

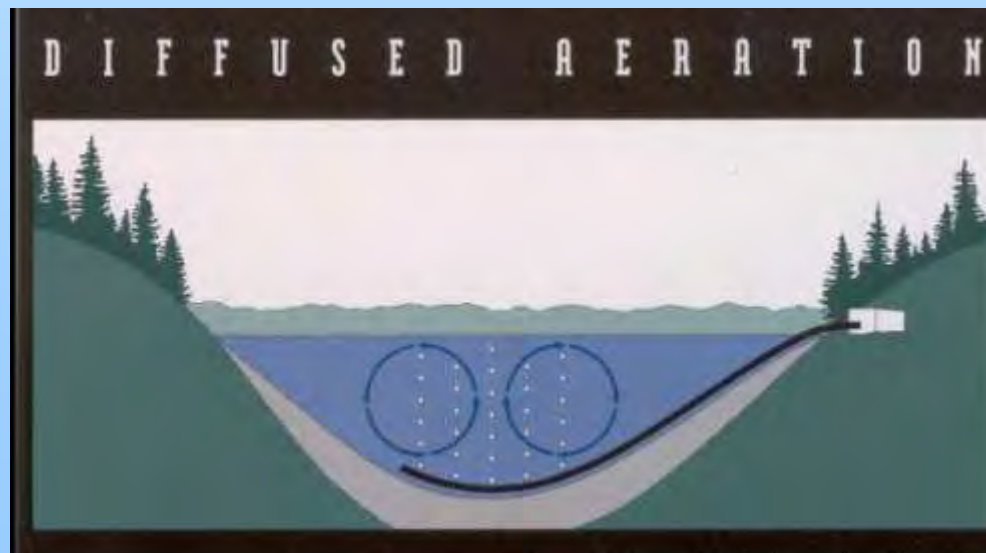
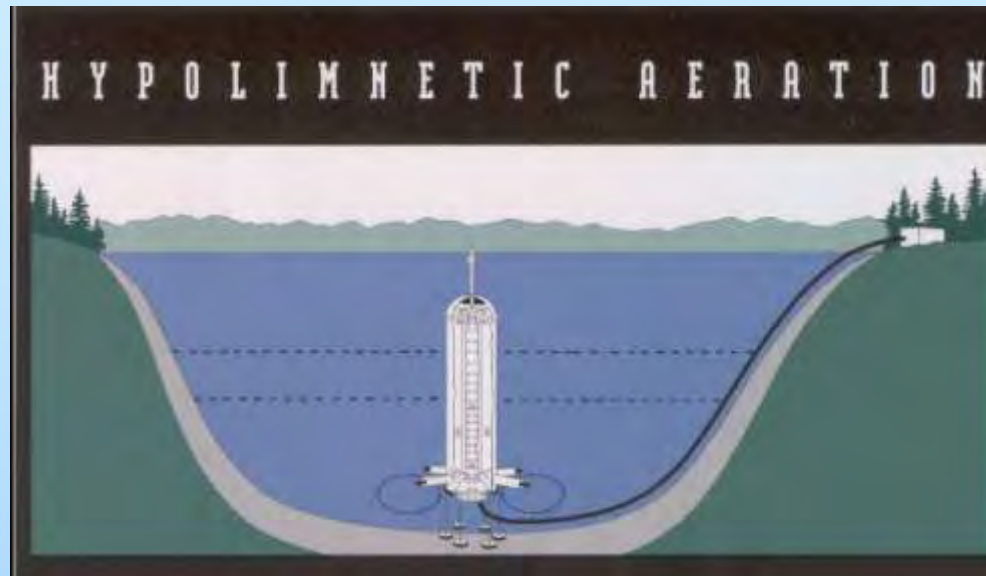
Lake & Reservoir Aeration

GES Logo.jpg

Richard S. Geney, Vice President
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Summerfield, NC

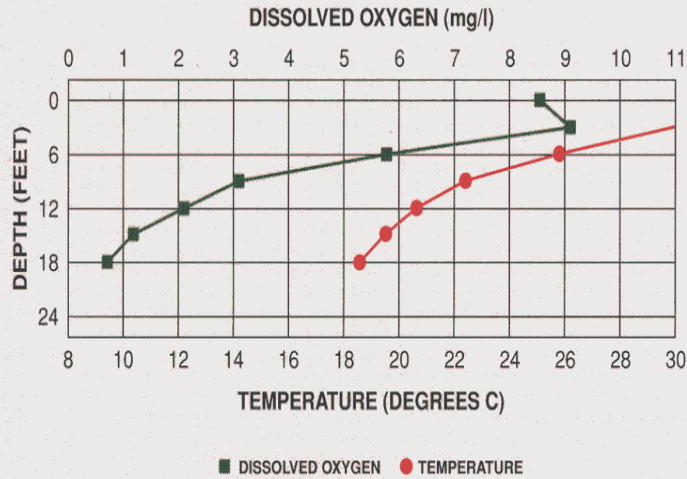


Lake Profiles

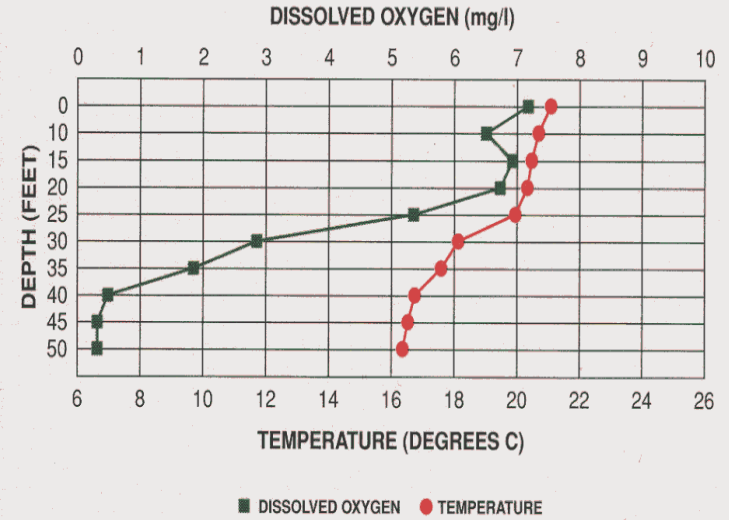


Temperature Profile Comparison

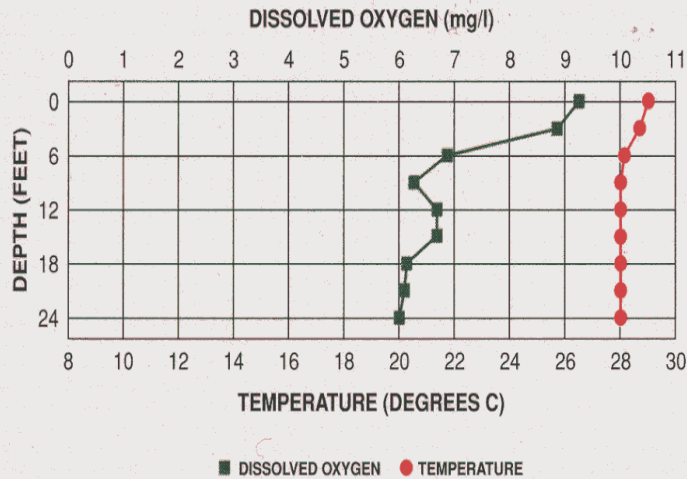
Before Diffused Aeration



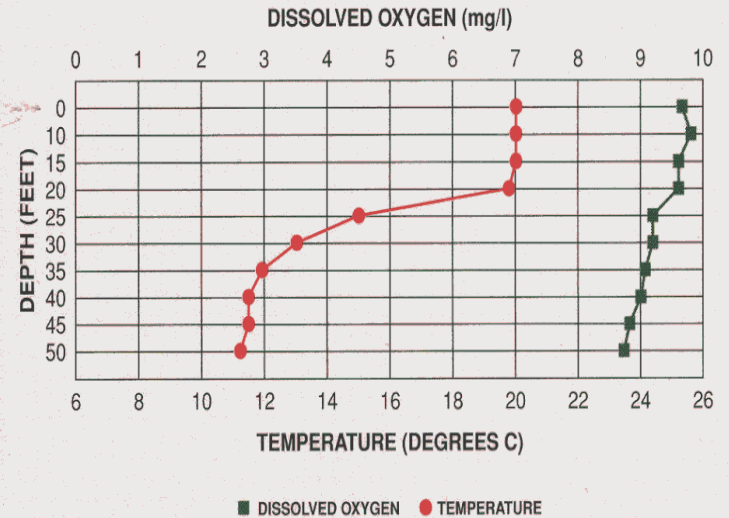
Before Hypolimnetic Aeration



After Diffused Aeration



After Hypolimnetic Aeration



City Lake Reservoir



High Point, NC

City Lake Reservoir

USES:

- City Municipal Water Supply
- Recreational Boating & Fishing

PROBLEMS:

- Low Dissolved Oxygen Levels
- Excessive Algae Growth
- Complaints Due to Taste & Odor

City Lake Reservoir

METHOD OF TREATMENT:

- Diffused Aeration / Destratification
- (6) Diffuser Lines, (2) Compressors

RESULTS:

- Aerobic Conditions All Summer
- Improved Overall Water Quality
- Reduced Customer Complaints
- Increase in Filter Runs (100%)

Salem Lake Reservoir



Winston-Salem, NC

Salem Lake Reservoir

USES:

- Water Supply
- Recreational Boating & Fishing

PROBLEMS:

- High Manganese Levels
- Water Treatment Issues

Salem Lake Reservoir

TREATMENT:

- Diffused Aeration / Destratification System
- (5) Diffuser Lines, (1) Compressor

RESULTS:

- Increased water quality & chemistry consistency
- Reduced manganese levels & water treatment issues

Lake Welch Reservoir



Gaffney, SC

Lake Welch Reservoir

USE:

- Primary Water Supply

PROBLEMS:

- High Levels of Manganese
- Manganese in Distribution System

Lake Welch Reservoir

METHOD OF TREATMENT:

- Diffused Aeration/Destratification
- (6) Diffuser Lines, (2) Compressors

BENEFITS TO DATE:

- Reduced Manganese Levels
- Eliminated use of KMnO_4 in Summer
- Improved Water Quality & Chemistry Consistency

Graham Creek Reservoir



Amherst County, VA

Graham Creek Reservoir

USES:

- Primary Water Supply
- Recreational Fishing & Boating

PROBLEM:

- Elevated Levels of Manganese

Graham Creek Reservoir

TREATMENT:

- Diffused Aeration/Destratification System
- (3) Diffuser Lines, (2) Compressors

RESULTS:

- Minimized Manganese as a Treatment Issue

ASU Reservoir



Boone, NC

ASU Reservoir

USES:

- Primary Water Supply for University

PROBLEMS:

- Elevated Levels of Manganese
- Variable Water Quality during Fall Turnover

ASU Reservoir

TREATMENT:

- Diffused Aeration/Destratification System
- (3) Diffuser Lines, (1) Compressor

ASU Reservoir

RESULTS:

- Reduced Manganese Levels
- Elimination of Spiking
- Improved Overall Water Quality
- Increased Water Filter Life at Dining Facility from 1 to 4 months

Lake Gordon Reservoir



Cumberland, MD

Lake Gordon Reservoir

USES:

- Municipal Water Supply
- Limited Recreational Fishing

PROBLEMS:

- High Levels Manganese resulting in negative impact on DAF system
- Required routine addition of Potassium Permanganate (KMnO_4) in the raw water inlet summer and fall.

Lake Gordon Reservoir

TREATMENT:

- Diffused Aeration/Destratification System
- (4) Diffuser Lines, (2) Compressors

RESULTS:

- Reduced Levels of Manganese
- Eliminated need for KMnO_4 in 2 years due to improved overall water quality