released in Wisconsin, and are the insects available from DNR for citizens to propagate and release into their local wetlands. A root-mining weevil species and a type of flower-eating weevil have also been released and are slowly spreading naturally. The Purple Loosestrife Biocontrol Program offers cooperative support, including free equipment and starter beetles from DNR and UWEX, to all state citizens who wish to use these insects to reduce their local purple loosestrife.

See how you can help raise special beetles to feast on this plant and protect wetlands.

Invasive species

Learn
about invasive species in Wisconsin.

Report
an invasive species in your area.

Order
invasive species publications.

Reporting forms

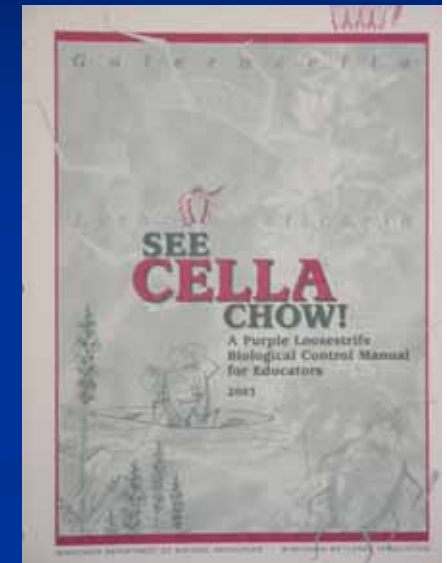
Wetland invasive plant

Internet 100%

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Educational and instructional materials are on the DNR website!

- Education leads to involvement and action!
- 15 educational activities make it easy for educators of all kinds to make beetle work also a real learning experience!
- Appendices include PL history in Wis., rearing instructions, and forms



Ed. activities are usually set up around a small rearing project

1. Cooperators mark big healthy PL plants in fall, & sew cages in winter
2. Return in spring to dig up the roots



3. Clean the root crowns and transplant them into flower pots
4. Add cages immediately, put pots in pools & tie up tops



Program makes the process easy/cheap with info & free gear!

- **Free** pots, pools, netting, & beetles are available in Madison
- Cooperators buy potting soil, sew cages, and construct plant supports
- Cooperators choose the # of pots (10 beetles/pot usually produce ~1,000 beetles in 6-8 weeks!)
- **FREE** starter beetles are sent to cooperators when plants are ~2' tall



Add beetles, wait, and release them

6. We collect & mail beetles to teachers for free (or collect your own locally at previous release sites); use for activities, then add 10 to each plant.



7. Wait 6-8 weeks. Then when new adult beetles appear it's time to take plants to field sites

8. This is where a little brawn comes in!

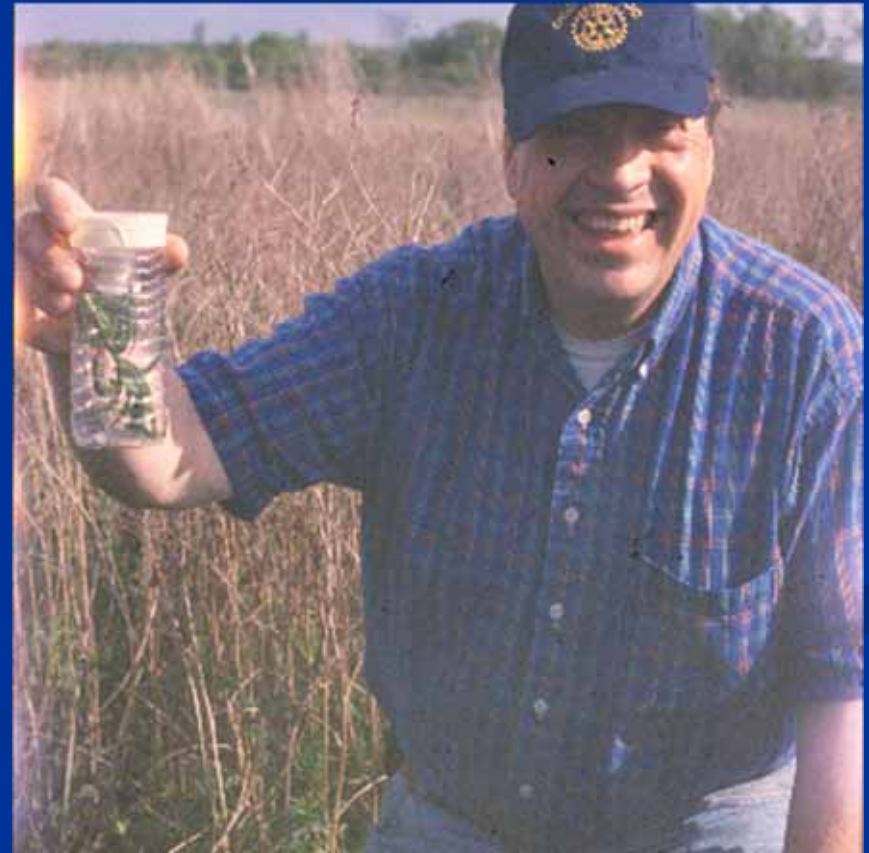


9. Pots are put next to healthy PL & cages are removed



An alternative is to simply collect biocontrol beetles on a previous release site in your area

- Collecting is often very easy and fun, though it has to happen from mid May to very early June
- Use the beetles in a variety of educational activities
- Then use the beetles for rearing or release them on new sites!



**Involve kids since once they
“experience” nature early in life they
never give up their love of things
wild--they will be real nature
caretakers forever!**



We need YOU to help your citizens learn about WIPs like PL and how they can be prevented or controlled.

Also which species to learn to report to help save our remaining wetlands from other WIPs...

Thank you for your time and attention!

Please contact me with comments, questions, and suggestions!

Brock.Woods@Wisconsin.gov; 608-266-2554