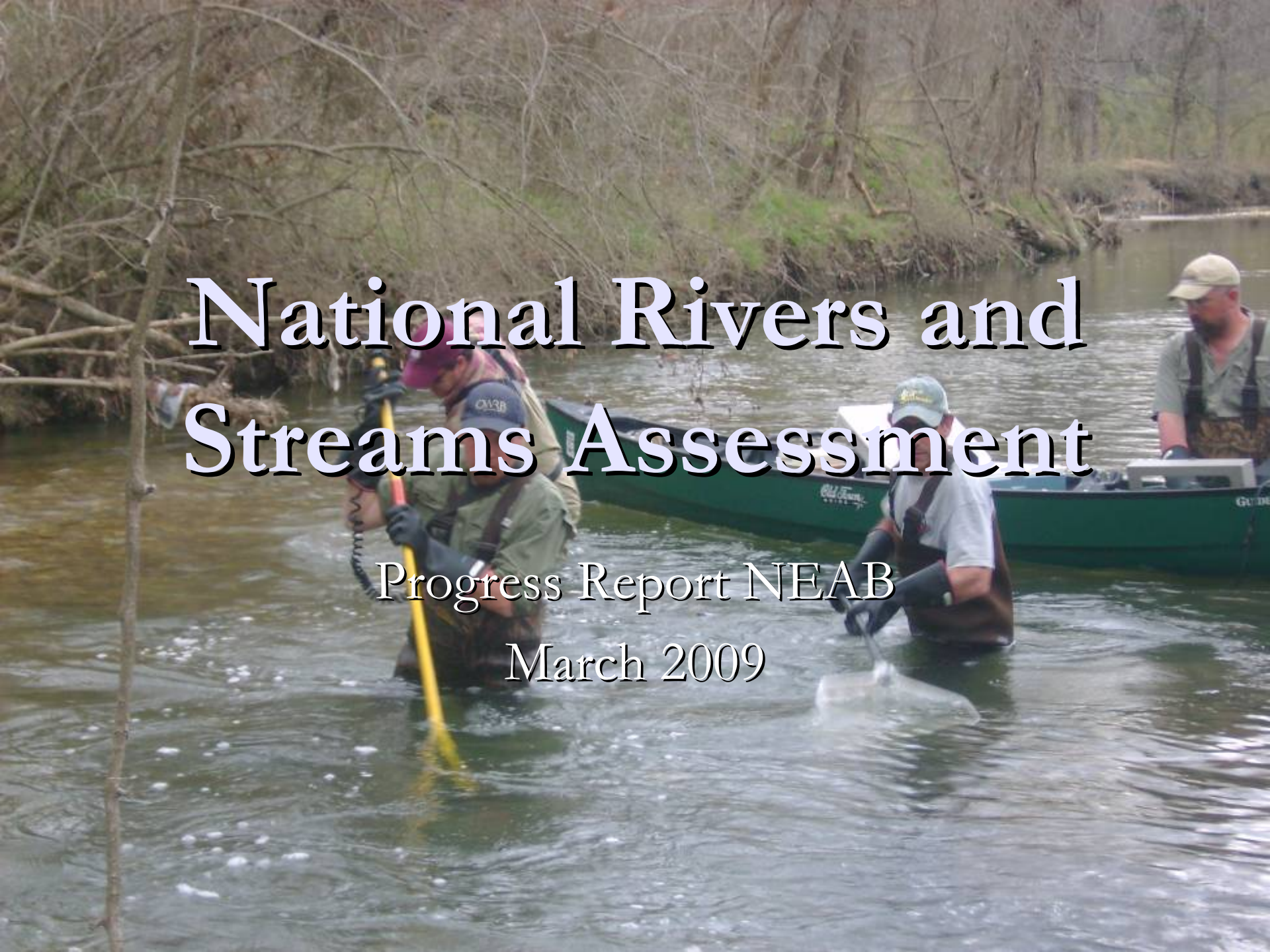


US EPA ARCHIVE DOCUMENT

A photograph of three people in a river, wearing waders and using tools like a yellow pole and a net, likely conducting a water quality or habitat assessment. The background shows a riverbank with bare trees and a green boat.

National Rivers and Streams Assessment

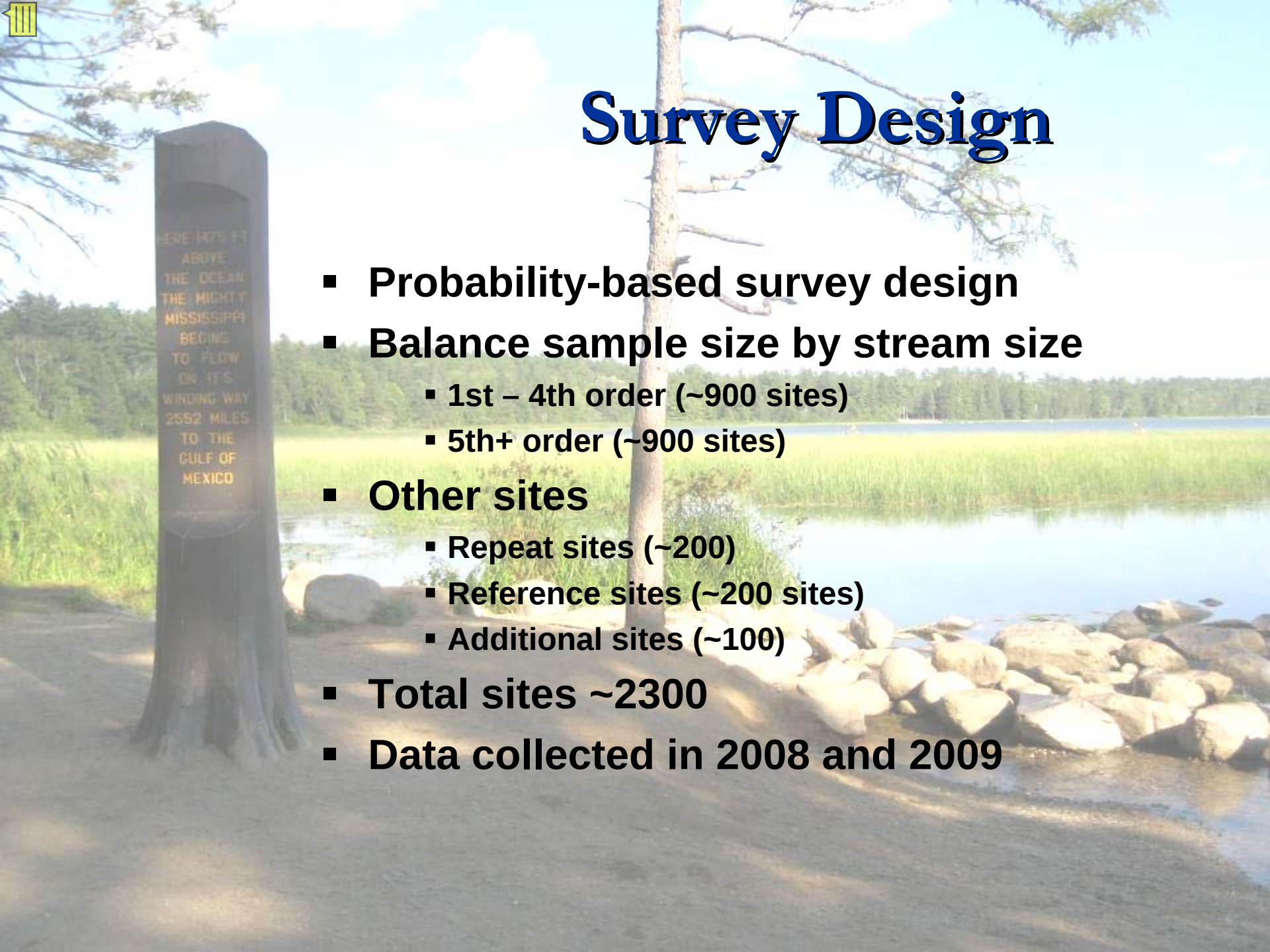
Progress Report NEAB

March 2009



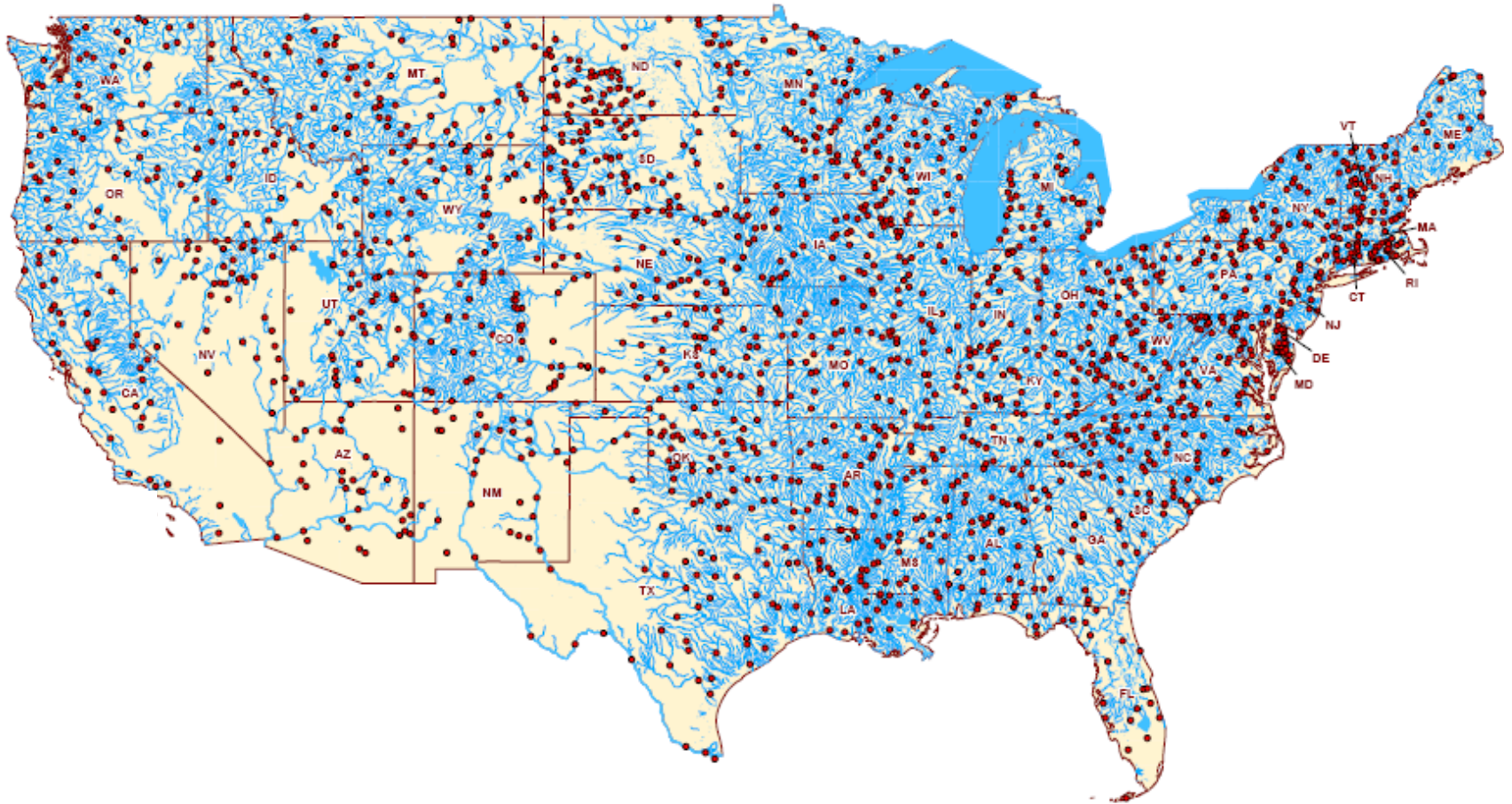
Survey Design

- **Probability-based survey design**
- **Balance sample size by stream size**
 - 1st – 4th order (~900 sites)
 - 5th+ order (~900 sites)
- **Other sites**
 - Repeat sites (~200)
 - Reference sites (~200 sites)
 - Additional sites (~100)
- **Total sites ~2300**
- **Data collected in 2008 and 2009**



HERE 1475 FT
ABOVE
THE OCEAN
THE MIGHTY
MISSISSIPPI
BEGINS
TO FLOW
ON ITS
WINDING WAY
2552 MILES
TO THE
GULF OF
MEXICO

1800 NRSA Sites



Data Crews are Collecting

- In situ temperature, pH, DO, and conductivity
- Secchi transparency (in rivers)
- Water chemical quality and nutrient concentrations
- Chlorophyll-a
- Sediment enzymes
- PPCPs from water column (urban sites)



Data Crews are Collecting

- Periphyton
- Benthic macroinvertebrates
 - Including Low Gradient Stream Study
- Enterococci
- Fish Community
- Fish Tissue
 - Including PPCPs (urban sites)
- Physical habitat characteristics



Successes - NRSA

■ Field Sampling

■ Crews trained

- 13 trainings
- More than 300 people trained
- 53 crews
- 868 sites sampled

■ Lab Processing

- Majority of labs in place and samples being processed

■ Quality Assurance

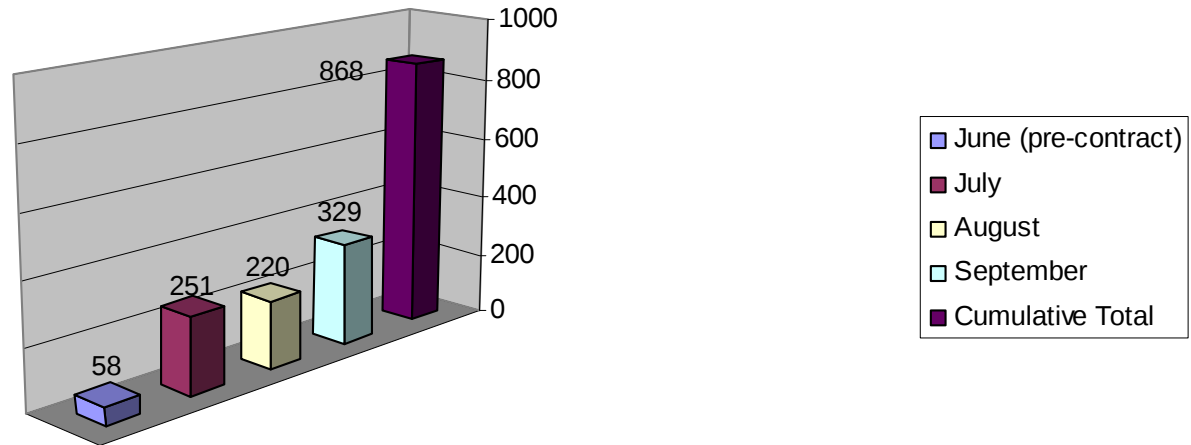
- 40 + field audits



Sampling Progress

9/29/08

Number of NRSA Sites Monitored - 2008



868 Sites Sampled

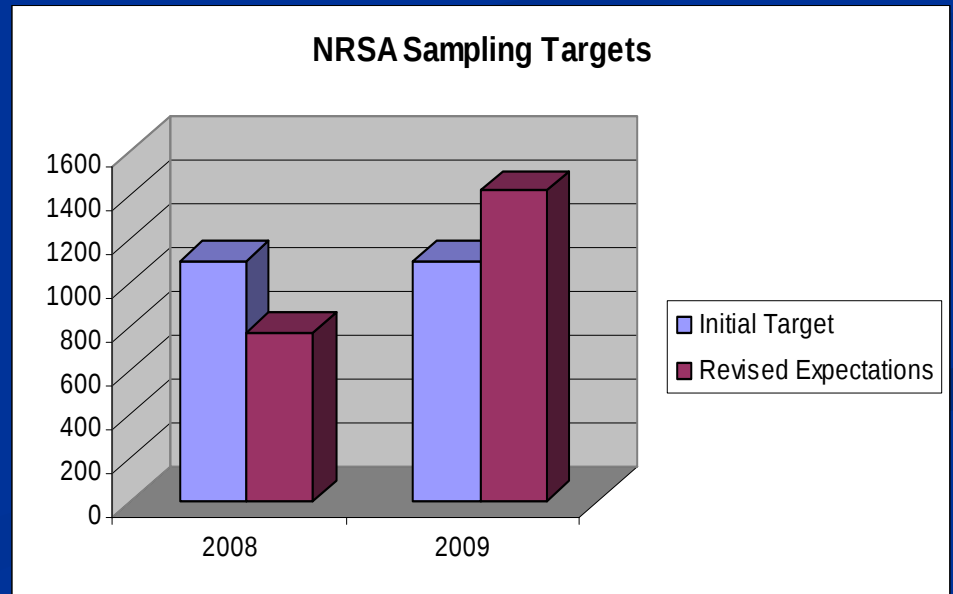
**~40% of the Urban
PPCP samples
collected**

**>6800 Samples
Collected***

* Does not include field data (e.g. habitat)

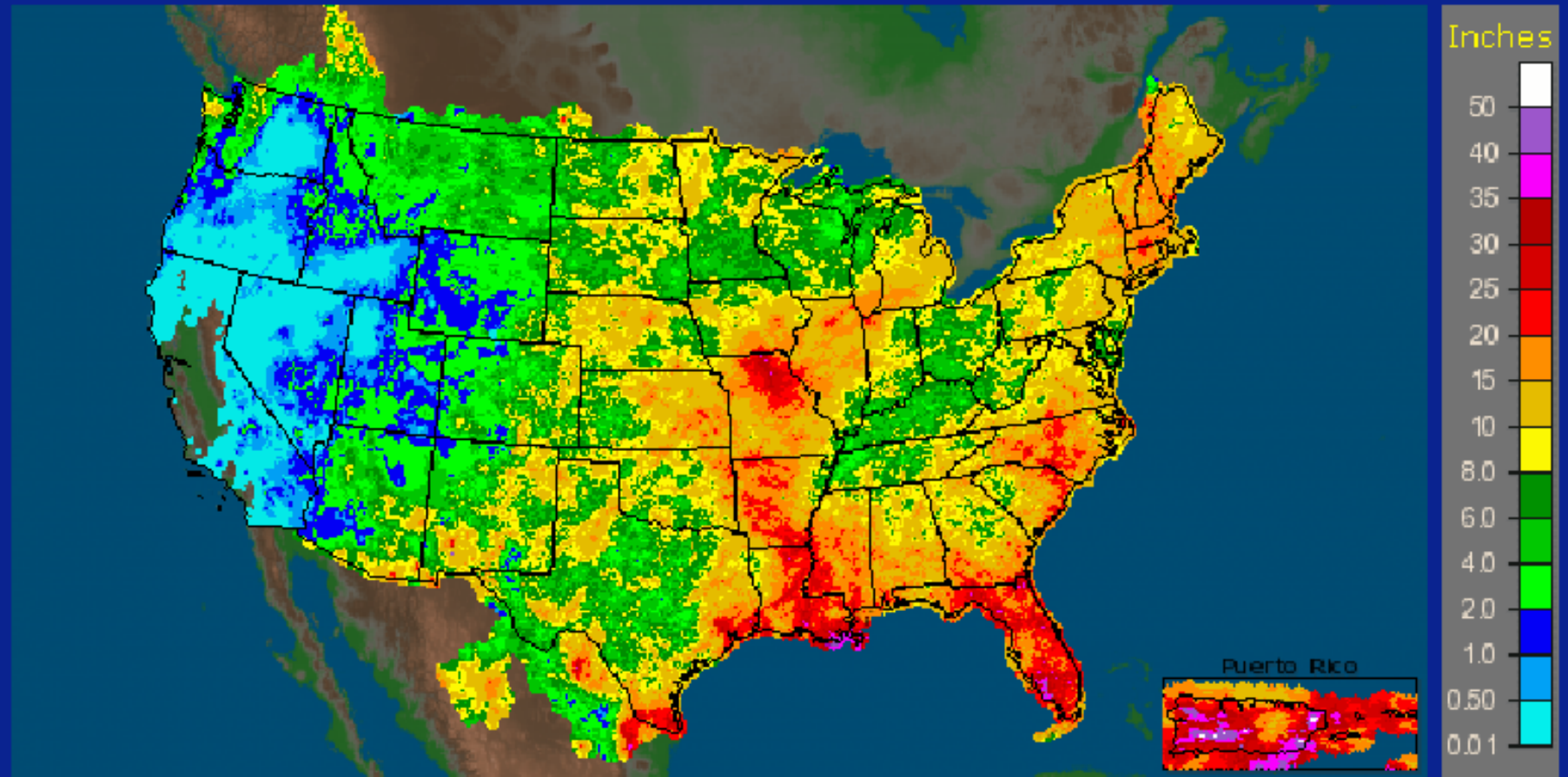
2008 Challenges

- Initial Estimates for Sampling
 - ~1100 sites in 2008
 - ~1100 in 2009
- June/Early July – Identified minimum number of 2008 sampled sites to ensure project completion over two years
 - Weather related problems
 - Long field days
 - Others



Rainfall During Summer 2008

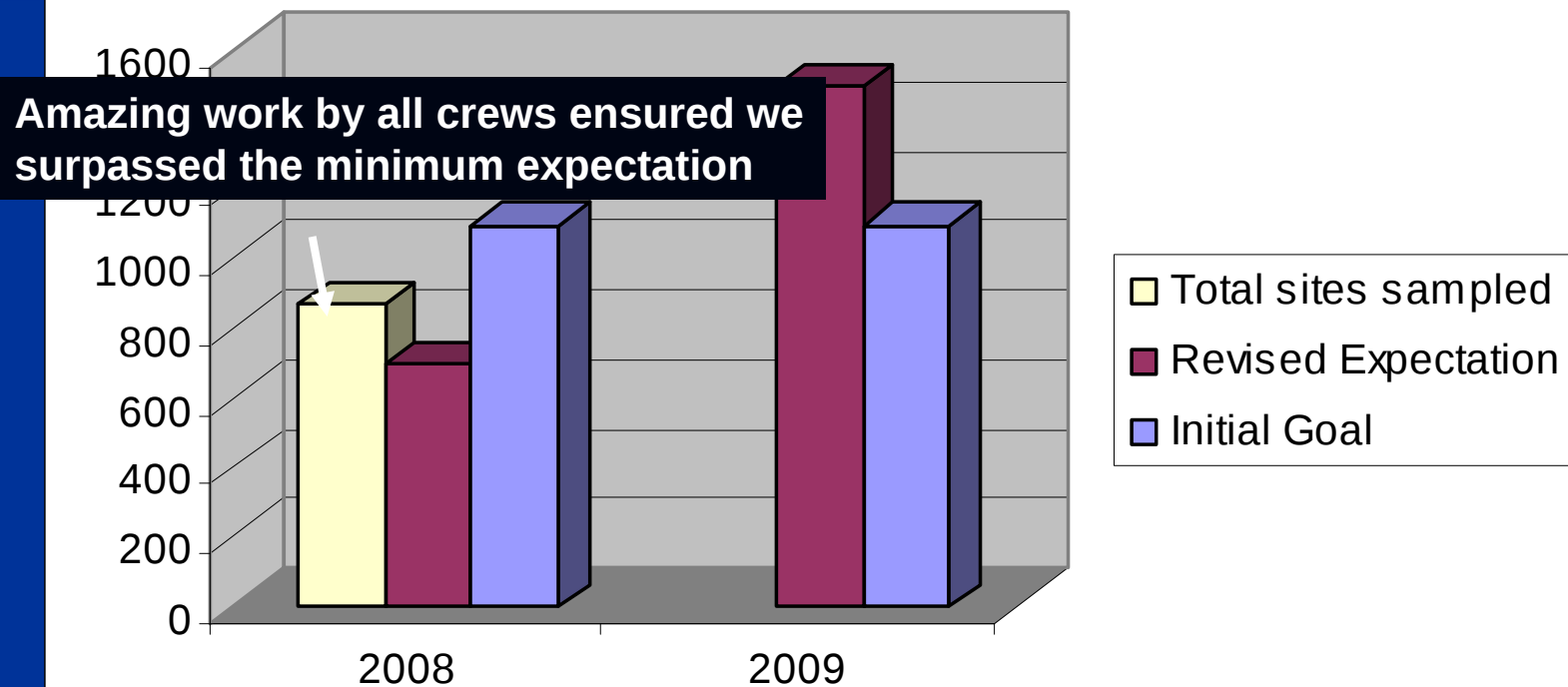
CONUS + Puerto Rico: Current 90-Day Observed Precipitation
Valid at 9/27/2008 1200 UTC - Created 9/27/08 18:42 UTC



☒ Topo ☒ Pcpn Amount ☐ Counties ☐ Rivers ☒ States ☐ Highway/City ☐ RFC Boundary

Despite the challenges...

NRSA - Total Sites Sampled



2009 Field Season

- Reconnaissance started on sites for next year
 - State and Contract crews planning field season, schedules, etc now
 - Additional crews added to increase sampling rate
- Trainings for 2009 field season are being scheduled
 - Region 1 contact is Tom Faber
 - Final field manual distributed at the end of March, send comments ASAP to Ellen Tarquinio
- Increased state participation for 2009 across the country



Region 1 Training

Training June 8-10 at the Region 1 lab

Webinar Scheduled for June

Boatable and Wadeable protocols

Contact:

Tom Faber Region 1 (faber.tom@epa.gov)

Ellen Tarquinio EPA HQ (tarquinio.ellen@epa.gov)

Continuing Analysis from WSA

- Wadeable Streams Assessment field work completed in 2004; Report in 2006
- Areas of continuing work:
 - Field Methods comparability
 - Lab Methods Comparability
- Incorporation in NRSA
 - Trends Assessment
 - Evaluation of low gradient benthic protocols

Looking forward

■ Data Analysis

- Evaluating different approaches to establishing reference
- Incorporating multiple biological indicators
- Exploring application of BCG based on pilot work currently being used

■ Design Year

- Evaluation of field and lab methods from 08/09 season
- Incorporation of comparability work

Questions?

- HQ Contact:

- Ellen Tarquinio

- Tarquinio.ellen@epa.gov

- 202-566-2267

- Treda Smith

- Smith.treda@epa.gov

- 202-566-0916