

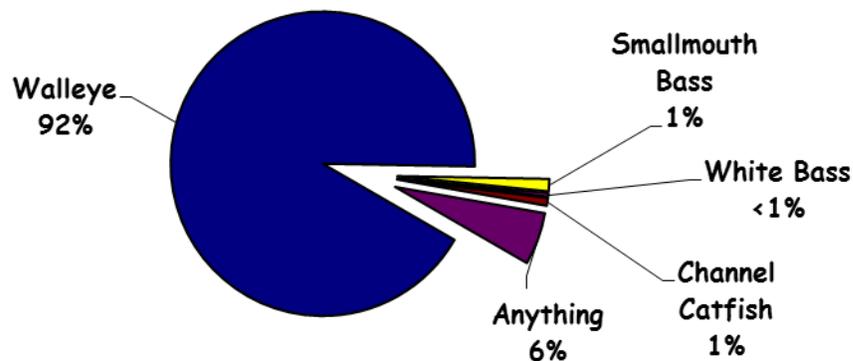
Lake Francis Case 2015 Fishing Forecast

Biologists working on Lake Francis Case annually survey both the fish population and angler use and harvest of that population. Over time, information collected from these surveys identifies trends in fish population dynamics and angler use and harvest. This long-term data helps biologists evaluate the effectiveness of past management efforts and predict future fishing trends. Anglers spent over 650,000 hours fishing Lake Francis Case in 2014 and harvested over 165,000 walleye! Walleye anglers experienced excellent catch rates during 2014, catching 1.2 walleye for every hour fished.

Year	Hours of Fishing	Walleye Harvest
2010	480,884	102,973
2011	633,536	248,773
2012	616,337	195,859
2013	736,121	235,608
2014	652,313	165,915

It is no secret that anglers come to South Dakota to enjoy the fantastic walleye fishing our great state has to offer. Lake Francis Case is no exception. A vast majority of anglers fishing Lake Francis Case are targeting walleye. Results from the 2014 April-July creel survey showed that 92% of the anglers fished primarily for walleye. While many other fish species provide excellent angling opportunities and great table fare, only a small percentage of anglers specifically target these species.

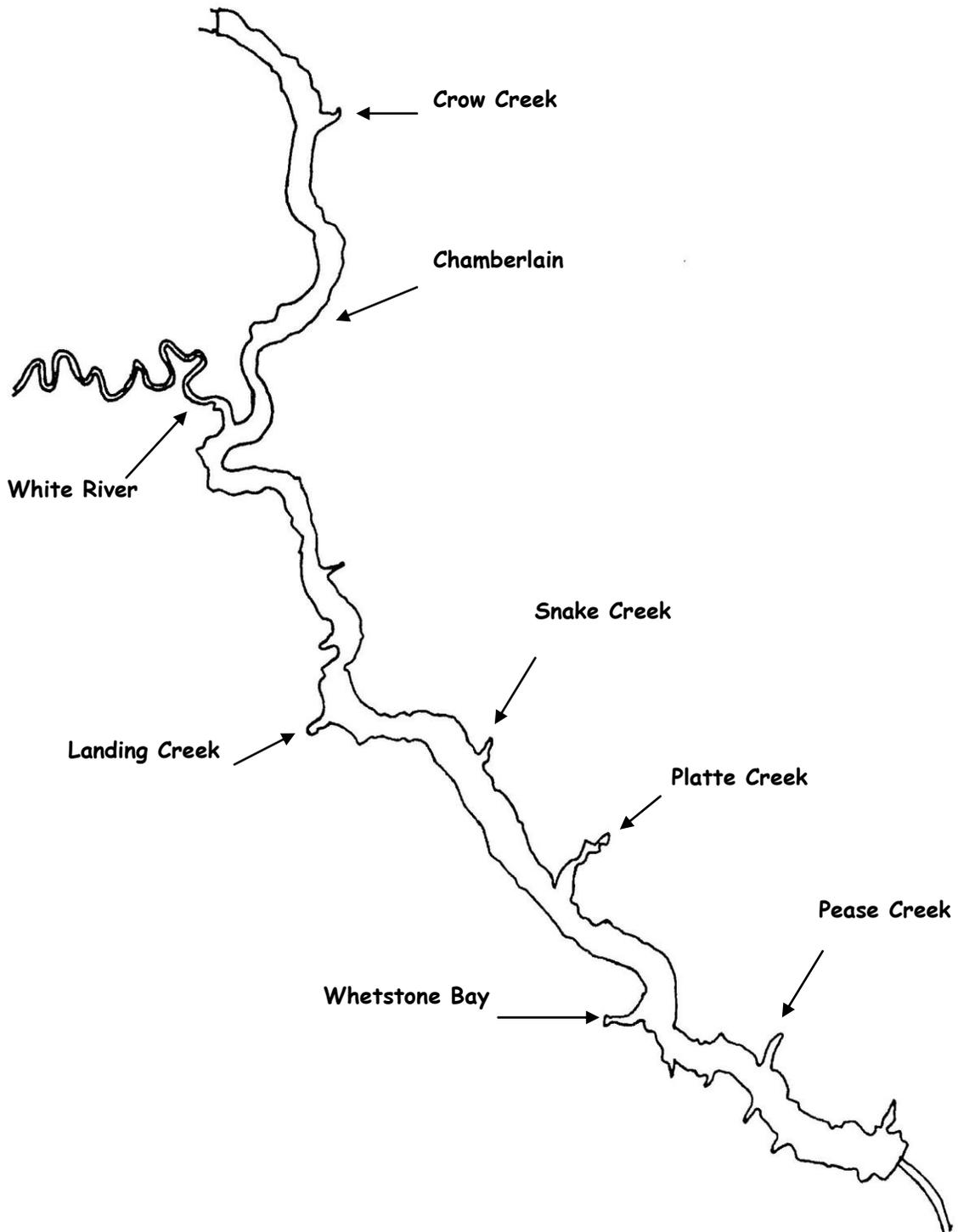
**Percentage of Lake Francis Case
Anglers that fish for...**



>Click on links to the right for information on each fish species.
>Scroll down for general information for Lake Francis Case.

- [Walleye](#)
 - [Catfish](#)
 - [Smallmouth Bass](#)
 - [White Bass](#)
 - [Paddlefish](#)
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Lake Francis Case



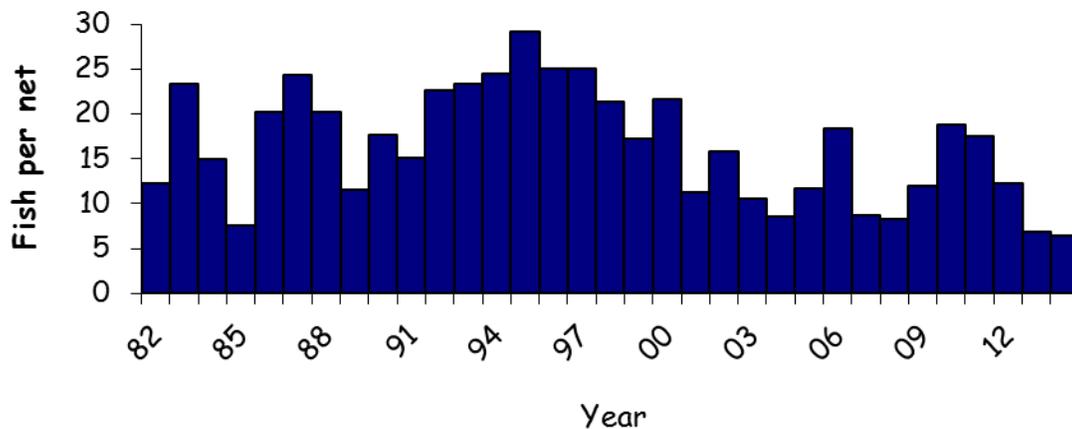
Lake Francis Case Walleye, Sauger or Saugeye

Lake Francis Case Walleye (includes sauger and saugeye) Regulations (For specifics, see pages 16-18 in the 2015 Fishing Handbook)

- 4 fish daily/8 in possession
- Minimum walleye length limit is 15 inches and is in effect from Jan. 1-June 30 and Sept. 1-Dec. 31, annually (all months of the year except July and August).
- Anglers are allowed one walleye 20 inches or longer per day in their daily limit, year round.
- High-grading or culling of walleye is prohibited.
- The area between the railroad bridge and the I-90 causeway in Brule and Lyman counties is closed to fishing during January, February, March, April and December, except that shore-fishing is allowed from the Brule County side year-round.
- When anglers are fishing through the ice in the area from the northern Gregory-Charles Mix county line downstream to Ft. Randall Dam, size restrictions do not apply and anglers are required to keep the first four walleye they catch.

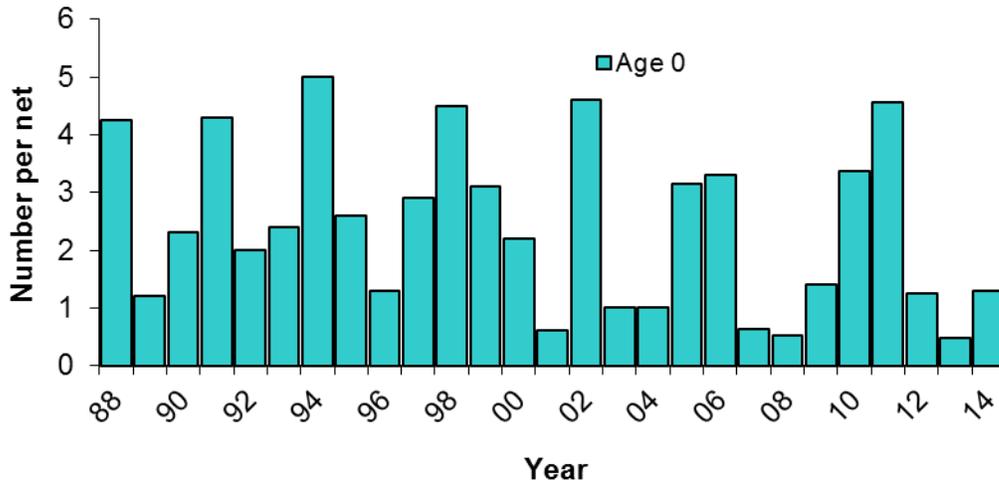
Overall walleye abundance measured by the 2014 survey decreased to the lowest level observed and was similar to that measured in 2013. High angler harvest coupled with low 2013 walleye production contributed to the reduction experienced the past two years. Abundance of harvestable size walleye (those ≥ 15 inches), in the 2015 LFC population is lower than what was present in the reservoir prior to 2013. Strong 2010 and 2011 walleye year classes should support a bulk of the sport harvest in 2015. Walleye less than 15 inches are present in the population but are not as plentiful as in past years. These young fish are important, as they replace those fish harvested by anglers or lost to natural causes.

Lake Francis Case Walleye



High walleye production during 2005 and 2006 currently provides some larger fish in the population. Moderate production in 2009 and excellent production in 2010 and 2011 should support the bulk of the harvest in 2015. Good walleye production occurred in 2012 while 2014, providing smaller walleye in the population.

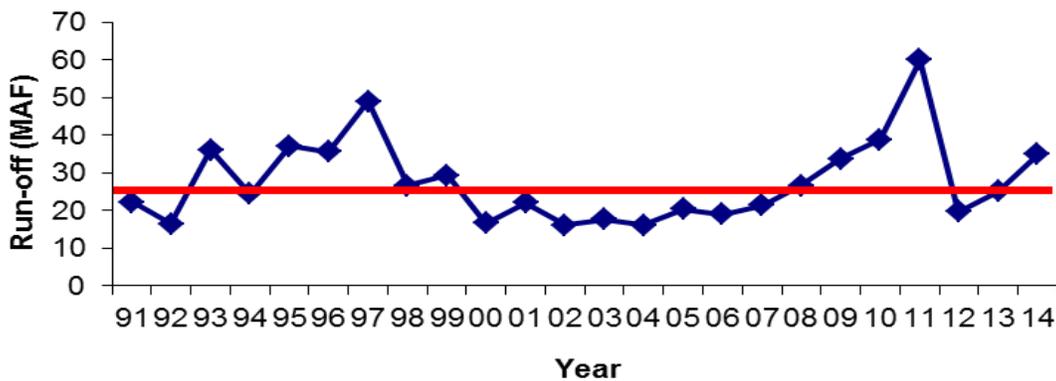
Lake Francis Case Walleye Production



Water, obviously important to fish!

Run-off into the Missouri River system is key for fish production. Localized run-off provides the reservoir with nutrients needed to produce plankton; small creatures that our bait-fish and newly hatched game fish eat. During periods of high run-off, the reservoir is capable of supporting high numbers of fish. Drought conditions seriously decrease the reservoir's ability to produce and maintain fish populations. During low run-off periods, the reservoir simply does not have the nutrients needed to support large numbers of fish. As the graph below shows, run-off in the Missouri River basin has been at or above average (25.2 million acre-feet (MAF), depicted by the red line) from 2008-2011 following eight years of below normal conditions, which has increased reservoir productivity. Run-off into the Missouri River basin above Sioux City during 2012 was 19.7 MAF, a drastic decline from the 60 MAF measured during 2011, the highest on record. 2014 run-off was 35.0 MAF and the forecast for 2015 is 25.5 MAF.

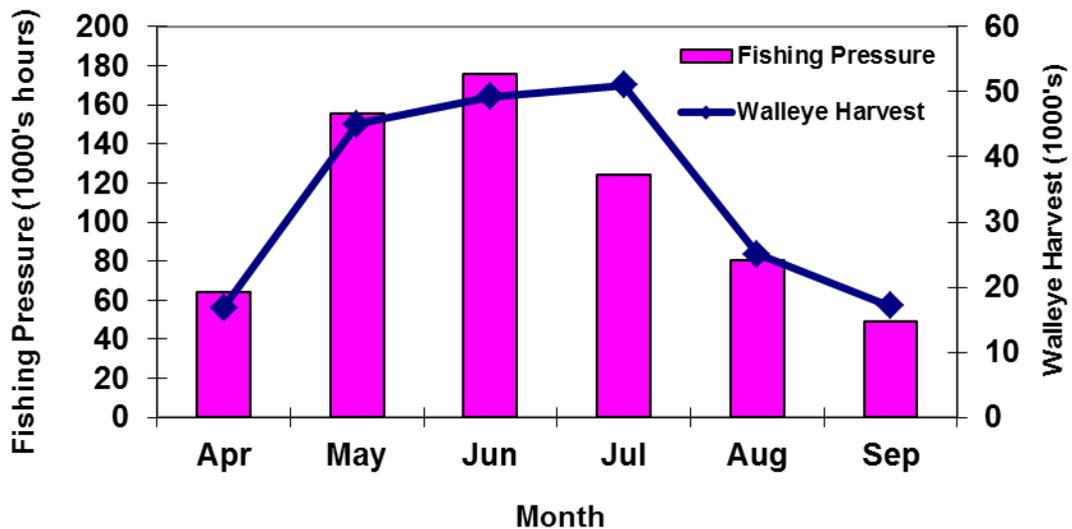
Missouri River Annual Run-off in Million Acre Feet (MAF)



Lake Francis Case Fishing Use and Walleye Harvest

For anglers unfamiliar with Lake Francis Case walleye, fish can be found year-round throughout the reservoir. However, the typical yearly pattern has a majority of the spawning size walleye moving into the upper 1/3 of the reservoir in late fall/early spring. After spawning in mid/late April, walleye begin to disperse throughout the reservoir. As water temperatures rise, walleye fishing can be good throughout the entire reservoir. Lake Francis Case typically sees most of its fishing use during the May-July time period. Consequently, this is also the time period when a majority of the walleye harvest occurs. When you have more people on the lake fishing, more fish are harvested, as shown in the chart below.

Average Fishing Pressure and Walleye Harvest by Month for Lake Francis Case 2010-2014



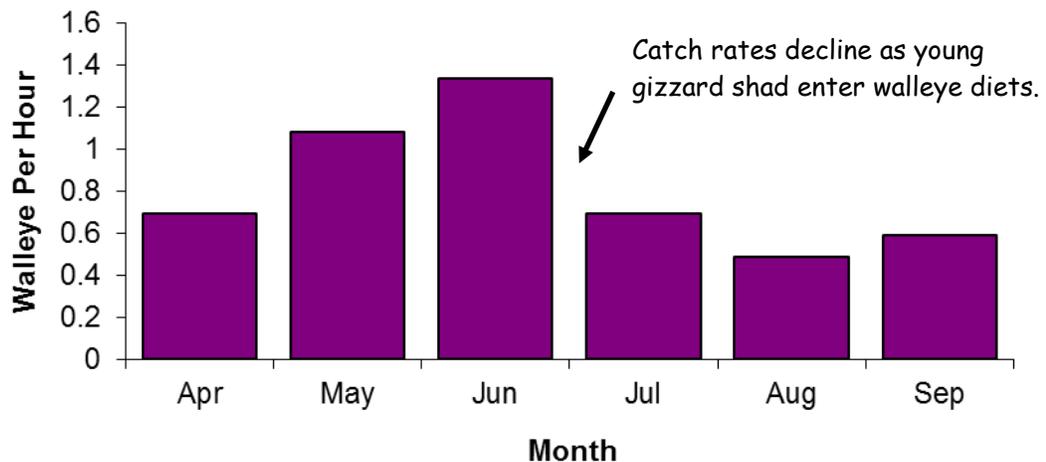
What do Lake Francis Case walleye eat?



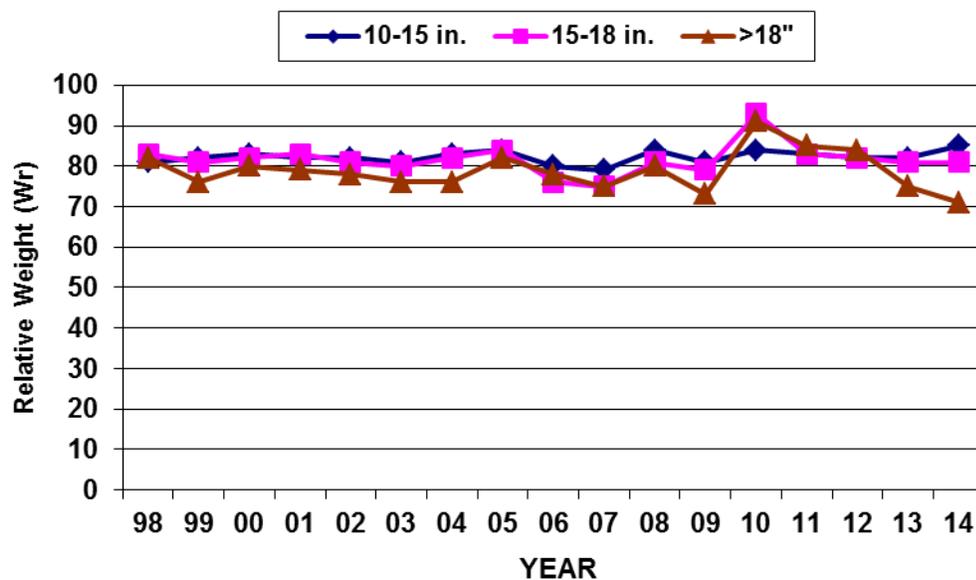
The primary forage fish species in Lake Francis Case is gizzard shad. Due to gizzard shad being intolerant of cold water temperatures for extended time periods, a majority of the young gizzard shad in Lake Francis Case die each winter. Fortunately, there are enough warm water refuges, associated with numerous artesian wells located throughout the reservoir, to over-winter a sufficient number of adult shad to produce a year class of shad each spring. Other forage fish species such as emerald and spottail shiners, young yellow perch, young white bass and a host of different minnows, shiners and darters provide a valuable source of prey.

Biologists often use catch rates to help determine the quality of a fishery. A catch rate is the number of fish caught per hour of fishing. For example, a walleye catch rate of 0.5 walleye/hour means it takes an average of 2 hours for an angler to catch a walleye. Catch rates of walleye and other sport fish that depend on young gizzard shad for food are typically highest in May and June as food resources are limited due to the die-off of young gizzard shad during winter. Gizzard shad begin spawning in late May or early June. Newly hatched gizzard shad reach a size desirable to walleye by about mid July, at which time catch rates of walleye typically decline on Lake Francis Case due to food being plentiful. The chart below helps illustrate how angler success on Lake Francis Case is influenced by prey-fish abundance.

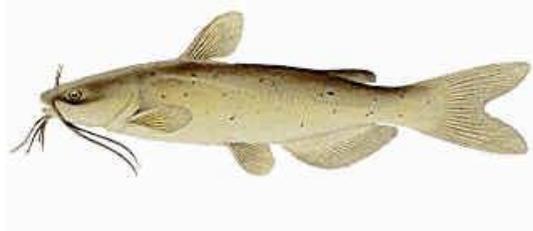
**Average Monthly Walleye Catch Rate
Lake Francis Case**



Biologists index fish condition or plumpness using relative weight (Wr). LFC walleye relative weights are typically in the high 70s or low 80s. As the chart below illustrates, LFC walleye relative weights of smaller fish are typically above 80 while relative weights of larger walleye typically fluctuate between 70 and 80.



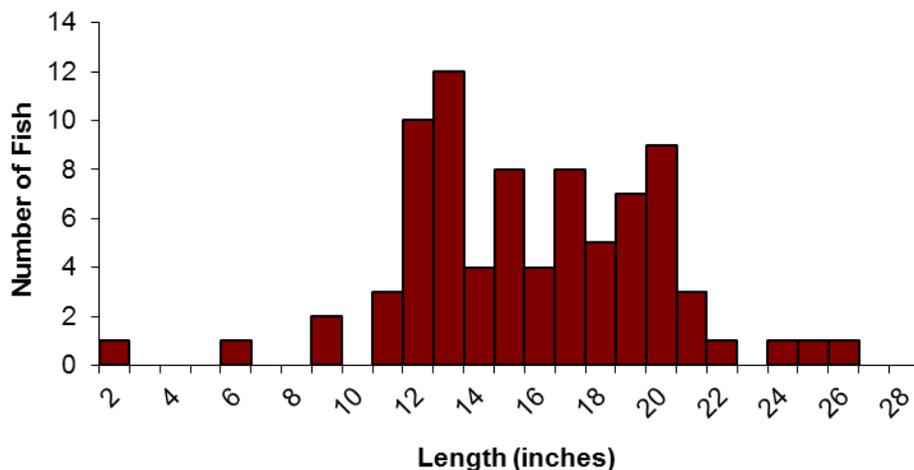
Lake Francis Case Channel Catfish



Lake Francis Case Channel Catfish Regulations: There is no daily or possession limit on channel catfish on Lake Francis Case.

Channel catfish are found throughout LFC. They are plentiful but often overlooked by most anglers. LFC catfish are slow growing and long lived. Catfish in the angler harvest during 2014 averaged nearly 15 inches long (7 or 8 years old) while average length in gill net samples was over 16 inches. Shore fishing with live, cut, or stink bait is an effective method to catch catfish, especially in the summer. Fishing in the backs of large bays and on mud-flats with a variety of baits such as night crawlers, minnows, and commercially prepared baits has proven successful. Most channel catfish caught on Lake Francis Case are incidental catches by walleye anglers. While channel catfish from Lake Francis Case's clean, cool water provide great table fare, less than 1% of anglers fishing LFC in 2014 specifically targeted channel catfish. Estimated harvest of channel catfish in 2014 was 11,784. Anglers willing to change a few tactics and specifically target channel catfish are in for a great fishing trip. Channel catfish are easy to catch and excellent to eat! The chart below illustrates the sizes of channel catfish in the Lake Francis Case population.

Lake Francis Case Channel Catfish 2014



Lake Francis Case Smallmouth Bass



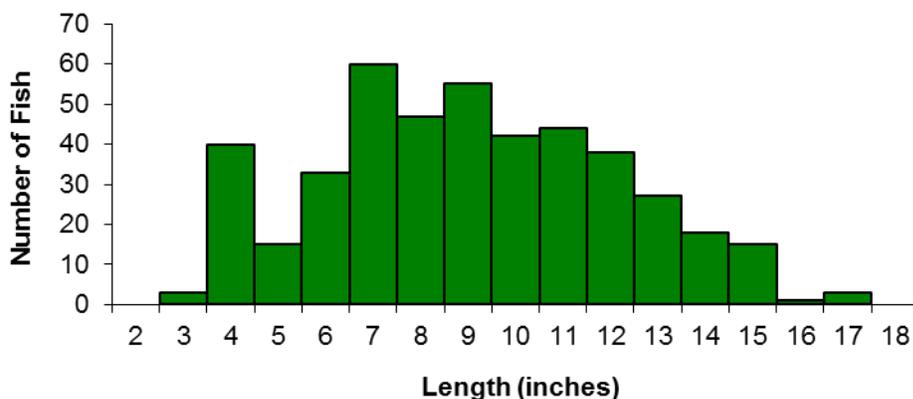
Lake Francis Case Smallmouth Bass Regulations: Daily limit of 5 fish and possession limit of 10. There are no length restrictions for smallmouth bass on Lake Francis Case.

Smallmouth bass are found throughout Lake Francis Case with the best fishing usually found in the middle and lower portions of the reservoir. However, good shore fishing opportunities exist in the upper reservoir in May and June. Boat anglers often focus on rip-rap areas below Big Bend Dam or near Chamberlain; rocky areas and bays around Snake, Platte, and Pease Creeks; numerous bays around the North Point area; and the face of Ft. Randall Dam. During early summer smallmouth bass can also be found on mudflats in and around stumps searching for shad.

1.3 percent of anglers fishing Lake Francis Case during 2014 targeted smallmouth bass. Anglers caught an estimated 40,835 smallmouth bass during 2014, and harvested 12% of those for an estimated harvest of 5,090 smallmouth bass. Smallmouth bass in the angler harvest averaged 13.2 inches in length.

Smallmouth bass spawn in May and early June in Lake Francis Case. Males build nests in shallow water and attract females to the nests. Males will guard nests and newly hatched fry after hatching. After spawning, smallmouth bass will disperse from the shallows and occupy mud flats in search of food during summer months.

Lake Francis Case Smallmouth Bass 2014



Lake Francis Case White Bass

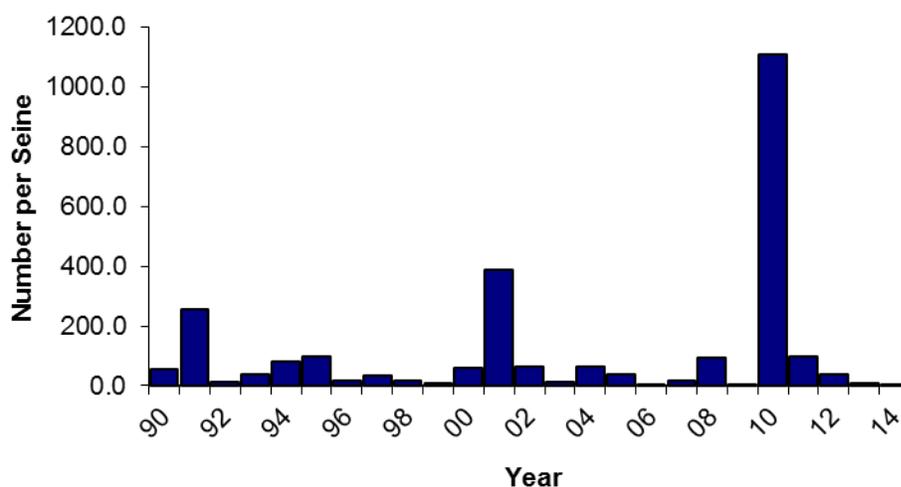


Lake Francis Case White Bass Regulations: Daily limit of 25 and possession limit of 50. There are no size restrictions for white bass on Lake Francis Case.

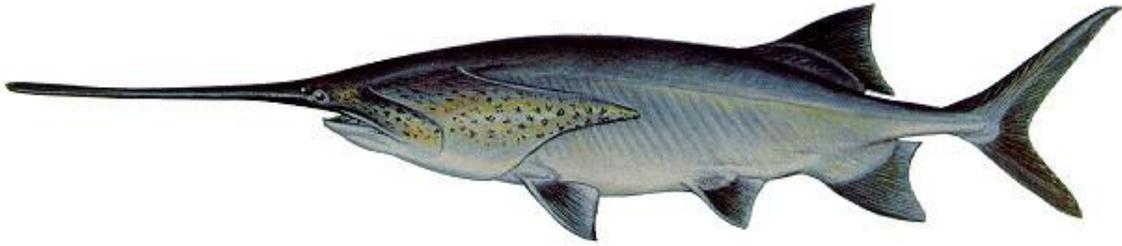
White Bass: Often called stripers or silver bass, white bass are common throughout the reservoir. Fishing for white bass in the upper third of the reservoir in May and June has proven productive. Anglers often target the tailrace area for white bass, but don't overlook wind-blown shorelines. White bass feed effectively by working together to trap schools of prey fish against underwater structure (typically the shoreline) or the water's surface. During calm evenings, schools of white bass can often be seen chasing baitfish on the water's surface. Excellent white bass production in 2010 and good production in 2011 should provide great angling opportunities for the next several years. The extremely large 2010 white bass year-class will be common in angler catches during 2015. White bass production during 2013 and 2014 was poor.

Less than 1% of Lake Francis Case anglers target white bass. Most white bass harvest occurs as incidental catches by walleye anglers. Estimated harvest of white bass in 2014 was 16,720, which was 39% of the over-all catch (42,608). White bass are excellent to eat if served fresh with the red meat trimmed from the fillets.

Lake Francis Case Age-0 White Bass



Lake Francis Case Paddlefish



Paddlefish stocking in Lake Francis Case occurred sporadically from the early 1970's through the early 1990's. Beginning in the early 1990's this stocking became an annual occurrence. As a result, paddlefish numbers in Lake Francis Case increased over the past 20 plus years indicating good survival of stocked fish. Evidence of natural paddlefish production has not been documented on Lake Francis Case in recent history. Research conducted jointly by Game, Fish and Parks and South Dakota State University modeled the potential impacts of sport harvest on the Lake Francis Case paddlefish population and aided in bringing paddlefish snagging back to the reservoir. In May of 2012 the first snagging season since 1988 occurred on Lake Francis Case. The spring snagging season is open to South Dakota residents. Snagging permits were issued by lottery drawing, similar to how South Dakota's deer or elk tags are distributed. Game, Fish and Parks issues 350 resident-only permits.

Season Dates: May 1-31

Snagging Hours: 6 A.M. - 9 P.M. central time daily

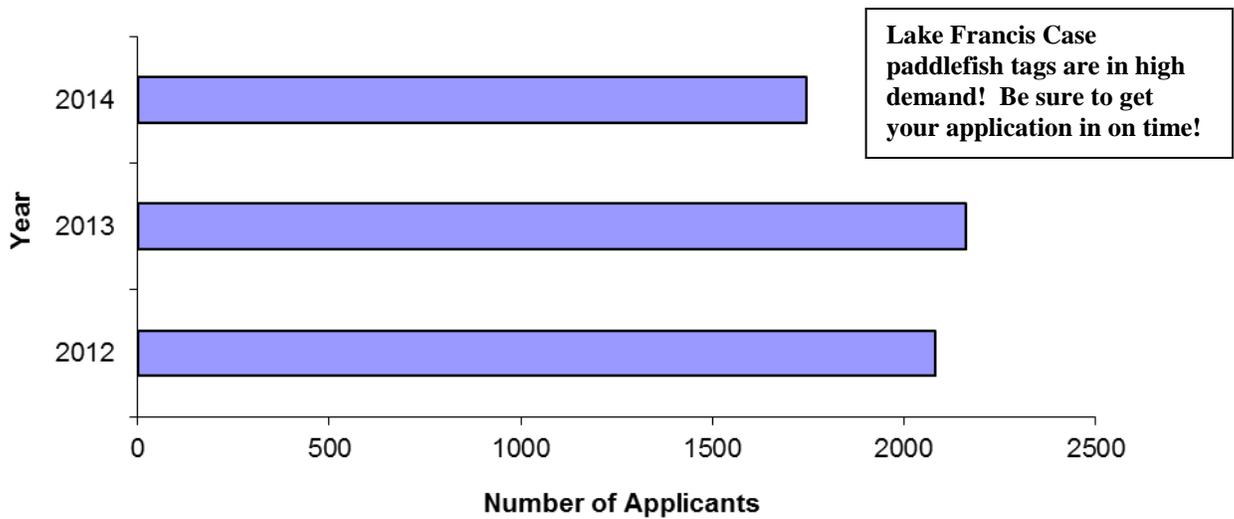
Limit: Daily and Possession - equal to the number of tags issued (maximum of 2)

Open Area: Lake Francis Case and White River east of the Highway 47 bridge. Exception: No paddlefish snagging from the face of Big Bend Dam downstream to the chain link Fence approximately 0.2 miles from face of dam.

Application Deadline: mid-February

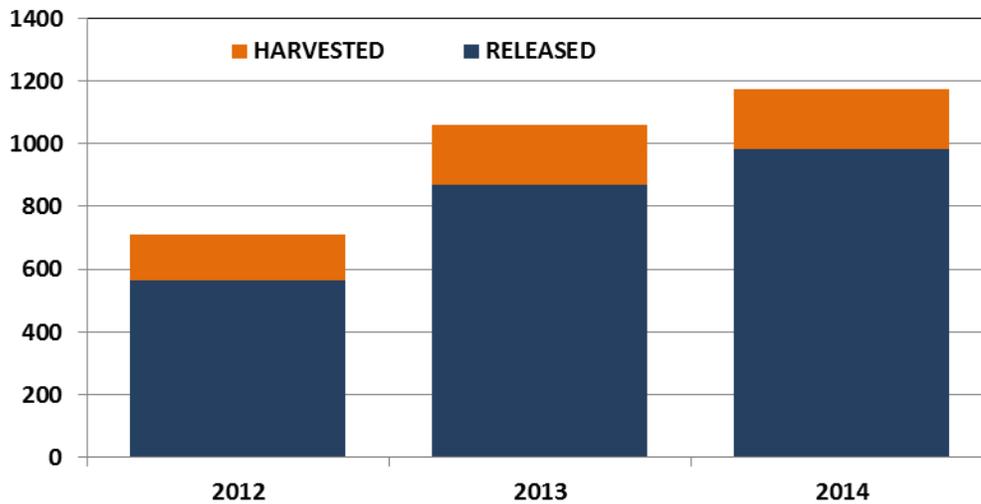
Apply online at www.gfp.sd.gov





Anglers spent an estimated 2,862 hours snagging for paddlefish on Lake Francis Case during the 2014 31 day season. That's an average of over 92 hours per day! A majority of angling occurs in the Big Bend Dam tailwater and near the mouth of the White River. Anglers harvested an estimated 195 paddlefish in 2014. Nearly 67% of anglers that snagged harvested a fish while 17% of tag holders indicated they did not snag for paddlefish in 2014. The average 2014 catch rate for Lake Francis Case paddlefish anglers is 0.4 paddlefish/hour. This means it takes an angler on average about 2.5 hours to snag a paddlefish. Anglers reported releasing over 980 paddlefish during the 2014 season. Harvested paddlefish from Lake Francis Case average just over 51 pounds during 2014. Female and male paddlefish in the angler harvest averaged 59 and 40 pounds respectively.

Lake Francis Case Paddlefish 2012-2014



Firm white flesh from paddlefish provides great table fare and can be prepared in many different ways. Many anglers coat the flesh with their favorite breading and fry it like they would any other fish. Try boiling the meat in lemon-lime soda and dipping it in melted butter for a tasty treat! Broiled or grilled paddlefish lightly seasoned and coupled with the dip of your choice will please anyone's palate. Any way you prepare it, paddlefish is delicious!

Future plans call for paddlefish stocking in Lake Francis Case to continue. The Lake Francis Case snagging season will continue as well. Paddlefish are a long lived species and angler harvest can have profound effects on a population. Over the next few years, Game, Fish and Parks biologists will monitor the effects of harvest on the Lake Francis Case population. A slow, conservative approach will ensure continuation of this unique opportunity.



New state record paddlefish caught May 7, 2014 in Lake Francis Case by angler Bill Harmon. The fish tipped the scales at 127 pounds 10 ounces.