



## Tunison Laboratory of Aquatic Science

*The USGS Great Lakes Science Center is dedicated to providing scientific information for restoring, enhancing managing and protecting living resources and their habitats in the Great Lakes region.*

*The Center is headquartered in Ann Arbor, Michigan, and has biological stations and research vessels located throughout the Great Lakes Basin.*



### Background

The Tunison Laboratory of Aquatic Science in Cortland, New York, was authorized by an act of Congress in 1930 and was initially called the Cortland Experiment Station. Early work at the station centered around research in nutrition and husbandry of trout. Consequently the station had a series of minor name changes associated with its mission including “Trout Nutrition Laboratory” (1940’s), “Eastern Fish Nutrition Laboratory” (1950’s), and “Tunison Laboratory of Fish Nutrition” (1970’s). In the early 1990’s because of a shift in research emphasis the station was re-named the Tunison Laboratory of Aquatic Science. The mission of the Laboratory is to provide resource managers the scientific information needed to preserve, protect, and restore biological resources throughout the Great Lakes basin.



The Tunison Laboratory

### Facilities

The Laboratory is located on 100 acres of land and consists of three buildings for offices, laboratories and storage. The main building consists of three offices,

three laboratories, one classroom and five indoor raceways. The laboratory building consists of seven offices, eight laboratories, an isolation facility, conference room and a library room. The storage building houses up to four vehicles and the backup generator, and has a shop and tool room. The laboratory also has 24 outdoor concrete raceways and three residences, two of which are used by the Lime Hollow Nature Center which is co-located on Tunison’s 100 acres. Tunison’s acreage contains nature trails and stream, pond, and wetland habitats.

### Partners

The Tunison Laboratory of Aquatic Science cooperates with a wide variety of both research and management partners. These include the New York State Department of Environmental Conservation, U.S. Fish and Wildlife Service, Bureau of Indian Affairs, St. Regis Mohawk Tribe, New York Sea Grant, U.S. Environmental Protection Agency, Ontario Ministry of Natural Resources, Water Resources Division (USGS), State University of New York College of Environmental Science and Forestry, Cornell University, and Hobart and William Smith Colleges.

### Research Capabilities

Research carried out at Tunison focuses on a wide array of issues that are important to state, federal, tribal and Canadian natural resource managers throughout the Great Lakes. Specific research topics currently being

investigated by Tunison scientists include (1) examining the feasibility of restoring Atlantic salmon, American eel, and lake sturgeon in Lake Ontario and the St. Lawrence River, (2) determining the effects of double-crested cormorant predation on fish populations in Lake Ontario and the St. Lawrence River, (3) determining the effect of cormorant control measures (egg oiling) on reducing impacts on fish populations, (4)



examining the cause, effect and possible remediation of thiamine deficiency that causes high fry mortality in salmonids, (5) determining the ecological health of Great Lakes tributaries, near shore areas, and embayments as it relates to native species restoration and exotic species expansion, (6) determining the effects of dreissenid mussel proliferation on Lake Ontario food-webs and associated declines of native amphipods, (7) development of low phosphorus fish feeds to reduce phosphorus levels in hatchery effluent, and (8) assessing the biodiversity and health of wetland habitats within the Montezuma National Wildlife Refuge and along the St. Lawrence River.