Valentine National Wildlife Refuge

2014 Fish Survey Report

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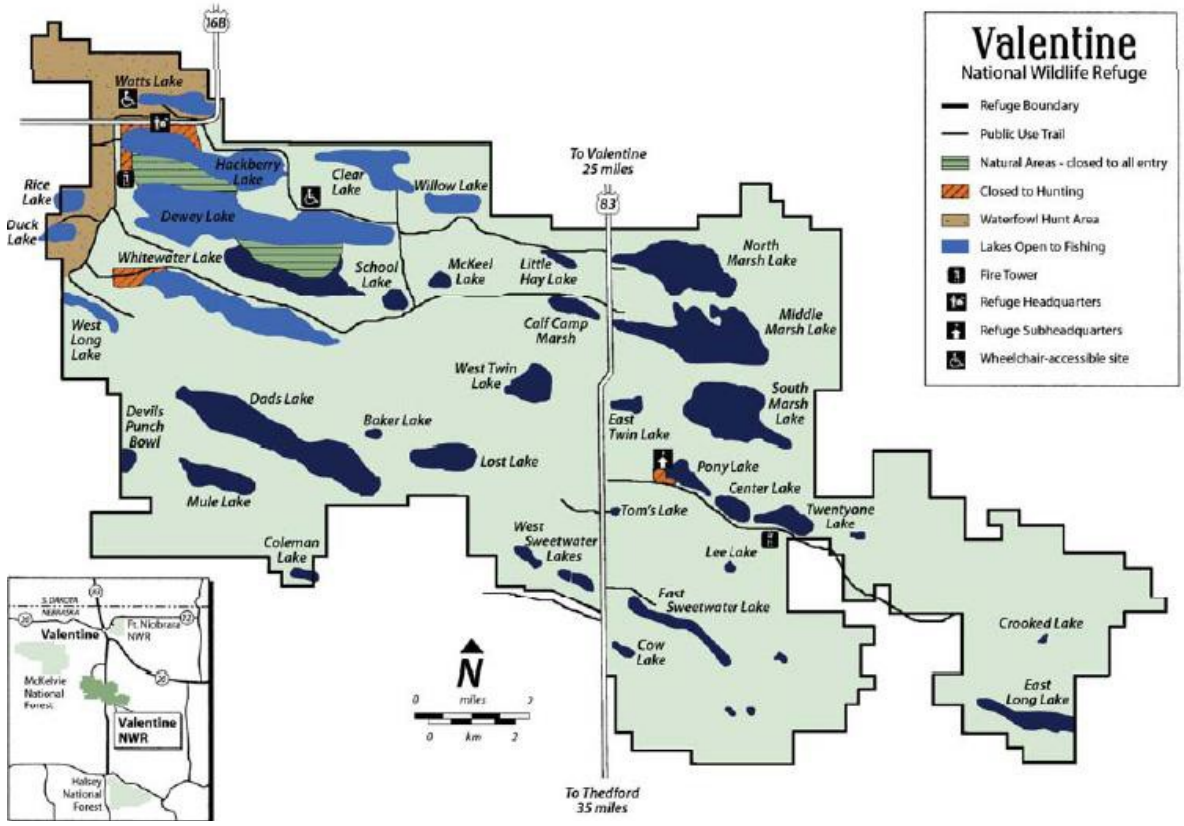
The Valentine National Wildlife Refuge (VNWR) is 71,516 acres in size and was established in 1935 to protect a portion of the Sandhills and to provide a resting, feeding, and nesting area for migrating waterfowl. Lakes, marshes, mid and tall grass prairie, and meadows provide habitat for many species 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.



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

In 2014, Nebraska Game and Parks personnel was given the opportunity to take over fish population surveys on the VNWR. Prior surveys had been conducted by USFWS personnel out of the Pierre, SD office. NCPC personnel made a few minor changes to how surveys were being conducted which were gear changes that are specific to the species you are targeting. Biologist's use electrofishing to target largemouth bass at night and common carp during the day while frame netting surveys are used to target shore oriented species such as bluegill, yellow perch, black crappie, and northern pike. Once fish are captured using these methods they are measured, weighed and a few scales are removed to determine age of the fish and then returned back to the water. Anglers are reminded that 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 are sampled in late March or early April when they are moving into the shallows to spawn, sometimes this can happen relatively quickly even within a few days making sampling of this species in several waterbodies relatively difficult.

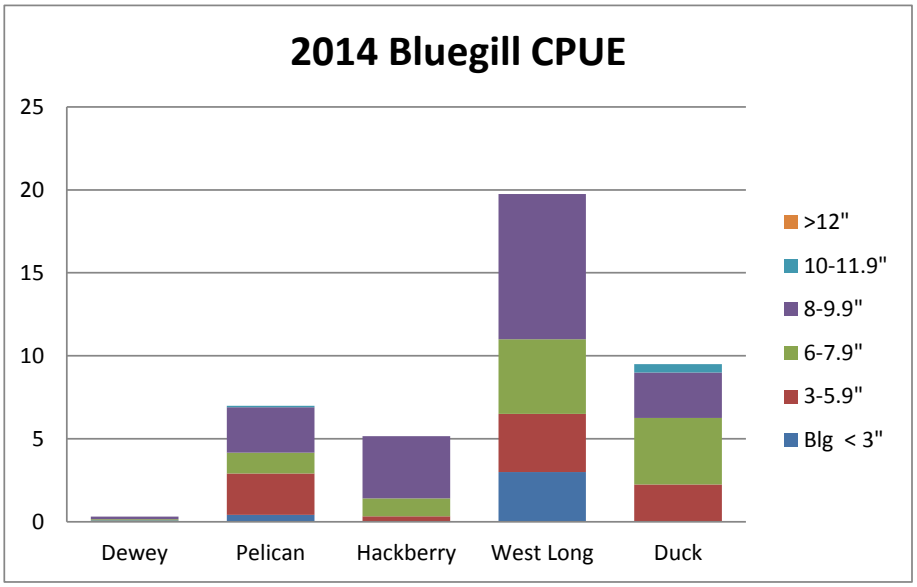
Frame net set in Dewey Lake

Weighing largemouth bass collected from Duck Lake 2014

Biologist collecting lengths off Northern pike collected in Pelican Lake 2014.

Bluegill

Bluegill are targeted year round by anglers. Out of the nine lakes open to fishing on the VNWR five of those were sampled for bluegill in 2014. Bluegill can be found in almost any sandhill lake as long as it is able to support fish. These habitats are highly productive and although densities of bluegill may not be high in these lakes, they can produce some trophy bluegill. West Long Lake had the highest density of bluegills with a catch rate of 19.75 per net. Approximately 44% of those fish sampled measured greater than 8 inches. Pelican and Duck also showed good size structure of bluegill and are favorite destinations for many ice anglers. Surveys indicated Pelican and Duck each had fish that exceeded the ten inch mark. The largest bluegill sampled was 10.43 inches and resided in Duck Lake. Anglers wanting to target bluegill should not overlook Hackberry as 72% of those fish sampled were greater than 8 inches.

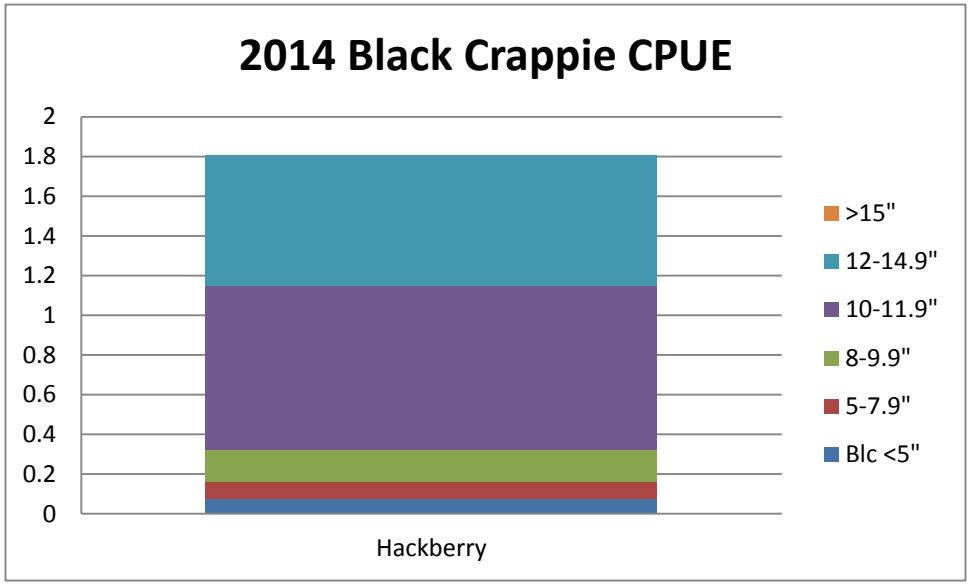


Panfish Regulations: Bluegill, Yellow Perch, Crappie, Green Sunfish
Bag limit of 15 fish in combination and a possession limit of 30 fish.

Top Left Bluegill collected from Duck Lake, Top Right Bluegill collected from Hackberry Lake, and Bottom Bluegill collected from Pelican Lake. All fish were collected in 2014.

Black Crappie

Black crappie are only found in two lakes on the VNWR. These fish provide an additional panfish opportunity and seem to do well even in the presence of common carp. Black crappie were never stocked into Hackberry Lake but they are present. Anglers are reminded it is illegal to transfer fish from one body of water to another. Even though densities for black crappie are not high in Hackberry, size structure is excellent. Every size class was collected for black crappie except fish over 15 inches. Fish under the 5 inch mark indicated some natural recruitment was occurring. The largest black crappie collected at Hackberry measured 12.34 inches. Clear Lake also has black crappie present but due to low water levels in 2014 surveys were not conducted.

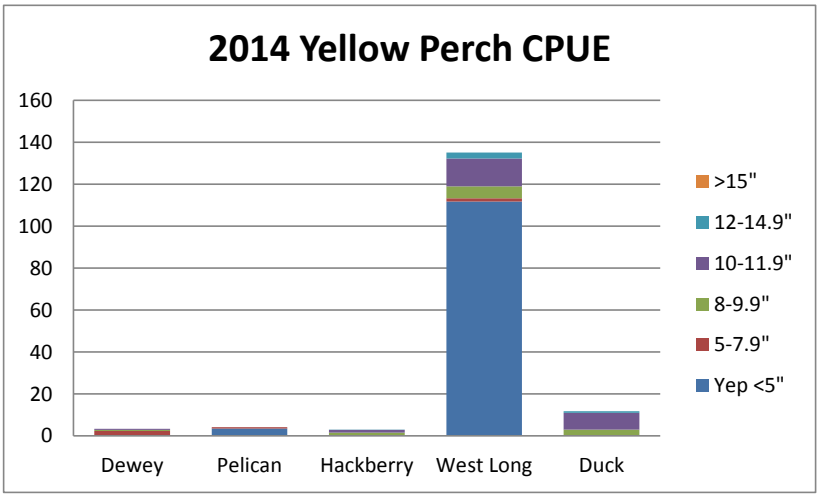


Black crappie collected from Hackberry Lake in 2014

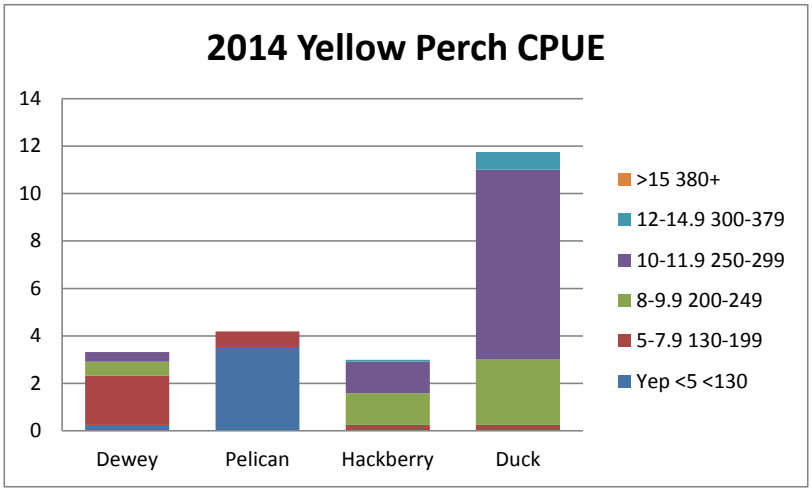
Yellow Perch

Yellow perch are a favorite for ice anglers but are also targeted during the open water months. Most sandhill lakes have populations of yellow perch. Given the right conditions and highly productive environment they live in allow some of these fish to reach lengths of 12-15 inches. 2014 sampling showed the highest density of perch resided in West Long Lake. Of the fish sampled at West Long 82.7% of those sampled were under 5 inches in length. If you removed those 5 inch fish from the graph West Long still had an excellent catch rate of 23.25 fish per net. The largest fish sampled was also from West Long Lake and measured 13.94 inches. Duck lake also showed excellent size structure for yellow perch and 74% of those fish sampled were over 10 inches in length. Graphs showing yellow perch catch rates can be seen below, one graph has West Long removed to show size structure of other lakes.

Yellow perch collected from West Long Lake in 2014



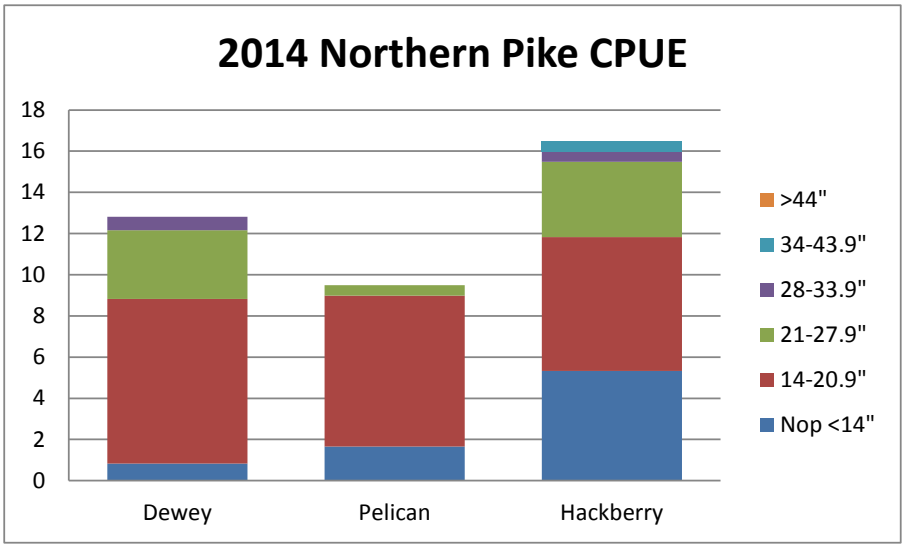
Yellow perch collected from Hackberry Lake in 2014



Northern Pike

Northern pike exist in several lakes throughout the VNWR although Nebraska is on the southern end of their native range. Water temperatures become warm in the summer limiting growth and due to sandhill lakes being relatively shallow they have no cooler water refuges during those hot summer months. These fish do provide angling opportunities year round and are a fun fish to target and excellent table fare if one learns how to remove the Y bones. Northern pike have been managed in the past to provide an additional predator on common carp populations and is the reason a maximum size limit of 28 inches in place on the VNWR.

Pike are sampled with frame nets in mid to late March when these fish are spawning in the shallow vegetation of these lakes. The highest density of northern pike sampled in 2014 was at Hackberry Lake even though pike have never been stocked there. Hackberry has an excellent size structure of northern pike and the largest collected measured 39.4 inches and weighed approximately 14 pounds. Dewey Lake also showed an excellent size structure and should not be overlooked by anglers wanting to target pike through the ice or open water. Clear Lake on the VNWR also has a northern pike population however; due to low water in 2014 it no surveys were conducted.



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.

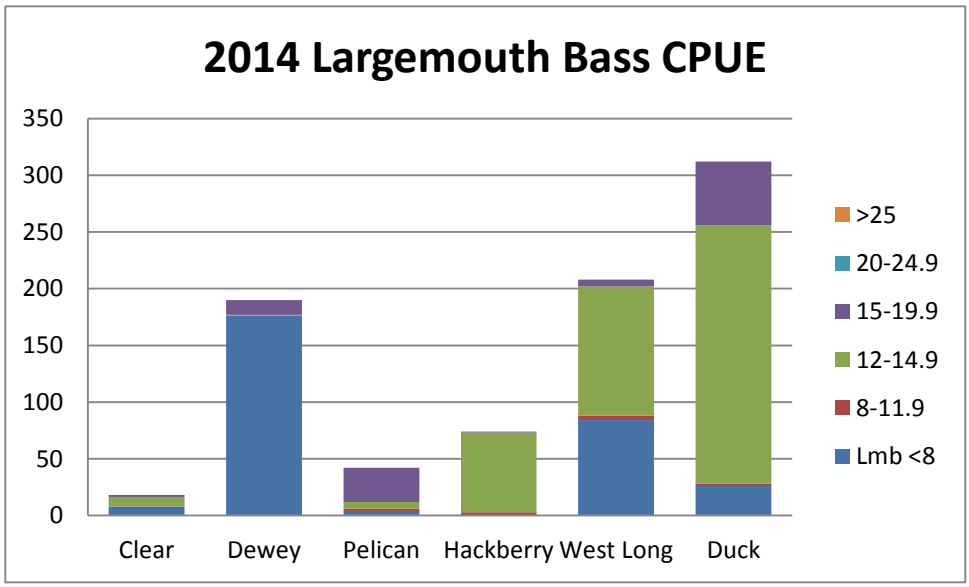
Northern pike collected from Hackberry Lake during 2014

Northern pike collected from Dewey Lake in 2014

Largemouth Bass

Largemouth bass exist in most sandhill lakes and is the primary predator for these waterbodies. Higher bass densities help to control unwanted species such as common carp and also control panfish recruitment which allows those remaining panfish to grow extremely well without competition for available food. High bass densities exist in Duck and West Long with catch rates of 312 and 208 fish per hour. Duck and West Long Lakes both had strong year classes of 12-15 inch fish. Anglers wanting to harvest bass should fish Duck Lake as 18% of the fish sampled were over the minimum length limit of 15 inches. There were no bass sampled in 2014 over 20 inches in length.

Anglers searching for trophy largemouth should fish lakes such as Pelican and Hackberry as historical data indicates fish over the 20 inch mark. The largest bass collected during the 2014 surveys was from Dewey Lake and measured 19.8 inches.



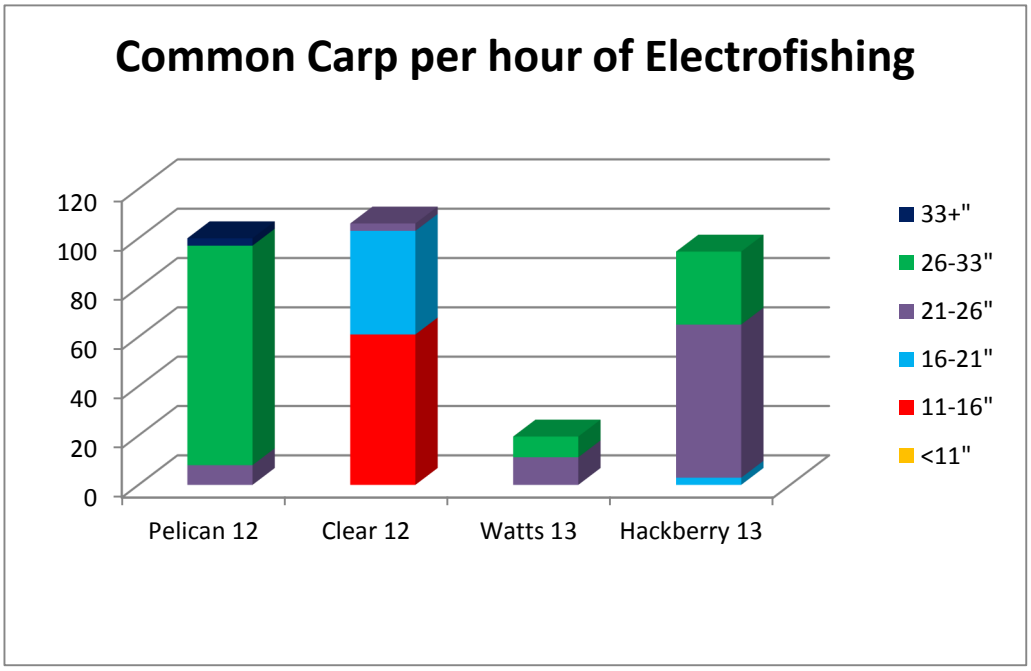
Largemouth Bass Regulations: Minimum length of 15 inches with only one fish longer than 21 inches in the daily bag. Bag limit of 5 fish and possession limit of 10 fish.

Largemouth Bass collected in 2014 from Dewey Lake

Couple happy ice anglers at Pelican Lake

Common Carp

Common carp gained access to the lakes open to fishing on the VNWR during the 1930's when the Gordon ditch was dug. Common carp do extremely well in these shallow highly productive habitats and once established cause detrimental effects by reducing water quality, reducing aquatic vegetation, and increased competition for game fish species. Common carp grow extremely fast often out growing what predatory species such as northern pike and largemouth bass can effectively control within the first year. Common carp angling can be very fun and challenging. Trophy fishing opportunities exist in several of these waterbodies and anglers are encouraged to keep carp that they catch. The state record common carp for bow and arrow fishing came from Dewey Lake in 2011 and weighed 50 pounds 5 ounces.



Common carp collected from Dewey Lake in 2014 weighing approximately 32 pounds

Aquatic Habitat Plan

The problems facing these lakes are the presence of common carp and passage of these fish through existing water control structures. Undesirable fish species such as common carp can be removed from these lakes by using the chemical rotenone. These renovations are often expensive and should only be done at times of low water or drought or by manually pumping the lakes down for a more effective treatment. NGPC and USFWS personnel decided if any future renovations of these lakes would occur then something needed to be done with the existing water control structures. Engineers and consultants were hired to design water control structures below Watts, Hackberry, Dewey, Pelican, Whitewater, Clear, and Willow. These structures are designed so no fish passage can occur between lakes. Excavation of ditches between lakes will also allow USFWS personnel the ability to manage water more effectively. This project should be out for bids in early 2015. Funding for this project comes directly from anglers permits as part of the Aquatic Habitat Stamp Fund.

Angler Access Projects

Several angler access projects have been completed over the past couple years. This project was completed in 2014 which provided concrete boat ramps 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 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.

Busy day on Pelican

AIS (Aquatic Invasive Species)

Zebra and Quagga Mussels

Anglers and boaters should know that AIS (Aquatic Invasive Species) issues have become a rising concern in Nebraska. Zebra mussels (pictured right) and quagga mussels are small fingernail-sized mussels and adults are usually 1/4 to 1/2 inches long with alternating yellow and brownish colored stripes on their shell. Statewide monitoring in Nebraska has begun since the zebra mussels were confirmed in Nebraska at Offutt Lake and Zorinsky Lake near Omaha and are present in several reservoirs in Colorado and Kansas. Sampling for veligers (free-swimming larvae of adult mussels) occurs statewide from the months of May through September. No evidence of these mussels has been discovered in any other lakes sampled.

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. Once established these mussels can cause millions of dollars in damage to recreation, water systems, and fisheries. Anglers should always remember to **CLEAN DRAIN DRY** which will help to prevent the spread of these unwanted invasive species.

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 make sure to visit neinvasives.com.

NEW REGULATIONS 2015: 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. This regulation is intended to prevent or delay the establishment of aquatic invasive species, particularly zebra mussels, in Nebraska waters.

Other Regulations: 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.

For more information about fisheries management at the Valentine National Wildlife Refuge please contact the following personnel:

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Refuge Manager: Steve Hicks, (402) 376-3789 steve_hicks@usfws.gov