



Bass & Crappie



in Brownlee Reservoir



BROWNLEE



Idaho Power's Hells Canyon Complex was built to provide clean, renewable electricity, but the project also is operated with respect for multiple uses, including flood control, recreation, downstream salmon spawning and navigation for jet boaters and rafters. Idaho Power owns and maintains four parks in the canyon. Learn more at idahopower.com/recreation.

OXBOW



HELLS CANYON



The Hells Canyon Complex has been a popular spot for anglers for more than four decades. Abundant bass, crappie and other species draw fishermen from all over to try their tackle in Brownlee, Oxbow and Hells Canyon reservoirs.



Black Crappie

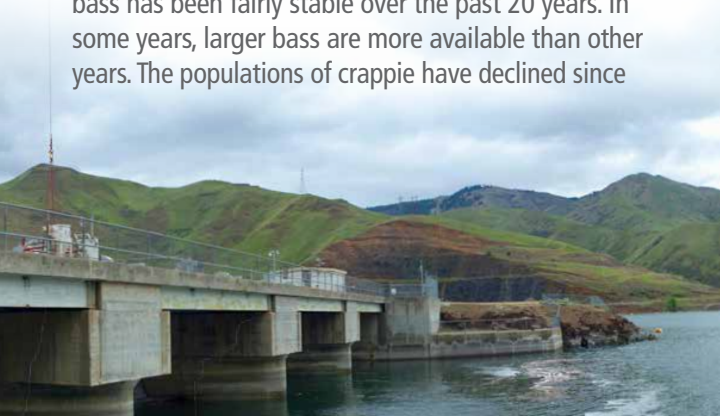
Idaho Power has monitored the fish in these reservoirs since 1991. Most of the fish are non-native, warm-water game fish. In addition to crappie and smallmouth bass, the reservoirs are home to largemouth bass, catfish, bluegill and trout.

Anglers often ask about the impact that elevation changes in Brownlee Reservoir in particular have on the population of game fish. The water level in Brownlee can vary significantly based on a number of factors, including the amount of water coming in from upstream, water being used for power generation, a spring drawdown required by the U.S. Army Corps of Engineers for flood control, and summer drawdown required for Idaho Power's fall Chinook flow program.

Idaho Power research shows that the spring drawdown, which typically ends by April 15, does not affect the overall spawning success of smallmouth bass or crappie. Most spawning for these fish happens after April 15, when the reservoir is refilling.

Population

Based on our tracking, the population of smallmouth bass has been fairly stable over the past 20 years. In some years, larger bass are more available than other years. The populations of crappie have declined since



their abundance in the early 1990s. Their numbers tend to be cyclic. Population swings are typical of crappie populations throughout the U.S. Crappie are resilient and, given the right conditions, can increase in numbers very quickly.

Ideal spawning conditions in Brownlee Reservoir may require a prolonged regional drought. In years with anticipated high runoff based on snow pack, large late-winter and spring drawdowns are often required in Brownlee Reservoir for downstream flood control. This drawdown, especially if combined with high Snake River inflows to Brownlee Reservoir, can affect the number of crappie available to anglers and available to spawn. During periods of prolonged drought, the reservoir level is not lowered as much and generally receives lower flows which helps retain them in the reservoir.

Spawning

During the 1990s, Idaho

Power researched

smallmouth bass and crappie spawning in the Hells Canyon Complex, including when, where and at what depth they spawn. Some smallmouth bass nested when water temperatures were as low as 55°F, but most nesting happened when water temperatures reached 59°F. The first smallmouth bass nests observed in any given year ranged from April 29 to May 27. Idaho Power observed smallmouth bass nesting usually peaked between May 22 and June 4. Nests were observed at depths from 2 to 6 feet. The length of the nesting varied based on water temperature from four to seven days before fry



Smallmouth Bass



started to leave the nest, with shorter lengths as water temperature increased. During these two weeks, water levels in Brownlee Reservoir are generally increasing or stable.

Black and white crappie nested when water temperatures were as low as 54°F. Most nesting took place after water temperatures reached 59°F. The first nests were observed as early as April 20 and as late as May 28. The peak in crappie nesting typically occurs between June 9 and July 2. Nesting depth of crappie ranged from 5 to 36 feet. Unlike smallmouth bass, crappie nesting takes an average of four days before fry leave the nest, and one crappie may nest several times during a spawning season.

Other Measures

Idaho Power has guidelines to protect the peak spawning of bass and crappie. A target Brownlee elevation of at least 2,069 feet by May 20 is set based on spawn timing. At a water level of 2,077 feet, the reservoir is considered "full." On May 20, a 30-day period begins during which Brownlee Reservoir is not lowered more than one foot from the highest elevation reached on that date. (Exceptions may be made for system and economic emergencies.) At the end of the 30-day period, and until July 4, the reservoir can be lowered more than one foot, but not below 2,069 feet.



White Crappie





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