

Library Reference 2.1

Summary of management questions and decision analysis.

Management Question	Decision Analysis Components and Regulatory References	Spatial and Temporal Scale of Assessment	Tools for Assessment
<p>Can ambient water quality standards be achieved with continued Metro discharge to Onondaga Lake?</p>	<p>Dissolved Oxygen: 6 NYCRR Sec. 703.3 Ammonia: 6 NYCRR Sec. 703.5 Turbidity: 6 NYCRR Sec. 703.2 Floatables: 6 NYCRR Sec. 703.2 Phosphorus: 6 NYCRR Sec. 703.2 TOGS 1.1.1 Water Quality Standards & Guidelines Nitrogen: 6 NYCRR Sec. 703.2 Bacteria: 6 NYCRR Sec. 703.4</p>	<p><u>Dissolved Oxygen</u>: Upper waters, fall mixing, South Deep <u>Ammonia and Nitrite</u>: Upper waters; South Deep, year-round <u>Bacteria</u>: Class B portions of lake</p>	<p><u>Monitoring</u>: AMP data <u>Modeling CSOs</u>: use SWMM to confirm: system-wide annual average capture of at least 95% of combined sewage volume. <u>Modeling Lake</u>: OLWQM to project: <ul style="list-style-type: none"> • Summer average TP • DO at fall mixing • Ammonia and NO₂-N compared to standards • Algal bloom frequency </p>
<p>Must Metro effluent meet the Stage III phosphorus and ammonia limits for discharge to Onondaga Lake or the Seneca River in order for the receiving water to achieve compliance with ambient water quality standards?</p>	<p>Phosphorus: 6 NYCRR Sec. 703.2 (<i>possibly modified by site-specific guidance value</i>) Trophic state indicators: frequency, intensity and duration of algal blooms Ammonia: TOGS 1.1.1 Water Quality Standards & Guidelines (<i>latest revision to NYS standards</i>) NYSDEC revised TMDL for phosphorus: December 31, 2011</p>	<p><u>Phosphorus and other trophic state parameters</u>: Summer average, upper waters, South Deep (per NYSDEC guidance). <u>Dissolved Oxygen</u>: Upper waters, fall mixing, South Deep <u>Ammonia</u>: Upper waters, South Deep, year-round</p>	<p><u>For lake discharge</u>:</p> <ul style="list-style-type: none"> • AMP data: <u>Ammonia</u>: effects of Stage III limits, met in 2004 <u>TP</u>: effects of Stage II limits, met in 2006 • Use lake model to project compliance under critical conditions <p><u>For Seneca River discharge</u>: TRWQM to project: DO and NH₃-N in Seneca River under low flow conditions</p>
<p>Are additional measures needed to ensure compliance with dissolved oxygen standards during fall mixing?</p>	<p>Feasibility analysis of hypolimnetic oxygenation (ENSR 2004). <i>Status: removed from ACJ per stipulation</i></p>	<p>Focus of compliance for dissolved oxygen: fall mixing, upper waters</p>	<ul style="list-style-type: none"> • AMP data: profiles and buoy • Mass-balance model • OLWQM