



## LET CUSTOMER SUCCESS STORY

**CLIENT:** Glasgow Wastewater Treatment Plant  
**LOCATION:** Glasgow, Montana  
**APPLICATION:** BOD, TSS, Ammonia treatment  
**PRODUCT:** LemTec™ Biological Treatment Process

### BACKGROUND

Meeting stringent regulatory requirements, especially for Ammonia limits, can be a daunting task for any wastewater treatment system, especially those located in cold climates where nitrification is adversely affected by winter temperatures. Add in the potential cost of a new treatment plant and the



expertise required to operate a complicated mechanical system, and many rural communities are faced with difficult and expensive options for meeting their treatment requirements. The City of Glasgow, located in central Montana was faced with more stringent effluent requirements that included Ammonia limits. With an aging lagoon treatment system that was incapable of meeting these limits, the City turned to Lemna Environmental Technologies to provide a solution.

## LET SOLUTION

Lemna Technologies' unique LemTec™ Biological Treatment Process (LBTP), composed of a series of aerobic treatment cells and followed by a low-loaded settling zone for sludge storage was the answer to the City's problem. The aerobic and anaerobic cells are covered by the LemTec™ Modular Cover System, a patented floating modular cover, which provides an insulated environment for heat retention and prevents algae growth by shielding sunlight. This warmer environment, along with the other components of the aerobic and anaerobic cells, provides conditions conducive to the removal of biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS) and ammonia nitrogen (NH<sub>3</sub>). The LBTP is capable of delivering exceptional BOD, TSS and Ammonia treatment in a smaller footprint than a traditional lagoon at a lower cost than a traditional package plant. The Lemna Polishing Reactor (LPR) follows the settling cells and provides additional BOD and Ammonia treatment.



## RESULTS

The LBTP installed in Glasgow is an effective, reliable, and affordable aerated lagoon based biological treatment process capable of achieving year-round effluent limits as low as 10 mg/l BOD, 10 mg/l TSS and 2 mg/l NH<sub>3</sub>-N at a fraction of the cost of a mechanical system. With a reduced footprint, a process that is extremely reliable, and simple to operate, the LBTP is the highest performance pond-based package in the world and offers numerous advantages over other systems, including lower capital and operating costs, expandability and low maintenance.



LEMNA ENVIRONMENTAL TECHNOLOGIES, INC.

4215 WHITE BEAR PARKWAY, SUITE 200 • VADNAIS HEIGHTS, MN 55110

PHONE: 612-253-2000 FAX: 612-253-2003 WWW.LEMNA TECHNOLOGIES.COM