

# ALDEN

## Numeric Modeling

Computational Fluid Dynamics (CFD) is a reliable, cost-effective tool for solving many complex flow-related problems involving liquid and gas flows, hydraulic flows, heat and mass transfer, as well as particles and sprays. The numeric modeling staff at Alden offers decades of combined experience in CFD modeling and simulation of flow-related problems from a wide range of industries, as well as considerable experience in physical modeling, testing, and field studies. This unique combination of expertise and experience allows Alden to provide cost-effective, practical solutions to our clients' flow problems.

Examples of applications of numeric modeling and simulation include:

- Air pollution control equipment
- Fish passage and protection
- Industrial flow processes
- Power generation
- Water and wastewater management
- Hydraulic structures
- River mechanics
- Turbomachinery
- Alternative energy technologies

Alden's numeric modeling team provides services to a broad range of clients studying unique flow phenomena, as well as meeting the numeric modeling needs of Alden's Environmental, Hydraulic Modeling, Air & Gas Flow Modeling, and Flow Meter Calibration Groups.

Based on a history of successful interaction and mutual respect, a long-standing working relationship has been established with FERC, USFWS, NOAA, and many regional, state and local agencies.

