Water Availability in the Great Lakes Reflections on the Great Lakes Pilot

Presented by:

Thomas R. Crane
Deputy Director
Great Lakes Commission

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Binational Great Lakes Basin

U.S. Army Corps of Engineers, Detroit District

Background on Great Lakes Water Resources Management Activities

- Great Lakes Charter of 1985
- Great Lakes Charter Annex 2001
- Toward the Development of a Water Resources Decision Support System
- John Glenn Great Lakes Basin Program Biohydrological Information Base
- Great Lakes - St. Lawrence River Sustainable Water Resources Management Agreement and Compact

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Biohydrological Information Inventory

John Glenn Basin Program - Section 455 (b) of WRDA 1999

Comprehensive assessment of U.S. federal roles in managing water resources within the Great Lakes Basin

Focused on current status and needs for predicting water withdrawal impacts on:

- groundwater and tributary stream dynamics
- water balance for the Great Lakes and flows in the Interconnecting Waterways
- biologic sustainability throughout the watersheds, along the coastal margins and within the lakes and interconnecting waterways

Addressed data and modeling needs, costs and benefits, including agency roles

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Biohydrological Information Inventory–
Identified Roles for the USGS

Groundwater, Geology, Soils, and Aquifers

- Conduct research to better define aquifer capacity including enhancing the current groundwater monitoring network

Surface Water Hydrology

- Expand the current stream gauging network in the U.S. Great Lakes basin
- Conduct research on restoring natural stream dynamics

Open Lake

- Research improvements in water balance components

Interconnecting Waterways and Diversions

- Model Interconnecting waterway levels and flows

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Biohydrological Information Inventory – Identified Roles for the USGS

Water Use Accounting

- Work with the Great Lakes states to develop comprehensive consumptive use estimates
- Coordinate consistent water demand forecasts for all watersheds

Biological Impacts

- Coordinate geospatial data compilation on wetlands, other habitats and land use changes
- Create consistent predictive modeling of biological impacts affected by water use

Analysis, Modeling and Information Systems

- Assist in the linking multi-agency information systems to support predictive modeling

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Great Lakes - St. Lawrence River Sustainable Water Resources Management Agreement and Compact

- Signed by Great Lakes Governors and Premiers on December 13, 2005
- The Agreement will be implemented in Ontario and Québec through provincial laws
- The Compact, an agreement among the Great Lakes States, will be passed into law through an interstate compact

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Sustainable Water Agreement Article 302 - Science

Guides the collection and application of scientific information to support:

- Understanding of the impacts of water withdrawals;
- Periodic assessment of the cumulative impacts of withdrawals, diversions and consumptive uses on a watershed basis;
- Improved scientific understanding of the waters of the basin;
- Improved understanding of the role of groundwater in basin water resources management; and
- Development, transfer and application of science and research related to water conservation and water use efficiency.

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Questions?

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Great Lakes System Profile