America's Everglades: Who Pollutes? Who Pays?

Enterprise Assessment for the Reduction of Nutrient Pollution in South Florida Waters:

A study by RTI International

As part of the Everglades Foundation's ongoing scientific and economic research efforts, the Foundation commissioned RTI International, a respected and independent research institute, to conduct a comprehensive study involving the collection and analysis of public data with the goal of answering several questions: Who contributes what share of the pollution flowing directly into 1) the Everglades, and 2) the broader footprint of the South Florida Water Management District? Who pays for the cost of cleaning up this pollution?

The findings of this study are especially timely considering the ongoing discussions underway between the federal government and the state of Florida over water quality standards that have been the subject of litigation for two decades.

While the RTI study assembles a wide range of data from a variety of sources, perhaps one of the most striking findings is the fact that **the agricultural industry is responsible for 76 percent of the phosphorus pollution entering the Everglades. In addition, researchers determined that the agricultural industry pays ONLY 24 percent of the cost of phosphorus removal, leaving the balance of the burden on the shoulders of taxpayers.**

In 1996, Florida voters overwhelmingly approved, with 68 percent of the vote, a "Polluter Pays" amendment to the state Constitution. This amendment clearly states that those who cause pollution in the Everglades Agricultural Area must be primarily responsible for paying the cost of cleaning it up.

Now, 16 years later, Florida policymakers and the public for the first time have a comprehensive, independent study that examines the sources of pollution in the Everglades, an analysis of the costs that have been incurred to clean up this pollution, and an accounting of who is paying these costs.

RTI evaluated pollution within the boundaries of the South Florida Water Management District and in the more narrowly focused regions or "subbasins." To conduct the analysis, the study area was subdivided into six major subbasins and three minor subbasins. Within each subbasin, RTI grouped (nutrient) pollution reduction activities into four major categories: Domestic Wastewater Treatment Facilities; Urban Stormwater Best Management Practices (BMPs); Agricultural BMPs; and Public Works Projects.

When pollution levels exceed scientifically determined limits, harm is done to the ecosystem, its fish and other wildlife, the drinking water supply and human health.

To meet the water quality and supply objectives of Everglades restoration, new measures to control pollution at its source must be coupled with public works, some of which have been fully constructed and others which are planned or under way.

These public works – primarily filtration marshes, commonly called Stormwater treatment areas (STAs), flow equalization basins (FEBs), and other structures - will be focused on removing agricultural pollution before it enters the fragile Everglades ecosystem that supplies 1 in 3 Floridians with their daily supply of fresh water.

OTHER KEY FINDINGS

• According to the RTI Study, agriculture pays 24% of the costs of phosphorus removal, residential/commercial/industrial rate payers fund 10% of the cost, and the remaining 66% is funded by taxpayers. (RTI, page ES-8, Figure ES-7)

• Agriculture contributes about 76% of the total phosphorus entering the Everglades. Urban phosphorus loads are about 23% of the total. The remaining 1 % of the total phosphorus is originating from natural areas. (RTI, page ES-8, Figure ES-7)

• Within the South Florida Water Management District, agriculture discharges 1,449 metric tons of phosphorus and 12,845 tons of nitrogen into surface water. (RTI, page 7-2, Table 7-1)

• Of the 216 metric tons of phosphorus reaching the STAs, only 28 metric tons are coming from Lake Okeechobee. (RTI, page 6-10, Table 6-3).

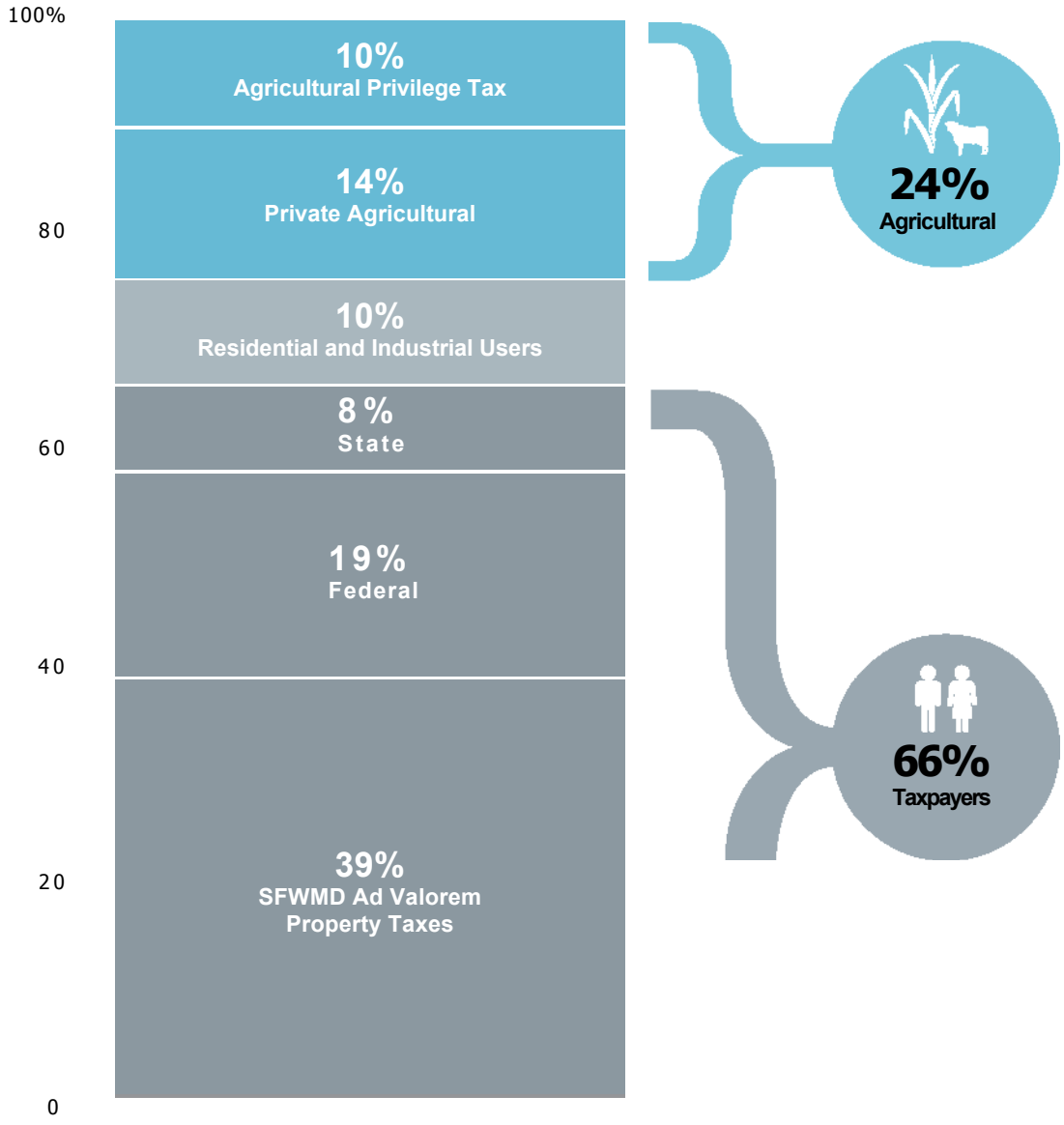
• Waste water treatment facilities – in residential, commercial and industrial sectors — remove 93% of the total phosphorus they produce each year, and account for 16% of the total phosphorus load to the environment within the South Florida Water Management District. (calculated from Table 7-1, page 7-2, RTI)

• Residential, commercial and industrial sectors pay 99% of the cost to remove the phosphorus they produce (Table 7-2, RTI), and remove 93% of the phosphorus they produce within the South Florida Water Management District. (calculated from Table 7-1, page 7-2, RTI)

• It costs $47 to remove 1 pound of phosphorus with Best Management Practices (BMPs) and $350 per pound to remove it with Stormwater Treatment Areas (STAs) (calculated from Table 7-1, page 7-2, RTI). By comparison, it costs less than $10 per pound to add phosphorus as fertilizer. (Average US farm prices of selected fertilizers, USDA, *www.ers.usda.gov/ Data/ FertilizerUse/*, Table 7)

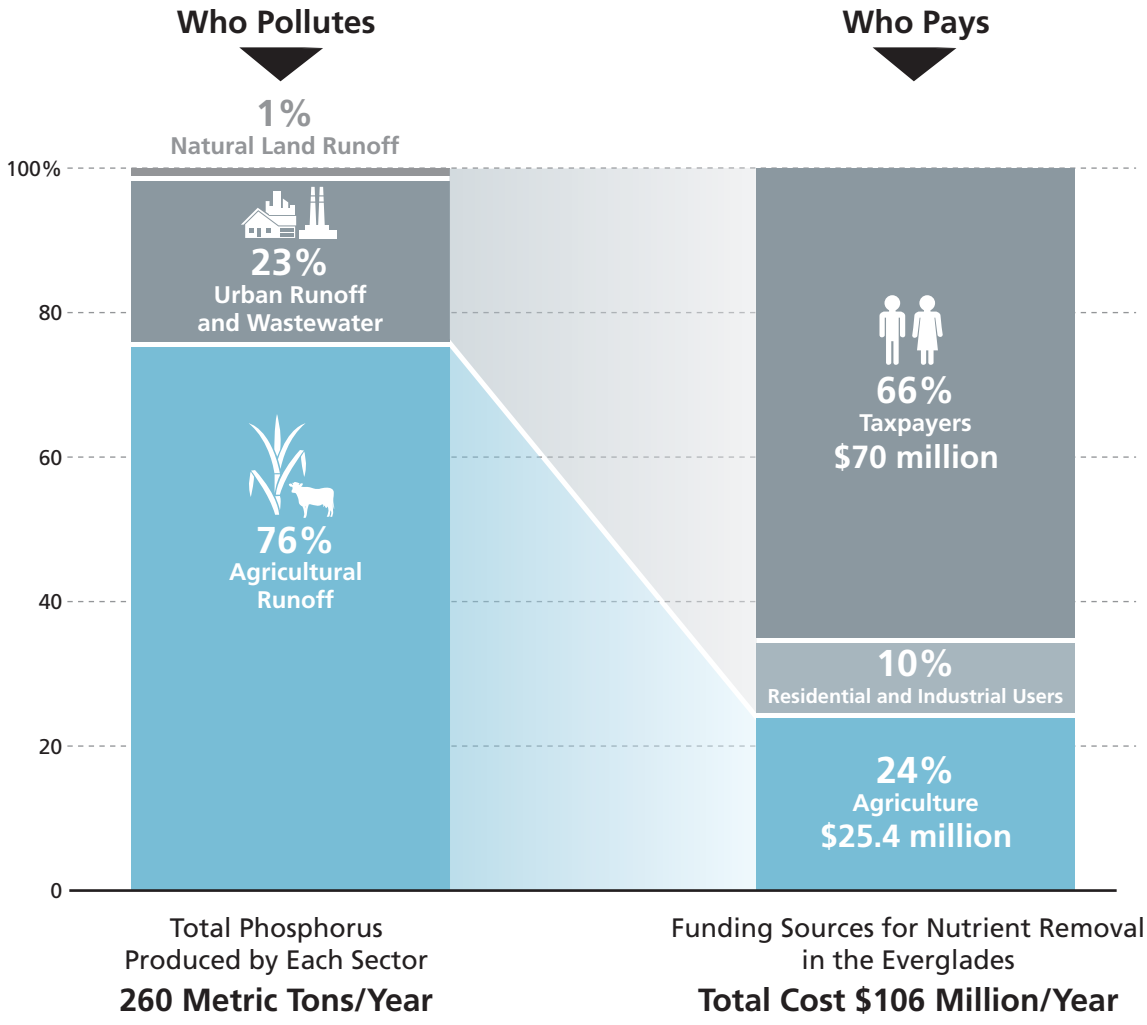
Funding Sources for Nutrient Removal in the Everglades

Total Costs: $106 Million/Year



SOURCE: RTI International Study, Enterprise Assessment for the Reduction of Nutrient Pollution in South Florida Waters, 2012.

Phosphorus Pollution in the Everglades:
Who Pollutes and Who Pays



Phosphorus pollution reaching the Everglades is originating from ECP and non-ECP basins (ECP: Everglades Construction Project).

ECP basins refer to the Everglades Agricultural Area (EAA), C-139 Basin, C-51W Basin (including Acme sub-basins), L-8 Basin and other Water Control Districts south of Lake Okeechobee.

Non-ECP basins refer to the L-28 Basin, Feeder Canal Basin, C-139 Annex Basin, North New River Canal Basin, C-11 W Basin, and C-111 Basin.

SOURCE: RTI International Study, Enterprise Assessment for the Reduction of Nutrient Pollution in South Florida Waters, 2012.

America's Everglades: Who Pollutes? Who Pays?

Enterprise Assessment for the Reduction of Nutrient Pollution in South Florida Waters:
A study by RTI International