



## **LEMNA CORPORATION FACILITY WINS ENGINEERING EXCELLENCE AWARD**

### **From American Consulting Engineers Council**

The Wastewater Treatment Expansion in White House, Tennessee has been awarded one of the prestigious “Excellence in Engineering Awards” from the American Consulting Engineers Council. When the City of White House outgrew its existing wastewater treatment capacity, it turned to Lemna Corporation and its innovative technologies. The company’s completely natural technology using duckweed was selected. The award cited the city’s initial cost savings of \$500,000 and life-cycle savings of \$750,000.

Because of continued growth in the city, its existing wastewater treatment facility’s capacity was exceeded. A Lemna<sup>®</sup> System was chosen to expand the existing facility. This enabled the city to treat increased flows without constructing an expensive new plant.

The expanded facility treats 800,000 gallons (3,000m<sup>3</sup>) per day and consists of two aerated ponds, one Lemna<sup>®</sup> pond with a nitrification reactor at its end, and ultra-violet disinfection zone, and a cascade outfall. Treatment effluent can be used to irrigate nearby fields or may be discharged to a small stream. The influent parameters are 200 mg/l BOD, 200 mg/l TSS and 25 mg/l ammonia. The permitted discharge limits are 10 mg/l BOD, 30 mg/l TSS and 1 mg/l ammonia in the summer, 2 mg/l during the winter.

A mat of tiny duckweed plants covers the surface of the Lemna<sup>®</sup> pond, consuming wastewater pollutants. Since it keeps sunlight from entering the water beneath, it prevents the growth of algae. The quiescent water condition that the duckweed mat creates promotes the growth of organisms, which clean the wastewater.

Prior to receiving the ACEC Excellence in Engineering Award, this facility received an Excellence in Development Award from the Greater Nashville Regional Council and an Excellence in Engineering Merit Award from the Consulting Engineers of Tennessee.