EcoSOAR™

Case Study: Deepwater Horizon Oil Spill

On April 20, 2010, an offshore drilling rig, the Deepwater Horizon, suffered an explosion and massive oil spill, resulting in widespread oil pollution and shoreline damage in the Gulf of Mexico. A year later the KRIA Ionizer system was installed at a private home on a bayou in Orange Beach, AL at the request of the resident and the City's outside testing lab. The bayou is bordered by residences, boat docks, a resort, and different tourist spots.

Prior to starting the system, there were visible oil plumes and bubbles in the water and little or no observed aquatic life. The test lab reported the hydrocarbon concentrations in the water were at and above 10 parts per million with dissolved oxygen (DO) levels at 5.0-7.0 mg/L. The off-the-shelf system was easily installed at the shoreline by connecting to the resident's 220V electrical power supply then simply connecting the suction and return hoses to the unit. For this site, the unit was also easily modified with large air filters to increase the oxygen supply to the water. After only a few days of the KRIA Ionizer operation, DO levels were observed greater than 11 mg/L and hydrocarbon concentrations were reducing by testing lab report.

After one month of operation, DO levels were consistently maintained between 11-17 mg/L; double the levels prior to installation! The area of visibly improved water quality had expanded to approximately 5,000 feet radially. A local resident observed abundant minnows, small fish, and crabs as well as the reappearance of dolphins to the shore area. The resident began a journal documenting daily improvement of water quality and the return of biota and wildlife. She affirms that the KRIA Ionizer has had a significant positive effect for this important shoreline habitat. Based on the findings at Orange Beach, the standard size unit is expected to achieve DO levels of 15-20 mg/L at a one-half mile radius from the unit in a water body up to 100 feet deep.