U.S. Environmental Protection Agency
Office of Inspector General

14-P-0348
September 3, 2014

At a Glance

Why We Did This Review

We sought to determine steps the U.S. Environmental Protection Agency (EPA) and states in the Mississippi River Watershed are taking to reduce nutrients that contribute to the Gulf of Mexico hypoxic zone.

Hypoxia is the term used to describe an area with low oxygen, which results in conditions adverse to most aquatic life. The hypoxic zone in the Gulf of Mexico forms every summer as a result of excess nutrients that flow from the 31 states and two Canadian provinces of the Mississippi-Atchafalaya River Basin (MARB), and seasonal stratification of gulf waters**.** The 5-year average size of the hypoxic zone is largely unchanged since 1994, at approximately 15,000 square kilometers. According to the United States Geological Survey, agricultural sources contribute more than 70 percent of the nutrients that enter the Gulf of Mexico, and an estimated 11.6 million metric tons of nitrogen are added to the MARB each year.

This report addresses the following EPA goals or cross-agency strategies:

- *Protecting America's waters.*
- *Launching a new era of state, tribal, local and international partnerships.*

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The full report is at: www.epa.gov/oig/reports/2014/20140903-14-P-0348.pdf

Nutrient Pollution: EPA Needs to Work With States to Develop Strategies for Monitoring the Impact of State Activities on the Gulf of Mexico Hypoxic Zone

What We Found

The EPA is working to reduce the size of the Gulf of Mexico hypoxic zone principally by encouraging states to develop and implement nutrient reduction strategies. This approach has some promising aspects that may result in positive effects to local waterways. States have developed partnerships and have identified priority watersheds.

The EPA lacks necessary data to determine the impact of state nutrient reduction strategies on the Gulf of Mexico hypoxic zone.

At the time of our review in early 2014, most of the MARB states had not completed nutrient reduction strategies. In addition, few of the states in our sample had committed to specific reduction targets or timelines. Some states have expressed concern over their limited ability to monitor water quality and measure the progress of the strategies. Without this information, the EPA will be unable to determine the level of progress toward achieving basin-wide pollution reduction goals.

Recommendation and Planned Agency Corrective Actions

We recommend that the Assistant Administrator for Water work with state and federal Task Force members in the Mississippi River Watershed to develop and enhance monitoring and assessment systems that will track the environmental results of state nutrient reduction activities, including their contribution to reducing the size of the Gulf of Mexico hypoxic zone.

The Office of Water agreed with our recommendation and presented acceptable corrective actions that address it. This recommendation is resolved based on the EPA's response and a subsequent meeting to discuss the Office of Water comments.