



**Great Lakes
Binational Toxics Strategy
Sediment Goal Update**

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Sediment Challenge

- U.S. and Canadian Challenge: Complete or be well advanced in remediation of priority sites with contaminated bottom sediments in the Great Lakes Basin by 2006.

Areas of Concern in the Great Lakes - St. Lawrence River Basin



So, How much is left?

- Early estimates of 40,000,000 cubic yards of contaminated sediment in the Great Lakes with an estimated cost of \$2-6 Billion for remediation
- The U.S. Policy Committee has recently updated those estimates as a commitment made in the Great Lakes Strategy to be approximately 75 million cubic yards, and an associated cost range from \$1.5-4.5 Billion for remediation

Magnitude of the Problem on the U.S. Side

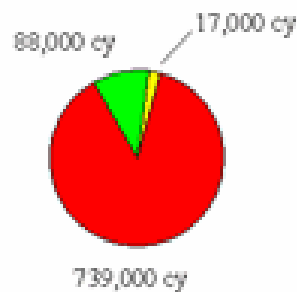
**Recent Estimates provided by Great Lakes
States:**

- **~ 75 Sites identified**
- **~75,000,000 cubic yards identified**
- **~46,000,000 cubic yards to be remediated**

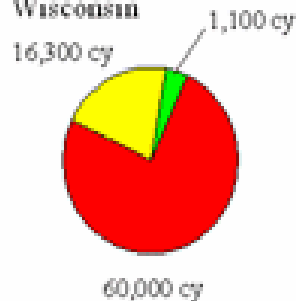
1. Newton Creek / Hog Island Inlet Superior, Wisconsin



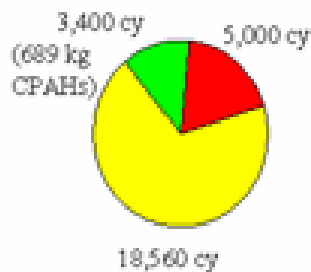
2. Lower Fox River & Green Bay, OUI – Wisconsin



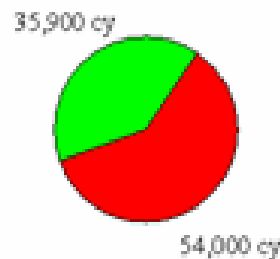
3. Hayton Area Remediation Project Wisconsin



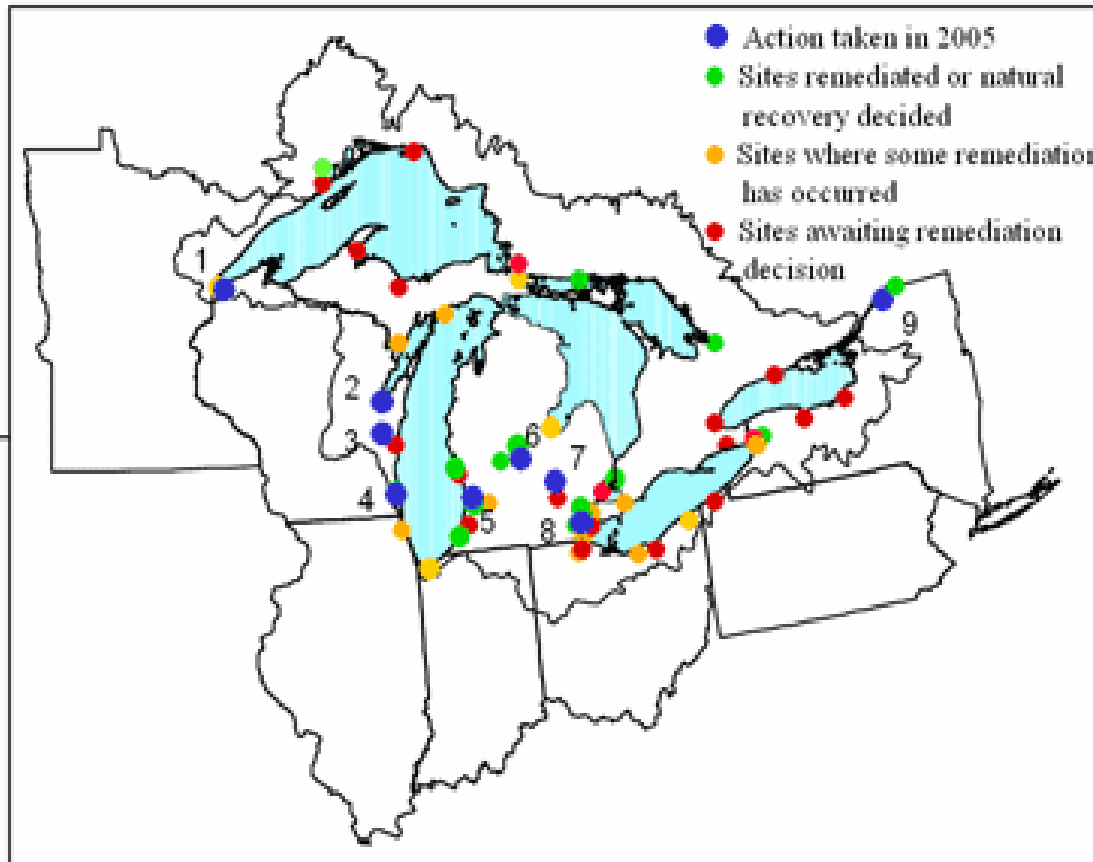
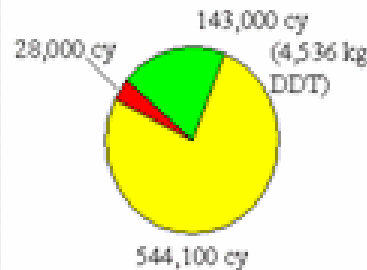
4. Moss-American Milwaukee, Wisconsin



5. Ruddiman Creek Muskegon, Michigan

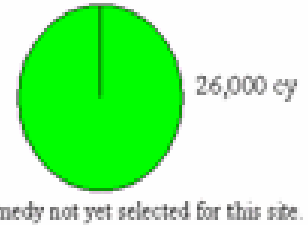


6. Velsicol Chemical St. Louis, Michigan

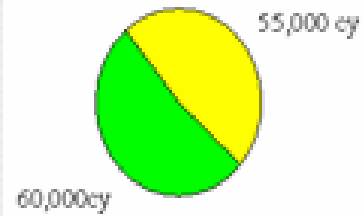


- Action taken in 2005
- Sites remediated or natural recovery decided
- Sites where some remediation has occurred
- Sites awaiting remediation decision

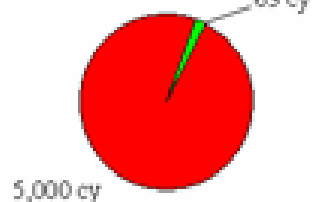
9. Alcoa Grasse River – Remedial Options Pilot Study Massena, New York



8. Detroit River, Black Lagoon Trenton, Michigan

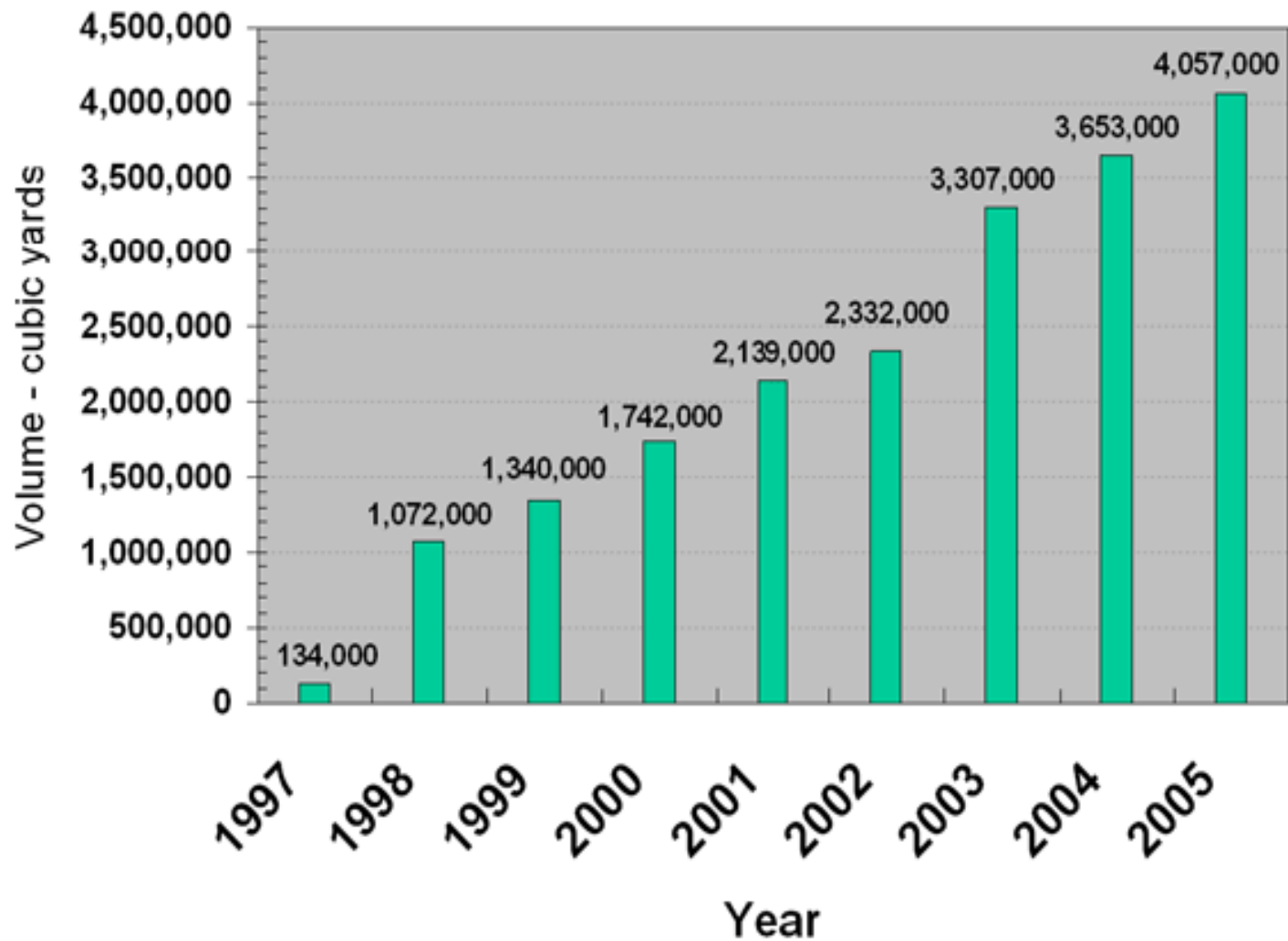


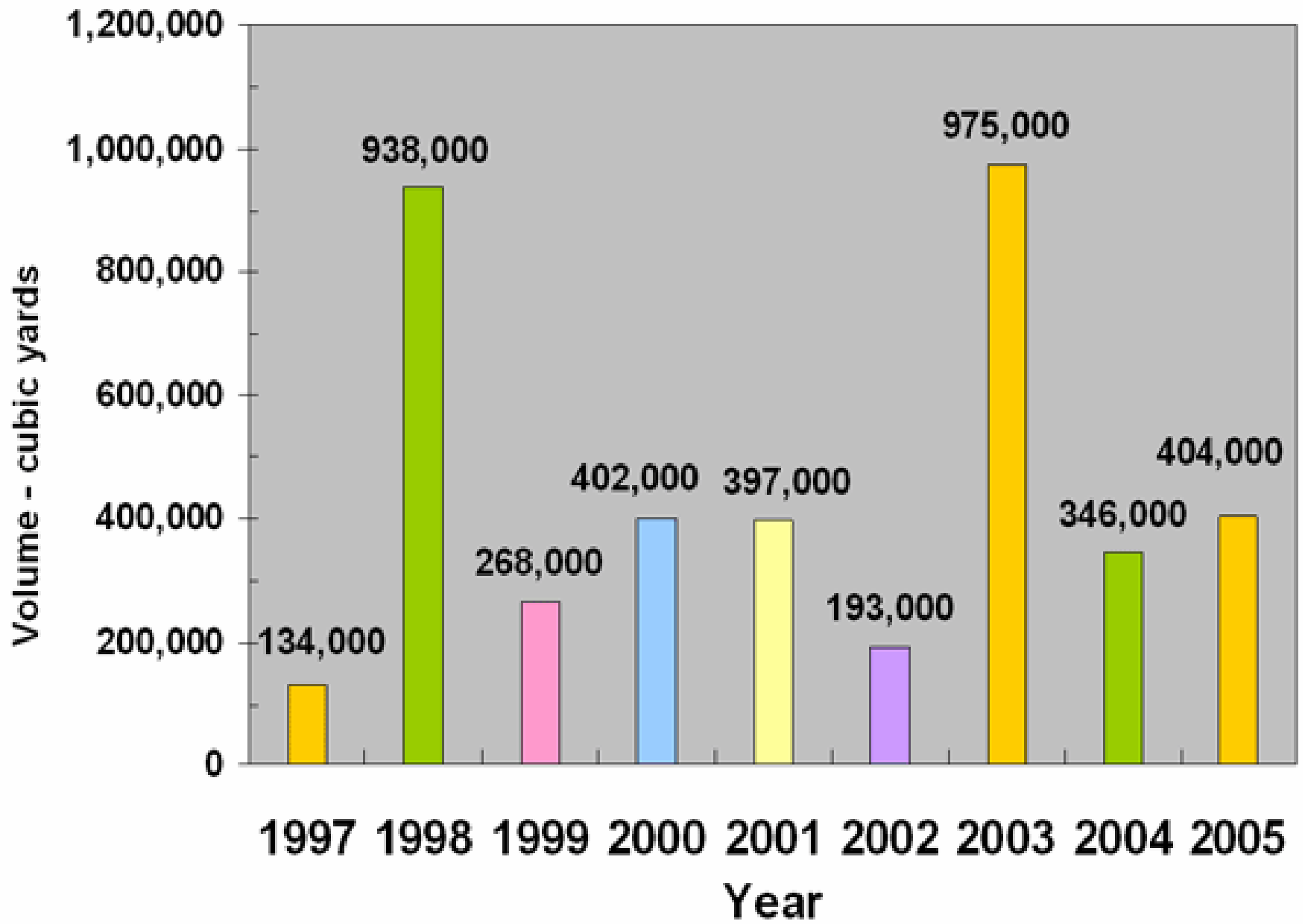
7. Shiawassee River Howell, Michigan



- Volume remediated in 2005
- Volume remediated prior to 2005
- Volume capped
- Volume undergoing natural recovery
- Volume awaiting remediation

Tracking Volume





Tracking Contaminant Mass

TABLE 6-1. Progress on Sediment Remediation in the Great Lakes since 1987*

Sediment(s) Location	Cumulative Mass of Contaminant Remediated (kg)											Cumulative Volume Sediments Remediated 1987 thru 2004 (m ³)	Volume Sediments Remediated 2004 (m ³)	Ultimate Disposition	
	Asbestos	Chromium	Copper	Lead	Manganese	Mercury	Nickel	PCB	Pb	Polychlorinated Biphenyls	Zinc				
U.S. Effort															
Area 1 and 2 (St. Clair River, Michigan)													15,304		Encasement in situ
Ashtabula River, OH															
Black River, Ontario, MI															
Black River, OH															
Black River, MI													26,000		Landfilled
Black River, NY															
Cedar River, MI															
Cuyahoga River, OH															
Deer Creek, Cedar River, MI															
Deer Creek, MI													140,000		Contract Disposal Facility
• Waukegan Creek													26,000		
• Black Lagoon													110,000	40,000	
Edgewood Creek, MI															
High Beach, Huron River, OH													51,000		Landfilled
High Beach, Huron River, OH													102,000		
Ice River, Green Bay, WI													80,000		Landfilled
• Green Hill													7,000		
• Develin													100,000	80,000	Landfilled
• DU 1															
Grand Calumet, IN													490,000		Contract Disposal Facility
• U.S. Military Works													800,000		
• U.S. Lease													10,000		
Kalamazoo River, MI													100,000		Landfilled
• Bright Mill Pond															
Manistee Lake, MI															
Manistee River, MI													100,100		Landfilled

Canadian Progress – Sediment Remediation 1997-2006

- Remediation completed, underway or planned at 4 locations
- Decisions made for non-intervention/natural recovery at 2 locations
- Further 9 sites are subject to ongoing site characterization and decisions on intervention/remediation are pending