

# Development of nutrient sensor

The objective of the project is to design a sensor to probe nutrient pollution, primarily nitrogen and phosphorus, in water and soil. While nitrogen and phosphorus are nutrients that are natural parts of aquatic ecosystems, their high concentration results in serious environmental and human health issues. The goals of this project are : (1) understanding of the nutrient pollution, its source and impacts; (2) reviewing the existing lab and field sensor technologies for detection of pollutants; (3) Hands-on lab testing of nutrients; (4) Measurements and evaluation of the nutrient pollutants in Dallas area, such as tap water, garden soil, and natural streams and rivers and (5) Design of a novel cost-effective nutrient sensor based on the learned information.