

TABLE 6.1
HOW THE RECOMMENDED REMEDY ADDRESSES KEY HUMAN HEALTH RISK CONCERNS IN ONONDAGA LAKE

Medium	Human Health Risk Concerns		Remedial Component Addressing Health Risk Concern
	Pathways	CPOIs	
Sediment^a	Direct exposure	Arsenic, PAHs, PCDD/PCDFs, hexachlorobenzene	Dredging Isolation capping
Fish Tissue	Fish consumption	Methylmercury, PCBs, PCDD/PCDFs, arsenic	Thin-layer capping Aeration (oxygenation) Monitored Natural Recovery
Water^b	Fish consumption	Methylmercury	Thin-layer capping Aeration (oxygenation) Monitored Natural Recovery

Notes:

^a Estimated risks related to direct exposure were highest (i.e., exceeded 1×10^{-5}) for sediments in the south basin. Estimated risk related to exposure to sediment in the north basin only exceeded 1×10^{-6} for the reasonable maximum exposure and was not further evaluated in the FS.

^b Risks related to direct exposure including incidental ingestion were estimated in the HHRA to be less than 1×10^{-6} . NYSDEC surface water quality standards protective of human health via direct exposure were occasionally exceeded for benzene, chlorobenzene, and dichlorobenzenes and were regularly exceeded for dissolved mercury (via fish consumption).

**TABLE 6.2
HOW THE RECOMMENDED REMEDY ADDRESSES KEY ECOLOGICAL RISK
CONCERNS IN ONONDAGA LAKE**

Medium	Ecological Risk Concerns			Remedial Component Addressing Ecological Concern
	Receptors ^a	Pathways	CPOIs ^b	
Sediment^c	Benthic macroinvertebrates	Direct exposure	Mercury, ethylbenzene, xylenes, chlorobenzene, dichlorobenzenes, trichlorobenzenes, PAHs, total PCBs	Dredging Isolation capping
	Wildlife	Benthic macroinvertebrate / Insect consumption	PAHs, barium, chromium, mercury, methylmercury, selenium	Dredging Isolation capping
		Fish consumption	Methylmercury, PCBs, DDT	Thin-layer capping Aeration (oxygenation) MNR
Fish Tissue	Wildlife	Fish consumption	Methylmercury, PCBs, DDT	Thin-layer capping Aeration (oxygenation) MNR
Water^d	Wildlife	Fish consumption	Methylmercury	Thin-layer capping Aeration (oxygenation) MNR

Notes:

- ^a Risks were also identified for fish exposed to various CPOIs (chromium, mercury, methylmercury, selenium, vanadium, zinc) by comparison to literature-derived toxicity reference values but pathways of exposure (e.g., water, sediment, prey) are unknown.
- ^b Identification of CPOIs for key risk concerns focused on CPOIs contributing to sediment toxicity to benthic macroinvertebrates, CPOIs for which 95 percent upper confidence limit on the mean LOAEL HQs exceeded 1.0 (for risk to wildlife), and CPOIs that exceeded surface water quality standards (for risk to aquatic organisms).
- ^c Stressors of concern were noted for direct exposure. These included calcitic sediments and oncolites. Impaired benthic communities were noted in various areas of the lake.
- ^d Exceedance of narrative water quality standards (turbidity and suspended solids) and presence of stressors (salinity, dissolved oxygen, ammonia, phosphorus, sulfide, chloride, low transparency) were noted in the BERA. Occasional exceedances of NYSDEC surface water quality standards for barium, copper, lead, manganese, zinc, trichlorobenzenes, and bis(2-ethylhexyl)phthalate were also noted in the BERA (TAMS 2002a).