

NW District Irrigation Reservoirs 2014 Fall Survey Summary



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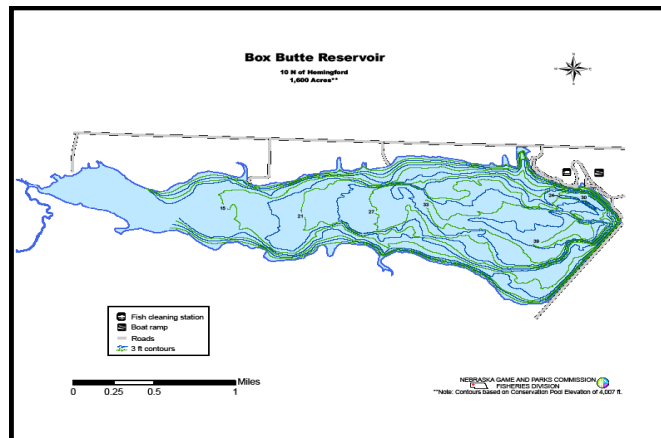
Several reservoirs located in the panhandle of Nebraska were built and managed for the primary purpose of water storage for irrigation. Water levels in these reservoirs can change drastically throughout a year and may make access difficult or impossible. The Bureau of Reclamation manages water in Box Butte Reservoir, Lake Minatare, Lake Winters Creek, and Big Lake Alice. Whitney Reservoir is managed by the Whitney Irrigation District. Oliver Reservoir was constructed by the Kimball Irrigation District and has been managed as a State Recreation Area by the Nebraska Game and Parks Commission until early 2014 at which time the South Platte Natural Resources District took over the maintenance and operation of the area for public use. A map of lake locations can be found at www.outdoornebraska.ne.gov/gisapps/fishing.asp. Fishing opportunities exist in most irrigation reservoirs.

Box Butte Reservoir is located approximately 9 miles north of Hemingford on the western edge of the sandhills in the Nebraska panhandle. The reservoir was constructed in the early 1940's and impounds the Niobrara River which originates about 60 miles upstream. Box Butte Reservoir was designed for irrigation, flood control, and recreation. The lake levels can fluctuate drastically throughout the irrigation season.



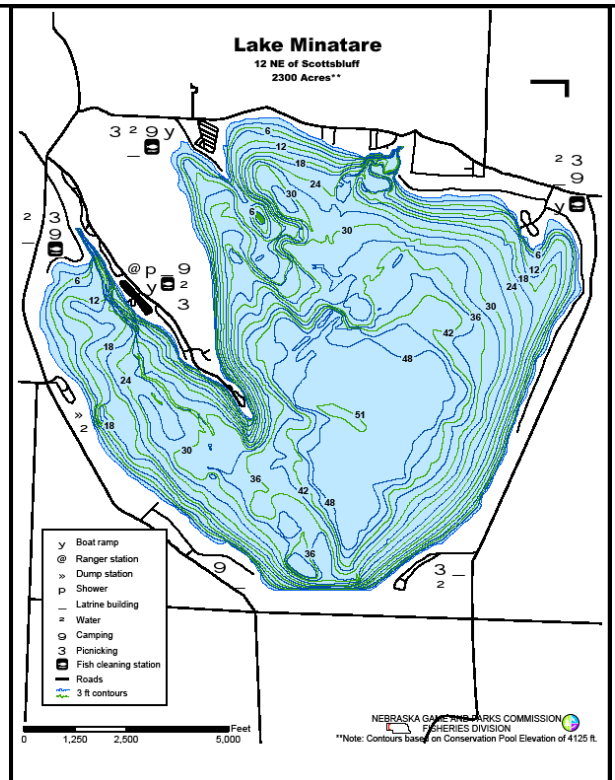
Box Butte Reservoir SRA is owned by the Bureau of Reclamation and encompasses 2,212 acres while the reservoir itself impounds approximately 1,600 of those acres at full pool. A State Recreation Area (SRA) encompasses the northeastern portion of the reservoir and the rest of the property is managed as a Wildlife Management Area (WMA). These areas are all managed by the Nebraska Game and Parks Commission. The SRA offers electrical and primitive camping, water, boat ramp (located on the north side), fish cleaning station, swimming, picnic tables and shelters, and primitive restrooms.

Game fish species present in Box Butte Reservoir include: walleye, northern pike, channel catfish, blue catfish, yellow perch, bluegill, black crappie, rock bass, largemouth bass, smallmouth bass, and pumpkinseed sunfish. It is an excellent open water fishery for all game fish species as well as a top ice fishing destination for pike, bluegill, and yellow perch. Box Butte is also known for its water clarity, making it desirable for bow fishing, underwater powered spear gunning, and surface spear action. Box Butte Reservoir currently holds 16 state records in the above categories.



Lake Minatare State Recreation Area is located 6 miles east and 8 miles north of Scottsbluff, NE in the North Platte River Valley. The area encompasses 2,873 acres, including a 2,147-acre reservoir when full. The reservoir was built in 1915 by the U.S. Bureau of Reclamation primarily for irrigation purposes. In 1986, jurisdiction of the area was granted to the U.S. Fish and Wildlife Service as part of the North Platte National Wildlife Refuge (NWR). The lake and land adjacent to the reservoir is managed by the Nebraska Game and Parks Commission through a lease agreement for recreational activities while the Pathfinder Irrigation District controls water levels for irrigation.

Fishing is available at Lake Minatare for a variety of fish species which include walleye, white bass, wiper, channel catfish, blue catfish, smallmouth bass, largemouth bass, white and black crappie, northern pike, and yellow perch.



Big Lake Alice and Lake Winters Creek are both part of the North Platte NWR located above Lake Minatare and supplied with water from the Lake Minatare supply canal. Big Lake Alice is drained low enough each year thus very few fish survive the winter months. Therefore Big Lake Alice is utilized as a rearing lake for shad, walleye, and perch to be sent down the supply canal and into Lake Minatare.

As part of the North Platte NWR, Lake Winters Creek has a few special fishing regulations. The lake is only open during daylight hours and anglers are restricted to non-gas motors. Anglers may find a variety of species at Lake Winters Creek including yellow perch, black crappie, bluegill, walleye, largemouth bass, northern pike, and smallmouth bass. To provide a refuge for migrating waterfowl, Lake Minatare, Lake Winters Creek, and Big Lake Alice are closed to public use from October 15th through January 14th each year.

Oliver reservoir (Kimball Reservoir) is located 8 miles west of Kimball, Nebraska off highway 30. It is a 270 acre reservoir located on a 917 acre recreation area. The lease agreement for Oliver was not renewed turning the lake back over to the South Platte NRD on January 1, 2014. Oliver Reservoir was once a unique fishery providing both cool and coldwater fishing opportunities. The combination of drought and over appropriation of groundwater use has contributed to the loss of water inflows to the lake. Occasional strong storms produce flash flood events that has extended the life of Oliver Reservoir. One storm event in the early spring of 2014 filled Oliver Reservoir to within a foot of full pool, extending the life of the reservoir. Game fish in Oliver Reservoir in 2015 may include walleye, white crappie, bluegill, largemouth bass, yellow perch, channel catfish, rainbow trout, and an occasional tiger musky.

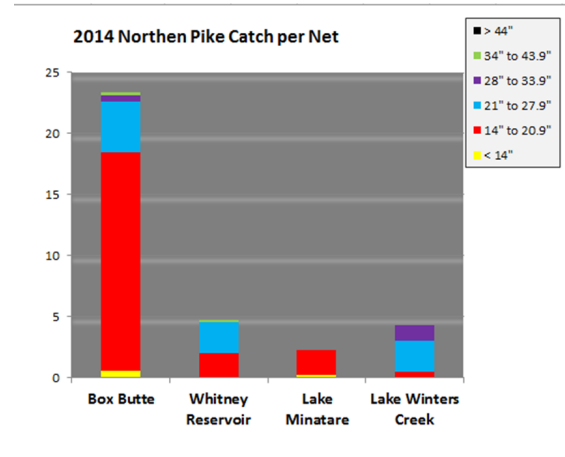


Whitney Reservoir is a 900 acre lake located about 1 mile West of Whitney, Nebraska owned and operated by the Whitney Irrigation District. A Wildlife Management Area located on the NE corner of the lake provides angler access with a boat ramp and pit toilet. The lake has a drastic summer drawdown making access nearly impossible by late summer. Game fish species present in Whitney Reservoir include: yellow perch, bluegill, black crappie, white crappie, northern pike, largemouth bass, channel catfish, white bass, and walleye.



Northern Pike

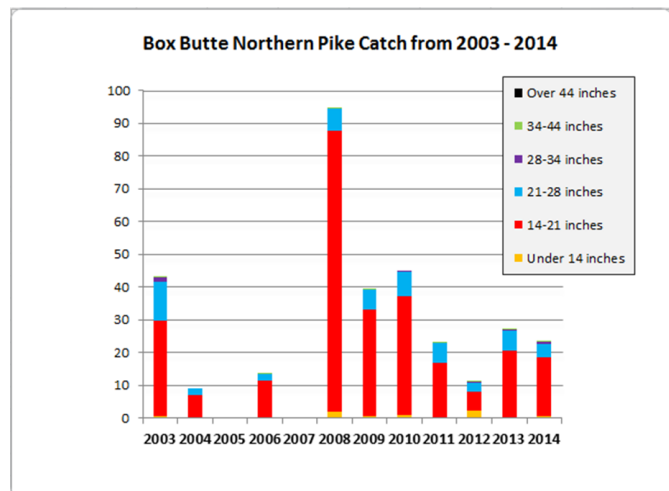
Northern pike are commonly found in Box Butte, Whitney, and Lake Winters Creek. A year-class of northern pike showed up in Lake Minatare in 2014 likely originating from an up stream source. Although northern pike are present in Lake Minatare at a low density, limited spawning habitat during early spring makes recruitment unlikely within the reservoir.



Northern pike sampling at Box Butte Reservoir is conducted in mid to late March or when the ice comes off, whichever comes first. The sampling gear consists of frame nets that are set perpendicular to the shoreline to intercept pike as they move into vegetated areas to spawn. Northern pike were not surveyed in Lake Winters Creek, Whitney, or Lake Minatare in 2014, but were documented during fall gillnet surveys to evaluate walleye and channel catfish populations.

In 2008, fisheries management placed a special regulation for northern pike at Box Butte. The regulation was a protected slot of 28-34 inches and an increased bag limit of 10 fish (only one can be over 34 inches). This new regulation is experimental and was done to increase size structure of pike in the lake and produce a better quality pike fishery. Whitney Reservoir, Lake Minatare and Lake Winters Creek have a daily bag limit of 3 pike of any size with a possession limit of 10.

Box Butte Reservoir continues to be the top northern pike destination in the panhandle with a catch rate of 23 fish per frame net. This is similar to the 2013 survey of 27 fish per net. Most pike in Box Butte are small (< 21 inches) with a few big fish. The biggest pike collected in Box Butte Reservoir in 2014 was 37.6 inches and weighed 13.4 pounds. Age and growth analysis indicates that pike are growing faster now than they were in 2003 when the lake had a good proportion of bigger pike (>21 inches).



Northern Pike (Continued)

Northern pike anglers looking for large fish should not be discouraged by the low catch rates in Whitney Reservoir or Lake Winters Creek. Since the reported catch rates are from gillnet surveys it is likely that the total abundance is greater than reported. Also, the average size northern pike sampled in 2014 was 22.4 inches in Whitney, 25.0 inches in Lake Winters Creek, and only 19.5 inches in Box Butte.

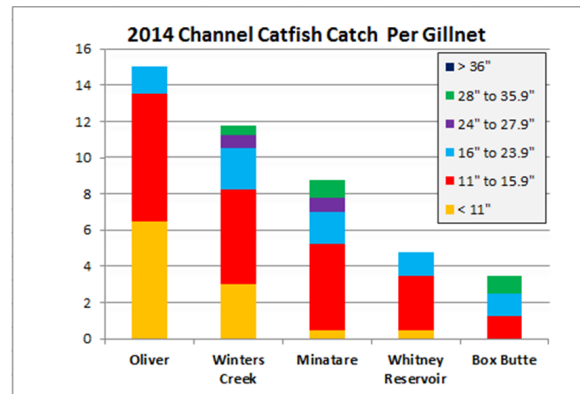


Pair of pike collected at Box Butte Reservoir in 2014

The biggest pike surveyed in 2014 came from Whitney Reservoir and measured 39.8 inches. Lake Minatare's high abundance of suckers and gizzard shad will provide excellent prey for the new year-class of northern pike, and anglers may see some trophy opportunities in the future.

Channel Catfish

Oliver Reservoir had the highest density of channel catfish in 2014 with 15 fish per gillnet. However, only 10 percent of the fish surveyed were longer than 16 inches. Lake Winters Creek and Lake Minatare both have good abundances of channel catfish with excellent size structures. Forty percent of the population in Lake Minatare were over 16 inches with 11 percent longer than 28 inches. Anglers seeking trophy catfish should also consider fishing Box Butte Reservoir. Although a lower density, Box Butte Reservoir consistently produces catfish over 10 lbs.



Box Butte and Lake Minatare have also historically been stocked with blue catfish. Anglers are required to know the difference between blue and channel catfish since blue catfish are managed as a trophy fishery with a bag limit of 1, and channel catfish have a bag limit of 5.

2014 Channel Catfish Stocking

Lake	# Stocked	Size Stocked	Rate (# / Acre)
Box Butte	3286	9.9 inch	2.0
Minatare	8000	9.7 inch	3.7
Whitney	4578	9.9 inch	5.0
Lake Winters Creek	2300	10.5 inch	9.8
Oliver	2928	10 inch	11.0



Blue or Channel?

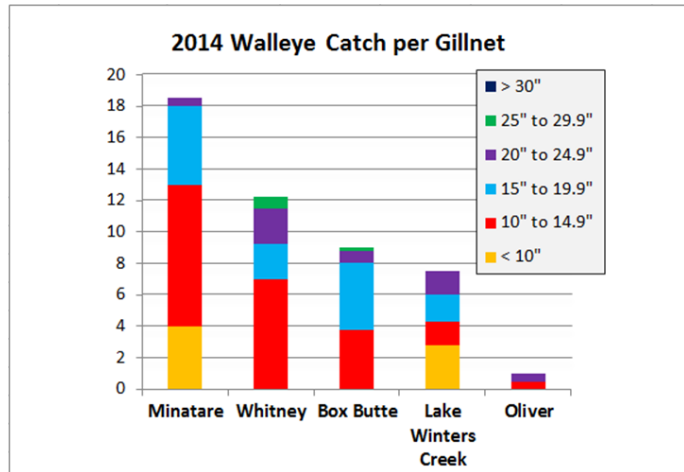
1. Blue catfish have a long straight anal fin while a channel catfish's anal fin is rounded.
2. Small channel catfish will have spots across its body while blue catfish will not.

Walleye

Walleye are found in Oliver Reservoir, Lake Minatare, Box Butte Reservoir, Whitney Reservoir, and Lake Winters Creek.

Lake Minatare continues to be the top walleye destination in the panhandle with 18.5 walleye per gillnet. The average size walleye sampled in Minatare in 2014 was 13.7 inches with 30 percent of the walleyes surveyed over the minimum size of 15 inches. Most legal walleye in Lake Minatare are 15 to 17 inches with very few larger fish.

Whitney Reservoir has a great walleye population with a catch rate of 12.25 fish per gillnet and excellent size structure. This will be the best bet for anglers looking for big walleye in the panhandle. The average size walleye collected in Whitney in 2014 was 16.4 inches with 24 percent of the population longer than 20 inches. These fish are in poorer condition than most walleye fisheries in the panhandle but may plump up with a good shad hatch. The biggest walleye collected during surveys in 2014 was in Whitney and measured 30.8 inches.



Box Butte walleye abundance was about average for the reservoir with 9 fish per gill net in 2014. Walleye anglers should continue to see some nice fish in 2015 with approximately 33 percent of the population over 15 inches and 11 percent over 20 inches.

After discovering a walleye population in Lake Winters Creek in 2012, walleye were added to the annual stocking schedule. Anglers can have some walleye success but will likely find better action in the future as a few year-classes establish. With the recent increase in water level, Oliver Reservoir was again added to the walleye stocking schedule in 2014. Very few walleye were left in Oliver after the lake nearly dried up in 2013. Walleye are stocked annually in Lake Minatare, and Whitney Reservoir. Box Butte Reservoir has a natural recruiting walleye population and does not require supplemental stocking.

In 2014, walleye fingerlings were also stocked in Big Lake Alice to act as a rearing pond to supplement the walleye fishery in Lake Minatare. Big Lake Alice is mostly void of game fish every year due to the drastic draw down during the fall and into the winter. The stocked walleye have little competition for limited resources and grow larger and faster than walleye stocked in Minatare. During the fall draw down, water from Big Lake Alice is drained through the Minatare supply canal and into Lake Minatare.



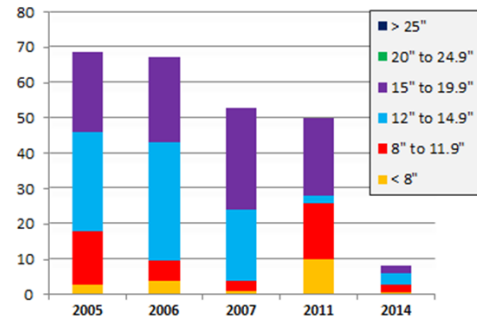
30 inch walleye collected from Whitney Reservoir in 2014

Black Bass

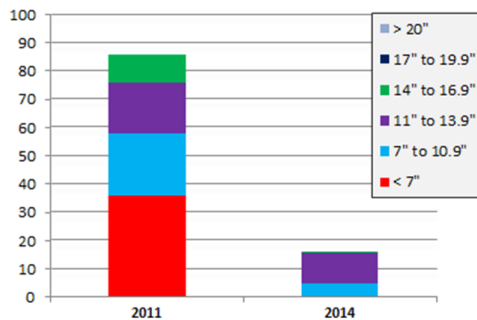
Box Butte Reservoir was the only irrigation reservoir surveyed for bass in 2014. Box Butte's bass population consists of both largemouth and smallmouth bass. The 2014 survey indicated a decline in both largemouth and smallmouth populations from the previous survey conducted in 2011. The average size largemouth sampled was 12.8 inches with 28 percent of the population over 15 inches. The average size smallmouth collected in the survey was 11.6 inches with the biggest fish at 16.6 inches.

Fluctuating water levels make bass surveys difficult to perform in irrigation reservoirs as water levels are usually high, flooding terrestrial vegetation and timber during the spring and early summer when bass surveys are typically conducted. Largemouth bass can be found in all irrigation reservoirs while smallmouth bass are only found in Box Butte Reservoir and Lake Minatare. Anglers looking for bigger bass should concentrate efforts on Box Butte Reservoir.

Box Butte LMB Catch Per Hour Electrofishing



Box Butte SMB Catch Per Hour Electrofishing



White Bass and Wipers

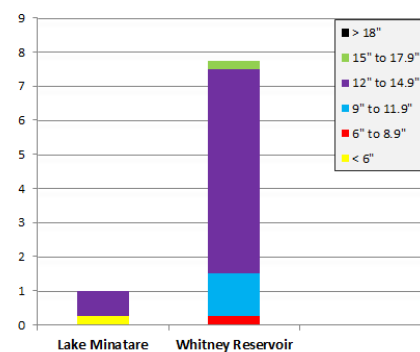
White bass can be found in Whitney Reservoir and Lake Minatare. Wipers are only found in Lake Minatare. White bass and wipers were sampled in low abundance in 2014 in Lake Minatare with a catch rate of 1.0 and 1.5 fish per net respectively. Although wipers are no longer stocked at Lake Minatare, the average size collected in 2014 was 20.2 inches. Wiper stockings were discontinued to reduce competition with white bass in an attempt to rebound the white bass population. White bass averaged 11.4 inches with 75 percent of the fish collected over 12 inches. The inlet canal at Lake Minatare is a popular destination for white bass and wipers while the lake is filling.

Whitney Reservoir has a good white bass population with a gillnet catch of 7.75 fish per net. Nearly 81 percent of the population was over 12 inches with the biggest fish approaching 16 inches.



White bass collected from Whitney Reservoir in 2014

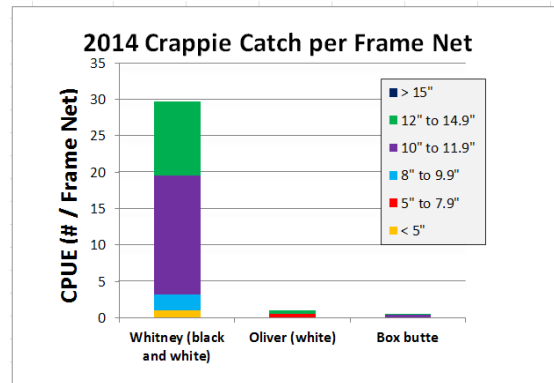
2014 White Bass Catch per GillNet



Panfish

Whitney Reservoir will continue to be the top irrigation reservoir for crappie in 2015. The population consists of both black and white crappie with whites making up 75 percent of the population. Extremely low water in the Fall of 2012 resulted in a large fish kill and Whitney's crappie population is still down from the 64 fish per net in 2012 to 29.75 fish per net in 2014. Crappie are very prolific and should bounce back quickly with higher water levels. Some recruitment was documented in 2014 as fish under 5 inches were collected. Anglers should find excellent crappie fishing with 89 percent of the population over 10 inches and 34 percent over 12 inches.

Anglers should not be discouraged by the low catch rates for Box Butte Reservoir. Water levels in the spring time, flood the cottonwoods and aquatic vegetation, making frame net surveys difficult. The abundance for crappie are likely higher than what the survey suggests. Anglers can expect quality crappie fishing with most fish longer than 10 inches.



Lake Minatare should also have a quality crappie fishery but was not surveyed in 2014.

The top irrigation reservoir for bluegill is Box Butte Reservoir with a catch rate of 13.6 fish per frame net in 2014. Over 50 percent of the population was over 8 inches with some fish approaching 10 inches.

No perch surveys were conducted on any of the irrigation reservoirs, but Lake Minatare and Box Butte Reservoir should both have good perch fishing in 2015. Box Butte fall gillnet catch had 6.75 perch per net with most fish between 10 to 12 inches. Lake Minatare had a lower catch rate with a gillnet catch of 0.25 fish per net.



Bluegill collected from Box Butte Reservoir in 2014

Fishing for panfish is a great way to introduce a friend or family member to fishing. Panfish can provide fast action, are relatively easy to catch, and are some of the best tasting fish found in Nebraska waters.

For additional information about fisheries management at Lake Minatare, Whitney Reservoir, Oliver Reservoir, Lake Winters Creek, or Box Butte Reservoir please contact the following personnel by phone or email addresses listed below.

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