

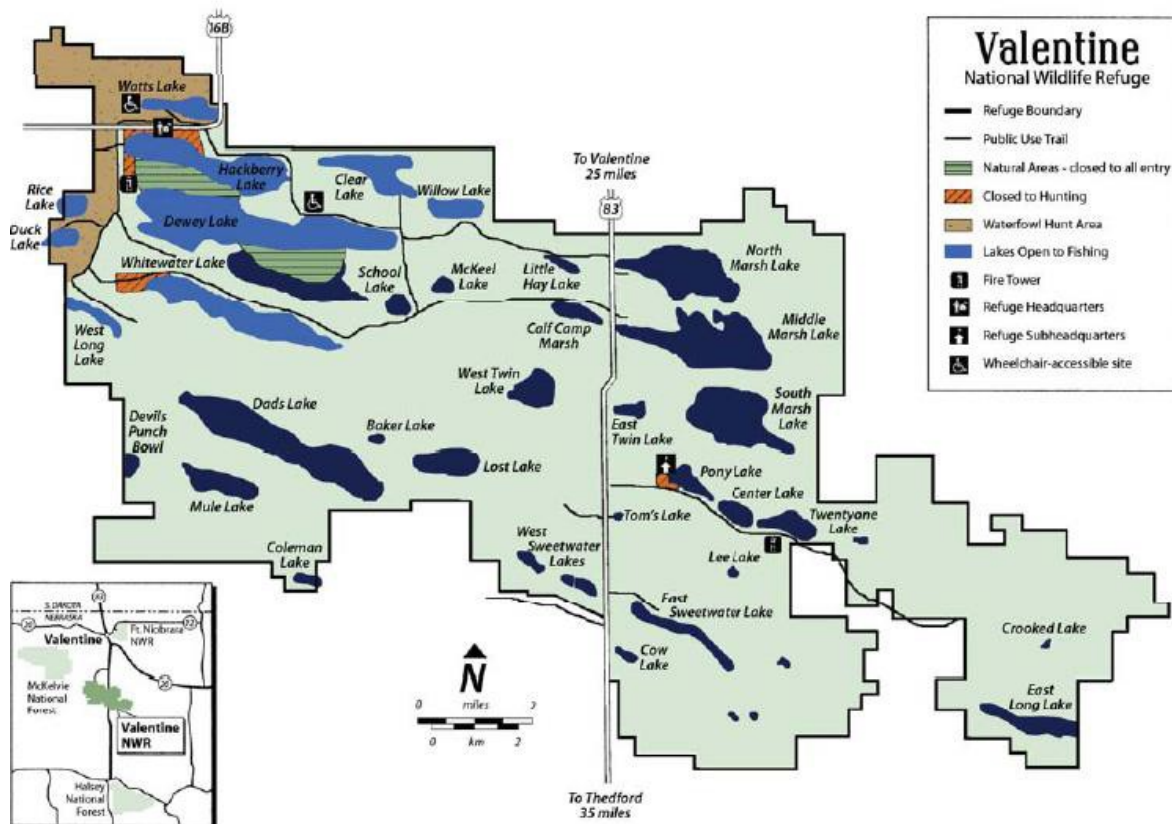
Valentine National Wildlife Refuge

2015 Fish Survey Report

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The Valentine National Wildlife Refuge (VNWR) is a 71,516 acre refuge. The refuge was established in 1935 to protect a portion of the Sandhills and provides a resting, feeding, and nesting area for migrating waterfowl. Lakes, marshes, mid and tall grass prairie, and meadows provide habitat for many species of wildlife. Public recreation including hunting and fishing is promoted. Management of the fisheries is defined in a Cooperative Agreement between the U.S. Fish and Wildlife Service (USFWS) and the Nebraska Game and Parks Commission (NGPC). NGPC manages the lakes for recreational fishing in cooperation with the USFWS. The VNWR contains 39 lakes of which 9 of them are open to fishing. Some of these lakes are too alkaline to support fish and a majority of the lakes are very shallow and can be heavily vegetated which makes them susceptible to frequent winter-kills and summer-kills. Those lakes that are open to fishing are: Watts, Hackberry, Dewey, Clear, Willow, Rice, Duck, West Long, and Pelican. Fish species found in these lakes include largemouth bass, bluegill, yellow perch, northern pike, black crappie, grass pickerel, black bullhead, and common carp. Fishing is permitted on the refuge from 1/2 hour before sunrise to 1/2 hour after sunset. The use of internal combustion motors is prohibited on all Refuge lakes. Boats propelled with oars, paddles, or electric motors may be used. The possession or use of live or dead minnows and the possession of any fish not taken from Refuge waters is prohibited. Frozen or dead smelt may be used as bait.



Map of the Valentine National Wildlife Refuge south of Valentine, Nebraska with lakes open to fishing shown in the light blue (image credit: <http://www.visitvalentine.com/Attractions/VRefuge.aspx>).

Survey Methods

Nebraska Game and Parks personnel took over fish population surveys on the VNWR in 2014. Prior surveys had been conducted by USFWS personnel out of the Pierre, SD office. Biologists use electrofishing to target largemouth bass at night and common carp during the day. Frame netting surveys are used to target shore oriented species such as bluegill, yellow perch, black crappie, and northern pike. Once these fish are collected they are weighed, measured and a few scales are removed to determine the age of the fish and evaluate growth compared to other lakes. 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.



NGPC personnel measure a common carp at Pelican Lake



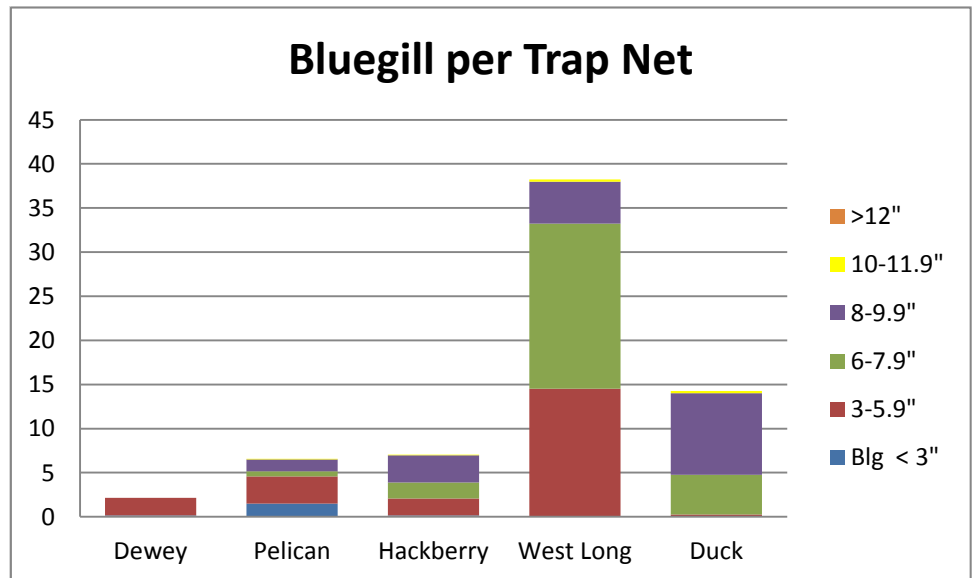
Frame net set at Dewey Lake to target northern pike in late March

Bluegill

Bluegill are a favorite for many anglers at the VNWR especially during the winter months.

Densities of bluegill are not high in these lakes but due to the high productivity of these habitats they can produce some trophy bluegill. Six of the nine lakes open to fishing were sampled in 2015; however, no bluegill were sampled in Clear Lake. West Long survey looked great this year

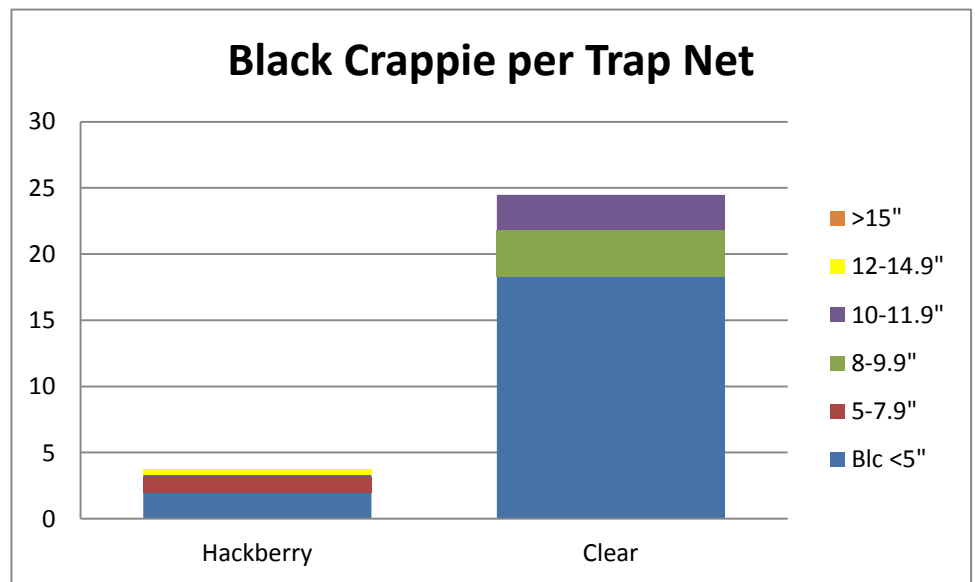
sampling 38.25 bluegill per net with an excellent size structure. Duck Lake catch rate came in second with 14.25 bluegill per net and 66% of the those fish sampled were over 8 inches in length. Anglers should not overlook Pelican and Hackberry Lakes which showed excellent size structure although densities were lower. The largest bluegill collected in 2015 came from Pelican Lake and was 10.6 inches and weighed 1.34 pounds.



Black Crappie

Hackberry, Clear, and Watts Lakes are the only 3 lakes with black crappie present on the VNWR. These fish provide an additional panfish opportunity for anglers. For both lakes sampled in 2015 most of the black crappie population is made up of fish less than 5 inches in length. Higher water levels over the past 2 years have allowed these fish to spawn and

recruit fish into the population. Surveys will be continued to monitor crappie abundance in these lakes. The largest crappie collected came out of Hackberry and measured 13.3 inches. Black Crappie were stocked into Watts Lake in 2015 after the renovation and should provide anglers with opportunities in 2-3 years.



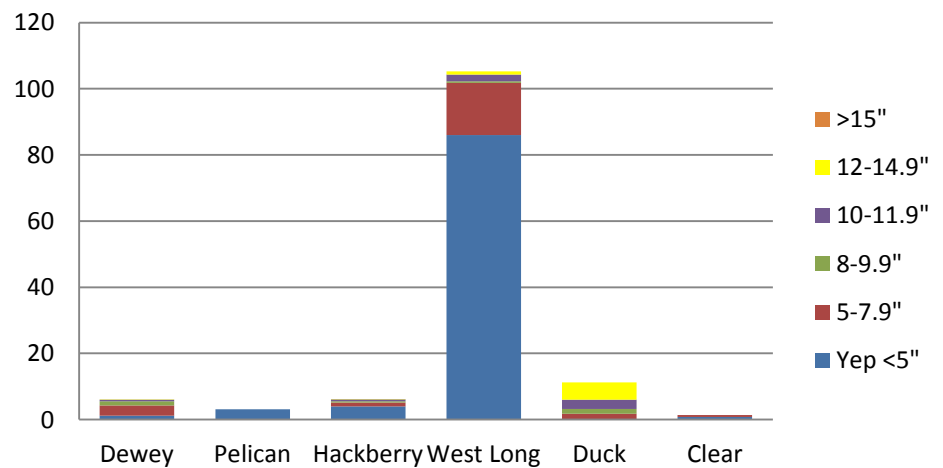
Yellow Perch

Yellow perch are targeted year round and a favorite for many ice anglers that travel to the VNWR each year. All of the nine lakes open to fishing have a yellow perch population. Yellow perch can reach lengths of 12-15 inches and are a great table fare due to their ease of cleaning. The highest population of yellow perch on the refuge resides in West Long with a catch rate of 105.25 perch per net. This is a very high catch rate compared to the other lakes although about 80% of the fish sampled were under 5 inches. Duck

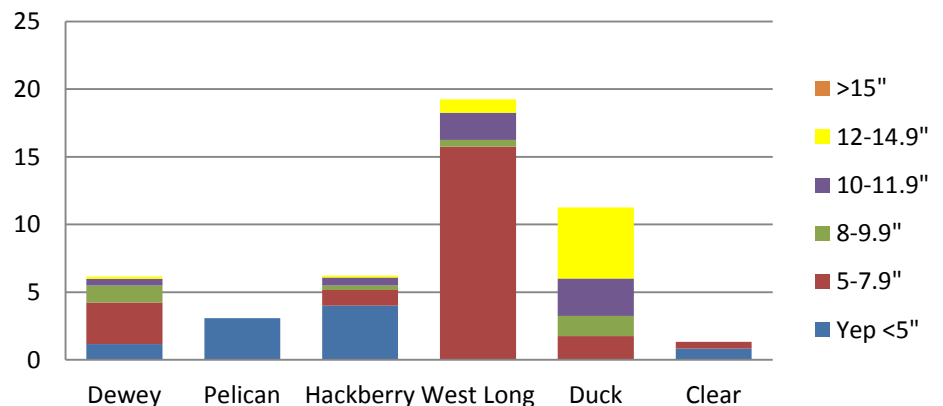


Lake came in second for perch abundance with a catch rate of 11.25 perch per net. Duck Lake showed excellent size structure and over half the perch sampled were greater than 12 inches. The largest perch collected in 2015 was in Duck Lake and measured 14.1 inches and weighed 1.96 pounds. Hackberry and Dewey Lakes also showed good size structure and both had fish pushing the 12 inch mark. Graphs showing catch rates for perch can be seen to the right; the lower graph has fish less than 5 inches removed from West Long to show the size categories sampled easier.

Yellow Perch per Trap Net



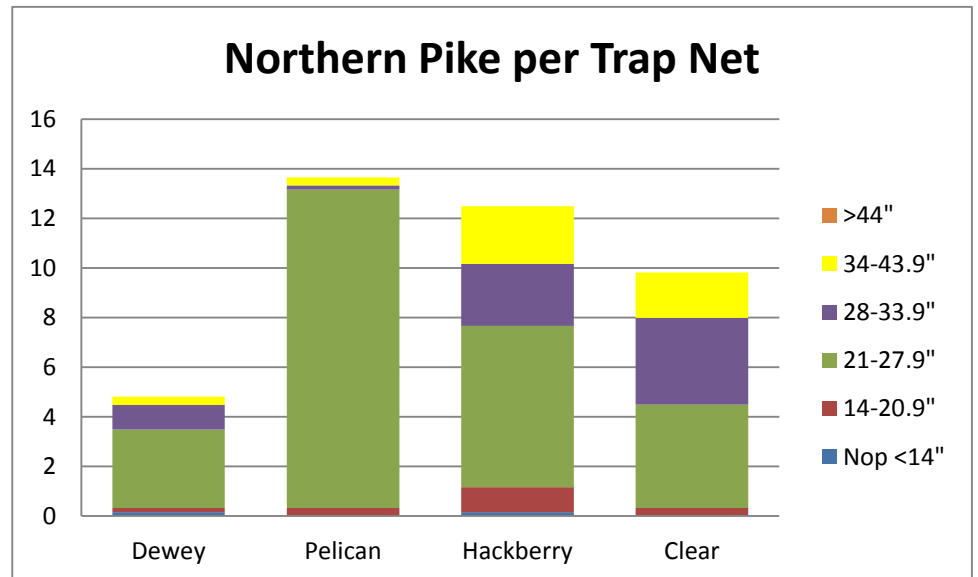
Yellow Perch per Trap Net (5" fish removed from West Long)



Panfish Regulations: Bluegill, Yellow Perch, Crappie, Green Sunfish, Etc. Bag limit of 15 fish in combination and a possession limit of 30 fish.

Northern Pike

Northern pike can be found in several lakes throughout the VNWR even though Nebraska is on the southern end of their native range. These fish provide angling opportunities year round and can be excellent table fare if one learns to remove the Y-bones. Northern pike are managed on the VNWR as an additional predator on common carp populations and regulated with a maximum size limit of 28 inches.



Pike are sampled in mid to late March as these fish are venturing into shallow areas to spawn. Anglers wanting to harvest pike should fish Pelican Lake. It had the highest density of northern pike with a catch rate of 13.65 fish per net and these fish averaged 24.4 inches. Clear and Hackberry lakes should not be overlooked for anglers seeking northern pike and fish over 40 inches. The largest northern pike collected in 2015 came from Clear Lake and measured 41 inches and weighed approximately 18 pounds.

Anglers should be reminded it is illegal to move fish from one lake to another, and is especially important on the VNWR since some lakes are managed for panfish populations while others are managed for pike fisheries.

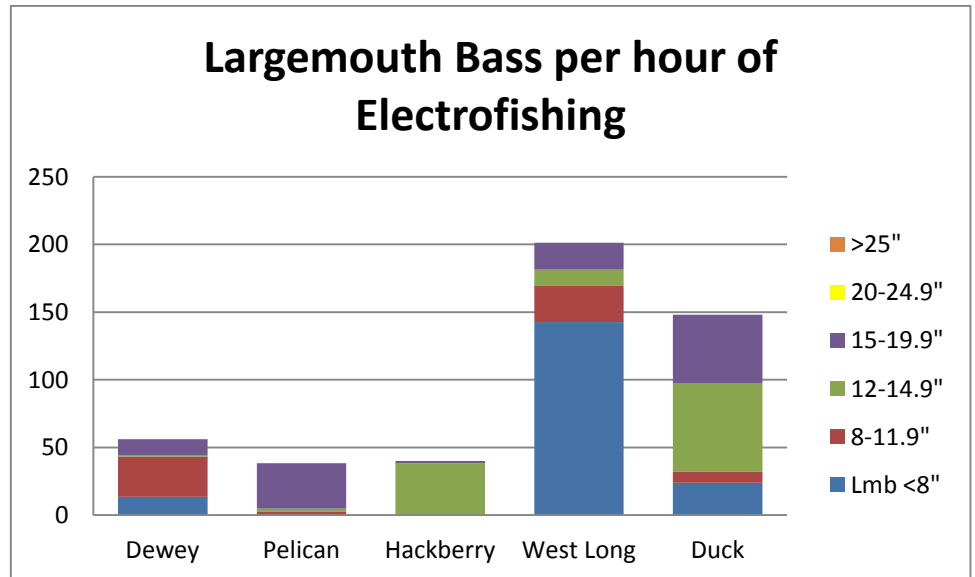
Northern Pike Regulations: Maximum length 28 inches, all northern pike over 28 inches must be released. Bag limit 3 fish and possession limit of 10 fish.



Largemouth Bass

Largemouth bass populations exist in all nine lakes open to fishing on the VNWR. These fish are predators for unwanted species such as common carp and also control panfish recruitment. Surviving panfish grow extremely well without competition for available food. In 2015, five of the nine lakes were sampled using night-time electrofishing methods. West

Long and Duck lakes had the highest catch rates of 201 and 148 fish per hour. Duck lake however showed a better size structure of fish sampled and 33% of the bass sampled were over 15 inches. For anglers seeking trophy largemouth, trips should be planned to Pelican and Dewey lakes where fish frequently push the 20 inch mark. The biggest largemouth collected in 2015 came from Pelican lake while sampling yellow perch populations. This fish, which is pictured below, measured 21.6 inches and weighed 6.6 pounds.



Aquatic Habitat Plan

An aquatic habitat project began in 2015 at the VNWR and will continue in 2016. The project is to address the presence of common carp in the system and their passage through the existing water control structures.

Control structures, berm improvements, fish barriers and dredging were planned at Watts, Hackberry, Dewey, Whitewater, Clear, Pelican, and Willow lakes. Channel clean-out has been completed at Watts and Hackberry lakes which will allow USFWS personnel the ability to manage lake water levels, sport fish populations and waterfowl habitat more effectively in the future. A new water control structure was also constructed on the lower end of Willow Lake which will limit upstream carp passage and control carp migrating to the refuge lakes.

Construction and equipment along the public roads and trails will be happening again in the spring of 2016. Visitors are reminded road and trail closures could occur for short periods as the project progresses. The Nebraska Game and Parks Commission and USFWS appreciate the public's patience during this project.



This project is a cooperative partnership between the Commission using Aquatic Habitat Program funds and assistance from the U.S. Fish and Wildlife Service.

Angler Access Projects

As part of the overall Aquatic Habitat Plan the first initial step implemented was angler access projects across the VNWR. Completed in 2014, concrete boat ramps were installed at Watts, West Long, Pelican, Hackberry, and Clear lakes. Each ramp complies with the American Disabilities Act (ADA) with a concrete parking area and concrete sidewalk connecting to a roll out dock. This portion of the project was funded by the USFWS Visitors Facilities Enhancement Funds and the NGPC Angler Access Program which is funded through the purchase of Aquatic Habitat Stamps.



Watts Lake Renovation

Watts Lake was chemically renovated during the spring of 2015 to restore the recreational fishery. The lake was pumped down over several weeks to save on chemical costs and also allow NGPC and USFWS personnel the ability to treat the lake more effectively. Watts Lake had a partial winter-kill and summer-kill in 2013 and the fishery had become out of balance. Unwanted species such as common carp, northern pike, and black bullhead were also present in the lake. The fishery should recover quickly and have harvestable fish in 3 years. Anglers, hunters, and outdoor enthusiasts should see improved water quality, increased amounts of aquatic vegetation, increased waterfowl usage and an improved fishery. The lake was restocked in 2015 with bluegill, yellow perch, and black crappie. Largemouth bass will be stocked in 2016.



Clear Lake Carp Trapping

Carp control has become a priority on the VNWR. In 2013, USFWS personnel applied for and received a grant to utilize volunteers to remove invasive species such as the common carp. A 70' by 70' trap system was purchased to try and bait carp and manually remove them. Along with this grant radio transmitters were also purchased and implanted in 15 common carp at Clear and Hackberry lakes. If anglers catch one of these fish please return it to the water in order for personnel to collect more data on fish movements in these sandhill lake systems.



For more information on fisheries management or activities on the Valentine National Wildlife Refuge contact:

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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 sampled since), Lewis and Clark Lake (2015) and below Gavins Point Dam in the Missouri River. Zebra mussels and quagga mussels are small fingernail-sized mussels and adults are usually $\frac{1}{4}$ to $\frac{1}{2}$ 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.



Pictured Left: Photo of Eurasian Watermilfoil at Goose Lake Wildlife Management Area



Attention motorboat owners operating in Nebraska in 2016:



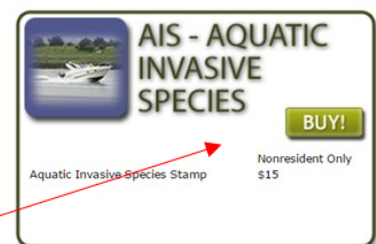
Boaters whose motorized watercraft are registered in any state other than Nebraska will be required to display a \$15 Aquatic Invasive Species Stamp each year they boat in Nebraska.

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.) are required 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.

From the “Buy A Permit” page, look for this link:



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