

Fishery Disaster Due to the Opening of the Bonnet Carré Spillway

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Introduction

February 27, 2019, marked the fourth time in the last eight years that the Bonnet Carré Spillway was opened by the United States Army Corps of Engineers (USACE) for the purpose of relieving pressure from the Mississippi River waterway system. The spillway closed in April, but reopened in May which marked the first time that it ever needed to be opened twice in one year.¹ Previous documentation has shown that dumping all of this fresh water from the spillway hurts the Mississippi Sound, damaging the environment and the marine life within the Sound. Populations of oysters, crab, shrimp, and finfish will be and have been negatively affected by the opening of the Bonnet Carré, to the point where there is a current 33% cumulative loss in commercial shrimp landings, and the expected oyster landings are zero for the 2019 year.² This prompted Mississippi Governor Phil Bryant to request a determination of a federal fisheries disaster under the Magnuson-Stevens Fishery Conservation and Management Act (MSA).² An in-depth look at how the Bonnet Carré operates, coupled with analyzing Governor Bryant's request, will reveal what is being disturbed in these ecosystems and what federal relief is available to Mississippi.

The Opening of the Bonnet Carré Spillway

According to the USACE, the Bonnet Carré Spillway was opened in February to keep the volume of the Mississippi River flows at New Orleans from exceeding 1.25 million cubic feet per second. While the spillway is in operation, according to the USACE, “materials suspended in the Mississippi River’s water are deposited in the floodways and Lake Pontchartrain and Lake Borgne... the vast input of fresh water into these brackish and saline lakes has an immediate, short-term, adverse environmental impact.”³ The February 2019 opening was seen as a short-term opening, but heavy rains prompted a second opening of the spillway on May 10, 2019. The spillway was closed on July 27, 2019, and the 123-day total openings marks an unprecedented period in the history of the spillway’s operation.

Although the USACE admits that there are adverse effects of opening the spillway, it expects long-range benefits to outweigh the initial shortcomings. As the USACE explains,

the long-range effect “is extremely favorable because it stimulates the natural flooding cycle of the river and provides a replenishment of valuable nutrients to the ecosystem.”⁴ Accordingly, the USACE says there have been long-term increased oyster, crab and other fisheries production associated with the opening of the spillway. However beneficial these long-term effects will be, it still does not deal with the issue of the initial impacts from the opening of the Bonnet Carré Spillway.

The initial shortcomings of opening the spillway will drive down commercial and recreational fishing landings, but besides the damage that will occur to the fishery businesses, the opening of the spillway allows for nutrient loading that has other harmful effects. The opening of the spillway caused trillions of gallons of freshwater to be dumped into the Mississippi Sound, and in those trillions of gallons are a lot of fertilizer and nutrients. This influx of nutrients combined with the changed salinity of the Sound caused bacteria in the water to bloom; when the blooms reach toxic levels, they are called harmful algal blooms, and they produce fatal toxins for both humans and animals which severely impacts the surrounding environment.⁵ These algal blooms highlight the negative impacts that the opening of the spillway causes in areas that do not necessarily pertain directly to fishing. Looking at past and current economic hardships that the opening of this spillway imposed will highlight why Governor Bryant requested federal aid and help explain why this aid was eventually granted.

Request for Relief

Governor Bryant formally sought federal assistance from the Secretary of the Department of Commerce under the MSA on May 31, 2019, seeking a “federal fisheries disaster declaration.” Two different parts of the MSA apply to fishery disasters. The first applies to “commercial fishery failure due to a fishery resource disaster as a result of ... man-made causes beyond the control of fishery managers to mitigate.”⁶ This is frequently referred to as a fishery resource disaster. The MSA also provides for federal assistance in the case of a “catastrophic regional fishery disaster,” which is

defined as a “natural disaster ... or a regulatory closure,” or could be made once a fishery resource disaster is determined.⁷ The Governor does not specify the relief sought.

The Governor began his request for relief by stating that the Bonnet Carré Spillway opening will have severe economic and environmental impacts. He stated that the State of Mississippi is having the most issues with oysters, but that the negative impacts span across a range of different species including shrimp, crabs and finfish. The Governor stated that, at the time he submitted his declaration request, the mortality rate of oysters was 70%, crab landings were estimated at a 35% loss, and that the opening of the 2019 shrimp season had to be pushed back due to the opening of the spillway. Due to these impacts, the Governor requested a federal fisheries disaster determination to “assist in obtaining financial assistance for all negatively impacted ecosystems, fisherman and related businesses in a timely manner.”

Since Governor Bryant made his request, studies have shown that the numbers he used were low, which illustrates the severe impact that is negatively affecting Mississippi’s economy. Following the closure of the spillway, Dr. Benedict C. Posadas, in his work for the Mississippi-Alabama Sea Grant Consortium, examined the economic impact to Mississippi’s commercial shrimp and oyster fisheries from the opening of the Bonnet Carré Spillway, and the numbers are worse than the ones used by Governor Bryant. While the Governor indicated that the oyster mortality rate was 70%, “recent state sampling results indicated that almost all the oyster resources were totally devastated (~100% mortality).”⁸ This means that the expected landings of oysters in 2019 will be zero, and in 2020, according to Dr. Posadas, landings will be “insignificant if not zero without immediate management intervention.”

A look at past economic data for the state can indicate just how much of Mississippi’s fisheries have been impacted. In 2015, the entire blue crab and oyster fishery industry created a total of \$35 million in economic contribution to the State of Mississippi, and in 2009, when separate data for this industry was available, the oyster industry created more than 350 jobs and \$13 million in economic contribution.⁹ To add further insult to injury, those are just the numbers for the commercial oyster fisheries. Preliminary state reports indicate that in May commercial shrimp landings declined 19%, with June seeing a 58% decline, and July seeing a 60% decline.¹⁰ Data for subsequent months were not available. The shrimp industry as a whole

contributed \$215 million to the Mississippi economy in 2015, to go along with 4,200 jobs added to the state.¹¹

This is not the first instance in which a federal fisheries disaster determination has been requested following the opening¹² of the Bonnet Carré Spillway, as one was sought following the 2011 spillway opening. The opening of the Bonnet Carré Spillway in 2011 resulted in 85% oyster mortalities and the halting of the recovery process to its baseline levels in 2002-2004.¹³ This severe setback caused Mississippi to request a federal fishery disaster determination under the MSA, which was granted in September 2012. Under three different models used by Dr. Posadas to assess direct economic losses for the 2011 spillway opening, the lowest direct loss attributed to the Mississippi commercial oyster landings was \$6 million, with the highest going up to \$46 million.¹⁴

Statutory Relief

As described above, the MSA provides regional fishery disaster assistance. A governor of an affected state can take the first step in getting federal assistance for a fishery disaster under either a “fishery resource disaster” or a “catastrophic regional fishery disaster.” The relief could extend to different parties depending on the statutory basis for the determination. A copy of the Secretary of Commerce’s determination was not available as of this writing. However, the website from the Department of Commerce indicates the Secretary made the determination under both Section 312(a), which is the fishery resource disaster, and Section 315, which is the catastrophic regional fishery disaster.¹⁵

Upon a determination by the Secretary that a fishery resource disaster exists, “the Secretary is authorized to make sums available to be used by the affected State, fishing community, or by the Secretary in cooperation with the affected State or fishing community for assessing the economic and social effects of the commercial fishery failure.”¹⁶ This part of the statute prescribes that the Secretary may make a finding of a commercial fishery disaster, and to make funds available to “restore the fishery or prevent a similar failure and to assist a fishing community affected by such a failure.” Once a determination has been made that there is a fishery disaster, the relief may be handed out and used by certain fishing communities, or by the affected state.

Mississippi’s May 31 request was followed by Louisiana on June 13, 2019, and Alabama on July 10, 2019.

On September 25, 2019, in a press release, Secretary Wilbur Ross announced a finding of a catastrophic regional fishery disaster in Louisiana, Alabama, and Mississippi due to extreme flooding events in the Gulf of Mexico caused by the opening of the Bonnet Carré Spillway.¹⁷

Following a determination that a fishery disaster exists, funds for relief must be authorized by Congress, and then allocated to the selected parties. According to the press release from the Department of Commerce, Congress set aside \$165 million for such assistance.¹⁸ How the \$165 million will be disbursed has not yet been stated, but the aid has been granted and help is on the way for the declared fishery disaster areas. 🐟

Endnotes

- Jan Wesner Childs, *After Historic Run, Officials Begin Closing Bonnet Carré Spillway*, The Weather Channel (Jul. 23, 2019).
- Benedict Posadas, *Direct Losses to Mississippi Shrimp Fishery in 2019*, Horticulture and Marine Economics Blog (Sep. 17, 2019); and Benedict Posadas, *Bonnet Carré Spillway: Impacts on Mississippi's Commercial Oyster Fishery*, MASGC (Sep. 05, 2019), respectively.
- Letter from Governor Phil Bryant, Mississippi, to Secretary of Commerce Wilbur Ross (May 31, 2019).
- U.S. Army Corps of Engineers, *Spillway Operation Information*.
- U.S. Army Corps of Engineers, *Spillway Operation Information*.
- Eric Jeansonne, *What Exactly Is a Harmful Algal Bloom and What are Its Impacts?*, WLOX (Jun. 30, 2019).
- 16 U.S.C. § 1861(a). This can also be referred to as Section 312(a), based on its original public law source.
- 16 U.S.C. § 1864. This can also be referred to as Section 315, based on its original public law source.
- Benedict C. Posadas, *Bonnet Carré Spillway: Impacts on Mississippi's Commercial Oyster Fishery*, MASGC (Sep. 05, 2019).
- Benedict C. Posadas, *Bonnet Carré Spillway: Impacts on Mississippi's Commercial Oyster Fishery*, MASGC (Sep. 05, 2019).
- Benedict C. Posadas, *Bonnet Carré Spillway: Impacts on Mississippi's Commercial Shrimp Fishery*, MASGC (Aug. 22, 2019).
- Benedict C. Posadas, *Bonnet Carré Spillway: Impacts on Mississippi's Commercial Shrimp Fishery*, MASGC (Aug. 22, 2019).
- Benedict C. Posadas and Benedict Kit A. Posadas Jr., *Economic Impacts of the Opening of the Bonnet Carré Spillway to the Mississippi Oyster Fishery*, Food Distribution Research Society (Mar. 2017).
- Benedict C. Posadas and Benedict Kit A. Posadas Jr., *Economic Impacts of the Opening of the Bonnet Carré Spillway to the Mississippi Oyster Fishery*, Food Distribution Research Society (Mar. 2017).
- Benedict C. Posadas and Benedict Kit A. Posadas Jr., *Economic Impacts of the Opening of the Bonnet Carré Spillway to the Mississippi Oyster Fishery*, Food Distribution Research Society (Mar. 2017).
- See NOAA, *Fishery Disaster Determinations #89*.
- 16 U.S.C. § 1861(a)(2).
- Press Release, *Secretary of Commerce Approves Disaster Declarations for American Fishing Communities*, U.S. Department of Commerce (Sep. 25, 2019).
- Press Release, *Secretary of Commerce Approves Disaster Declarations for American Fishing Communities*, U.S. Department of Commerce (Sep. 25, 2019). See Pub. L. No. 116-20, tit. II, Pub. L. No. 116-6, 133 Stat. 97 for the laws authorizing the funding. Personal conversation of the author with Department of Commerce, Office of Public Affairs (Oct. 25, 2019).

IN SUM.

A Summation of the Facts and Figures of Interest in this Edition

★	Number of days Bonnet Carré Spillway was open 2016 – 2018:	46
★	Number of days the Spillway was open Feb. thru July 2019:	123
★	Estimated decrease in July commercial wild shrimp in Mississippi:	60%
★	Estimated decrease in oysters in Mississippi:	100%
★	Amount of federal fishery disaster assistance for AL, LA, and MS:	\$165 million