



# Darryl J. Diefes, DDS

Whiteville, North Carolina

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Outstanding Achievement  
Small Business Category

## BACKGROUND

Dr. Darryl Diefes had been practicing dentistry in Bladen and Columbus counties for 16 years. In 1994 he read about high mercury levels in several species of fish in and around Lake Waccamaw. Mercury-containing dental amalgam could potentially add to the problems of environmentally fragile Lake Waccamaw as well as other lakes and rivers. He realized this waste had to be collected and disposed of carefully. He later learned that Whiteville, where his office was located, had been cited for violating mercury standards. It was clear that action was necessary to reduce the health hazards that mercury from dental amalgam posed to his community.

## WASTE REDUCTION ACTIVITIES

Dr. Diefes sought the most effective and efficient environmental technology products and service that would recycle mercury amalgam to comply with environmental standards. He chose to implement Dental Recycling North America's (DRNA) three-component mercury capture and recycle system. The equipment involves chairside particle traps coordinated with an amalgam separator and a filter for mercury in the solution. The captured mercury particles are collected periodically for reclamation.

Dr. Diefes has shared the results of his research and efforts with all other local dentists, encouraging them to take an active role in reducing mercury discharge from their offices. His goal is for Whiteville to become the first town in North Carolina to voluntarily achieve non-detectable dental source mercury in municipal waste water, which would demonstrate that a collective effort can indeed help protect a community's lakes and rivers.

## WASTE REDUCED

Mercury levels from the office have dropped from an average of 0.00214 ppm to a low average of 0.0004 ppm. In addition, the captured mercury is sent for reclamation and possible reuse rather than disposal.

## ANNUAL SAVINGS

Penalties assessed to Whiteville due to mercury pollution violations approached \$10,000, while the DRNA system costs approximately \$1,500 annually. His dedication to reducing dental mercury discharge saves thousands of taxpayer dollars and preserves lakes and rivers in Columbus County.

## CONTACT

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