2024 NE District Flood Control Reservoir Fish Sampling Summary

Nebraska Game and Parks Commission
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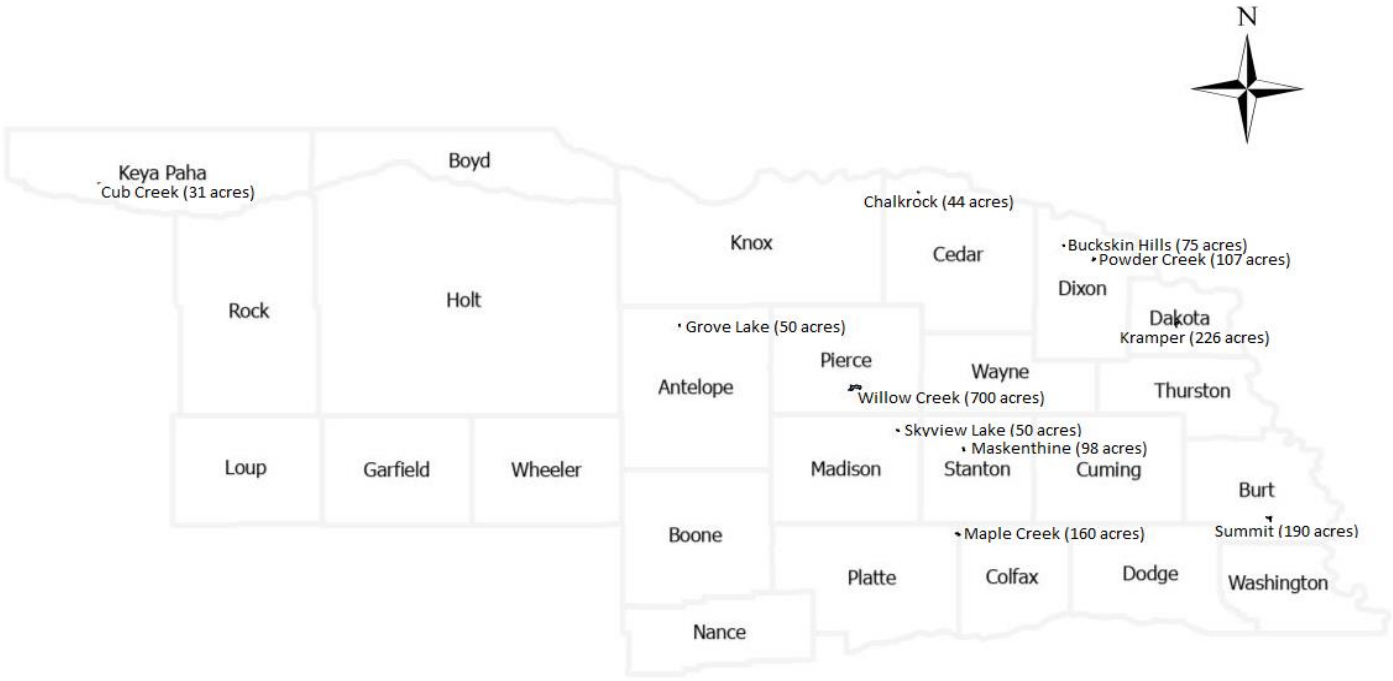
Background

Several flood control reservoirs dot the landscape of the Northeast District, ranging in size from approximately 25 to 700 surface acres. The primary species making up the fish communities in the smaller reservoirs are largemouth bass, bluegill, black crappie and channel catfish. Walleyes are also found in low to moderate numbers in some of the smaller reservoirs. Most of the flood control reservoirs receive annual stockings of channel catfish, while about half are annually stocked with walleye. Besides channel catfish and walleye, most other species in these lakes typically maintain their populations through natural reproduction and recruitment.

In 2024, eleven flood control reservoirs in the Northeast District were sampled, including Maskenthine, Maple Creek, Grove, Summit, Buckskin Hills, Powder Creek, Chalkrock, Cub Creek, Kramper, Skyview and Willow Creek.



Water levels were low throughout the district, especially at Maskenthine, Summit, and Willow Creek going into the 2024 fishing season. Although there was not enough precipitation in the early spring fishing season to get water levels up to full pool, we did get some precipitation mid-summer, which brought the lakes back up closer to where they should be.

Sampling Efforts

The standard gear used to survey panfish is frame nets with 5/8” mesh. Several factors including, but not limited to, lake size, topography and vegetation determine how many nets to set. Nets are set at various locations around the lake for one night in the spring. Northern pike are sampled in early spring at ice out. Night electrofishing is used to survey bass, and the number of stations depends on the size of the lake and consistency of catch. Individual stations are typically 15 minutes of shoreline electrofishing, but times may be

reduced if there is a high number of fish caught so the tanks do not get overcrowded and induce additional stress (see table below).

Gill nets set in the fall of the year are used as the standard gear to catch open water, offshore species like walleye, saugeye, catfish, white bass and wipers.

Willow Creek is typically sampled in late September with overnight sets of frame nets and experimental mesh gill nets. In previous years, water levels during the Fall sampling season have been low due to drought. Therefore, the typical effort used on this reservoir weren't used because of the lack of locations available to set nets. In 2024, we were fortunate to find enough locations for 4 frame nets and 3 gill nets.

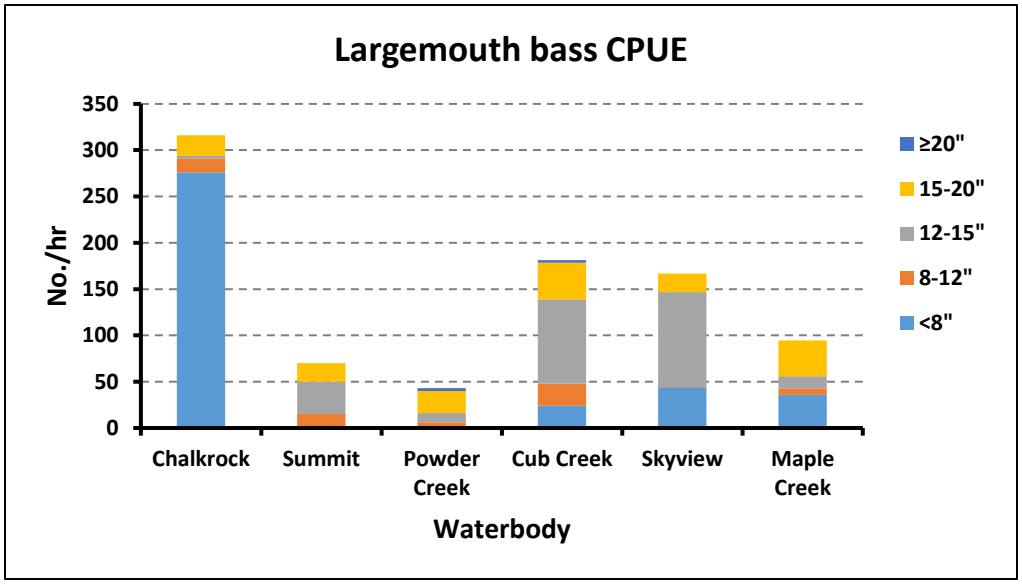
Table 1.- A comprehensive list of the lakes, time of the year, sampling gear and amount of effort used to sample the flood control reservoirs in 2024.

Lake	Time	Gear	Effort
Maskenthine	Spring	Frame Nets	5 nets
Maple Creek	Spring	Frame Nets	10 nets
	Spring	Night Electrofishing	15 min x 3 stations
	Fall	Gill Nets	2 nets
Grove Lake	Spring	Frame Nets	5 nets
	Early Spring	Frame Nets	5 nets
Summit Lake	Spring	Frame Nets	10 nets
	Spring	Night Electrofishing	15 min x 4 stations
	Fall	Gill Nets	2 nets
Buckskin	Spring	Frame Nets	4 nets
Powder Creek	Spring	Frame Nets	3 nets
	Spring	Night Electrofishing	15 min x 4 stations
Chalkrock	Spring	Frame Nets	3 nets
	Spring	Night Electrofishing	15 min x 2 stations 10 min x 1 station
Cub Creek	Spring	Frame Nets	4 nets
	Spring	Night Electrofishing	15 min x 3 stations
Kramper	Spring	Frame Nets	9 nets
	Fall	Gill Nets	2 nets
Skyview	Spring	Frame Nets	3 nets
	Spring	Night Electrofishing	15 min x 3 stations
Willow Creek	Spring	Frame Nets	4 nets
	Fall	Frame Nets	4 nets
	Fall	Gill Nets	3 nets

Sampling Results by Species

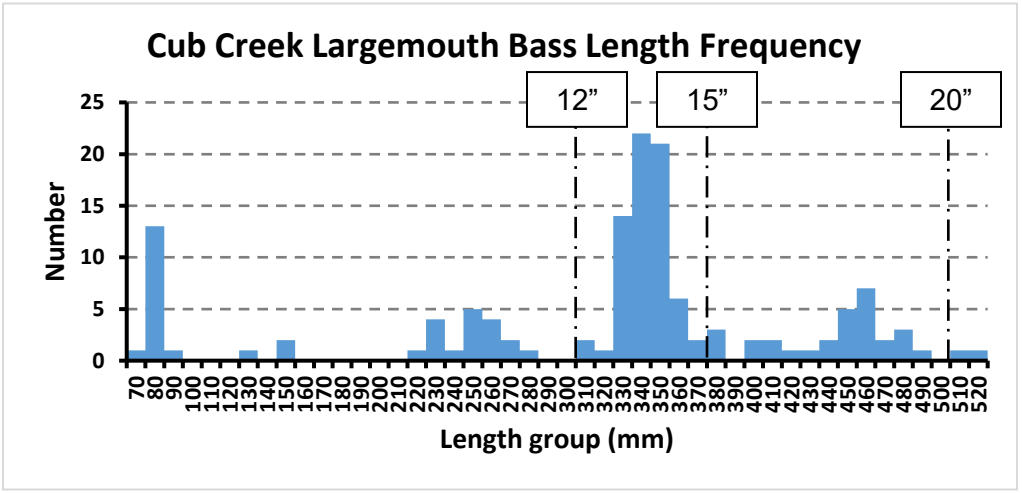
Largemouth Bass

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



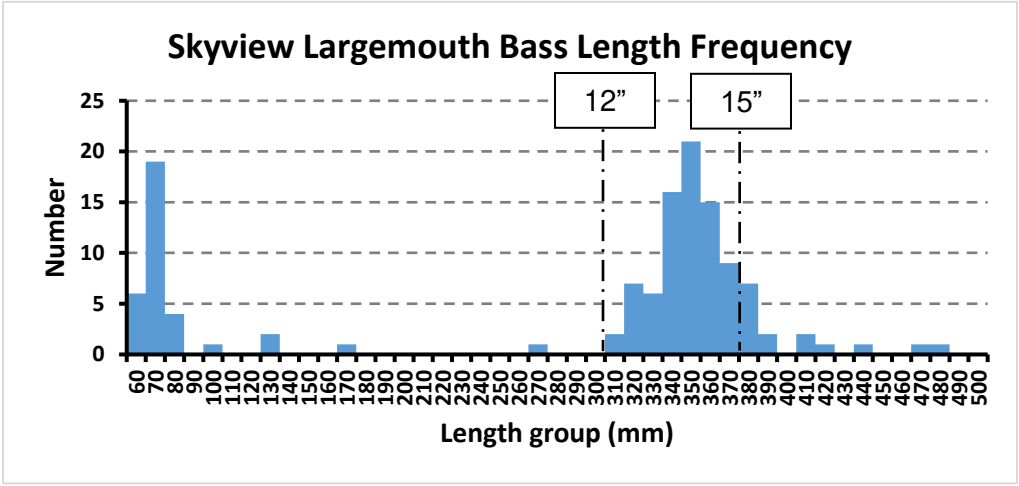
Chalkrock, Summit, Powder Creek, Cub Creek, Skyview and Maple Creek were surveyed for bass in 2024.

Chalkrock had the highest catch rate of largemouth bass in spring of 2024, but unfortunately it consisted of an abundance of fish less than 8 inches and very few above 8.

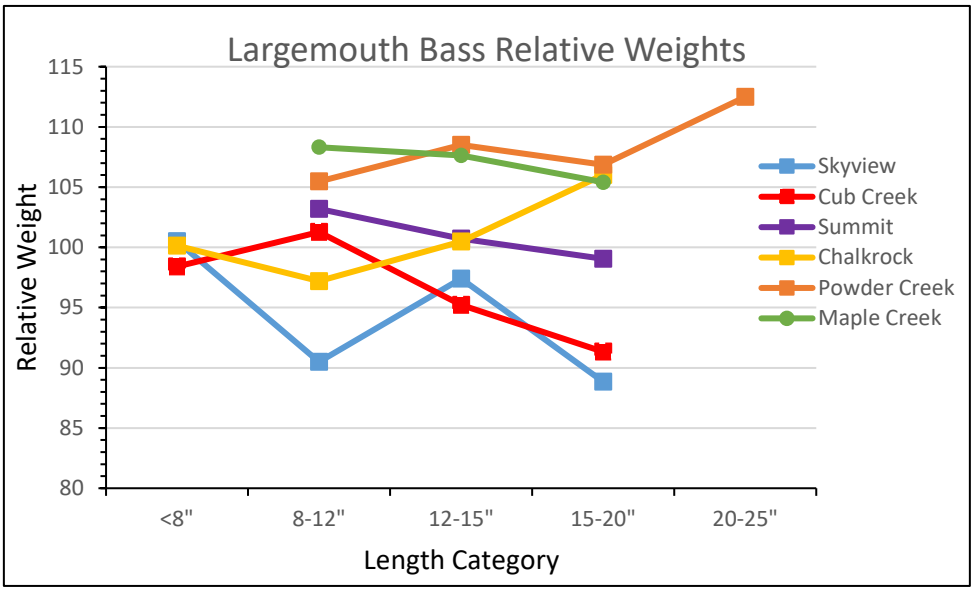


Cub Creek and Skyview had the best-looking largemouth bass catch rates and size structure from our 2024 sampling. Both lakes have a good number of bass less than 8 inches recruiting to the population, plenty of bass in the 12-15” range and a decent number of opportunities to catch a bass 15 inches or larger. There is some concern with the Cub Creek bass however, with body condition decreasing as they grow, suggesting limited prey is available for the larger bass.

Maple Creek, Powder Creek and Summit would all provide some opportunities to catch bass in the 15-20” range as well. Our catch rates on those lakes were down for 2024, but vegetation was thick around the shoreline in areas we tried to sample and water quality was poor at Maple Creek, which likely influenced reduced catch rates. Powder Creek continued to have recruitment



issues continuing its trend of less than desirable bass abundance. Increasing common carp and yellow bass abundance and the presence of gar (several collected in 2024 sampling) could be starting to affect bass numbers.



Other opportunities for largemouth bass throughout the district include Grove, Buckskin, Kramper and Maskenthine.

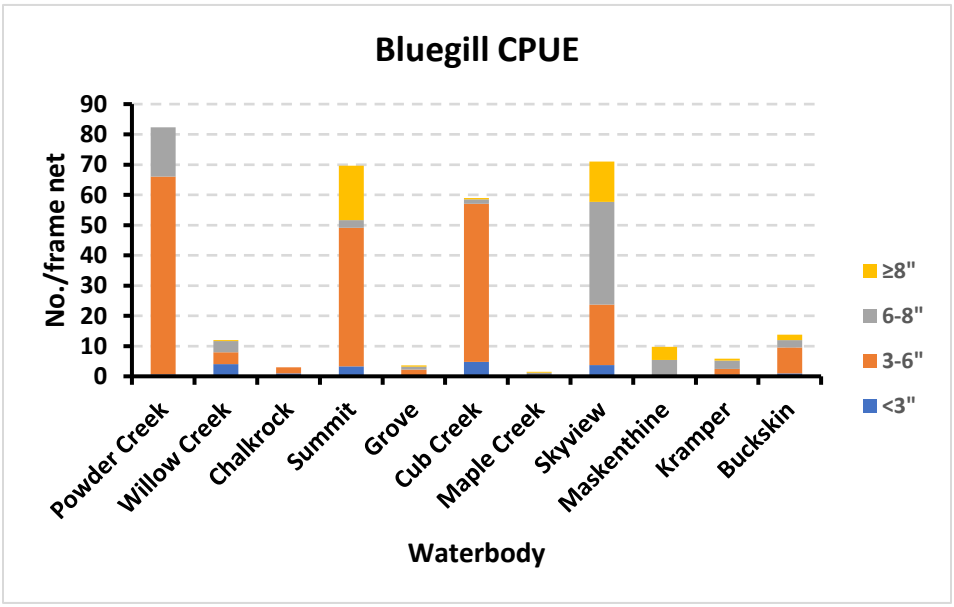
Maskenthine suffered a fish kill in the summer of 2023 due to low oxygen levels coupled with warm water temperatures. Mostly bluegill and walleye were lost after further investigation, and therefore the largemouth bass population should still be in good shape.

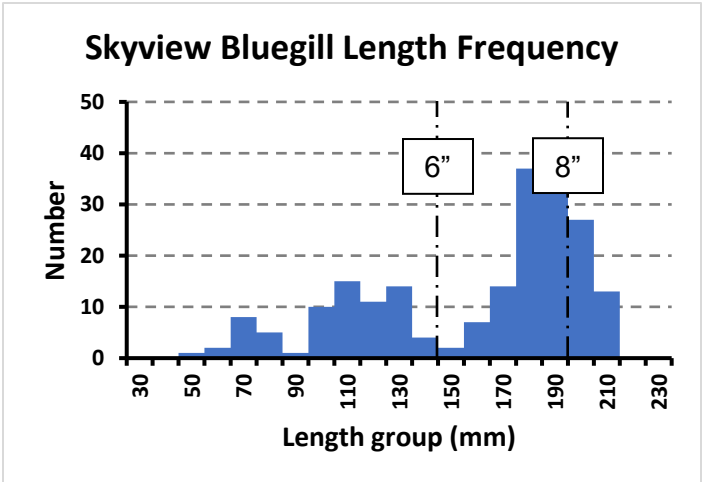
For a more detailed look into largemouth bass trend data over time on the flood control reservoirs sampled in 2024, see Appendix A.

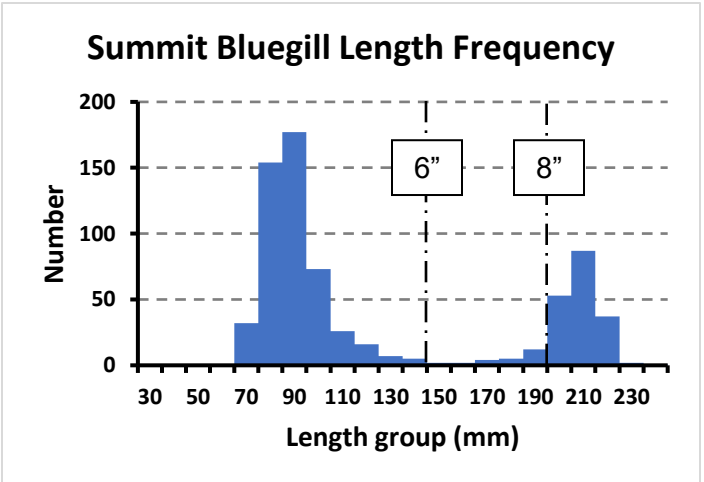
Bluegills

Bluegill are sampled with frame nets in the spring of the year, typically late-April thru mid-June. Bluegill can be a tough species to get a good index of their numbers and size distributions due to their spawning behavior in the spring. Inconsistent spring weather also makes it difficult to get a good representative sample. Eleven flood control reservoirs were sampled with frame nets in the spring of 2024.

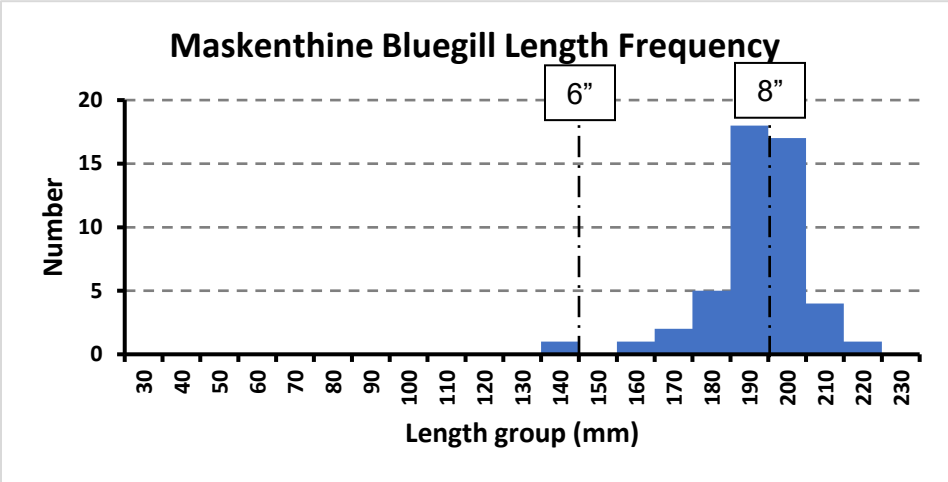
Skyview and Summit sampling yielded the highest catch rates of bluegill with great size structure







and lots of fish 6 inches and larger. In fact, at Summit 26% of our sample was 8 inches or larger and at Skyview, 19% was 8 inches or larger.

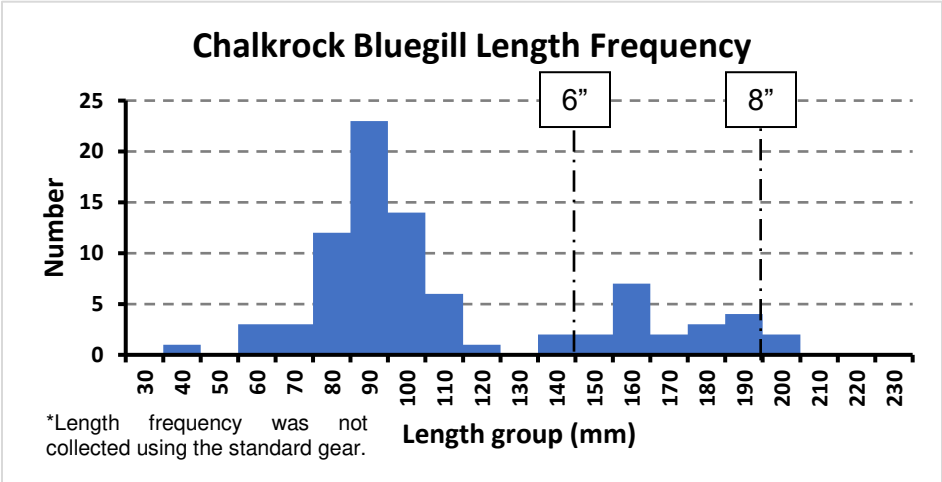


Although bluegill catch declined substantially at Maskenthine in 2024, their size structure still looked good. The fish kill in summer of 2023 not only clamed a large portion of adult bluegill but also may have killed some of those smaller fish that were missing from our sample. In the case that those smaller fish were lost in the fish kill, the high-quality adult population that remains will reproduce to fill in those smaller sizes that are lacking. Another reason the smaller bluegill may have been missing from our sample could be due to the high catch of large channel catfish in those same nets. The catfish may have eaten some of those smaller bluegill as they were stuck in the nets together overnight.

Maple Creek provided the most opportunity in the district to catch bluegill over 8 inches in our 2023 sampling, but frame netting did not go as well in 2024. Maple Creek was surveyed for bluegill several times due to low catch rates each visit. Timing, murky water and excessive filamentous algae may have contributed to our poor catch rates in 2024. Despite the low catch rates, those fish that were sampled in 2023 are probably still there and should continue to provide some opportunities.

Size structure and abundance of bluegill in Buckskin was a concern after our 2023 sampling but catch rates and size structure was better in 2024. The majority of our 2024 sample was made up of bluegill in the 3–6-inch range, but proportionally, there should be plenty of opportunities to catch a bluegill 6 inches and larger.

Powder Creek was surveyed in 2020, 2023 and 2024 and has shown a decline in size structure. Powder Creek had the highest catch rate in 2024, but most were small. An angler would have to catch a lot of small bluegills before catching a keeper, with only a 19% of the sample above 6 inches and none exceeding 8 inches.



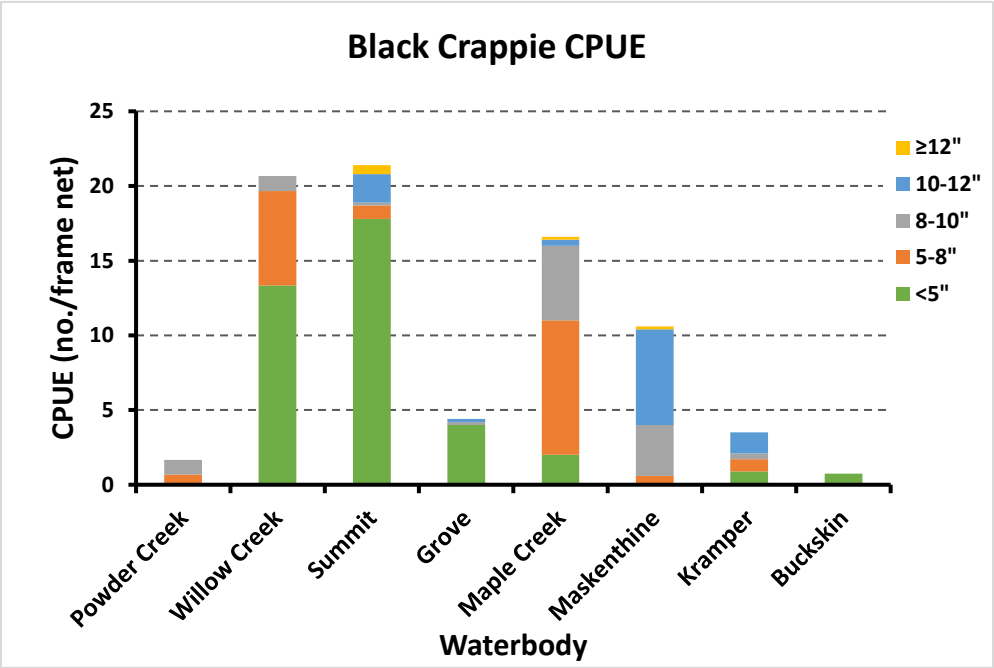
Chalkrock sampling for bluegill did not go well, with only a handful of fish caught in our standard gear. While electrofishing we observed more and larger bluegill, so we recorded their length frequency. Even though electrofishing is not our standard gear for sampling, it was helpful to see that the lake is not completely overrun with small bluegill. The dense vegetation along the shoreline and the increasing sedimentation are likely the contributing factors, in that the bass cannot effectively prey on bluegill to keep their numbers at bay.

Grove, Kramper and Willow Creek are last on the list of bluegill lakes sampled in 2024. Although our sampling catch rates weren’t ideal at these lakes, we see that each length group is represented in our sample. That

even distribution is what we look for in a healthy bluegill population because it indicates we have good reproduction, growth and balance of predators and prey. Despite our poor sampling catch rates in 2024, I wouldn't count Grove, Kramper or Willow Creek out of the rotation of places to visit to target bluegill in the northeast district.

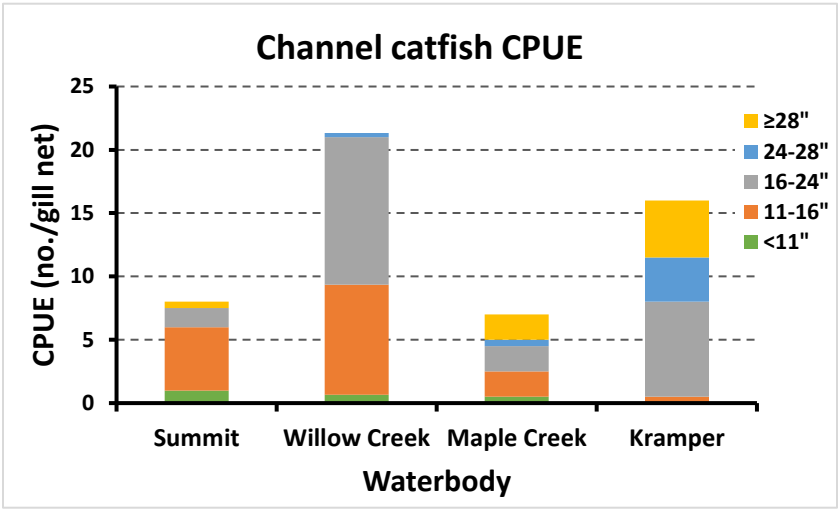
For a more detailed look into bluegill trend data over time on the flood control reservoirs sampled in 2024, see Appendix A.

Crappie



Timing is critical for collecting crappie via frame nets in the spring. Net sets are usually considered to be timed well when the crappie are in shallow spawning, creating a relatively small "window of opportunity" to catch numbers and sizes that are representative of the population. Summit, Maple Creek, Maskenthine and Kramper surveys show those lakes providing opportunity for crappie 10 inches and larger. Maple Creek, Maskenthine and Kramper also had an abundance of crappie that will be moving into the desired 10 inch and larger length group by spring of 2025. Willow Creek catch rates were high, but unfortunately no black crappie above 10 inches were caught in our sample. Crappie net catch was low at Powder Creek, Grove, Kramper, and Buckskin. Low catch at most of these lakes may have been due to the timing, and/or excessive vegetation. Anglers seemed to have good success on crappie in Kramer Lake in 2024. However, Powder Creek was likely due to low numbers.

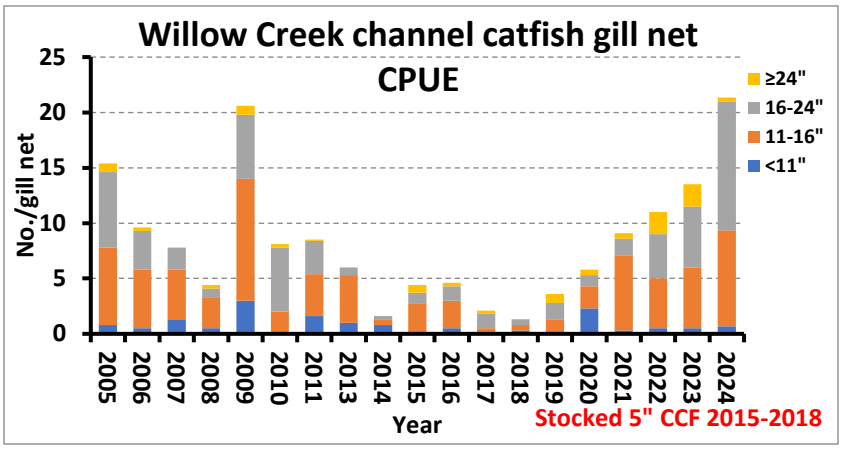
Channel Catfish



2024 was the year of the catfish. We had several nets full of catfish in our spring sampling efforts. Gill nets set in the fall of the year are the standard gear for catching catfish. Most lakes get stocked with 10-inch fish and have strong channel catfish numbers. Summit, Willow Creek, Maple Creek and Kramper were all sampled using gill nets in 2024. All lakes surveyed in 2024 had great size structure and opportunities to catch catfish 24 inches or larger.

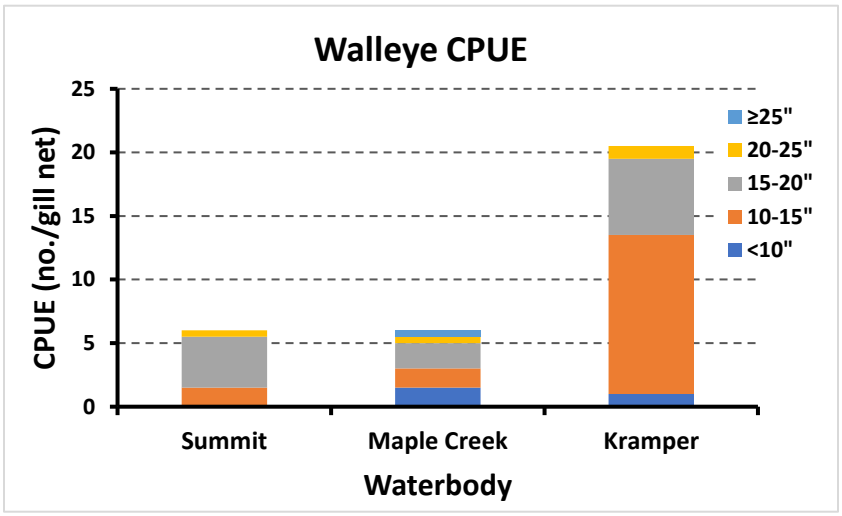
During 2024, the trend of increasing numbers of channel catfish in Willow Creek Reservoir continued. There are even some opportunities to catch channels 24 inches and larger. Previous surveys have shown a pattern of good gill net catfish catch during years with low water levels and 2024 was another low water year, especially toward the fall.

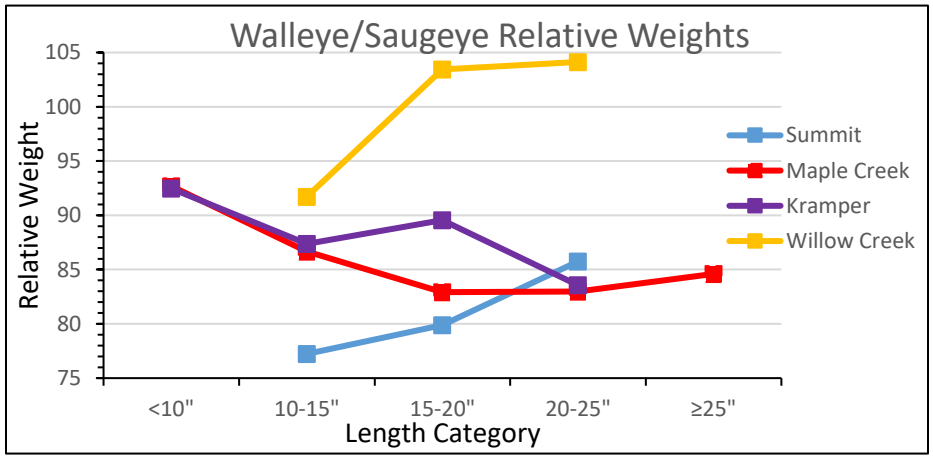
In addition to the waterbodies included in our 2024 sampling efforts, most of the flood control reservoirs in the Northeast district have good channel catfish populations. Lakes exhibit moderate to high numbers and good size structure, and none of them should be overlooked by anglers seeking catfish.



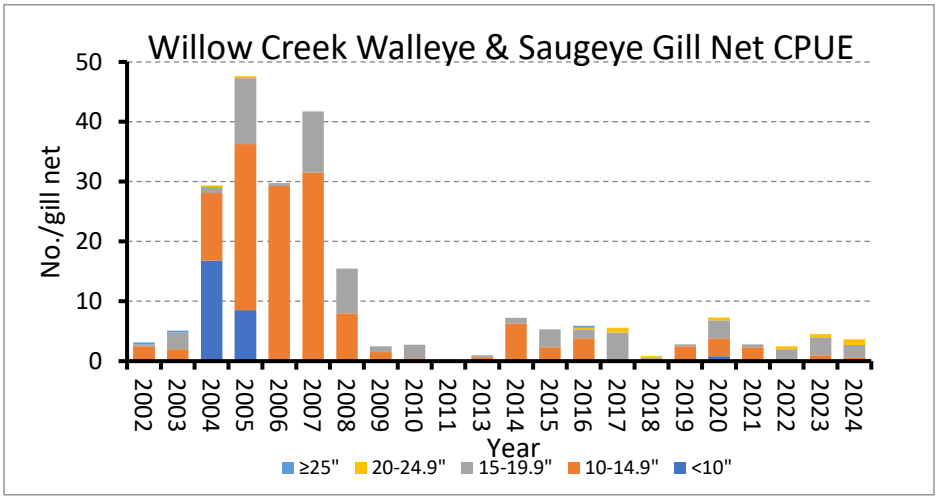
Walleye/Saugeye

Many of the smaller flood control reservoirs in the district receive annual walleye stockings. Four reservoirs in the district receive annual stockings of advanced fingerling walleye, which are stocked at roughly 8 inches in size. The reservoirs that receive the advanced fingerlings are Summit, Maple Creek, Kramper and Skyview. Skyview was the only of those four reservoirs that was not surveyed for walleye or saugeye in 2024. Fall gill netting is the standard gear used for targeting walleye and saugeye. The best walleye catch rates in 2024 were in Kramper. Body condition was okay at Kramper and Willow Creek, however relative weights at Summit and Maple Creek were lower than we prefer them to be. After further investigation, the relative weights of the 10-15" and 15-20" length groups were lower than they have been since pre-2001. Summit Lake was renovated in 2001 to eliminate the overabundant populations of common carp and gizzard shad. Low relative weights are an indication that there is a shortage of food. We will continue to monitor both numbers and relative weights of walleye in Summit as they will likely change over time since the discovery of common carp in 2023 and gar in 2024.



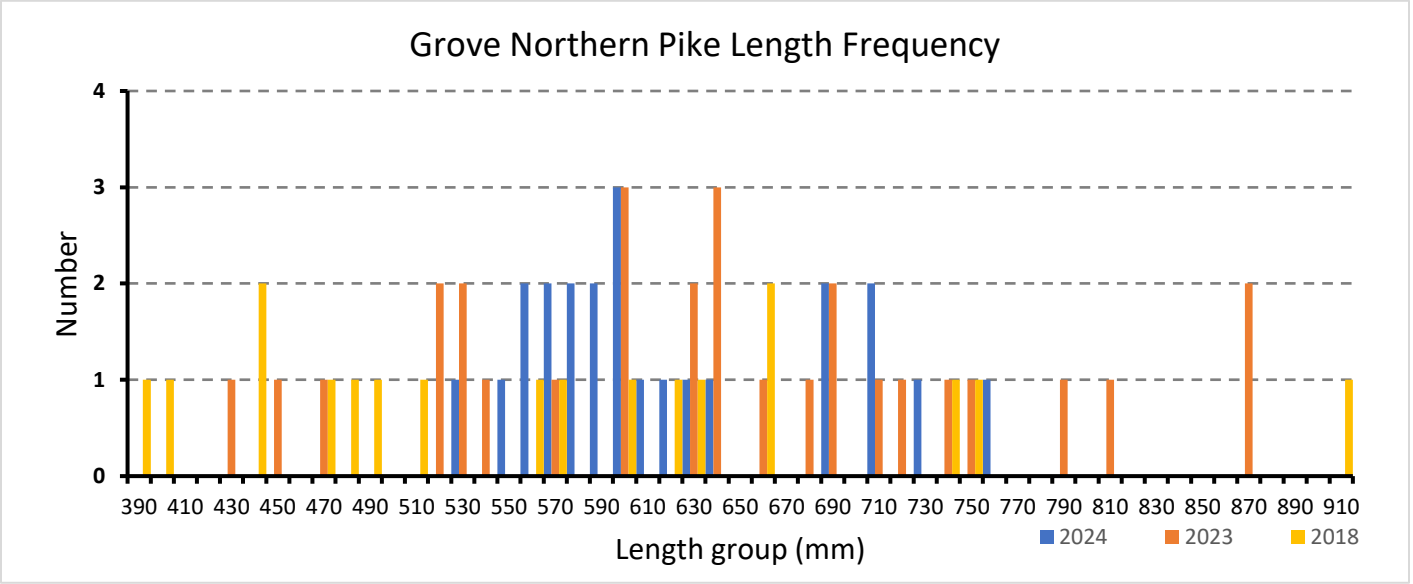


Walleye fry stocking in Willow Creek was initiated in 2004 and was very successful up until 2008. Fry stocking rates have remained the same or higher since that time, but they have failed to create a good year class since 2008. Willow Creek experiences substantial algal blooms, which may be negatively impacting recruitment of some species, walleye in particular. Considering the poor walleye recruitment and seeing success in other areas of the state with saugeye (a cross between walleye and sauger), it was decided to try them in Willow Creek. Saugeye tend to be a bit hardier and may handle the poor water quality better than the walleye. Saugeye stockings began in 2017 and have continued annually since. Overall, saugeye seem to be doing better than walleye, but the water quality degradation and sedimentation issues are still having an impact on recruitment to the fishery. The 2023 survey only caught one walleye (19 inches), and ten saugeye ranging from 12.5 to 19 inches. The saugeye and walleye stockings will continue, but action should be taken to improve water quality in the future for the Willow Creek fishery to reach its full potential.



Northern Pike

Northern Pike are not stocked in any flood control reservoirs in northeast district, but there are some opportunities to catch them throughout the district. Northern pike are naturally reproducing in Grove Lake and targeted sampling was done in 2018, 2023 and 2024. The population size structure and numbers of northern pike in Grove were good and looked healthy (body condition was 90-95). Twenty-three northern pike were sampled that ranged from 21 to 30 inches in 2024. When compared to the two most recent surveys, it appears the size distribution was narrower in 2024 than previous years.



Other opportunities in flood control reservoirs for northern pike in the district include Maskenthine and Willow Creek, where they have been routinely sampled in low numbers. Goose Lake is a natural sandhill lake in the district that also has opportunities to catch northern pike. The lake was renovated in 2022 and the first stocking was of a lower number than desired. Fish from that initial stocking should be over 28 inches by now and the second stocking, which was a higher number, should be around 24 to 26 inches in early 2025. Anglers in search of larger pike may want to hold off until 2026 to pursue them in Goose.

Fish Stocking

Flood control lakes in the northeast district have largemouth bass, bluegill and crappie. Some also have yellow perch populations that that are comprised primarily of small individuals (that can maintain their abundance without stocking). Natural recruitment for sport fish species such as channel catfish, walleye, and saugeye is typically very low or non-existent in our flood control reservoirs and require supplemental stocking to maintain their numbers. Channel catfish are stocked in most flood control reservoirs as 10-inch fish, either annually or semi-annually at rates of 5-15 per surface acre. Stocking density is determined by lake size, relative population levels, and observed angler usage and harvest. Walleye and saugeye are stocked in select lakes annually with fish size and stocking rates determined by research and individual lake sampling. Stocked two-inch fingerling walleye do well in lakes such as Maskenthine and Buckskin Hills at a rate of 50 per surface acre. Larger "advanced" size walleye, typically 8-9 inches, are currently stocked annually in September at 5-10 per acre at Skyview, Maple Creek, Summit, and Kramper. These fish appear to be surviving much better than the two-inch fingerlings and show greater potential to maintain moderate to high numbers of walleye for the angler in these lakes. Willow Creek is stocked annually with 500,000 walleye fry and 70,000 fingerling saugeye.

Stocking records for all lakes in Nebraska can be found on the Game and Parks website at outdoornebraska.org.

Invasive Species

Fish species that were not stocked by NGPC have been observed in Maple Creek, Skyview, and Summit among others. As a reminder, **"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, and yellow bass away from the water body from which they were captured."** Please call your local conservation officer (phone numbers are listed in the regulation guides) or the Wildlife Crimestoppers Hotline (1-800-742-7627) if you observe this or any kind of game violation.

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, Powder Creek, Summit, Buckskin, Skyview 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, 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 if their registration is up-to-date, residents are in compliance and won't have to have a physical sticker attached to their watercraft. Additional information about aquatic invasive species and preventing their distribution can be found in the 2025 Nebraska Fishing Guide and on our website: Aquatic Invasive Species | Nebraska Game & Parks Commission. 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 and on our website.

More Information

Fishing rules and regulations

Visit the Nebraska Game and Parks website at:
www.OutdoorNebraska.org

Fisheries and/or fishing opportunities in the Northeast District

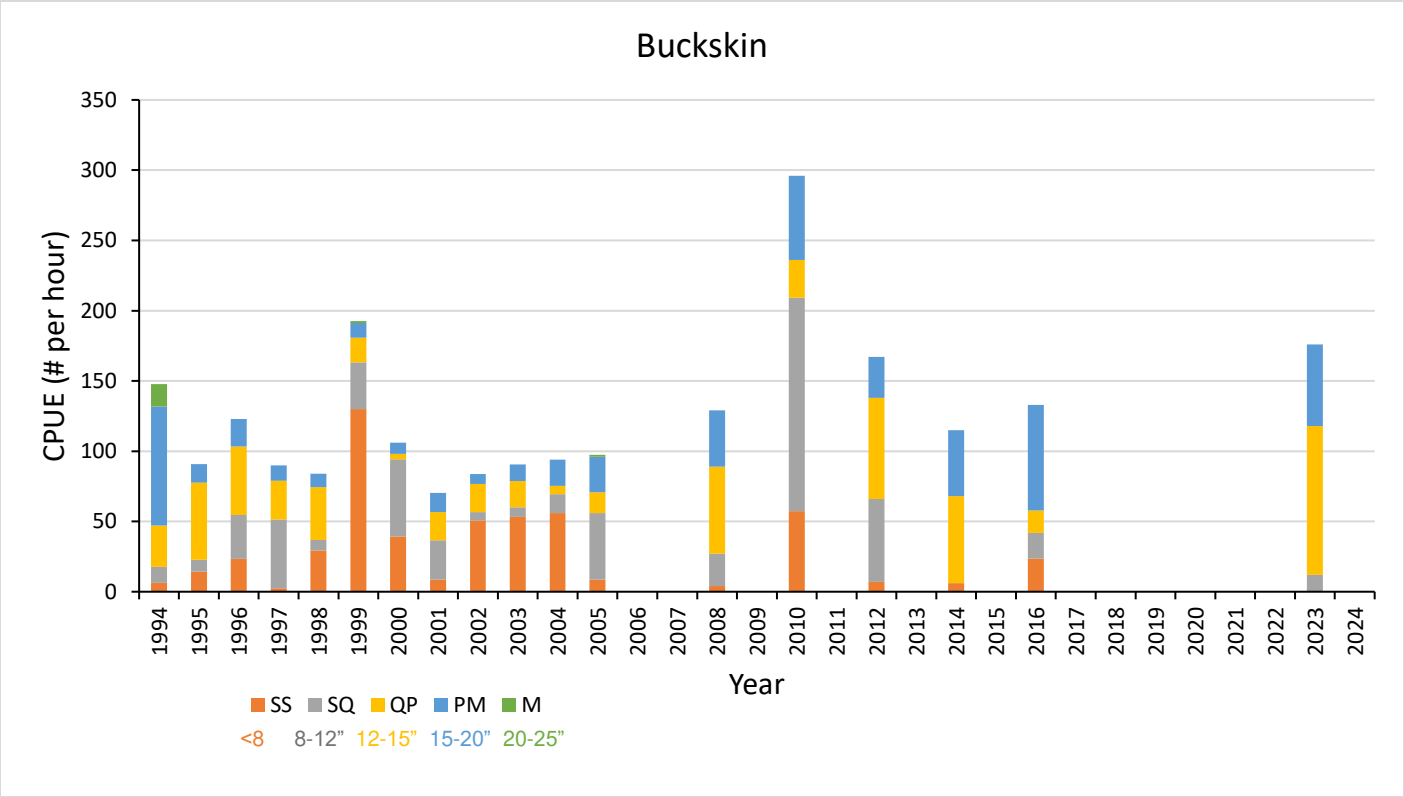
Contact us:

Jeff Schuckman, Northeast Region Manager, Norfolk Office, Phone: 402-370-3374, email: jeff.schuckman@nebraska.gov

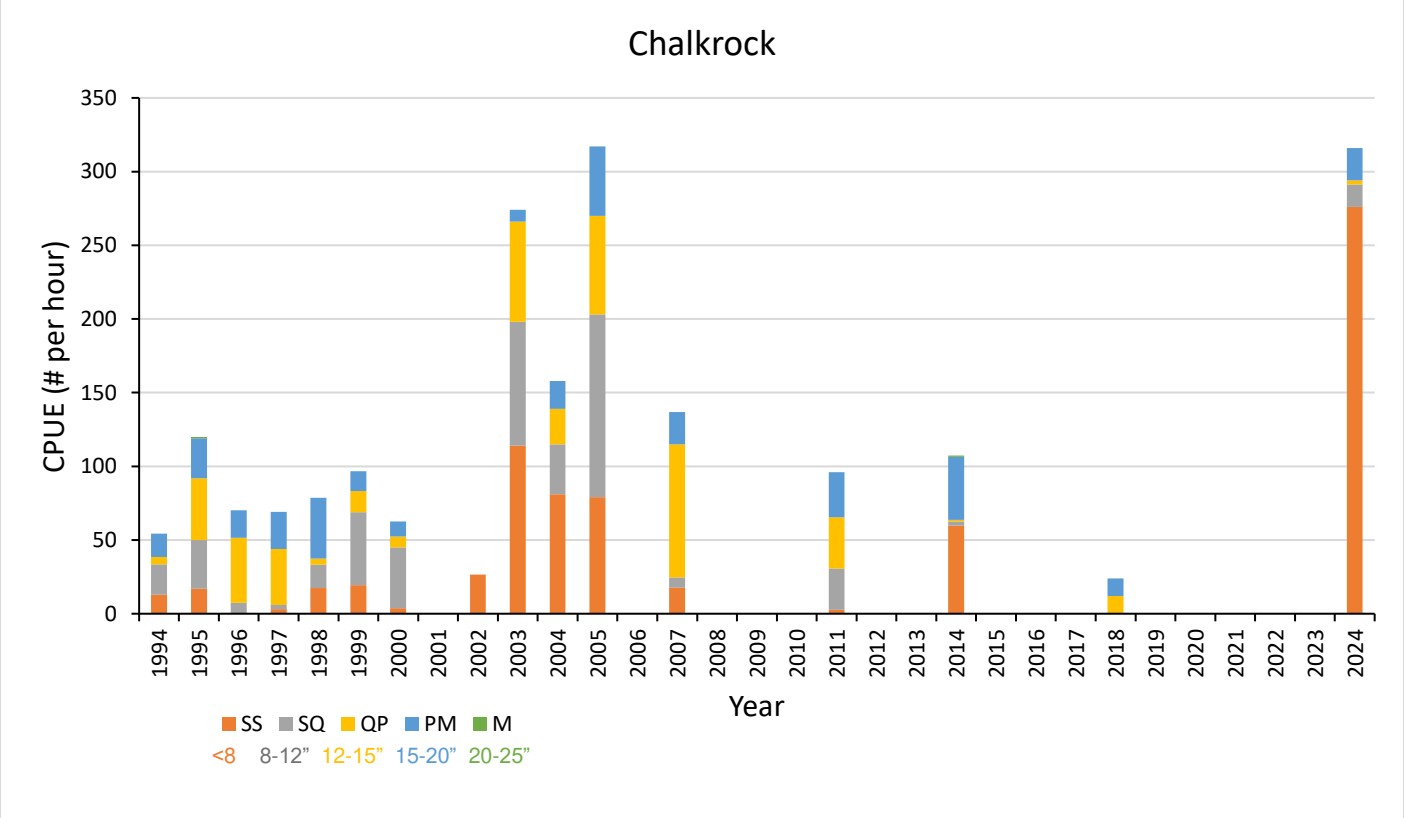
Phil Chvala, Fisheries Biologist, Norfolk Office, Phone: 402-370-3374, email: phil.chvala@nebraska.gov

Rebecca Munter, Fisheries Biologist, Norfolk Office, Phone: 402-370-3374, email: Rebecca.munter@nebraska.gov

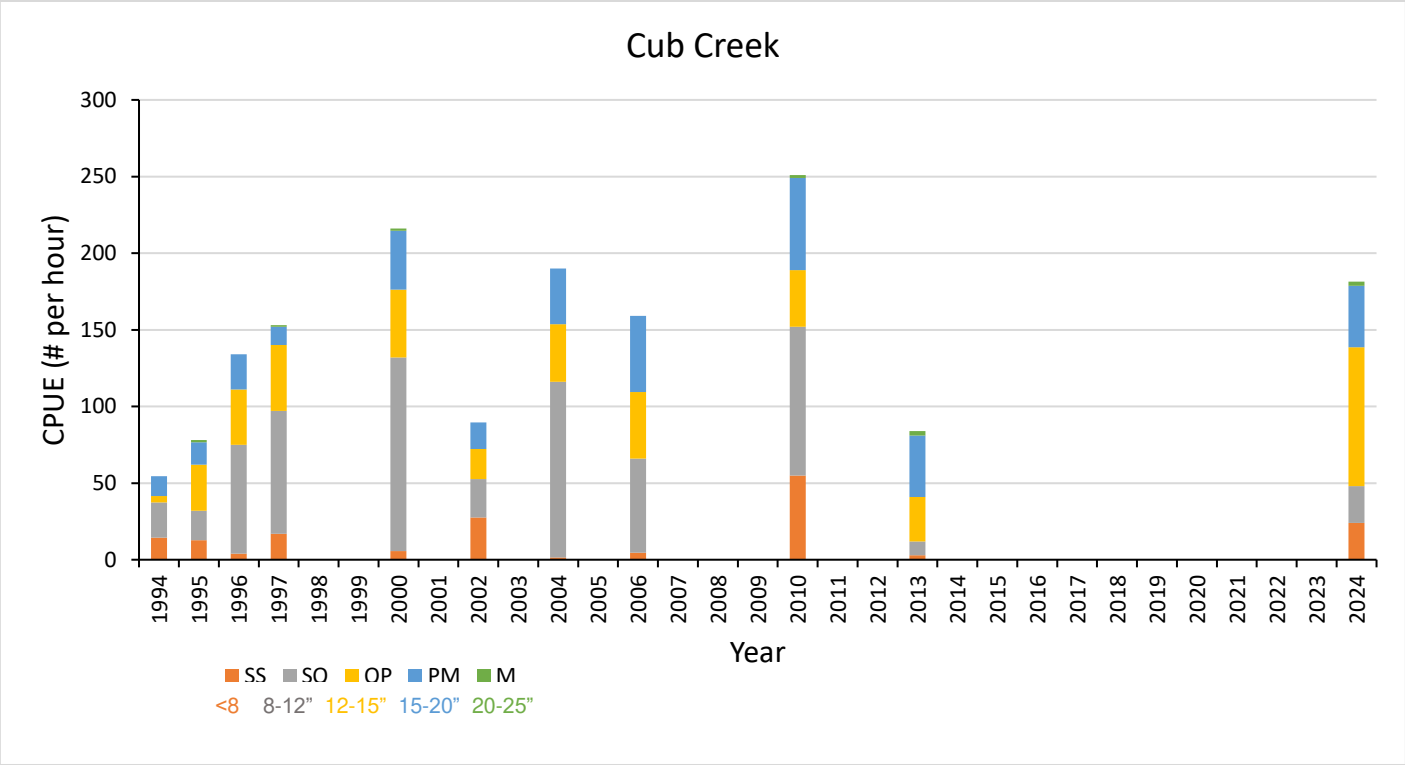
Appendix A



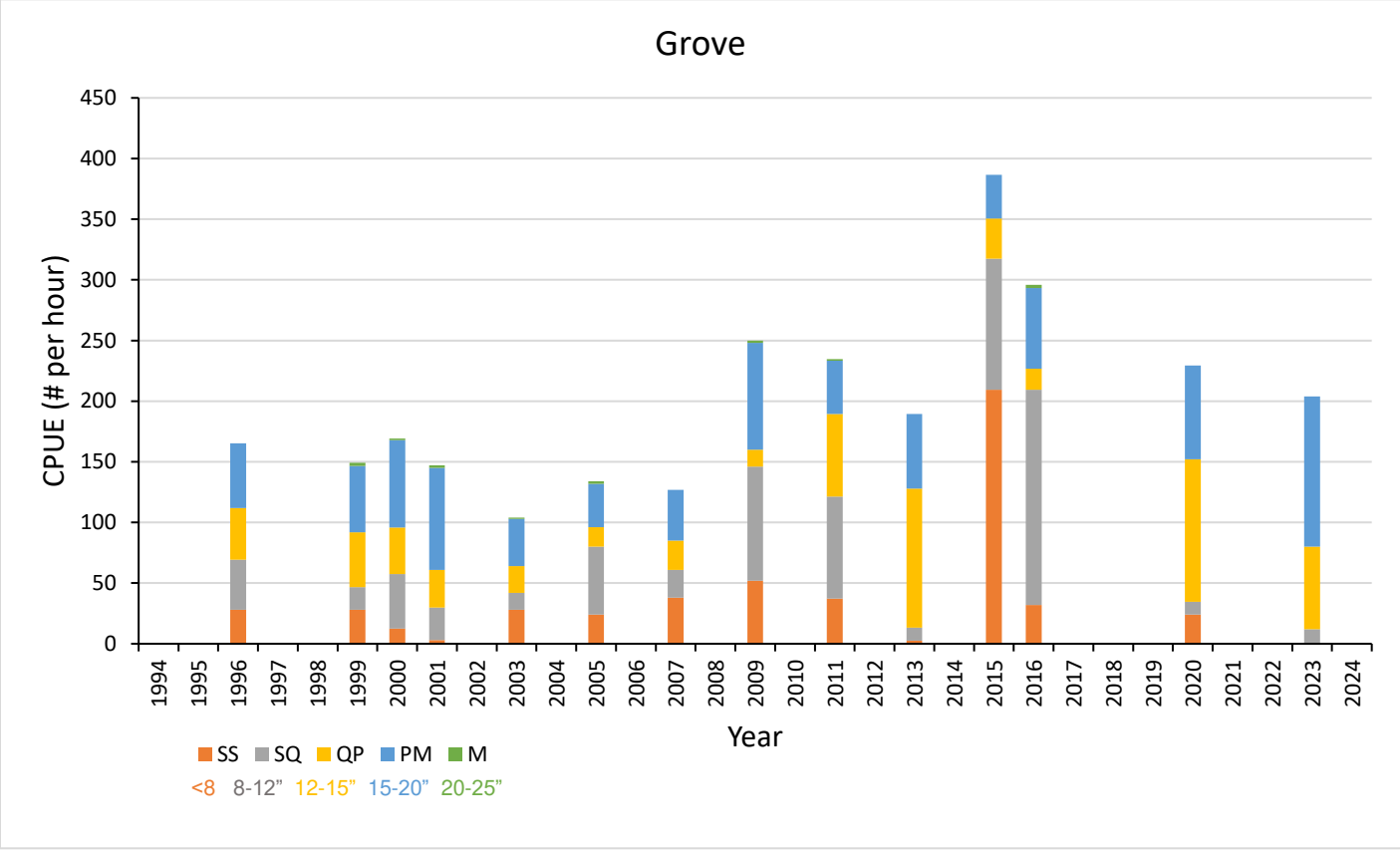
Appendix 1.- Buckskin largemouth bass catch per unit effort by length category over time.



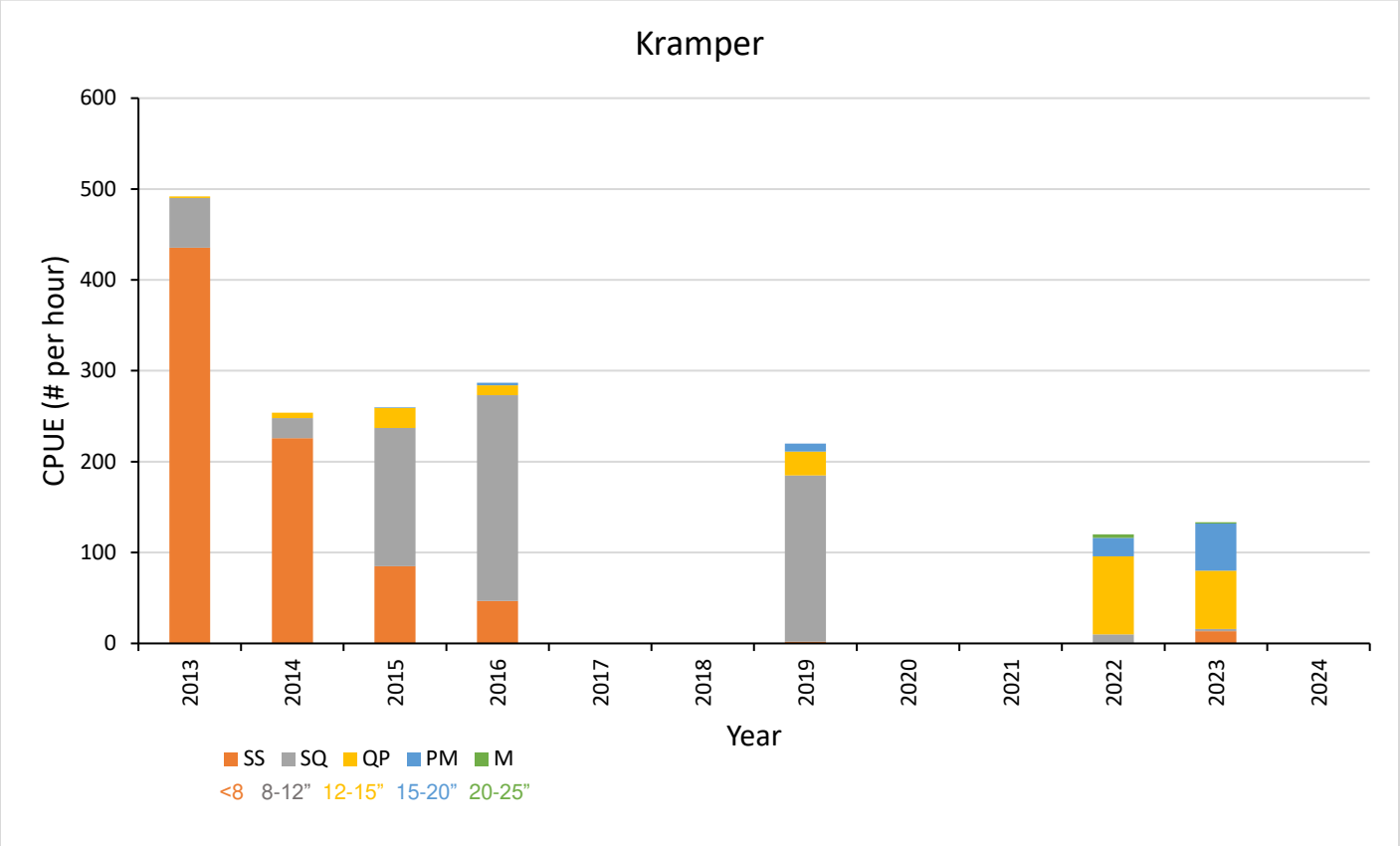
Appendix 2.- Chalkrock largemouth bass catch per unit effort by length category over time.



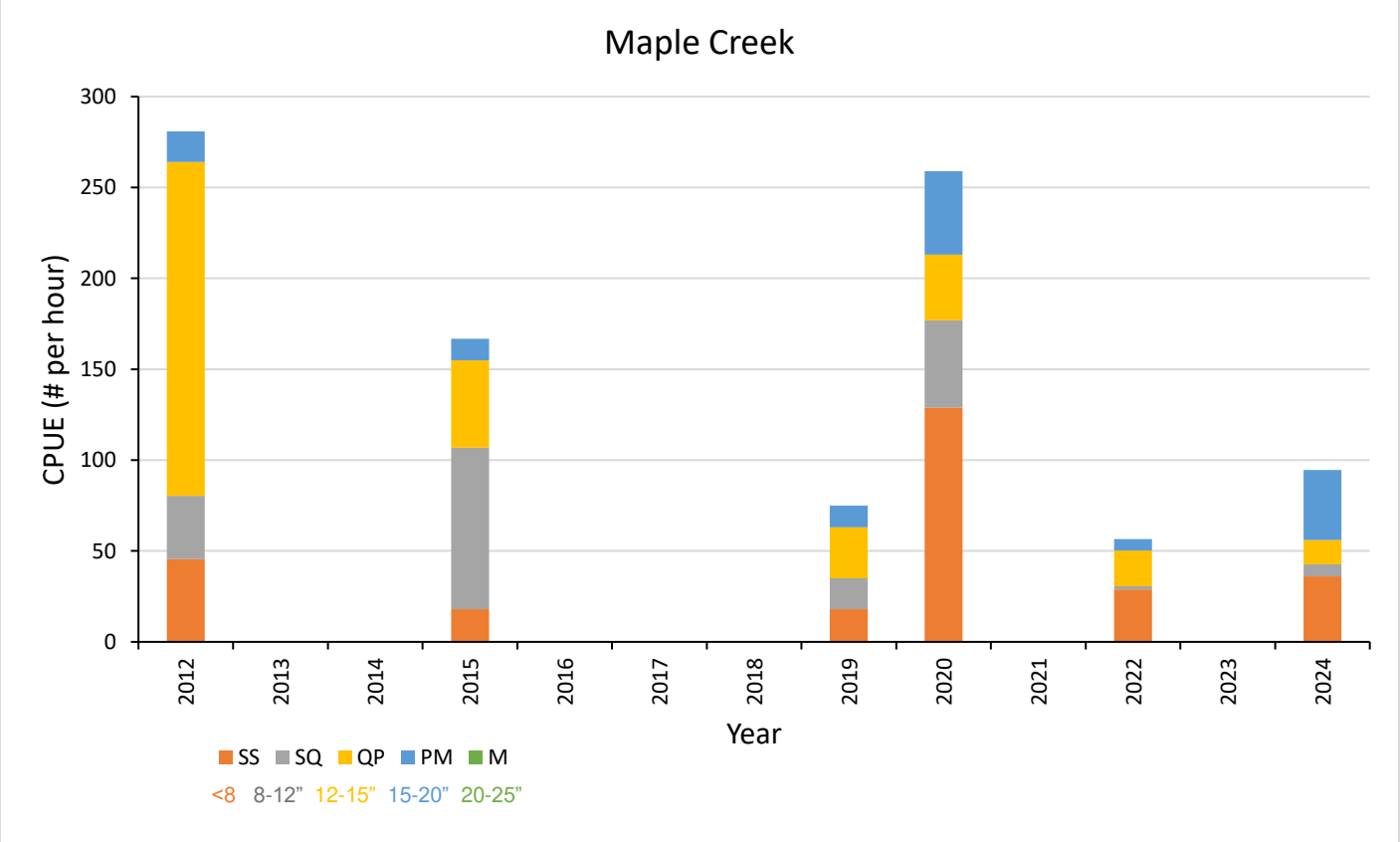
Appendix 3.- Cub Creek largemouth bass catch per unit effort by length category over time.



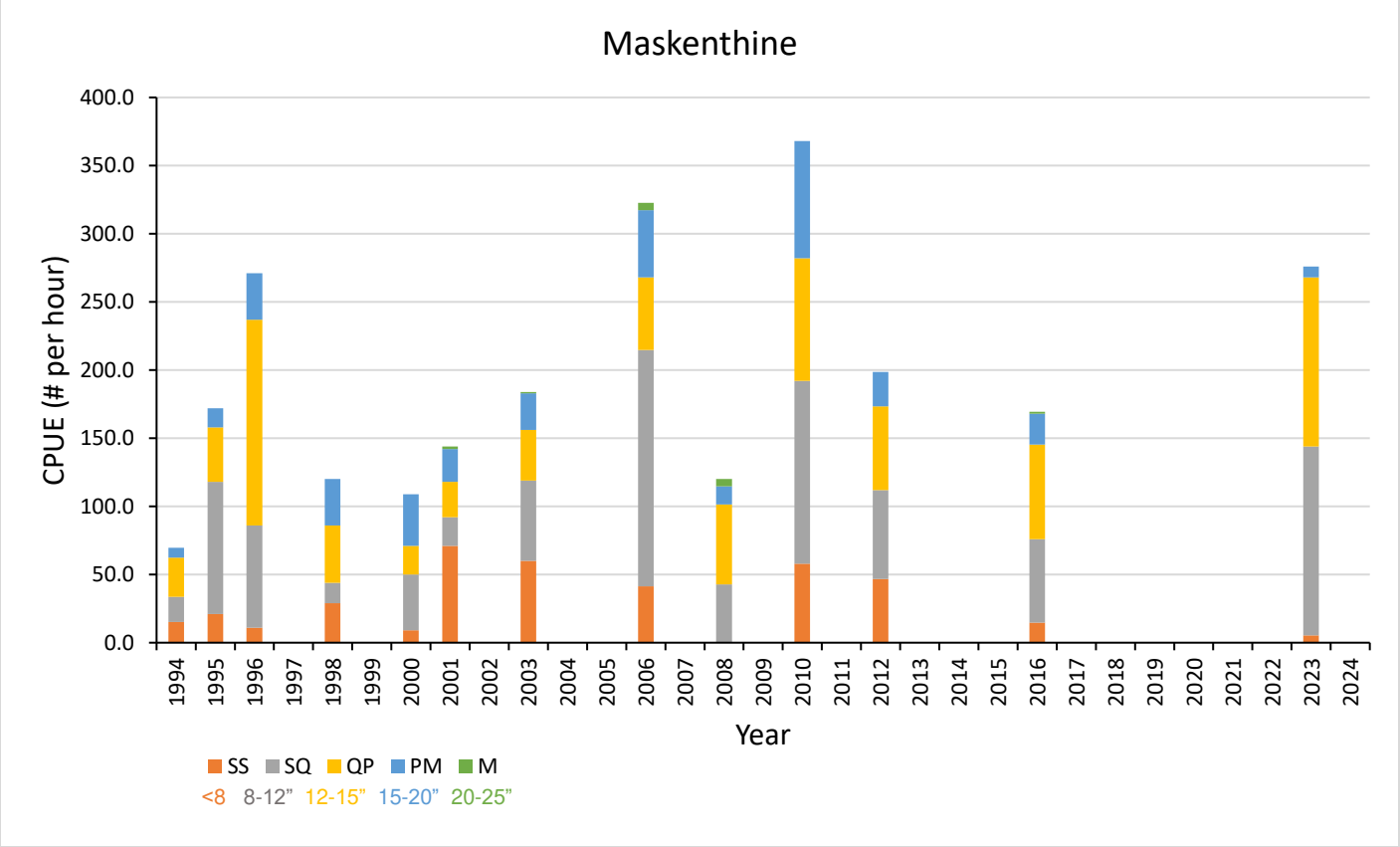
Appendix 4.- Grove Lake largemouth bass catch per unit effort by length category over time.



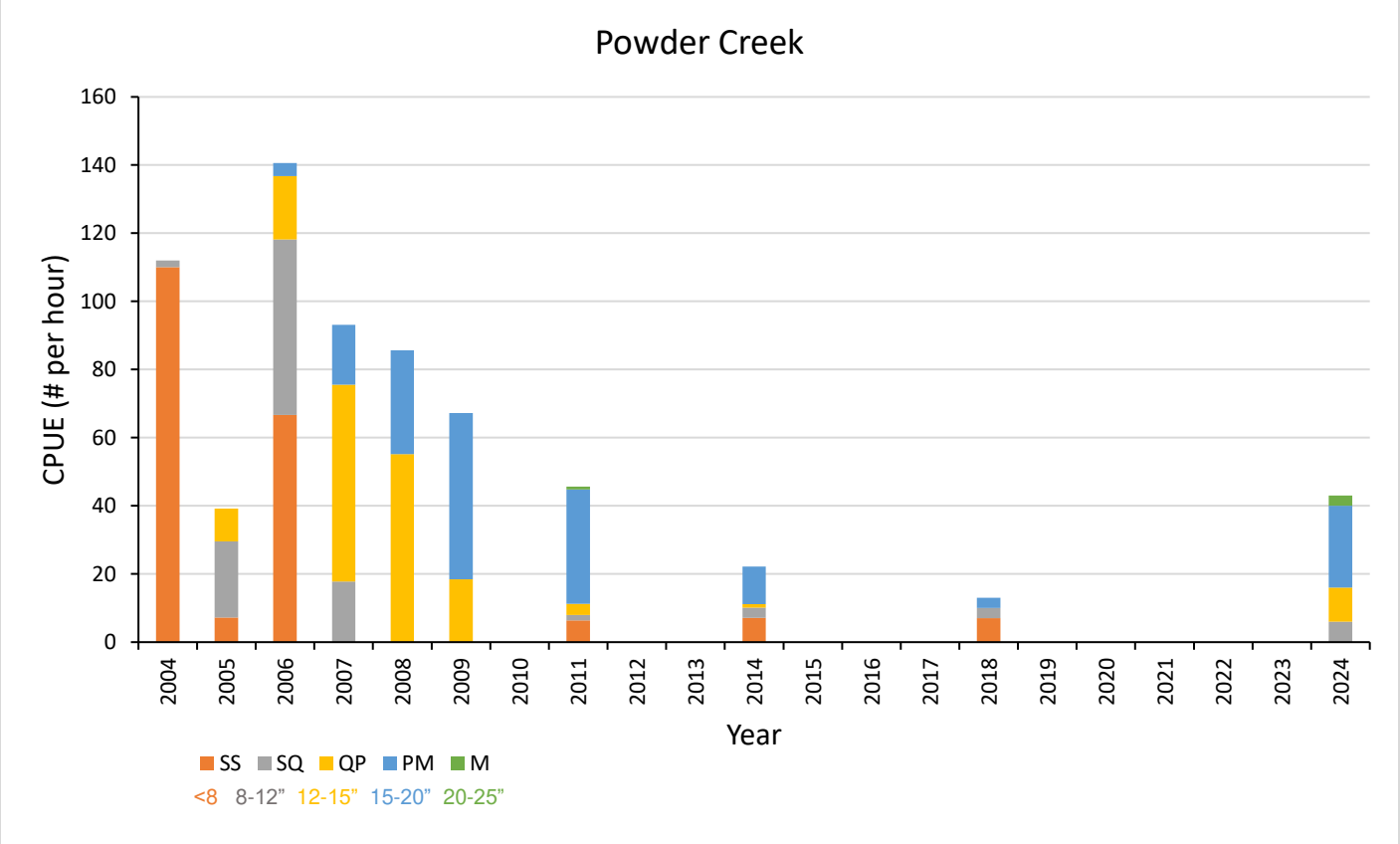
Appendix 5.- Kramper largemouth bass catch per unit effort by length category over time.



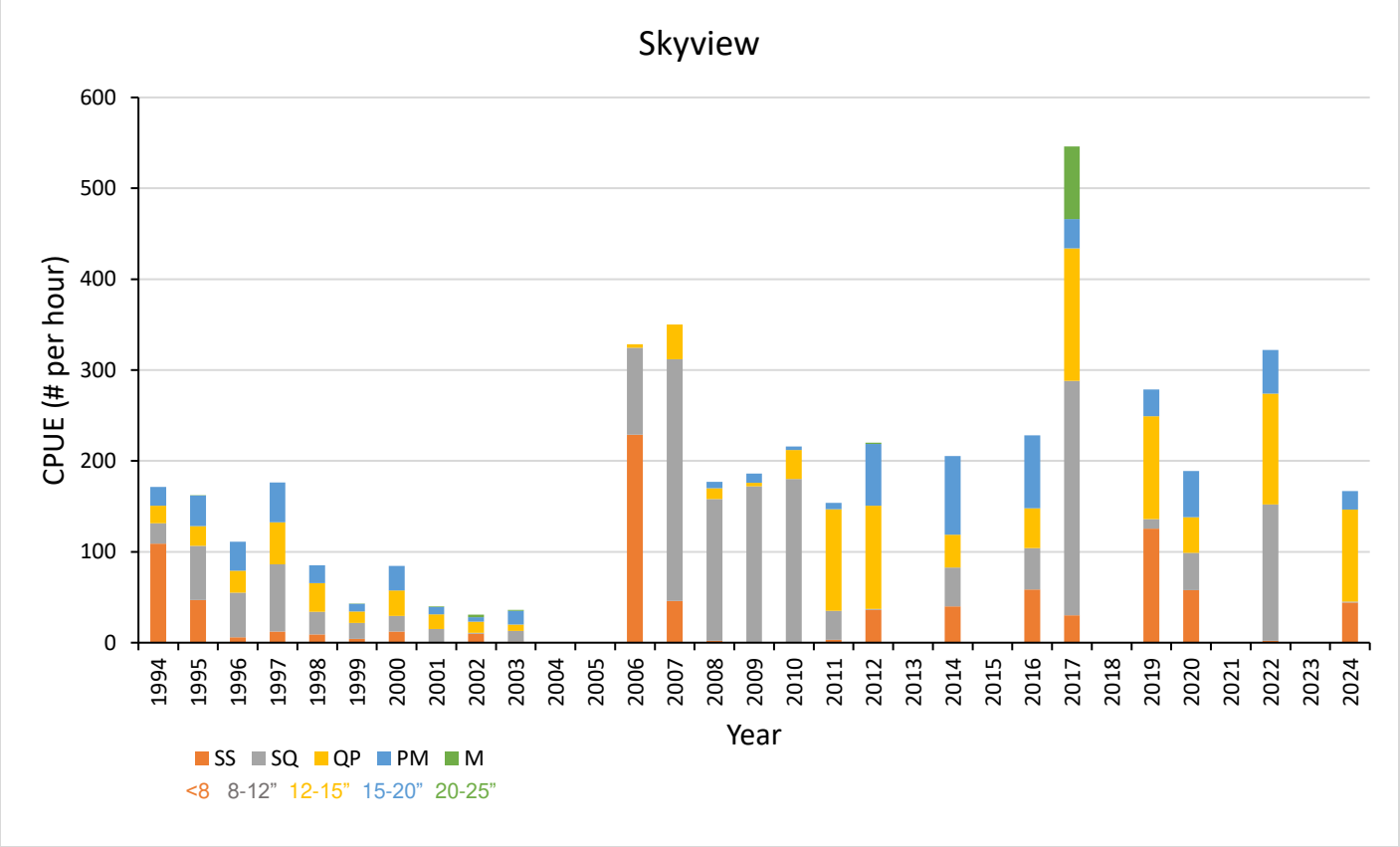
Appendix 6.- Maple Creek largemouth bass catch per unit effort by length category over time.



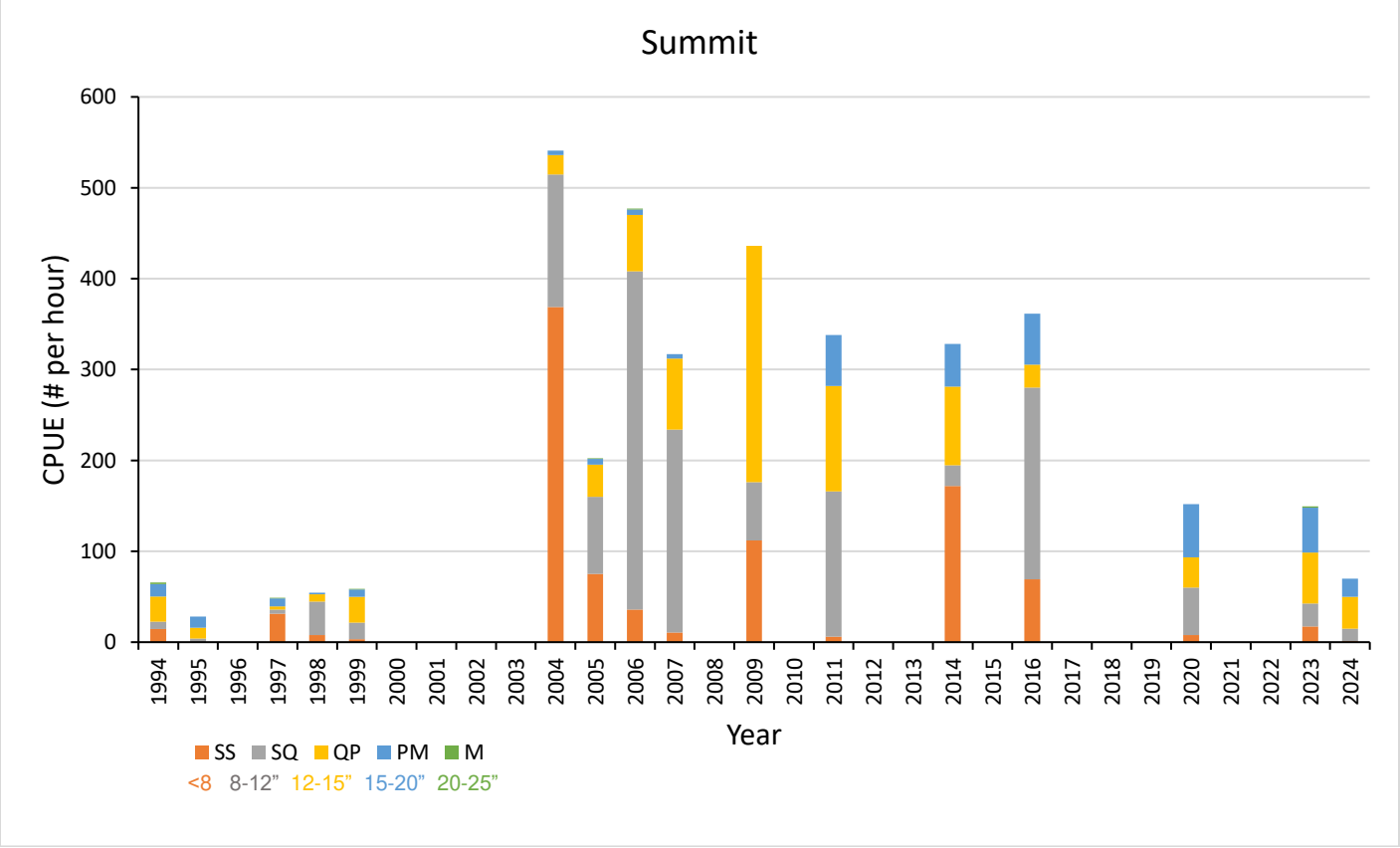
Appendix 7.- Maskenthine largemouth bass catch per unit effort by length category over time.



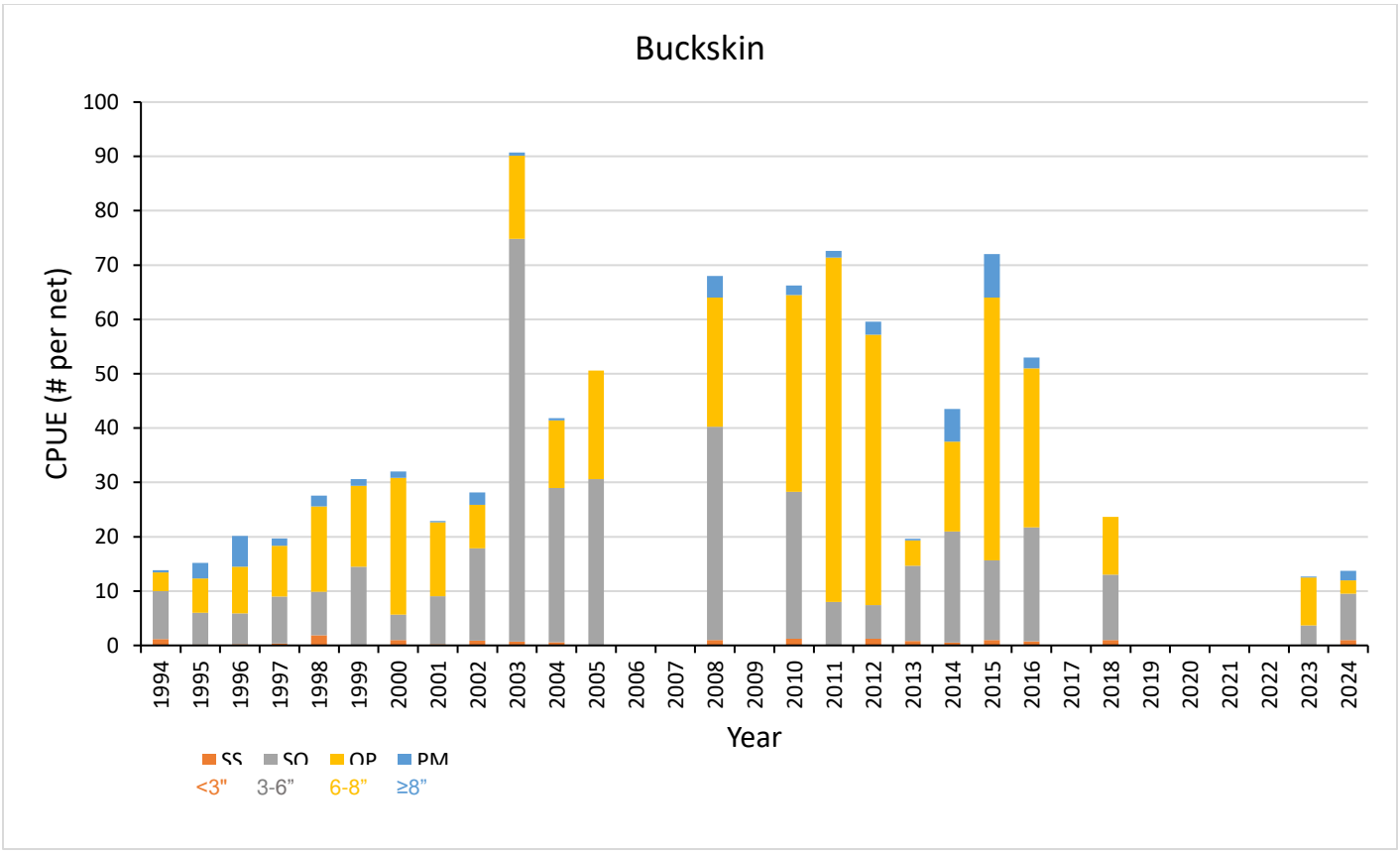
Appendix 8.- Powder Creek largemouth bass catch per unit effort by length category over time.



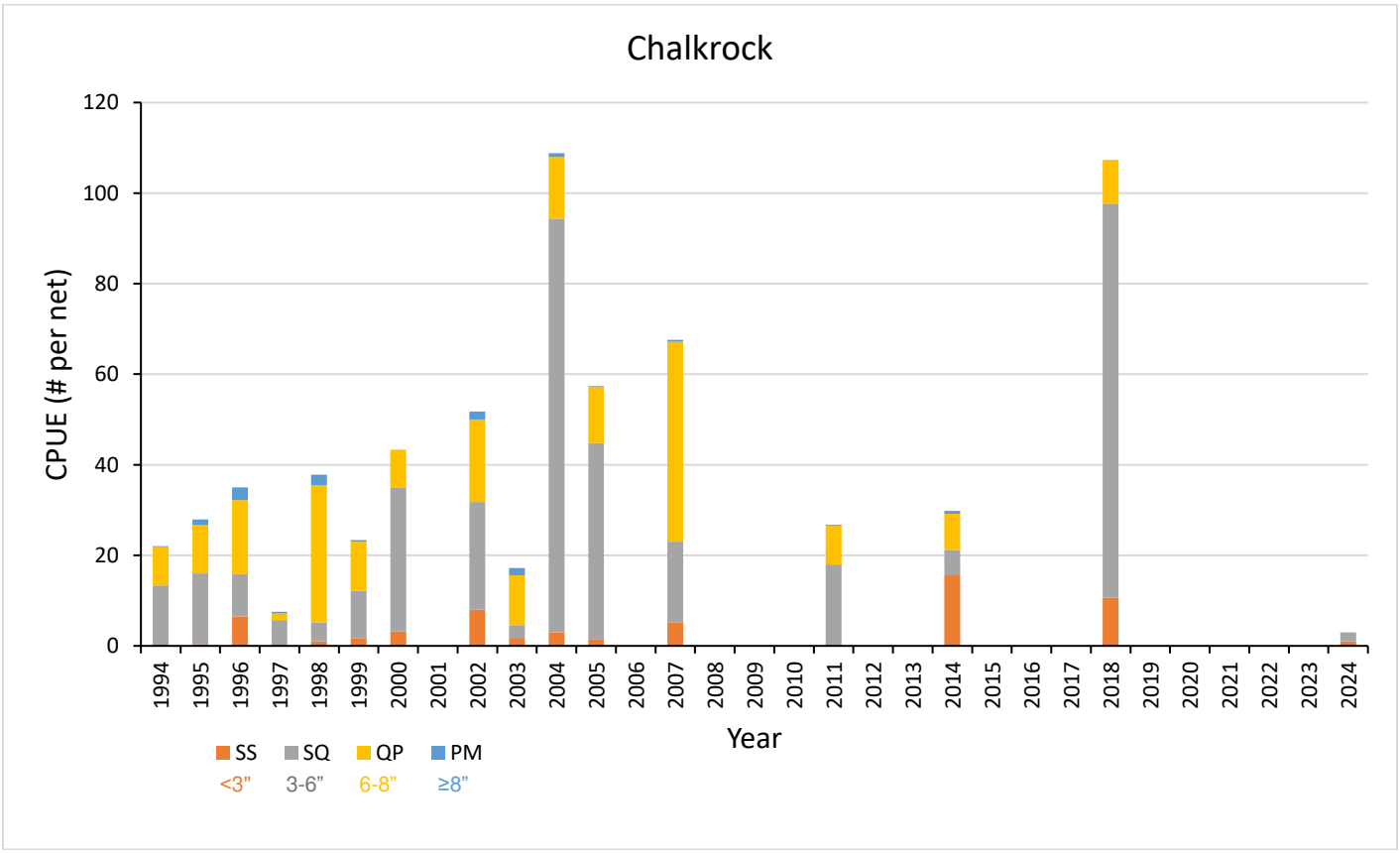
Appendix 9.- Skyview largemouth bass catch per unit effort by length category over time.



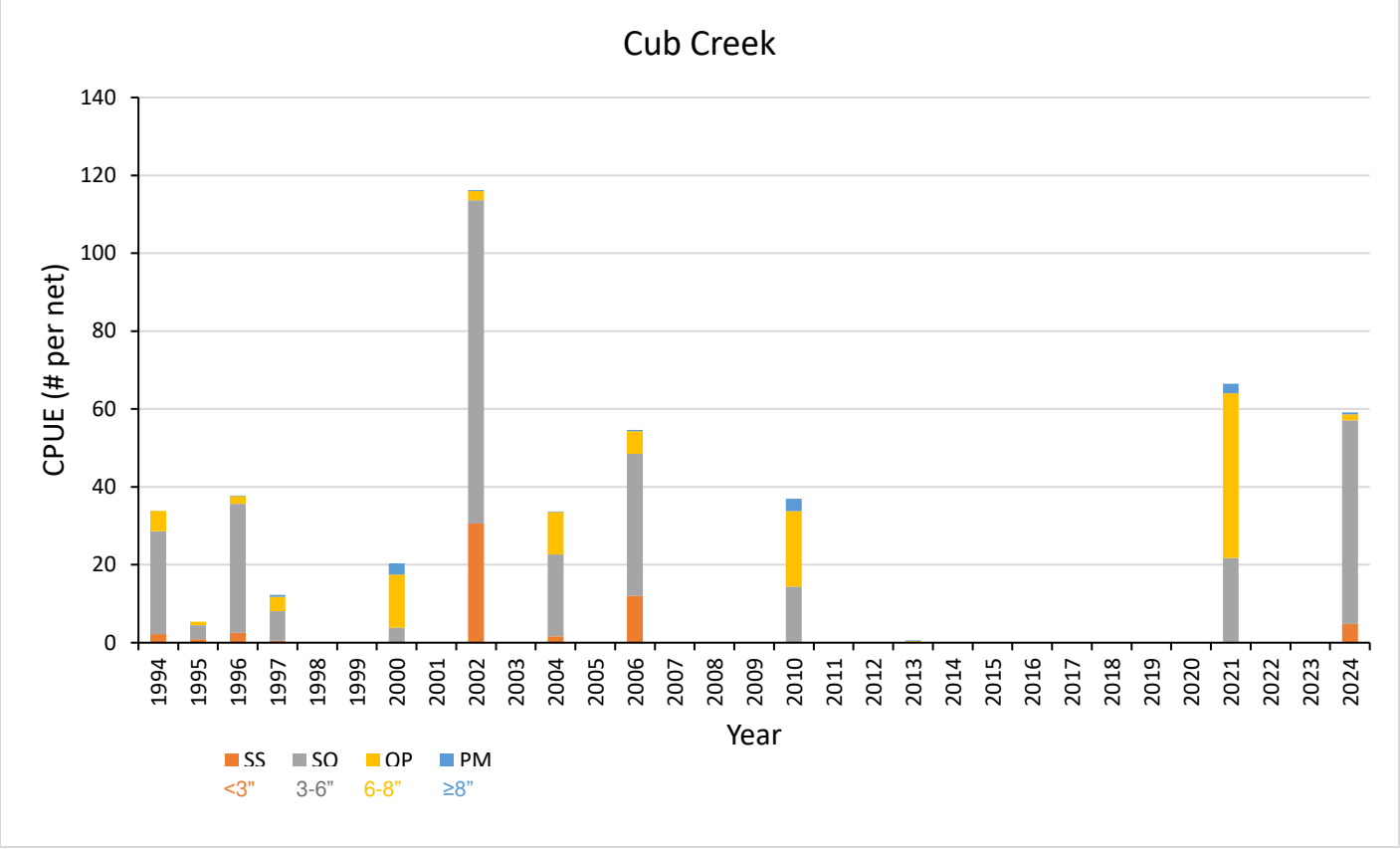
Appendix 10.- Summit largemouth bass catch per unit effort by length category over time.



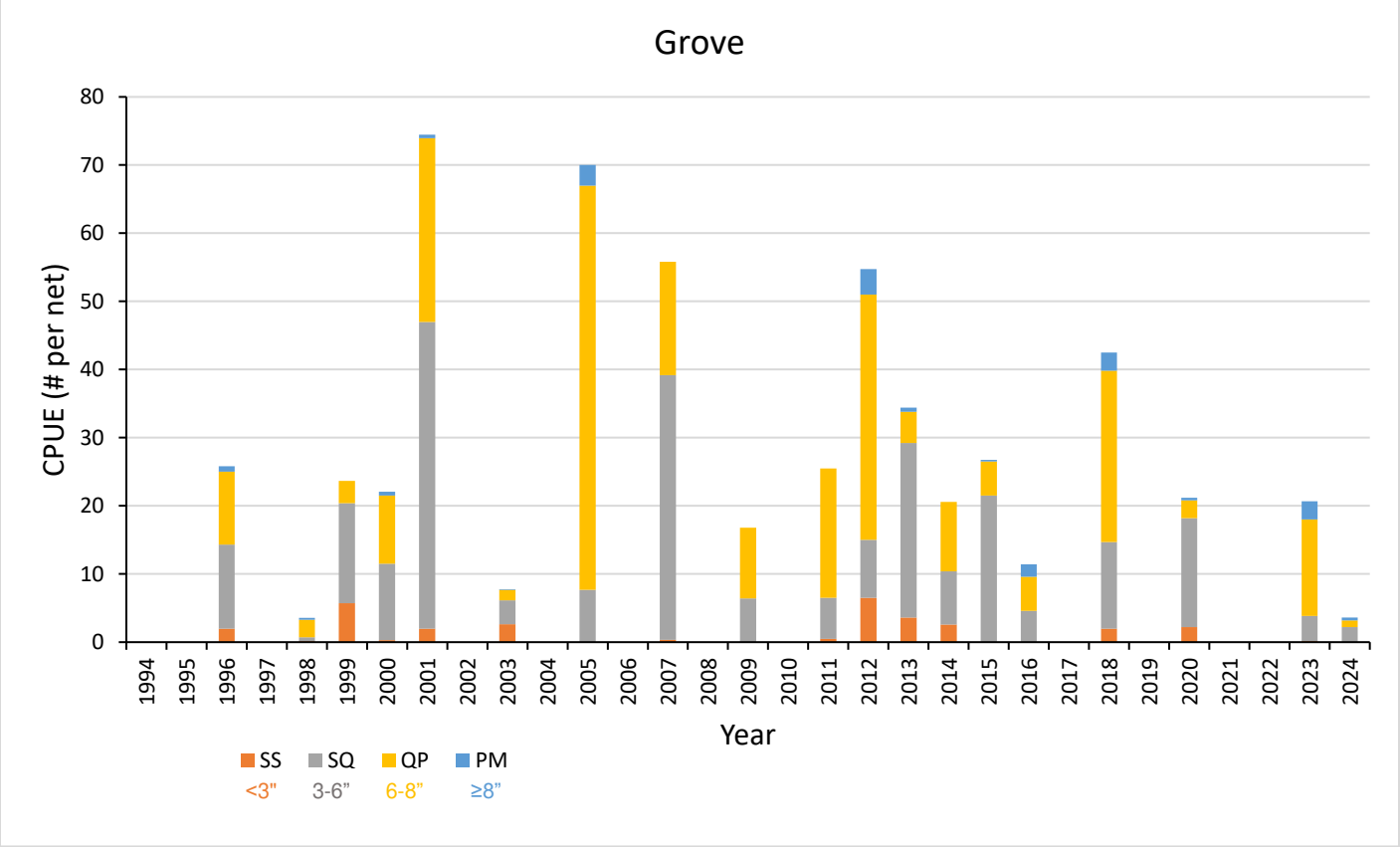
Appendix 11.- Buckskin bluegill catch per unit effort by length category over time.



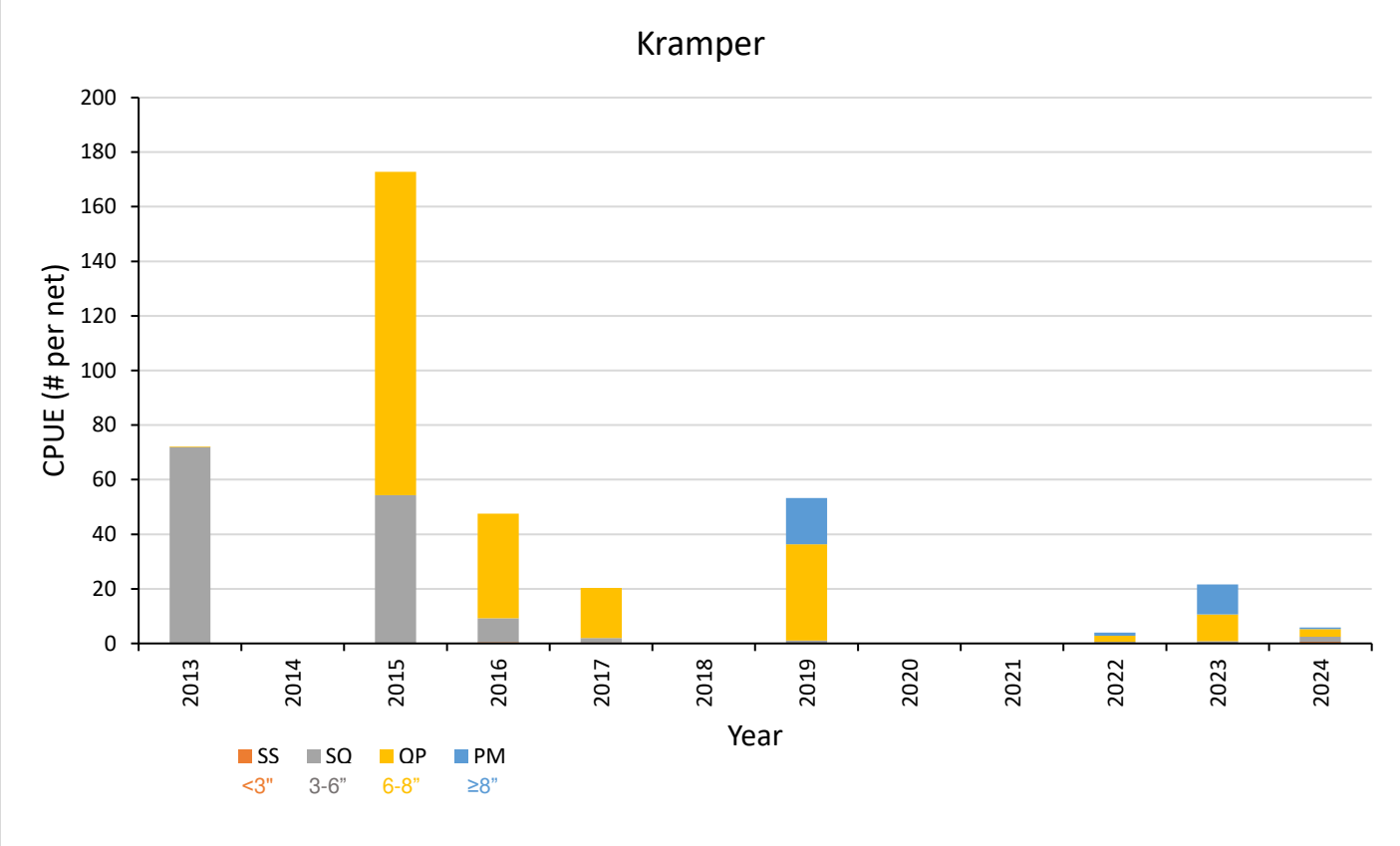
Appendix 12.- Chalkrock bluegill catch per unit effort by length category over time.



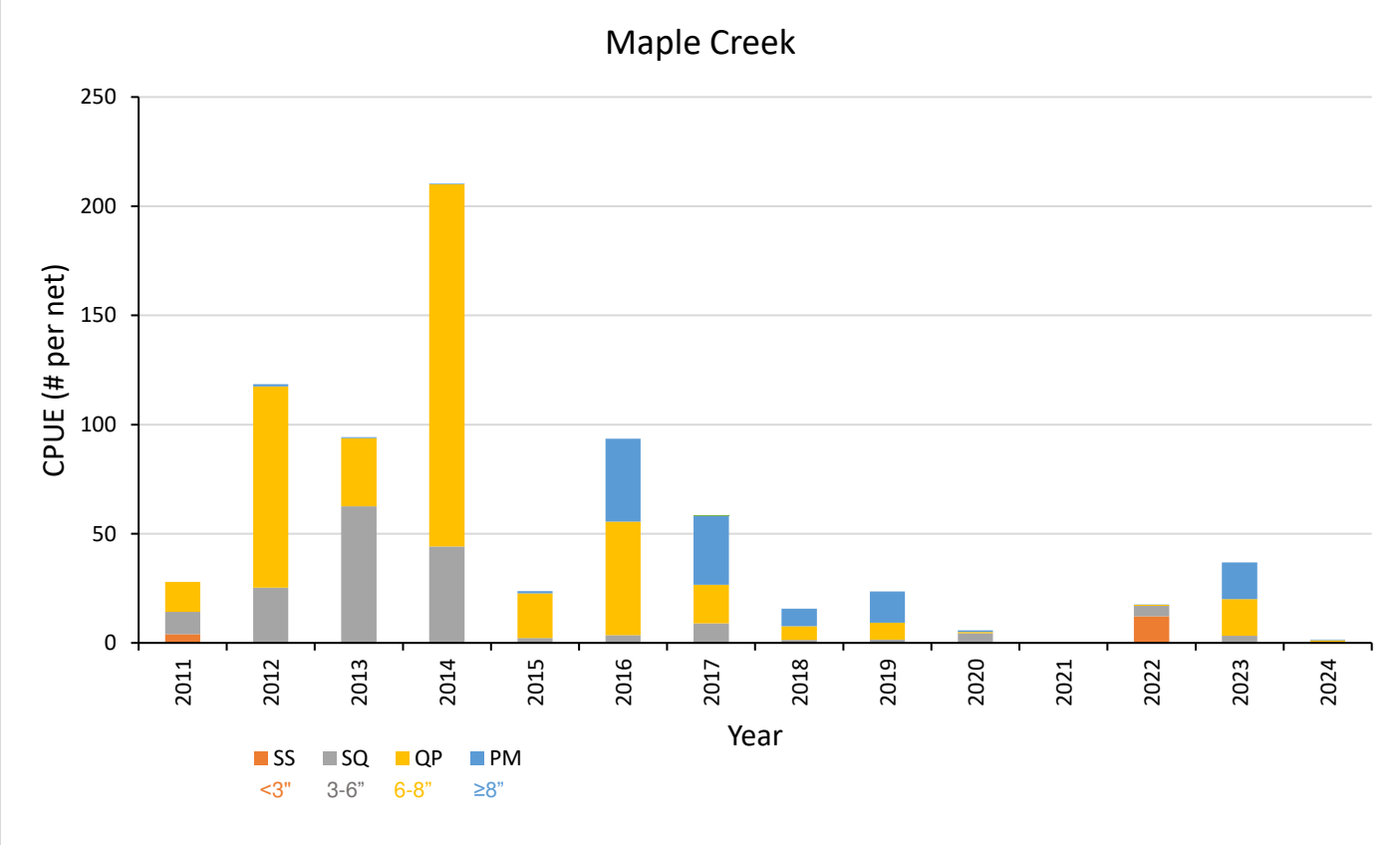
Appendix 13.- Cub Creek bluegill catch per unit effort by length category over time.



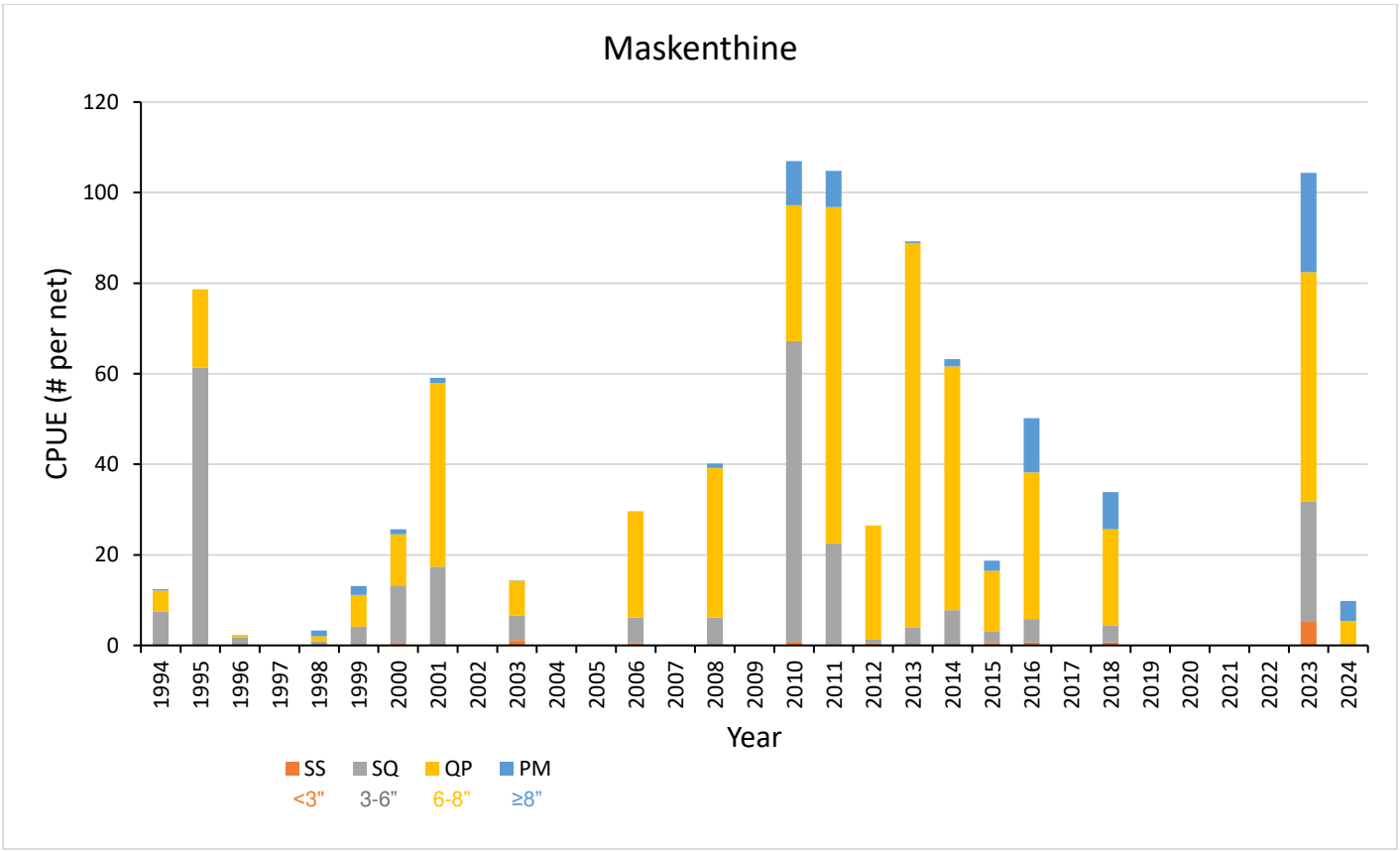
Appendix 14.- Grove bluegill catch per unit effort by length category over time.



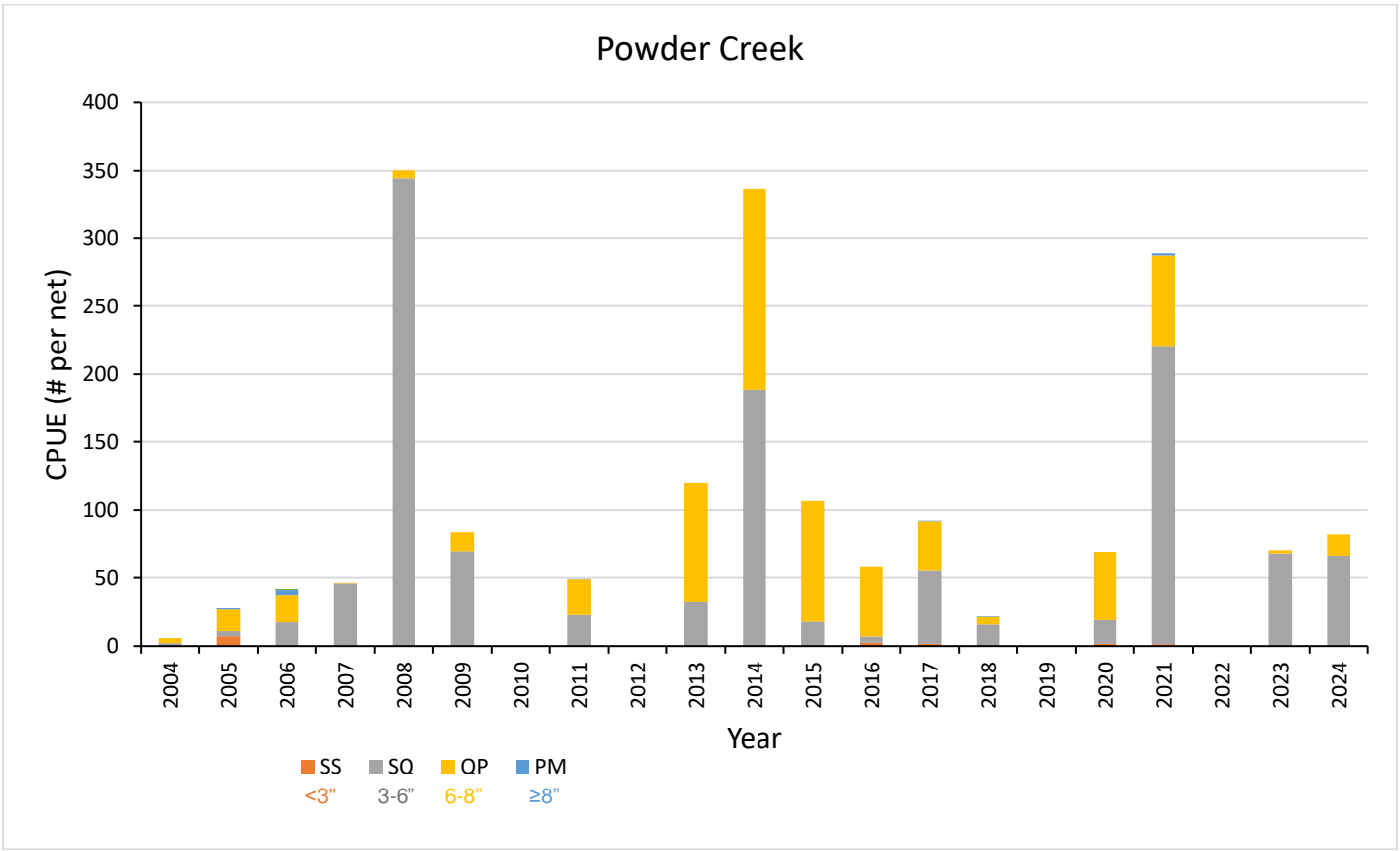
Appendix 15.- Kramper bluegill catch per unit effort by length category over time.



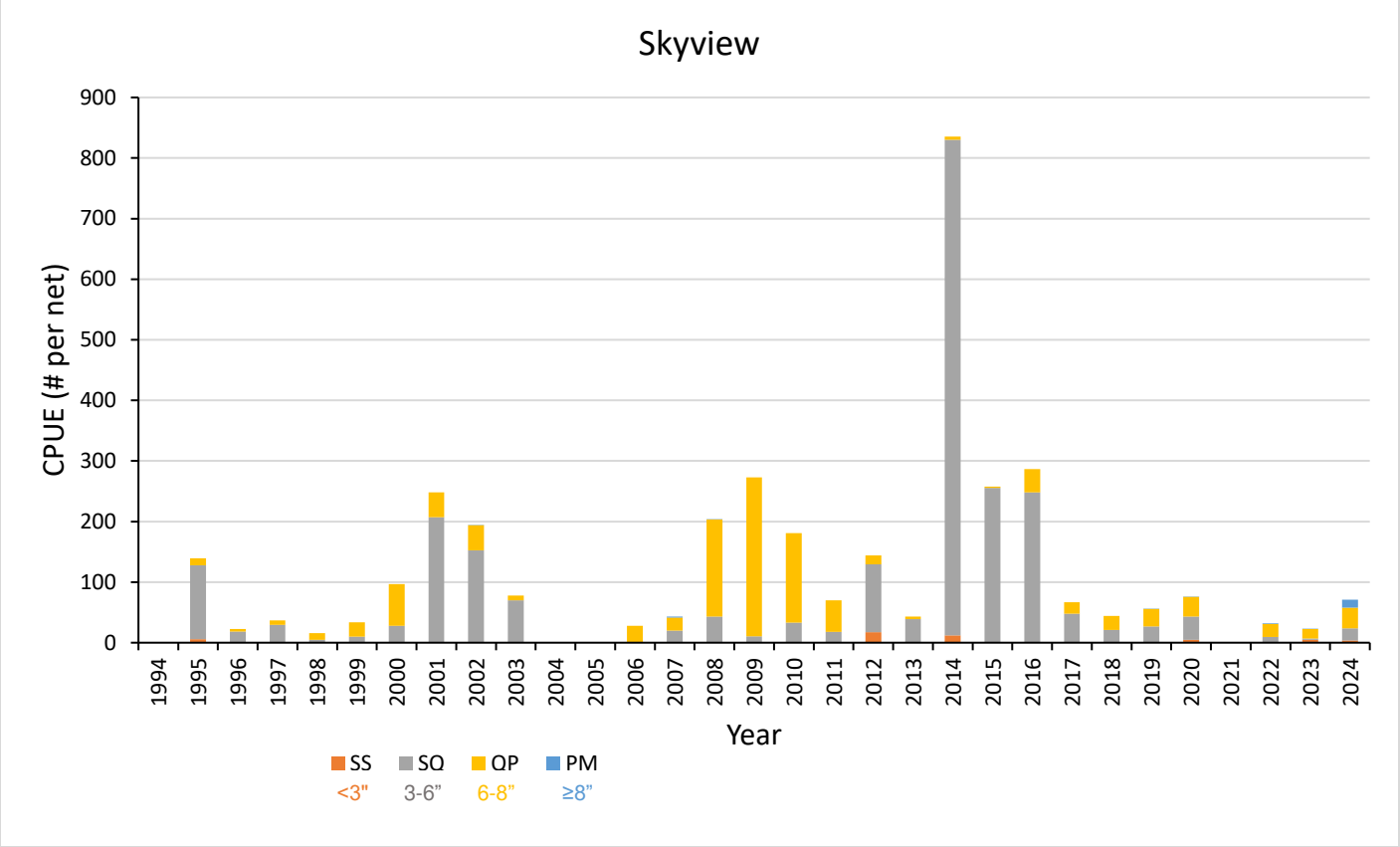
Appendix 16.- Maple Creek bluegill catch per unit effort by length category over time.



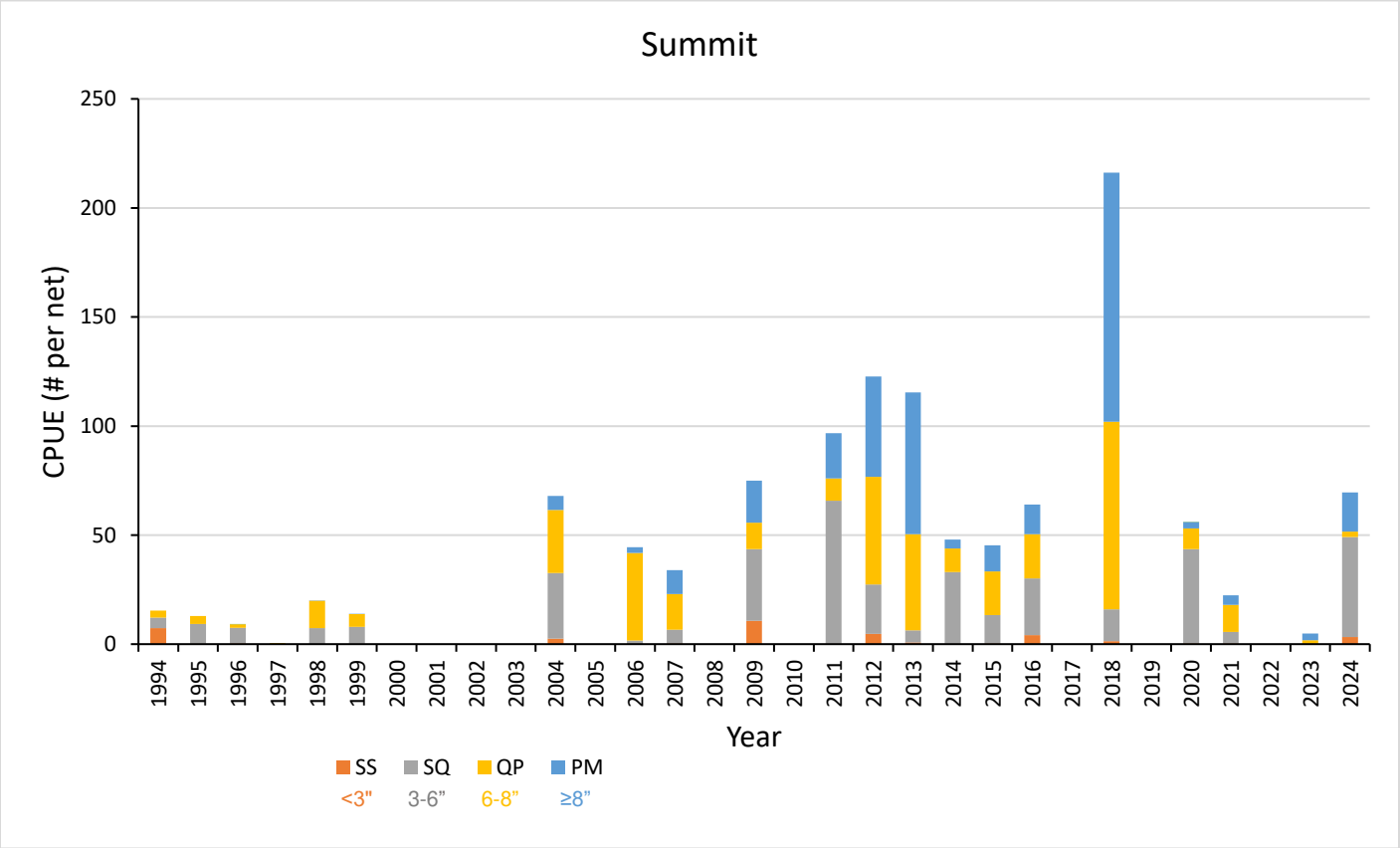
Appendix 17.- Maskenthine bluegill catch per unit effort by length category over time.



Appendix 18.- Powder Creek bluegill catch per unit effort by length category over time.



Appendix 19.- Skyview bluegill catch per unit effort by length category over time.



Appendix 20.- Summit bluegill catch per unit effort by length category over time.