2019 NE District Flood Control Reservoir Fish Sampling Summary

Nebraska Game and Parks Commission
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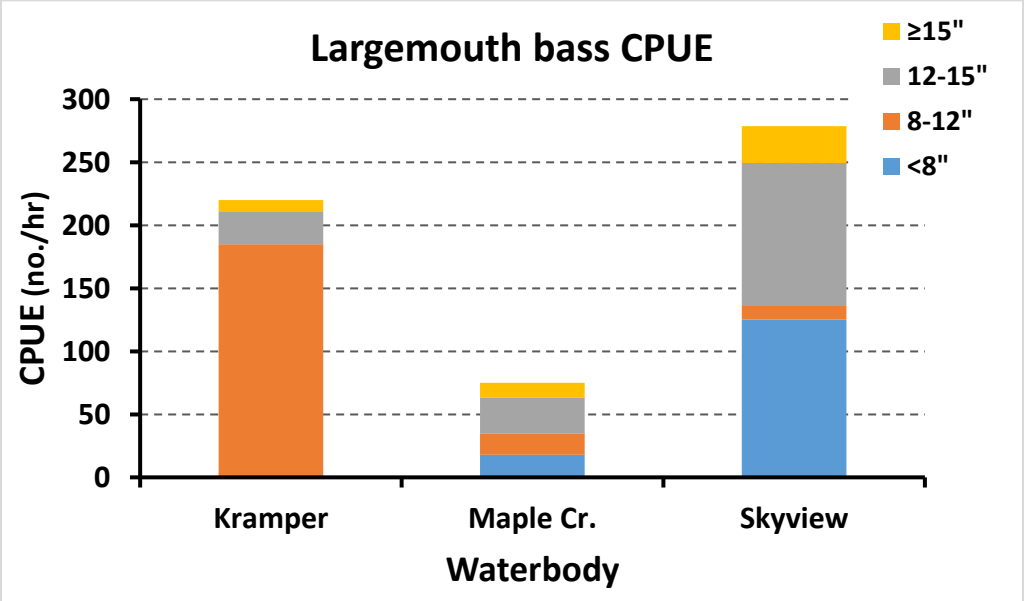
Several flood control reservoirs dot the landscape of the Northeast District ranging in size from approximately 25 to 700 surface acres. Willow Creek Reservoir near Pierce is the largest of the flood control reservoirs in the Northeast District and management is geared toward a large reservoir fishery 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 recruitment.

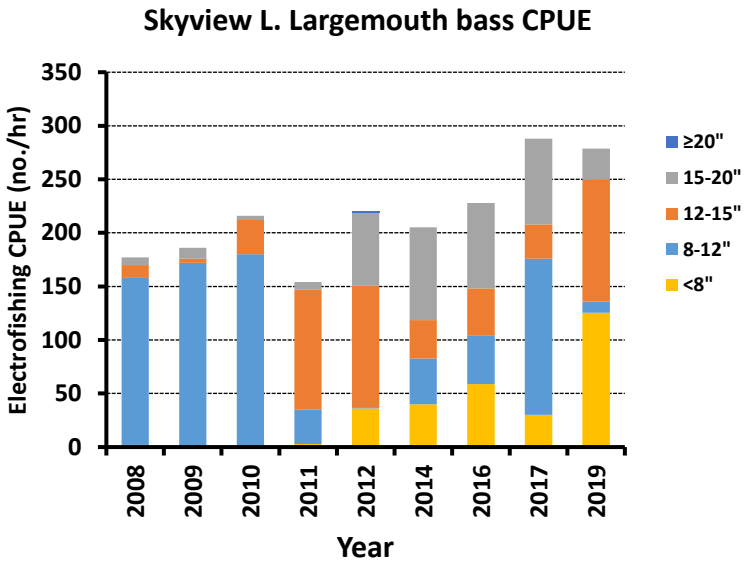
Largemouth bass

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.



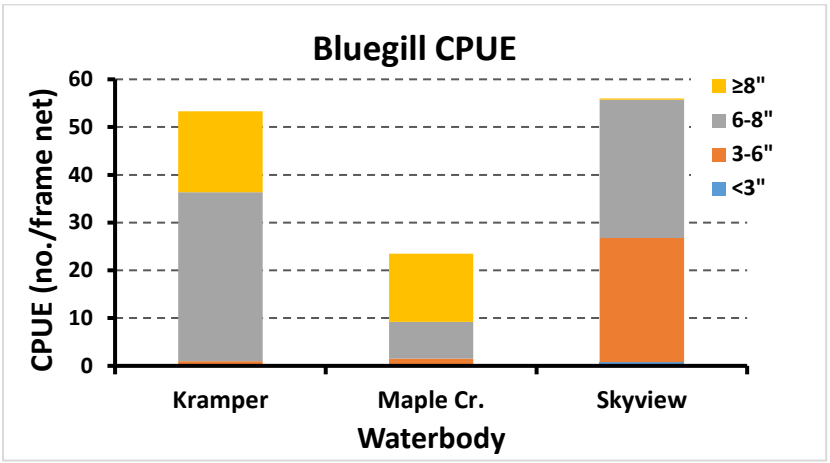
Night-time electrofishing for largemouth bass was conducted on three flood control reservoirs in 2019. The bass population in Kramper Lake near Hubbard is primarily made up of smaller fish likely due to the relatively new fishery still developing. However, as can be seen in the graph, there are some larger fish available to the angler. Maple Creek Reservoir near Leigh and Skyview Lake in Norfolk had bass

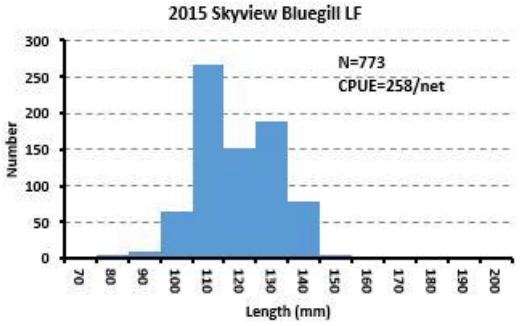
populations with a very good size distribution with all length groups represented. The catch rate in Maple Creek was less than desirable but may not be indicative of the population. The electrofishing effort occurred somewhat late and visibility was limited due to a fairly substantial algae bloom occurring at the time. Additionally, submerged aquatic vegetation was quite dense. In Skyview, the number of 8-12-inch bass appeared low but that could have been a function of limited recruitment when there was more of a "top-heavy" population in the lake. The largemouth bass length limit was reduced in 2016 from a 21-inch minimum to a 15-inch minimum length to restructure the bass population in order to shift it towards one made up of more intermediate-size fish and increased numbers. This scenario should provide increased predation on the high-density, slow-growing bluegill population that has exhibited very poor size structure in recent years yet still provide some good bass angling opportunities.

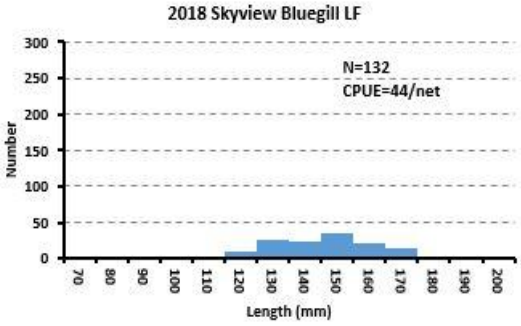


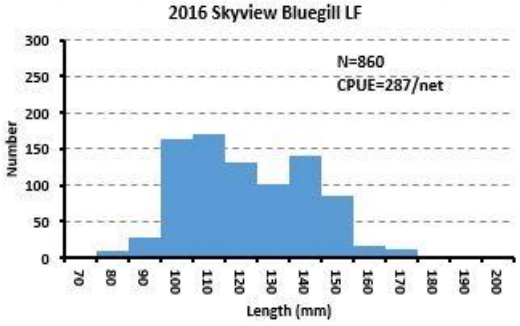
Bluegill

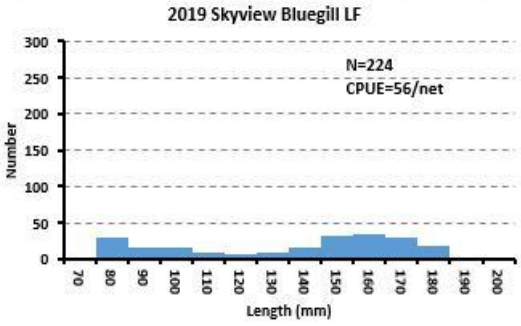
Bluegill are sampled with frame nets in the spring of the year, typically late-April thru mid-June. Three flood control reservoirs were sampled for bluegill in the spring of 2019 and were the same as those that were electrofished for bass. Netting results in Kramper and Maple Creek indicated bluegill populations with excellent size structure. Both lakes exhibited relatively high catch rates of fish 8 inches and longer. However, overall numbers were a bit lower than desired in Maple Creek. The bluegill catch has been low the last 2 years, possibly due to the heavy fishing pressure the lake had been receiving over the last several years. Additionally, very few fish under six inches have been sampled during netting surveys in the last two years, possibly indicating some recruitment issues. The bluegill population in Skyview appeared to be responding positively to the bass population shift noted above. As can be seen in the series of bluegill length frequency (LF) graphs below, bluegill density has declined and it certainly appeared that size structure has improved noticeably. Growth information indicated that bluegill were reaching 6 inches in length in 2019 a year earlier than they did in 2016. Growth rates are still fairly slow compared to most other lakes but they are improving.

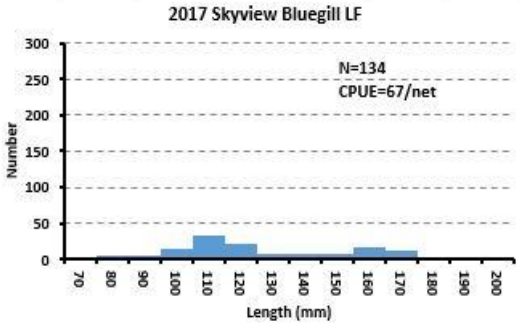

Bluegill CPUE
CPUE (no./frame net)
60
50
40
30
20
10
0
≥8"
6-8"
3-6"
<3"
Kramper
Maple Cr.
Skyview
Waterbody

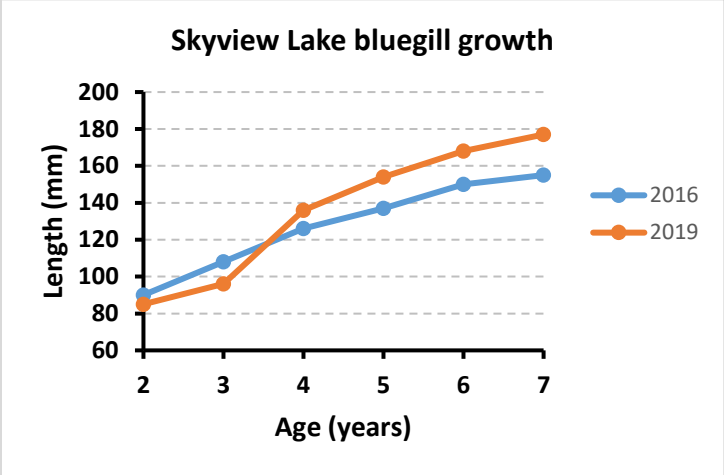

2015 Skyview Bluegill LF
N=773
CPUE=258/net
Number
Length (mm)


2018 Skyview Bluegill LF
N=132
CPUE=44/net
Number
Length (mm)


2016 Skyview Bluegill LF
N=860
CPUE=287/net
Number
Length (mm)

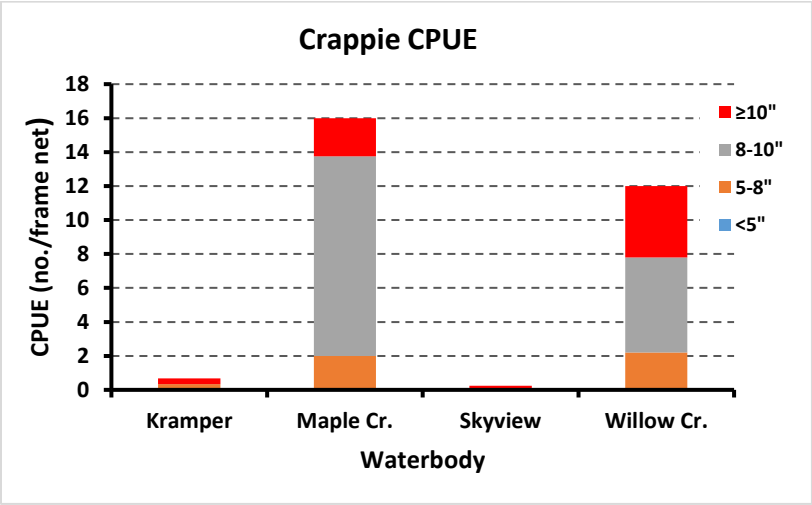

2019 Skyview Bluegill LF
N=224
CPUE=56/net
Number
Length (mm)

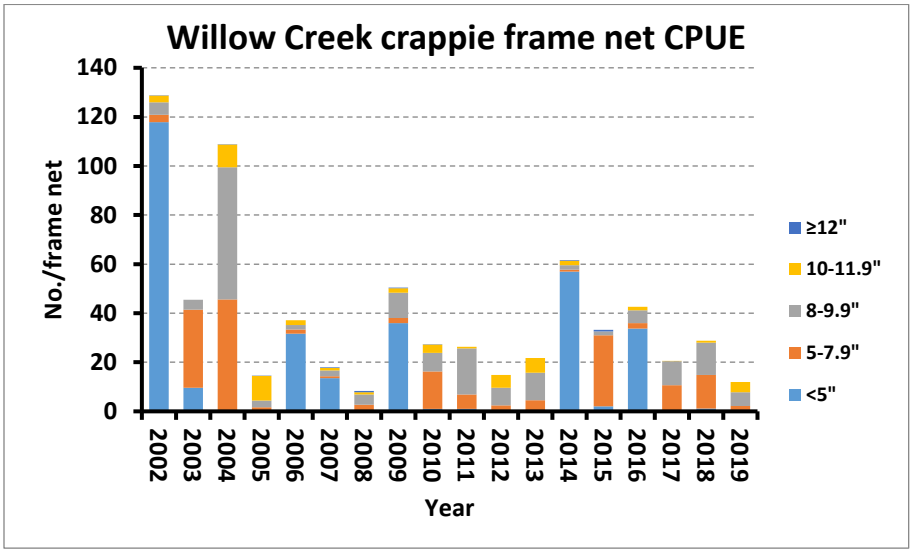

2017 Skyview Bluegill LF
N=134
CPUE=67/net
Number
Length (mm)



Black crappie

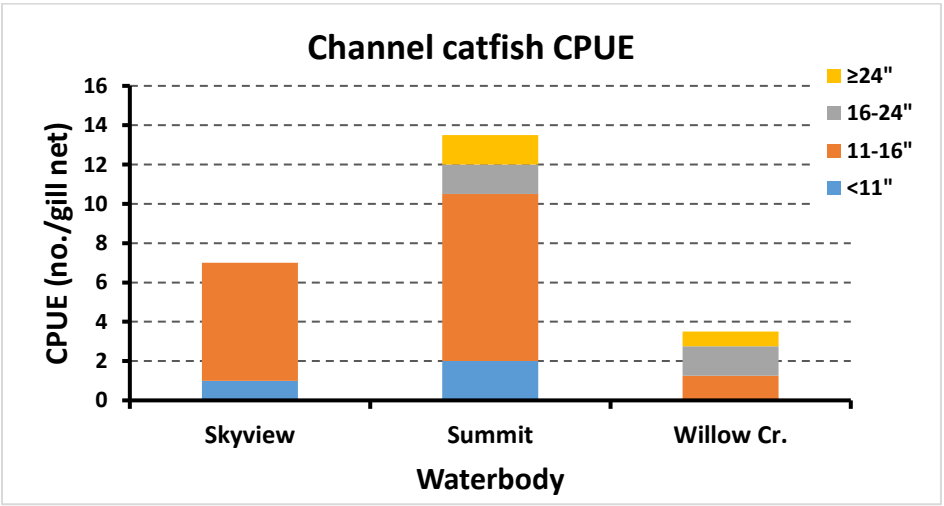
Timing is critical for collecting crappie in the spring so the catch shown in the graph may not truly represent the population in each of the lakes sampled that were sampled then. Kramper, Maple Creek, and Skyview results were from spring frame net surveys that were primarily targeting bluegill. The timing appeared to be closest for Maple Creek as the average catch was 16/net with some quality fish over 10 inches in the sample. The crappie population in Kramper was likely underestimated substantially as fishing for them was quite good during the spring of 2019. Skyview, by most indications however, appears to support a low-density population with some nice fish showing up in the creel on occasion. Willow Creek, the largest of the flood control reservoirs in the Northeast district, is sampled in the fall. Historically, it has provided some outstanding crappie fishing but has been fairly mundane in recent years. 2019 marked the lowest crappie catch rate in Willow Creek since 2008 but there were some nice fish available with just over four crappie ≥ 10 inches per frame net. The Willow Creek numbers include both black and white crappie while populations in the other lakes are black crappie only. Other flood control reservoirs in the district that provide some good crappie fishing opportunities include Buckskin, Summit, Maskenthine, and Grove.





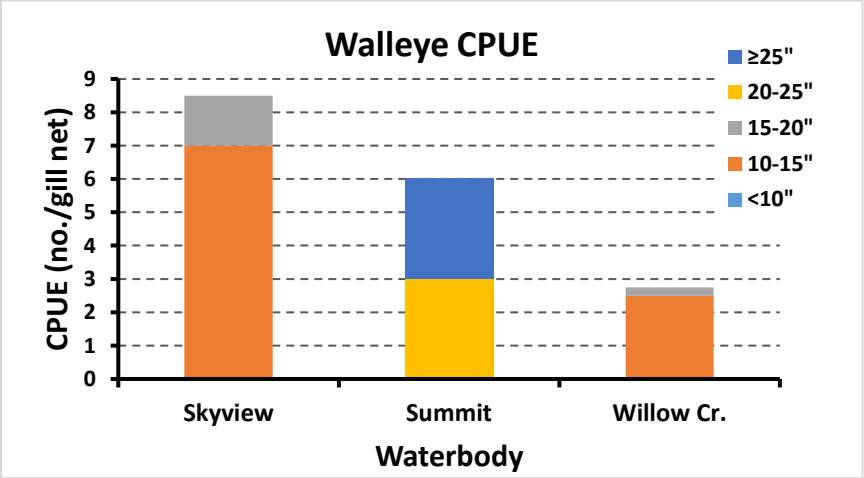
Channel catfish

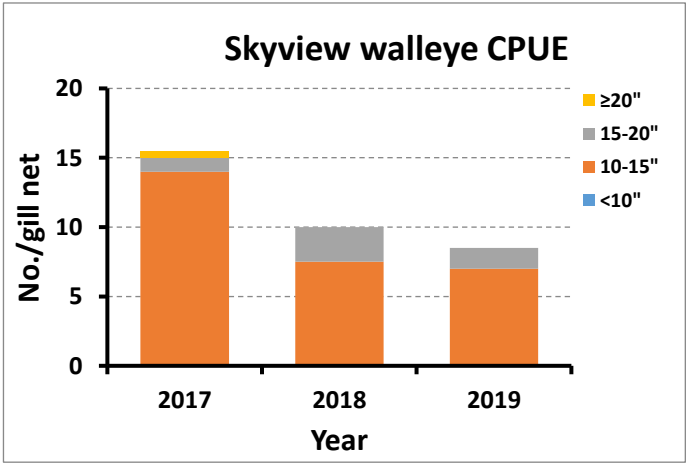
Three flood control reservoirs were sampled with gill nets in the fall of 2019 including Skyview, Summit, and Willow Creek. Gill nets target "open water" or offshore species such as walleye, catfish, and white bass. Most all of the flood control reservoirs in the Northeast district have good channel catfish populations. In Skyview Lake the catch was fairly low and no catfish over 16 inches were observed in the sample. Sampling over the last several years has indicated relatively low catch rates of catfish over 16 inches (3-4/net) which is likely a function of the lake being in an easily-accessible, urban setting. Also potentially contributing to the low catch rate could have been the low water temperature that had developed by the time of the survey. Gill net sampling in Summit Lake revealed a higher-density population as indexed by a catch rate of over 13/net. The majority of fish were less than 16 inches but fish up to 27 inches were collected. Channel catfish in Willow Creek exhibited a nice size distribution but were present in low numbers. Willow Creek does suffer from poor water quality which appears to be negatively affecting most of the fish populations in the lake. As mentioned earlier, with good numbers of catchable fish with good size structure, the flood control reservoirs in the district are all worthy of a stop for those pursuing channel catfish.

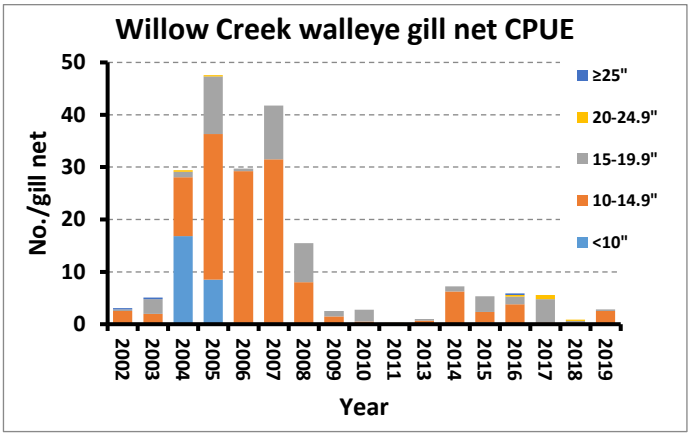


Walleye

The advanced-fingerling walleye stockings occurring in Skyview appeared to continue doing well and are providing a targetable population in the lake. The catch has declined with each subsequent year but that is likely a function of anglers having realized their presence and thus targeting and harvesting them. Although approximately 18% of the walleye were of harvestable size, the most common length groups in the sample were around 12-13 inches. Those fish should reach legal size sometime in the summer of 2020. Sampling in Summit Lake revealed a walleye population that appeared to be experiencing poor recruitment over the last several years as no fish less than 20 inches in length were collected. Age data on those fish indicated that all were ≥5 years old. With that kind of age structure some very nice walleye were present with some even approaching/exceeding Master Angler size. The lake has been stocked with walleye fry annually since 2010 and they seemed to be performing well. However, it looked as though that was no longer the case and possibly hasn't been since 2015. Plans are to adjust the stocking efforts to advanced fingerling (≥8 inches) as success has been observed in other waterbodies utilizing them. Willow Creek once again provided a poor catch rate on walleye. In fact, no walleye were collected in the gill nets in 2019. The bar for Willow Creek in the graph below is represented totally by saugeye, a hybrid cross between walleye and sauger. Experimental saugeye stocking began in 2017 to see if they would perform better than walleye have been recently and these data indicate that they might be. However, they are not providing a desirable catch rate at this point.







This species, yellow bass, was also collected during our gill net survey in Summit Lake. Anglers have reported catching them over the last few years but these are the first that have been collected during any of our survey efforts. Like their cousin the white perch, they have the potential to overpopulate and develop abundant, slow-growing populations that can hinder other species in a waterbody. They did not arrive at Summit on their own. Summit Lake provides a **great** fishery for bass, bluegill, crappie, and catfish and it would be a tragedy to see it ruined by someone moving fish around. Hopefully, the yellow bass will not become overly abundant and start impacting the other species in the lake. Fish species that were not stocked by NGPC have also been observed in Maple Creek Reservoir and Skyview Lake, among others, in recent years. **"It is unlawful to release into public waters of the state any fish that did not originate from that body of water, including the dumping of bait buckets." Additionally, sport fish regulations state "It shall be unlawful to transport or possess live white perch, black carp, silver carp, bighead carp, grass carp and yellow bass away from the water body from which they were captured."** Please call your local conservation officer (phone numbers are listed in all of our regulation guides) or the Wildlife Crimestoppers Hotline (1-800-742-7627) if you observe this or any kind of game violation.

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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