Elwood Reservoir 2017 Fall Survey Summary



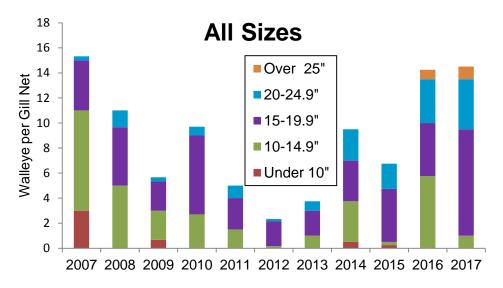
Jared Lorensen, Fisheries Biologist

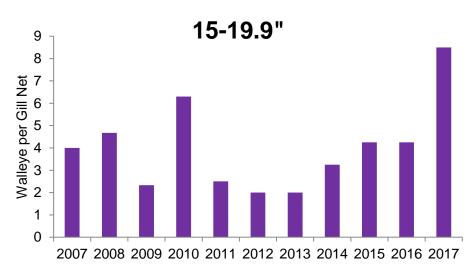
Elwood Reservoir was constructed during the late 1970s and is utilized by Central Nebraska Irrigation & Public Power District (CNPPID) for regulation of irrigation water. This reservoir is located approximately five miles south of Johnson Reservoir. A public access Wildlife Management Area (WMA) is located along the east shoreline and provides a concrete boat ramp, dock, nighttime lighting, parking and an outhouse. Most of the abundant coves and fingers of this reservoir are remote, steep and heavily vegetated making them accessible only by boat. Limited shoreline access for bank angling is available near the "bubble" and along the dam. The boating regulation allows internal combustion engines but limits speed to 5 mph and/or non wake producing speeds. As of January 10, 2018 this reservoir was at elevation 2599.3' inundating approximately 986 surface acres.

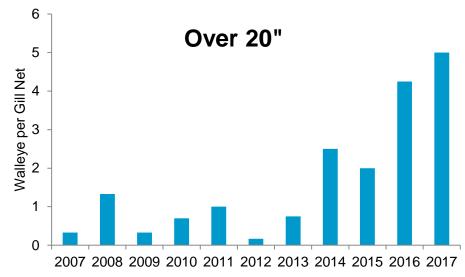


The fishery of Elwood Reservoir is sampled every fall using experimental gill nets, a method commonly used to sample species found primarily in open water. Data collected from these surveys allow biologists to evaluate the population density, size structure, and growth rates for several species. This data provides valuable information to guide decision making scenarios that include fish species stocked, stocking rates and fishing regulations. This information also assists Game and Parks staff in guiding anglers to waterbodies that have the desired populations for fishing. For more explanation of what constitutes a fisheries survey read the <u>Survey Says</u> article. 1

Walleye







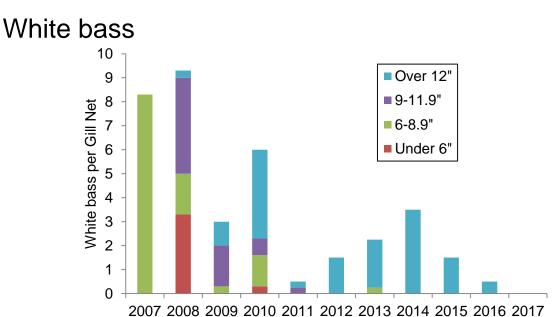
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Walleye

The walleye population declined during the low water years preceding 2010 due to poor habitat availability, reduced prey populations and angling mortality. Since the return of better habitat, survey data has not indicated the desired population response but 2016 and 2017's surveys have been the best observed in nearly ten years. 2017's survey revealed 14.5 walleye per gill net. This sample included approximately 7% in the 10-14.9" length group, 59% in the 15-19.9" length group, 28% in the 20-24.9" group and 7% in the over 25" group. The most abundant length group (15-19.9") were those originating from stockings during 2014 and 2015. On June 15, 2017 walleye fingerlings (200,042 - 2") were stocked. These walleye were not present in the 2017 standard gill netting effort as they may have been too small but they are expected to be doing well. Variable walleye stocking strategies are planned for the future. The 2018 stocking will be requested similarly to 2015's. Check <u>NGPC's Fish Stocking</u> website for updates.

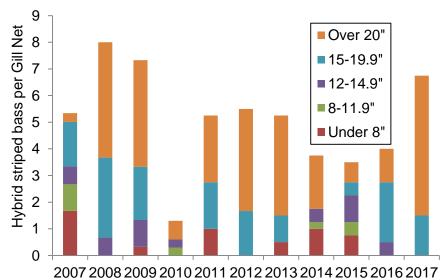
Elwood has a special walleye harvest regulation to encourage growth. A daily bag limit of four walleye may include one walleye from 15 to 18", and three or four longer than 18" and only one 22" or longer in the daily bag. The primary objective is to protect walleye through age three, thereby increasing abundance of larger fish. For more information concerning regulations consult the <u>2018 Fishing Guide</u>.



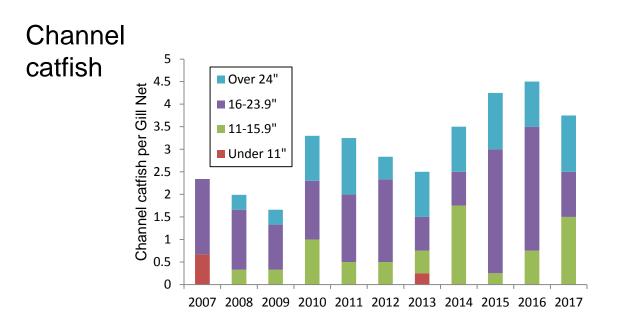


There has been a resurgence of white bass since 2003 but the 2017 survey collected zero. Although density of white bass is quite low, size values are large. White bass reproduction and recruitment can be inconsistent. White bass survey data also is inconsistent from year to year due to their schooling behavior. There is a special restrictive regulation on white bass and hybrid striped bass harvest at Elwood. To investigate Elwood's harvest regulations visit the 2018 Fishing Guide.

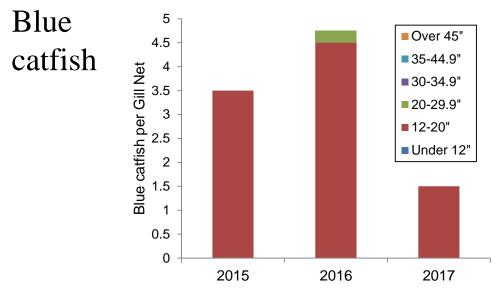
Hybrid striped bass (aka wiper)



The 2017 data reveals the most abundant capture of hybrid striped bass since 2009. A large proportion (75%) were greater than 20". A mean length of 20.75" and a maximum length of 24" was observed. This population is maintained by annual stocking. There is a special restrictive regulation concerning hybrid striped bass and white bass harvest. To investigate Elwood's harvest regulations visit the <u>2018 Fishing Guide</u>. To aide in differentiating these species visit <u>NGPC's Temperate Bass ID Site</u>. In addition to what this website states, hybrid striped bass have more than one stripe that extends to the tail.



The 2017 survey data indicates a growing channel catfish population with an increase in small catfish. The largest channel catfish sampled in 2017 was 31". Of those sampled during 2017, 40% were 11-15.9", 27% 16-23.9" and 33% over 24". Chances remain very good to catch a nice sized channel catfish in 2018.



Blue catfish were first introduced into Elwood on September 15, 2014 with a stocking of $3,976 - 12 \frac{1}{2}$ " fish. Average length of those sampled in 2017 was 15". The abundant alewife and gizzard shad population should support these catfish and they should provide another unique angling opportunity. The daily bag limit for blue catfish is one (1). Check the 2018 Fishing Guide for details and the NGPC Fish Identification Guide for help differentiating between blue and channel catfish.

Stockings



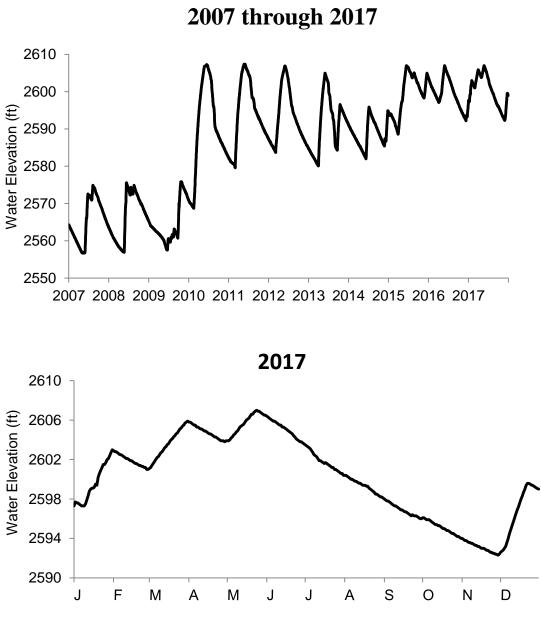
Elwood Reservoir receives stockings from NGPC's Hatchery System every year. Many factors are involved when stocking selections are made. Below you will find Elwood's stocking history for the past eleven years. For more stocking details access NGPC's Fish Stocking Reports.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Walleye	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Hybrid striped											
bass	Х	Х	Х	Х	Х		Х	Х	Х		Х
Channel											
catfish	Х		Х				Х		Х		Х
Muskellunge					Х		Х		Х		Х
Alewife	Х										
Gizzard shad	Х						Х				
Yellow perch			Х	Х							
Black crappie				Х							
Bluegill					Х						
Largemouth											
bass					Х						
Rock bass						Х					
Spotted bass						Х	Х	Х	Х	Х	Х
Blue catfish								Х			Х

For additional information about the fishery of Elwood Reservoir please contact Brad Newcomb, District Mgr. 308-865-5310, <u>brad.newcomb@nebraska.gov</u> Jared Lorensen, Biologist 308-535-8025, jared.lorensen@nebraska.gov

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Water Level



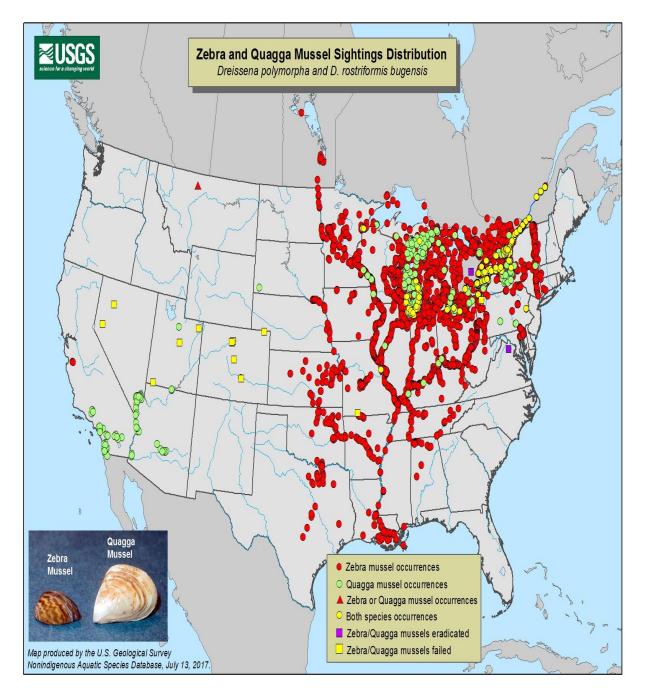
Elwood's water level changes frequently and plays a vital role in this fishery. Water elevation has benefitted from an agreement between CNPPID and Tri-Basin Natural Resources District (TBNRD) involving groundwater recharge during non-irrigation season. Follow water level fluctuations at <u>CNPPID's</u> <u>Lake & Reservoir Elevation Site</u>.

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Invasive Species

Distribution of invasive zebra and quagga mussels is getting closer and closer to SW Nebraska. The most recent finding was at Lewis and Clark Reservoir in NE Nebraska during 2015. This <u>map</u> portrays the spread of these invasive mussels and is updated often.

In 2016, Nebraska boaters became required to possess a <u>Aquatic Invasive Species</u> (<u>AIS</u>) <u>Stamp</u>. Residents acquire the stamp when registering their watercraft. Nonresidents have to purchase a physical sticker that must be displayed on their watercraft.



Invasive Species



STOP AQUATIC HITCHHIKERS![™]

According to Nebraska State Law, it is illegal for watercraft to enter a Nebraska waterbody or leave a launch area while containing water. This includes all containers, compartments, and equipment that are permanently attached to the watercraft.

AND

All aquatic vegetation must be removed from watercraft and trailers before leaving a launch area.

Protect Your Waters—Remember to CLEAN, DRAIN, and DRY!

