

Attachment A: Mississippi's Success Story on Nonpoint Source Pollution Clean-up

Mississippi plans to achieve lasting environmental improvements by reducing nonpoint source pollution in state waters through education and demonstrations. Projects like the Lake Washington watershed project depend on being able to translate public concern into positive action, and show farmers the advantages of replacing traditional practices with innovative, - environmentally sound methods.

Lake Washington--No Longer Muddying Up the Waters

Knowing that best management practices could help restore Lake Washington to its former grace was a big step--but it took section 319 funds to actually get the projects going.

Lake Washington, shaped like a giant "three," was formed in the flat delta earth south of Greenville some 700 years ago. The lake contains more than 3,200 acres of open water, with hundreds of acres backing up into dense cypress groves. Once known for its graceful beauty and antebellum mansions, in recent years Lake Washington has received runoff from 11,000 acres of cropland--mostly cotton and soybeans --making it muddy and aesthetically displeasing. Each year, erosion dumps some 12 tons of soil per acre into the lake, along with toxic pesticides and - nutrient-rich fertilizers that fuel algae growth and help deplete the lake's oxygen.

To make matters worse, few of the hundreds of cottages and house trailers lining the lake have adequate sewage treatment systems. The most dramatic effect of this pollution surfaced during the hot, dry summer of 1990 when a rare blue-green algae bloomed across the stagnant water and gathered on the shores. The algae produced deadly toxins--14 dogs died after drinking lake water.

Beginning in 1989, the lake began a broad-based cleanup drive using a \$100,000 federal Clean Lakes Program grant (section 314). A feasibility study identified the BMPs needed to control the nonpoint source pollution and restore the lake to its former glory, so the state turned to the section 319 program to continue its effort. After the study was completed in June 1991, the state received a section 319 grant totaling \$616,363 to implement the BMPs. In addition, farmers contributed some \$410,910 of in-kind services such as labor and equipment.

Several BMPs have been approved and installed. Farmers have used no-till systems on 3,890 acres and reduced-till on 919 acres for cotton, soybeans, grain sorghum, and corn. These innovations are remarkable in a region where tradition is revered. Farmers have also installed 14 grade stabilization structures. These hold water on fields through the winter, allowing sediment to settle out of the water, controlling weeds, and providing habitat for migrating waterfowl. In addition, more farmers are planting grass filter strips, grassed waterways, and vegetation barriers along fields.

By summer 1995, the project's anticipated completion date, Mississippi officials expect erosion to be reduced by 75 percent. BMPs still to come include converting 4,000 acres to no-till, converting 650 acres to reduced-till, and installing 26 grade stabilization - structures.

The Lake Washington project also targets sewage pollution. A sewage collection and treatment system, being built in the adjacent Glen Allan community, will serve some 200 households. The system, funded through nearly \$1 million in grants and loans from the Farmers Home Administration, will include a lagoon and four cells of artificial wetlands. It will filter out effluent for discharge away from the lake and reduce the amount of organic material and nutrients entering the lake. A monitoring plan, part of the continuing Lake Washington project, will compare newly gathered data with lake data collected before the BMPs were installed. The state has received EPA approval for long-term monitoring for the entire drainage area and for individual monitoring of two BMPs.

Until then, photographs are documenting the improvements in the lake. In comparing two fields--one using no-till planting and the other using conventional methods--one can easily see the difference between the clear runoff from the former and the muddy, turbid runoff from the latter.

Lake residents have noticed the change, too. Although heavy rain has fallen, the rain "did not muddy up the lake like it did in the past," reported a local resident.