Northwest District Sandhills Lakes

2017 Survey Summary

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Introduction

The sandhills region of Nebraska is a unique geographical region comprised of stabilized sand dunes, exposed groundwater lakes in the valleys, and perched mineralized lakes on poorly drained soils. A few lakes are watered by artesian wells and springs while the majority of lakes depend on the water table and fluctuate with its seasonal levels. Most lakes in the sandhills region are either too shallow or too alkaline to support a long-term fishery. Sandhills lakes are typically shallow, vegetated, highly productive systems with fisheries that typically consist of yellow perch, bluegill, black crappie, largemouth bass, northern pike, black bullhead, and green sunfish. The following summary is for sandhills lakes with public access that were surveyed in 2017. Walgren Lake is not a sandhill lake but functions the same and therefore added to the following summary. Fisheries data from the Valentine NWR is available in its own summary at http://outdoornebraska.gov/fishsamplingreports/. An interactive map of lake locations and species composition can be found at http://maps.outdoornebraska.gov/fishing/.

Sampling Methods

Sandhills lakes typically get surveyed at least once every 3 years for each priority species. Largemouth bass are surveyed at night by electrofishing while shoreline oriented species (bluegill, crappie, yellow perch, and northern pike) are sampled using frame nets. A couple sandhill lakes have walleye that get sampled by gillnets in the fall. Species collected during a survey are counted, measured, weighed, and some scales removed for aging before releasing them back. Biologists use this information to monitor the health and size structures of each fish population. The following graphs and commentary are from surveys conducted in 2017 with suggestions on which sandhill lakes should produce quality fishing for each species. Most fish surveys conducted in 2017 targeted northern pike, bluegill, and yellow perch. Anglers are reminded they should not rely solely on what the surveys indicate as patterns of weather and timing of the surveys could have effects on catch rates for certain species. For example yellow perch and northern pike are sampled in late March or early April when they are moving into the shallows to spawn; this can happen relatively quickly even within a few days making sampling of this species in several waterbodies relatively difficult.

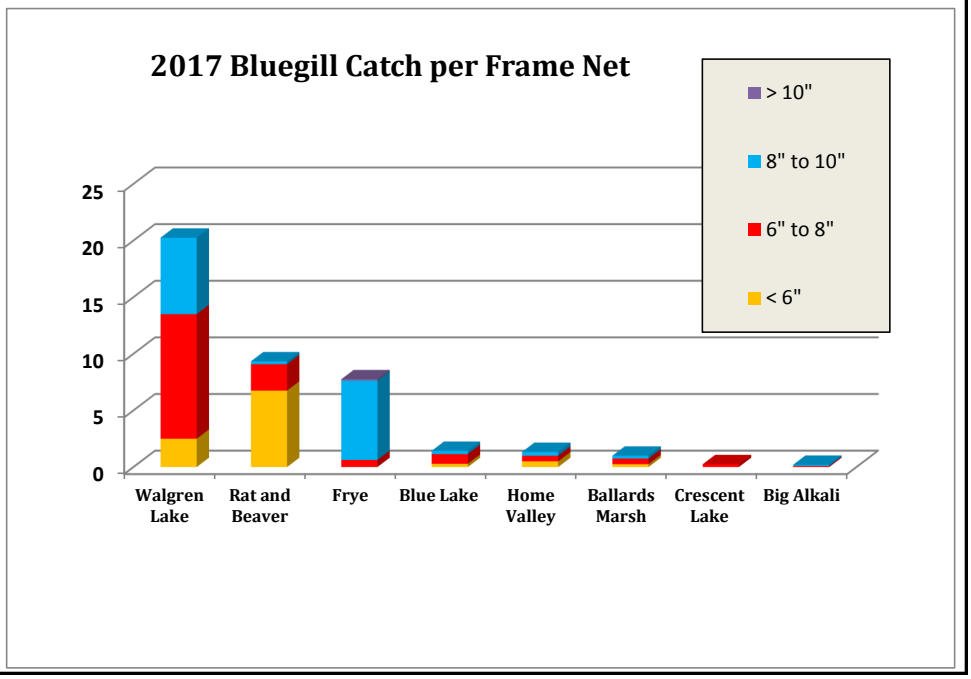
Bluegill:

2018 should be another great year for big bluegill in the Sandhills. Most of the sandhill lakes surveyed produced bluegills over 8 inches with Frye Lake having the biggest with fish over 10 inches. Walgren Lake had the highest density of bluegill at 20.25 fish per net with 33 % of the catch over 8 inches. These fish were plump with mean relative weight (Wr) values over 100. Frye Lake will be the best chance for a master angler bluegill with some fish over 10 inches. The body condition of these fish was exceptional with Wr values over 130 for all sizes. Rat and Beaver Lakes also had a good bluegill catch in 2017 with 9.3 fish per net. However, these fish were mainly small (under 6 inches). Following the renovation in 2014 these fish should grow fast and produce some excellent opportunities in the next few years.

Smith Lake Wildlife Management Area in Sheridan County was not surveyed for bluegill in 2017 but should produce some excellent fishing in 2018. With the infestation of the invasive curly leaf pondweed in Smith Lake, summertime fishing can be difficult. Anglers should fish early (March—April) before the curly leaf reaches the surface or late summer (after July) when the curly leaf dies back. Remember to remove all vegetation from your boat, trailer and fishing equipment before leaving the boat launch facility to prevent the spread of curly leaf to other lakes.

The Valentine National Wildlife Refuge lakes will also produce some excellent bluegill opportunities in 2018. The best fishing will be on Duck Lake and West Long where common carp are absent. More information on the refuge lakes can be found at http://outdoornebraska.gov/fishsamplingreports/.

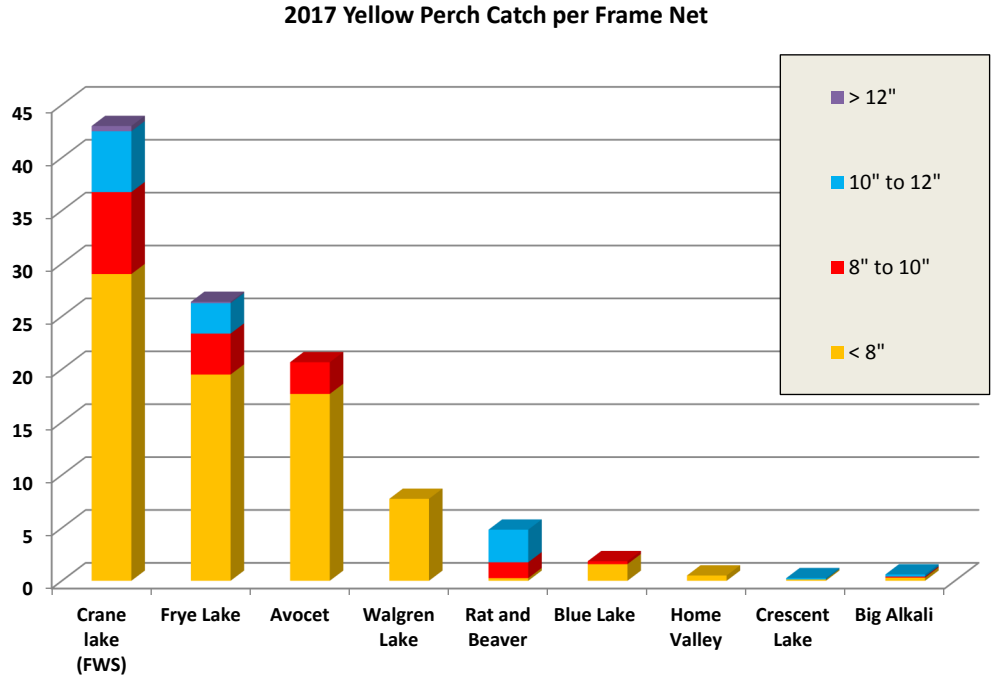
Anglers fishing from the bank seeking bluegill should consider Island Lake or Walgren Lake as both of these lakes have fishing piers. Shore fishing on most sandhill lakes is challenging due to abundant vegetation and is best approached with waders or a float tube.



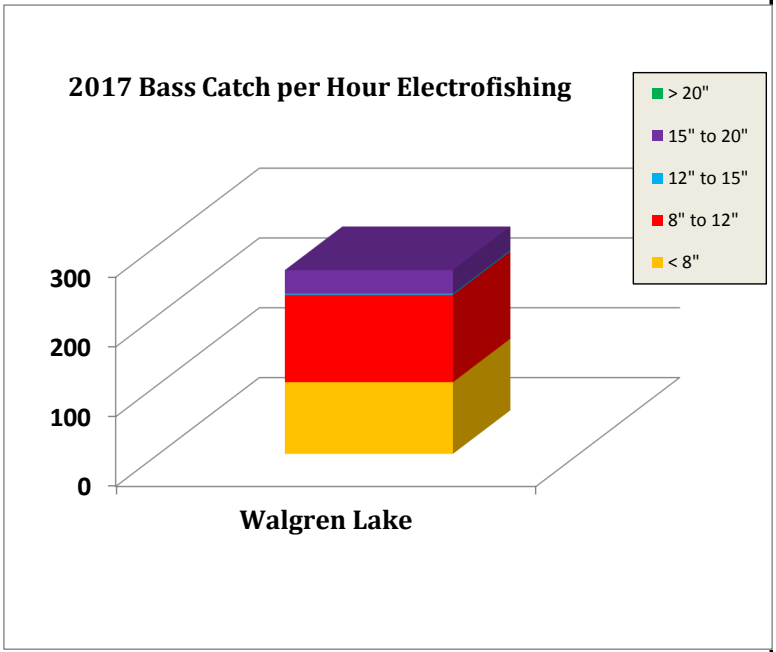
Yellow Perch

Yellow perch are one of the most sought after panfish species in the sandhills. Yellow perch are aggressive most of the year making them a great species to start new anglers on. These highly productive lakes have the potential to grow perch between 12 and 15 inches if they can evade anglers long enough. Perch harvest over the past few years has removed most of the larger perch in the public sandhills lakes.

2017 was a odd year for yellow perch surveys. Most perch surveys had lower catch rates than expected and may not be a true representative of the current perch populations. Crane Lake on the Crescent Lake National Wildlife Refuge had the highest density for perch of the lakes surveyed in 2017 with 43 fish per frame net. Although most of the perch were less than 8 inches long, 15% of the catch was over 10 inches with some over 12 inches. Crane Lake is only open to fishing from November 1st until February 15th during daylight hours. Frye Lake had a similar size structure with a catch of 26.4 fish per net. Only 11 % of the catch was over 10 inches with very few fish over 12 inches. A big year class of two-year-old perch should produce some excellent fishing opportunities in the next couple years in Frye. Rat and Beaver Lakes had a low catch rate in 2017 with 4.8 perch per net. Renovated in 2014 there should be a few fish pushing the 12 inch minimum size this year although none were caught during the spring survey. It is also likely that the true abundance may be higher than the survey suggests. The health of the Blue Lake yellow perch population has declined compared to the past few years. The combination of heavy fishing pressure and the increase in common carp has resulted in reduced abundance and poor body condition.



Largemouth Bass:



Walgren Lake was the only sandhill lake surveyed for bass in 2017. The survey suggests a high density of bass with a total catch of 263 bass per hour electrofishing, Although 86% of the catch was under 12 inches, some bass over 15 inches do exist.

Bass are present in most sandhill lakes and can provide some excellent fishing opportunities. Although not surveyed in 2017, anglers looking for big bass should try Smith Lake WMA, Home Valley, or Avocet WMA. All three lakes should produce bass over 15 inches in 2018. Blue Lake is a unique bass fishery as it has both largemouth and smallmouth bass. Largemouth bass made up the majority of the bass population, however the smallmouth were in good condition with most fish just under 15 inches during the last survey conducted in 2016. Anglers looking to catch a lot of bass should fish Frye Lake or Island Lake. Frye Lake typically has a high density of largemouth bass with some fish around 15 inches.

Largemouth bass can be caught year-round in the sandhills but the best fishing times are typically early in the year as they concentrate in the shallows getting ready to spawn. Popular spring baits include spinner baits, jigs, or plastic worms and creature baits.

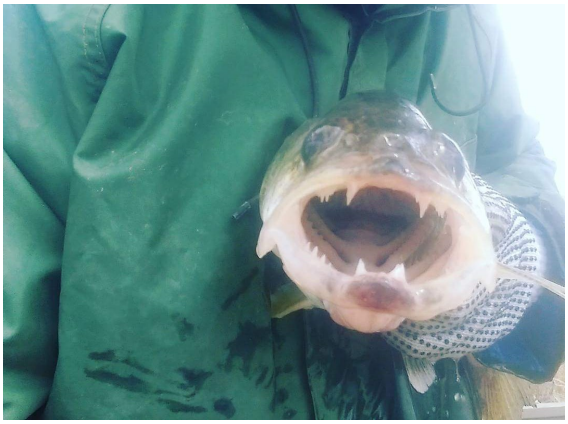
As the summer progresses, and vegetation increases, anglers can have great success using weedless topwater baits. Try fishing plastic worms and creature baits hooked weightless and weedless. Topwater baits such as frogs, mice, and hardbaits work great in open pockets around dense vegetation.

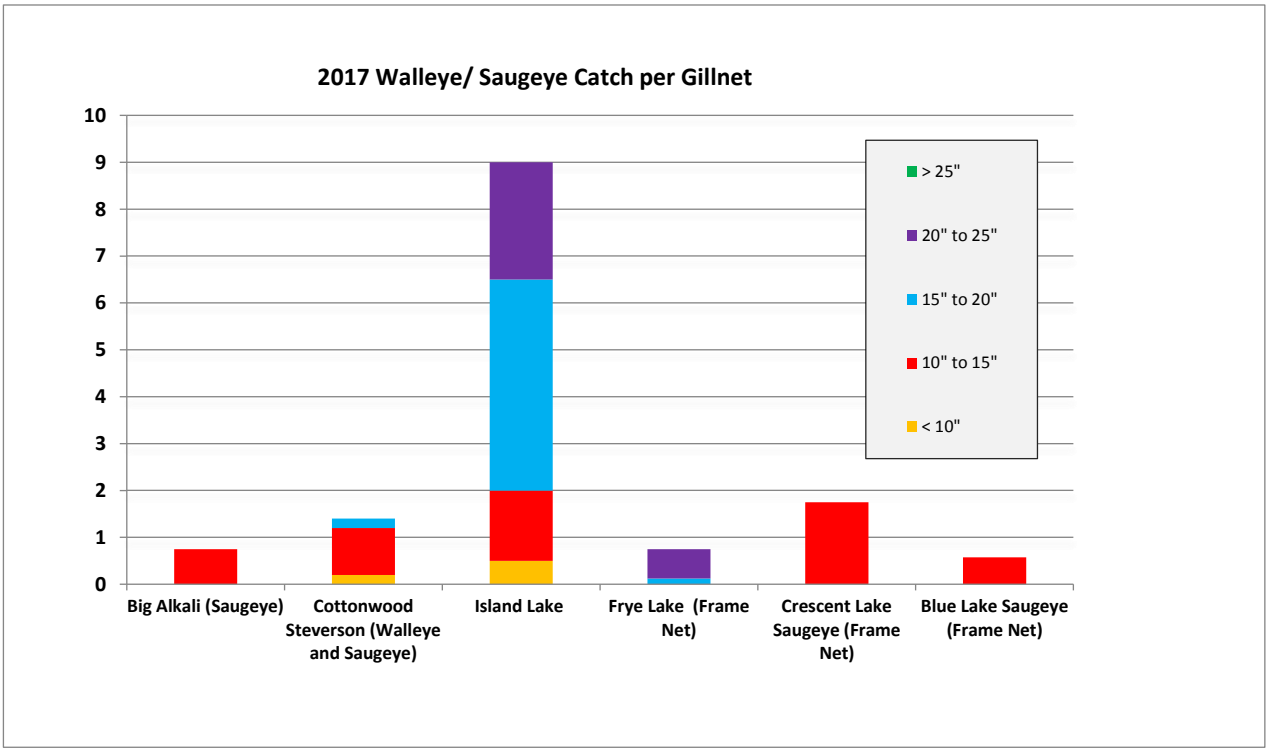
Walleye & Saugeye:

Frye Lake, Cottonwood-Steverson WMA, Home Valley, Big Alkali, and Island Lake all contain walleye. Crescent Lake WMA was stocked with sauger in 2013, and 2014 . In 2015 walleye and sauger stockings were replaced with saugeye in Cottonwood-Steverson WMA, Big Alkali, and Crescent and Blue Lake was added to the list starting in 2017. Saugeye is a hybrid between a walleye and a sauger. These fish seem to be more shoreline oriented and Fall electrofishing surveys indicate excellent survival in these sandhill lakes.

Island Lake is the top sandhill lake for walleye in 2018 with a catch rate of 9 fish per gillnet in 2017. The average size walleye sampled in Island was 17.6 inches with 78% of the catch over 15 inches. Cottonwood-Steverson is a popular sandhill lake to fish for walleye. Gizzard shad were introduced in 2017 into Cottonwood-Steverson to create a pelagic prey base with hopes to boost body condition and survival for walleye and saugeye. Current abundance remains low with a fall gillnet catch of 1.4 fish per net.

Crescent and Blue Lake were not surveyed for Saugeye in 2017 but some fish were collected during spring fame net surveys. These saugeye were in excellent condition and averaged 12 and 12.7 inches respectively. Anglers should expect to find some harvestable fish in the next couple years.



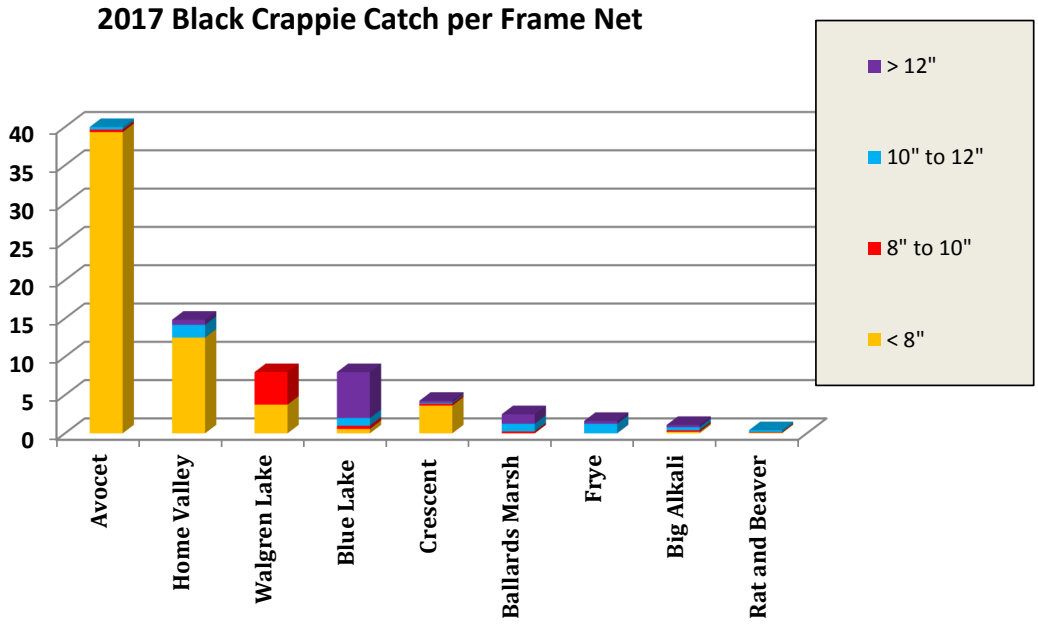


Crappie:

Avocet WMA had the highest density of crappie in 2017 with 40 fish per frame net. However, nearly all of the catch was less than 8 inches. Home Valley had the second highest catch with 14.8 fish per net. Although some crappie over 12 inches were collected, 84% of the population was under 8 inches. Blue Lake had the highest density of crappie over 12 inches, however these fish were in poor condition (mean Wr of 83) making these fish less desirable to anglers. Some reports of large dead crappie under the ice in 2017 suggest that the end may be near to the big 2008 year-class.

Most sandhill lakes have low abundance of crappie but consistently produce some crappie over 12 inches. Frye Lake, Ballards Marsh, and Big Alkali should all have excellent crappie fishing even though the catch rates were low in 2017. Other lakes that should not be overlooked in 2018 include Island Lake, Smith Lake WMA, and Hackberry, Clear, and Watts Lake on the Valentine NWR. More information on the Valentine NWR can be found at http://outdoornebraska.gov/fishsamplingreports/.

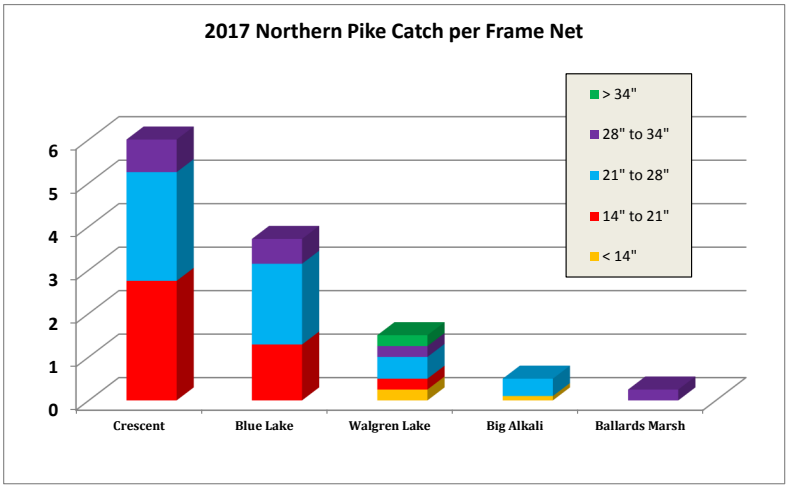
Early May is the best time of the year to target crappie in the sandhills. Fishing small jigs, inline spinners, beetle spins, and minnows on a bobber where live baitfish are allowed are all popular methods for catching crappies.



Northern Pike:

Northern Pike were sampled in five sandhill lakes in 2017. Although all 4 lakes had low abundance of pike (less than 10 per net), anglers should still expect some good success fishing for pike in the sandhills. Crescent Lake had the highest abundance with 6 fish per net and an average size of 22.4 inches and some fish over 28 inches. Blue Lake was not stocked with pike but had some northerns swim up from Crescent Lake. The abundance is lower in Blue Lake but the sizes are similar to those found in Crescent. The biggest pike surveyed in 2017 came from Walgren Lake at 39.8 inches.

Anglers looking to pike fish the sandhills should take a look at the Valentine NWR. Several Lakes on the refuge have excellent pike populations and some very large individuals (see the Valentine NWR survey summary at http://outdoornebraska.gov/fishsamplingreports/). Cottonwood State Recreation Area, and Smith Lake WMA also have fishable pike populations.



Invasive Species

Curly-leaf pondweed currently covers nearly 100 percent of the water surface on Smith Lake WMA during the spring with it first becoming a problem in 2015. This invasive plant has a tendency to grow fast and shade out native vegetation while making fishing difficult. Curly-leaf starts growing early in the year and reaches maturity by late June. The vegetation dies back by late July and releases an abundance of nutrients that typically result in a blue-green algae bloom. In 2017 curly-leaf pondweed covered nearly 95 percent of Smith Lake. This plant was likely brought in attached to a boat as it only takes a piece of this plant to become established. It is important to remove all vegetation from your boat and trailer before leaving the boat launch area and **CLEAN, DRAIN,** and **DRY** your watercraft and fishing equipment before launching on another body of water.

Bluegreen algae at SmithLake WMA

Curly leaf pondweed at SmithLake WMA

Invasive Species

Over the past several years invasive species have become a rising concern in Nebraska. In 2015, a new regulation was established to help prevent the spread of invasive species via boats and trailers. The new regulation states: It is illegal to either arrive or leave any water body in Nebraska with water other than from a domestic source (water supply system, well or bottled) except for firefighting purposes.

Zebra mussels (pictured right) were first documented in Nebraska in 2006 at Offutt Airforce Base Lake and have since been discovered at Zorinsky Lake (2010) (mussels eliminated via a winter drawdown that froze them out and haven't been documented since), Lewis and Clark Lake (2015), Lake Yankton (2017), and below Gavins Point Dam in the Missouri River. Zebra mussels and quagga mussels are small fingernail-sized mussels and adults are usually ¼ to ½ inches long with alternating yellow and brownish colored stripes on their shell. These mussels can spread in their immature form known as veligers by being transported in bilge, ballast, or live-well water or as adults attached to boat hulls, engines, aquatic vegetation, or other surfaces. Sampling for these veligers occurs statewide from the months of May through September. No evidence of these mussels has been discovered in any other lakes sampled.

Aquatic vegetation such as curly-leaf pondweed and Eurasian water milfoil are also invasive species present in Nebraska. Both of these plants form dense mats of vegetation near the water's surface which make recreational fishing, boating, and swimming difficult. Spread of these plants can happen through stem fragmentation. A single segment of plant material can be transferred to another water body and form a new colony therefore removing any visible plant material from boats and trailers is a must and remember to **CLEAN, DRAIN, and DRY**!

CLEAN- Remove plants, animals, mud and thoroughly wash equipment that came into contact with the water.

DRAIN- Drain all water before leaving, including wells, bilge, ballast, and any parts or equipment that can hold water.

DRY- Allow all equipment to dry completely before launching into another body of water.

For more information on invasive species in Nebraska visit neinvasives.com.

Attention motorboat owners operating in Nebraska :

Boaters whose motorized watercraft are registered in any state other than Nebraska will be required to display a $15 Aquatic Invasive Species Stamp each year they boat in Nebraska.

This stamp will help fund Aquatic Invasive Species education and inspection programs.

- Note that boat inspections to launch in Nebraska are NOT mandatory at this time.
- This applies to all *motorized* watercraft. Non-motorized craft are exempt.
- Personal watercraft (Jet Ski, Waverunner, Sea Doo, etc.) arerequired to have this stamp.
- Boats registered in Nebraska pay the fee via their registrations and are exempt from displaying the sticker.

This stamp is available online at

www.outdoornebraska.org

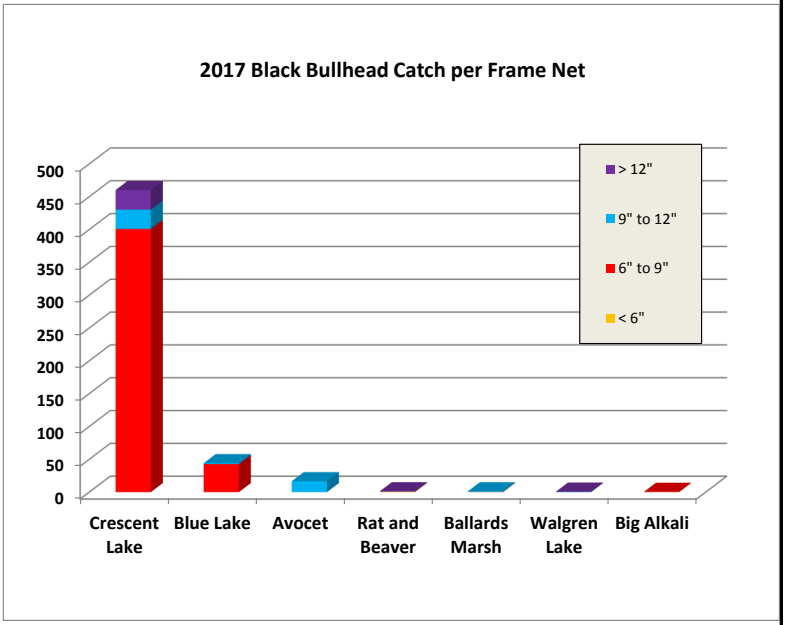
and at some agency offices.

Learn more about invasive species at www.neinvasives.com.

Other Species

Green sunfish and black bullheads are two native species to the sandhill region of Nebraska and several lakes provide fishing opportunities. Crescent Lake had the highest abundance of bullheads in 2017 with 460 fish per frame net. Although the average size was 7.8 inches, some bullheads were over 13 inches.

Common carp are plentiful in many sandhill lakes and can cause undesirable impacts to the fisheries. Anglers are encouraged to fish for and keep carp from sandhill lakes. Contact the local fisheries offices for tips on where to look for these species.



Both Cottonwood- Steverson WMA and Crescent Lake have been stocked with muskellunge. Crescent has only had one year of stocking, but Cottonwood-Steverson has a good musky population with some fish over 40 inches.

Top: 13inch bullhead from Crescent Lake

Left: 42 inch musky surveyed in Cottonwood– Steverson in 2017.

For additional information about fisheries management in the sandhills please contact the following personnel by phone or email address listed below.

District Supervisor:	Al Hanson	308-763-2940	al.hanson@nebraska.gov
Fisheries Biologist:	Joe Rydell	308-763-2940	joe.rydell@nebraska.gov
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