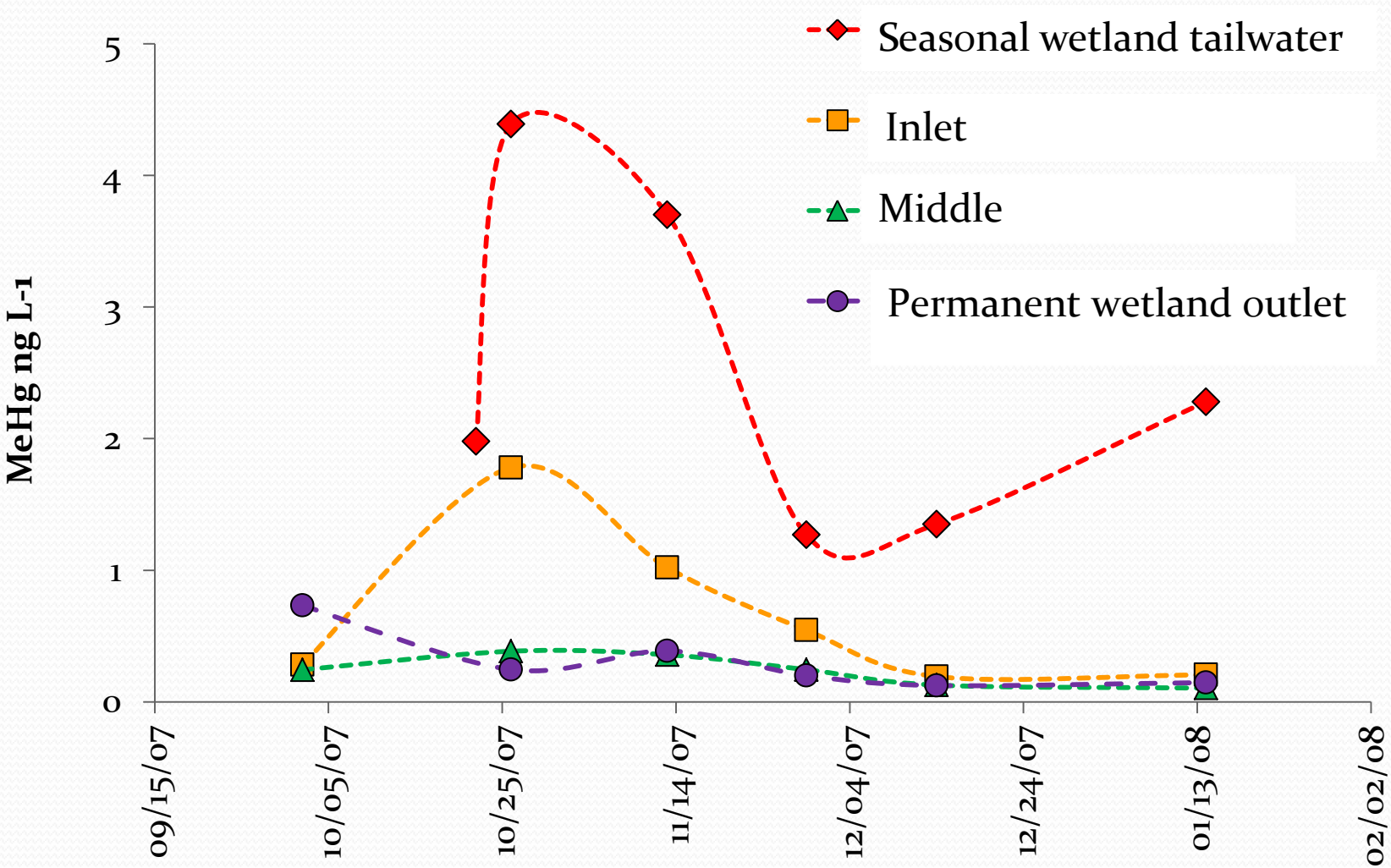
Development of best management practices to reduce methyl mercury exports and concentrations from seasonal wetlands in the Yolo Wildlife Area.

Wesley Heim, Kenneth Coale, and Mark Stephenson

Funding: California Fish and Game

March 6th, 2012 at CVWQCB, Rancho Cordova

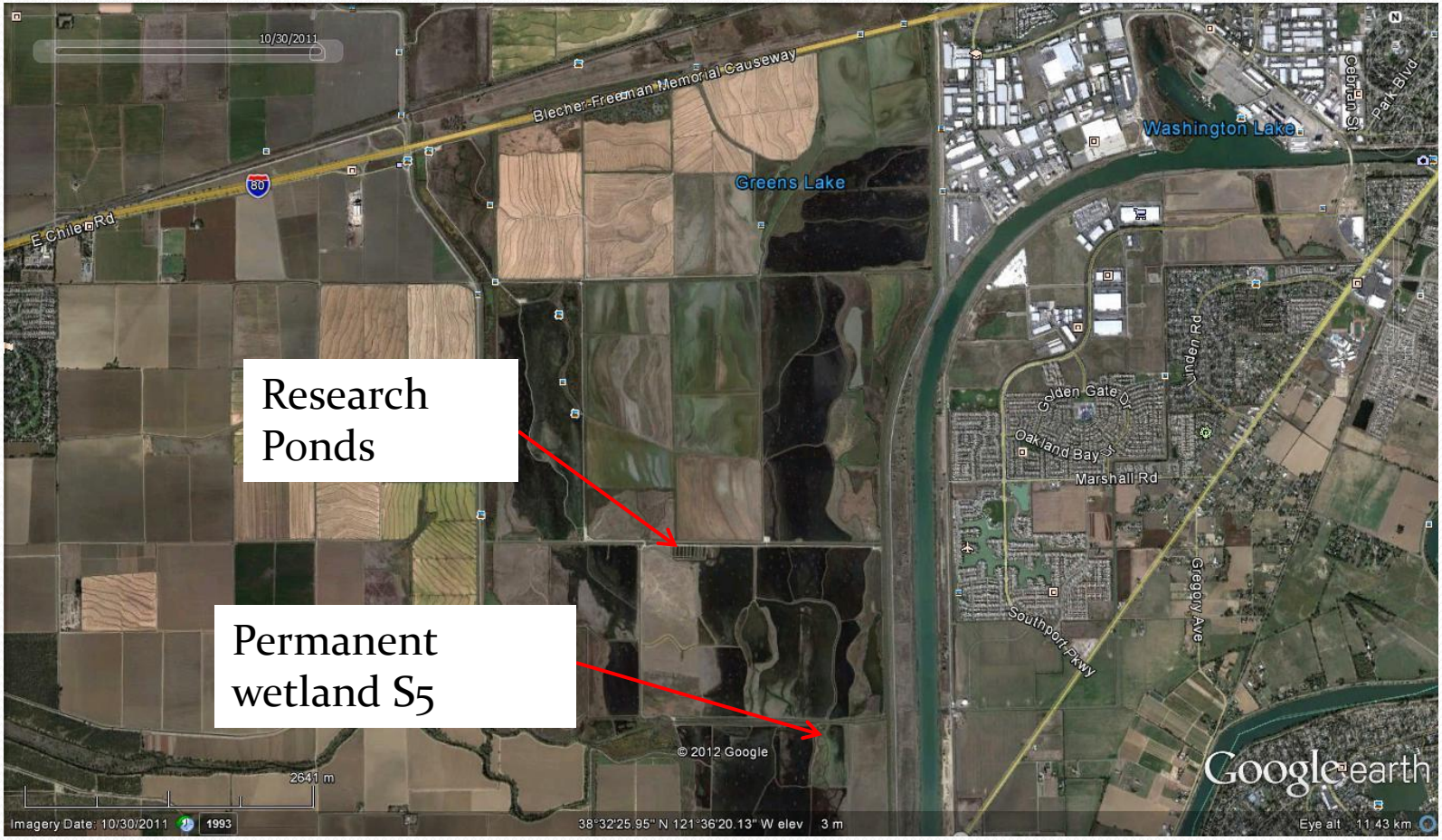
Permanent wetland as treatment pond



Grant Objectives

- Objective 1. Construct permanent wetlands.
- Objective 2. Confirm MeHg is reduced in permanent wetlands.
- Objective 3. Determine the effect of size, depth, and hydraulic residence time of permanent and experimental wetlands on MeHg removal.
- Objective 4. Identify MeHg removal mechanisms (photodegradation, particle scavenging/settling, flux) in the permanent and experimental wetlands to aid in wetland design.
- Objective 5. Determine if MeHg concentrations are reduced by summer grazing on seasonal wetlands and if so develop into BMP.
- Objective 6. Determine which summer plant species minimize MeHg production after flooding of seasonal wetlands and develop into BMP (related to biomass).

Research sites



South permanent wetland 5

Research ponds site

Research ponds

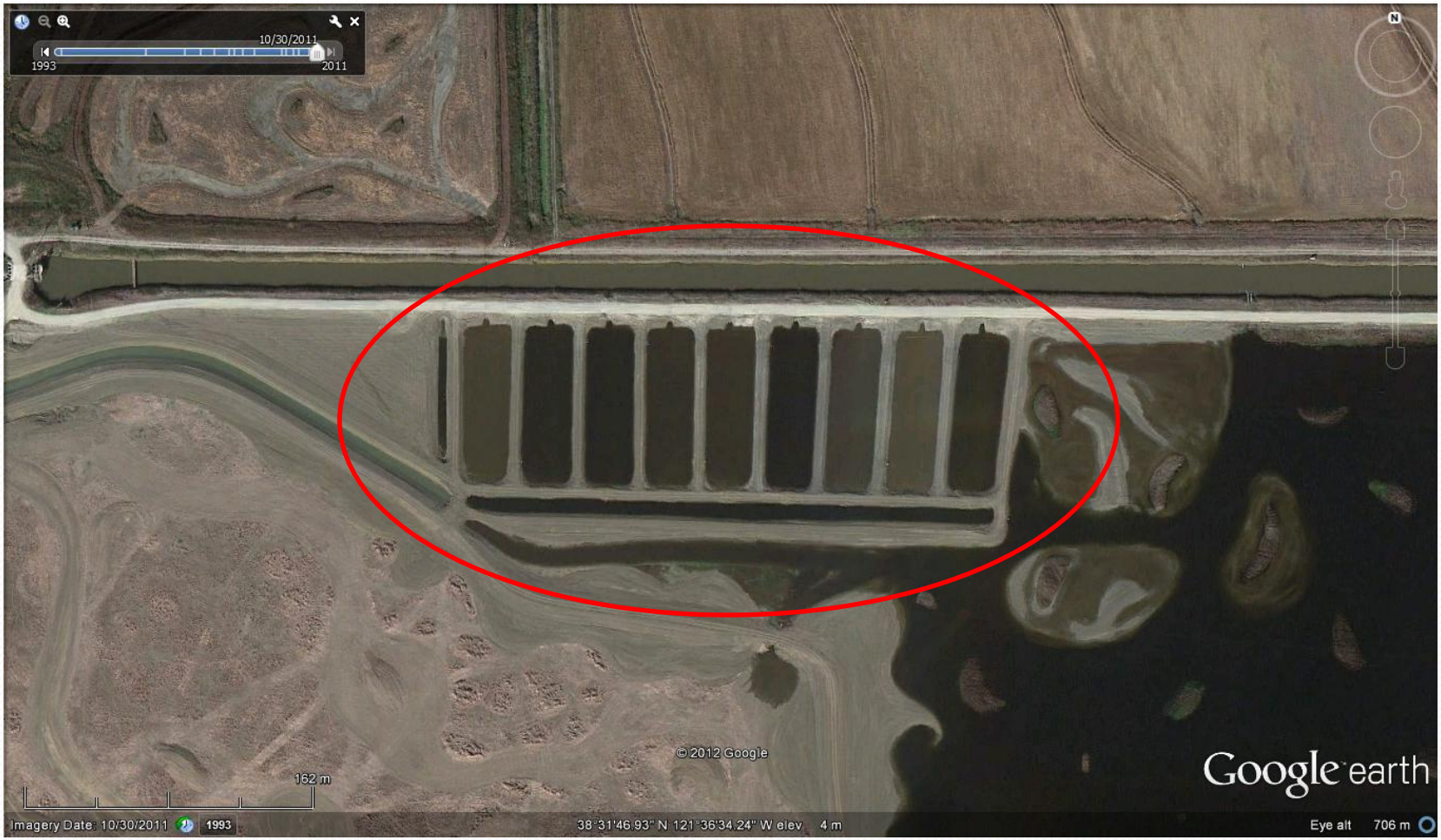


Photo Credit: http://www.dfg.ca.gov/lands/wa/region3/yolo/photos.html