

ALDEN

Environmental Services

Alden's engineers, scientists and biologists are the experts in the field of environmental impact mitigation at water resource projects. Our team has developed numerous fish protection systems for water intakes, as well as upstream and downstream fish passage facilities at dams and power plants. We are experts at resolving O&M problems associated with water resource projects, such as debris management, icing, siltation, and head loss. Alden's solutions maximize the benefits while minimizing the costs of environmental compliance.

Specific areas of expertise include:

- Fish protection technology design

- Alternative technology evaluations (engineering considerations, cost estimates, and estimates of potential biological effectiveness)

- Strategic planning for §316(b) compliance

- Cooling water intake structure: fish protection technology design, development, and evaluation

- Resolution of O&M problems (e.g., icing, siltation, biofouling, and debris)

- Upstream and downstream fish passage design and evaluation

- Laboratory and field studies of fish protection and passage technologies

- Pilot-scale field studies

- Hydroelectric entrainment and mortality studies

- Hydraulic design and model studies

- Fish-friendly hydro turbine design

- Ocean energy turbine fish protection evaluations

