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## WATER QUALITY STAKEHOLDERS – ARE YOU AT THE RIGHT TABLE?

**Among the many causes of water quality impairment in the U.S. summarized by the EPA, nutrients rank third on the national 303(d) impaired waters list ([http://iaspub.epa.gov/waters10/attains\\_nation\\_cy.control?p\\_report\\_type=T](http://iaspub.epa.gov/waters10/attains_nation_cy.control?p_report_type=T)). All forms of P account for roughly 60% of the nutrient impairments, N (all forms) 37%, and general “eutrophication” the remainder. Agriculture is listed as the top source of water quality impairment in assessed rivers and streams; third in assessed lakes, reservoirs, and ponds; and seventh in assessed bays and estuaries (<http://www.epa.gov/waters/ir/index.html>).**

**Applied nutrients, especially mobile forms in soil like nitrate that may not have been taken up during crop harvest, may be subject to some movement and potential loss.** Losses may occur via erosion, leaching, drainage, and runoff; particularly when crops are not actively growing in fields and rainfall is abundant. The magnitude and timing of some of these unintended nutrient losses should draw attention to more skilled cropping system management; especially better conservation and nutrient management practice choices and effective implementation.

**Some water quality challenges have continued to persist like the internationally recognized annual hypoxic zone (*bottom waters with <2 mg/L dissolved oxygen*) in the Gulf of Mexico, with its associated N and P loads delivered via the Mississippi River.** In spite of documented trends for higher crop yields and greater crop harvest nutrient removal, the annual nitrate-N loads from the Mississippi River Basin to the Gulf of Mexico have not changed appreciably since 1980. The annual total P loads have increased more than 10%, and orthophosphate P (soluble) loads have increased more than 5% since the early 1980s. In contrast, total N loads have declined by more than 20% over the last 30 years. Soluble nutrient losses to surface and groundwater resources are also attracting more public interest and scrutiny outside the Mississippi River Basin, especially in more populated watersheds around the country.

**Practical, science-based nutrient management and farming expertise are essential at local, state and national levels.** There is a growing need for agriculture to clearly discuss the challenges and options available to improve crop nutrient recovery and to reduce losses from fields. Such agricultural “stakeholder” involvement is key to ensuring that agricultural interests and sound science are in front of policymakers, regulators and government officials who are responsible for ensuring that water quality meets designated use requirements.

**For sure, our urban neighbors, municipal wastewater treatment managers, city and county officials, environmental advocates, conservation groups, and others are getting involved, expressing concerns, and calling for water quality protection and restorative actions.** Most of us within the farm community proudly view ourselves as responsible stewards of our nation’s land resources. Seldom do we hesitate to join friends, family and others in conversations about the weather, or last year’s production problems. Yet, when we sit down at our family tables to partake of the abundant, nutritious and affordable food produced through our labors ... should we also be thinking about taking a place at the local, state and national water quality policy tables to help chart our collective water quality future?

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Abbreviations: N = nitrogen; P = phosphorus.

Note: *Plant Nutrition TODAY* articles are available online at the IPNI website: [www.ipni.net/pnt](http://www.ipni.net/pnt)