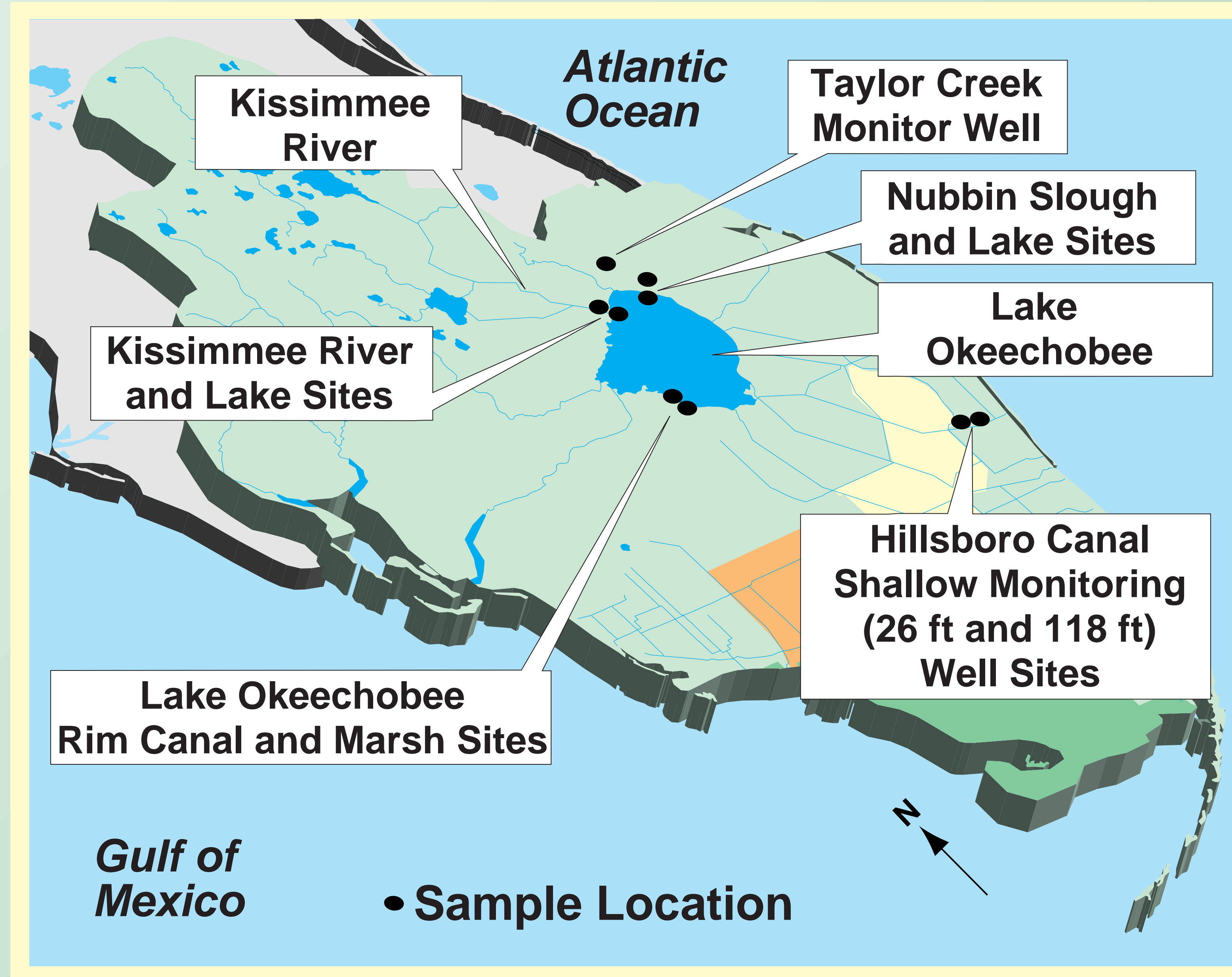
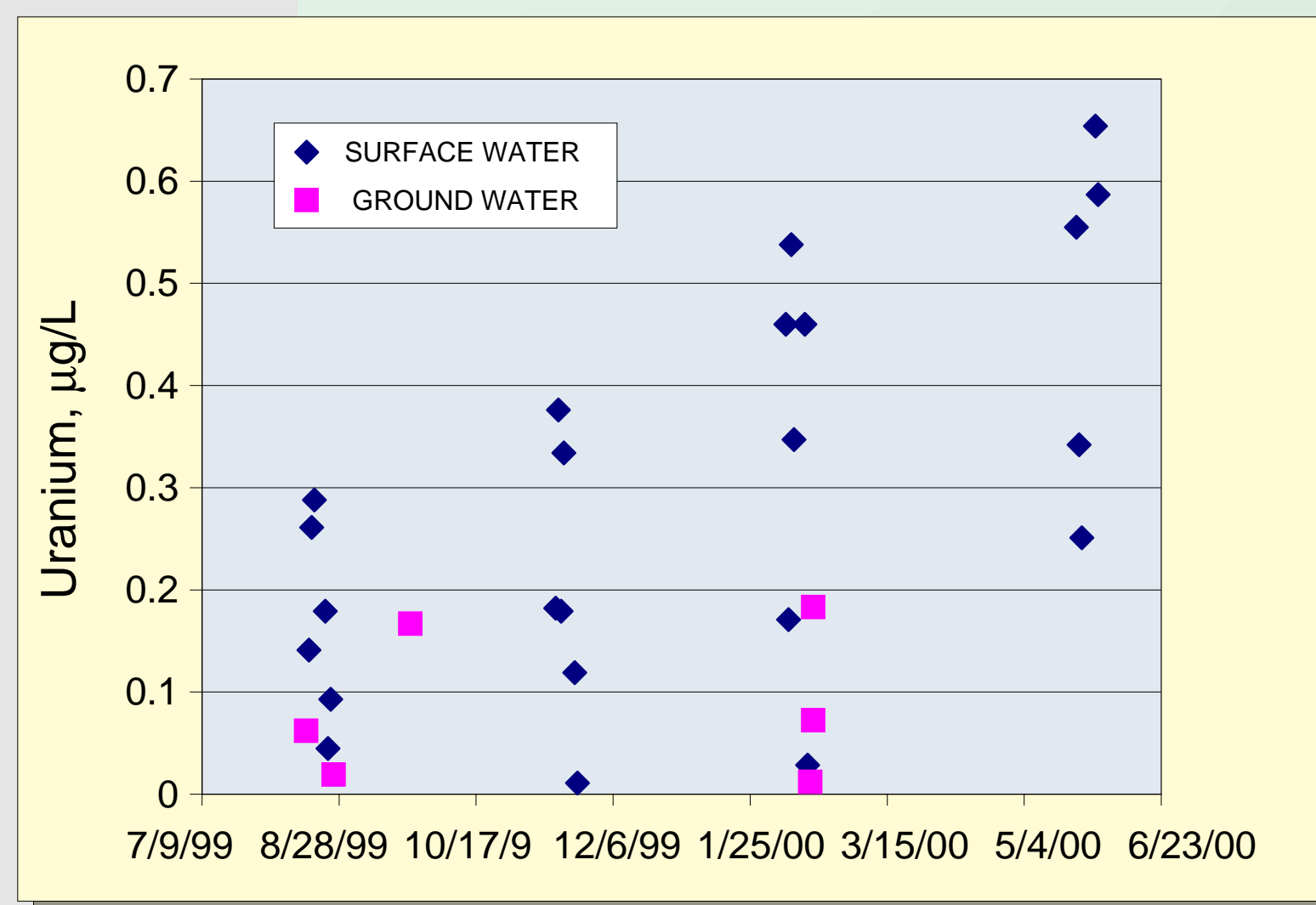
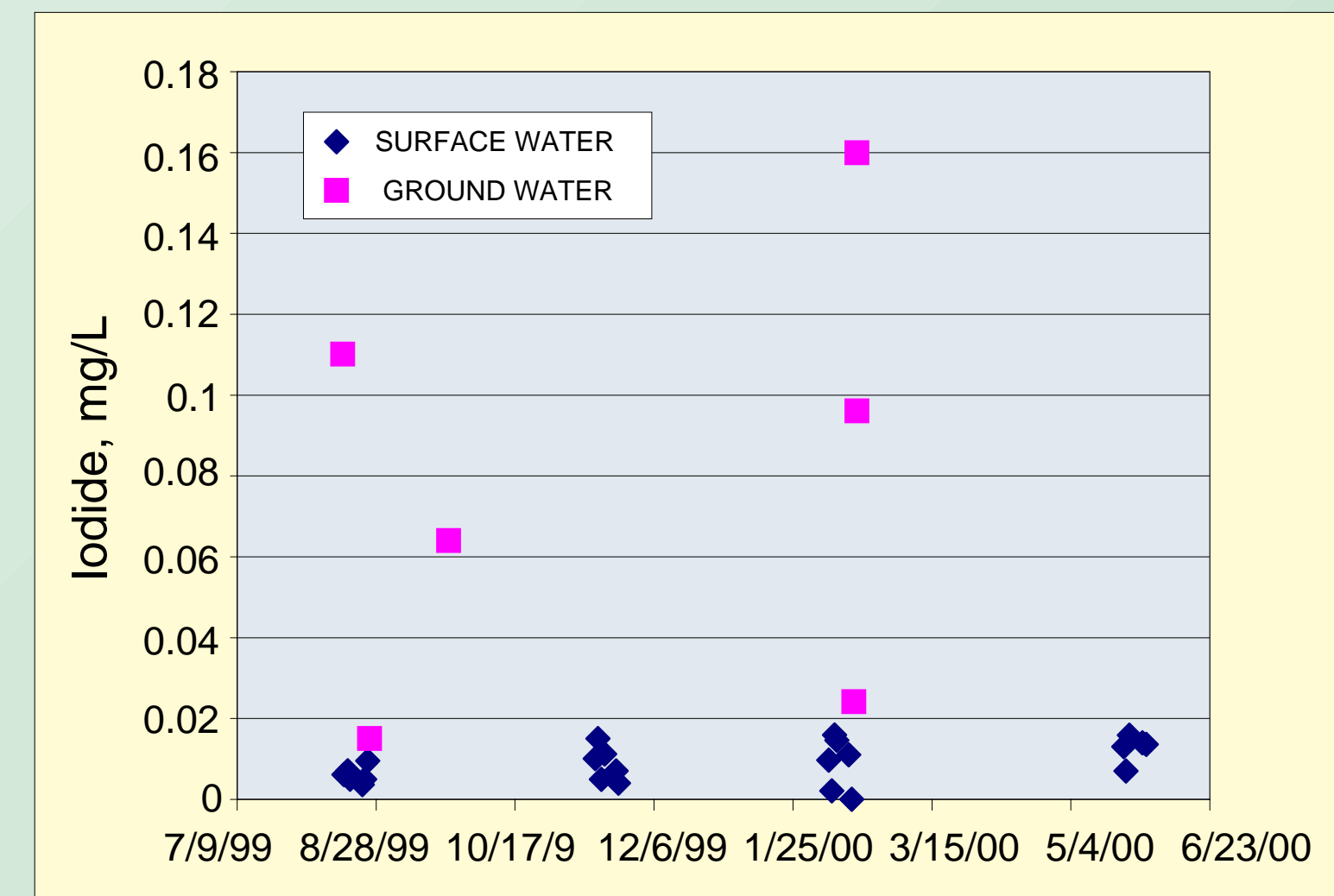
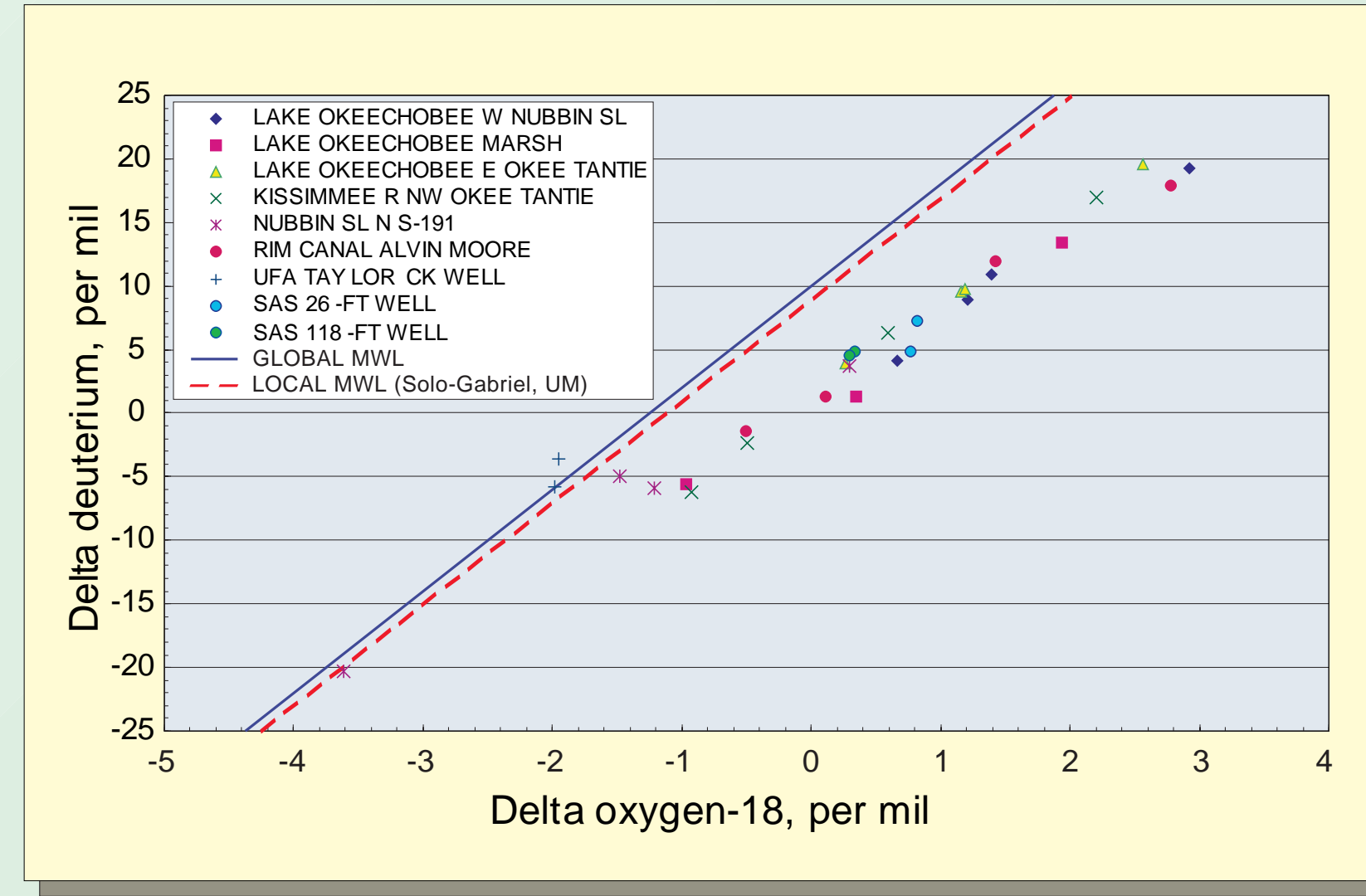
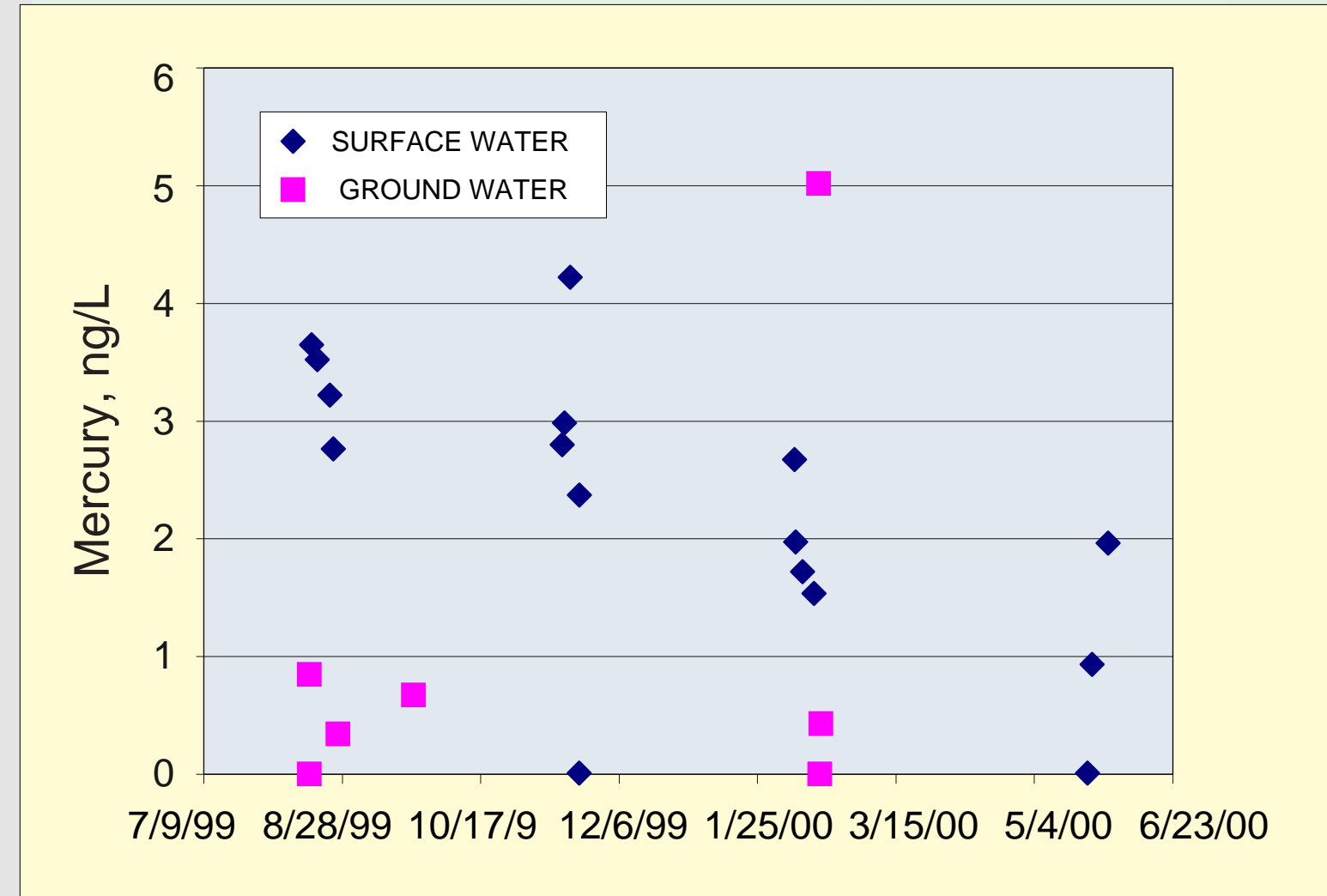


# WATER-QUALITY CHARACTERIZATION OF SURFACE AND GROUND WATERS FOR GEOCHEMICAL MODELING OF AQUIFER STORAGE AND RECOVERY, SOUTH FLORIDA, 1999-2000



**OBJECTIVE OF 1999-2000 WATER-QUALITY SAMPLING STUDY**

Characterize the quality of surface and ground water in areas anticipated for ASR

Collect some of the information and data needed for geochemical modeling

**PROPOSED MODELING PROJECT**

Geochemical Modeling of Water-Rock Interactions Resulting from Aquifer Storage and Recovery near Lake Okeechobee

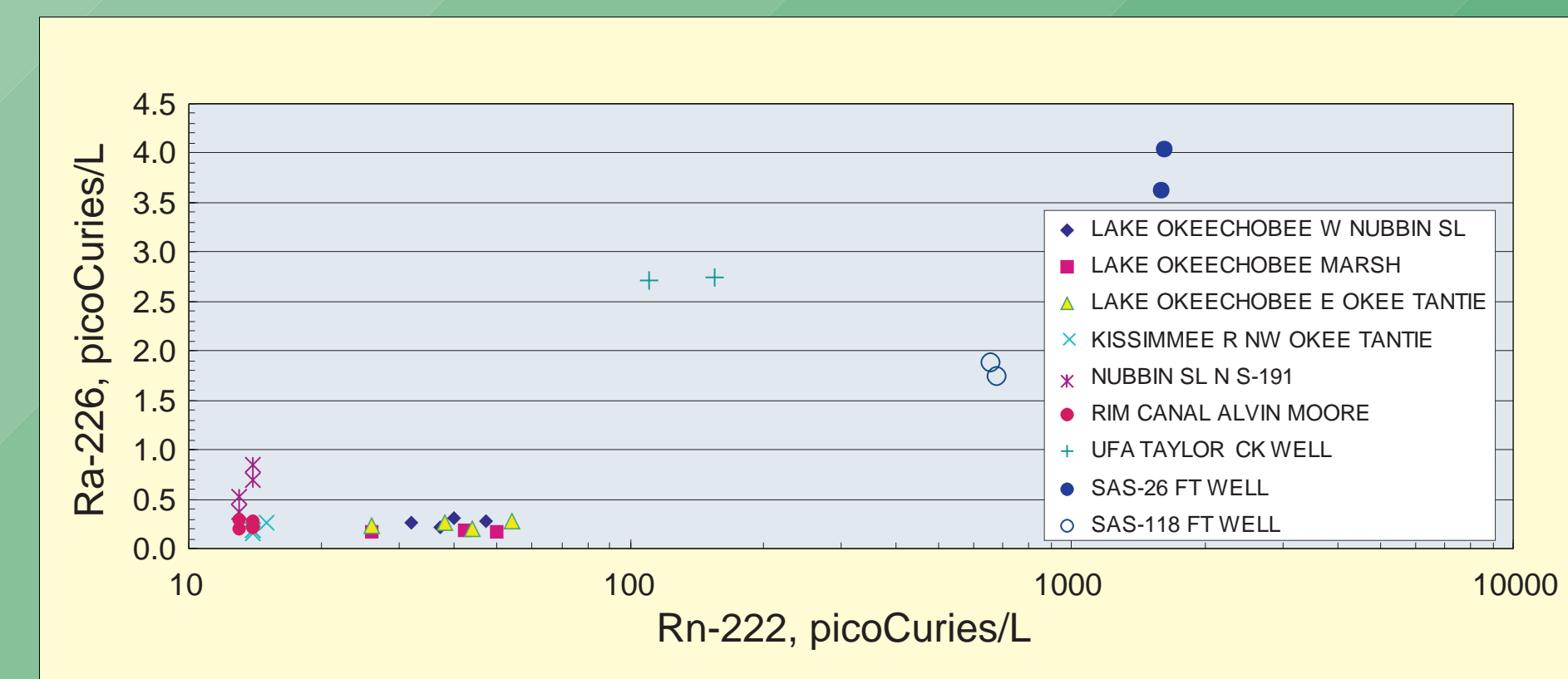
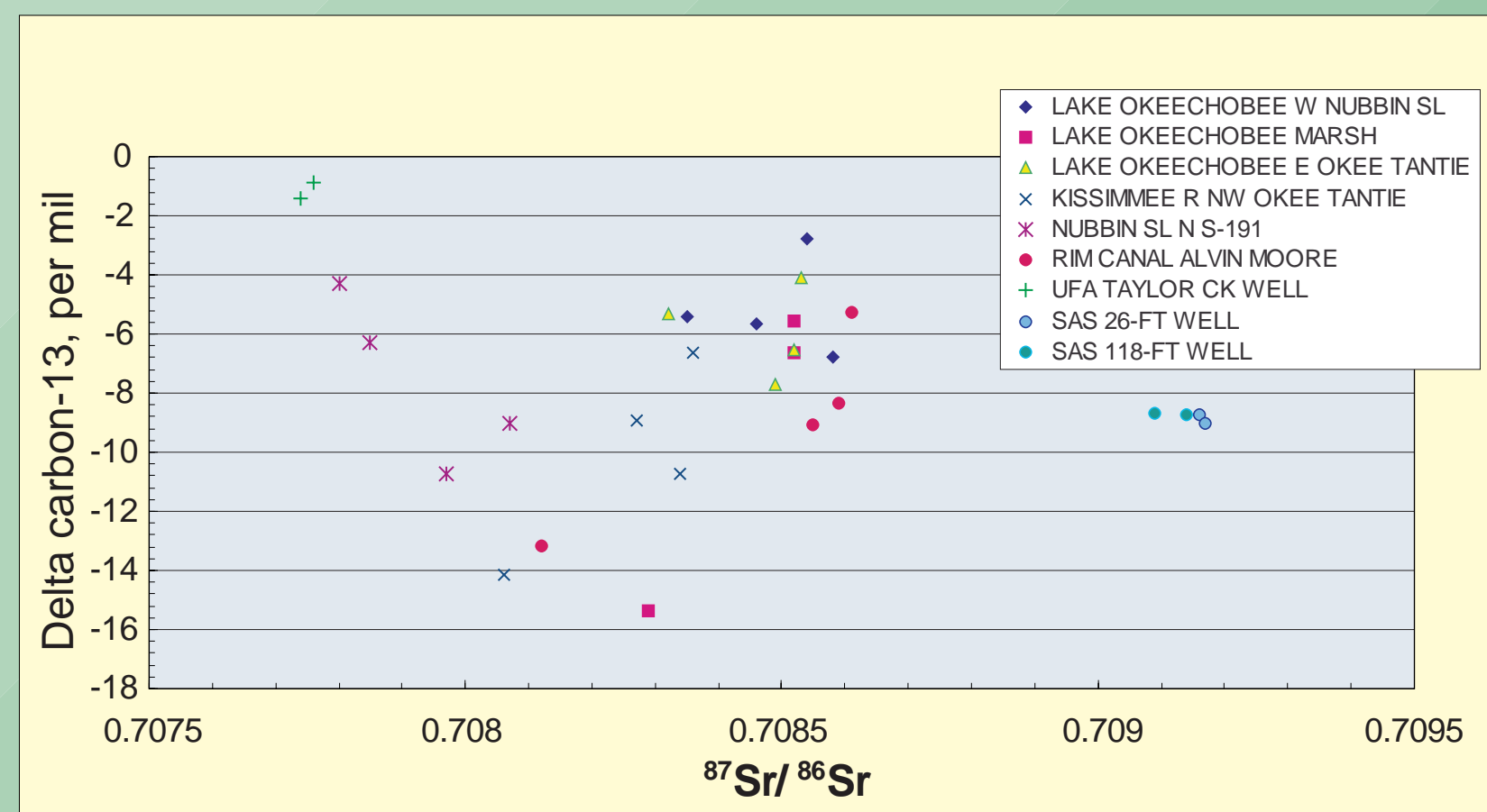
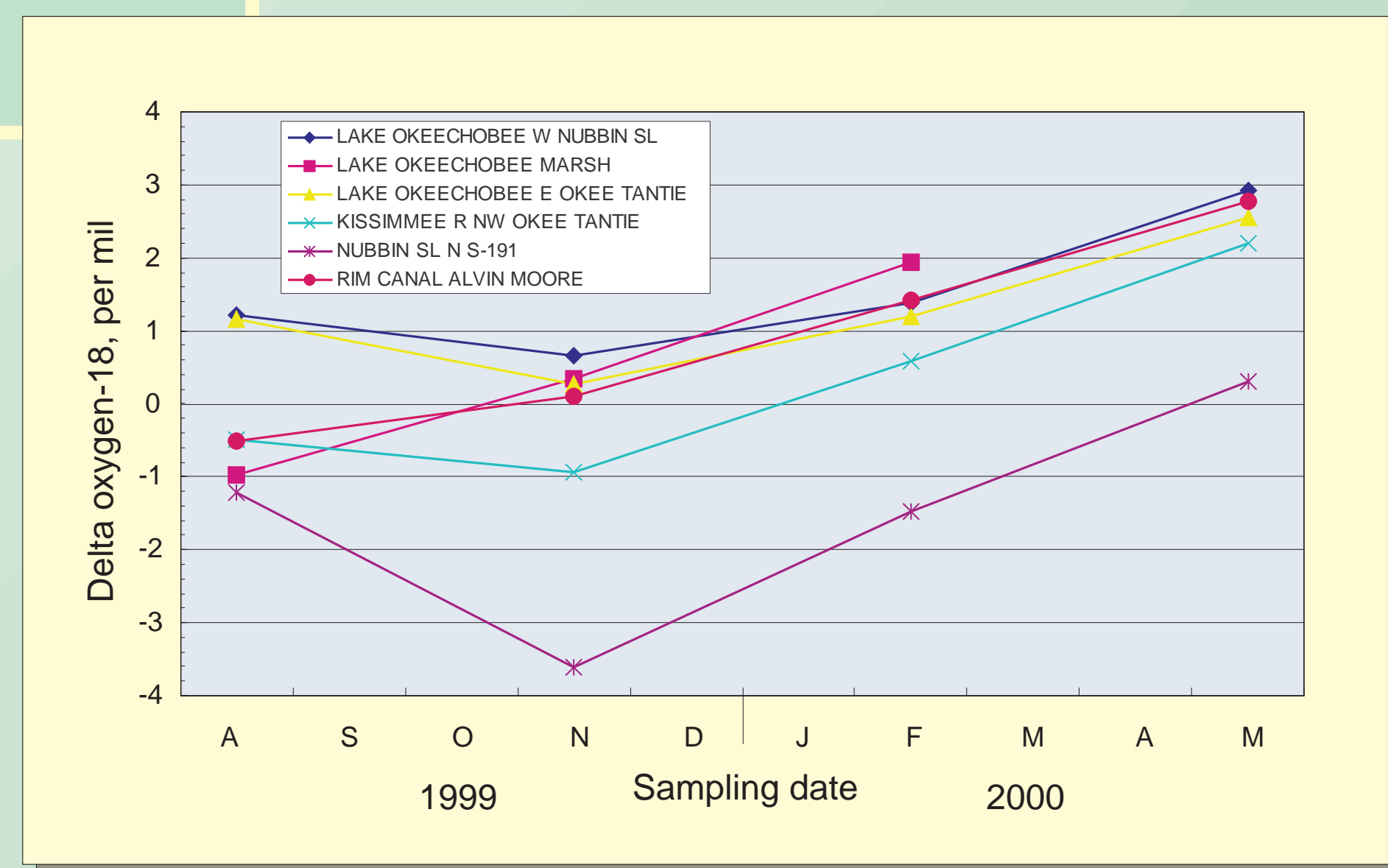
**OBJECTIVES:**

- Identify dominant geochemical reactions that will result from interactions of injected water, aquifer material, and native water in targeted injection zones
- Determine which naturally occurring environmental tracers and isotopes are most effective in quantifying mixing reactions, water-rock dissolution/precipitation reactions, and recovery efficiency of injected water that is stored in the Upper Floridan aquifer

- PARAMETER MEASURES**
- DO, Temperature, pH, alkalinity
  - Major ions
  - Nutrients, DOC
  - Chlorophyll
  - Trace elements
  - Isotopes of O, H, C, N, Sr
  - Radionuclides

**MODELS OF MIXING AND GEOCHEMICAL REACTIONS WILL REQUIRE INFORMATION ON:**

- Chemical composition of source water
- Chemical composition of native ground water
- Chemical composition of aquifer materials



Examples of data that may be useful for geochemical modeling