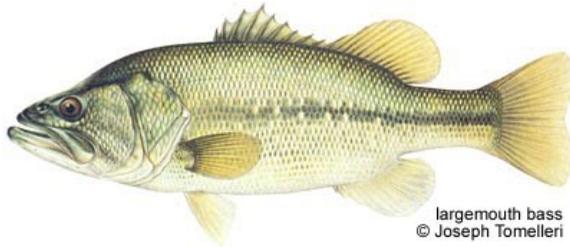


# Mississippi River Fisheries 2009-2010



This guide provides information on the status of fish populations in the Mississippi River. It is intended to help anglers better understand fish population cycles and habitat conditions and how they affect fishing success. This guide is updated every other year.

Information for the guide comes from many years of fish population sampling by the MN DNR. Sampling is conducted annually using electrofishing gear, gill nets, fyke nets, trawls and seines, each targeting certain sizes and species of fish. Sampling has been conducted annually in Pool 4 for 44 years! This information is essential to understanding and managing the Mississippi River fishery. For more information contact the MN DNR in Lake City at 651-345-3365 .

## HABITAT

Healthy fish and wildlife populations are dependent on a mix of healthy habitats. Marsh/wetland, backwater, side-channel, main channel and sandbar/island habitats define a healthy river. A healthy Mississippi River is a result of fluctuations in water levels and flows due to flooding and drought. Flooding erodes sediments, scours new channels, cuts off old ones creating new backwaters, deposits new sediments and transfers nutrients. Drought conditions concentrate flows and expose sediments that allow many different kinds of plants to grow. This dynamic process maintains a healthy mix of habitat types critical in sustaining healthy fish and wildlife populations.

## EXOTIC SPECIES

Exotic species are plants or animals that are not native to a specific area. Some exotic species are considered non-invasive, which means they cannot persist in an area. An example of this is the recent discovery of several Pacus in the Mississippi River. Although this sort of an introduction is still a problem, these tropical fish cannot persist in the river because of their temperature requirements. The more dangerous types of exotic species are invasive species. These species invade an area and compete with native species for resources. Some of the invasive species in the river include zebra mussels, Eurasian watermilfoil, and Asian carp. Although only eight Asian carp have been found in the Minnesota portion of the river, they have become very common further downstream, and have been found in larger numbers as far north as southern Iowa. These fish are found in extremely high numbers in portions of the Mississippi and Illinois Rivers and feed primarily on zooplankton, a food common to all newly hatched gamefish. Unfortunately they prefer cold water temperatures, so their invasion into Minnesota is very likely. How the invasion of Asian carp will affect gamefish abundance and growth is unknown at this point. Anglers can help slow the spread of exotic species by emptying their livewells and checking their boats before leaving the river.

## WATER LEVEL MANAGEMENT

Water level management is becoming a more widely accepted option to restore some of the floodplain processes critical in sustaining habitats that support fish and wildlife populations. Water level reductions expose sediments that have been under water for over sixty years, allowing seeds to germinate and plants to grow. Pool 8 water levels were lowered by 1 – 1.5 feet in 2001 and 2002 with good results. With a 1.5 foot drawdown in 2002, about 2000 acres of shallow water habitat was exposed that resulted in increased plant growth in these areas. Water level reductions were also conducted in Pool 5 in 2005 and 2006 with similar results. When water levels are raised to normal operating levels, these recently vegetated areas not only provide immediate fish and wildlife habitat, but continue to persist, providing excellent seasonal fish and wildlife habitat well into the future.

## STATUS OF FISH POPULATIONS

**Northern Pike** – Populations throughout Pools 3-9 and the Vermillion River Bottoms are currently good to excellent. Spawning conditions and aquatic habitat have been optimal for survival and growth. High numbers of 23-30 inch fish exist, with good numbers of 30-40 inch fish also available.

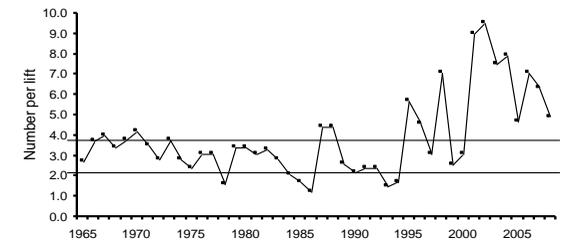
**Panfish** – Yellow perch populations are relatively good throughout Pools 4 – 9. Strong year classes of perch have been produced in each of the last four years and good numbers of 7-12 fish are available. Bluegill numbers are down slightly from historic highs in the past few years, but because of excellent aquatic habitat conditions, good numbers of 5 - 8 inch bluegill are still available. Crappies have had a bit more variable recruitment and the best populations occur in Lake Pepin and Pool 4, where good numbers of 9-12 inch crappies are available.

**Largemouth bass** – Relatively consistent recruitment in each of the past five years has produced a fishery consisting of good numbers of 10-16 inch bass with an occasional fish 18 inches and larger. A strong year class was produced in 2008 and should provide good fishing for years to come. Good numbers of largemouth bass continue to exist in Lake Pepin.

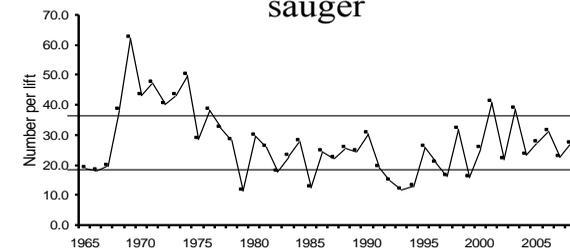
**Smallmouth bass** – Populations of smallmouth bass are good throughout pools 4 – 8, but somewhat down from population highs during the late 1990's and early 2000's. All sizes, up to 20 inches, are available.

**Walleye/Sauger** – Walleye and sauger populations are good to excellent throughout all pools, especially in Pool 4 (Lake Pepin). The strong 2001 year class, while still providing a few trophy fish, is disappearing rapidly due to natural mortality. However, relatively consistent recruitment and strong 2007 and 2009 year classes continue to maintain a healthy population of both walleye and sauger throughout Pools 3-9. The graphs on the following page show natural fluctuations in walleye and sauger populations from 1965 to 2008. Numbers on the left side of the graph are average number/gillnet, and provide an index of relative abundance.

### walleye



### sauger



**White bass** – Populations are generally good throughout most pools, but highest in Lake Pepin and Pool 4, with average numbers of 10 -15 inch fish available.

**Catfish** – Populations of channel and flathead catfish are in good shape throughout pools 3 - 9 with good numbers of all ages and sizes present.

**Non-Game Fish** – Carp, buffalo, redhorse, carpsucker and freshwater drum populations are healthy and stable. MN commercial harvest in 2009 was 1.15 million pounds, which was about 400,000 pounds above the 10-year mean.

The report card (to the right) rates fish populations based on recent sampling information. The symbols used for 2010 signify increasing, decreasing or stable trends in populations for each species shown.

The table below gives average lengths (in inches) of popular gamefish at a given age in the spring. Studies have shown that few bluegill survive beyond age 5 or 6 in the Mississippi River, so it's not surprising that 9-10 inch bluegill are relatively rare. Exceptions occur when growth rates exceed the norm, such as during the period 1994-1998, when the average size of age 4 bluegill (in fall 1998) was about 8.5 inches, compared to the norm of 7.5 inches. Likewise, few walleye and sauger survive beyond age 9 or 10, consequently, 28 inch walleye and 21 inch sauger are relatively rare.

## MISSISSIPPI RIVER REPORT CARD

**2009 Ratings: Exc=Excellent, Good, Fair, Poor**

**Prognosis for 2010: + increasing - decreasing = stable**

AGE	Bluegill	Black crappie	Smallmouth bass	Largemouth bass
1	2.0	3.0	3.0	3.5
2	4.5	6.0	7.0	8.0
3	6.5	8.5	10.5	11.5
4	7.5	10.5	12.0	13.5
5	8.5	12.0	14.0	15.5
6	9.0+	13.0	16.0	17.5
7		14.0+	17.0	18.0+
8			18.0+	
AGE	Sauger	Walleye	White bass	Northern pike
1	6.0	7.0	5.0	11.5
2	10.0	12.0	9.0	18.0
3	13.0	16.0	11.0	22.5
4	15.0	18.0	12.5	27.0
5	16.0	20.0	14.0	30.0
6	17.5	22.0	15.0	33.0
7	18.5	23.5	15.5	35.0
8	19.5	24.0	16.0	37.0
9	20.0	25.0	16.5	39.0+
10	20.0+	27.0+	16.0+	

LOCATION	YEAR	FISH POPULATIONS									2009 BACKWATER HABITAT CONDITIONS
		Northern pike	Bluegill	Black crappie	Smallmouth bass	Largemouth bass	Sauger	Walleye	White bass	Catfish	
Vermillion R. Bottoms	2009	Good	Poor	Fair	Poor	Fair	Fair	Good	Poor	Fair	Poor
	2010	=	=	=	=	+	=	=	=	=	
Pool 3	2009	Good	Fair	Fair	Fair	Fair	Fair	Good	Fair	Good	Fair
	2010	=	+	+	=	+	=	+	+	=	
Pool 4 (Lake Pepin)	2009	Exc	Good	Good	Exc	Good	Exc	Exc	Good	Exc	Exc
	2010	=	=	+	=	+	+	+	=	=	
Pool 5	2009	Exc	Good	Good	Exc	Exc	Good	Good	Fair	Good	Exc
	2010	+	-	-	=	=	=	=	=	=	
Pool 5A	2009	Exc	Exc	Good	Good	Exc	Good	Good	Fair	Good	Exc
	2010	+	-	=	=	=	=	=	=	=	
Pool 6	2009	Good	Good	Good	Good	Good	Good	Good	Fair	Good	Exc
	2010	+	-	=	=	+	+	+	=	=	
Pool 7	2009	Exc	Exc	Good	Exc	Exc	Good	Good	Fair	Good	Exc
	2010	=	-	=	=	=	=	+	=	=	
Pool 8	2009	Exc	Exc	Good	Good	Exc	Good	Good	Good	Exc	Exc
	2010	=	-	=	=	=	=	+	=	=	
Upper Pool 9	2009	Exc	Good	Good	Fair	Good	Good	Good	Good	Exc	Good
	2010	+	-	=	=	-	+	+	=	=	

