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RICK PERRY
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OS EXECUTIVE SECRETARIAT

March 26, 2012

The Honorable John E. Bryson
Secretary
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, D.C. 20230

Dear Secretary Bryson:

Pursuant to the provisions of Section 312(a) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended, and Sections 308(b) and 308(d) of the Interjurisdictional Fisheries Act (IFA), enclosed you will find a report detailing the effects of the oyster fishery closure due to the red tide along the Texas coast. This information is required by the National Marine Fisheries Service to assess whether this event qualifies for disaster assistance.

Fisheries are an important component of coastal economies, providing jobs for fishermen, fish processors and related maritime support industries. The closure of the commercial oyster fishery due to red tide is the longest recorded in Texas. Estimated ex-vessel losses to commercial oyster fishermen during this period are in excess of $8 million, representing more than $15 million in losses to these local economies and the state; however, these numbers do not take into account post-harvest processing losses incurred by local shellfish dealers. It is estimated this closure is directly affecting more than 1,800 families along the Texas coast.

Thank you for your consideration of this request for a federal disaster declaration and assistance. If you have any questions, please feel free to contact Robin Riechers, Director of Coastal Fisheries, within the Texas Parks and Wildlife Department, at (512) 389-4636 or by e-mail at robin.riechers@tpwd.state.tx.us.

Sincerely,

Rick Perry

Rick Perry
Governor

RP:trp

Enclosure

cc: Mr. Robin Riechers

2012 Texas Red Tide Disaster Relief Proposal

A. Introduction and Background:

Several species of toxic algae, primarily dinoflagellates, are known to occur in offshore waters of the Gulf of Mexico. Of these, *Karenia brevis* has had the greatest impact in Texas coastal waters. Under normal conditions these algae rarely cause problems to natural resources; however, at times, rapid growth occurs that can lead to "blooms" where *K. brevis* will be the predominant species in the water. It is during these bloom events that impacts to natural resources can occur. *Karenia brevis* cells contain a neurotoxin (brevitoxin) that affects the central nervous system of fish and can result in their death. Filter-feeding shellfish, such as oysters, concentrate brevitoxin in their tissues which can result in Neurotoxic Shellfish Poisoning should a person eat the affected oyster.

Though research is ongoing to determine what triggers these red tide blooms, drought conditions are known to leave Texas' coastal waters susceptible to blooms, as *K. brevis* prefers warm, salty water. The state of Texas is currently undergoing the worst drought in recorded history. The National Climatic Data Center reported a total of 14.88 inches of rain in 2011, the lowest since 1917, and the Palmer Drought Severity Index lists 2011 as the worst drought in Texas since records were first recorded in 1895 (NOAA Climate Data Center 2012). Record high salinities have been observed in Texas bay systems (TPWD data) which have contributed to the expansion of the current red tide bloom. With the ongoing La Niña, state climatologists predict that this ongoing drought is likely to continue for the next several months and could persist through the rest of the year (National Weather Service 2012).

The worst red tide bloom prior to the current (2011-2012) bloom event occurred in 1996-1997 when bay systems from the Colorado River south to the Rio Grande were closed to shellfish harvest. This bloom remained active for 47 days until a significant coastwide rainfall event dropped salinities to a level that killed *K. brevis*. The Texas Department of State Health Services began sampling oyster meats in the closed bays to gauge brevitoxin toxicity in oysters to determine when they dropped to acceptable levels. Lavaca, Carancahua and Tres Palacios bays, which were the least impacted in terms of *K. brevis* densities, were closed for 77 days. This impact lasted 32 days after all signs of *K. brevis* were gone. The bays with the greatest impact (Aransas, Corpus Christi, Mesquite, San Antonio and Espirtu Santo bays) were closed for over 90 days after the bloom disappeared.

The current bloom was first observed September 11, 2011 along the lower Texas coast. The Texas Department of State Health Services issued a shellfish closure on October 5, 2011 for private oyster leases in Galveston Bay. The closure was extended to all bay systems along the Texas coast on November 1, 2011, the beginning of the public oyster season, and a portion of the coast continues to remain closed. This is the first recorded red tide closure that has simultaneously impacted every oyster producing bay in Texas, and is the longest duration event since records have been kept (DSHS data).

The average annual ex-vessel value generated by the Texas oyster industry is $14.3 million (estimates based on average monthly landings and values for the years 2007-2010: range $9.4 million - $19.2 million), with a total economic benefit to the state of Texas from the harvest component of the fishery of over $26 million (Minnesota IMPLAN Group, 2010). Approximately 80% of the ex-vessel value and landings is generated during the public season, November through April.

Although most of the coast has recently reopened, devastating losses have already occurred. The Texas Parks and Wildlife Department estimates that over $8 million in ex-vessel value has been lost due to the red tide closure of Texas bays. The total economic impact of the red tide closure to the state of Texas from the harvest portion of the fishery is over $15 million. This does not take into account the lost values associated with the post-harvest processing of this species (e.g. freezing, shucking, packing, wholesale and retail sales, etc.) by local shellfish dealers.

Primary industry participants directly affected by red tide related closures include commercial fishermen and wholesale shellfish dealers. For Fiscal Year 2011 (FY 2011), which ran from November 2010 to April 2011, there were 607 Resident Commercial Oyster Boat Licenses sold. Considering that a typical crew compliment aboard a Texas commercial oyster boat consists of three individuals, Texas Parks and Wildlife Department estimates that the 2011-2012 red tide closure affected approximately 1,820 commercial oyster fishermen. Additionally, there were 22 Commercial Seafood Dealers who reported handling over 1.6 million sacks of oysters during the FY 2011 public oyster season. These businesses employ varying numbers of individuals depending on whether the facility contains shucking operations along with their other oyster handling operations.

Of the 607 Resident Commercial Oyster Boat Licenses sold during FY 2011, ninety-one percent (91%) can be assigned to one of six coastal Texas counties: Aransas, Calhoun, Chambers, Galveston, Harris and Matagorda. The average per capita income for families in the small communities where the commercial oyster fleet is located is $39,232 (Texas Association of Counties 2012). The detrimental losses that have occurred due to the red tide bloom have had a significant negative impact on these small coastal communities.

Literature Cited

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