Hypoxia in the Gulf of Mexico has received national attention because of its potential to cause large-scale ecological and economic impacts. Hypoxia is an area of depleted oxygen (<2 parts per million) that forms in the Gulf of Mexico each summer as a result of excess nutrients (primarily nitrogen and phosphorus) carried by the Mississippi River and seasonal stratification (layering) of Gulf waters. The size of the Gulf hypoxic zone off the Louisiana and Texas coasts average more than 5,000 square miles each year, or about the size of Connecticut. Action plans for mitigating Gulf hypoxia call for states, tribes and federal agencies within the Mississippi River basin to develop viable strategies for nutrient reduction, including identifying opportunities to restore floodplain wetlands.

Additional reforestation in the project area will help facilitate the role of the nation's largest bottomland forest floodplain ecosystem as the "final filter" of the 1.25-million-square-mile Mississippi River watershed. According to the NRCS (August 2013), each acre of Lower Mississippi River region's cropland converted to forest, on average, reduces the annual loss of 84 pounds of nitrogen and phosphorus. Land put in long-term conserving cover (e.g. forest) nearly eliminated soil erosion and sediment loss. Sediment loads delivered to rivers and streams in the Lower Mississippi River Valley average 1.15 tons per acre per year. The input of agricultural pesticides will be eliminated on reforested land.

A 2013 modeling study by scientists at U.S. Forest Service's Center for Bottomland Hardwoods Research concluded that "converting agricultural lands close to streams into forests would greatly lessen water outflow and reduce the effects of sediment load as far as the Gulf of Mexico."