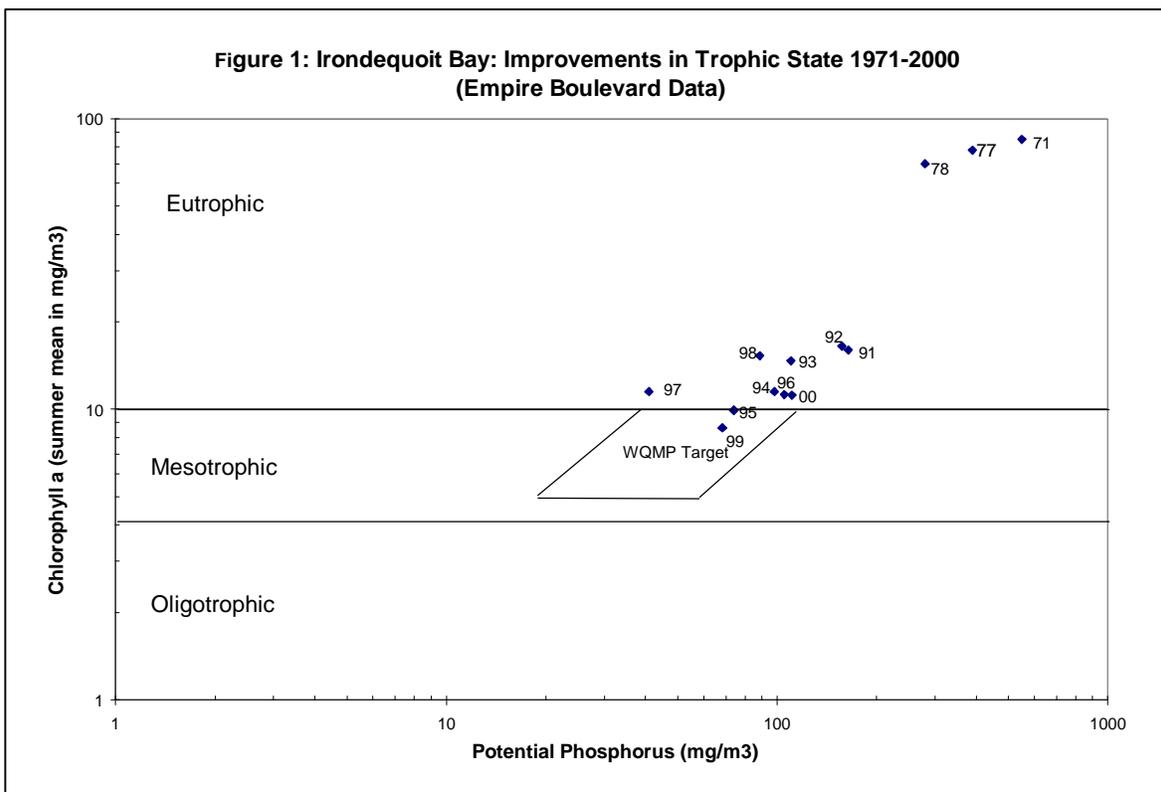


Irondequoit Bay: Water quality goals for Irondequoit Bay (published in the 1985 Irondequoit Basin Framework Plan) include the intent to achieve a stable mesotrophic state in Irondequoit Bay (Figure 1). The bay water quality has been moving towards this goal over the last 30 years due to several county initiatives supported by local, state and federal governments.

These programs include:

- Diversions of wastewater effluent out of the watershed through construction of the cross-Irondequoit tunnel in the 1970s and 1980s.
- Virtual elimination of raw sewage entering the watershed from combined sewer overflows in the City of Rochester due to construction and use of deep storage tunnels in the 1980s and 1990s.
- Application of alum in deep-water areas of the bay in 1986.
- Irondequoit Bay oxygen supplementation in the 1990s and 2000s.
- Managing of Irondequoit Creek stormwater through natural wetlands.

These projects were accomplished through the Irondequoit Bay Pure Waters District, the Rochester Pure Waters District and Monroe County Health Department programming. Projects sponsored by the Monroe County Health Department are explained in the following overviews.

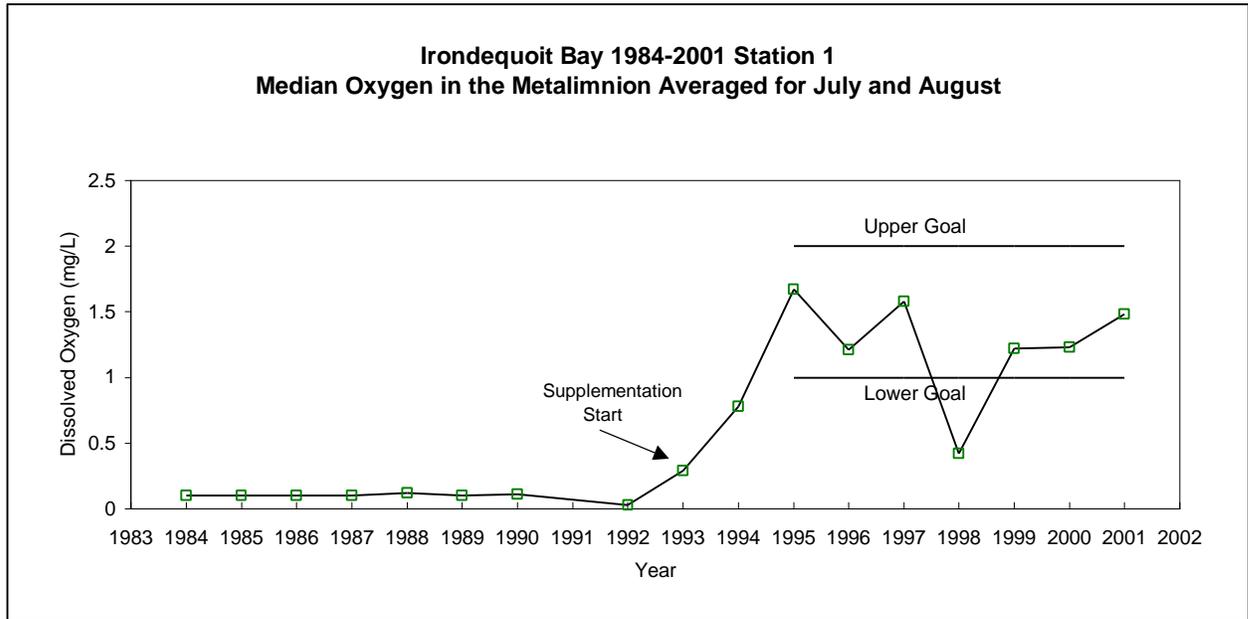


Alum Project:

Project Overview: Aluminum sulfate (Alum) was applied to the sediments of Irondequoit Bay during the summer of 1986. Alum effectively reduces the internal load phosphorus that is released from the sediments during anoxic conditions.

Oxygen Supplementation:

Project Overview: Oxygen supplementation was a recommendation of the 1991 Clean Lakes Phase II final report published by the Monroe County Health Department. During the summer months since 1993, oxygen has been gravity fed from a storage tank to Irondequoit Bay into five diffusers located one meter off the Bay bottom. The goal is to maintain 1 to 2 milligrams per liter of dissolved oxygen in the metalimnion thereby creating a refuge for herbivorous zooplankton. The expected benefit of this program is for zooplankton to effectively graze on phytoplankton without the threat of predation by fish, resulting in the removal of phosphorus from the Bay water system.



Irondequoit Creek Wetlands Project:

Project Overview: The wetlands project was a recommendation of the 1980-81 Nationwide Urban Runoff Program study published by the United States Geological Survey. Removal of nutrients (phosphorus) from storm runoff before it enters Irondequoit Bay by use of the cattail wetland at the mouth of Irondequoit Creek.

Definitions:

Mesotrophic: Surface waters that are only moderately rich in plant nutrients such as phosphorus.

Anoxic: Absence of oxygen

Metalimnion: The middle layer of water in a lake that is stratified according to temperature.

Herbivorous Zooplankton: The fraction of the microscopic animal community (zooplankton) that feeds on microscopic plant life (phytoplankton).