

**Dr. Doug Smith**

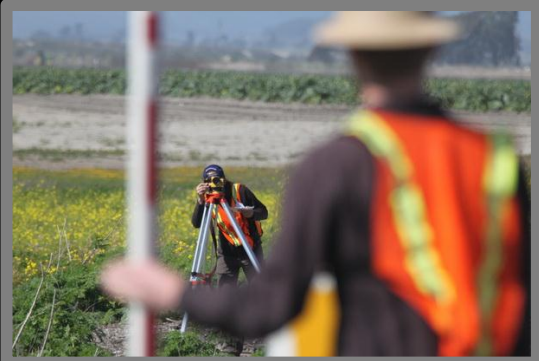
**Division of Science & Environmental Policy**

**Watershed Institute**





# Research Feeds Curriculum





# Watershed-Marine Bridge



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Terra-scanner

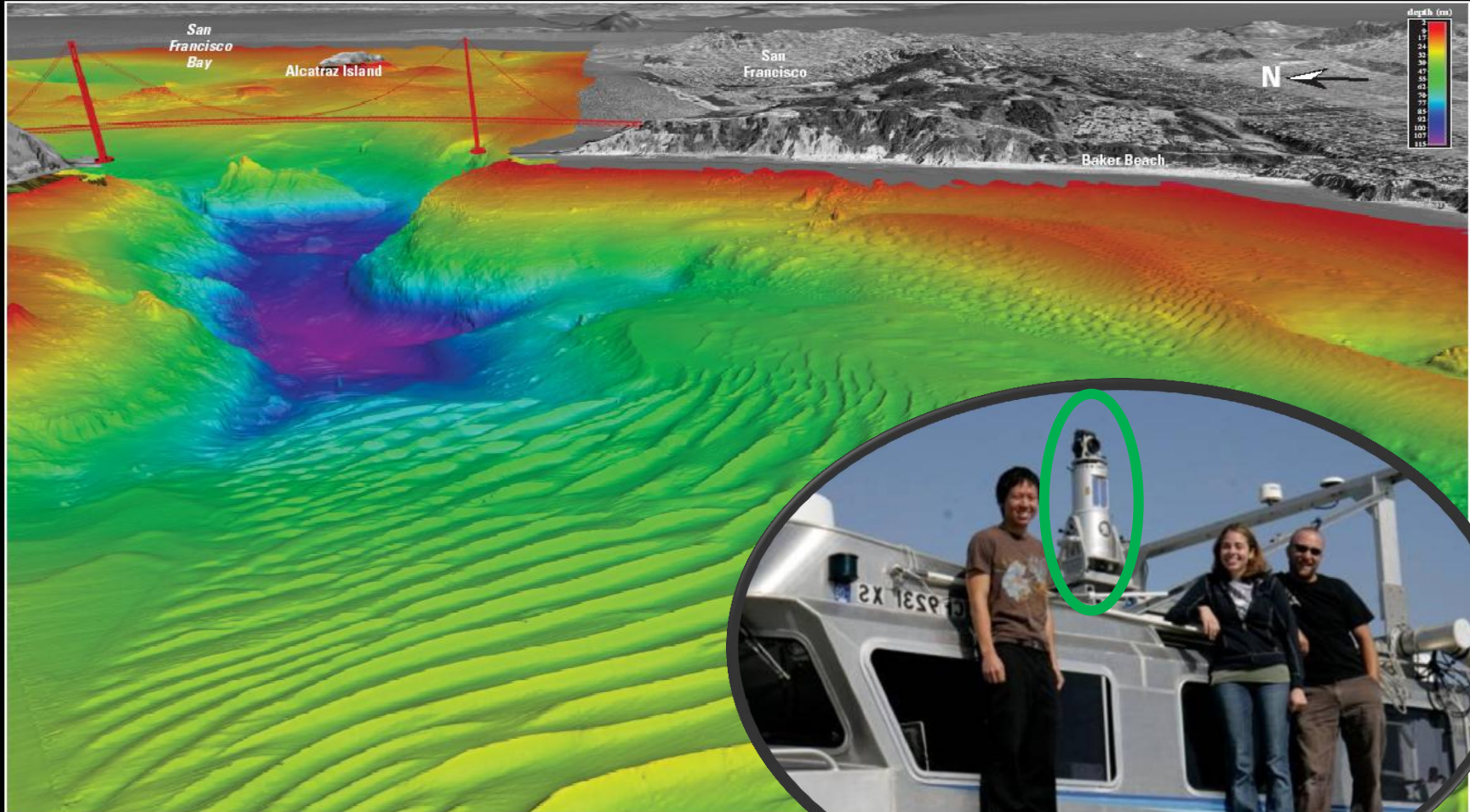




# Coastal Erosion

## Sand Waves at the Mouth of San Francisco Bay, California

Patrick L. Barnard<sup>1</sup>, Daniel M. Hanes<sup>1</sup>, Rikk G. Kvitek<sup>2</sup>, and Pat J. Iampietro<sup>2</sup>



Perspective view of the giant sand wave field at the mouth of San Francisco Bay, just seaward of the Golden Gate. The wave is 2.4 m high, 400 m wide, and 240 degrees long, and is a digital orthophoto quadrangle (DOQ) on USGS digital elevation models (DEM), with 25 m resolution (1.2 mi). The bathymetry inside the bay is from Darnell and Gartner (1999), Golden Gate.

<sup>1</sup>USGS, Geological Survey  
California State University, Monterey Bay

For more information on this study, go to [http://pubs.usgs.gov/coastal/\\_process/](http://pubs.usgs.gov/coastal/_process/)






Monterey Dunes Way

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Google earth

Imagery Date: 5/1/2011  2004

10 S 608122.84 m E 4070255.18 m N elev 7 ft

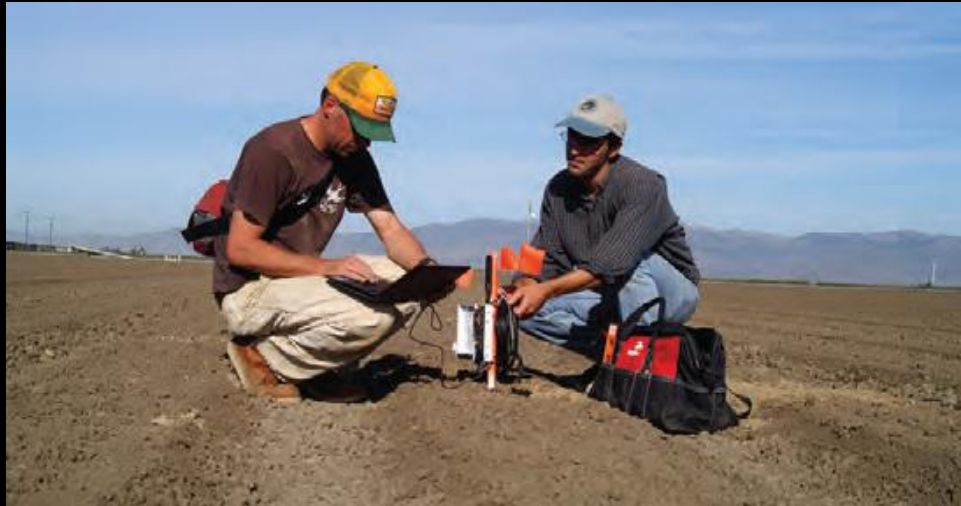
Eye alt 637 ft 







# Working with growers to address water management challenges using satellite data and field measurements

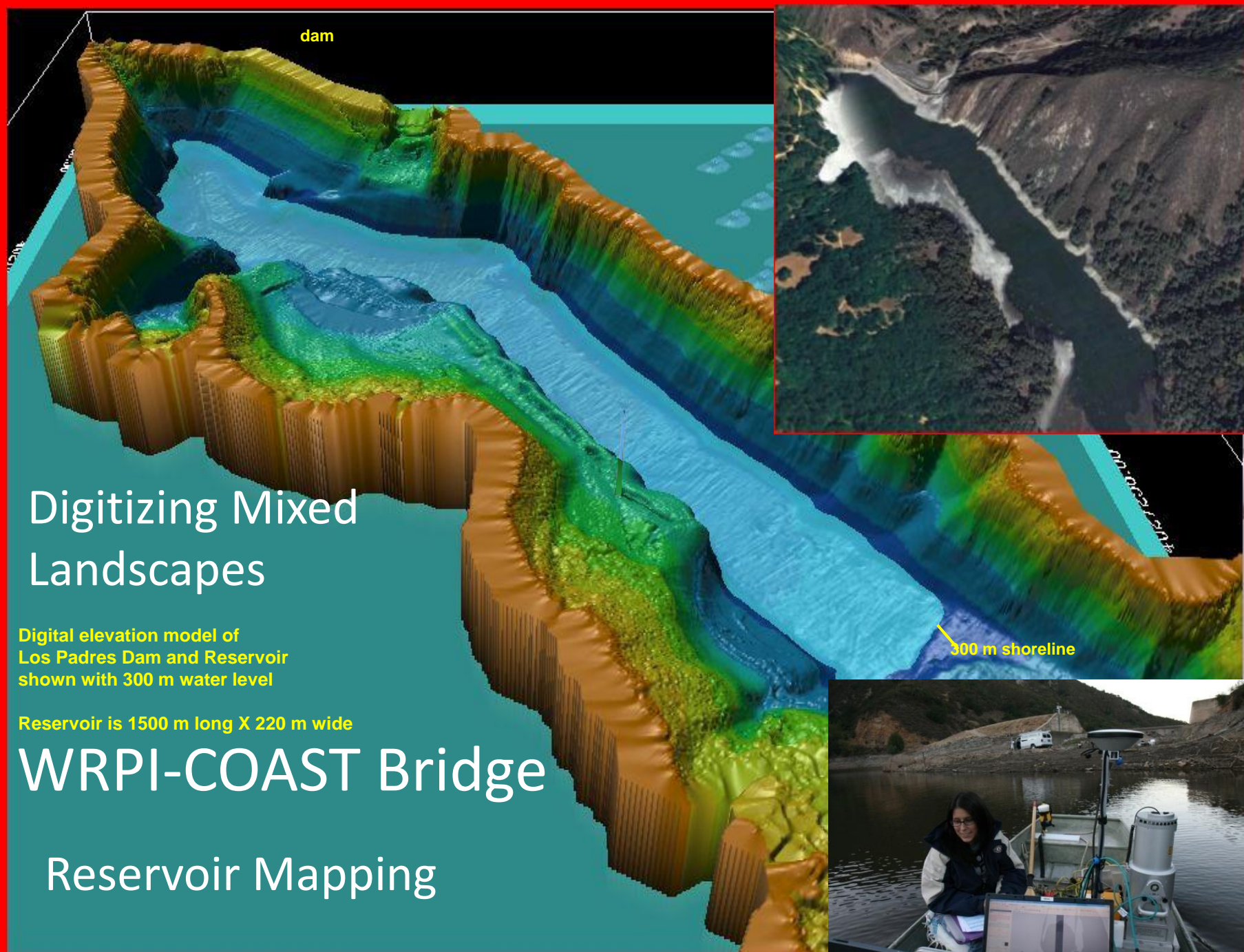




# Students working on soil erosion issues







dam

300 m shoreline

# Digitizing Mixed Landscapes

Digital elevation model of Los Padres Dam and Reservoir shown with 300 m water level

Reservoir is 1500 m long X 220 m wide

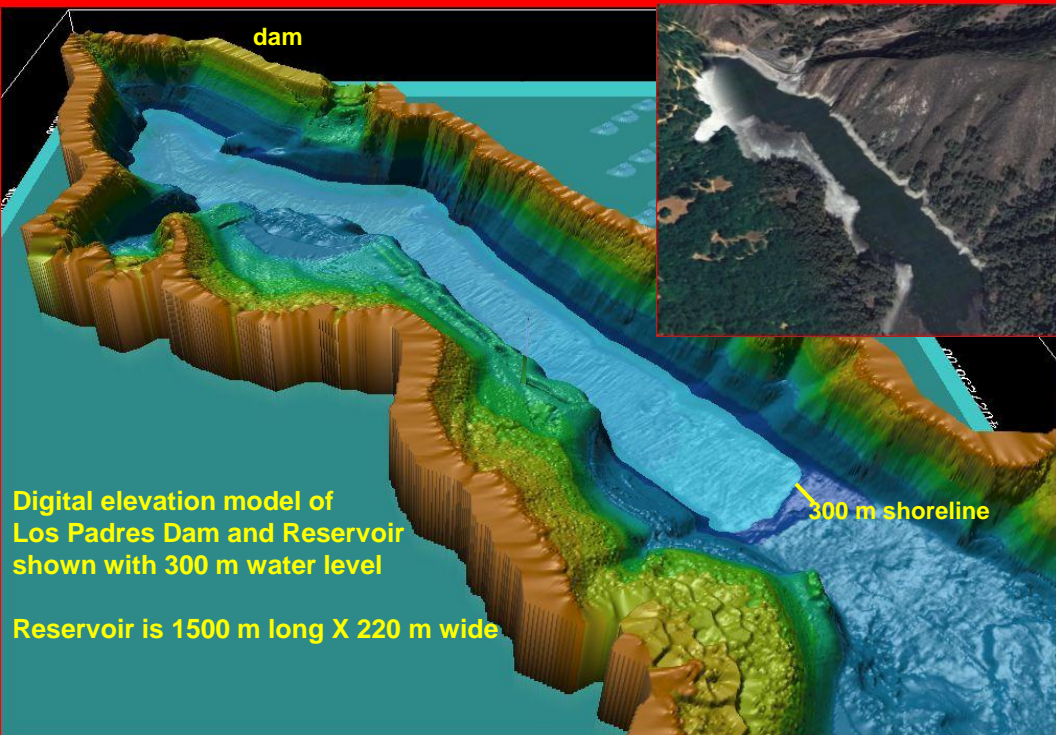
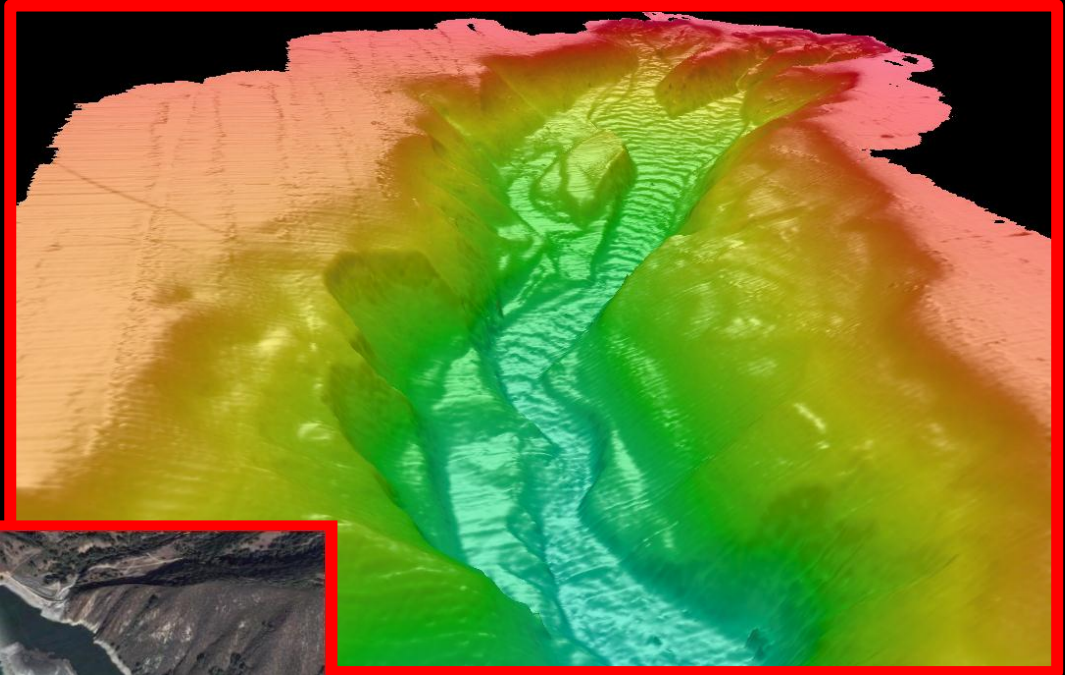
# WRPI-COAST Bridge

## Reservoir Mapping



# WRPI-COAST Bridge

## Submarine Processes and Geologic Hazards

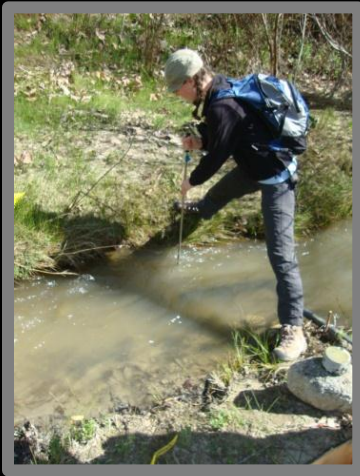


## Digitizing Mixed Landscapes





# CSUMB Students in Action: Applied Watershed Science and Policy





# Student Internship Placements

- Federal, State, and County Agencies
  - NASA, USFS, BLM, DOD, Naval Postgraduate School, Monterey County Regional Parks, Monterey Bay National Marine Sanctuary
- Non-Government Organizations
  - Big Sur Land Trust, Carmel River Watershed Conservancy, Oceana, Planning and Conservation League Foundation, Water Quality Preservation, Inc., Coastkeeper, Save the Waves
- Education – Research Institutes
  - Institute for Applied Marine Ecology (CSU Monterey Bay), Seafloor Mapping Lab (CSU Monterey Bay), Watershed Institute (CSU Monterey Bay), Center for Marine Biodiversity and Conservation (UC San Diego)
- Environmental Consulting & Industry
  - Driscoll Farms, Marine Applied Research and Exploration



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