



Southern California Firestorms 2007

USGS Response to 2007 Wildfires in Southern California

Scientists involved (not full list):

Geology

Lucy Jones, Geoffrey Plumlee, Todd Hoefen, Raymond Kokaly, Jonathan Stock, Kevin Schmidt, Susan Cannon

Water

Eric Reichard, Gerald Bawden, Deborah Martin, James Bowers, Greg Mendez, Charles Parrett

Geography

Michael Hutt, Vivian Queija, Brenda Jones, Jean Parcher, Dave Hester

Geospatial Information

Carol Ostergren, Drew Decker, Tim Saultz

Biology

Jon Keeley, Kevin Lafferty, Erin Boydston, Barbara Kus, Robert Fisher



USGS Response to 2007 Wildfires in Southern California

Expertise employed immediately:

- imagery acquisition, analysis, remote sensing
- geology, geomorphology, geophysics, geochemistry
- hydrology, water quality
- biology, ecology
- information technology
- outreach and communications

HyMap Data Coverage

- **Harris Fire**
11/15/2007
- **Witch/Poomacha**
Fires 11/19/2007

During Hymap collection, field calibration sites were measured with a field spectrometer.

Orange pins = Ash sampling sites.





Preliminary Analytical Results for Ash and Burned Soils from the October 2007 Southern California Wildfires

By Geoffrey S. Plumlee, Deborah A. Martin, Todd Hoefen, Raymond Kokaly, Philip Hageman, Alison Eckberg, Gregory P. Meeker, Monique Adams, Michael Anthony, and Paul J. Lamothe



Open-File Report 2007-1407

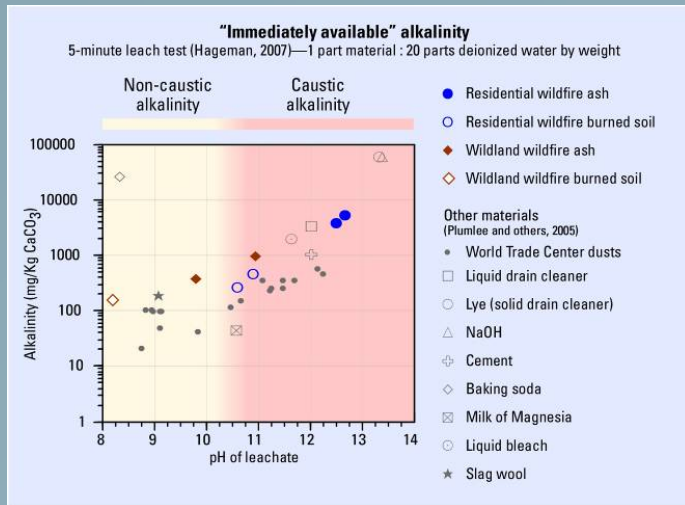
U.S. Department of the Interior
U.S. Geological Survey



Plumlee, G.S., Martin, D.A., Hoefen, T., Kokaly, R., Hageman, P., Eckberg, A., Meeker, G.P., Adams, M., Anthony, M., and Lamothe, P.J., 2007, Preliminary analytical results for ash and burned soils from the October 2007 southern California wildfires: U.S. Geological Survey Open-File Report 2007-1407, 13 p.



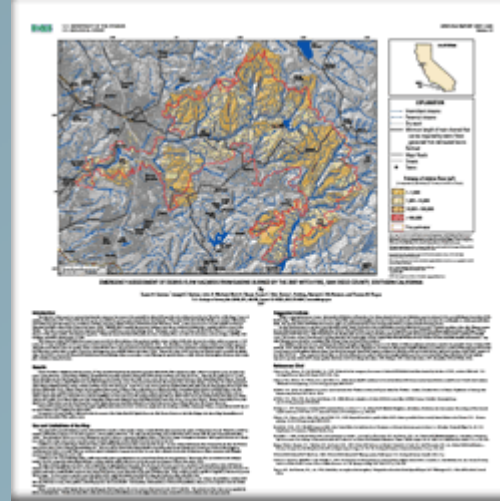
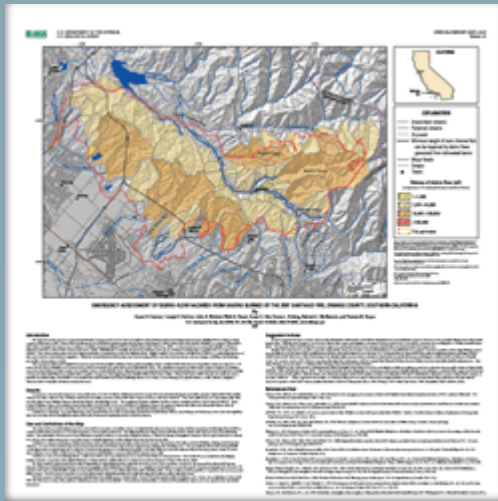
Assess surface-water quality from ashfall and runoff and its potential impacts to human health.



Burned trailer park in creek upstream of arroyo toad critical habitat, City of Tijuana, Mexico, and Tijuana Estuary NWR

Estimate increased debris flow/flood risk due to altered runoff characteristics in burned basins.

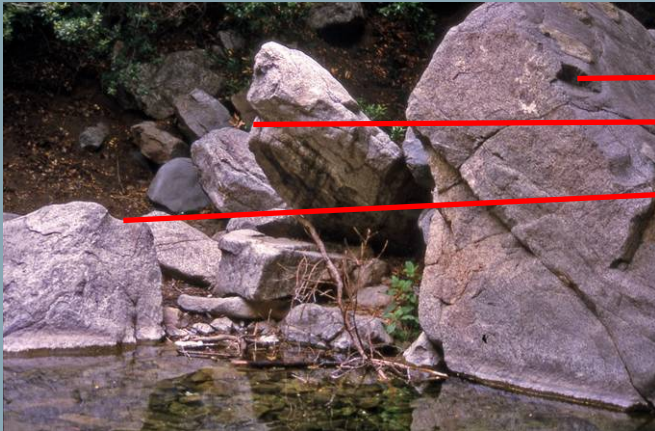
Develop models based on geology, elevation, and burn severity parameters.



Repeat Photos: Top photo 6/85, bottom photo 12/07. Common points of reference are connected by red lines.

This pool was trout habitat until the rain event on Nov 30.

6-10 feet of material is filling pool.



Assess fire impact on terrestrial biodiversity and local ecosystems.



4:50 am



9:00 am



9:09 am

Wildlife camera trap in Santiago Fire
(courtesy of Erin Boydston)