

2018 NE District Flood Control Reservoir Fish Sampling Summary

Nebraska Game and Parks Commission

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Several flood control reservoirs dot the landscape of the Northeast District ranging in size from approximately 25 to 700 surface acres. Willow Creek Reservoir near Pierce is the largest of the flood control reservoirs in the Northeast District and management is geared toward a large reservoir fishery that includes walleye, wipers, and channel catfish. It also provides some good opportunities for crappie anglers. Willow Creek does experience substantial algae blooms which may be negatively influencing recruitment of some species. The primary species making up the fish communities in the remaining smaller reservoirs are largemouth bass, bluegill, black crappie, and channel catfish. Walleye are also found in some of these reservoirs but in relatively low numbers in most cases. Most of the flood control reservoirs receive annual stockings of channel catfish while about half are annually stocked with walleye. Species in these lakes other than the channel catfish and walleye typically maintain their populations through natural reproduction and recruit-

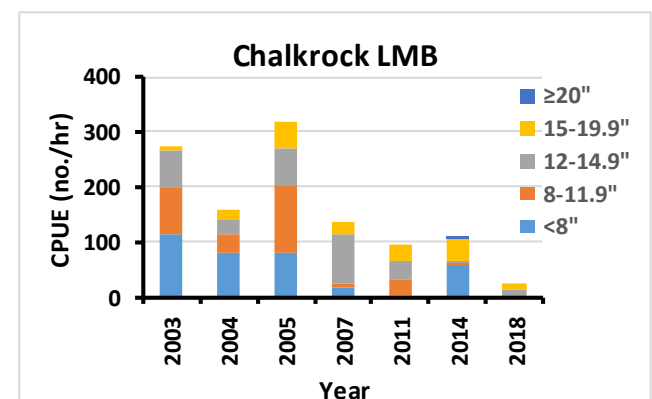
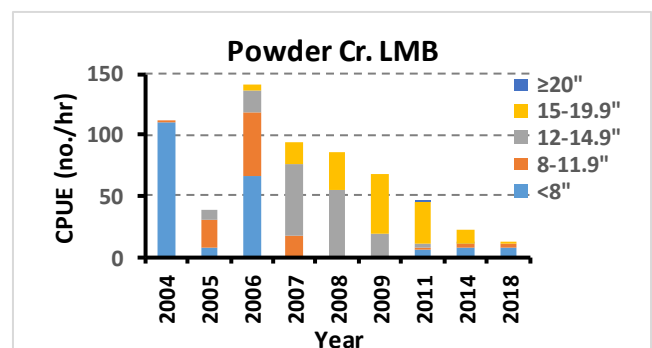
Largemouth bass

Bass are collected by night-time electrofishing efforts that are conducted in the spring of the year. A catch rate of at least 150 bass per hour of electrofishing is desirable. This minimum catch rate not only equates to good catch rates for anglers seeking bass but can also limit panfish recruitment so that desirable growth rates and size structure on those panfish can be maintained.

Similar to 2017, night time bass electrofishing effort was limited in 2018 due to equipment issues and time. Two lakes were prioritized due to recent concerns with the bass populations in those lakes.

Limited bass recruitment has been an ongoing issue at Powder Creek Reservoir near Martinsburg. In most lakes largemouth bass have no issue maintaining their populations through natural reproduction and recruitment. Powder Creek has been an exception to that since shortly after the lake was built and we haven't been able to produce numbers there without stocking. Currently, and through the years, abundant hybrid sunfish, black bullhead, and catfish populations may have played a role in limiting bass recruitment. With the limited number of bass in the lake, the bluegill population continued to go "unchecked" and has consisted of abundant, relatively slow-growing individuals. In an effort to turn this around, a lake drawdown is proposed for the summer of 2019. If available, larger bass will be stocked concurrent with the drawdown so that relatively high predation can occur on the bluegill, hybrid sunfish, and bullhead populations. Prior to the latest survey the bass population was considered relatively low density but with good size structure, that can't be said in its current state.

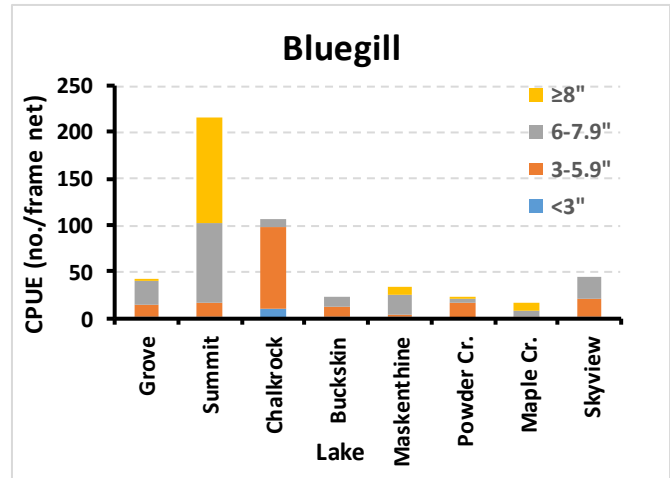
Chalkrock Lake appeared to have recruitment issues also. The lake experienced a partial bass die-off in 2016 and was subsequently stocked with bass in 2017 and 2018. Those recent bass stockings mentioned were of larger fish (9-12+ inches). However, as can be seen in the graph and despite the 2017 stocking, our 2018 survey still indicated very low numbers. Similar to Powder Creek, Chalkrock is also a candidate for a summer drawdown/bass stocking in 2019. Unlike these two lakes, the bass populations in most of the flood control reservoirs in the Northeast maintain consistent recruitment and have stable adult populations with good size structure. Information on some of those other lakes in the district can be found in previous reports on this web page.



Bluegill

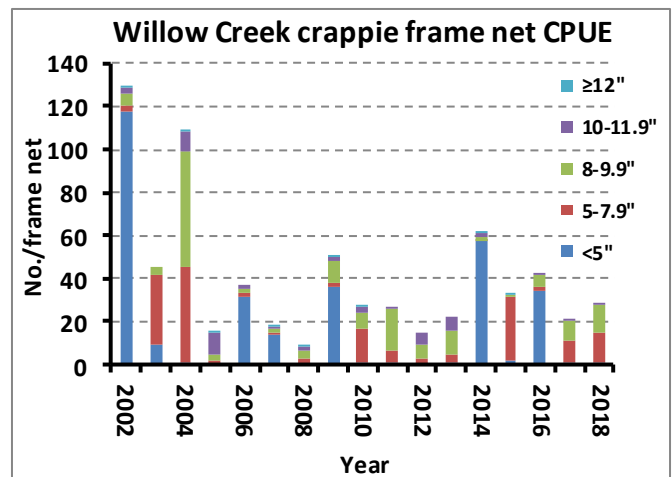
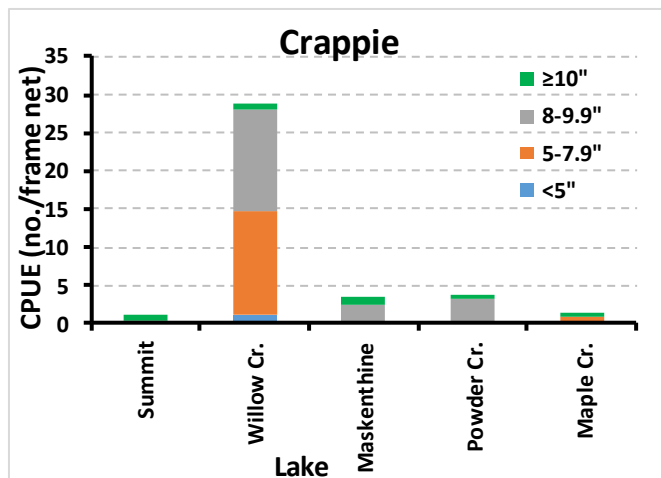
Frame net sampling for bluegill takes place in the spring, from late April through June. Although the data is from last spring, fishing opportunity for bluegill should be fantastic at Summit since over 50% of those sampled exceeded 8 inches. Maple Creek was the “gold-standard” for bluegill in the Northeast District in 2017 with around 30 per net exceeding 8 inches but numbers appeared to have dropped off somewhat in 2018 after several years of heavy angling pressure. There are still some really nice bluegill present but, as mentioned, numbers appeared to be down quite a bit.

The bluegill populations were slightly improved the last two years in Chalkrock, Powder Creek, and Skyview but still left a lot to be desired. However, the other lakes shown in the graph should offer some good opportunity for decent-size bluegill along with a good catch rate for anglers. The number of bluegill shown for Powder Creek is likely misleading. Most of those nets were loaded with channel catfish that ate a lot of the bluegill that were in the net along with them. Grove Lake has once again been producing some decent fish on a more consistent basis and Maskenthine continues to plug along, steadily producing some nice, harvestable fish. Additional lakes that weren't sampled in 2018 but should provide some good bluegill opportunities include Kramper, Cub Creek, and Pibel.



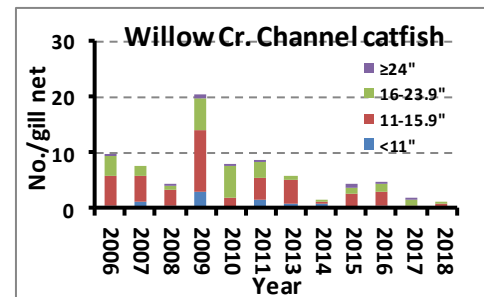
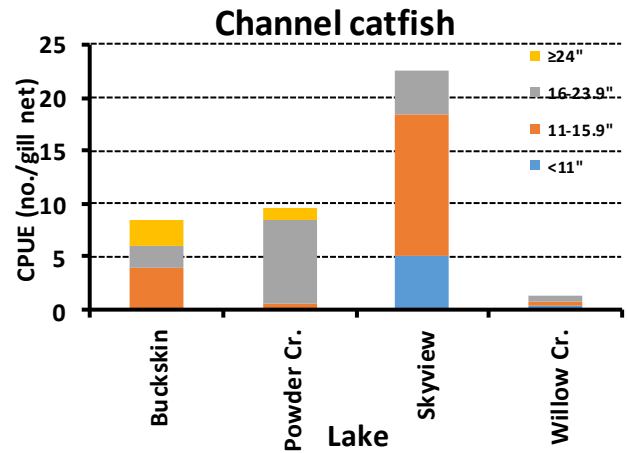
Crappie

Crappie data on most of the flood control reservoirs are collected in the spring at the same time bluegill are being sampled. Timing is critical to catching crappie in the spring; a fairly small window of opportunity typically occurs when they are in shallow preparing for and carrying out spawning activities. Thus, the low numbers in the lakes other than Willow Creek, which is sampled in the fall, probably don't accurately represent those populations. Crappie were collected in decent numbers in Willow Creek but they were running a bit on the small side with size structure similar to that of 2017. Age analysis indicated that growth rates have slowed in recent years, most notably for white crappie but also for young black crappie (age-1). Flood control lakes in addition to those actually sampled in 2018 that should provide good crappie angling opportunities include Summit and Kramper lakes. Grove and Buckskin lakes were sampled in 2018 but the number collected was too low to include in the graph. However, as mentioned earlier, crappie can easily be missed in a spring-time sample. Crappie fishing was good in those two lakes in 2018 and it should continue in 2019.



Channel catfish

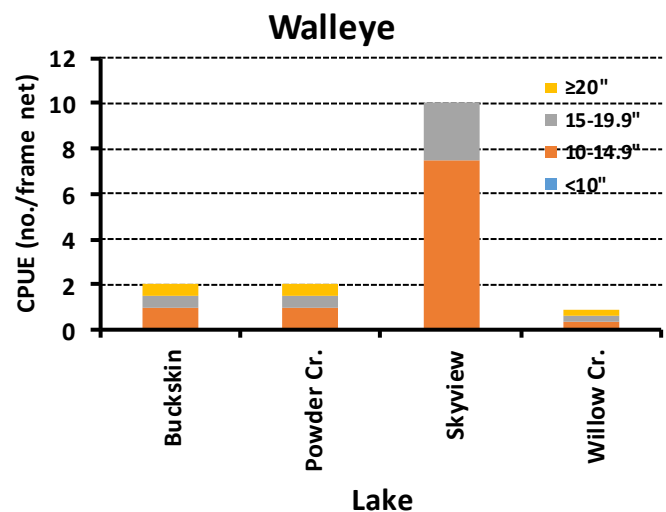
Channel catfish, along with other species considered “open-water” or “off-shore” (for example: walleye, white bass, etc.), are sampled in the fall with gill nets. Most all of the flood control reservoirs in the district provide excellent opportunity for channel catfish anglers, for both numbers and size. Most lakes will have size distributions and numbers similar to that of Powder Creek. The catfish fishery in Willow Creek, however, is struggling. The lack of larger fish could still be due, at least in part, to a substantial catfish die-off in the spring of 2014 from a bacterial infection. Catch rates have been less than 5 per net there since 2014, well below our target range of around 10 per net. In trying to conserve hatchery space, several lakes in the state were switched to stocking smaller fish (5 inches instead of 10 inches) a few years ago. Willow Creek was one of those and was stocked with the smaller fish from 2015-2018. Recruitment has been quite limited so we will return to stocking 10” catfish beginning in 2019 to see how they fare. It is believed that water quality may be affecting recruitment of other species in the lake and thus could also be negatively influencing catfish recruitment.



Walleye

Gill nets were set in four northeast flood control reservoirs in the fall of 2018. Willow Creek is sampled annually with gill nets to assess the walleye, wiper, and channel catfish populations. Other, smaller lakes are sampled intermittently to evaluate channel catfish and walleye populations. However, Buckskin, Powder Creek, and Skyview have been stocked with advanced-size (9-inch) walleye fingerlings the last three years and thus are being sampled on an annual basis to assess the viability of stocking those larger fish.

The advanced fish are really making a difference in Skyview while not so much in the other two. Standard fingerling walleye (~1.5 inches) were stocked in Skyview annually from 2005 through 2009 following the 2004 renovation of the lake but no fish from those stockings were ever observed during subsequent sampling efforts. Buckskin and Powder Creek had been stocked annually with standard fingerlings for the last ten years or more prior to switching to the advanced fish. Gill net data are limited for Powder Creek so limited walleye information exists for that lake other than anecdotal observations from other sampling methods. Buckskin, however, was sampled with gill nets 5 times prior to 2017 with an average catch of 2.8/net. Over the last 2 years Buckskin and Powder Creek have averaged between 2 and 3 walleye per gill net. It is difficult to infer much about Powder Creek due to the limited data but at Buckskin the catch rate is very similar to the period when standard fingerlings were stocked. The stockings of those larger walleye, and appropriate sampling, are planned to continue for the next 1-2 years in those lakes to provide a good evaluation of the advanced fingerling stocking success. Some of the smaller flood control reservoirs in the district that might provide a targetable walleye population would include Maple Creek, Maskenthine, and Summit lakes.



Other species

Wipers have been stocked in Willow Creek on an annual basis for some time and used to provide a great opportunity for a hard-fighting trophy type fish. However, the fingerling (~1.5-inch fish) stocked wipers haven't done well for several years now, possibly due to the lake's poor water quality. The average net catch for wipers was 7/net from 1996 to 2006 but was an abysmal 0.8/net from 2007 to 2017. In an effort to address this decline, advanced fingerling wipers (~6 inches) were stocked in 2017 and 2018 and will continue to be stocked over the next several years to see if they will recruit better than the smaller fingerlings. There were a few individuals collected in the 2018 sample, which is encouraging. The regulation for wipers at Willow Creek includes a 3-fish bag limit with only one over 16 inches.

Northern pike are present in some of these waters including Willow Creek, Maskenthine, and Grove Lake. The Willow Creek and Maskenthine populations are low-density and catches of pike are typically incidental while fishing for other species. In contrast, pike are relatively common in Grove Lake and are targeted regularly as the lake does produce some really nice fish. Pike collected during the 2018 sample at Grove ranged from 15 to 36 inches. As of January 1, 2019, the minimum length limit on northern pike at Grove Lake increased to 34 inches. Additionally, the new statewide pike regulations limit anglers to one fish over 34 inches, thus creating a one-fish bag limit on pike at Grove Lake. There is no minimum length limit for pike on the other reservoirs in the district.



Bullheads are present in several of the flood control reservoirs in the district. Fishable populations are present in Maple Creek, Summit, Powder Creek, and Kramper.

Invasive Species

Many of the Northeast District Lakes contain dense beds of aquatic vegetation on a seasonal basis. Curly-leaf pondweed is found in this area and is classified as an Aquatic Invasive Species. Those lakes that develop especially dense stands of curly-leaf include Pibel, Grove, Summit, Buckskin, and Maskenthine. **Anglers are reminded of the Clean, Drain, Dry regulations that require any boat that has been on a waterbody to drain all water from all compartments, equipment, or containers before leaving the launch area and to remove all aquatic vegetation from the boat and trailer before leaving the launch area.** These regulations are meant to control and/or limit the spread of aquatic invasive species such as zebra mussels, Eurasian watermilfoil, and the aforementioned curly-leaf pondweed, to name a few. Nonresident boaters are also reminded of the Invasive Species sticker requirement. The sticker provides funding for dealing with invasive species that are already present in addition to education and prevention activities that are meant to limit their spread. Nonresident boaters must have one of these stickers affixed to their watercraft before launching in any Nebraska water. Resident boaters automatically contribute to this fund through a surcharge on their boat registration, thus as long as their registration is up-to-date, residents are in compliance and won't have a physical sticker attached to their watercraft. Additional information about aquatic invasive species and preventing their distribution can be found in the 2019 Nebraska Fishing Guide (pp. 27-28) and at the University of Nebraska Invasive Species website: <http://www.neinvasives.com>. More information for Northeast District lakes such as location, boat ramps, species present, special regulations, etc. can also be found in the Nebraska Fishing Guide.

For more information on fishing rules and regulations visit the Nebraska Game and Parks website at OutdoorNebraska.org.

For more information on the fisheries and/or fishing opportunities in the Northeast District contact:
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Attention motorboat owners operating in Nebraska:

Starting in 2016, boaters whose motorized watercraft are registered in any state other than Nebraska must purchase and display a \$15 Aquatic Invasive Species (AIS) Stamp each year they launch their boat in Nebraska. The stamp will help fund AIS education and inspection programs.



- Boat inspections for AIS prior to launch in Nebraska are NOT mandatory at this time.
- Personal watercraft registered outside of Nebraska must have this stamp.
- Non-motorized craft registered in any state are exempt from the stamp.
- Stamps are not required for boats registered in Nebraska. A \$5 AIS fee is included on the residents' three-year boat registrations.
- Residents who register their boats in other states must have this stamp before launching in Nebraska.

This stamp is available online at OutdoorNebraska.org
or at Nebraska Game and Parks permitting offices.

Learn more about invasive species at neinvasives.com.

