

Progress toward water quality improvement: Nitrite-N. AMP 2013 Annual Report.  
(Water Quality Standard)

**AMENDED CONSENT JUDGMENT GOAL**

Achieve compliance with the applicable ambient water quality standard to meet designated best use for survival and propagation of a warm water fish community. Achieve desired use of aquatic life protection.

<b>Hypotheses to be tested:</b>	<b>Status:</b>
Achievement of Stage III effluent limits for ammonia results in compliance with the NYS ambient water quality standard for nitrite (warm water fish community)	<ul style="list-style-type: none"> <li>Stage III effluent limits have been met for ammonia-N since 2004, after the BAF upgrade was implemented for year-round ammonia treatment.</li> <li>Since 2006, Onondaga Lake has been in full compliance with NYS AWQS for nitrite-N in upper waters.</li> </ul>
<b>Current Conditions with Historical Comparison</b>	
Major Sources – Percent Contribution (Annual Average (standard deviation))	<u>Time Period</u>
	<u>Metro Effluent Outfall 001</u>
	<u>Tributaries</u>
	1985-2003: 75% (14%)
	2004-2009: 38% (18%)
	2010: 17%
	2011: 18%
Upper Waters Concentration (Annual Average (standard deviation))	2012: 28%
	2013: 28%
	<u>Time Period</u>
	<u>South Deep, UML, Jan-Dec (µg/L)</u>
	1985-2003: 166 (76)
	2004-2009: 49 (18)
Compliance with NYS AWQS	2010: 40
	2011: 37
	2012: 41
	2013: 40 (3-m Sample)
	Percent of upper water observations exceeding standard (100 µg/l):
	1985-2003: 55%
Factors Affecting Compliance	2004-2009: 6%
	2010-2013: 0% Full compliance
	Percent of lower water observations exceeding standard (100 µg/l):
	2010: 21%
	2011: 10%
	2012: 0% Full compliance
<b>Planned Load Reductions (1998 – 2012)</b>	2013: 24% (Average of 15 & 18-m discrete samples)
<b>Monitoring and Assessment Program</b>	
Loading Estimates <i>Annual County monitoring program</i>	
Lake Monitoring <i>Annual County monitoring program</i>	

## Appendix A-6

### Related Biological Monitoring

- Assessment of fish community began in 2000
- Annual zooplankton monitoring

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### Tools for Decision Making

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Model	Onondaga Lake Water Quality Model (Anchor QEA, LLC)
NYS AWQS	100 µg/l