



# Washington County Aquatic Invasive Species Strategic Plan Five-Year Update 2019 - 2024



*Banded Mystery Snail*  
(*Viviparus georgianus*)



*Invasive Species Dive*  
*Silver Lake, WI*



*Yellow Floating Heart*  
(*Nymphoides peltata*)



*Eurasian Watermilfoil*  
(*Myriophyllum spicatum*)



*Clean Boats Clean Waters*  
*Boat Inspection*



*Curly-leaf Pondweed*  
(*Potamogeton crispus*)

## PROJECT CONTRIBUTORS

This Plan update was the result of many individuals and groups. The Advisory Committee members, Washington County staff, and other staff listed below deserve a special thanks and acknowledgement for their contributions.

As part of this Aquatic Invasive Species (AIS) Plan update process, an Advisory Committee (AC) was established to guide the preparation of the Plan. The AC reviewed the Plan chapters and identified recommendations for Plan goals, objectives, and actions. The group is comprised of members from lake protection and rehabilitation districts, lake owners associations, DNR staff, and stakeholders throughout Washington County.

A public informational meeting and hearing was held by the Washington County Land Use and Planning Committee on September 26, 2019 to obtain public reaction to this Plan update. The Land Use and Planning Committee then recommended approval of the Plan to the Washington County Board of Supervisors. The Plan was adopted by the County Board by resolution on October 9, 2019 (see Appendix B for a copy of the Resolution).

### Advisory Committee Members:

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Christine Bohn, Ozaukee Washington Land Trust  
Lee Krueger, Cedar Lakes Conservancy  
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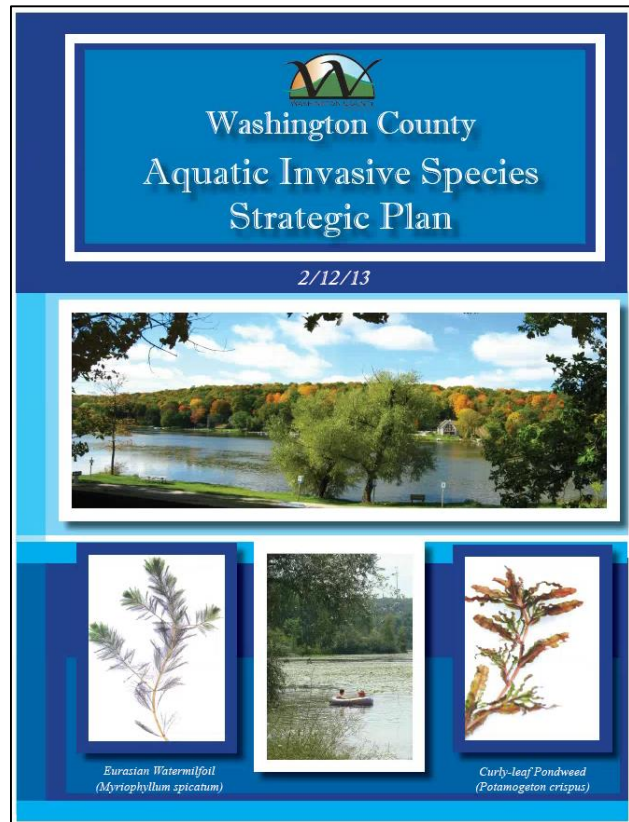
## CHAPTER 1 INTRODUCTION

### Background

In 2013 the first Washington County Aquatic Invasive Species Strategic Plan was adopted by the County Board of Supervisors. The Plan provides an overview of Washington County water bodies, describes how AIS can be detrimental to aquatic ecosystems, and pin-points where AIS have been identified in the County. The Plan also recommends goals and strategies for combating AIS and engaging in AIS education and outreach, as well as identifying entities responsible for Plan implementation. The Plan recommends annual evaluation by staff and reconvening with the Advisory Committee every five years to oversee a plan update.

This five year AIS Strategic Plan update has been created to evaluate the progress of the current Plan implementation, review recommended goals and actions and suggest needed updates or revisions. Per the Strategic Plan recommendation, the AIS Advisory Committee was reconvened along with additional stakeholders to help develop and guide this Aquatic Invasive Species Strategic Plan Five Year Update.

This five year update is an addendum to the original AIS Strategic Plan<sup>1</sup> and helps guide the future of an AIS program in Washington County. As an addendum, this document provides information on new and threatening AIS to the area, and sets the direction for future programs. This addendum has undergone the same approval and adoption process as the original 2013 AIS Strategic Plan which was approved by the AC, submitted to the DNR for comments, and adopted by the Washington County Board of Supervisors.



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#### <sup>1</sup> Additional Plan References:

- *Multi-jurisdictional Comprehensive Plan for Washington County: 2035*
- *Washington County Land & Water Resource Management Plan (LWRMP): 2011-2020*
- *Park and Open Space Plan for Washington County (3rd Edition) (SEWRPC 2004)*
- *Waukesha County AIS Strategic Plan*
- *Waukesha AIS Strategic Plan mapping app* <https://www.waukeshacounty.gov/ais>
- *DNR AIS Strategic Plan* <https://dnr.wi.gov/news/input/documents/guidance/AISPlanDraft.pdf>
- *Washington County Strategic Priorities, For the Quality of Life of the Citizens of Washington County 2017-2019*



## Aquatic Invasive Species Defined

- Species non-native to local area
- Threaten the diversity or abundance of native species
- Threaten ecological stability, human health and safety, commercial, agricultural, aquaculture, or recreational activities
- Typically, no local predator allowing AIS to out-compete natives and decrease biodiversity

## AIS Impacts

- Outcompete native species for food and habitat, causing displacement or reduced populations of native species
- Change the composition and structure of aquatic communities, which can have negative cascading effects throughout aquatic food webs
- Alter sport fishing opportunities, negatively affecting the recreation and tourism industries
- Impede navigation and recreational boating activities
- Reduce aesthetic appeal and impact swimming opportunities
- Degrade habitat and negatively affect wildlife and water quality
- Degrade shorelines and beaches, affecting the recreation and tourism industries
- Negatively affect human and wildlife health through the spread of new diseases and pathogens
- Decrease property values
- Negatively affect commercially valuable species
- Increase costs to utilities and municipalities

### AIS Defined:

*"Plants, animals and pathogens that are "out of place."*

*A species is regarded as invasive if it has been introduced by human action to a location, area, or region where it did not previously occur naturally (i.e., is not native), becomes capable of establishing a breeding population in the new location without further intervention by humans, and spreads widely throughout the new location."*

- WI DNR

### Quick Fact:

*Annual Losses to Great Lakes Region at least \$230 Million (Jul 2008).*

*A U.S. study suggests invasive species brought in by ocean-going ships may be costing the Great Lakes over \$200 million per year to commercial fishing, sport fishing, and the area's water supply.*

- Center for Aquatic Conservation at the University of Notre Dame and University of Wyoming



Eurasian watermilfoil in Lake Five  
Credit: Brad Steckart



Zebra Mussels overtaking abandoned jar  
Credit: Fiona Maitland

## Aligning AIS Strategic Plan with Strategic Priorities for Washington County

In 2015 and updated in 2018, the Washington County Board of Supervisors identified a vision, mission and four strategic goals for County services that are provided directly to citizens along with a set of practices designed to achieve each goal. The County Board also established a goal and related practices for programs that do not provide direct services to citizens, but that support the direct services provided by other County programs.

### Washington County Vision

Washington County strives to cultivate its rich heritage, vibrant economy and attractive communities through the distinct values that define us.

#### Quick Fact:

*Studies done in Vermont and Wisconsin site Eurasian Watermilfoil reduced lakefront property values up to 16% and 13% respectively.*

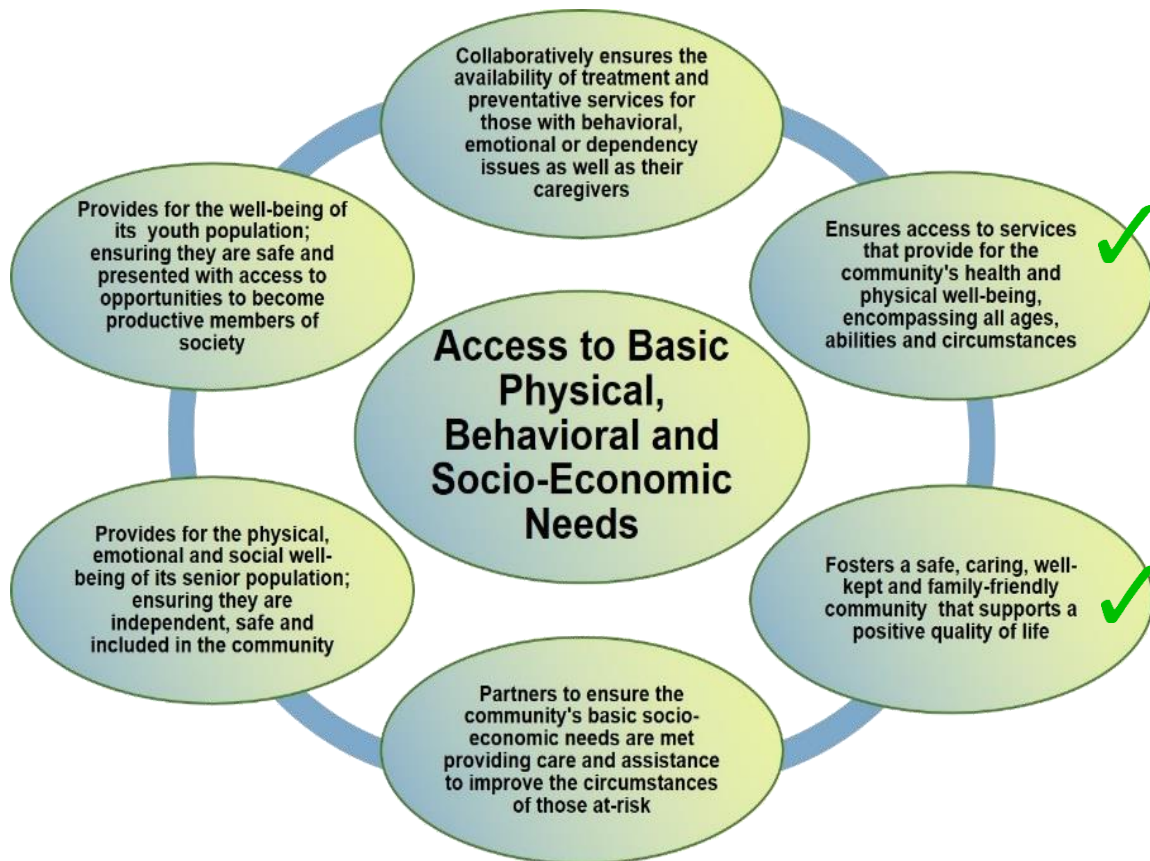
*- U.S. Fish & Wildlife Service*

### Washington County Mission

We create an environment for residents and businesses to enjoy our authentic quality of life through a well-governed and administered county dedicated to safe and secure communities; economic growth and vitality; effective mobility and reliable infrastructure; and access to basic needs.

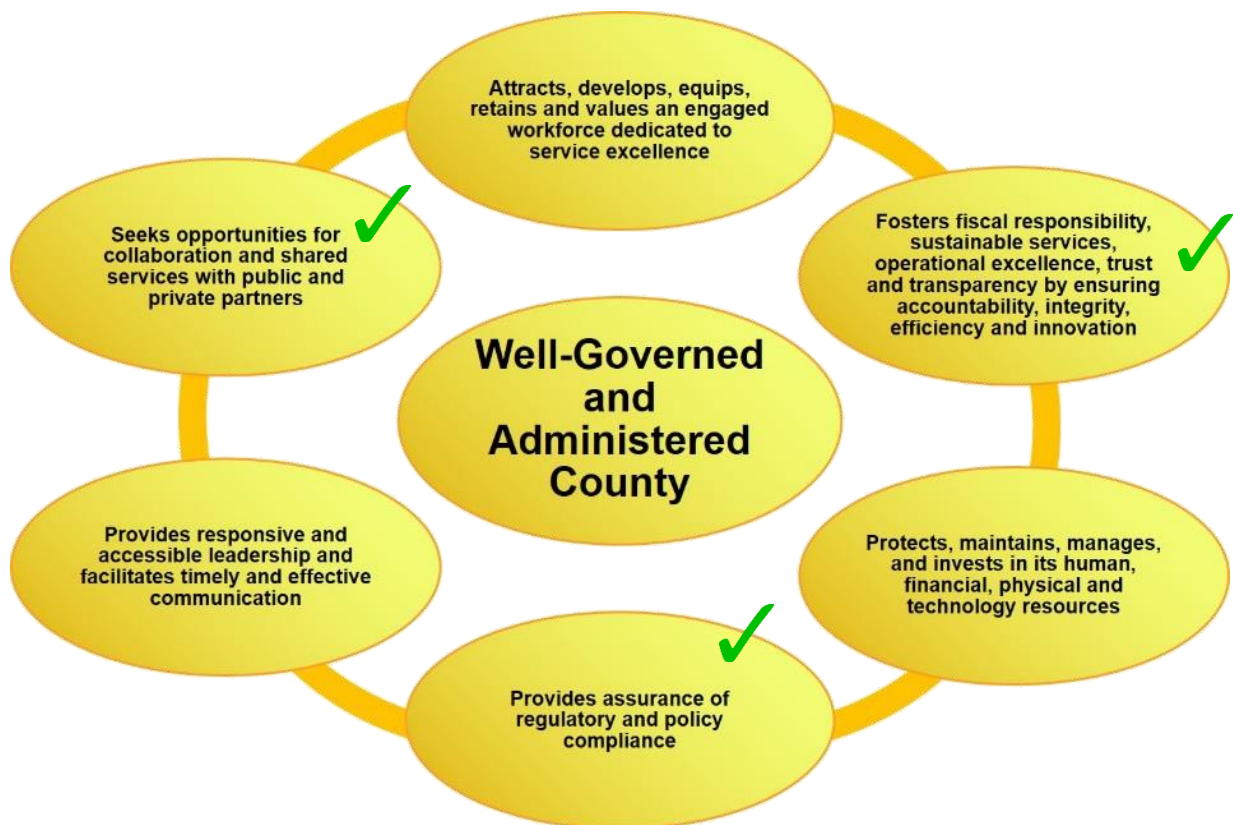
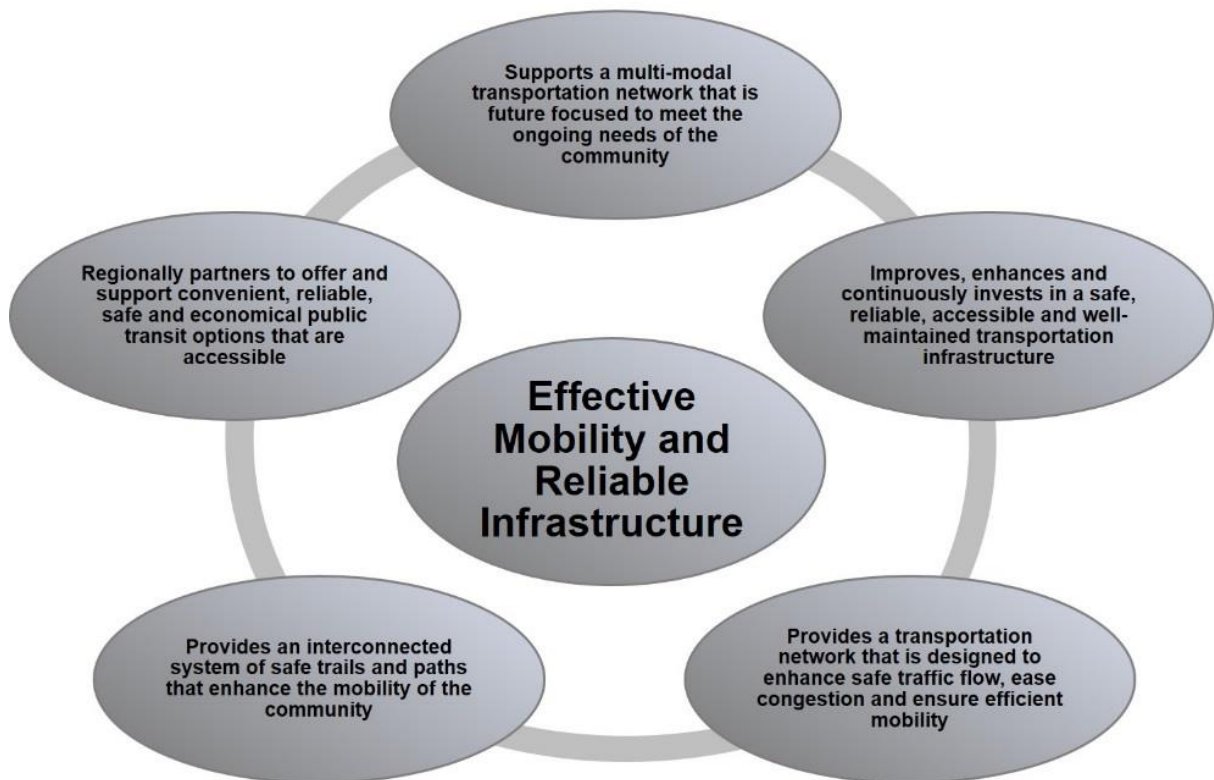
### Goals and Practices

The goals and practices for County services are shown below. Practices that align with the AIS Program are marked with green checkmarks.









## CHAPTER 2

### NEW AIS THREATS

This section provides detailed information on AIS that has either recently been found in, or that are threatening Washington County waters and other water bodies throughout Wisconsin. The following identified AIS are in addition to those listed in the 2013 Aquatic Invasive Species Strategic Plan.

#### ***Starry Stonewort (Nitellopsis obtusa)***

**History:** Starry stonewort is a submerged macroalgae native to Europe and Western Asia. It was introduced to the Great Lakes through ballast water and was first reported in Wisconsin in 2014. As of the date of this report, Starry stonewort is found in Wisconsin, Indiana, Michigan, Minnesota, New York, Pennsylvania, and Vermont in the United States. It has been identified in Washington County in Silver Lake and Pike Lake in 2015. In 2016, another population was discovered in Green Lake in West Bend. In 2018, the algae spread to Little Cedar Lake.

#### **Identifying Characteristics:**

- Smooth stems (not corticated), branchlets arranged in whorls (circles) of 4 to 6. Stiff and holds shape out of water, uneven forking at ends of branches
- Distinct star-shaped reproductive structures called bulbils produced in lake sediments
- Circular round red balls (antheridia) found at junctions between branchlets
- Commonly mistaken for Slender Stonewort (*Najas flexilis*) which is delicate and doesn't hold shape out of water or doesn't produce bulbils. Larger and more robust than other similar species such as native stoneworts (*Nitella spp.*) and muskgrasses (*Chara spp.*)



*Starry stonewort bulbil*  
Credit: Paul Skawinski

**Life Cycle:** Starry stonewort starts growing in the early spring. It can produce seeds however, only male starry stonewort has been found in the U.S. The main methods of reproduction are through vegetative fragmentation and from bulbils, both of which can produce new colonies.

**Impacts:** Starry stonewort forms thick vegetative mats along a lake bottom which can shade out native plants, reducing aquatic plant diversity and food for fish and waterfowl. It can also reduce successful fish spawning activities.

**Control:** An effective method for control and/or eradication is currently unknown. Silver Lake has attempted diver-assisted suction harvesting and is currently planning to dredge portions of the lake, while Green Lake isolated their population with curtains and attempted to maintain high concentrations of chemicals. Muskego Lake in Waukesha County unsuccessfully attempted an 80-inch drawdown. Various chemical treatments have been attempted in lakes along the St. Lawrence Seaway corridor with no success of treatment.



## ***Phragmites* (*Phragmites australis* ssp. *australis*)**

**History:** Phragmites was introduced from Europe to the eastern U.S. sometime between the late 1700s and the early 1800s in ship ballast. In Washington County, Phragmites has established itself along roads and highways in various low-lying areas.

### **Identifying Characteristics:**

- Holds leaves over winter, often over 10 feet tall
- Large, feathery seedheads
- Dark green leaves in spring, turning light brown over winter
- Dull, ridged stems
- Commonly mistaken for Native Phragmites (*Phragmites australis* ssp. *americanus*) which is shorter with sparse seedheads, bright green leaves, and smooth, glossy, reddish stems



*Phragmites* displaying seedheads

*Credit: Katy Chayka*

### **Life Cycle:** Non-native Phragmites

begins growing earlier in the season than many other wetland plants, including native Phragmites. It also continues growing later into the fall than native Phragmites. The plants form thick roots and rhizomes that can spread 10 or more feet in one growing season. It can spread by stolons that have been found growing up to 43 feet from the parent plant.

**Impacts:** Non-native Phragmites grows faster and taller than most native wetland plants. Once established on a lakeshore or adjacent wetland, it displaces native plants and reduces wildlife habitat. Furthermore, non-native Phragmites can alter hydrology and increase fire potential. In the Midwest, non-native Phragmites grows in disturbed habitats and spreads along highway systems. This species is commonly spread by mowing equipment along roadside right-of-ways.

**Control:** Early identification and removal is the most effective method of control for Phragmites. The species is particularly difficult to control as it spreads by seed, stolon's (above ground runners that can form new plants), and an extensive network of rhizomes under the ground. The longer stands exist, the more difficult they can be to control. Chemical treatment with Imazapyr or glyphosate is often necessary for control, and should be applied after plants are in full bloom in late summer up to the first killing frost (late August-October). A WDNR permit may be required for chemical treatment occurring near water. Visit [dnr.wi.gov/lakes/plants/](http://dnr.wi.gov/lakes/plants/) for more information regarding herbicide treatments and permitting. The Ozaukee Washington Land Trust has proven expertise to manage Phragmites control projects and has led local efforts to control Phragmites along some of the County and Town roads. However, there has been no County-wide effort to strategically control this species in Washington County. A management program to monitor, control, and minimize spread is needed.

## **Hydrilla (*Hydrilla verticillata*)**

**History:** Hydrilla is a submerged aquatic plant from Asia and northern Australia. It was introduced to the United States in the 1950s through the aquarium trade and was first documented in a waterway in south Florida in 1960. Hydrilla was discovered in a man-made pond in Marinette County, Wisconsin in 2007 but has not been observed or reported in any other part of the state.

### **Identifying Characteristics:**

- Rings (whorls) of four to eight leaves around the stem
- Serrated edges on leaves
- Thorns are also present underneath the leaf, along the centerline
- Commonly mistaken for Common waterweed (*Elodea canadensis*) – looks similar, but has leaves with smooth edges arranged in whorls of three around the stem



*Hydrilla's tooth-like leaf edge*

*Credit: Robert Vidéki*

**Life Cycle:** Hydrilla can be monoecious (having both male and female flowers on the same plant) or dioecious (having male and female flowers on different plants). It is believed the Wisconsin plant is monoecious. Hydrilla can spread by fragmentation, turions, and tubers. The floating fragments sprout adventitious roots and eventually sink to the lake bed where they may start a new colony. It has been found that a fragment with one whorl of leaves can sprout and grow into a new plant. Northern U.S. populations overwinter and grow from tubers in the spring. Southern U.S. populations overwinter as perennials.



*Whorls of Hydrilla leaves*

*Credit: Vic Ramey*

**Impacts:** Hydrilla can form dense canopies that restrict fish passage, boat passage, fishing, and swimming. Because such small fragments can sprout into a new plant, any amount of Hydrilla present on boat trailers and other equipment can spread the plant.

**Control:** Several different treatment methods have been used in parts of the world with Hydrilla invasions. Mechanical removal is used for management only in areas that are in close proximity to domestic water supply intakes, in rapidly flowing water, or when immediate removal is necessary. Fall drawdowns can be an effective control if done prior to regrowth in the spring. Tubers and turions may remain dormant and viable in undisturbed substrates for up to four years.

Aquatic herbicides have been used effectively for control; however, no effective biological control agents are known to exist at this time.

### **Java Waterdropwort/Vietnamese Parsley (*Oenanthe javanica*)**

**History:** Java Waterdropwort is a fast-growing plant native to Southeast Asia. It is often sold for ornamental purposes and is also popular in Asian cooking. Java Waterdropwort was first introduced after being planted as an ornamental plant in Brodhead, Wisconsin in 2010. Presently, it is known to occur in a tributary to the Milwaukee River in northern Milwaukee County and in portions of the Bark River near Dousman in Waukesha County.

#### **Identifying Characteristics:**

- Lush green pinnate leaves that resemble large flat parsley or celery foliage
- Small umbels (3-5 cm across) of tiny white flowers
- Jointed, hollow stem

**Life Cycle:** Java Waterdropwort can occur in marshes, riparian areas, shallow, slow moving waters, and on shore. It spreads by seed, runners, and fragmentation. Flowers bloom in late summer to early fall, often later than other similar looking species.



*Pinnate leaves of Java Waterdropwort*  
Credit: Brad Steckart



*Vietnamese Parsley in bloom*  
Credit: Hyun-tae Kim

**Impacts:** Java Waterdropwort grows and spreads quickly by runners and fragmentation potentially choking streams and displacing native vegetation.

**Control:** Hand-pulling small populations can be effective if all roots and stem fragments are removed. Mechanical methods, such as cutting, could further distribute the population since it can spread by fragmentation. Chemical treatment can control an established population, but care should

be taken to reduce harm to native species. A WDNR permit is required for chemical treatment near water. Visit [dnr.wi.gov/lakes/plants/](http://dnr.wi.gov/lakes/plants/) for more information regarding herbicide treatments and permitting.



## **Asian clam (*Corbicula fluminea*)**

**History:** Asian Clams are freshwater bivalves native to Southeast Asia as well as parts of central Australia, Africa, and the Mediterranean. It was first introduced to the United States in 1938, and had found its way into most of the Mississippi River Basin by the 1970's. This species has strong biofouling capabilities and has caused millions of dollars worth of damage to intake pipes used in power plants and industrial water systems. As of the date of this report, Asian Clam is found in Wisconsin, Indiana, Michigan, Minnesota, and Illinois in the United States. Although there are no recorded instances of Asian Clams within Washington County bodies of water, surrounding counties suffer the impacts of Asian Clams which raises a high level of concern with our County's AIS management team.

### **Identifying Characteristics:**

- A small, 1-2 inch long shell
- Ornamented by distinct, concentric growth rings
- Light yellowish to blackish-brown thick, triangular shell with heavy, distinct, evenly spaced growth rings
- Some people might mistake Zebra Mussels for Asian Clams

**Life Cycle:** Asian Clams start growing in the early summer. By releasing veligers brooded in parent's gills, a single clam can release hundreds of offspring per day or up to 70,000 per year. Asian Clams are able to reproduce by self-fertilization with their hermaphroditic nature. The average life span is about 1-7 years.



*Asian Clam close-up highlighting concentric growth rings*  
Credit: David Fenwick

**Impacts:** Asian Clams are known to dominate and alter benthic communities, reduce species diversity, and displace native species. They often compete with native mussels and juvenile fish for food. It has also been documented to cause problems in irrigation canals, pipes, and drinking water supplies.

**Control:** An effective method for control and/or eradication is currently unknown. Mechanical and chemical controls such as manual removal, drastic temperature changes, and chemicals have been used in industry-only settings like water intake pipes. However, treatments are not yet feasible in natural areas.

## **Japanese knotweed (*Fallopia japonica*)**

**History:** Japanese knotweed is an herbaceous perennial native to Eastern Asia, but can now be found in Europe, the British Isles, New Zealand, Canada, and majority of the United States. Because Japanese knotweed is already establishing within Washington County, management programs to monitor, control, and minimize spread are necessary.

### **Identifying Characteristics:**

- Forms large colonies of erect, arching stems (resembling bamboo). Stems are round, smooth, and hollow with reddish-brown blotches
- Plants reach up to 10' and the dead stalks remain standing through the winter
- Leaves are arranged in simple, alternate patterns with spade-shaped leaves or more heart-shaped leaves on younger shoots
- Flowers are creamy, white or greenish; borne in plume-like clusters in upper leaf axils near the end of stems. Plants bloom in August-September
- Japanese knotweed is similar in appearance to bamboo and Giant knotweed (*Polygonum sachalinense*) but the best way to tell them apart is by their leaf bases; Japanese knotweed is squared off while Giant knotweed is heart shaped



*Japanese knotweed's spade-shaped leaves*  
Credit: John Davis

**Life Cycle:** This plant can reproduce itself both by seed and by rhizomes. In the spring, the plant aggressively begins to grow and stems elongate rapidly. After only a few weeks, a large green canopy is created blocking out the light to competing plants. New growth is frost sensitive and dies if frozen during the winter months. Plant parts containing rhizomes or seeds from the season before start the cycle once again in spring. New infestations of Japanese knotweed often occur when soil contaminated with rhizomes is transported or when rhizomes are washed downstream during flooding.

**Impacts:** Japanese knotweed is a highly aggressive, invasive species that typically colonizes on roadsides, riverbanks, woodland edges, wetlands, railroads and other embankments throughout the region. Japanese knotweed contains allelopathic compounds which are toxic chemicals to surrounding vegetation ultimately disrupting nutrient cycling in riparian areas. It is known for destroying value of homes and surrounding vegetation if not taken care of.

**Control:** Control of Japanese knotweed is difficult and typically requires a combination of mechanical and chemical methods over a period of two or more growing seasons. Mechanical: hand pull young plants, dig or till when soil is soft, or burn which typically requires higher unit costs than mowing. Chemical: apply directly to individual cut stems in the fall following the second (late summer) mowing. Foliar application is a highly effective method for controlling Japanese knotweed, and is applied following late summer mechanical treatment.

## **Manna Grass (*Glyceria maxima*)**

**History:** Manna Grass is native to Europe and Asia and is thought to have been initially introduced as a forage and ornamental species. It was first documented in North America in the mid-1940s at the far west end of Lake Ontario. In the 1970s, Manna Grass was found in Racine County and Milwaukee County. Currently, most Wisconsin Manna Grass populations are found in the Southeast Region between Milwaukee and Madison, however a huge population exists along the North Branch of the Manitowoc River in Calumet County.

### **Identifying Characteristics:**

- Leaf blades ½ to 1 inch wide and 8 to 24 inches long
- Shallow grooves on leaves
- Leaf edges have stiff short hairs and are rough to the touch
- Tall growing, erect, sparse seedheads in large, distinct umbels (6 to 12 inches long)
- Commonly mistaken for Native American manna grass (*Glyceria grandis*) with a shorter height, growing up to 4.5 feet tall, with a drooping, instead of an upright seedhead



Manna Grass seedhead  
Credit: Rasbak

**Life Cycle:** Manna grass can grow in wetlands, swamps, lakes, ponds, slow-moving rivers, ditches, and wet pastures. The Grass spreads primarily by rhizomes, but also produces seeds that can remain dormant and viable in the soil for several years. It begins emerging in early spring and grows thick monotypic stands. Plants can also become uprooted, float downstream and re-establish away from the original colony.

**Impacts:** Manna Grass grows in dense monotypic stands that can crowd out and smother native species. The Grass is not suitable for nesting and is a poor source of food for wildlife.

**Control:** Several methods, including chemical treatment and manual removal, are being tested for effective control and removal. Currently, black plastic can be used to eradicate small populations. Frequent cutting of stands throughout the year can provide control for larger populations. More information on treatment and control methods can be found at <http://dnr.wi.gov/topic/invasives/fact/tallmannagrass.html>.

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To find more information about both aquatic and terrestrial invasive species, visit the following websites:

- **Wisconsin DNR Invasive Species:** <https://dnr.wi.gov/topic/Invasives/>
- **South Eastern Wisconsin Invasive Species Consortium:** <https://sewisc.org/>
- **UW-Extension:** <https://fyi.extension.wisc.edu/wifdn/learn/invasive-species-i-d-and-impacts/>



### AIS in Washington County's Lakes (2018)

Numerous major lakes of 50 acres or more in Washington County contain populations of various aquatic invasive species. The table below summarizes known AIS populations that have been identified in the County's major lakes.

Waterbody Name	Surface Area (acres)	Max. Depth (feet)	Under 3 Ft. (%)	Over 20 Ft. (%)	Aquatic Invasive Species						
					Curly-Leaf Pondweed	Eurasian Water-Milfoil	Rainbow Smelt	Zebra Mussel	Rusty Crayfish	Chinese & Banded Mystery Snail	Starry Stonewort
Bark Lake	65	34	15.9	31.1		X					
Barton Pond	63	5	51.7	-					X		
Big Cedar Lake	937	105	7	47	X	X	X	X			
Druid Lake	122	53	21.6	62.2	X						
Friess Lake	121	48	13	68	X	X		X	X		
Green Lake	70	37	11.4	37.8	X	X				X	X
Lake Five	104	23	-	-		X					
Lake Twelve	45	20	34	-		X					
Little Cedar Lake	260	56	16.9	37.3	X	X		X			X
Lucas Lake	69	15	20	-	X	X					
Pike Lake	461	45	-	-	X	X		X	X		X
Silver Lake	122	47	12	56	X	X		X		X	X
Smith Lake	85	5	45	-							
Wallace Lake	54	35	15.6	18.6	X	X		X			

Although this document does not provide an update to lakes less than 50 acres, it is important to document new and manage existing AIS populations on small waterbodies such as private ponds and small wetland areas. Even a minor AIS infestation could spread to other uninfected waterbodies.

## CHAPTER 3

# GRANTS AND PARTNERSHIPS

With the development of the first Aquatic Invasive Species Strategic Plan for Washington County, the County was successful in its application for a second AIS Education, Prevention and Planning Grant. This grant maintained a three-quarter time County AIS Coordinator position within the Washington County Planning and Parks Department from 2014 thru 2016. In 2015, with the discovery of starry stonewort in Silver Lake and an earlier discovery in Muskego Lakes in Waukesha County, discussions between the two counties lead to an Intergovernmental Agreement (IGA). The agreement converted the three-quarter time AIS Coordinator position to full-time with Washington County and then contracted the position half-time with Waukesha County. Additionally, it allowed for the hiring of summer interns to provide a greater presence at public boat launches and assist the AIS Coordinator with plant surveys and other job related tasks. This partnership and regional effort helped secure a third three-year AIS Education, Prevention and Planning Grant from 2017 thru 2019.

### AIS Coordinator

The purpose of the AIS Coordinator position is to increase citizen awareness and to keep the WDNR abreast of AIS specific to Washington and Waukesha Counties. The AIS Coordinator organizes and implements AIS activities throughout the two counties. This involves coordinating efforts between lake associations, lake districts, conservation organizations, and the WI Department of Natural Resources to control AIS and provide a response plan against invasive species. The position also manages lake-group staff, volunteers, county interns, and serves as the coordinator for Clean Boats, Clean Water (CBCW) watercraft inspection activities. Planning and executing training workshops, properly equipping boat landings with educational information and a means of AIS disposal, and keeping a presence at the landings through volunteer efforts are key aspects of the coordinator position. The AIS Coordinator surveys and maps lakes and wetlands where AIS exist, provides control and treatment strategies, and serves as an educator and primary contact concerning AIS throughout the County.



*CBCW watercraft inspection of local boater*  
*Credit: Brad Steckart*

The AIS Coordinator currently oversees a three-year project that includes the following tasks for Washington County:

1. Holding a minimum of 12 workshops and/or training sessions (4 each year) to provide educational programming to lake groups regarding aquatic plant management plans and exotic species

2. Coordinating and training local volunteers using Clean Boats, Clean Waters watercraft inspection program protocol
3. Conducting a minimum of 600 hours of watercraft inspection (200 hours/year) in Washington County
4. Developing countywide location maps (GIS based) for known aquatic invasive species
5. Providing outreach material and contacts to contractors, state and federal agencies, and industry groups such as the bait, pet trade and garden nursery industries (a minimum of 25 per year)
6. Conducting a minimum of 15 (5 per year) aquatic plant surveys on lakes that lack previous plant survey data in Washington County
7. Serving as a coordinator for purple loosestrife bio-control (beetles) and recruiting volunteers
8. Working with the Washington County Land and Water Conservation Division to develop a five-year update to the countywide AIS Strategic Plan
9. Answering citizen inquiries regarding invasive species
10. Responding to reports of new AIS occurrences and partnering with the appropriate entities to develop a response strategy where appropriate

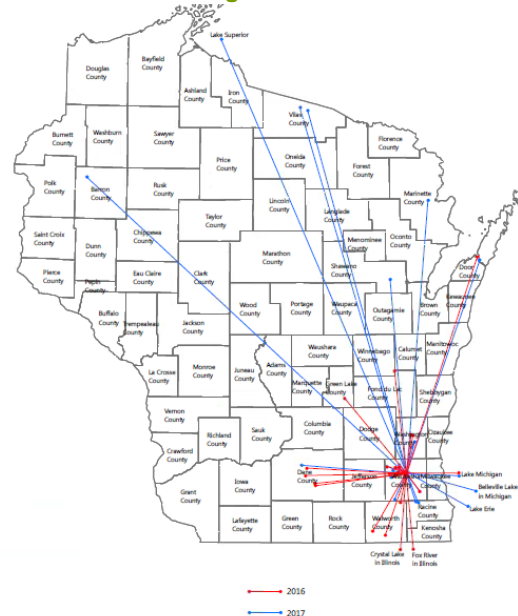


*Pike Lake Boat and Trailer Cleaning Station*  
Credit: Brad Stekart

**Boats Used on a Different Waterbody in the 5 Days Prior to Coming to Little Muskego Lake**



**Boats Used on a Different Waterbody in the 5 Days Prior to Coming to Pewaukee Lake**



*These figures were generated from data gathered by Clean Boats, Clean Waters inspectors. They demonstrate how far some boaters travel in less than a 5 day period. These boats could be potential pathways for new AIS to reach southeastern Wisconsin.*



## CHAPTER 4

# PAST PRIORITIES AND ACCOMPLISHMENTS

In the development of the 2013 Washington County Aquatic Invasive Species Strategic Plan, the Advisory Committee identified five primary issues and goals that must be addressed in order to be successful in the fight against AIS in the County.

### EDUCATION

**GOAL:** Educate residents and visitors of the County about the existence and impacts of AIS

### PREVENTION

**GOAL:** Prevent the spread of AIS to waterbodies that are currently uninfested, keep existing AIS populations in check and eradicate them if possible

### MONITORING

**GOAL:** Monitor and maintain an inventory of existing AIS populations

### CONTROL

**GOAL:** Control the spread of AIS populations

### SUSTAINED PLANNING

**GOAL:** Sustain the implementation of the AIS Strategic Plan

The Committee further identified objectives and actions related to each of the primary issues and selected twelve planned actions as the highest priorities that the Planning and Parks Department should consider when planning for future staff resources and programs. The following table lists those top twelve priorities and provides what accomplishments have occurred in the past five years through the AIS Education, Prevention and Planning Program.



*Volunteer collecting AIS samples from drainage pipe*  
*Credit: Paul Klein*



*Plant ID Training for Riparian Owners*  
*Credit: Brad Steckart*

## Priorities and Accomplishments from Washington County AIS Strategic Plan 2/12/13

		2013 Goal	Accomplished
<b>Education</b>	1	Improve launch signs focusing on fines and penalties	AIS signs regarding fines placed at every public boat launch in Washington County. Periodically repaired/replaced as needed.
	2	Utilize local media to spread message	“Boatbusters” video, segment in Outdoor Wisconsin, numerous news and newspaper appearances.
<b>Prevention</b>	3	Install AIS Cleaning Stations	AIS Cleaning Stations at Little Cedar, Big Cedar, Silver, Bark, Wallace, Green, Pike, and Druid Lake.
	4	Enforce Existing regulations by partnering with DNR, County Sheriff, and other enforcement agencies	Met regularly with waterguard and Wardens. Worked on prevention days during busy times of year and waterfowl opener.
	5	Work with entities on Lake Michigan shoreline to prevent spread of AIS	Developed lesson for Discovery World. Worked with Ozaukee and Milwaukee County with AIS issues.
<b>Monitoring</b>	6	Report AIS through County’s developed response guide	Used County response guide when starry stonewort was discovered.
	7	Use fishing forum websites like “Lakelink” to promote AIS awareness	Used Lakelink to verify populations, but did not post to website.
<b>Reduce, Manage, and Control</b>	8	Increase AIS awareness among riparian owners in order to recognize pioneer populations	Held workshops on plant identification. Responded within 24 hours to riparian owners with questions. Provided newsletter focusing on AIS watchlist.
	9	Encourage riparian landowners to remove AIS or know who to contact for treatment	Worked with riparian owners from each lake. Provided hand removal services, workshops, and contact information for chemical contractors.
<b>Sustained Planning</b>	10	Seek dedicated staff time under LWCD	Attained intergovernmental agreement and lake group support in order to hire LWCD AIS Interns.
	11	Incorporate recommendations into the County’s LWRMP	Accomplished
	12	Pursue short and long-term grant funding opportunities	Obtained two three-year AIS grants, 3 Rapid Response Grants, and numerous CBCW grants totaling over \$300,000. Obtained another 3-year grant and pursued intergovernmental partnership with Waukesha County. Pursued further partnerships with 4H, Carroll U, UWWC, school groups, and community groups.

## CHAPTER 5

### PRIORITIZATION AND GOAL SETTING

In the development of the 2019 Washington County Aquatic Invasive Species (AIS) Strategic Plan Five year Update, the Advisory Committee was provided an opportunity to review past program accomplishments and re-prioritize actions the AIS Program should implement over the next five years. As part of this process, the Planning and Parks Department staff reviewed three AIS plans (Washington County, Waukesha County, and Wisconsin DNR) and compared the objectives and planned actions within each plan. The staff only considered relevant objectives and actions related to Washington County's primary issues, goals, and AIS management conditions. After compiling the data, the relevant actions and outcomes were sent to Committee members for prioritizing. Each Committee member ranked their top four planned actions and outcomes. The following table lists those top three to five planned actions and outcomes as identified by the committee as a whole.

#### **EDUCATION**

PLAN OBJECTIVES	PLANNED ACTION & OUTCOMES	FREQUENCY
<b>Educate residents and visitors of the County about the existence and impacts of AIS.</b>	Facilitate Clean Boats, Clean Waters (CBCW) programs among County lakes. Initiate and maintain CBCW activities at lakes lacking the program.	ON-GOING
	Establish mass AIS emailing and postal mailing lists for disseminating AIS information (e.g. Constant Contact); publish annual AIS newsletter for citizens, boat owners, local governments, lake associations, schools, media outlets, chambers, and other local groups.	AS NEEDED
	Establish annual meetings and workshops with partner agencies and organizations to update each other on AIS activities, share experiences, and look for collaboration opportunities.	ANNUALLY
	Expand educational efforts to include how wetland/trailer watercraft use of public roads contributes to invasive species spread.	AS NEEDED



## PREVENTION

PLAN OBJECTIVES	PLANNED ACTION & OUTCOMES	FREQUENCY
<b>Prevent the spread of AIS to waterbodies that are currently not infested, keep existing AIS populations in check and eradicate them if possible.</b>	Offer assistance to local governments in establishing AIS law enforcement policies, including when warnings and citations could be issued for violations. Increase number of law enforcement AIS watercraft checks.	AS NEEDED
	Initiate cleaning stations at lakes lacking the resource. Offer County assistance in sign purchase and installation of AIS signage and watercraft cleaning stations and pressure wash decontamination stations at boat launches and supporting tools and materials to be used for CBCW program efforts.	SEASONALLY
	Connect with resorts/businesses and fish tournament organizers and proactively engage participants to ensure awareness of AIS regulations.	ON-GOING

## MONITORING

PLAN OBJECTIVES	PLANNED ACTION & OUTCOMES	FREQUENCY
<b>Monitor and maintain an inventory of existing AIS populations.</b>	Conduct AIS surveys on four lakes each year and facilitate additional data collection through partner agencies and local volunteer groups. Coordinate information with the WDNR and other AIS-related organizations.	QUARTERLY
	Explore an “Adopt-A-Lakeshore /Landing” program on lakeshores to monitor invasive species.	SEASONALLY
	Publicize and actively respond to the County’s AIS Identification and Response Guide for reporting newly discovered AIS, as well as conduct follow-up inspections to ensure successful treatment.	AS NEEDED
	Solicit public interest via press notices for assistance with lake monitoring programs.	MONTHLY

## CONTROL

PLAN OBJECTIVES	PLANNED ACTION & OUTCOMES	FREQUENCY
<b>Control the spread of AIS populations.</b>	Utilize WDNR Response Grants to address new AIS populations as soon as they are found.	AS NEEDED
	Increase organized volunteer efforts for the physical removal of AIS and provide training for volunteer groups on proper protocols to prevent the spread of AIS during the hand-pull operation.	SEASONAL
	Facilitate continued lake management efforts in lakes with existing AIS populations.	ON-GOING
	Encourage riparian landowners to be proactive by removing AIS populations themselves if they are able or work with lake organizations to contract out for chemical treatment of lakes and other waterbodies.	AS NEEDED

## SUSTAINED PLANNING

PLAN OBJECTIVES	PLANNED ACTION & OUTCOMES	FREQUENCY
<b>Sustain the implementation of the AIS Strategic Plan.</b>	Continue applying for State or Federal grants to support the AIS Coordinator position and the implementation of this Plan, while exploring ways to secure long and short-term funding.	ON-GOING
	Explore the potential of lake groups and local governments funding a position for a permanent AIS Coordinator in Washington County.	ON-GOING
	Collaborate with representatives from each lake association in the County to develop a countywide lake association committee in order to efficiently spread AIS information, sharing resources and working together as one in the fight against AIS.	ON-GOING
	Present facts to the County Board and local government officials about the economic impact of local lakes and how AIS can affect their communities through local businesses, tourism, and property values.	AS NEEDED
	Communicate program success stories to County policy makers, State legislators, and other entities providing financial support.	ON-GOING

## CHAPTER 6

# IMPLEMENTATION AND RECOMMENDATIONS

This Plan is intended to serve as a guide for use in the implementation of an Aquatic Invasive Species Education, Prevention and Planning Program for Washington County. Various AIS control measures are identified and explained in the 2013 Strategic Plan. Additional newly discovered or threatening species and specific control methods are mentioned in Chapter 2 of this Plan. Furthermore, Chapter 5 lists priority actions as identified by the Advisory Committee and sets the direction and work plan for the program into the future. Most of these actions rely on a coordinated effort around the County to be effective. Therefore, implementation of this Plan is largely contingent on obtaining adequate grant funds or establishing long-term funding sources locally, which is discussed below.

### **Plan Review and Adoption**

As proposed in the 2013 AIS Strategic Plan, the implementation of the Plan is to be evaluated by staff annually and must reconvene with the Advisory Committee every five years to: review inventory information, goals, recommended actions, accomplishments, analyze Plan implementation progress, and guide necessary Plan updates.

Upon adoption, the Plan will continue to be used as a guide by County officials and staff in making aquatic invasive species management decisions. The Washington County Aquatic Invasive Species Strategic Plan will continue to undergo an annual evaluation by staff and an update process every five years.

### **Long-Term Financial Sustainability**

The Washington County Aquatic Invasive Species Education, Prevention and Planning Program has and continues to be heavily dependent on grants through the Wisconsin Department of Natural Resources surface waters grant program. The surface water grant program is a highly competitive grant that is based on a scoring system where annually grant applications exceed funds available. Although Washington County has been successful in securing three 3-year grants in the past, relying on the continued grant funding is not sustainable since there are no guarantees for continued funding due to the competitive nature and funding limitations in the grant program. A fourth AIS Education, Prevention and Planning Grant will likely be pursued for 2020 with the same financial 3-year time frame structure as the previous three grants the County received.

The DNR is currently drafting changes that would take effect in 2021, to a contract-base program and would provide an annual base level of funding to eligible entities that provide core services related to aquatic invasive species prevention. It is believed that future grant funding beyond the next grant application cycle through the WDNR would provide a base grant of \$13,000-\$15,000 annually. This change will greatly reduce the amount of funding needed that currently supports this program.

In order to sustain the current AIS program, including the continued partnership with Waukesha County, the 2019 budgeted expense is \$40,350; most of this is in salaries and benefits but also includes \$2,000 for program support. Considering this Strategic Plan is for the next five years,



the anticipated annual need to maintain this program is estimated to increase from \$45,000 to \$55,000 for the next five years.

With the above in mind, the Advisory Committee was asked for ideas on how to sustain an AIS program for the long-term, especially looking at future funding once a contract-based grant program would start. Meaning there would be a financial need between \$30,000 and \$40,000 annually. These figures are derived from maintaining a half-time shared AIS Coordinator position (\$45,000-\$50,000 minus an anticipated contract-based grant of \$15,000).

Taking these figures into account, the Advisory Committee made the suggestions listed below. The suggestions by the advisory committee will be explored in detail over the next two years in preparation for the future sustainability of the AIS program.

- Continue applying for State or Federal grants
- Seek continued/increased funding from lake groups and local governments
- Seek County funding by exploring possible increase in the Land and Water Conservation budget toward AIS
- Explore the potential of utilizing a portion of the County Boat Launch Fees
- Seek donations from local retailers and businesses
- Explore the potential of designating a portion of enforcement fees or fines, in conjunction with encouraging law enforcement to be proactive in fining violators
- Seek donations from other areas, i.e. check box on property tax bills, additional donations when purchasing fishing license, placing donation boxes around County, *Go Fund Me* web page, etc.
- Additional funding should also be sought to assist lake groups with control efforts

Regardless of funding source(s) the Advisory Committee expressed their concern that the AIS program and implementation of this Strategic Plan should remain a priority of this position. The position should communicate program success stories to County policy makers, State Legislators and other entities providing financial support to ensure the value of the position is maintained. That said, when the Advisory Committee was asked if there could be some added responsibilities to the Aquatic Invasive Species Coordinator position, the following ideas were provided:

- Organize Healthy Lakes projects (fish habitat-*fish sticks*, shoreline improvement)
- Increase nonpoint pollution control efforts
- Expand to more wetland invasive species management
- Organize county-wide lakes association
- Acquire certification for chemical application for water chemical treatment
- Organize efforts between all aquatic and terrestrial invasive species control efforts and education

## APPENDIX A

### ADVISORY COMMITTEE DISCUSSION NOTES

#### Financial Sustainability:

- Organized Campaigning
  - Be clear with money usage; use hard numbers (surveys, boaters talked to, CBCW etc.)
  - Campaign to: Lake associations, outdoor groups, hunting groups, lions club, gun club, waterfowl club
- Donation box at pet stores, aquariums, bait shops, garden centers, YMCA camp
- Add AIS fee (or option to donate):
  - Boat launches
    - Ackerman and Henschke, Pike Lake opening public launch
  - Property Tax bills
    - Add option to donate to AIS/water quality program
    - Raise taxes to lake districts
    - Use part of county tax
  - Law enforcement fines contribute to AIS program
  - Fishing licenses
- Ask private companies about donations
- Ask bigger boat dealerships about donations
  - Looks good for advertising
  - Boat or sport shows: have donation bucket
- Go Fund Me page
  - Easy to share
  - Specific goal: people want to swim in a clean lake

#### Future Direction – Value Added:

- Expand on healthy lakes
  - Erosion control, water quality, nonpoint runoff control i.e. stormwater basins instead of culverts draining straight into lake.
- Include wetland and terrestrial species (Japanese knotweed, Phragmites)
- Organize county wide lake association
- Monitor fish populations at a county level in relation to AIS spread
- Organize more law enforcement presence on site
- Organize partnerships with groups working on upland lands
- Have county staff certified for expedited control and prevention efforts
- Seek assistance with grant writing so AIS coordinator can focus time elsewhere
- Cut ties with Waukesha County to create two full time positions rather than one, shared, part time position

APPENDIX B  
**COUNTY ADOPTION RESOLUTION**

***WASHINGTON COUNTY, WISCONSIN***

Date of enactment: 10/9/19  
Date of publication: 10/19/19

**VOTE**

**2019 RESOLUTION 37**

**Adopting the Washington County Aquatic Invasive Species  
Strategic Plan Five-Year Update**

**WHEREAS**, since 2010 Washington County has received Aquatic Invasive Species Control Grants from the Wisconsin Department of Natural Resources to assist with local efforts in providing information, education and monitoring on the types of existing and potential aquatic invasive species in the County; report threats posed to the County's aquatic resources; and coordinate efforts for control and prevention of aquatic invasive species; and

**WHEREAS**, on February 12, 2013 the Washington County Board of Supervisors adopted its first Aquatic Invasive Species Strategic Plan which has been used as a guide for County officials to ensure resources are spent in the most efficient and fiscally prudent way to combat aquatic invasive species throughout the County as well as helping to secure additional grants for aquatic invasive species control efforts; and

**WHEREAS**, the Washington County Planning and Parks Department has developed a five-year update to the Aquatic Invasive Species Strategic Plan which was guided by an Advisory Committee, including members from ten local lake protection and rehabilitation districts and lake owners' associations along with representatives from nonprofit conservation organizations in Washington County; and

**WHEREAS**, these non-native plants and animals displace native species, disrupt ecosystems, harm recreational activities such as fishing, boating and swimming; and ultimately impact local economies; and

**WHEREAS**, *The Washington County Aquatic Invasive Species Strategic Plan Five-Year Update* has been created as an addendum to the original Species Plan to evaluate the progress of the current Plan implementation, review recommended goals and actions and suggest needed updates or revisions; the Five-Year Update further identifies where Aquatic Invasive Species have been found, describes additional threats to County water bodies and recommends goals, strategies and direction for future aquatic invasive species programs in Washington County; and

**WHEREAS**, the Land Use and Planning Committee reviewed the Plan on September 26, 2019, and recommends approval of the plan and adoption by the County Board of Supervisors;

**NOW, THEREFORE, BE IT RESOLVED**, by the Washington County Board of Supervisors that *The Washington County Aquatic Invasive Species Strategic Plan Five-Year Update* is hereby adopted.



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VOTE REQUIREMENT FOR PASSAGE: Majority

RESOLUTION SUMMARY: Resolution adopting *The Washington County Aquatic Invasive Species Strategic Plan Five-Year Update*.

APPROVED:	Introduced by members of the LAND
(signed by Bradley S. Stem)	USE AND PLANNING COMMITTEE
Bradley S. Stem, County Attorney	as filed with the County Clerk.
Dated 10/11/19	

	(signed by Jeffrey D. Schleif)
Considered 10/9/19	Jeffrey D. Schleif, Chairperson

Adopted 10/9/19  
Ayes 22 Noes 0 Absent 4  
Voice Vote \_\_\_\_\_

(There is no direct fiscal impact related to adoption of the plan update. Any future fiscal impacts would be approved as they arise during budget proceedings or via resolution.)