

*The Delta Science Program, Ecosystem Restoration Program & Surface Water Ambient Monitoring Program Jointly Present a Brown Bag Seminar Series*

## **The Delta Carbon Cycle – Quantify, Manage, & Trade Opportunities for Applying New Science to Restoring Wetlands and Storing Carbon in the SF Estuary**



**Judith Z. Drexler –  
Wetland Ecologist  
U.S. Geological Survey**

**Friday, April 4, 2014  
12:00 – 1:00 p.m.**

**Location: Cal EPA Building  
Byron Sher Conference Room  
1001 'I' Street  
Sacramento, CA 95814**

### **What processes regulate wetland formation and carbon storage?**

The Sacramento-San Joaquin Delta included approximately 540 square miles of tidal freshwater marshes and winding channels before being drained and converted to agricultural use. These marshes, with their deep peat soils, stored large quantities of carbon providing an important ecosystem service.

During the past 10-plus years, there has been considerable research on remnant and constructed marshes in the Delta. This presentation will share results of this wetland research and provide lessons learned to inform anticipated wetland restoration efforts in the Delta and Suisun Marsh. In particular, processes that regulate marsh formation and the accumulation and storage of carbon will be presented. Carbon sequestration rates in impounded vs. natural tidal marshes in South Carolina, a direct analog to sites in the Suisun Marsh, will also be discussed. Lastly, the presentation will pinpoint current data gaps and potential improvements to marsh sustainability models. The goal of the talk is to encourage the use of newly available science to ensure that wetland restoration will be sustainable now and in the face of climate change.