

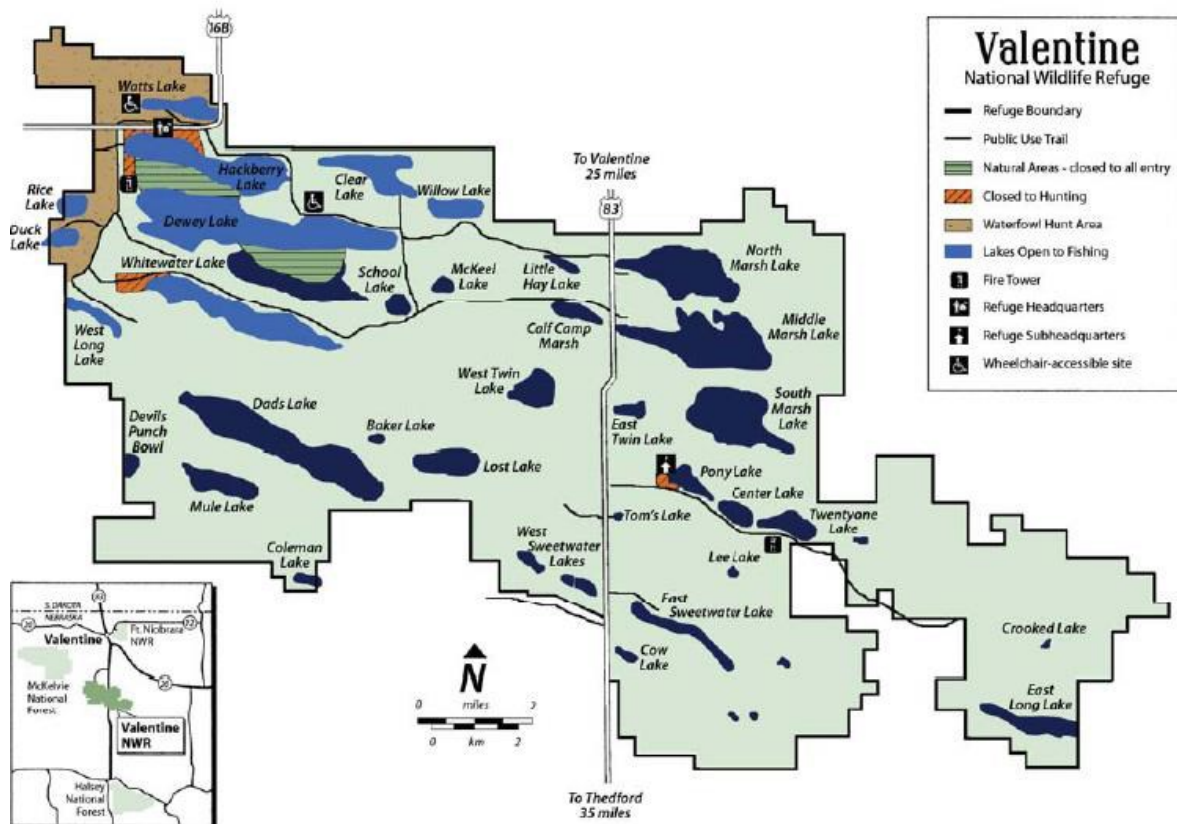
Valentine National Wildlife Refuge

2017 Fish Survey Report

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The Valentine National Wildlife Refuge (VNWR) is 71,516 acres in size. 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 were 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.



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

Bluegill

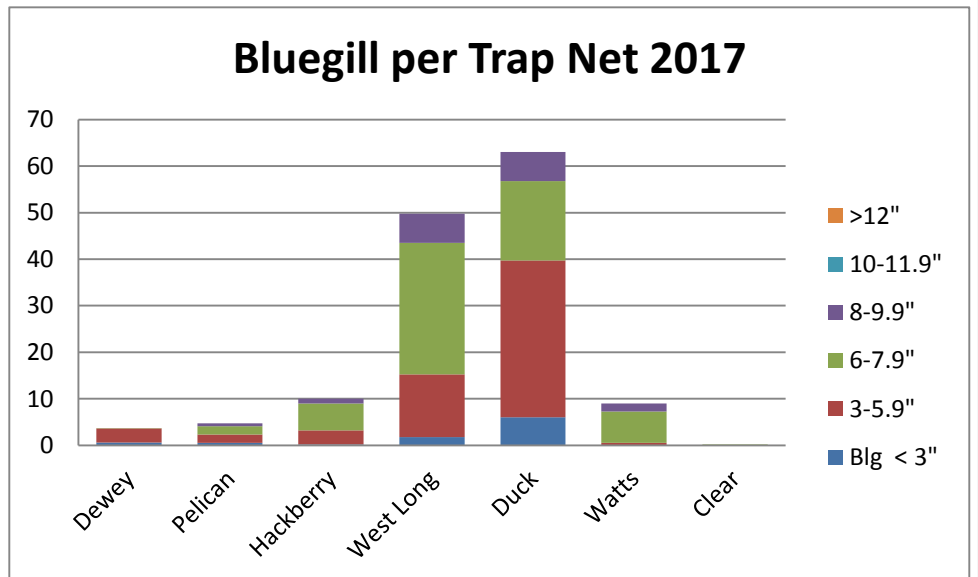
Bluegill are one of the most sought after species on the VNWR and can be targeted year round by anglers. Due to the productivity of these systems these fish grow extremely fast and can reach trophy sizes over 10 inches in length which draws anglers from across Nebraska as well as other states. How fast they grow depends on the waterbody and other fish competition for available prey items.

The highest density of bluegill sampled in 2017 on the VNWR was at Duck Lake which had 63 bluegill per net. Approximately 10 percent of those fish collected were over 8 inches in length. West Long Lake came in second with 49.75 bluegill per net with 12 percent of the bluegill measuring over 8 inches in length. These 2 lakes have been receiving a majority of the ice fishing pressure the last several years which have cropped off some of the bigger bluegill numbers. These lakes continue to produce quality bluegill since there are no common carp present and northern pike numbers are low in abundance or absent such is the case in Duck Lake. The largest bluegill sampled in 2017 came out of West Long and measured 234 mm (9.2 inches). Anglers should not overlook Hackberry Lake and Watts Lake which also had bluegill over 8 inches in length.

Most anglers target these fish through the ice although small boats and waders can be fun during the spawning period.

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

Proposed Regulations: Pelican Lake-5 bluegill daily bag limit with 1 over 9 or 10 inches.



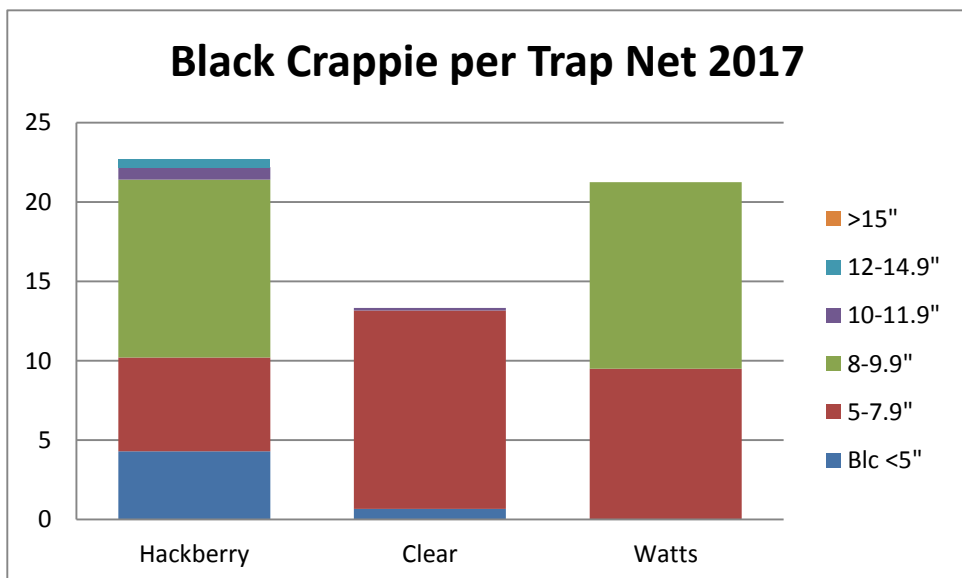
Black Crappie

Black crappie are present in 3 lakes on the VNWR (Hackberry, Clear, and Watts). In 2017 surveys indicated the highest densities of crappie at Hackberry with a catch rate of 21.6 crappie per net. All size categories were sampled except fish over 15 inches in length. The largest crappie sampled was also from Hackberry measuring 364mm (14.3 inches).

Watts Lake was renovated in

2015 and crappie were stocked post renovation. These fish are doing extremely well with net catches of 21.25 fish per net and approximately 55 percent of those fish are over 8 inches in length. Higher water levels over the past several years have helped crappie spawn and recruit to these populations. Efforts will be made in the future to make crappie fisheries throughout several of the lakes on the VNWR post renovations.

These fish are usually targeted during the spring spawning period by throwing small jigs and fake minnows around submergent vegetation.

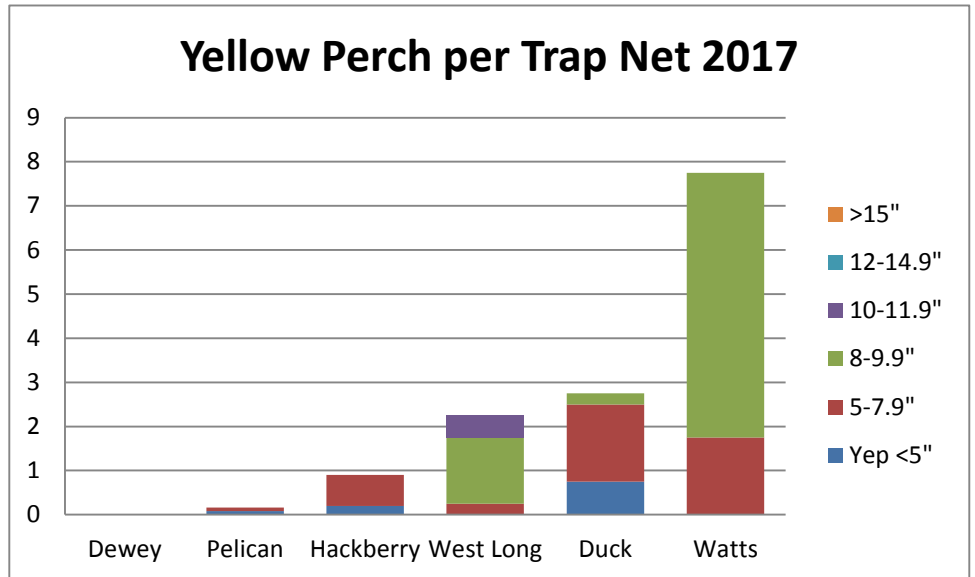


Yellow Perch

Yellow perch are a favorite table fare for anglers that come to the VNWR. Populations of yellow perch are found throughout the 9 lakes open to fishing on the VNWR. Surveys indicated the highest perch population was in Watts Lake at 7.75 fish per net. This lake was renovated in 2015 and the population is still building. Approximately 77 percent of the perch collected

were over 8 inches in length. Duck Lake (2.75 fish per net) and West Long Lake (2.25 fish per net) had the next highest perch abundances although these are relatively low. Anglers should be reminded that these surveys are done during the spring spawning period and weather can become a factor in catch rates. The largest perch sampled in 2017 came from West Long Lake and measured 273 mm (10.7 inches).

Yellow perch are usually targeted through the ice during the winter months using ice fishing jigs and wax worms.



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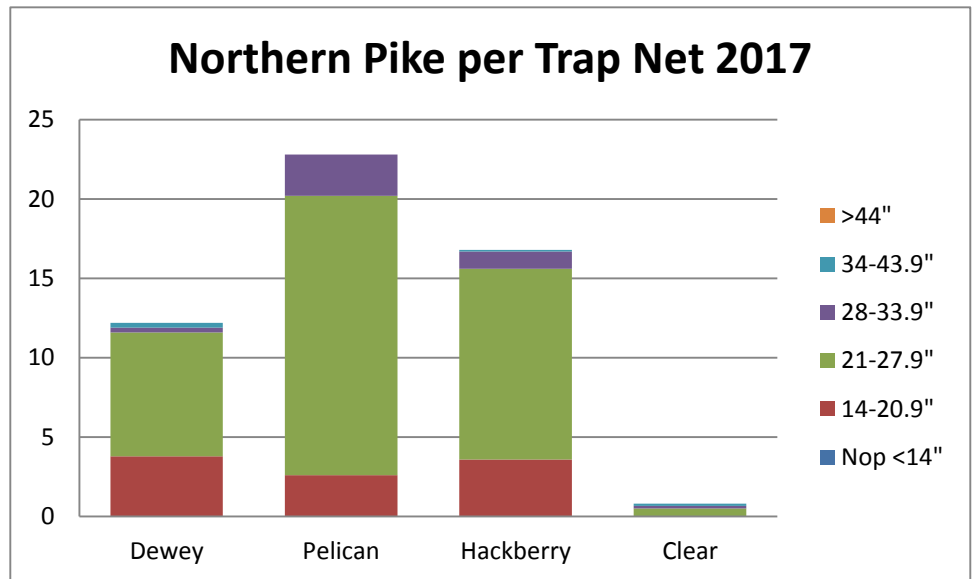
Northern Pike

Northern pike can be found throughout several of the lakes on the VNWR which draw anglers each year for both open water angling as well as running tip-ups during the winter months. These fish are managed on the VNWR as an additional sport fish as well as a management tool for common carp control. Common carp control is a high priority and is the reason a maximum size limit of 28 inches has been in place on the VNWR.

Northern pike are sampled during the spring spawning period usually just after ice out as these fish are venturing into spawn on the shallow vegetation. The highest density of pike in 2017 was at Pelican Lake which had 23 fish per net. Approximately 76 percent of the pike collected were between 21 and 28 inches in length. Clear Lake had the biggest pike sampled in 2017 with a fish that measured 1045 mm (41.1 inches) although abundance was really low only sampling 0.6 pike per net. Bigger pike do exist in these other waterbodies although numbers remain relatively low and no other fish exceeding 40 inches were observed in 2017.

Northern Pike Regulations: Maximum length 28 inches, all northern pike over 28 inches must be released. Bag limit 3 fish and possession limit 10 fish. As of December 1, 2017 length limits have been rescinded on northern pike for Pelican Lake. Bag limits and possession limits still apply.

Proposed Regulations: Post renovations minimum size limit of 24 inches with 1 over 34 inches in the daily bag.



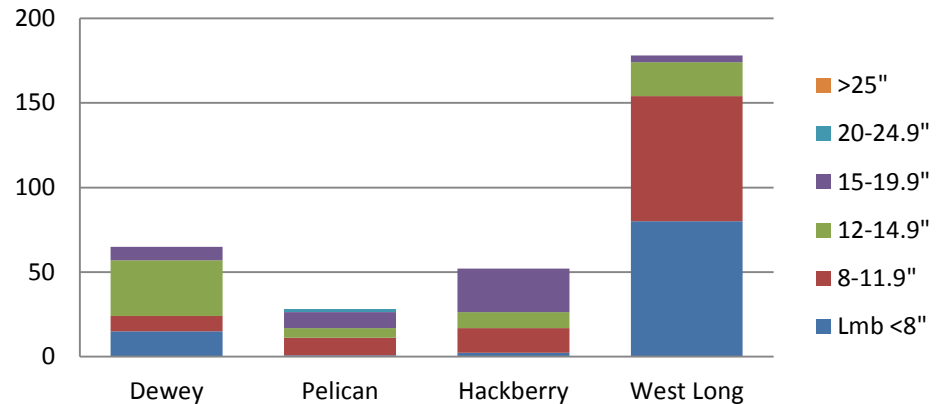
Largemouth Bass

Only 4 of the 9 lakes were sampled for largemouth bass in 2017. Largemouth bass are the primary management tool to help control unwanted species such as common carp. Largemouth bass also help control panfish recruitment which allows the remaining panfish to grow extremely well without competition for available food.

Largemouth bass are sampled at night as they move into the shallow areas to feed. Bass densities ranged from 28 bass per hour at Pelican Lake to 178 bass per hour at West Long. Size structures of bass throughout the lakes looked fair but other than West Long abundance remains low. Out of the 4 lakes sampled Hackberry had the highest population of bass over 15 inches in length (55 percent of the population). The largest largemouth bass observed during 2017 came from Pelican lake and measured 536 mm (21.1 inches).

Largemouth Bass regulations: Daily bag limit of 5 with and possession limit of 10. Inland waters has a statewide minimum of 15 inches with 1 fish over 21 inches in the daily bag. As of December 1, 2017 length limits have been rescinded on largemouth bass for Pelican Lake. Bag limits and possession limits still apply.

Largemouth Bass per Hour Electrofishing 2017



Aquatic Habitat Plan Phase II

Over the past several years there has been a lot of work completed on the portion of the refuge that contains the nine public fishing waters. Area users have seen improvements on the roads and angler/boater access and recently dredging of channels to improve movement of water between lakes and the installation of carp barriers. Of the nine fishing lakes, four are currently free of common carp, those being Duck, Rice, West Long and Watts with the latter recently renovated. The overall goal of this large interagency project is to eliminate common carp from this segment of the refuge with work starting in the upper part of the watershed and proceeding downstream.

Over the next four years, plans are to systematically treat the remaining lakes in the system to eliminate carp while still providing some fishing opportunity to anglers during this period. The current renovation schedule is as follows: 2018 – Pelican, School and Whitewater; 2019 – Hackberry; 2020 – Dewey and 2021 – Clear, McKeel and Willow. Several of the listed lakes are not open to fishing but connected during high water and contain carp populations. Several months prior to the renovations, length limits on largemouth bass and northern pike will be rescinded to allow anglers to harvest them using the normal methods. Fisheries staff will also conduct a salvage operation and transfer collected sportfish to other public waters.

The removal of common carp from the system will allow for more management options than available in the past. Current plans are to manage the upper lakes (Duck, Rice, Watts, West Long, Pelican, and Hackberry) for quality panfishing and largemouth bass with an emphasis on bluegill, black crappie, and yellow perch. The proposed fishing regulations for largemouth bass and panfish will follow the statewide regulations except on Pelican Lake. Pelican Lake will be managed for a trophy bluegill fishery returning it to its historical prominence by limiting bluegill harvest to a daily bag limit of 5 of which only one can be over 9 or 10 inches. The lower lakes (Dewey, Clear and Willow) would be stocked with bluegill, yellow perch, black crappie, largemouth bass and northern pike to provide anglers pike fishing opportunities. Proposed northern pike harvest regulations on the refuge would change from the current 28-inch maximum, used to help control common carp to a 24 – inch minimum and a one over 34” with the statewide daily bag limit of 3. These proposed regulations will be considered by the Nebraska Game and Parks Commission Board of Commissioners in 2018.



Photo courtesy of Eric Fowler

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), 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 $\frac{1}{4}$ 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.



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

Zac Brashears NGPC Biologist, (402) 376-8080 zac.brashears@nebraska.gov

Al Hanson (NGPC Manager) or Joe Rydell NGPC Biologist, (308) 763-2940 al.hanson@nebraska.gov, joe.rydell@nebraska.gov

Juancarlos Giese (USFWS refuge manager), (402) 376-1889 Juancarlos_giese@fws.gov

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.) 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.