Some Data You Might Want to Know About

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National Eutrophication Survey (NES) 1972-1973 (or 74)

"A response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs."

OBJECTIVES

- **Develop information on nutrient sources, concentrations and impact on selected lakes**
- **Provide a basis for management practices relating to point-source discharge reduction and non-point source pollution abatement.**
- **Broader based correlations between nutrient concentrations (and loading) and trophic condition advanced the refinement of nutrient water quality criteria for the Nation's freshwater lakes.**

LAKES SELECTED

- **Impacted by municipal sewage treatment plant outfalls within 40 km of lake**
- **40 hectares or larger**
- **Mean hydraulic retention time of at least 30 days**
- **Criteria waived for some lakes of particular State interest**
- **Over 800 lakes and reservoirs**
- **4,200 tributaries and lake outlets**
- **1,000 sewage treatment plants**

METHOD

- **EPA personnel (in helicopter)**
- **State National Guard**
- **Operators of sewage treatment Plants**
- **State Agency Officials**

- **Data located on STORET (Legacy?)**

National Surface Water Survey

- Designed to "synoptically quantify the acid-base status of surface waters in the United States in areas expected to exhibit low buffering capacity" in support of the National Acid Precipitation Assessment Program.
- The Eastern Lake Survey - Phase I (ELS-I) (Fall of 1984)
  - A three-month effort in which 1612 probability sample lakes and 186 special interest lakes in the northeast, southeast, and upper midwest regions of the United States were sampled.
- The Eastern Lake Survey - Phase II (ELS-II), (Spring, summer and fall,1986)
  - Involved the resampling of a subset of lakes in the northeastern United States sampled in ELS-I
  - to determe chemical variability and biological status
  - Examine within-index period variability to provide insight concerning the ability to detect chemical changes
  - Determine the precision of the estimates of the number of acidic lakes from Phase I.
- The Western Lake Survey-Phase I (WLS-I), (Fall of 1985)
- Data (ASCII) and metadata (PDF) for seven Eastern Lake Survey data sets are available on the Web.

http://www.epa.gov/emap/html/datal/surfwatr/data/index.html

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EMAP SURFACE WATER PROGRAMS DATABASE 1991-1994 NORTHEAST LAKES DATA

Part of a demonstration project to evaluate approaches to monitoring lakes in Environmental Monitoring and Assessment Program (EMAP).

Databases include for EMAP lakes

- **Watershed data**
- **Water Chemistry data**
- **Fish Count data**
- **Fish Metrics data**
- **Zooplankton Count data**
- **Zooplankton Metrics data**
- **Sediment Diatom Count data**
- **Sediment Diatom Metrics data**

http://www.epa.gov/emap/html/dataI/surfwatr/data/index.html

National Nutrient Database

Developed the by EPA to derive nutrient criteria for different types of water bodies and different ecoregions of the country.

Is a web-enabled compilation of data from various sources that groups the data by specific waterbody and parameters.

Contains ambient data for waterbodies of the United States, predominantly from freshwater systems,

Data taken from legacy STORET, NASQAN, NAWQA, and other relevant nutrient data from universities and states/tribes.

How was the data checked for quality?

- **Sampled locations were verified.**
- **Duplicate samples were deleted.**
- **Data points collected by or downstream to effluent discharge points were deleted.**
- **Corresponding station IDs, Hydrologic Code Unit (HUC) codes, county, and ecoregions were verified.**
- **States verified that EPA or Standard Methods were used in sampling and analysis of nutrient data.**

http://www.epa.gov/waterscience/criteria/nutrient/

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The GLOBE Program

2006 April 22 17:23 UT

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Earth Day 2006, April 22

The GLOBE Program celebrates this special day, Earth Day and GLOBE's Anniversary, with the GLOBE community and remains committed with you to contributing to the evolving body of knowledge of Earth System science and the raising of environmental awareness. Read more about how to get involved.

Satellite Missions CALIPSO and CloudSat launch on 21 April 2006!

GLOBE students will soon have the opportunity to interact with scientists from the CALIPSO and CloudSat satellite missions! The official CALIPSO-CloudSat launch date from NASA was set for Friday, 21 April 2006, 3:02 AM Pacific Daylight Time (10:02 UTC), but the mission was scrubbed within the last minute due to a communication problem. The launch is currently re-scheduled for 23 April. More...

New for GLOBE Students: The GLOBE Chief Scientist's Blog!

GLOBE Chief Scientist, Dr. Peggy LeMone, is starting a "blog" intended for GLOBE students. "Blog" is short for "weblog," and is an online journal where the author posts thoughts, comments, and philosophies to share with others. More...

10th Annual GLOBE Conference, 31 July - 4 August 2006

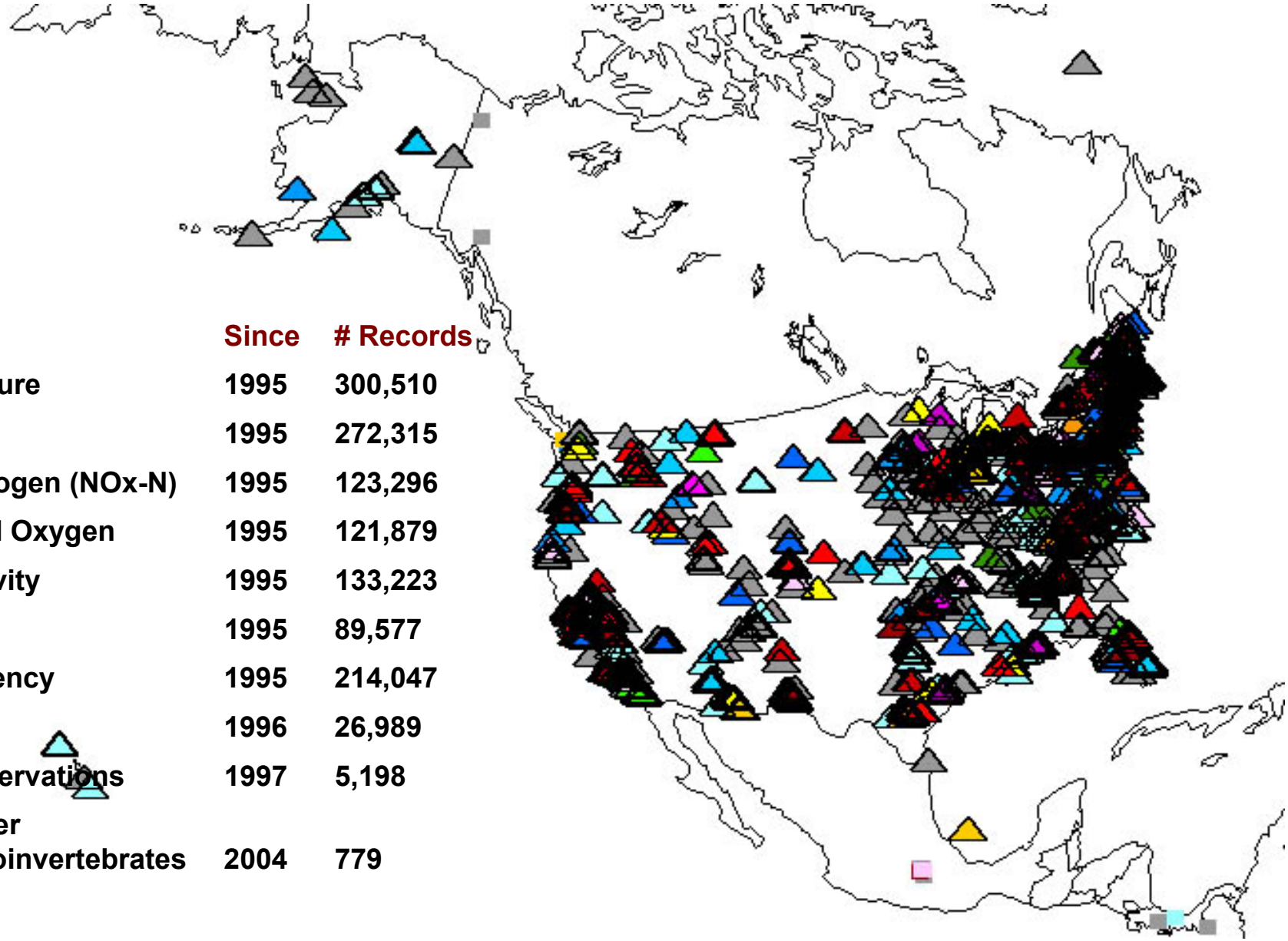
The GLOBE Annual Conference will take place in The Cape Panwa Hotel in Phuket, Thailand. This event is the first GLOBE Annual Conference to be held in Asia, giving opportunities for more international partners to attend. More...

GLOBE Europe Holds Annual Meeting in Paris

The GLOBE Europe Regional Consortium's annual meeting took place in Paris, France, hosted by GLOBE France at CNES on January 16 and 17, 2005, where future activities of the GLOBE Europe Consortium were discussed. More...

www.globe.org

Project Globe



Variable	Since	# Records
Temperature	1995	300,510
pH	1995	272,315
Total Nitrogen (NOx-N)	1995	123,296
Dissolved Oxygen	1995	121,879
Conductivity	1995	133,223
Alkalinity	1995	89,577
Transparency	1995	214,047
Salinity	1996	26,989
Tidal Observations	1997	5,198
Freshwater Macroinvertebrates	2004	779

World WATER MONITORING Day

AMERICA'S CLEAN WATER FOUNDATION

AMERICA'S CLEAN WATER FOUNDATION

America's Clean Water Foundation

International Water Association

International Water Association

Sponsors:

C&M Capitolink, LLC

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Georgia Pacific Foundation

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Save the Date: October 18

On October 18, citizens of the global community will join in World Water Monitoring Day (WWMD), a worldwide opportunity to positively impact the health of rivers, lakes, estuaries and other waterbodies. Volunteer monitoring groups, water quality agencies, students, and the general public are invited to test four key indicators of water quality: temperature, pH, dissolved oxygen, and turbidity.

It's Easy and it's Fun!
How to Participate:

1. Register your site. Choose any lake, stream, bay, or other waterbody where you can safely monitor. Register your site beginning July 18 each year by clicking on WWMD Database to enter the World Water Monitoring Day registration database.

What's New?

Click above to see what's new in World Water Monitoring Day

Girl Scout WWMD Badges

WWMD in Taiwan

ACWF President: US Water Ambassador

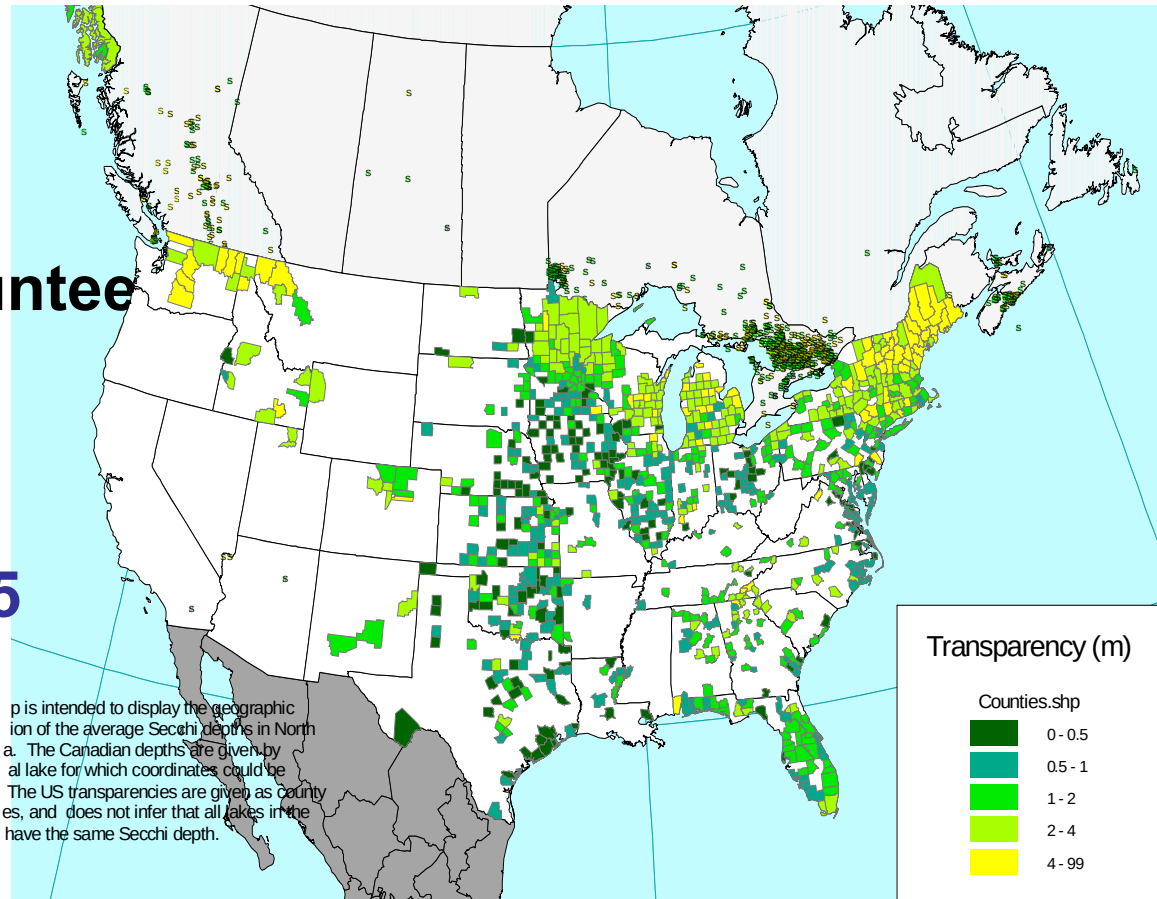
To Taiwan in 2005

To Germany in 2004

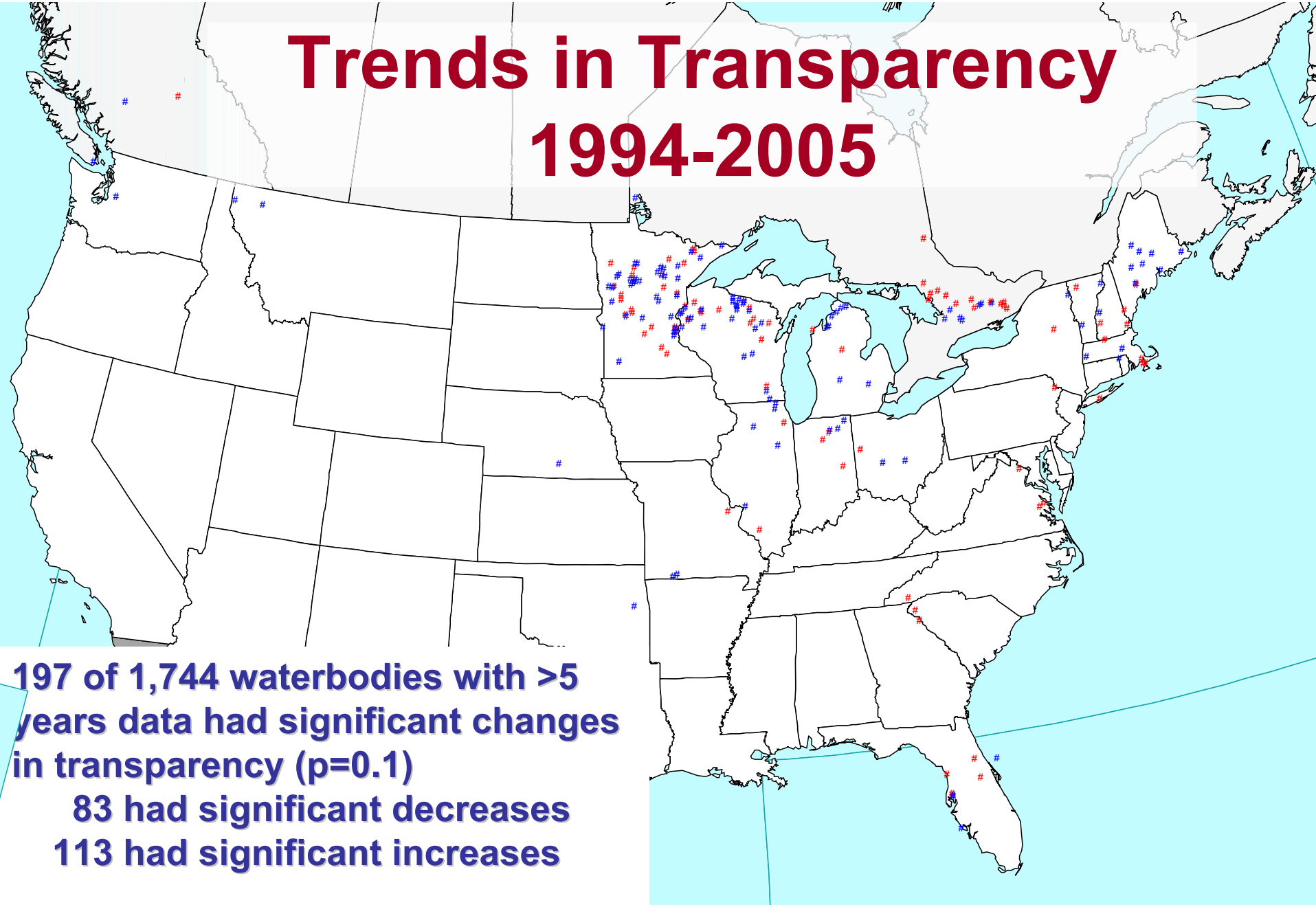
The Great North American Secchi Dip-In

Since July, 1994

- 33,906 Data Records
- Providing 33,655 transparency records
- On 6,400 waterbodies
- By 10,700 volunteers
- **Belonging to 370 voluntee and professional programs**
- **In 50 US states, 8 Canadian provinces, 5 other countries**



Trends in Transparency 1994-2005



197 of 1,744 waterbodies with >5 years data had significant changes in transparency (p=0.1)

83 had significant decreases

113 had significant increases

Possible Lessons to be Learned

- Regional and national surveys are rare and sporadic
- Sampling methodology is inconsistent
- Analytes vary with primary intent of survey
- Choice of waterbody varies
- Housing of the data in STORET, when done, allows future access
- Data can be lost as technology changes