

2018 Vilas County Boat Decontamination Services

Final Report for Surface Water Grant AEPP52618

Submitted by Cathy Higley, Vilas County Land & Water Conservation Dept.

28 Jan 2019



2018 Vilas County Boat Decontamination Services Summary Chart

Decontamination Site	Decon Inspector Hours	% of Transient Boaters*	Boats Decon'd Before Entering Lake	Boats Decon'd After Leaving Lake	Decon Unit Engine Run Hours	Decon Unit Prevented Potential AIS Exposure (from subsample - not complete list)
Big Muskellunge Hwy N	84.5	24.64%	2	11	3.02	not documented
Plum Lake Statehouse Landing (Razorback Rd)	100.0	27.06%	3	7	2.33	not documented
Star Lake East Campground Landing Hwy N	99.0	30.00%	9	26	8.67	Spiny waterflea from Star Lake to Little St. Germain Lake and to Buckatabon Lakes
Trout Lake Overlook Hwy M	36.0	80.00%	5	0	1.27	not documented
Trout Lake North Landing Hwy M	58.5	30.00%	0	2	0.62	not documented
Vilas County Fairgrounds - Musky Open	9.0	100.00%	1	5	1.20	not documented
Musky Jamboree (educational event, no decon)	5.5	n/a	0	0	0.00	n/a
2018 Project Totals	392.5	30.02% (averaged)	20	51	17.1	

*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

Background

Spiny waterfleas, an NR40 as a Prohibited species, are now verified in 4 lakes within Vilas County. Spiny waterflea and its impacts on Lake Mendota in Madison have been studied by the Center for Limnology and results show that spiny waterfleas had reached dense levels resulting in a loss of 1 meter of water clarity. This loss of water clarity is also coupled with detrimental changes in the lake fishery (Walsh, et al).

The Northwoods economy is dependent on maintaining desirable lakes. In 2016, Vilas County visitors spent \$212.5 million, ranked 4th in state per capita visitor spending, and lake front parcels generated 75% of the County's property tax revenue (Vilas County Land & Water Conservation Dept.). In addition, it has been fairly well documented that water clarity is linked to property values. In 2018, a study was done on Vilas and Oneida County lakes in particular. On Plum Lake, it was determined that an increase in 1 meter of water clarity would equate to an average increase of \$14,987.63 per property (Kemp et al). However, a loss of 1 meter in water clarity as seen on Lake Mendota (attributed to their spiny waterflea infestation) would equate to an average loss of \$19,399.84 per average property on Plum Lake (Kemp).

While every boater is required to "Inspect, Remove, Drain, and Never Move", it is not always easy to sufficiently drain water from every part of a boat (bilges, livewells, jetski impellers, etc.). Highly transient boaters are not able to dry their boat & equipment long enough to desiccate spiny waterflea adults or their resting eggs, contributing to risk of spread.

In addition, hot pressure washes are most effective used when targeting small-bodies organisms. Removal rates for physically larger species are generally not better than "Inspect, Remove, Drain, and Never Move" (Rothlisberger et al). Thus the targeted lakes we chose were either verified to have spiny waterflea or be considered vulnerable to spiny waterflea as per the WI DNR listing.

In a study of boater transiency, the region representing Vilas County reported that 53% of boaters were "transient" (using their boat on more than 1 water body per year) and that 56% of boaters were "highly transient" (using their boat on more than 1 water body in the last 5 days). These percentages are reported somewhat independently of each other and will not add to 100%, nor are they a subset of each other. This is due to visitors from other regions using their watercraft in Vilas County's region. These percentages are higher than the other regions in WI averages of 45% and 43% respectively, indicating a greater potential for AIS exposure and spread (Witzling). These transiency figures do not directly correlate with the Clean Boats Clean Waters (CBCW) DNR boater transiency data – which indicate Vilas County-wide boaters using their boats on another waterbody within the last 5 days 36% of the time (Wisconsin Dept. of Natural Resources) - probably due to the fact that the CBCW data is only able to capture prior transiency, not future transiency as the former study was able to capture.

A 2017 survey of transient boaters showed that over 70% of transient boaters would allow their boat to be decontaminated and that 41% indicated that the most important barrier was that the "Decontamination services were not available" (Higley).

There are other hot pressure washer decontamination units operating at Lac Vieux Dessert (MI group) and within the Lac du Flambeau tribal boundaries (Tribe). However, this project is the only publicly available one operating throughout the "spiny waterflea season" (mid-summer through fall is when spiny waterflea populations peak annually) in the majority of Vilas County.

The Decontamination project began with a work group meeting starting in May 2017. The group consisted of representatives from:

- Boulder Junction Lakes Alliance (Dick Jenks)
- Eagle River Chain of Lakes Association (Carole Linn and Dave Mueller)
- DNR Northern Highlands Facilities staff (Dan Jacoby)
- UW-Oshkosh Environmental Research & Innovation Center (Carmen Thiel)
- Vilas County Land & Water Conservation (Cathy Higley)

The group consulted many others during the course of their work:

- Trout Lake Property Owners Association (Jim Pondel)
- UW-Extension Environmental Resources Center (Tim Campbell)
- UW-Madison Center for Limnology (Carol Warden)
- DNR (Samantha Olsen and Kevin Gauthier)
- Lakes Committee for the Town of Plum Lake
- Lac du Flambeau Tribal Natural Resources staff (Celeste Hockings)
- Minnesota Dept. of Natural Resources (Keri Hull)
- Several others not listed here

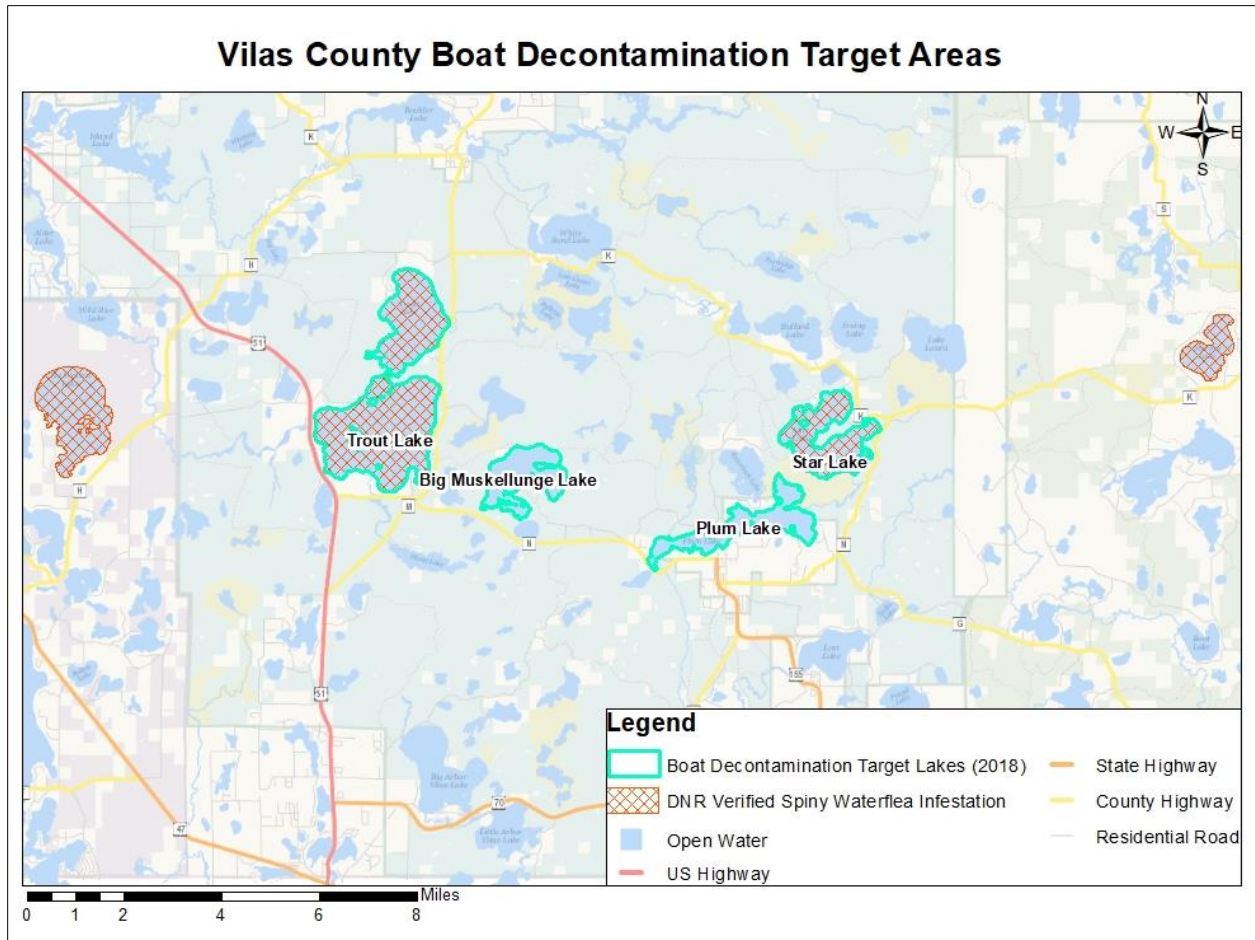
The group worked through the scientific appropriateness of boat decontamination services, selection of a decontamination unit, site suitability, property owner permissions, gaining stakeholder support, creation of an operator's manual, grant applications, and unit operation schedule.

Grant funding came from Lumberjack Resource Conservation, & Development (purchase of decontamination unit) and the DNR Surface Water Grant Program (funding for year 1 staff and operations). Donation funding also came from:

- Headwaters Chapter of Muskies Inc.
- Musky Clubs Alliance
- Walkabout Paddle & Apparel

These donations totaled roughly \$1,700 in 2018. A summary of total project costs is available in the Appendix.

Boat decontamination was offered to all receptive boaters upon entering and leaving all lakes. Operators were trained to "triage" high traffic situations: transient boats entering a suitable lake were priority as well as any boats leaving an infested lake. However, no high traffic events where triaging was necessary were reported. Datasheets used are available in the Appendix.



Deliverables

Target Lakes for boat decontamination were:

- Big Muskellunge Lake (spiny waterflea suitable)
- Plum Lake (spiny waterflea suitable)
- Star Lake (spiny waterflea verified)
- Trout Lake (spiny waterflea verified)

Decontamination services were offered for the following tournament events:

- Musky Open Tournament
- Musky Classic
- St. Germain Greater Wisconsin Musky Tournament

Number of Boats Decontaminated

Seventy-one boats were decontaminated during the course of 392.5 hours of work. Of these 20 were entering a lake, while 51 were leaving a lake. The unit was in operation on select 4.5 hours shifts from 6:00 a.m. – 8:30 p.m. from July 1, 2018 – October 7, 2018 to match the spiny waterflea mid-summer-fall typical population spike.

Potential AIS Exposure Prevented

Boaters who encountered the decontamination unit were asked for their email addresses so inspectors could send them a link to fill out an online survey. The survey was emailed to the boater 8 to 14 days after the encounter to allow the boater to continue any “boater transiency” activities within 5 days after the encounter. Questions were asked regarding their boat travel; what practices they used beyond the statutorily required “inspect, remove, drain, and never move” steps; and their perceptions on having their boat decontaminated. The full list of questions in this survey is included in the Appendix.

From this data, it can be inferred whether or not the presence of the decontamination unit made an impact on the landing where it was located. Because decontamination units are most effective on removing small-bodied organisms, only the following species were tracked because they have very small or microscopic life stages (Rothlisberger):

- Freshwater Jellyfish
- Starry Stonewort
- Spiny Waterflea
- Zebra Mussels

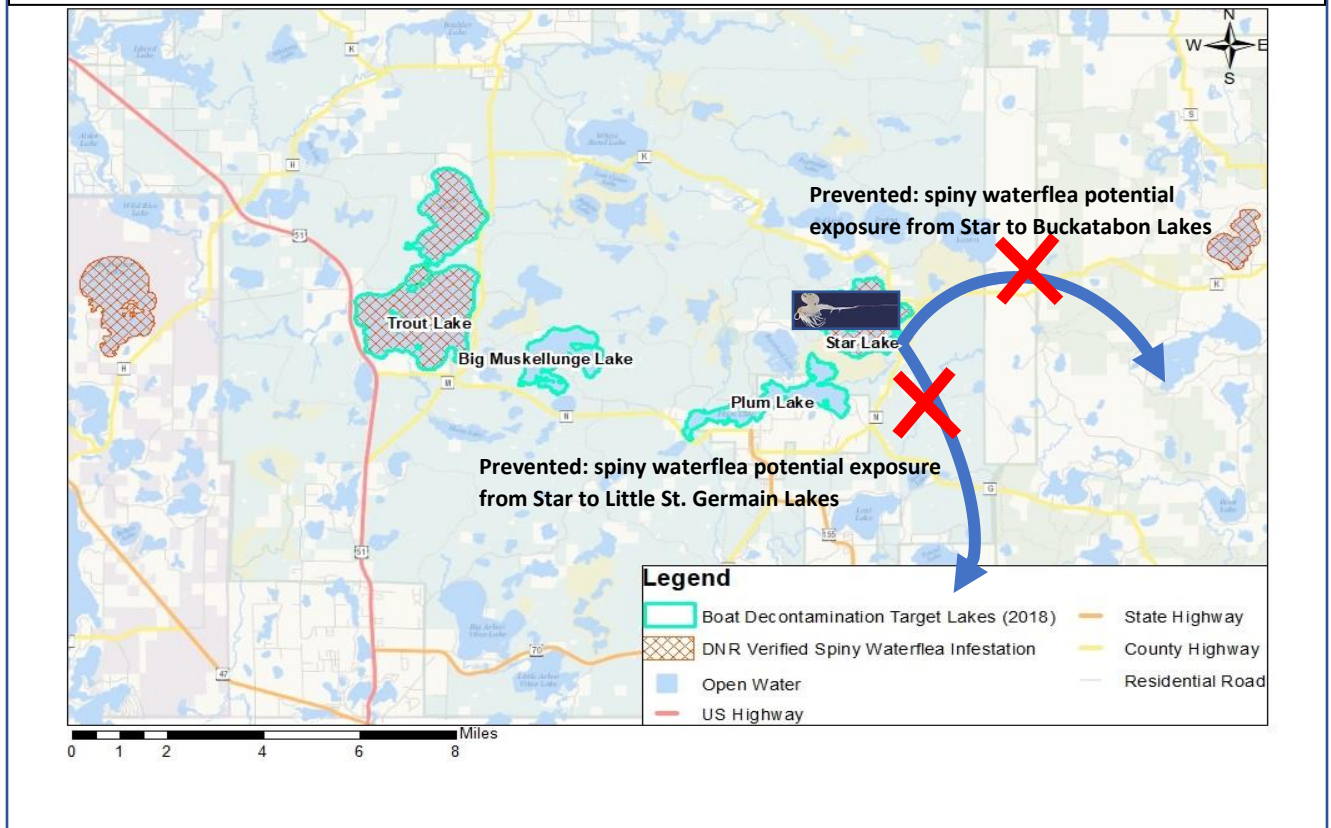
If the boater reported using their boat on another waterbody within 5 days of being contacted, it was assumed there was potential AIS exposure from only the last lake visited. Both the “verified” and “observed” AIS list compiled by WI DNR available at <https://dnr.wi.gov/lakes/invasives/AISByWaterbody.aspx> was considered to be a species of potential AIS exposure.

If the boater reported taking any extra steps on their own (high pressure wash, low pressure wash, chemical treatment, or dry for 5 days), it was assumed that the decontamination unit did nothing extra to remove AIS and was not counted as having impact.

While lake suitability data for some AIS is available, it is not available for all considered species. For the purposes of this report, lake suitability data was not considered in the analysis.

Only 25 of the 71 boaters that participated in boat decontamination completed the online survey, so these results only represent a small subsample of the potential AIS exposure. It is quite likely that further AIS preventions were undocumented.

2018 Vilas County Decontamination Unit Documented Potential AIS Exposure Preventions



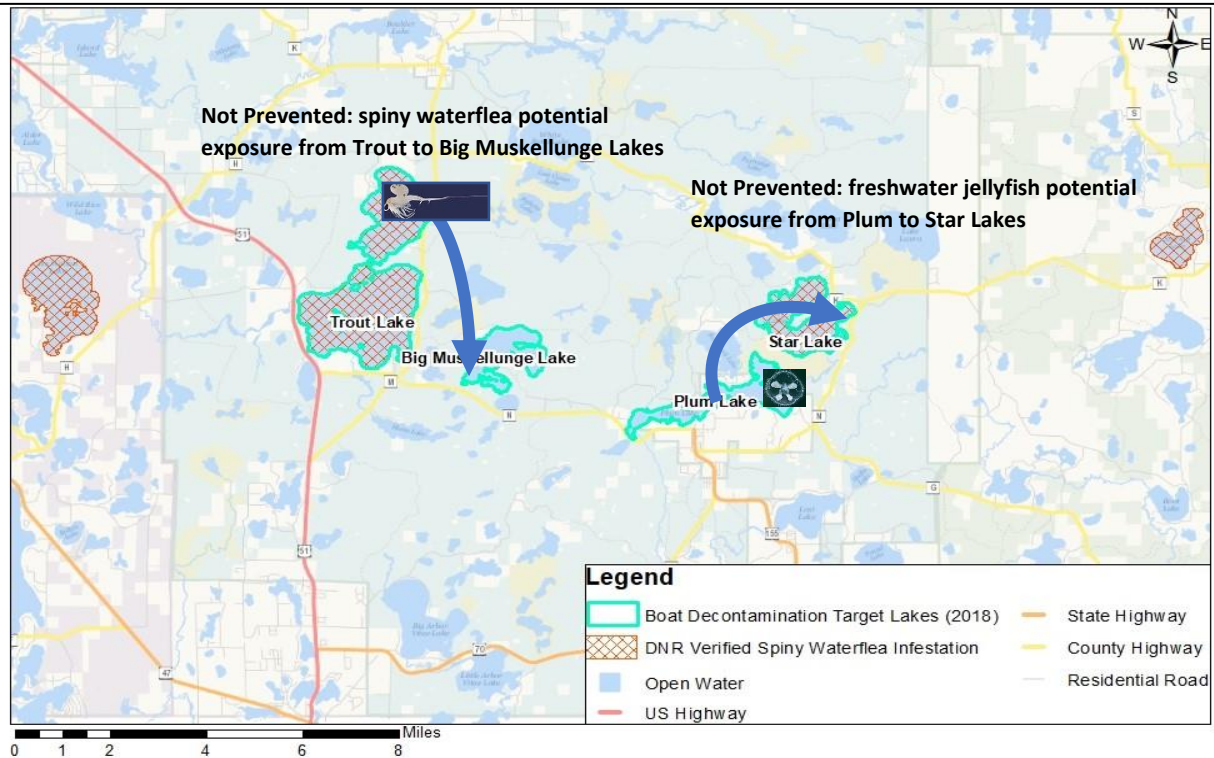
Decon unit **prevented** the following potential AIS exposure:

- Spiny waterflea from Star Lake to Buckatabon Lakes on 7/3/2018
- Spiny waterflea from Star Lake to Little St. Germain Lake on 8/17/18

Decon unit **did not prevent** the following potential AIS exposure (due to decon unit not being present or boater choosing to not decontaminate):

- Spiny waterflea from Trout Lake to Big Muskellunge Lake on 7/28/18
- Freshwater jellyfish from Plum Lake to Star Lake on 7/4/2018

2018 Vilas County Decontamination Unit Documented Potential AIS Exposure Not Prevented



Decontamination Unit Operator Personal Protective Gear

The following were provided to the operators for personal protective gear:

- Insulated elbow length gloves
- Face shields
- Goggles
- Traffic cones
- First aid kit along with burn kit
- Knee pads
- High visibility rain suits
- Ear plugs

An infrared thermometer was also purchased to verify water temperature contacting the boats.



Signage

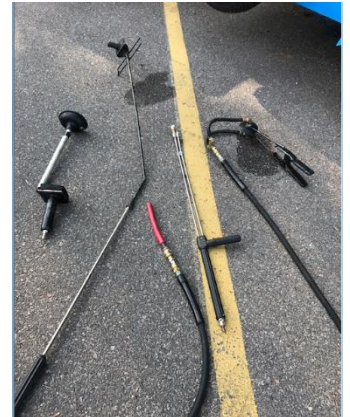
Three sandwich board style signs were purchased to indicate to boaters that there was a boat wash station at the site. A blank sign with lettering was purchased to indicate the times that the operator would be present at the site. Another sign mounted on the decontamination unit itself was developed with the help of the decontamination work group members and Tim Campbell from UW-Extension Environmental Resources Center.



Decontamination Unit Attachments

The following attachments were purchased to allow access to safely decontaminate outboard motors, livewells, ballast tanks, to reach under pontoon boats, and inboard motors & jetskis. Any necessary couplers/adapters were also purchased.

- Diffuser hose
- Short hose
- Large motor muffs
- Heavy duty motor muffs
- Ballast hose
- Fake-a-lake
- Under trailer sprayer with 2 pivoting caster wheels and 36" lance



Second Muffler on Decontamination Unit

A second muffler was welded to the decontamination unit by UW-Oshkosh staff. Although there is not quantifiable data on the noise level, it is now similar to a riding lawn mower. At first, decontamination unit operation at the North Trout Lake Landing was denied due to concern with noise and its proximity to a campground. However, after approximately one month into operations, DNR Northern Highlands American Legion State Forest Staff allowed the Trout Lake decontamination site to be moved from Hwy M to the Trout North Landing because it was quieter than expected and was not anticipated to affect campers. No noise complaints were reported during the course of the 2018 season.

Decontamination Unit Operation Training Program

UW-Oshkosh with the assistance of the decontamination work group, the unit manufacturer Powerline, and the Minnesota DNR's watercraft decontamination training program developed and delivered a

training for operating the unit. The 3.5 hour training consisted of a classroom portion, and trailer driving portion, and a hands-on operation portion where trainees decontaminated various boats. [A handbook was developed](#), and is also submitted as a second document for this final report. The staff were trained in the classroom and practiced decontaminating various boats at Kemp Station in Woodruff.



Continued Clean Boats Clean Waters Efforts at Target Lakes

All decontamination operators were required to share the CBCW message and fill out a CBCW sheet before decontaminating boats. CBCW data was entered into SWIMS.

Note that the total number of hours in SWIMS (288 hours) is less than the 392.5 total hours delivered. This is due to:

- Due to a communication error, one inspector did not fill out CBCW datasheets (90 hours)
- There is no station ID for 2 decontamination sites – Vilas County Fairgrounds and Musky Jamboree (14.5 hours)

In addition, all target lakes continued their own CBCW efforts as below. Care was taken to not duplicate efforts at the landings.

Big Muskellunge Hwy N Landing – 150 hours contracted with UW-Oshkosh CBCW Intern program; plus 27 hours from contracted private CBCW inspectors

Plum Lake Statehouse Landing (Razorback Rd) – 310 hours contracted with UW-Oshkosh CBCW Intern program; plus 84.5 hours from contracted private CBCW inspectors

Star East Campground Landing – 310 hours contracted with UW-Oshkosh CBCW Intern program; plus 120 hours from contracted private CBCW inspectors

Trout North Landing – 100 hours contracted with UW-Oshkosh CBCW Intern program

Decontamination Unit Maintenance

The unit was maintained primarily by UW-Oshkosh staff and a member of the decontamination work group volunteer in 2018 – very little maintenance was needed. However, some maintenance is anticipated for the 2019 season (replace water heater temperature control knob).

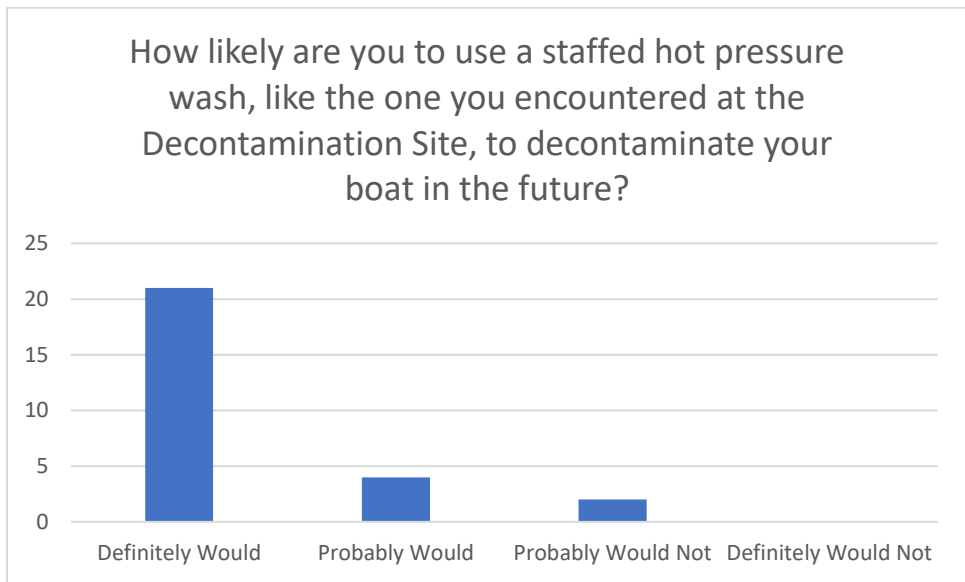
Local Presence for Decontamination Unit Program

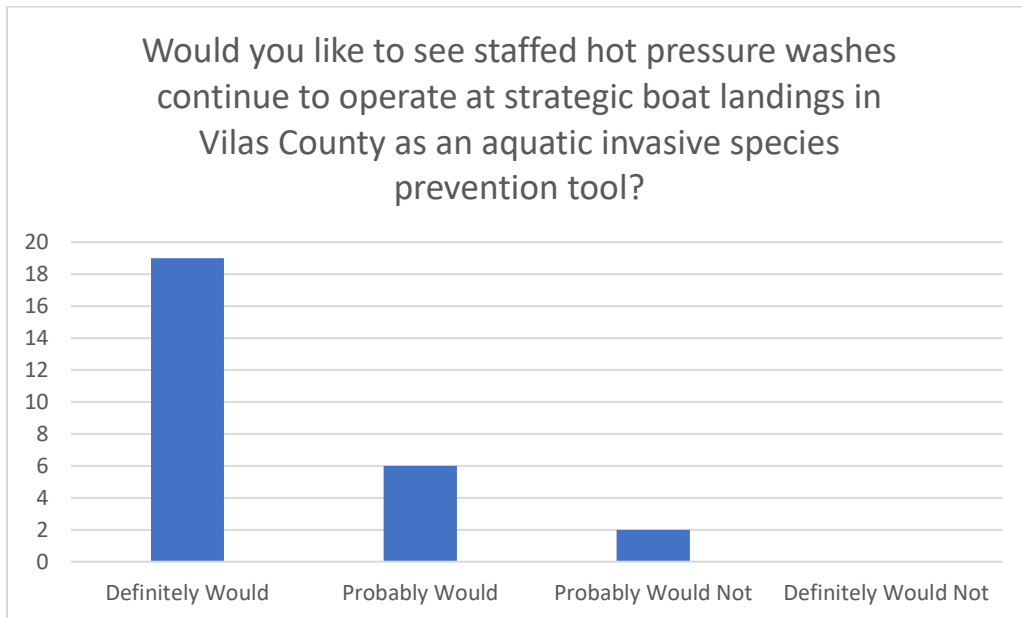
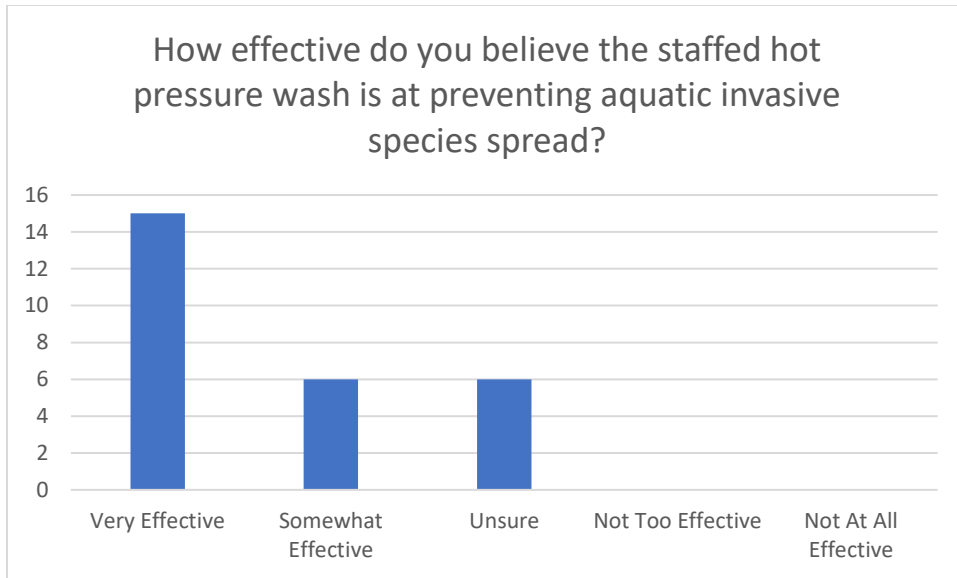
Vilas County Land & Water Conservation staff were able to be a local presence for the program. Land & Water staff accomplished:

- Communications with residents and visitors
- Finding a suitable winter housing location
- Checking sites for suitability
- Assisting decontamination unit operators as necessary
- Operation of decontamination unit in the fall

Customer Satisfaction Survey

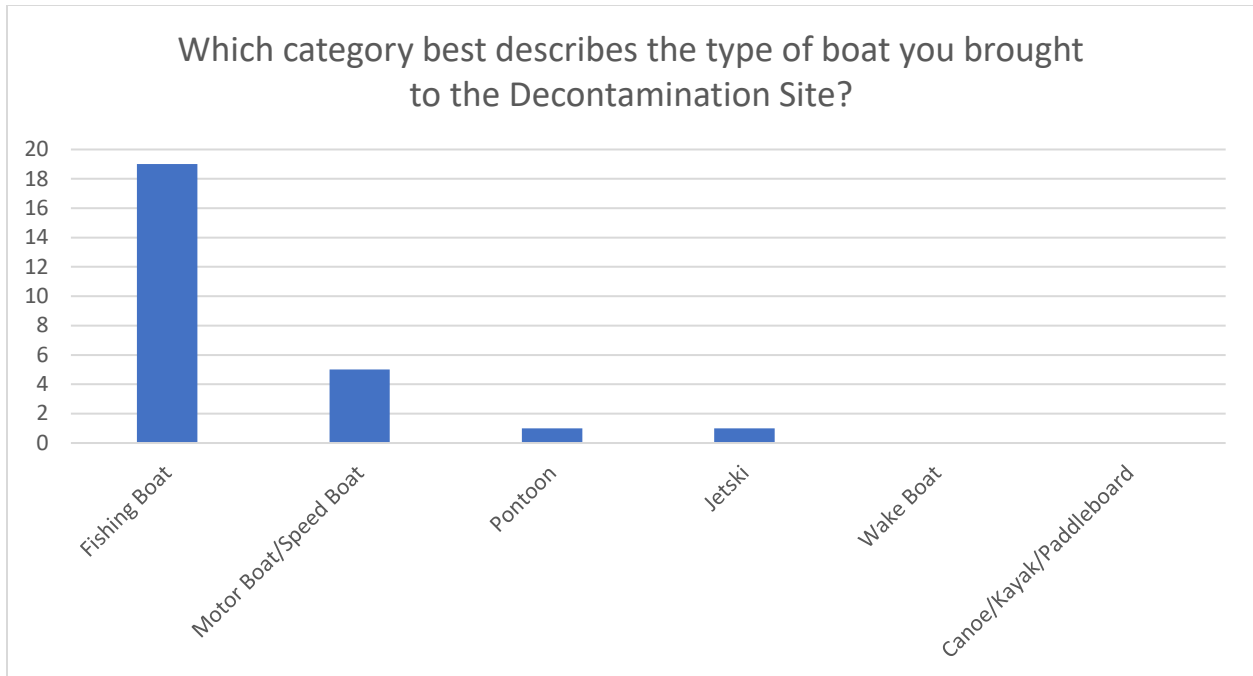
As part of the online survey emailed to willing boaters who encountered the boat decontamination unit, data on their satisfaction of the program was collected. The complete list of questions asked of participants is in the Appendix. Note that only 27 responses were received. While this represents 38% of participants (a typical return rate for electronic-only surveys), less than enough responses were collected to infer trends and so it would not be appropriate to generalize the responses. Thus, the charts below are reported by number of responses rather than percentages.





Types of Boats Used

Boaters who responded to the online survey were asked what type of boat best describes their own. Most respondents indicated they used a fishing boat, implicating that some type of livewell is likely on board most boats. Twenty-six respondents provided a response to this question.



Boater Travel Patterns

To better understand the predominant travel patterns of boaters visiting other waterbodies within 5 days, the DNR SWIMS staff shared the “Where Boaters Have Been” data as related to Big Muskellunge, Plum, Star, and Trout Lakes. This dataset consisted of occurrences where any of those 4 lakes are listed as a previous lake visited in the last 5 days as collected by CBCW inspector data, as well as when any one of the 4 lakes is the station where the CBCW data is being recorded. These data consisting of over 4,300 entries from years 2010-2017 were reviewed and unusable data was not included in the analysis. For example, an entry for the “Black Lagoon” in Vilas County was discarded since there is no such place. The resulting “clean” dataset consisted of 4,136 entries.

While the data show quite a bit of variation in where boats are coming from and where they are going to, a few more popular “travel loops” are listed in the chart below. Charts of target lake specific data are included in the Appendix.

Top 10 Travel Loops (To and/or From) Documented from Transient* Boaters Involving Target Lakes Big Muskellunge, Plum, Star, or Trout Lakes 2010-2017 (n = 4,136)			
Non-Target Lake	Target Lake	Occurrences	Percentage
Ballard Lake Total	Star Lake	318	8%
Plum Lake Total	Star Lake	327	8%
Big Saint Germain Lake Total	Plum Lake	133	3%
Irving Lake Total	Star Lake	114	3%
Big Saint Germain Lake Total	Star Lake	82	2%
Ballard Lake Total	Plum Lake	69	2%
Razorback Lake Total	Star Lake	68	2%
Plum Lake Total	Big Muskellunge Lake	64	2%
OTHER LAKES	All Target Lakes	2961	72%

*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

Also notable is the low number of Great Lakes, out of state, and outside adjacent county area “hits” that were documented as transient boater destinations or prior lakes. Target lake specific data is included in the Appendix.

Documented Transient Boater Travel Involving Target Lakes Summary 2010-2017 (n = 4,136)		
General Lake Location	Hits	Percentage of Total Documented Travel
Vilas County Lakes	3,627	88%
Adjacent County Lakes (Oneida, Iron, Forest, Price)	343	8%
Non-Adjacent WI Counties	166	4%
- Out of State	24	1%
- Great Lakes	23	1%

Communications

Vilas County Land & Water staff along with members of the boat decontamination work group send out information about the decontamination program through several avenues:

- 2018 Statewide AIS Coordinator meeting
- Meetings with the Lakes Committee for the Town of Plum Lake
- Trout Lake Property Owners Association Annual Meeting
- Electronic means – ConstantContact listserv
- Article in local newspaper Lakeland Times

- Northern Highlands Forest staff wrote section on decontamination in their newsletter given to all visitors
- Decontamination operator wrote an article for the Kemp Station newsletter
- Channel 12 news did a segment on the boat decontamination training day

Vilas County Land & Water Conservation has also communicated upon request to other lake organizations: consultant for Lake Owen, Timberland Invasives Partnership, and Lumberjack RC&D, each of which are considering their own decontamination program.

Discussion & Future Planning

Continuation of Decontamination Services

From interactions with the lake organizations and other stakeholders, it seems that boat decontamination is generally a desired service at these landings and should continue. UW-Oskosh has applied for a DNR Surface Water Grant to continue these services in 2019.

Boat decontamination is one tool used in AIS prevention. Education and outreach, boat inspections, and enforcement of related WI statutes are need for solid programming. It will be important to work with partners to see that signage, CBCW efforts, public education workshops, and law enforcement efforts continue.

Non-Transient Boat Decontamination

Additional information was considered from the online survey completed by a subset of 25 boaters whose boats were decontaminated. Of those, 9 reported visiting another body of water within 5 days either before decontaminating their boat or after decontaminating their boat; 15 reported not visiting another body of water within 5 days; and 1 was unsure (could not remember dates). This is surprising that the majority of boaters would decontaminate their boat even though they are ultimately not transient. However, 13 of those 15 that were not transient decontaminated their boat upon leaving the lake – this could be because they felt the need to take advantage of the service before being able to enter another lake even if the “when” and “where” was uncertain.

More Outreach Needed

During the course of the summer, it became clear that more public outreach and education on decontamination and when it is appropriate is necessary. Many people are curious of the unit itself. There are plans to include educational mobile signage for 2019 to help address this issue.

Boaters also seemed quite hesitant to allow decon unit operators to decontaminate motors and livewells in particular. It is unclear if this is from a perspective of privacy of personal property damage.

Most survey respondents reported using a “Fishing Boat”, implying that there is likely a livewell, baitwell, or bait bucket on board. While the survey response rate is was not considered sufficient, it will still be important to communicate to all CBCW inspectors that education on draining water applies to livewells and bait buckets in addition to supplying information on the live bait regulations.

Improvements in Verifying Participant Data

Of the total 245 boats encountered and CBCW data was collected, 75 reported being transient (30%). With the methods of data collection used, we cannot ensure that boaters who did decontaminate were

the transient ones. Note however, that the survey results described above did indicate some answers to this, however it is only a subsample.

In future data collection efforts, it would be prudent to collect information on the following parameters:

- Parts of boats not decontaminated but should have been
- Ensure continuity between CBCW data and decontamination data (ie – know if the transient boaters were the ones who decontaminated their boats)
- Continue to collect data on boater travel, working to increase participation from boaters – this is data that gives can validity to decontamination efforts and expenses

Setting Goals for Boater Participation

Having data continuity between CBCW and Decon data will give a better perspective on how well we are targeting transient boaters with decontamination services. Since there is data to support that 56% of boaters are highly transient (Witzlinger), and that 72% of transient boaters would likely allow their boat to be decontaminated (Higley), results can be compared. For example, in an ideal world 100 CBCW contacts would likely mean 56 transient boaters (past and future transiency) and 40 boaters that would allow boat decontamination. In real world encounters, this figure will likely be less – for example boaters can find themselves with time constraints, or particular operators may not be as skilled at approaching boaters and could impact this number. For the target lakes involved here, it may be appropriate to set a goal of decontaminating boats at a rate of 25-30%.

Venue Cost-Benefit Efficiencies

The Musky Open Tournament organizers requested decontamination services without our prompting. Future collaborations with tournaments would be most cost effective, especially if they involve target lakes.

Star Lake was the lake that showed the highest boater traffic, most boater transiency, and most willingness to participate in boat decontamination. In the future, emphasizing services on Star Lakes would also be cost effective.

It should also be noted the with the available 2018 CBCW data, it appears that boater transiency rates are higher in the Northern Highlands State Forest Boat Landings (about 34% reported back-end boater transiency) when compared to other landings managed by other entities in Vilas County (about 24% back-end boater transiency). Continuing partnerships with the Northern Highlands State Forest staff will be critical in continuing efforts to prevent the spread of small-bodied aquatic invasive species in Vilas County.

References

Ferry, Maureen. "Re: Vulnerable Lakes List." Received by Cathy Higley, 13 Nov 2017.

Higley, Cathy. "Boat Decontamination Survey Project June-August, 2017". Vilas County Land & Water Conservation. 12 Dec 2017.

Kemp, Thomas et al. 2018. "The Impact of Water Clarity on Home Prices in Vilas and Oneida Counties, Wisconsin. University of Wisconsin – Eau Claire, Economics Department. Final report for Lumberjack RC&D, WI Dept. of Natural Resources, and University of Wisconsin – Eau Claire funded study.

Kemp, Thomas. "Re: Water clarity study." Received by Cathy Higley 10 Dec 2018.

Rothlisberger J, Chadderton L, Keller R, Fedora M, Drew M, McNulty J, and Lodge D. "Slowing the Lake to Lake Spread of Aquatic Invasive Species by Recreational Boaters." Center for Aquatic Conservation (University of Notre Dame) and The Nature Conservancy. April 2008.

Vilas County Land & Water Conservation Dept. "Valuing Vilas County's Water Resources." (Flyer) 10 Aug 2017.

Walsh J, Carpenter S, and Vander Zanden J. "Invasive Species Triggers a Massive Loss of Ecosystem Services Through a Trophic Cascade." *Proceedings of the National Academy of Sciences*, vol. 113, no. 15, 12 April 2016, pp. 4081-4085, doi: 10.1073/pnas.1600366113.

Wisconsin Dept. of Natural Resources. "Aquatic Invasive Species". Accessed 26-29 Nov 2018.
<https://dnr.wi.gov/lakes/invasives/AISByWaterbody.aspx>

Wisconsin Dept. of Natural Resources. "Watercraft Inspection Results – Vilas County". Accessed 8 Jan 2019. <https://dnr.wi.gov/lakes/invasives/WatercraftSummary.aspx?show=stats&location=64>

Witzling L and Shaw B. Wisconsin Department of Natural Resources, University of Wisconsin-Extension, and UW-Madison Department of Life Sciences Communication. "Aquatic Invasive Species Prevention: Survey of Wisconsin Boaters and Anglers Executive Summary." Aug 2014.

APPENDIX 1: Boater Travel Tables

Documented Transient Boater* Travel Loops Involving Great Lakes and Target Lakes 2010-2017 (n = 4,136)		
Non-Target Lake	Target Lake	Occurrences
Lake Michigan Total	Star Lake	6
Lake Michigan Total	Plum Lake	3
Bay of Green Bay Total	Trout Lake	3
Lake Michigan Total	Trout Lake	2
Sturgeon Bay Total	Plum Lake	2
Sturgeon Bay Total	Trout Lake	2
Bark Bay Slough Total	Big Muskellunge Lake	1
Lake Superior Total	Plum Lake	1
Lake Superior Total	Star Lake	1
Lake Superior Total	Trout Lake	1
Sturgeon Bay Total	Big Muskellunge Lake	1

*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

Top 10 In-State Documented Transient Boater* Travel Loops Involving Target Lakes and Lakes in Non-Adjacent Counties** (n = 4,136)	
Non-Target Lake	Occurrences
Lake Winnebago Total	13
Lake Michigan Total	11
Wisconsin River Total	9
Lake Mendota Total	8
Lake Nokomis Total	7
Lake Wausau Total	7
Sturgeon Bay Total	5
Lake Owen Total	4
Mississippi River Total	4
Pewaukee Lake Total	4
OTHER LAKES	94

*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

**Excludes data from Vilas, Oneida, Iron, Price, and Forest Counties in WI.

APPENDIX 2: Sample Decon Datasheets (front & back)



State of Wisconsin
Department of Natural Resources
Wisconsin Lakes Partnership

Watercraft Inspection Report
Form 3200-120 (R 2/13)

Notice: Information is collected under s. 33.02, Wis. Stats. Personally identifiable information, including names of volunteers, will be broadly distributed in conjunction with lakes data.

Inspector Name(s) _____ Date _____ Start Time am pm End Time am pm Total Hours Spent: _____
 Paid: _____ Volunteer: _____
 Waterbody Name _____ County _____ Landing Location _____

Boat Was... Entering Leaving	Questions to Ask Boater Have you been contacted by a watercraft inspector this season?		Are you willing to answer a few questions?		Was boat used during the past 5 days on a different waterbody? If YES, where? <u>Circle Last</u> Waterbody		Number of People Contacted Don't know
	Y	N	Y	N	Y	N	
1)							
2)							
3)							
4)							
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							
TOTALS: Enter the totals & waterbody information into SWIMS at http://dnr.wi.gov/lakes/cbow-data							

Discuss Following Prevention Steps with Boater
 WI Law requires boaters to take the following steps when leaving a boat landing:
Steps 1 & 2: Inspect boat, trailers and equipment and remove any attached plants/animals.
 » Have you heard of this before? (see prompt)
Step 3: Drain all water from boats, vehicles and equipment.
 » Do you have any questions? (see prompt)
If angler, state following steps:
Step 4: Drain water from livewells and containers holding your catch.
 » This is a relatively new law. Were you aware that this is required? (see prompt)
 Do you use live bait? (If YES, share message below.)
Bait Message: If live bait comes in contact with lake/river water, it can only be used on that same waterbody or discarded in trash. (bait=minnows/leeches/worms)
 » Do you have any questions on this law as it can be a little confusing? (If yes, see Prompt and offer bait sticker/brochure)

Comments: _____
 Sheet _____ of _____ 

Boat Decontamination Data

Name: _____ Landing & Lake Name: _____
 Date: _____ Start Time: _____ End Time: _____

	Decon Entering		Engine Time (Min)	Decon Leaving		Engine Time (Min)	Email (optional) Vilas County is doing survey on aquatic invasive species prevention and your experience today. We would like to email you a 10 question survey 1-2 weeks from now.
	Y	N		Y	N		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
TOTALS							

APPENDIX 3: Questions Asked via SurveyMonkey of Willing Boaters

Title: Boat Decontamination Follow Up Survey

Decontamination Site: *Name of site goes here* (i.e. Trout Lake – Overlook off of Cty Hwy M)

Message: Thank you for offering to take the boat decontamination follow up survey! Our records show you took your boat to the Decontamination Site listed above. The 10 questions should take you 5 minutes or less.

- 1) Which category best describes the type of boat you brought to the Decontamination Site listed above?
Fishing Boat
Motor Boat/Speed Boat
Pontoon
Jetski
Wake Boat
Canoe/Kayak/Paddleboard
- 2) Did you allow staff to decontaminate your boat at the Decontamination Site? (**Not** required by WI law)
Yes – only upon **entering** the Waterbody
Yes – only upon **leaving** the Waterbody
Yes – both upon **entering and leaving** the Waterbody
No
- 3) Please list the name of the Waterbody you were entering and/or leaving referenced in Question 2.
Waterbody:
Date:
- 4) Did you take any of the following steps to further clean your boat on your own *before you entered* the Waterbody you listed in Question 3? (**Not** required by WI law.)
The boat was dry for 5 consecutive days
Low pressure wash (such as garden hose)
High pressure wash (such as car wash)
Chemical treatment (such as bleach solution)
Something else?: _____
None
- 5) “Previous Waterbody”: What was the previous waterbody you had used your boat on before the Waterbody listed in Question 3?
Waterbody:
County:
Date:

- 6) Did you visit another waterbody since you were at the waterbody listed in Question 3?
Yes
No

****If Yes have 6b) pop up****
****If No skip to Question 8****

- 6b) "Next Waterbody": What was the next waterbody you visited with your boat after the Waterbody in Question 3?

Waterbody:
County:
Date:

- 7) Did you take any of the following steps to further clean your boat *before you entered* the "Next Waterbody" listed in Question 6b? (**Not** required by WI law.)

The boat was dry for 5 consecutive days
Low pressure wash (such as garden hose)
High pressure wash (such as car wash)
Chemical treatment (such as bleach solution)
Something else?: _____
None

- 8) How likely are you to use a staffed hot pressure wash, like the one you encountered at the Decontamination Site, to decontaminate your boat in the future?

Definitely would
Probably would
Probably would not
Definitely would not

- 9) How effective do you believe the staffed hot pressure wash is at preventing aquatic invasive species spread?

Very effective
Somewhat effective
Unsure
Not too effective
Not at all effective

- 10) Would you like to see staffed hot pressure washes continue to operate at strategic boat landings in Vilas County as an aquatic invasive species prevention tool?

Definitely would
Probably would
Probably would not
Definitely would not

Thank you for helping us understand more about Boat Decontamination in Vilas County!

APPENDIX 4: Boater Travel Summary Charts

FROM Target Lake, Going to Another Lake

FROM Target Lake	TO Lake	County	TO Lake WBIC	2017	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Big Muskellunge	Allequash Lake	Vilas County	2332400	1	1	1	1	0	0	0	0	4
Big Muskellunge	Ballard Lake	Vilas County	2340700	1	6	9	4	0	0	0	0	20
Big Muskellunge	Bearskin Lake (Oneida Cty)	Oneida County	1523600	0	1	0	0	0	0	0	0	1
Big Muskellunge	Big Arbor Vitae Lake	Vilas County	1545600	0	0	3	1	1	0	0	0	5
Big Muskellunge	Big Lake (Boulder Junction)	Vilas County	2334700	1	0	0	5	0	0	0	0	6
Big Muskellunge	Big Portage Lake	Vilas County	1629500	0	1	0	0	0	0	0	0	1
Big Muskellunge	Big Saint Germain Lake	Vilas County	1591100	7	3	2	6	4	0	0	0	22
Big Muskellunge	Black Oak Lake	Vilas County	1630100	1	0	2	1	0	0	0	0	4
Big Muskellunge	Carroll Lake	Vilas County	1544800	0	1	1	0	0	0	0	0	2
Big Muskellunge	Catfish Lake	Vilas County	1603700	0	0	1	0	1	0	0	0	2
Big Muskellunge	Crab Lake	Vilas County	2953500	0	1	1	0	0	0	0	0	2
Big Muskellunge	Crescent Lake (Oneida Cty)	Oneida County	1564200	2	0	0	0	0	0	0	0	2
Big Muskellunge	Eagle Lake (Eagle River Chain)	Vilas County	1600200	1	0	0	0	0	0	0	0	1
Big Muskellunge	Fence Lake	Vilas County	2323000	1	0	0	0	0	0	0	0	1
Big Muskellunge	Forest Lake	Vilas County	2762200	1	0	0	0	0	0	0	0	1
Big Muskellunge	Found Lake	Vilas County	1593800	2	1	1	1	1	0	0	0	6
Big Muskellunge	Gunlock Lake	Vilas County	1539700	1	0	0	0	0	0	0	0	1
Big Muskellunge	High Lake	Vilas County	2344000	2	0	2	0	0	0	0	0	4
Big Muskellunge	Irving Lake	Vilas County	2340900	1	0	0	0	0	0	0	0	1
Big Muskellunge	Lac Vieux Desert	Vilas County	1631900	0	0	3	0	0	0	0	0	3
Big Muskellunge	Lake Laura	Vilas County	995200	0	1	0	0	0	0	0	0	1
Big Muskellunge	Minocqua Lake (Oneida Cty)	Oneida County	1542400	0	0	3	0	0	0	0	0	3
Big Muskellunge	Little Arbor Vitae Lake	Vilas County	1545300	1	4	5	1	0	0	0	0	11
Big Muskellunge	Little Crawling Stone Lake	Vilas County	2324000	1	0	0	1	0	0	0	0	2
Big Muskellunge	Little John Lake	Vilas County	2332300	0	0	2	0	0	0	0	0	2
Big Muskellunge	Little Saint Germain Lake	Vilas County	1596300	1	0	2	1	0	0	0	0	4
Big Muskellunge	Long Lake (Fon du Lac Cty)	Fon du Lac County	38700	0	1	0	0	0	0	0	0	1
Big Muskellunge	Lost Lake	Vilas County	1593400	0	1	0	1	2	0	0	0	4
Big Muskellunge	Metonga Lake (Forest Cty)	Forest County	394400	0	0	0	0	0	0	1	0	1
Big Muskellunge	Muskellunge Lake	Vilas County	1596600	0	1	4	1	0	0	0	0	6
Big Muskellunge	Plum Lake	Vilas County	1592400	8	5	2	7	9	0	0	0	31
Big Muskellunge	Razorback Lake	Vilas County	1013800	2	1	0	2	0	0	0	0	5
Big Muskellunge	Rest Lake	Vilas County	2327500	0	1	1	1	0	0	0	0	3
Big Muskellunge	Star Lake	Vilas County	1593100	2	2	4	1	1	0	0	0	10
Big Muskellunge	Tomahawk Lake (Oneida Cty)	Oneida County	1542700	0	0	1	2	0	0	0	0	3
Big Muskellunge	Tomahawk Thoroughfare (Oneida Cty)	Oneida County	1542500	0	0	1	0	0	0	0	0	1
Big Muskellunge	Trout Lake	Vilas County	2331600	5	6	1	0	0	0	0	0	12
Big Muskellunge	Twin Lakes	Vilas County	1623800	0	0	1	0	0	0	0	0	1
Big Muskellunge	Two Sisters Lake (Oneida Cty)	Oneida County	1588200	0	0	1	0	0	0	0	0	1
Big Muskellunge	White Sand Lake (Lac du Flambeau)	Vilas County	2321100	2	0	1	0	0	0	0	0	3
Plum Lake	Allequash Lake	Vilas County	2332400	0	0	1	0	0	0	0	0	1
Plum Lake	Anvil Lake	Vilas County	968800	0	0	1	0	0	0	0	0	1
Plum Lake	Ballard Lake	Vilas County	2340700	5	0	7	4	0	0	0	12	28
Plum Lake	Big Arbor Vitae Lake	Vilas County	1545600	4	0	0	0	0	0	0	1	5
Plum Lake	Big Lake (Boulder Junction)	Vilas County	2334700	1	0	1	0	3	0	0	0	5
Plum Lake	Big Muskellunge Lake	Vilas County	1835300	5	0	6	0	0	0	0	0	11
Plum Lake	Big Portage Lake	Vilas County	1629500	2	0	2	0	1	0	0	0	5
Plum Lake	Big Saint Germain Lake	Vilas County	1591100	15	0	11	27	28	0	0	0	81
Plum Lake	Big Sand Lake	Vilas County	1602600	3	0	2	0	0	0	0	0	5
Plum Lake	Big Stone Lake (Oneida Cty)	Oneida County	1612200	0	0	0	0	1	0	0	0	1
Plum Lake	Black Oak Lake	Vilas County	1630100	7	1	1	1	0	0	0	0	10
Plum Lake	Wazeecha Lake (Wood Cty)	Wood County	1391200	0	0	0	0	0	2	1	0	3
Plum Lake	Butternut Lake (Forest Cty)	Forest County	692400	3	0	0	0	0	0	0	0	3
Plum Lake	Catfish Lake	Vilas County	1603700	1	0	0	0	0	0	0	0	1
Plum Lake	Cedar Lake (Washington Cty)	Washington County	25300	0	0	0	1	0	0	0	0	1
Plum Lake	Clear Lake (Manitowish Chain)	Vilas County	2329000	0	0	0	1	0	0	0	0	1
Plum Lake	Crab Lake	Vilas County	2953500	1	0	0	0	0	0	0	0	1
Plum Lake	Eagle River	Vilas County	1599500	1	0	0	0	0	0	0	0	1
Plum Lake	Fence Lake	Vilas County	2323000	1	0	0	0	0	0	0	0	1
Plum Lake	Forest Lake	Vilas County	2762200	1	0	0	0	0	0	0	0	1
Plum Lake	Found Lake	Vilas County	1593800	3	0	3	0	2	0	1	0	9
Plum Lake	George Lake (Oneida Cty)	Oneida County	1569600	0	0	0	0	0	1	0	0	1
Plum Lake	Grass Lake (Shawano Cty)	Shawano County	299200	0	0	1	0	0	0	0	0	1

FROM Target Lake	TO Lake	County	TO Lake WBIC	2017	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Plum Lake	High Lake	Vilas County	2344000	0	0	2	0	0	0	0	0	2
Plum Lake	Irving Lake	Vilas County	2340900	5	0	0	0	0	0	0	0	5
Plum Lake	Kentuck Lake	Vilas County	716800	2	0	4	0	0	0	0	0	6
Plum Lake	Lake Laura	Vilas County	995200	0	0	1	0	0	0	0	0	1
Plum Lake	Lake Nokomis (Lincoln Cty)	Lincoln County	1516500	0	0	0	0	0	1	0	0	1
Plum Lake	Lake Waubesa (Dane Cty)	Dane County	803700	0	0	0	0	0	1	0	0	1
Plum Lake	Little Arbor Vitae Lake	Vilas County	1545300	5	0	1	0	0	0	0	0	6
Plum Lake	Little Crawling Stone Lake	Vilas County	2324000	1	1	0	0	0	0	0	0	2
Plum Lake	Little Muskego Lake (Waukesha C	Waukesha County	762700	0	0	2	0	0	0	0	0	2
Plum Lake	Little Saint Germain Lake	Vilas County	1596300	8	0	6	4	3	1	0	0	22
Plum Lake	Lost Lake	Vilas County	1593400	2	0	5	1	1	0	0	0	9
Plum Lake	Minocqua Lake (Oneida Cty)	Oneida County	1542400	2	0	1	0	0	0	0	0	3
Plum Lake	Muskellunge Lake	Vilas County	1596600	0	0	3	0	0	0	0	0	3
Plum Lake	Presque Isle Lake	Vilas County	2956500	0	0	2	0	0	0	0	0	2
Plum Lake	Razorback Lake	Vilas County	1013800	5	0	2	0	0	0	0	0	7
Plum Lake	Rest Lake	Vilas County	2327500	1	0	0	0	0	0	0	0	1
Plum Lake	Smoky Lake	Vilas County	1018300	1	0	4	0	0	0	0	0	5
Plum Lake	Star Lake	Vilas County	1593100	31	0	22	10	10	0	0	4	77
Plum Lake	Tomahawk Lake (Oneida Cty)	Oneida County	1542700	0	1	0	0	0	0	0	0	1
Plum Lake	Tomahawk Thoroughfare (Oneida	Oneida County	1542500	0	0	0	1	0	0	0	0	1
Plum Lake	Trout Lake	Vilas County	2331600	2	0	3	0	0	0	0	0	5
Plum Lake	Turtle Flambeau Flowage (Iron Ct	Iron County	2294900	0	0	0	0	0	1	0	0	1
Plum Lake	Twin Lakes	Vilas County	1623800	0	0	1	0	0	0	0	0	1
Plum Lake	Two Sisters Lake (Oneida Cty)	Oneida County	1588200	0	1	0	0	0	0	0	0	1
Plum Lake	Upper Buckatambon Lake	Vilas County	1621800	1	0	0	0	0	0	0	0	1
Plum Lake	Upper Eau Claire Lake (Bayfield C	Bayfield County	2742700	0	0	0	0	0	0	1	0	1
Plum Lake	White Birch Lake	Vilas County	2340500	0	0	0	0	0	0	0	1	1
Plum Lake	White Sand Lake (Lac du Flambea	Vilas County	2321100	1	0	0	0	0	0	0	0	1
Plum Lake	Willow Flowage (Oneida Cty)	Oneida County	1528300	0	0	0	0	0	0	0	1	1
Star Lake	Alva Lake (Oneida Cty)	Oneida County	968100	0	0	0	1	0	0	0	0	1
Star Lake	Anvil Lake	Vilas County	968800	1	0	3	0	3	0	0	0	7
Star Lake	Ballard Lake	Vilas County	2340700	20	26	56	35	21	0	0	12	170
Star Lake	Bear Lake (Oneida Cty)	Oneida County	1527800	0	0	0	1	0	0	0	0	1
Star Lake	Big Arbor Vitae Lake	Vilas County	1545600	1	5	7	0	0	0	0	0	13
Star Lake	Big Lake (Three Lakes)	Oneida County	1613000	0	0	0	0	0	1	0	0	1
Star Lake	Big Lake (Boulder Junction)	Vilas County	2334700	3	1	6	1	2	0	0	0	13
Star Lake	Big Lake (Cisco Chain)	Vilas County	2963800	0	0	0	1	2	0	0	0	3
Star Lake	Big Muskellunge Lake	Vilas County	1853500	7	3	5	2	0	0	0	0	17
Star Lake	Big Portage Lake	Vilas County	1629500	1	2	0	0	2	0	0	0	5
Star Lake	Big Saint Germain Lake	Vilas County	1591100	3	12	13	10	6	0	0	0	44
Star Lake	Big Sand Lake	Vilas County	1602600	2	1	0	0	1	0	0	0	4
Star Lake	Black Oak Lake	Vilas County	1630100	6	0	6	6	0	0	0	0	18
Star Lake	Butternut Lake (Forest Cty)	Forest County	692400	1	2	0	0	0	0	0	0	3
Star Lake	Deerskin Lake	Vilas County	1601300	0	0	0	1	1	0	0	0	2
Star Lake	Eagle Lake (Eagle River Chain)	Vilas County	1600200	0	0	1	0	0	0	0	0	1
Star Lake	Eagle River	Vilas County	1599500	1	2	0	0	0	0	0	0	3
Star Lake	Enterprise Lake (Langlade Cty)	Langlade County	1579700	0	0	1	0	0	0	0	0	1
Star Lake	Fence Lake	Vilas County	2323000	2	0	2	0	0	0	0	0	4
Star Lake	Forest Lake	Vilas County	2762200	1	0	0	0	0	0	0	0	1
Star Lake	Found Lake	Vilas County	1593800	2	3	8	3	4	1	0	0	21
Star Lake	Franklin Lake (Forest Cty)	Forest County	692900	2	0	0	0	0	0	0	0	2
Star Lake	George Lake (Oneida Cty)	Oneida County	1569600	0	0	0	0	0	1	0	0	1
Star Lake	Grass Lake (Shawano Cty)	Shawano County	299200	0	2	0	0	0	0	0	0	2
Star Lake	Gunlock Lake	Vilas County	1539700	1	0	0	0	0	0	0	0	1
Star Lake	High Lake	Vilas County	2344000	0	4	0	0	0	0	0	0	4
Star Lake	Irving Lake	Vilas County	2340900	18	0	0	0	0	0	0	0	18
Star Lake	Kentuck Lake	Vilas County	716800	0	0	1	0	1	0	0	0	2
Star Lake	Lac Vieux Desert	Vilas County	1631900	0	0	1	1	0	0	0	0	2
Star Lake	Lake Laura	Vilas County	995200	4	5	0	6	0	0	0	0	15
Star Lake	Lake Mendota (Dane Cty)	Dane County	805400	0	0	0	0	0	1	0	0	1
Star Lake	Lake Michigan	n/a	20	0	1	0	0	0	0	0	0	1
Star Lake	Lake Nebagammon (Douglas Cty)	Douglas County	2865000	0	0	1	0	0	1	0	0	2
Star Lake	Lake Owen (Bayfield Cty)	Bayfield County	2900200	0	1	0	0	0	0	1	0	2

FROM Target Lake	TO Lake	County	TO Lake WBIC	Year								TOTAL Occurrences	
				2017	2016	2015	2014	2013	2012	2011	2010		
Star Lake	Lake Superior	n/a	2751220	1	0	0	0	0	0	0	0	0	1
Star Lake	Lake Winnebago (Fon du Lac Cty)	Fon du Lac County	131100	0	2	0	0	0	0	0	0	0	2
Star Lake	Little Arbor Vitae Lake	Vilas County	1545300	5	3	2	3	0	0	0	0	0	13
Star Lake	Little John Lake	Vilas County	2332300	0	0	1	0	0	0	0	0	0	1
Star Lake	Little Saint Germain Lake	Vilas County	1596300	4	2	2	2	3	0	0	0	0	13
Star Lake	Long Lake (Vilas Cty)	Vilas County	1602300	2	2	0	1	1	0	0	0	0	6
Star Lake	Long Lake (Washburn Cty)	Washburn County	2106800	0	0	1	0	0	0	0	0	0	1
Star Lake	Lost Lake	Vilas County	1593400	2	1	5	0	1	0	0	0	0	9
Star Lake	Minocqua Lake (Oneida Cty)	Oneida County	1542400	0	0	0	0	0	0	0	0	1	1
Star Lake	Moen Lake (Oneida Cty)	Oneida County	1573800	0	1	0	0	0	0	0	0	0	1
Star Lake	Muskellunge Lake	Vilas County	1596600	1	2	5	2	2	0	0	0	0	12
Star Lake	Namekagon Lake (Bayfield Cty)	Bayfield County	2732600	0	0	1	0	0	0	0	0	0	1
Star Lake	Pelican Lake (Oneida Cty)	Oneida County	1579900	1	0	0	0	0	0	0	0	0	1
Star Lake	Plum Lake	Vilas County	1592400	15	11	14	7	8	0	0	0	7	62
Star Lake	Rainbow Flowage (Oneida Cty)	Oneida County	1595300	0	0	0	1	0	0	0	0	0	1
Star Lake	Razorback Lake	Vilas County	1013800	5	8	15	3	0	0	0	0	0	31
Star Lake	Rest Lake	Vilas County	2327500	0	1	0	0	0	0	0	0	0	1
Star Lake	Smoky Lake	Vilas County	1018300	1	0	0	1	0	0	0	0	0	2
Star Lake	Tomahawk Lake (Oneida Cty)	Oneida County	1542700	0	0	1	0	0	0	0	0	0	1
Star Lake	Tomahawk Thoroughfare (Oneida Cty)	Oneida County	1542500	1	0	1	0	0	0	0	0	0	2
Star Lake	Trout Lake	Vilas County	2331600	3	3	2	0	0	1	0	0	0	9
Star Lake	Twin Bear Lake (Bayfield Cty)	Bayfield County	2903100	0	0	0	0	0	0	0	0	1	1
Star Lake	Twin Lakes	Vilas County	1623800	0	0	0	0	3	0	0	0	0	3
Star Lake	Upper Buckatabon Lake	Vilas County	1621800	1	2	0	0	0	0	0	0	0	3
Star Lake	White Sand Lake (Lac du Flambeau Cty)	Vilas County	2321100	1	0	0	0	0	0	0	0	0	1
Star Lake	Yellow Birch Lake	Vilas County	1599600	0	2	0	0	0	0	0	0	1	3
Trout Lake	Allequash Lake	Vilas County	2332400	1	1	3	4	0	0	0	0	0	9
Trout Lake	Ballard Lake	Vilas County	2340700	4	5	4	1	1	0	0	0	2	17
Trout Lake	Big Arbor Vitae Lake	Vilas County	1545600	1	1	5	1	1	0	0	0	0	9
Trout Lake	Big Lake (Boulder Junction)	Vilas County	2334700	5	6	8	8	5	0	0	0	0	32
Trout Lake	Big Lake (Cisco Chain)	Vilas County	2963800	2	3	0	0	0	0	0	0	0	5
Trout Lake	Big Muskellunge Lake	Vilas County	1835300	7	9	6	9	0	0	0	0	0	31
Trout Lake	Big Portage Lake	Vilas County	1629500	1	2	0	0	2	0	0	0	0	5
Trout Lake	Big Saint Germain Lake	Vilas County	1591100	4	5	4	6	11	0	0	0	0	30
Trout Lake	Black Oak Lake	Vilas County	1630100	2	1	4	6	0	0	0	0	0	13
Trout Lake	Butternut Lake (Forest Cty)	Forest County	692400	0	3	0	0	1	0	0	0	0	4
Trout Lake	Carrol Lake	Vilas County	1544800	0	0	0	0	0	1	0	0	0	1
Trout Lake	Clear Lake (Woodruff, Oneida Cty)	Oneida County	977500	0	0	0	1	0	0	0	0	0	1
Trout Lake	Crab Lake	Vilas County	2953500	0	5	2	1	0	1	1	3	0	13
Trout Lake	Dam Lake (Oneida Cty)	Oneida County	1596900	0	0	1	0	0	0	0	0	0	1
Trout Lake	Eagle River	Vilas County	1599500	0	0	2	0	0	0	0	0	0	2
Trout Lake	Fence Lake	Vilas County	2323000	3	5	6	3	0	0	0	0	0	17
Trout Lake	Forest Lake	Vilas County	2762200	2	0	0	0	0	0	0	0	0	2
Trout Lake	Franklin Lake (Forest Cty)	Forest County	692900	0	1	1	0	0	0	0	0	0	2
Trout Lake	Green Lake (Green Lake Cty)	Green Lake County	146100	1	0	0	0	0	0	0	0	0	1
Trout Lake	Gunlock Lake	Vilas County	1539700	2	0	1	0	0	0	0	0	0	3
Trout Lake	High Lake	Vilas County	2344000	3	7	4	0	0	0	0	0	0	14
Trout Lake	Inving Lake	Vilas County	2340900	1	0	0	1	0	0	0	0	0	2
Trout Lake	Kentuck Lake	Vilas County	716800	0	3	0	0	0	0	0	0	0	3
Trout Lake	Lac Vieux Desert	Vilas County	1631900	1	0	0	0	1	0	0	0	0	2
Trout Lake	Lake Laura	Vilas County	995200	0	3	0	1	0	0	0	0	0	4
Trout Lake	Minocqua Lake (Oneida Cty)	Oneida County	1542400	2	1	0	2	0	0	0	0	0	5
Trout Lake	Lake Owen (Bayfield Cty)	Bayfield County	2900200	0	0	0	1	0	0	0	0	0	1
Trout Lake	Lake Superior	n/a	2751220	1	0	0	0	0	0	0	0	0	1
Trout Lake	Little Arbor Vitae Lake	Vilas County	1545300	2	2	2	2	0	0	0	0	0	8
Trout Lake	Little Crawling Stone Lake	Vilas County	2324000	2	2	2	0	0	0	0	0	0	6
Trout Lake	Little John Lake	Vilas County	2332300	0	1	0	1	0	0	0	0	0	2
Trout Lake	Little Saint Germain Lake	Vilas County	1596300	4	3	2	0	3	0	0	0	0	12
Trout Lake	Long Lake (Washburn Cty)	Washburn County	2106800	1	0	0	0	0	0	0	0	0	1
Trout Lake	Lost Lake	Vilas County	1593400	1	1	1	1	1	0	0	0	0	5
Trout Lake	Mann Lake	Vilas County	2332000	1	0	0	0	0	0	0	0	0	1
Trout Lake	Twin Lakes	Vilas County	1623800	2	0	0	0	0	0	0	0	0	2
Trout Lake	Pelican Lake (Oneida Cty)	Oneida County	1579900	0	0	1	0	0	0	0	0	0	1

FROM Target Lake	TO Lake	County	TO Lake WBIC	2017	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Trout Lake	Plum Lake	Vilas County	1592400	3	3	1	4	6	0	0	2	19
Trout Lake	Presque Isle Lake	Vilas County	2956500	0	0	3	0	0	0	0	0	3
Trout Lake	Razorback Lake	Vilas County	1013800	2	0	1	0	0	0	0	0	3
Trout Lake	Rest Lake	Vilas County	2327500	1	1	2	2	0	0	0	0	6
Trout Lake	Squaw Lake	Vilas County	2271600	0	0	2	0	0	0	0	0	2
Trout Lake	Squirrel Lake	Vilas County	1536300	1	0	0	0	0	0	0	0	1
Trout Lake	Star Lake	Vilas County	1593100	6	5	3	1	5	0	0	0	20
Trout Lake	Tomahawk Lake (Oneida Cty)	Oneida County	1542700	0	3	1	2	0	0	0	0	6
Trout Lake	Tomahawk Thoroughfare (Oneida Cty)	Oneida County	1542500	0	1	2	3	0	0	0	0	6
Trout Lake	Turtle Flambeau Flowage (Iron Ct)	Iron County	2294900	1	1	0	1	0	2	2	2	9
Trout Lake	Twin Bear Lake (Bayfield Cty)	Bayfield County	2903100	0	0	0	0	1	0	0	0	1
Trout Lake	Two Sisters Lake (Oneida Cty)	Oneida County	1588200	0	0	3	0	0	0	0	0	3
Trout Lake	Van Vliet Lake	Vilas County	2956800	0	1	1	0	0	0	0	0	2
Trout Lake	White Sand Lake (Lac du Flambeau)	Vilas County	2321100	2	0	2	1	0	0	0	0	5
			TOTALS	355	237	391	238	167	17	8	50	1463

From a Lake, Going TO Target Lake

FROM Lake	County	FROM WBIC	TO Target Lake	2017 Occurrences	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Allequash Lake	Vilas County	2332400	Big Muskellunge Lake	2	9	10	6	2	0	0	0	29
Anvil Lake	Vilas County	968800	Big Muskellunge Lake	0	1	1	1	0	0	0	0	3
Arrowhead Lake	Vilas County	1541500	Big Muskellunge Lake	0	0	0	0	1	0	0	0	1
Ballard Lake	Vilas County	2340700	Big Muskellunge Lake	4	5	5	2	0	0	0	0	16
Bark Bay Slough	Bayfield County	2881200	Big Muskellunge Lake	0	0	0	1	0	0	0	0	1
Bear Lake	Barron County	2105100	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Bearskin Lake	Oneida County	1523600	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Big Arbor Vitae Lake	Vilas County	1543600	Big Muskellunge Lake	6	5	2	3	3	0	0	0	19
Big Crooked Lake	Vilas County	2338800	Big Muskellunge Lake	0	1	1	0	0	0	0	0	2
Big Lake (Boulder Junction)	Vilas County	2334700	Big Muskellunge Lake	2	3	4	1	0	0	0	0	10
Big Lake (Cisco Chain)	Vilas County	2963800	Big Muskellunge Lake	1	0	0	0	0	0	0	0	1
Big Portage Lake	Vilas County	1629500	Big Muskellunge Lake	0	0	1	0	1	0	0	0	2
Big Saint Germain Lake	Vilas County	1591100	Big Muskellunge Lake	0	10	2	2	3	0	0	0	17
Black Oak Lake	Vilas County	1630100	Big Muskellunge Lake	0	0	1	0	2	0	0	0	3
Bolger Lake	Oneida County	973000	Big Muskellunge Lake	2	0	0	0	0	0	0	0	2
Boulder Lake (Vilas Cty)	Vilas County	2338300	Big Muskellunge Lake	3	1	3	1	1	0	0	0	9
Brandy Lake	Vilas County	1541300	Big Muskellunge Lake	2	0	0	0	0	0	0	0	2
Buckskin Lake	Oneida County	2272600	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Butternut Lake	Forest County	692400	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Carrol Lake	Vilas County	1544800	Big Muskellunge Lake	2	1	1	2	1	0	0	0	7
Catfish Lake	Vilas County	1603700	Big Muskellunge Lake	0	1	1	0	0	0	0	0	2
Cedar Lake	Iron County	2309700	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Clear Lake (Manitowish Chain)	Vilas County	2329000	Big Muskellunge Lake	0	2	3	3	0	0	0	0	8
Crystal Lake	Vilas County	1631200	Big Muskellunge Lake	2	1	1	2	0	0	0	0	6
Dam Lake	Oneida County	1596900	Big Muskellunge Lake	1	0	0	0	0	0	0	0	1
Day Lake	Vilas County	1843500	Big Muskellunge Lake	0	0	2	0	0	0	0	0	2
Diamond Lake	Vilas County	1844700	Big Muskellunge Lake	2	0	1	1	0	0	0	0	4
Eagle River Chain	Vilas County	1599500	Big Muskellunge Lake	4	0	1	0	0	0	0	0	5
Erickson Lake	Vilas County	983600	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Escanaba Lake	Vilas County	2339900	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Fallison Lake	Vilas County	1847800	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Fence Lake	Vilas County	2323000	Big Muskellunge Lake	0	0	3	0	0	0	0	0	3
Firefly Lake	Vilas County	1848900	Big Muskellunge Lake	0	1	1	0	0	0	0	0	2
Fishtrap Lake	Vilas County	2343200	Big Muskellunge Lake	0	0	1	1	0	0	0	0	2
Flambeau Lake	Vilas County	2320500	Big Muskellunge Lake	0	1	2	0	0	0	0	0	3
Found Lake	Vilas County	1593800	Big Muskellunge Lake	0	1	0	2	0	0	0	0	3
Green Lake	Green Lake County	146100	Big Muskellunge Lake	0	0	0	1	0	0	0	0	1
Hasbrook Lake	Oneida County	1589100	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
High Lake	Vilas County	2344000	Big Muskellunge Lake	2	3	3	2	1	0	0	0	11
Horse Lake	Polk County	2616200	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Horsehead Lake	Vilas County	2953100	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Ike Walton Lake	Vilas County	2321800	Big Muskellunge Lake	0	1	0	1	0	0	0	0	2
Irving Lake	Vilas County	2340900	Big Muskellunge Lake	2	4	2	1	0	0	0	0	9
Jag Lake	Vilas County	1855900	Big Muskellunge Lake	0	1	1	0	0	0	0	0	2
Kawaguesaga Lake	Oneida County	1542300	Big Muskellunge Lake	0	1	0	1	1	0	0	0	3
Kentuck Lake	Vilas County	716800	Big Muskellunge Lake	0	0	0	1	1	0	0	0	2
Lac Vieux Desert	Vilas County	1631900	Big Muskellunge Lake	0	2	0	0	0	0	0	0	2
Lake Gogebic (MI)	Gogebic Cty, MI	n/s	Big Muskellunge Lake	1	0	0	0	0	0	0	0	1
Lake Nokomis	Lincoln County	1516500	Big Muskellunge Lake	0	0	0	0	1	0	0	0	1
Lake Winnebago	Winnebago County	131100	Big Muskellunge Lake	1	0	1	0	0	0	0	0	2
Little Arbor Vitae Lake	Vilas County	1545300	Big Muskellunge Lake	3	2	3	1	0	0	0	0	9
Little Crooked Lake	Vilas County	2335500	Big Muskellunge Lake	2	0	0	0	0	0	0	0	2
Little John Junior Lake	Vilas County	1861700	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Little John Lake	Vilas County	2332300	Big Muskellunge Lake	6	11	12	3	2	0	0	0	34
Little Saint Germain Lake	Vilas County	1596300	Big Muskellunge Lake	0	2	0	1	0	0	0	0	3
Little Spider Lake	Vilas County	1540400	Big Muskellunge Lake	1	0	0	0	0	0	0	0	1
Little Trout Lake	Vilas County	2321600	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Long Lake (Vilas Cty)	Vilas County	1602300	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Manitowish Lake	Vilas County	2329400	Big Muskellunge Lake	1	2	3	1	0	0	0	0	7
Mann Lake	Vilas County	2332000	Big Muskellunge Lake	2	0	1	0	0	0	0	0	3
Minocque Lake	Oneida County	1542400	Big Muskellunge Lake	0	2	3	2	1	0	0	0	8
Muskellunge Lake	Vilas County	1596600	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Nebish Lake	Vilas County	1869700	Big Muskellunge Lake	0	1	2	0	0	0	0	0	3
North Turtle Lake	Vilas County	2310400	Big Muskellunge Lake	0	0	2	0	0	0	0	0	2
Oxbow Lake	Vilas County	2954800	Big Muskellunge Lake	0	0	0	0	1	0	0	0	1
Palmer Lake	Vilas County	2962900	Big Muskellunge Lake	0	1	1	0	0	0	0	0	2
Pelican Lake	Oneida County	1579900	Big Muskellunge Lake	1	0	0	0	0	0	0	0	1
Pickeral Lake (Oneida Cty)	Oneida County	1590400	Big Muskellunge Lake	0	0	2	0	0	0	0	0	2
Pickeral Lake (Vilas Cty)	Vilas County	1619700	Big Muskellunge Lake	0	0	0	2	0	0	0	0	2
Pioneer Lake	Vilas County	1623400	Big Muskellunge Lake	2	0	0	0	0	0	0	0	2

FROM Lake	County	FROM WBIC	TO Target Lake	2017 Occurrences	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Plum Lake	Vilas County	1592400	Big Muskellunge Lake	8	6	6	9	4	0	0	0	33
Presque Isle Lake	Vilas County	2956300	Big Muskellunge Lake	1	1	1	0	0	0	0	0	3
Rainbow Flowage	Oneida County	1595300	Big Muskellunge Lake	0	2	0	0	0	0	0	0	2
Razorback Lake	Vilas County	1013800	Big Muskellunge Lake	0	1	2	1	1	0	0	0	5
Rest Lake	Vilas County	2327500	Big Muskellunge Lake	0	0	2	0	0	0	0	0	2
Round Lake	Vilas County	2334900	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Rush Lake	Vilas County	2343600	Big Muskellunge Lake	0	0	0	1	0	0	0	0	1
Silver Lake	Vilas County	1599800	Big Muskellunge Lake	0	0	0	1	0	0	0	0	1
Sparkling Lake	Vilas County	1881900	Big Muskellunge Lake	0	0	3	0	0	0	0	0	3
Star Lake	Vilas County	1593100	Big Muskellunge Lake	7	4	5	2	0	0	0	0	18
Stella Lake	Vilas County	1594000	Big Muskellunge Lake	0	0	0	0	1	0	0	0	1
Stormy Lake	Vilas County	1020300	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Sturgeon Bay	Door County	88	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Sweeny Lake	Oneida County	1589600	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Tomahawk Lake	Oneida County	1542700	Big Muskellunge Lake	4	0	0	2	0	0	0	0	6
Trout Lake	Vilas County	2331600	Big Muskellunge Lake	9	9	6	9	0	0	0	0	33
Twin Lakes (North Twin)	Vilas County	1623800	Big Muskellunge Lake	1	0	0	1	0	0	0	0	2
Upper Buckatabon Lake	Vilas County	1621800	Big Muskellunge Lake	0	1	0	0	0	0	0	0	1
Upper Gresham Lake	Vilas County	2330800	Big Muskellunge Lake	5	2	1	1	1	0	0	0	10
Waubesa Lake	Dane County	803700	Big Muskellunge Lake	0	0	0	1	0	0	0	0	1
Lake Wausau	Marathon County	1437500	Big Muskellunge Lake	1	0	0	0	0	0	0	0	1
White Birch Lake	Vilas County	2340500	Big Muskellunge Lake	0	1	0	1	0	0	0	0	2
White Sand Lake (Lac du Flambeau)	Vilas County	2321100	Big Muskellunge Lake	4	2	2	2	0	0	0	0	10
Wildcat Lake	Vilas County	2336800	Big Muskellunge Lake	1	2	1	1	2	0	0	0	7
Willow Lake	Oneida County	1529500	Big Muskellunge Lake	0	0	1	0	0	0	0	0	1
Allequash Lake	Vilas County	2332400	Plum Lake	1	0	2	0	4	0	0	1	8
Anvil Lake	Vilas County	968800	Plum Lake	2	1	0	1	0	0	0	0	4
Arrowhead Lake	Vilas County	1541500	Plum Lake	0	0	0	0	0	0	0	1	1
Ballard Lake	Vilas County	2340700	Plum Lake	17	7	5	3	4	0	0	5	41
Bass Lake	Vilas County	1604200	Plum Lake	2	0	0	0	0	0	0	0	2
Bearskin Lake	Oneida County	1523600	Plum Lake	6	0	0	1	1	0	0	0	8
Little Arbor Vitae Lake	Vilas County	1545300	Plum Lake	19	7	3	1	1	0	0	0	31
Big Lake (Boulder Junction)	Vilas County	2334700	Plum Lake	3	1	3	4	2	0	0	0	13
Big Lake (Cisco Chain)	Vilas County	2963800	Plum Lake	2	0	0	0	0	0	0	0	2
Big Muskego Lake	Waukesha County	762400	Plum Lake	0	0	1	0	0	0	0	0	1
Big Muskellunge Lake	Vilas County	1835300	Plum Lake	14	5	2	7	9	0	0	0	37
Big Portage Lake	Vilas County	1629500	Plum Lake	0	1	0	0	0	0	0	0	1
Big Saint Germain Lake	Vilas County	1591100	Plum Lake	15	7	9	7	13	0	0	1	52
Big Sand Lake	Vilas County	1602600	Plum Lake	6	0	4	1	0	0	0	0	11
Big Stone Lake	Oneida County	1612200	Plum Lake	0	0	1	0	0	0	0	0	1
Birch Lake	Vilas County	2311100	Plum Lake	0	0	0	0	1	0	0	0	1
Black Oak Lake	Vilas County	1630100	Plum Lake	4	2	0	0	0	0	0	0	6
Boom Lake	Oneida County	1580200	Plum Lake	2	0	0	0	0	0	0	0	2
Booth Lake	Oneida County	1537800	Plum Lake	2	0	1	0	0	0	0	0	3
Boulder Lake (Vilas Cty)	Vilas County	2338300	Plum Lake	0	1	1	2	0	0	0	0	4
Brandy Lake	Vilas County	1541300	Plum Lake	0	1	0	0	0	0	0	0	1
Buckskin Lake	Vilas County	2272600	Plum Lake	0	0	1	0	0	0	0	0	1
Butternut Lake	Forest County	692400	Plum Lake	2	0	2	0	3	0	0	1	8
Caroline Lake	Iron County	2938000	Plum Lake	0	1	0	0	0	0	0	0	1
Carrol Lake	Vilas County	1544800	Plum Lake	3	1	0	0	1	0	0	0	5
Castle Rock Lake	Juneau County	1345700	Plum Lake	0	0	1	0	0	0	0	0	1
Catherine Lake	Iron County	2309100	Plum Lake	2	0	0	0	0	0	0	0	2
Cisco Chain	Vilas County	n/a	Plum Lake	0	0	1	0	1	0	0	0	2
Cisco Lake	Bayfield County	2892200	Plum Lake	0	1	0	0	0	0	0	0	1
Clear Lake (Manitowish Chain)	Vilas County	2329000	Plum Lake	2	0	5	0	2	0	0	0	9
Crescent Lake	Oneida County	1564200	Plum Lake	1	0	0	0	0	0	0	0	1
Dam Lake	Oneida County	1596900	Plum Lake	2	0	1	0	0	0	0	0	3
Deer Lake	Vilas County	980600	Plum Lake	0	0	1	0	0	0	0	0	1
Eagle Lake	Vilas County	1600200	Plum Lake	0	0	0	1	1	0	0	1	3
Eagle River Chain	Vilas County	1599500	Plum Lake	5	1	1	0	5	0	0	0	12
Eagle River Three Lakes Chain	Oneida County	1599500	Plum Lake	0	0	1	2	0	0	0	0	3
Echo Lake	Iron County	2301800	Plum Lake	0	0	0	2	0	0	0	0	2
Erickson Lake	Vilas County	983600	Plum Lake	0	1	1	0	0	0	0	0	2
Escanabe Lake	Vilas County	2339900	Plum Lake	2	0	1	3	0	0	0	2	8
Fence Lake	Vilas County	2323000	Plum Lake	6	1	1	0	1	0	0	0	9
Fishtrap Lake	Vilas County	2343200	Plum Lake	0	0	0	2	0	0	0	0	2
Flambeau Lake	Vilas County	2320500	Plum Lake	3	1	0	0	0	0	0	0	4
Forest Lake	Vilas County	2762200	Plum Lake	0	2	0	0	0	0	0	1	3
Found Lake	Vilas County	1593800	Plum Lake	15	2	6	1	6	0	0	1	31

FROM Lake	County	FROM WBIC	TO Target Lake	2017 Occurrences	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Fox River (IL)	Illinois	n/s	Plum Lake		0	0	1	0	0	0	0	1
Frank Lake	Vilas County	983900	Plum Lake		0	0	0	0	1	0	0	1
Franklin Lake	Forest County	692900	Plum Lake		0	0	0	0	1	0	0	1
Geneva Lake	Walworth County	758300	Plum Lake		0	0	0	0	0	0	1	1
Heien Lake	Vilas County	2964400	Plum Lake		0	0	1	1	0	0	0	2
High Lake	Vilas County	2344000	Plum Lake		0	0	0	0	1	0	0	1
Horsehead Lake	Vilas County	2953100	Plum Lake		0	0	3	0	0	0	0	3
Irving Lake	Vilas County	2340900	Plum Lake		2	2	0	1	2	0	0	7
Jag Lake	Vilas County	1855900	Plum Lake		0	0	1	0	0	0	0	1
Katherine Lake	Oneida County	1543300	Plum Lake		0	0	1	1	1	0	1	4
Kawaguesaga Lake	Oneida County	1542300	Plum Lake		0	0	1	0	0	0	0	1
Kentuck Lake	Vilas County	716800	Plum Lake		4	3	3	0	2	0	0	12
Lake Arrowhead	Adams County	1377700	Plum Lake		0	0	1	0	0	0	0	1
Lake Content	Vilas County	1592000	Plum Lake		0	0	0	1	0	0	0	1
Lake Laura	Vilas County	995200	Plum Lake		1	0	0	1	0	0	0	2
Lake Michigan	n/s	20	Plum Lake		2	0	0	1	0	0	0	3
Lake Monona	Dane County	804600	Plum Lake		0	0	0	0	1	0	0	1
Lake Nokomis	Lincoln County	1516300	Plum Lake		2	0	0	0	0	0	0	2
Lake Owen	Bayfield County	2900200	Plum Lake		0	1	0	0	0	0	0	1
Lake Superna (IA)	Van Buren Cty, IA	n/s	Plum Lake		0	0	0	0	1	0	0	1
Lake Superior	n/s	2751220	Plum Lake		0	0	1	0	0	0	0	1
Lake Waubesa	Dane County	803700	Plum Lake		0	0	0	0	1	0	0	1
Lake Wausau	Marathon County	1437500	Plum Lake		0	1	1	0	1	0	0	3
Lake Winnebago	Winnebago County	131100	Plum Lake		0	1	1	0	0	0	0	2
Little Arbor Vitae Lake	Vilas County	1545300	Plum Lake		4	2	4	4	5	0	0	19
Little John Lake	Vilas County	2332300	Plum Lake		4	2	2	2	2	0	1	13
Little Muskego Lake	Waukesha County	762700	Plum Lake		0	0	1	0	0	0	0	1
Little Saint Germain Lake	Vilas County	1596300	Plum Lake		10	4	7	7	5	0	1	34
Little Star Lake (Town of Plum Lake)	Vilas County	1593200	Plum Lake		1	0	0	0	0	0	0	1
Long Lake (Vilas Cty)	Vilas County	1602300	Plum Lake		0	0	0	0	0	0	1	1
Lost Lake	Vilas County	1593400	Plum Lake		7	2	8	0	3	0	4	24
Madeline Lake	Vilas County	1544700	Plum Lake		0	1	0	0	1	0	0	2
Manitowish Lake	Vilas County	2329400	Plum Lake		5	0	2	1	1	0	1	10
Middle Sugarbush Lake	Vilas County	2317700	Plum Lake		0	0	0	0	1	0	0	1
Minoqua Lake	Oneida County	1542400	Plum Lake		7	0	2	1	4	0	1	15
Mississippi River	n/s	721000	Plum Lake		0	0	0	0	1	0	1	2
Muskellunge Lake	Vilas County	1596600	Plum Lake		8	0	9	0	2	0	1	20
Nebish Lake	Vilas County	1869700	Plum Lake		0	0	0	1	0	0	1	2
Oxbow Lake	Vilas County	2954800	Plum Lake		0	0	0	1	0	0	0	1
Palmer Lake	Vilas County	2962900	Plum Lake		0	1	3	0	1	0	0	5
Partridge Lake (Vilas Cty)	Vilas County	2341500	Plum Lake		0	0	0	0	1	0	0	1
Pelican Lake	Oneida County	1579900	Plum Lake		0	3	1	0	0	0	0	4
Pewaukee Lake	Waukesha County	772000	Plum Lake		0	1	1	0	0	0	0	2
Pickerel Lake (Oneida Cty)	Oneida County	1590400	Plum Lake		0	0	1	0	1	0	0	2
Pickerel Lake (Vilas Cty)	Vilas County	1619700	Plum Lake		5	0	4	1	0	0	0	10
Pine Lake (Waukesha Cty)	Waukesha County	779200	Plum Lake		0	0	0	1	0	0	0	1
Pokegema Lake	Vilas County	2320800	Plum Lake		0	0	1	0	0	0	0	1
Presque Isle Lake	Vilas County	2956300	Plum Lake		2	0	0	0	0	0	0	2
Rainbow Flowage	Oneida County	1593300	Plum Lake		0	3	2	0	2	0	0	7
Razorback Lake	Vilas County	1013800	Plum Lake		15	8	6	5	3	0	3	40
Rice Creek (Manitowish Chain)	Vilas County	2334500	Plum Lake		0	0	0	1	0	0	0	1
Roach Lake	Vilas County	2772500	Plum Lake		2	0	0	0	0	0	0	2
Round Lake	Vilas County	2334900	Plum Lake		0	0	4	0	0	0	0	4
Sevenmile Lake	Oneida County	1605800	Plum Lake		0	0	0	0	1	0	0	1
Snipe Lake	Vilas County	1018500	Plum Lake		2	0	1	0	0	0	0	3
Sparkling Lake	Vilas County	1881900	Plum Lake		2	0	0	0	0	0	0	2
Spider Lake	Vilas County	2329300	Plum Lake		0	0	0	0	1	0	0	1
Squaw Lake	Vilas County	2271600	Plum Lake		0	0	1	0	0	0	0	1
Squirrel Lake	Oneida County	1536300	Plum Lake		5	0	3	1	1	0	0	10
Star Lake	Vilas County	1593100	Plum Lake		28	12	14	7	8	0	7	76
Starrett Lake	Vilas County	1019800	Plum Lake		0	0	0	0	0	0	1	1
Stearns Lake	Vilas County	2323600	Plum Lake		0	0	1	0	0	0	0	1
Stella Lake	Vilas County	1594000	Plum Lake		0	0	2	0	1	0	0	3
Sturgeon Bay	Door County	88	Plum Lake		0	1	1	0	0	0	0	2
Sugar Camp Lake	Oneida County	1020400	Plum Lake		0	0	0	0	1	0	0	1
Sweeny Lake	Oneida County	1589600	Plum Lake		1	0	0	0	0	0	1	2
Thunder Lake	Oneida County	1618100	Plum Lake		0	0	0	0	1	0	0	1
Tom Doyle Lake	Oneida County	1586800	Plum Lake		2	0	0	0	0	0	0	2
Tomahawk Lake	Oneida County	1542700	Plum Lake		4	1	2	0	3	0	1	11

FROM Lake	County	FROM WBIC	TO Target Lake	2017 Occurrences	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Towards Lake	Vilas County	1022900	Plum Lake	0	0	1	0	0	0	0	0	1
Townline Lake	Oneida County	1609600	Plum Lake	0	1	0	0	0	0	0	0	1
Trout Lake	Vilas County	2331600	Plum Lake	5	3	1	6	6	0	0	2	23
Turtle Flambeau Flowage	Iron County	2294900	Plum Lake	2	0	0	0	0	0	0	0	2
Twin Lakes (South Twin)	Vilas County	1623700	Plum Lake	0	0	3	0	1	0	0	0	4
Twin Lakes (North Twin)	Vilas County	1623800	Plum Lake	7	1	3	0	1	0	0	0	12
Two Sisters Lake	Oneida County	1588200	Plum Lake	0	0	2	0	0	0	0	0	2
Upper Buckatambon Lake	Vilas County	1621800	Plum Lake	1	0	1	1	2	0	0	1	6
Upper Gresham Lake	Vilas County	2330800	Plum Lake	2	0	2	0	1	0	0	0	5
Upper Post Lake	Langlade County	399200	Plum Lake	0	1	0	0	0	0	0	0	1
Wabana Lake (MN)	Itasca Cty, MN	n/a	Plum Lake	0	0	0	1	0	0	0	0	1
White Birch Lake	Vilas County	2340500	Plum Lake	1	0	0	0	0	0	0	0	1
White Sand Lake (Lac du Flambeau)	Vilas County	2321100	Plum Lake	0	3	1	0	2	0	0	1	7
Whitefish Lake	Oneida County	1613500	Plum Lake	0	0	1	0	0	0	0	0	1
Wildcat Lake	Vilas County	2336800	Plum Lake	0	0	2	1	0	0	0	1	4
Willow Flowage	Oneida County	1528300	Plum Lake	0	2	0	0	1	0	0	0	3
Wisconsin River	n/a	1179900	Plum Lake	0	1	1	0	0	0	0	0	2
Wisconsin River Flowage C3 - Stevens Pt	Portage County	1409400	Plum Lake	0	0	0	0	1	0	0	0	1
Witches Lake	Vilas County	982500	Plum Lake	2	0	0	0	0	0	0	0	2
Wolf River	Winnebago County	241300	Plum Lake	0	0	0	0	1	0	0	0	1
Yellow Birch Lake	Vilas County	1599600	Plum Lake	0	1	0	0	0	0	0	0	1
Allequash Lake	Vilas County	2332400	Star Lake	2	1	1	1	1	0	0	0	6
Anvil Lake	Vilas County	968800	Star Lake	0	2	3	0	3	0	0	0	8
Arrowhead Lake	Vilas County	1541500	Star Lake	0	1	0	0	0	0	0	0	1
Baker Lake	Vilas County	1626400	Star Lake	2	0	0	0	0	0	0	0	2
Ballard Lake	Vilas County	2340700	Star Lake	51	17	34	25	14	0	0	7	148
Bear Lake	Oneida County	1527800	Star Lake	0	0	2	0	0	0	0	1	3
Bearskin Lake	Oneida County	1523600	Star Lake	0	1	0	0	0	0	0	1	2
Big Arbor Vitae Lake	Vilas County	1545600	Star Lake	2	5	7	1	1	0	0	0	16
Big Lake (Boulder Junction)	Vilas County	2334700	Star Lake	4	1	2	1	2	0	0	1	11
Big Lake (Cisco Chain)	Vilas County	2963800	Star Lake	2	0	0	0	0	0	0	0	2
Big Muskellunge Lake	Vilas County	1835300	Star Lake	3	2	4	1	1	0	0	0	11
Big Portage Lake	Vilas County	1629500	Star Lake	4	0	2	0	0	0	0	0	6
Big Saint Germain Lake	Vilas County	1591100	Star Lake	6	10	8	9	4	0	0	1	38
Big Sand Lake	Vilas County	1602600	Star Lake	4	0	6	0	2	0	0	1	13
Birch Lake	Vilas County	2311100	Star Lake	0	2	0	0	0	0	0	0	2
Black Oak Lake	Vilas County	1630100	Star Lake	6	0	1	1	1	0	0	0	9
Bolger Lake	Vilas County	973000	Star Lake	2	0	0	0	0	0	0	0	2
Bond Falls	Ontonagon Cty, MI	n/a	Star Lake	0	0	2	0	0	0	0	0	2
Boot Lake (Oconto Cty)	Oconto County	418700	Star Lake	0	1	0	0	0	0	0	0	1
Boot Lake (Vilas Cty)	Vilas County	1619100	Star Lake	0	1	0	0	1	0	0	0	2
Boulder Lake (Vilas Cty)	Vilas County	2338300	Star Lake	1	0	0	0	0	0	0	0	1
Boulder Lake (Langlade Cty)	Langlade County	491800	Star Lake	0	1	0	0	0	0	0	0	1
Brandy Lake	Vilas County	1541300	Star Lake	0	0	1	0	0	0	0	0	1
Broken Bow Lake	Vilas County	1837300	Star Lake	0	1	0	0	0	0	0	0	1
Buffalo Lake	Vilas County	974200	Star Lake	0	1	0	0	0	0	0	0	1
Butternut Lake	Forest County	692400	Star Lake	2	2	0	0	1	0	0	0	5
Carrol Lake	Vilas County	1544800	Star Lake	4	1	0	1	0	0	0	0	6
Catfish Lake	Vilas County	1603700	Star Lake	0	0	2	1	1	0	0	0	4
Cedar Lake	Iron County	2309700	Star Lake	0	0	1	0	0	0	0	0	1
Cisco Chain	Vilas County	n/a	Star Lake	2	1	1	0	0	0	0	0	4
Clear Lake (Oneida Cty)	Oneida County	977500	Star Lake	0	0	0	0	1	0	0	0	1
Clear Lake (Manitowish Chain)	Vilas County	2329000	Star Lake	2	0	1	0	0	0	0	0	3
Clearwater Lake	Oneida County	1616400	Star Lake	0	2	0	0	0	0	0	0	2
Crab Lake	Vilas County	2953500	Star Lake	4	0	0	0	0	0	0	0	4
Crawling Stone Lake	Vilas County	2322800	Star Lake	0	1	0	0	0	0	0	0	1
Dam Lake	Oneida County	1596900	Star Lake	3	1	0	0	0	0	0	0	4
Deer Lake	Vilas County	980600	Star Lake	0	0	1	0	0	0	0	0	1
Deerskin Lake	Vilas County	1601300	Star Lake	2	0	0	0	1	0	0	0	3
Diamond Lake	Vilas County	1844700	Star Lake	0	0	1	0	0	0	0	0	1
Dorothy Dunn Lake	Vilas County	1845600	Star Lake	0	0	2	1	0	0	0	0	3
Dorothy Lake	Oneida County	981200	Star Lake	0	0	1	0	1	0	0	0	2
Duck Lake	Vilas County	1599900	Star Lake	0	1	0	1	2	0	0	0	4
Dunn Lake (Washburn Cty)	Washburn County	2709800	Star Lake	0	0	1	0	0	0	0	0	1
Dunn Lake (Vilas Cty)	Vilas County	2960000	Star Lake	0	0	0	0	1	0	0	0	1
Eagle River Chain	Vilas County	1599500	Star Lake	4	6	6	2	6	1	0	2	27
Escanaba Lake	Vilas County	2339900	Star Lake	12	4	4	2	1	0	0	0	23
Fence Lake	Vilas County	2323000	Star Lake	0	0	1	0	0	0	0	0	1

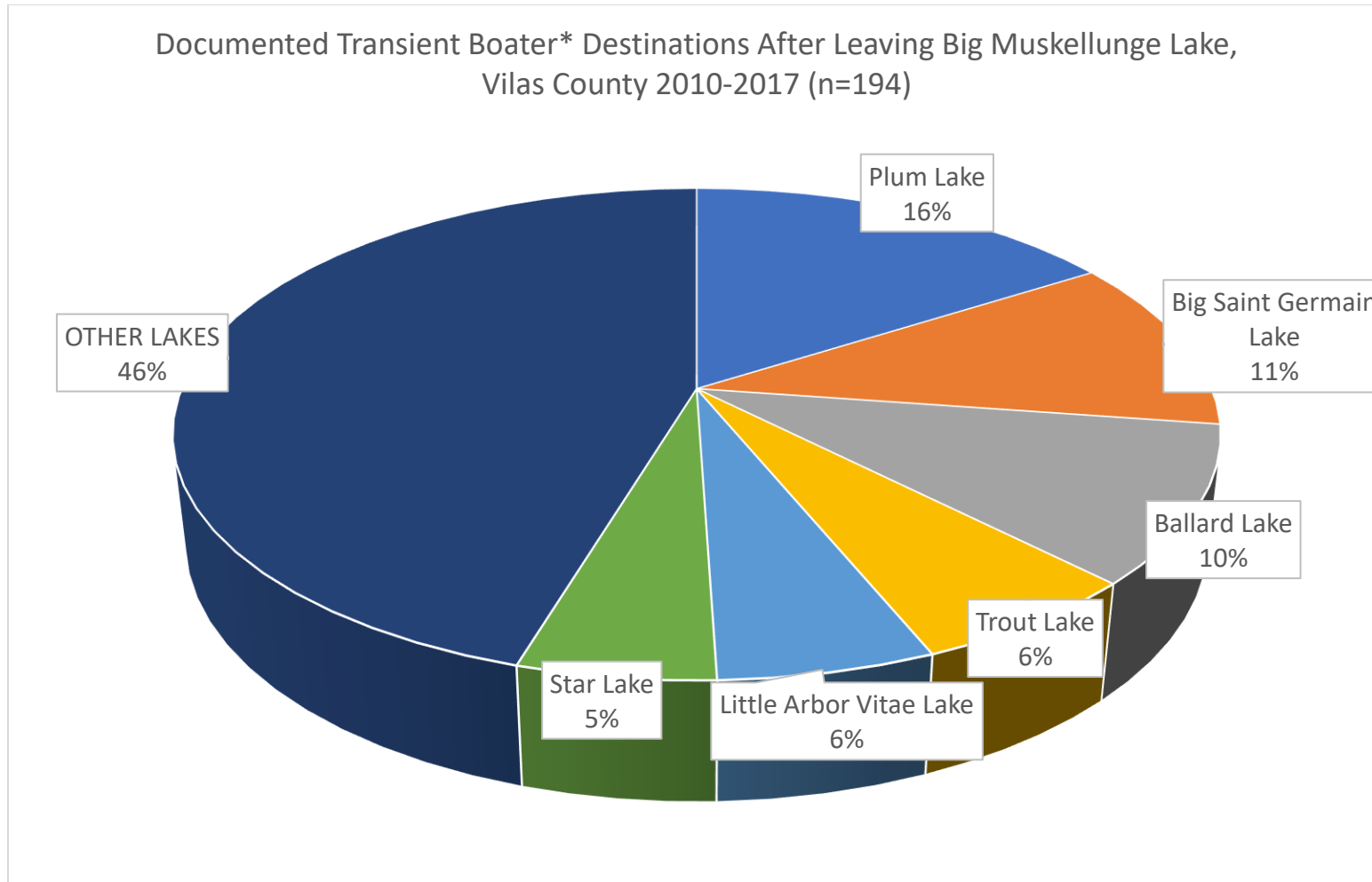
FROM Lake	County	FROM WBIC	TO Target Lake	2017 Occurrences	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Fishtrap Lake	Vilas County	2343200	Star Lake		0	0	0	0	2	0	0	2
Flambeau Lake	Vilas County	2320300	Star Lake		2	1	3	1	0	0	0	7
Forest Lake	Vilas County	2762200	Star Lake		2	1	2	0	3	0	1	9
Found Lake	Vilas County	1593800	Star Lake		6	2	2	1	1	0	2	14
Gilmore Lake	Washburn County	2695800	Star Lake		2	0	0	0	0	0	0	2
Hagerman Lake	Iron Cty, MI	n/a	Star Lake		2	0	0	0	0	0	0	2
Harris Lake	Vilas County	2958300	Star Lake		2	0	0	0	0	0	0	2
Hasbrook Lake	Oneida County	1389100	Star Lake		0	0	1	0	0	0	0	1
High Lake	Vilas County	2344000	Star Lake		2	0	3	0	1	0	0	6
Hunter Lake	Vilas County	991700	Star Lake		2	0	0	0	0	0	0	2
Hunters Lake	Waukesha County	826300	Star Lake		0	1	0	0	0	0	0	1
Iron Lake	Iron Cty, MI	n/a	Star Lake		0	0	1	0	0	0	0	1
Irving Lake	Vilas County	2340900	Star Lake		35	10	22	13	15	0	1	96
Island Lake	Vilas County	2334400	Star Lake		0	0	0	0	1	0	0	1
Kentuck Lake	Vilas County	716800	Star Lake		0	1	2	0	2	0	0	5
Lac Vieux Desert	Vilas County	1631900	Star Lake		2	1	1	1	0	0	0	5
Lake Geneva	Walworth County	758300	Star Lake		0	0	1	0	0	0	0	1
Lake Laura	Vilas County	995200	Star Lake		9	1	7	4	1	0	0	22
Lake Mendota	Dane County	805400	Star Lake		2	2	0	0	0	0	1	5
Lake Michigan	n/a	20	Star Lake		2	0	1	1	1	0	0	5
Lake Monona	Dane County	804600	Star Lake		0	1	0	0	0	0	0	1
Lake Nokomis	Lincoln County	1516300	Star Lake		0	0	0	0	1	0	0	1
Lake of the Hills	Vilas County	1620300	Star Lake		0	0	1	0	0	0	0	1
Lake Wausau	Marathon County	1437500	Star Lake		0	1	1	1	0	0	0	3
Lake Winnebago	Winnebago County	131100	Star Lake		2	1	0	0	1	0	0	4
Little Arbor Vitae Lake	Vilas County	1545300	Star Lake		4	4	8	2	1	0	0	19
Little John Lake	Vilas County	2332300	Star Lake		0	1	1	0	2	0	0	4
Little Muskie Lake	Vilas County	1542100	Star Lake		0	0	1	0	0	0	0	1
Little Saint Germain Lake	Vilas County	1596300	Star Lake		8	5	6	3	5	0	2	29
Little Star Lake (Manitowish Chain)	Vilas County	2334300	Star Lake		1	0	0	0	0	0	0	1
Little Star Lake (Town of Plum Lake)	Vilas County	1593200	Star Lake		0	0	0	0	1	0	0	1
Little Trout Lake	Vilas County	2321600	Star Lake		0	1	0	0	1	0	0	2
Long Lake (Vilas Cty)	Vilas County	1602300	Star Lake		0	1	0	0	0	0	0	1
Long Lake (Waupaca Cty)	Waupaca County	261200	Star Lake		2	0	0	0	0	0	0	2
Long Lake (Fond du Lac Cty)	Fond du Lac County	38700	Star Lake		0	1	0	0	0	0	0	1
Loon Lake	Vilas County	1001600	Star Lake		0	1	0	0	0	0	0	1
Lost Lake	Vilas County	1593400	Star Lake		5	5	9	1	3	0	0	23
Lower Nine Mile Lake	Vilas County	1605200	Star Lake		0	0	0	0	1	0	0	1
Lower Post Lake	Langlade County	397100	Star Lake		0	0	1	0	0	0	0	1
Lynx Lake	Vilas County	2954300	Star Lake		0	0	0	0	0	0	2	2
Manitowish Lake	Vilas County	2329400	Star Lake		4	2	0	1	0	0	0	7
Mann Lake	Vilas County	2332000	Star Lake		0	0	0	0	1	0	0	1
Mercer Lake	Oneida County	1538900	Star Lake		0	1	0	0	0	0	0	1
Minnetonka Lake	Hennepin Cty, MN	n/a	Star Lake		0	0	0	0	1	0	0	1
Minoqua Lake	Oneida County	1542400	Star Lake		10	2	0	0	1	0	1	14
Mississippi River	n/a	721000	Star Lake		0	0	1	0	1	0	0	2
Moon Lake	Vilas County	1005800	Star Lake		0	0	1	0	0	0	0	1
Muskellunge Lake	Vilas County	1596600	Star Lake		8	3	4	2	1	0	1	19
Nebish Lake	Vilas County	1869700	Star Lake		4	0	3	0	0	0	0	7
North Bass Lake	Iron County	1868900	Star Lake		0	0	0	0	1	0	0	1
Oconto River	Oconto County	440200	Star Lake		0	1	0	0	0	0	0	1
Oneida Lake	Oneida County	1518200	Star Lake		2	0	0	0	0	0	0	2
Ottawa Lake	Waukesha County	822200	Star Lake		0	0	1	0	0	0	0	1
Palmer Lake	Vilas County	2962900	Star Lake		0	2	1	0	4	0	0	7
Partridge Lake (Vilas Cty)	Vilas County	2341300	Star Lake		0	1	2	1	1	0	0	5
Partridge Lake (Waupaca Cty)	Waupaca County	253800	Star Lake		0	0	1	1	0	0	0	2
Pelican Lake	Oneida County	1579900	Star Lake		2	1	2	2	1	0	0	8
Pewaukee Lake	Waukesha County	772000	Star Lake		2	0	0	0	0	0	0	2
Pickeral Lake (Vilas Cty)	Vilas County	1619700	Star Lake		1	4	3	0	0	0	1	9
Pioneer Lake	Vilas County	1623400	Star Lake		0	1	0	0	2	0	0	3
Plum Lake	Vilas County	1592400	Star Lake		45	17	23	13	10	0	4	112
Presque Isle Lake	Vilas County	2956300	Star Lake		4	0	1	0	0	0	0	5
Rainbow Flowage	Oneida County	1595300	Star Lake		8	2	2	0	2	0	0	14
Rainbow Lake	Vilas County	2310800	Star Lake		0	0	0	1	0	0	0	1
Razorback Lake	Vilas County	1013800	Star Lake		11	10	12	3	1	0	0	37
Rest Lake	Vilas County	2327500	Star Lake		0	1	1	0	0	0	0	2
Rush Lake	Vilas County	2343600	Star Lake		0	0	1	0	0	0	0	1
Sand Lake	Oneida County	1597000	Star Lake		1	1	0	0	0	0	0	2

FROM Lake	County	FROM WBIC	TO Target Lake	2017 Occurrences	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Scattering Rice Lake	Vilas County	1600300	Star Lake	0	0	0	0	1	0	0	0	1
Silver Lake	Vilas County	1599800	Star Lake	0	1	0	0	1	0	0	0	2
Snipe Lake	Vilas County	1018500	Star Lake	0	2	2	0	0	0	0	0	4
South Turtle Lake	Vilas County	2310200	Star Lake	0	0	2	0	0	0	0	0	2
Sparkling Lake	Vilas County	1881900	Star Lake	2	1	0	0	0	0	0	0	3
Spider Lake	Vilas County	2329300	Star Lake	2	0	0	0	0	0	0	0	2
Squirrel Lake	Oneida County	1536300	Star Lake	0	0	4	0	2	0	0	0	6
Stanley Lake (MI)	Iron Cty, MI	n/s	Star Lake	0	0	0	0	2	0	0	0	2
Stella Lake	Vilas County	1594000	Star Lake	0	0	1	0	0	0	0	0	1
Stormy Lake	Vilas County	1020300	Star Lake	2	0	2	0	0	0	0	0	4
Sugar Lake	Rusk County	2356000	Star Lake	0	1	0	0	0	0	0	0	1
Sweeny Lake	Oneida County	1589600	Star Lake	2	0	1	0	0	0	0	0	3
Snyder Lake	Vilas County	1018700	Star Lake	0	0	1	0	0	0	0	0	1
Tamarack Lake	Vilas County	2310900	Star Lake	0	0	0	0	1	0	0	0	1
Tenderfoot Lake	Vilas County	2962400	Star Lake	0	0	0	0	3	0	0	0	3
Eagle River Three Lakes Chain	Oneida County	1599500	Star Lake	1	0	0	1	2	0	0	0	4
Tomahawk Lake	Oneida County	1542700	Star Lake	0	0	1	0	4	0	0	0	5
Trout Lake	Vilas County	2331600	Star Lake	12	6	3	1	5	0	0	0	27
Turtle Flambeau Flowage	Iron County	2294900	Star Lake	0	0	0	0	1	0	0	0	1
Twin Lakes (North Twin)	Vilas County	1623800	Star Lake	12	2	2	2	7	0	0	0	25
Twin Lakes (South Twin)	Vilas County	1623700	Star Lake	2	0	2	2	1	0	0	0	7
Two Sisters Lake	Oneida County	1588200	Star Lake	0	1	0	0	0	0	0	0	1
Upper Buckatabon Lake	Vilas County	1621800	Star Lake	8	6	9	1	4	0	0	0	28
Upper Gresham Lake	Vilas County	2330800	Star Lake	0	0	0	1	1	0	0	0	2
White Birch Lake	Vilas County	2340500	Star Lake	0	0	0	1	1	0	0	0	2
White Clay Lake	Shawano County	236400	Star Lake	0	0	0	0	1	0	0	0	1
White Sand Lake (Lac du Flambeau)	Vilas County	2321100	Star Lake	6	3	3	1	1	0	0	0	14
Wildcat Lake	Vilas County	2336800	Star Lake	6	0	0	0	0	0	0	0	6
Willow Lake	Oneida County	1529500	Star Lake	0	0	1	0	0	0	0	0	1
Wilson Lake	Iron County	2297000	Star Lake	2	0	0	0	0	0	0	0	2
Wisconsin River	n/s	1179900	Star Lake	2	1	2	0	0	0	0	0	5
Yellow Birch Lake	Vilas County	1599600	Star Lake	0	0	0	0	4	0	0	0	4
Allequash Lake	Vilas County	2332400	Trout Lake	12	13	1	0	0	0	0	0	26
Annabelle Lake	Vilas County	2953800	Trout Lake	2	0	0	0	0	0	0	0	2
Ballard Lake	Vilas County	2340700	Trout Lake	2	1	0	0	0	0	0	0	3
Bass Lake	Oneida County	1566200	Trout Lake	2	0	0	0	0	0	0	0	2
Bay of Green Bay	Brown County	70	Trout Lake	2	0	1	0	0	0	0	0	3
Bearskin Lake	Oneida County	1523600	Trout Lake	0	1	0	0	0	0	0	0	1
Big Arbor Vitae Lake	Vilas County	1545600	Trout Lake	10	2	3	0	0	0	0	0	15
Big Gibson Lake	Vilas County	1835200	Trout Lake	0	1	0	0	0	0	0	0	1
Big Lake (Boulder Junction)	Vilas County	2334700	Trout Lake	6	1	1	0	0	0	0	0	8
Big Lake (Polk Cty)	Polk County	2615900	Trout Lake	2	0	0	0	0	0	0	0	2
Big Muskellunge Lake	Vilas County	1839300	Trout Lake	10	6	1	0	0	0	0	0	17
Big Saint Germain Lake	Vilas County	1591100	Trout Lake	4	1	1	0	0	0	0	0	6
Big Sand Lake	Vilas County	1602600	Trout Lake	2	0	0	0	0	0	0	0	2
Black Hawk Lake (? State)	? State	n/s	Trout Lake	2	0	0	0	0	0	0	0	2
Boulder Lake (Vilas Cty)	Vilas County	2338300	Trout Lake	8	0	0	1	0	0	0	0	9
Butternut Lake	Forest County	692400	Trout Lake	2	0	0	0	0	0	0	0	2
Carrol Lake	Vilas County	1544800	Trout Lake	0	0	1	0	0	0	0	0	1
Cisco Lake	Bayfield County	2899200	Trout Lake	0	0	1	0	0	0	0	0	1
Clear Lake (Oneida Cty)	Oneida County	977500	Trout Lake	0	0	2	0	0	0	0	0	2
Clear Lake (Polk Cty)	Polk County	2623500	Trout Lake	2	0	0	0	0	0	0	0	2
Clear Water Lake (? State)	? State	n/s	Trout Lake	2	0	0	0	0	0	0	0	2
Crab Lake	Vilas County	2953500	Trout Lake	0	0	2	0	0	0	0	0	2
Crawling Stone Lake	Vilas County	2322800	Trout Lake	2	0	0	0	0	0	0	0	2
Crescent Lake	Oneida County	1564200	Trout Lake	2	0	0	0	0	0	0	0	2
Deep Wood Lake	Lanlade County	1445100	Trout Lake	0	0	1	0	0	0	0	0	1
Eagle River Chain	Vilas County	1599500	Trout Lake	2	0	0	0	0	0	0	0	2
Escanaba Lake	Vilas County	2339900	Trout Lake	4	0	0	0	0	0	0	0	4
Fence Lake	Vilas County	2323000	Trout Lake	6	1	2	0	0	0	0	0	9
Fish Lake	Dane County	985100	Trout Lake	2	0	0	0	0	0	0	0	2
Fishtrap Lake	Vilas County	2343200	Trout Lake	2	0	0	0	0	0	0	0	2
Found Lake	Vilas County	1593800	Trout Lake	0	1	0	0	0	0	0	0	1
Gile Flowage	Iron County	2942300	Trout Lake	2	0	0	0	0	0	0	0	2
Gresham Creek	Vilas County	2330200	Trout Lake	2	0	0	0	0	0	0	0	2
High Lake	Vilas County	2344000	Trout Lake	0	1	1	0	0	0	0	0	2
Horsehead Lake	Vilas County	2953100	Trout Lake	0	0	1	0	0	0	0	0	1
Irving Lake	Vilas County	2340900	Trout Lake	2	0	0	0	0	0	0	0	2
Jag Lake	Vilas County	1855900	Trout Lake	0	1	0	0	0	0	0	0	1

FROM Lake	County	FROM WBIC	TO Target Lake	2017 Occurrences	2016	2015	2014	2013	2012	2011	2010	TOTAL Occurrences
Lac Vieux Desert	Vilas County	1631900	Trout Lake	2	0	0	0	0	0	0	0	2
Lake Catherine (IL)	Lake Cty, IL	n/a	Trout Lake	2	0	0	0	0	0	0	0	2
Lake Gogebic (MI)	Gogebic Cty, MI	n/a	Trout Lake	2	0	0	0	0	0	0	0	2
Lake Mendota	Dane County	805400	Trout Lake	2	0	0	0	0	0	0	0	2
Lake Michigan	Brown County	20	Trout Lake	2	0	0	0	0	0	0	0	2
Lake Nokomis	Lincoln County	1516300	Trout Lake	2	0	0	0	0	0	0	0	2
Lake Vitaver (? State)	? state	n/a	Trout Lake	2	0	0	0	0	0	0	0	2
Lake Wass (? State)	? state	n/a	Trout Lake	2	0	0	0	0	0	0	0	2
Lake Winnebago	Winnebago County	1311100	Trout Lake	2	0	1	0	0	0	0	0	3
Little Arbor Vitae Lake	Vilas County	1545300	Trout Lake	6	0	1	0	0	0	0	0	7
Little John Lake	Vilas County	2332300	Trout Lake	2	0	4	1	0	0	0	0	7
Little Saint Germain Lake	Vilas County	1596300	Trout Lake	8	0	2	0	0	0	0	0	10
Lost Lake	Vilas County	1593400	Trout Lake	0	0	1	0	0	0	0	0	1
Manitowish Lake	Vilas County	2329400	Trout Lake	0	0	1	0	0	0	0	0	1
Manitowish River	Vilas County	2324400	Trout Lake	2	0	0	0	0	0	0	0	2
Mann Lake	Vilas County	2332000	Trout Lake	0	3	0	0	0	0	0	0	3
Minocqua Lake	Oneida County	1542400	Trout Lake	2	1	0	1	0	1	0	0	5
Muskellunge Lake	Vilas County	1596600	Trout Lake	2	0	0	0	0	0	0	0	2
North Turtle Lake	Vilas County	2310400	Trout Lake	0	0	2	0	0	0	0	0	2
Oxbow Lake	Vilas County	2954800	Trout Lake	2	0	0	0	0	0	0	0	2
Palmer Lake	Vilas County	2962900	Trout Lake	2	0	0	0	0	0	0	0	2
Pine Lake (Iron Cty)	Iron County	2949200	Trout Lake	0	0	1	0	0	0	0	0	1
Plum Lake	Vilas County	1592400	Trout Lake	4	0	3	0	0	0	0	0	7
Rainbow Flowage	Oneida County	1595300	Trout Lake	8	0	1	0	0	0	0	0	9
Razorback Lake	Vilas County	1013800	Trout Lake	0	1	0	0	0	0	0	0	1
Spring Lake	Vilas County	2964800	Trout Lake	0	0	2	0	0	0	0	0	2
Squirrel Lake	Oneida County	1536300	Trout Lake	2	0	2	0	0	0	0	0	4
Star Lake	Vilas County	1593100	Trout Lake	6	3	2	0	0	1	0	0	12
Sturgeon Bay	Door County	88	Trout Lake	2	0	0	0	0	0	0	0	2
Thunder Lake	Oneida County	1618100	Trout Lake	2	0	0	0	0	0	0	0	2
Tomahawk Lake	Oneida County	1542700	Trout Lake	4	0	0	0	0	1	0	0	5
Turtle Flambeau Flowage	Iron County	2294900	Trout Lake	0	1	1	0	0	0	0	0	2
Twin Island Lake	Vilas County	2959300	Trout Lake	0	1	0	0	0	0	0	0	1
Twin Lakes (North Twin)	Vilas County	1623800	Trout Lake	2	0	0	0	0	0	0	0	2
Upper Buckatabon Lake	Vilas County	1621800	Trout Lake	0	1	0	0	0	0	0	0	1
Upper Gresham Lake	Vilas County	2330800	Trout Lake	2	0	1	0	0	0	0	0	3
Weber Lake	Iron County	2909000	Trout Lake	2	0	0	0	0	0	0	0	2
White Sand Lake (Lac du Flambeau)	Vilas County	2321100	Trout Lake	4	0	3	0	0	0	0	0	7
Wildcat Lake	Vilas County	2336800	Trout Lake	6	3	0	0	0	0	0	0	9
Wisconsin River	n/a	1179900	Trout Lake	0	0	2	0	0	0	0	0	2
			TOTALS	942	447	607	275	321	4	0	77	2673

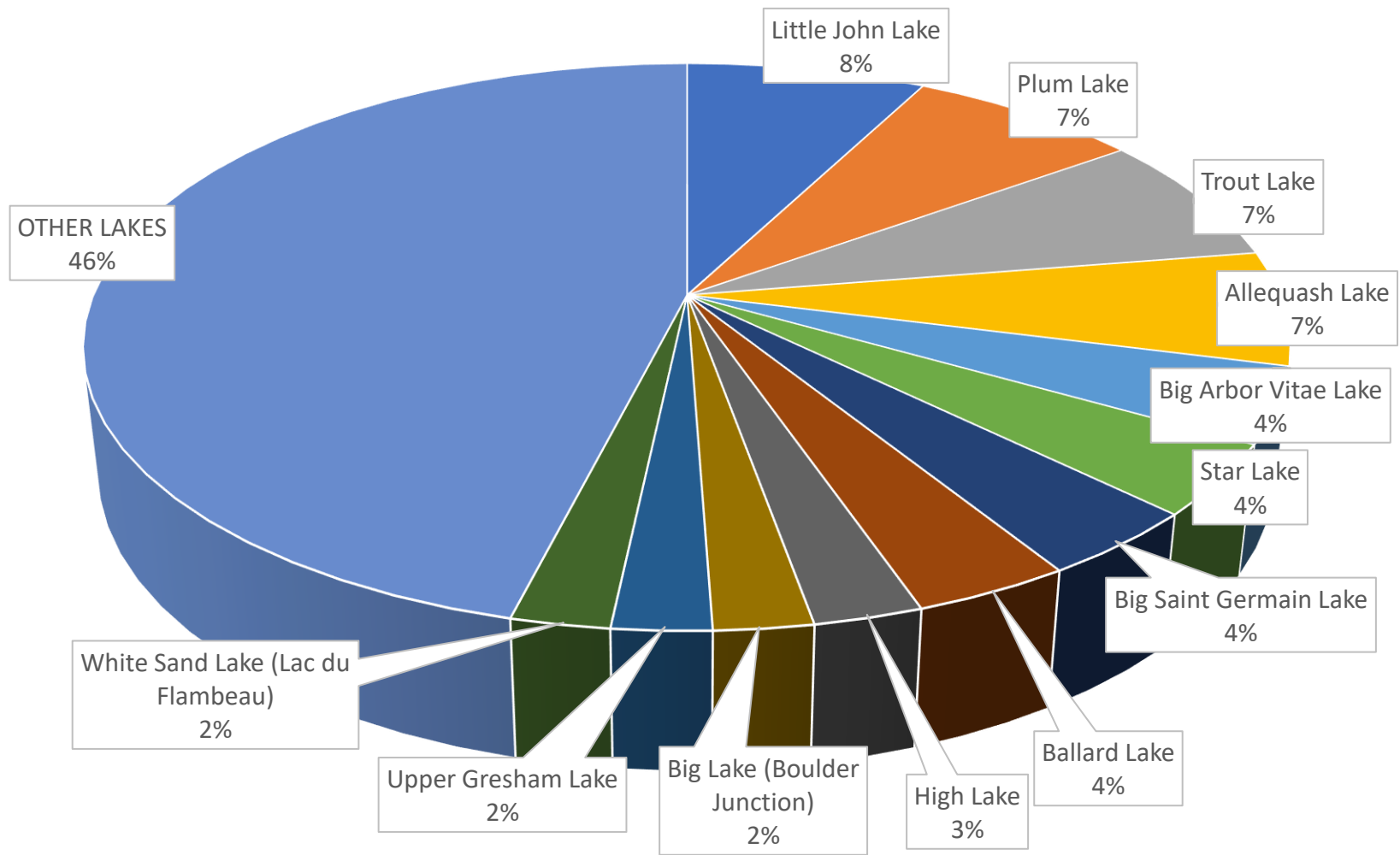
Appendix 5: Boater Travel Charts

Big Muskellunge Data



*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

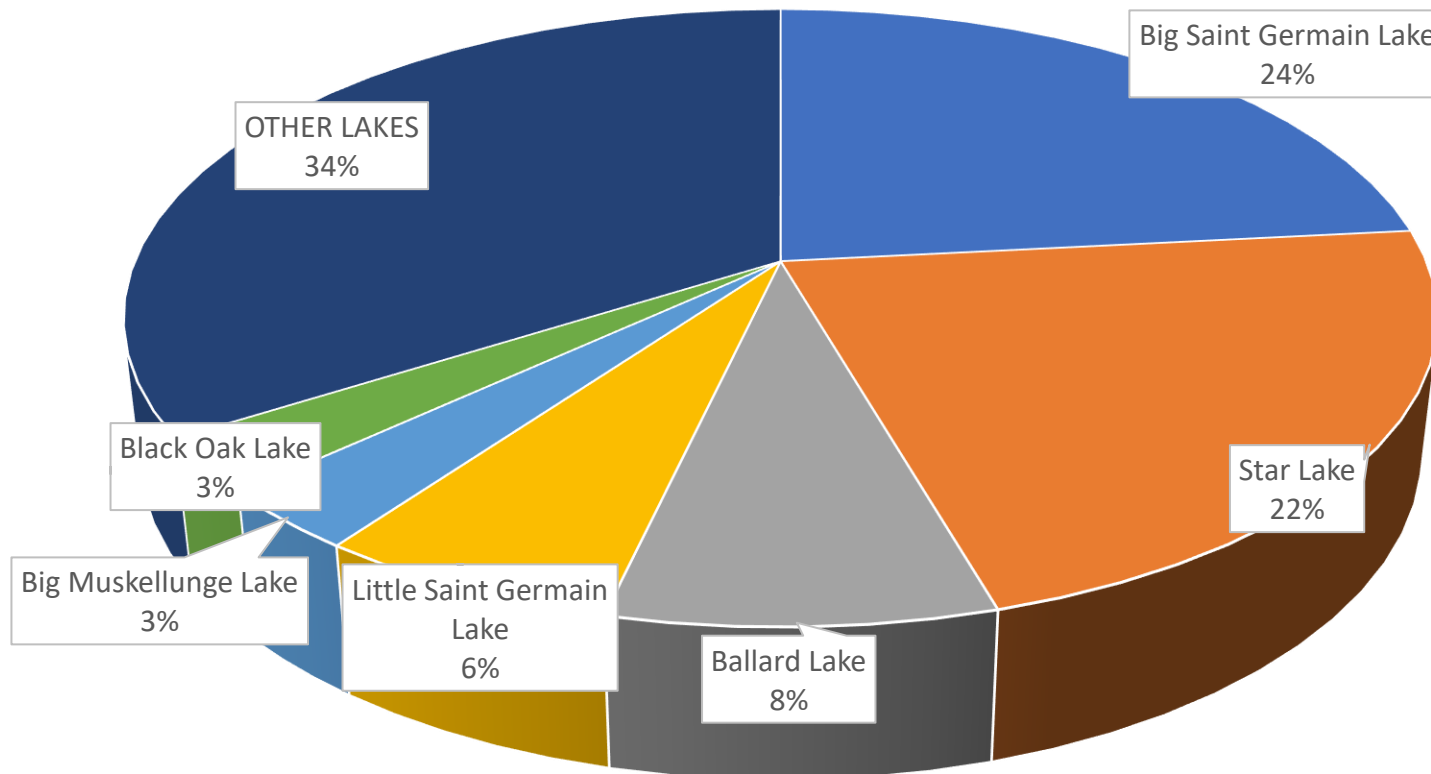
Documented Previous Lakes Visited by Transient Boaters* Prior to Launching at Big Muskellunge Lake, Vilas County 2010-2017 (n = 445)



*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

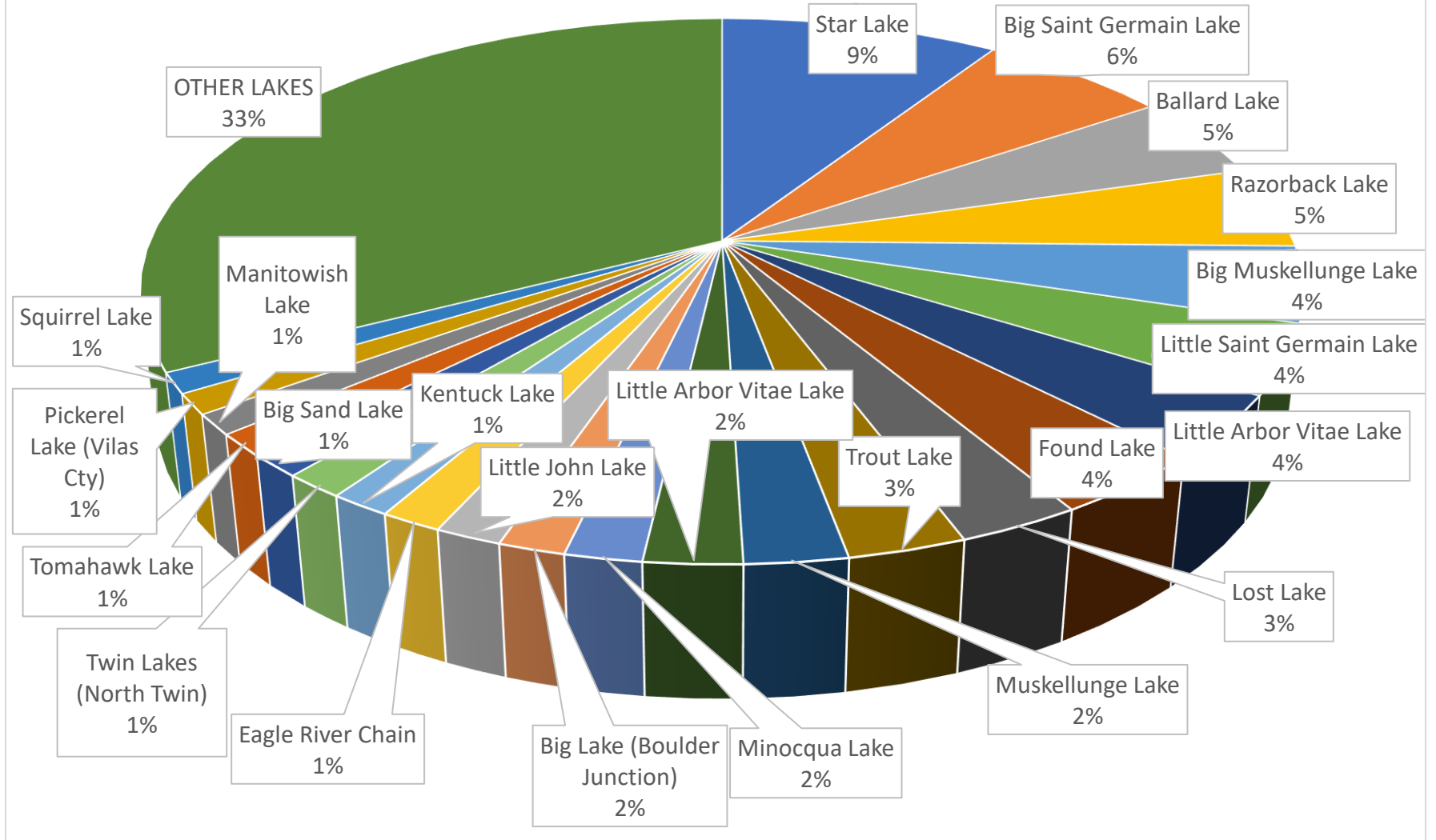
Plum Lake Data

Documented Transient Boater* Destinations After Leaving Plum Lake, Vilas County, 2010-2017 (n=347)



*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

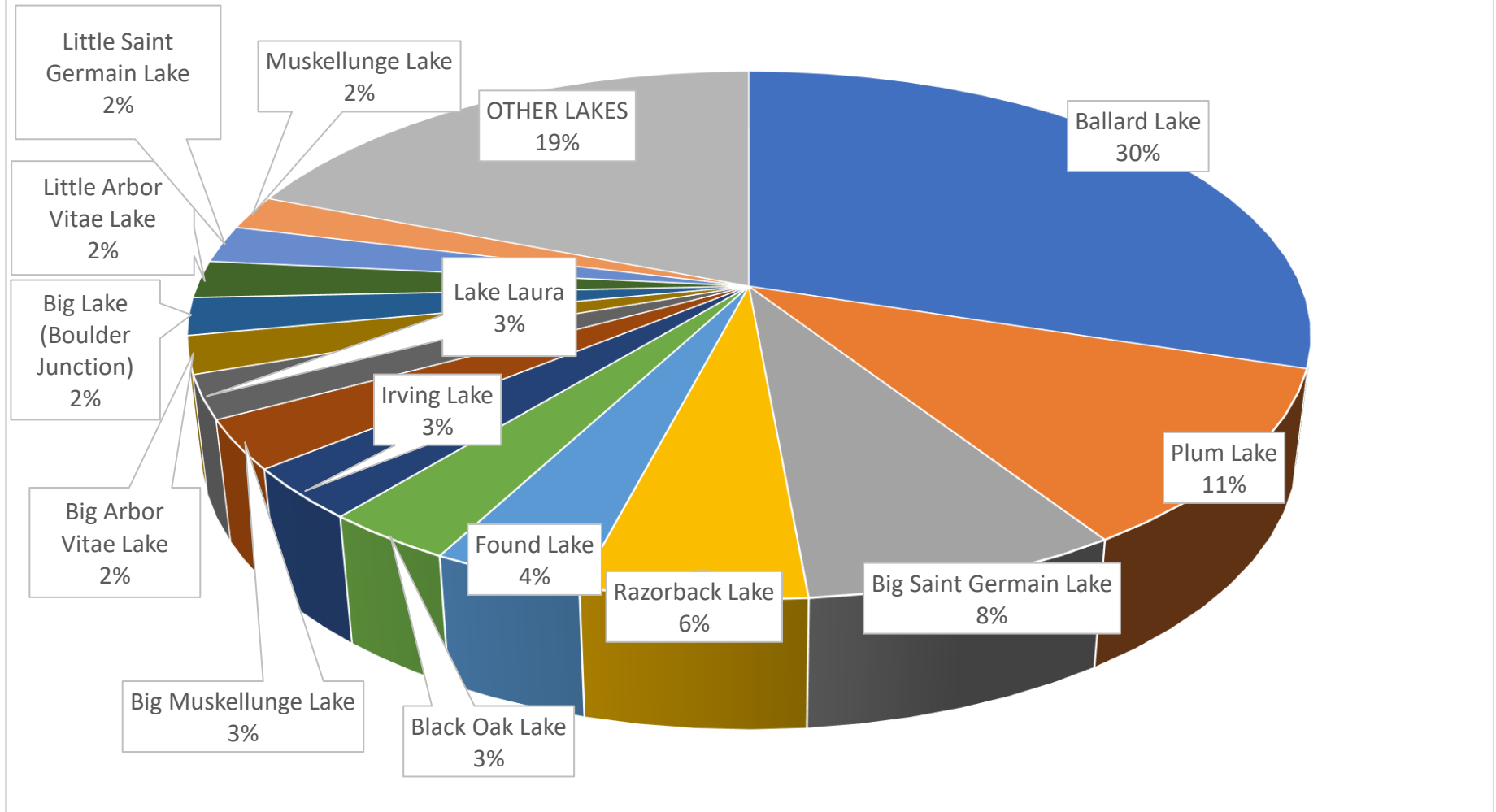
Documented Previous Lakes Visited by Transient Boaters* Prior to Launching at Plum Lake, Vilas County 2010-2017 (n = 826)



*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

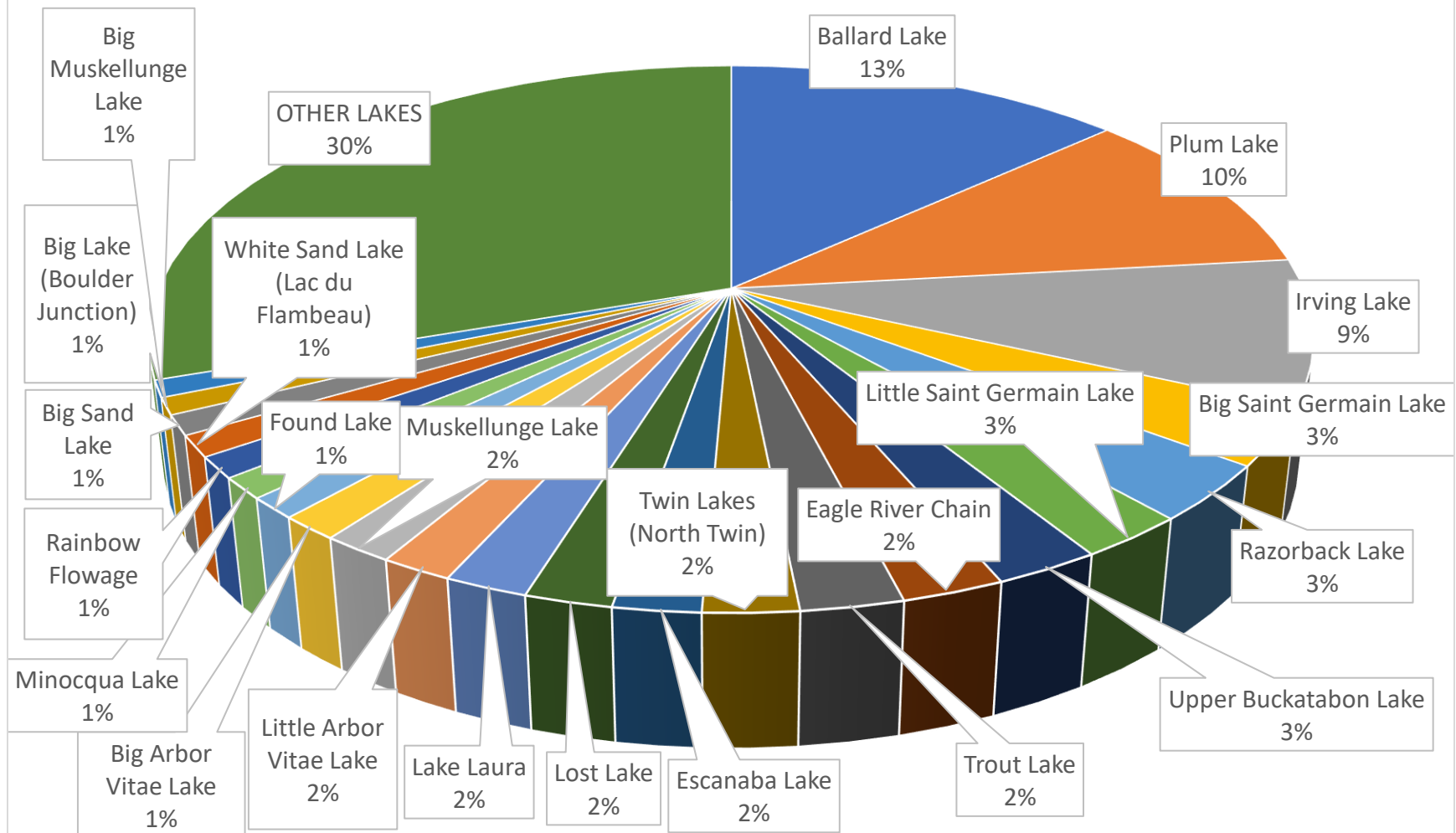
Star Lake

Documented Transient Boater* Destinations After Leaving Star Lake, Vilas County, 2010-2017
(n=568)



*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

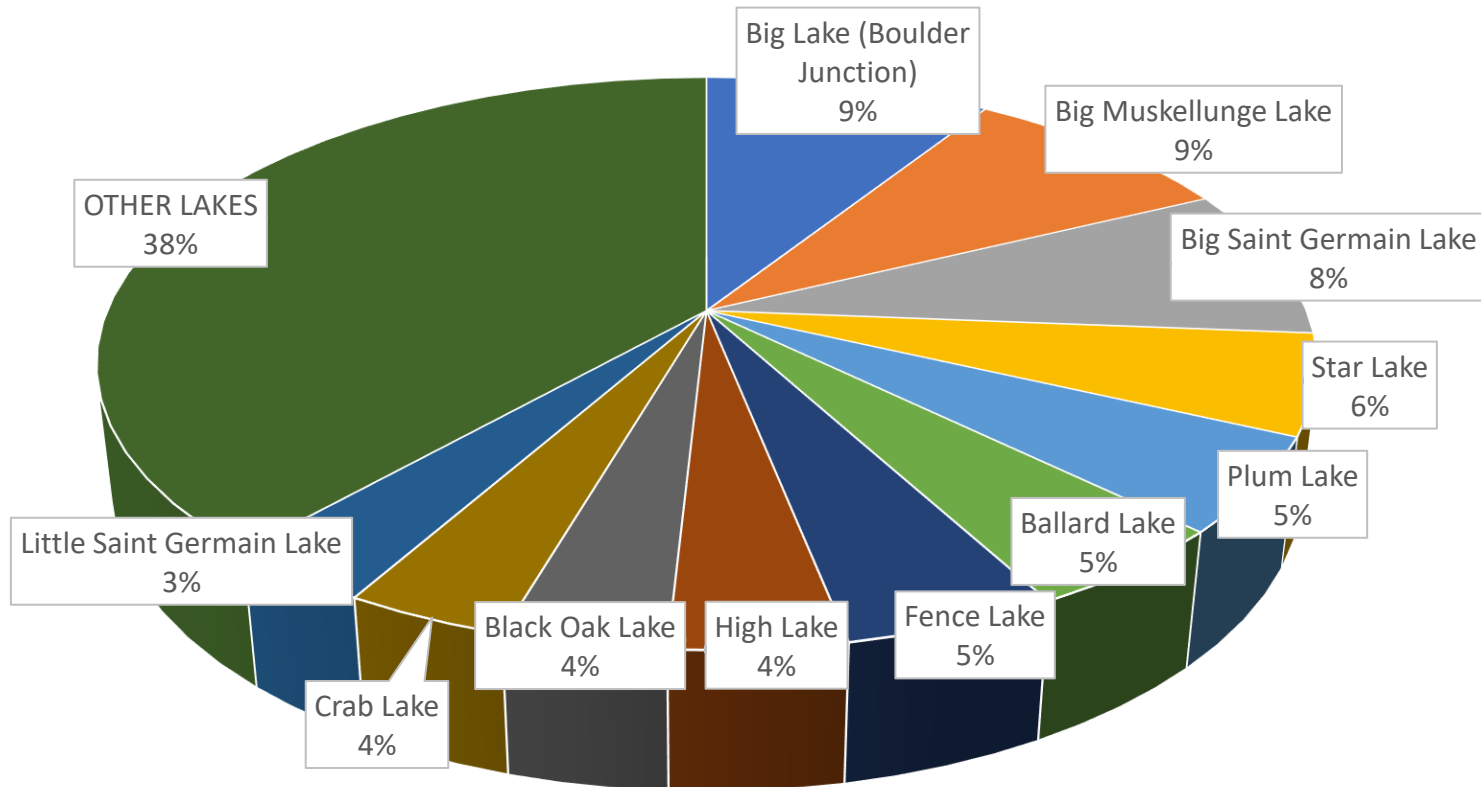
Documented Previous Lakes Visited by Transient Boaters* Prior to Launching at Star Lake, Vilas County 2010-2017 (n = 1,119)



*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

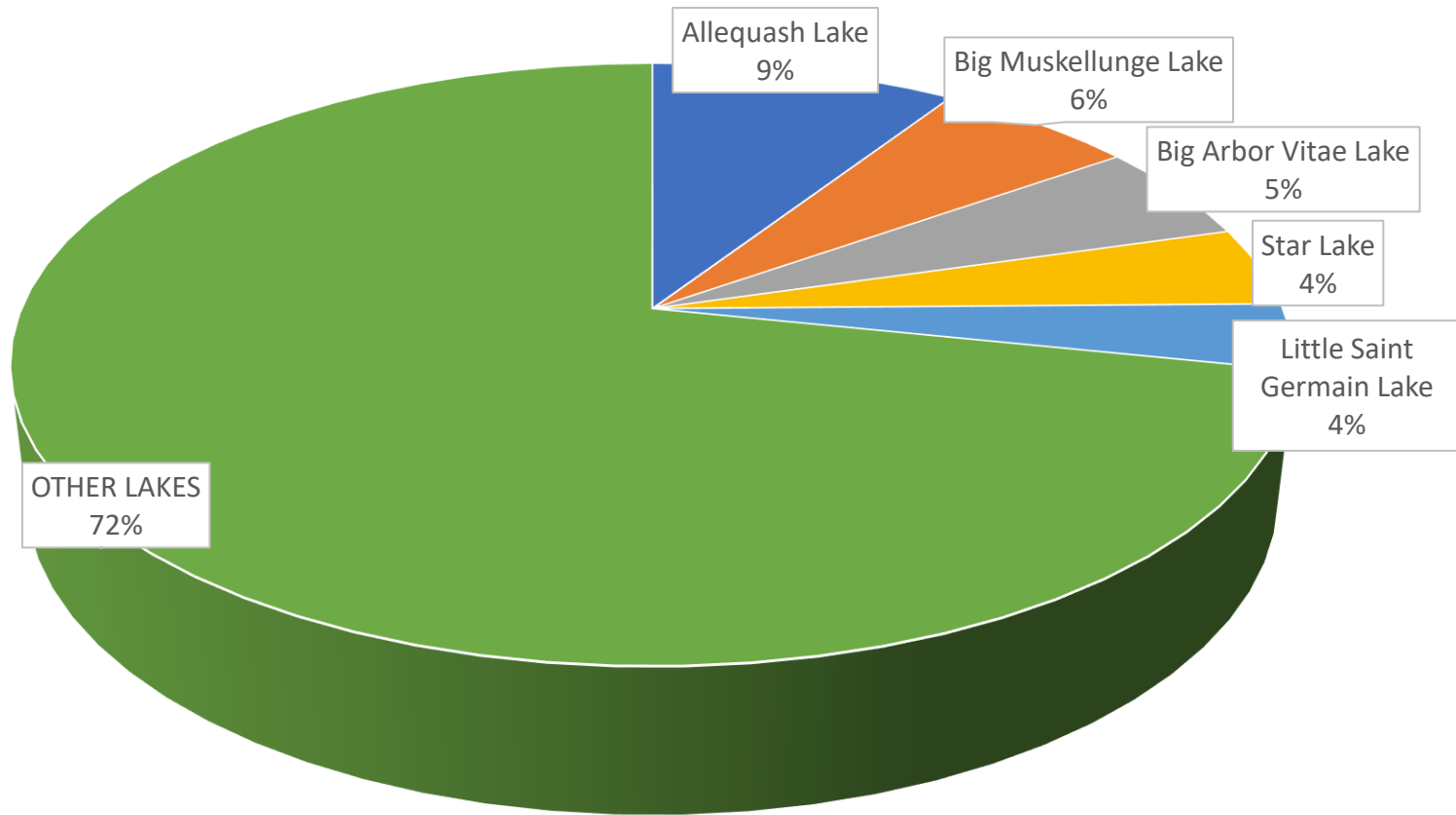
Trout Lake

Documented Transient Boater* Destinations After Leaving Trout Lake, Vilas County 2010-2017 (n=354)



*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

Documented Previous Lakes Visited by Transient Boaters* Prior to Launching at Trout Lake, Vilas County 2010-2017 (n = 283)



*Transient boaters = boaters who reported using their boat on another waterbody in the past 5 days.

APPENDIX 6: 2018 Boat Decontamination Program Budget – All Sources

	Cash Costs								In-Kind Costs		TOTALS
	Lumberjack RC&D	WI DNR	UW-Oshkosh	Vilas County	Headwaters Chapter Muskies Inc	Musky Clubs Alliance	Walk-About Paddle & Apparel	Other Donations	UW-Oshkosh	Vilas County	
Decon Unit Purchase	\$10,000.00		\$837.00								\$10,837.00
2nd Muffler, Cone holder, other Decon Unit Accessories		\$445.00									\$445.00
Decon Unit Nozzle Attachments		\$287.16									\$287.16
Maintenance on Unit				\$0.00							\$0.00
Signage on Decon Unit		\$235.00									\$235.00
Mobile signage for Decon Sites		\$275.00									\$275.00
Operator safety equipment		\$398.87		\$54.60							\$453.47
Staff Time & Operations Costs - Unit Operators		\$6,900.00	\$2,900.00	\$79.57					\$501.40	\$339.30	\$10,720.27
Staff Time - Administration (grants, reports, supervision, data analysis)		\$729.97							\$2,400.00	\$3,567.83	\$6,697.80
Volunteer Time - Administration & Planning											\$0.00
Survey Costs - SurveyMonkey Subscription		\$185.00									\$185.00
UW-Oshkosh Decontamination Program Donation Account					\$500.00	\$500.00	\$500.00	\$200.00			\$1,700.00
TOTALS	\$10,000.00	\$9,456.00	\$3,737.00	\$134.17	\$500.00	\$500.00	\$500.00	\$200.00	\$2,901.40	\$3,907.13	\$31,835.70