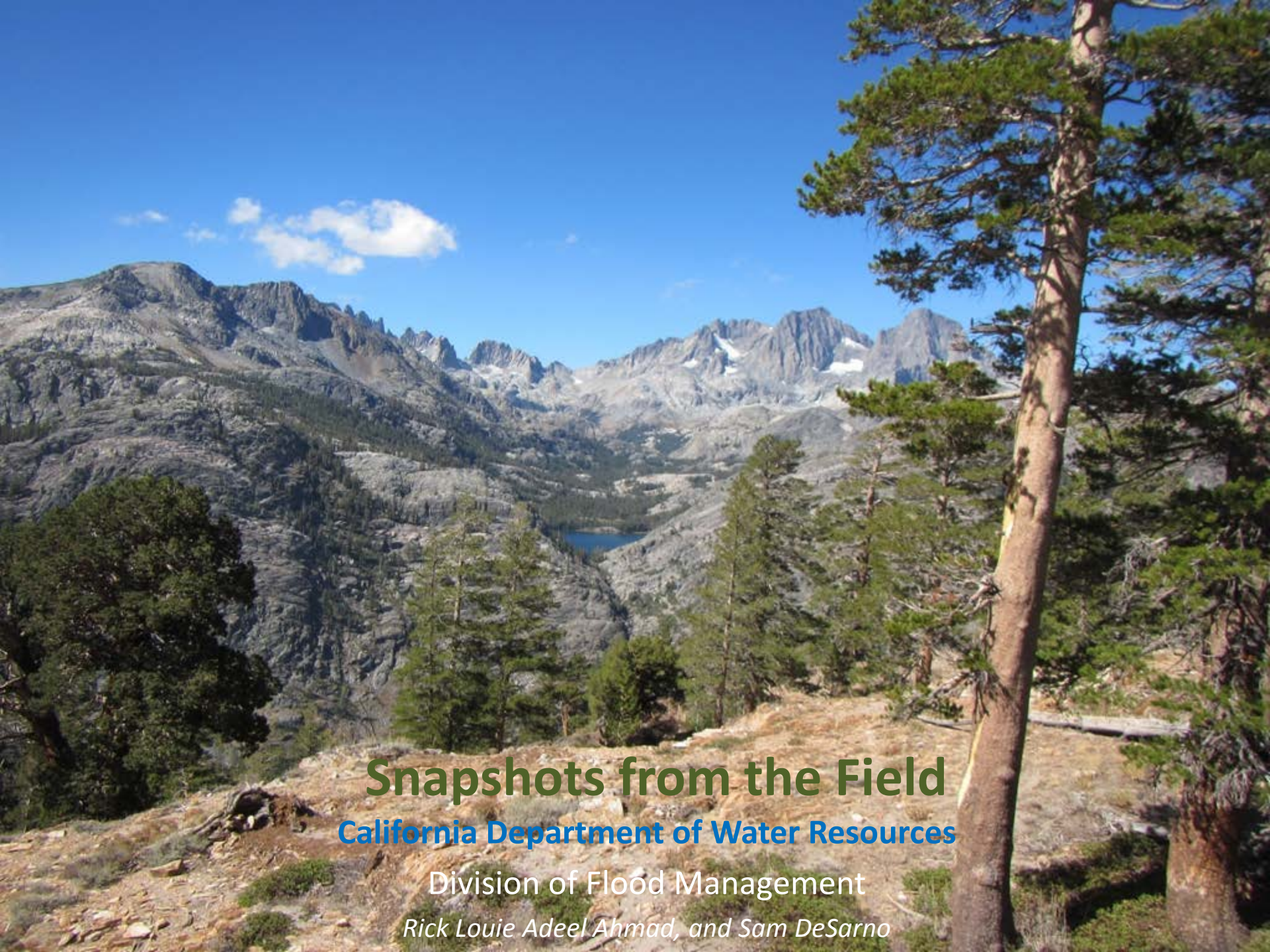


Snapshots from the Field

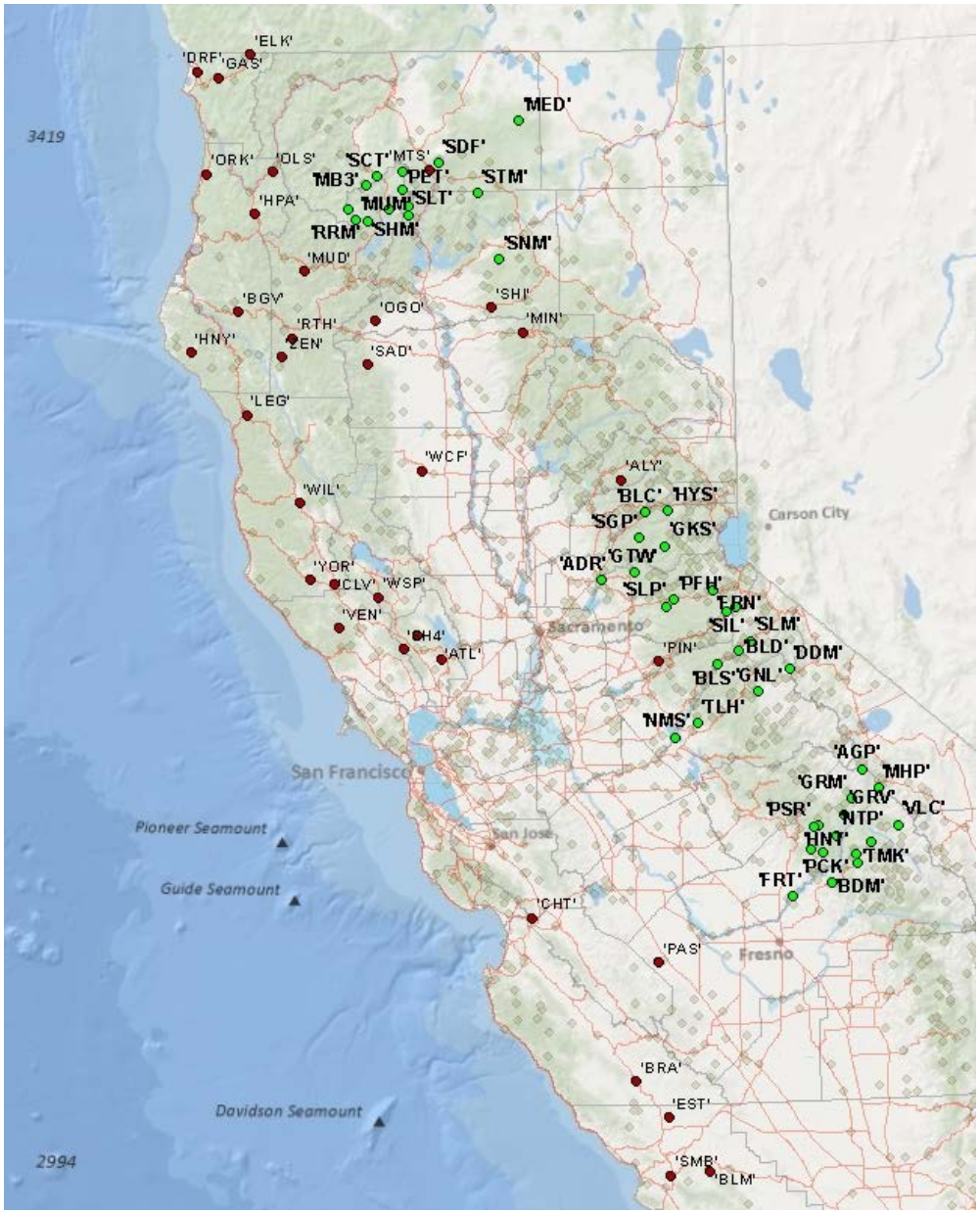
California Department of Water Resources

Division of Flood Management

Rick Louie Adeel Ahmad, and Sam DeSarno

2013 Field Work – USBR snow sites

- DWR handles maintenance for 48 USBR sites and 35 precipitation sites
- GOES telemetry radios need to be upgraded to 300 baud by May 13, 2013
- Green - USBR HydroMet stations
- Red – DWR Precipitation stations

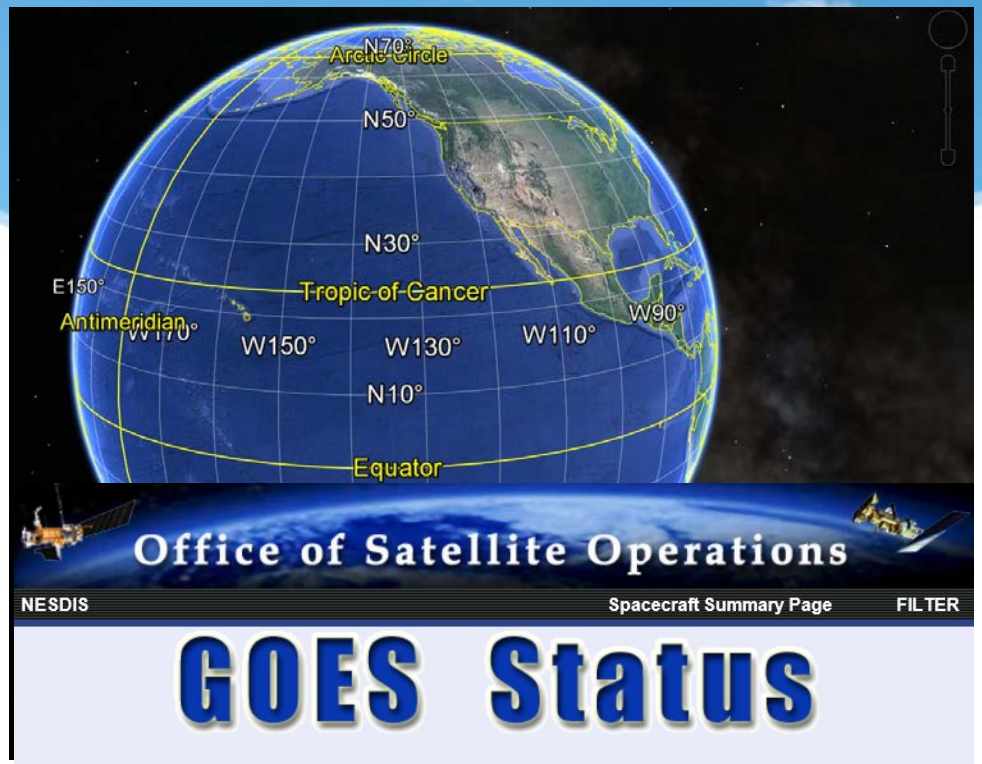


2013 Field Work – CCSS snow sites

- DWR Snow Surveys handles maintenance for manually measured and telemetered CCSS sites

- Blue – Bulletin 120 forecast basins
- Blue – DWR Precipitation stations (~54)

GOES Telemetry



GOES Status

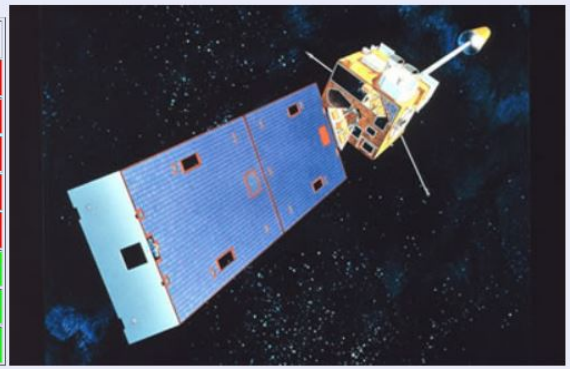
Last update: 08/16/2013 00:00:00

Welcome to the Geostationary Operational Environmental Satellites (GOES) spacecraft status page. This site provides up to date status information on each spacecraft and its various subsystems.

Select a spacecraft from the list below for a detailed status summary of that spacecraft. For more advanced reporting, select the Filter link.

Active Spacecraft and Operational Status

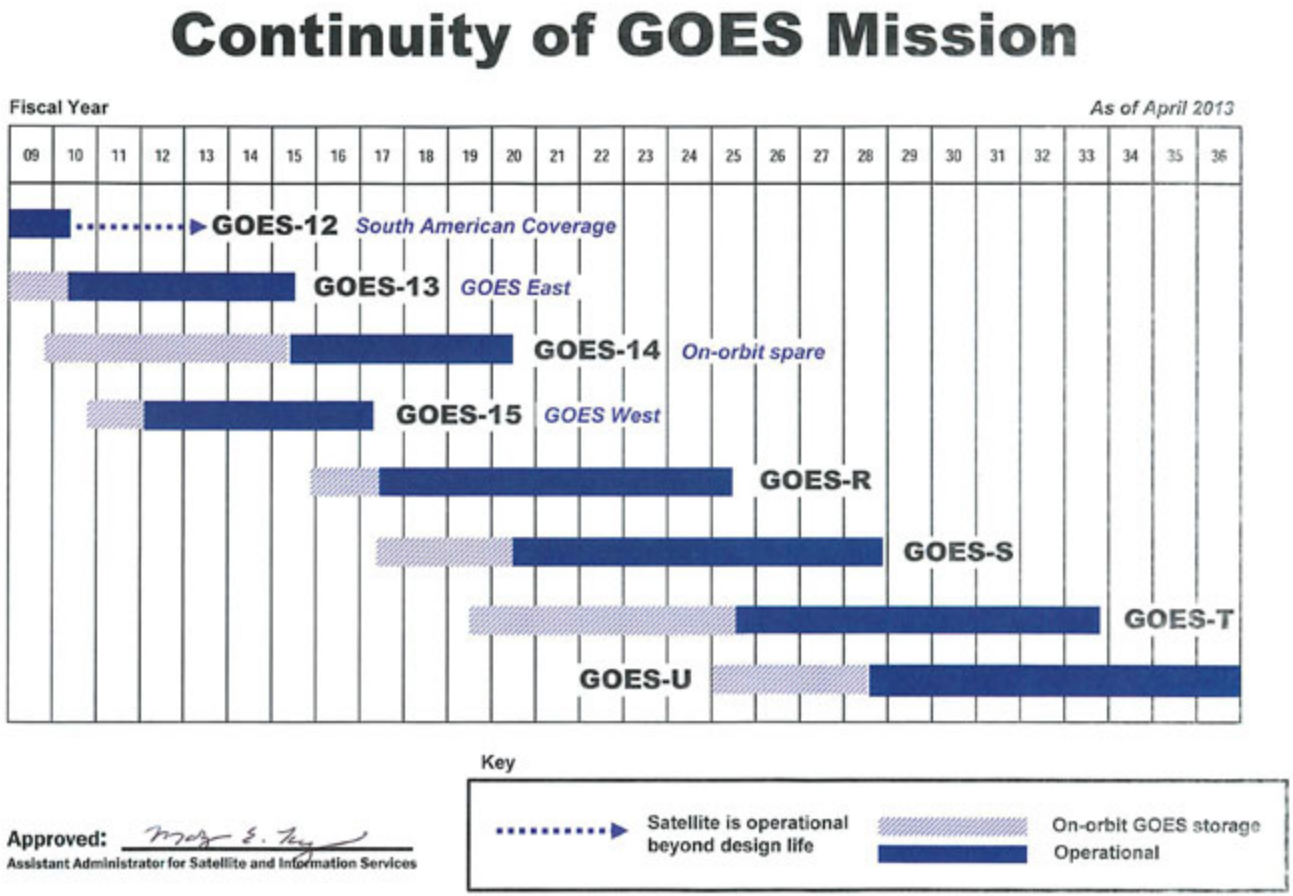
Spacecraft	Operational Status	Status
GOES 8	Decommissioned	RED
GOES 9	Decommissioned	RED
GOES 10	Decommissioned	RED
GOES 11	Decommissioned	RED
GOES 12	Decommissioned	RED
GOES 13	Operational East	GREEN
GOES 14	On-Orbit Storage	GREEN
GOES 15	Operational West	GREEN



Data Collection Platform Radio Set specifications

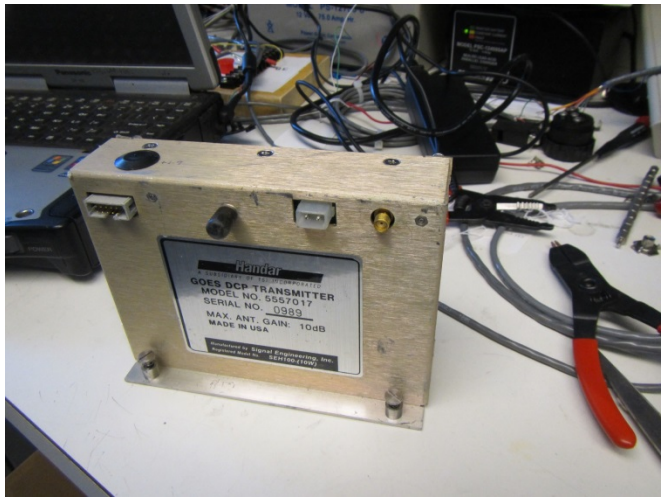
- GOES 15 (GOES-P) launched 3/4/10 became GOES West 12/6/11 positioned at 135 deg longitude
- No more 100 baud transmissions as of 5/31/13
- RF power output for 300 baud between 37 and 41 dBm (decibel millivolts or about 5 to 12 Watts)
- What about event data/test messages?

http://www.nesdis.noaa.gov/flyout_schedules.html



GOES Telemetry

http://www.noaasis.noaa.gov/DCS/docs/DCPR_CS2_final_June09.pdf



GOES radios

- Signal Engineering no longer manufacturing GOES DCP radios
- Old ones can be modified to work with different DCPs
- GPS system required for shorter transmission windows

Typical sites

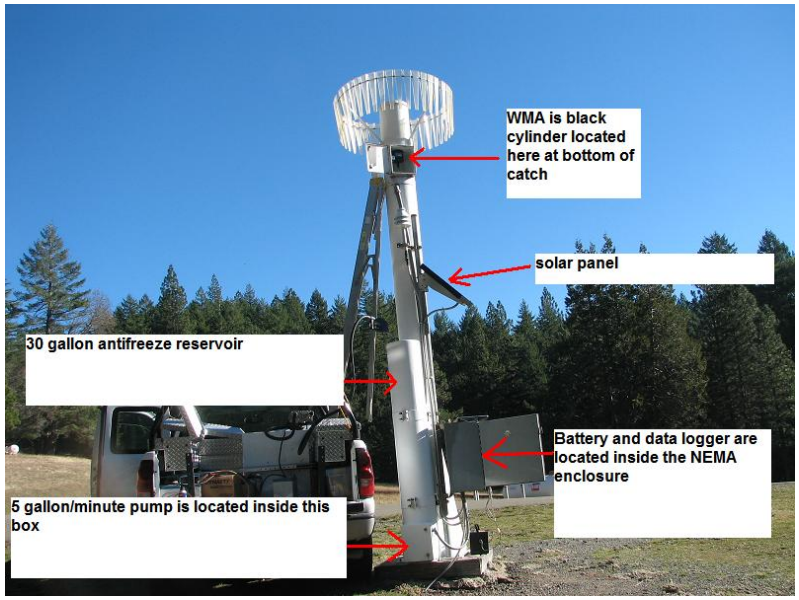
Wilderness, RRM

USBR snow shelter, SDF

makeshift precip, BGV

Streamgage Tipper, BRA

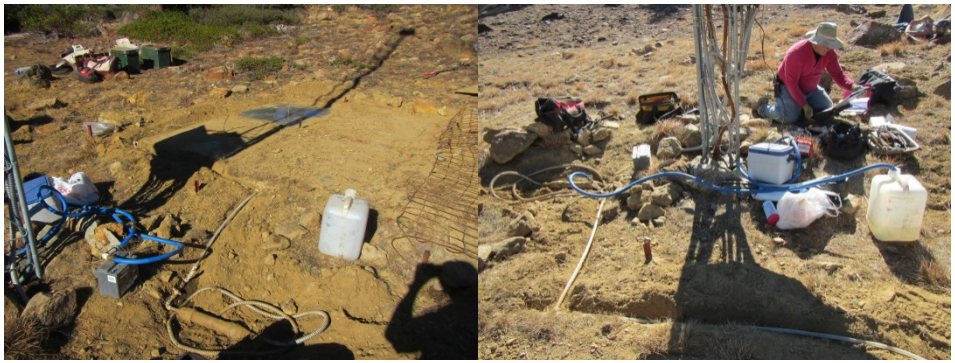
Overflow Tipper, TLH



ETI, ZEN

Snow Pillows

Deadman Creek, DDM



Snow Pillows

Shimmy Lake, SHM

Snow Pillows

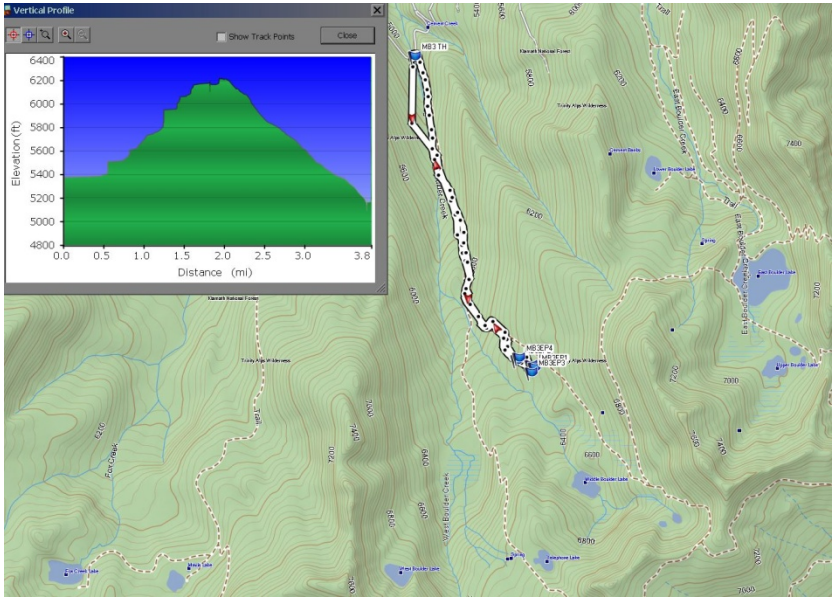
Mammoth Pass, MHP

System Improvements

- Plumbing – internal drains, pillow plumbing
- Wiring - Molex connectors, metal/plastic conduit
-
- Buildings – siding, doors, shovels, and rat bait
- Station Equipment - Antennas, Sensors, DCP’s, bear nets, wilderness boxes, enclosures, rhone towers

System Improvements

- Plumbing – internal drains, pillow plumbing
- Wiring - Molex connectors, metal/plastic conduit



Middle Boulder Lake, MB3

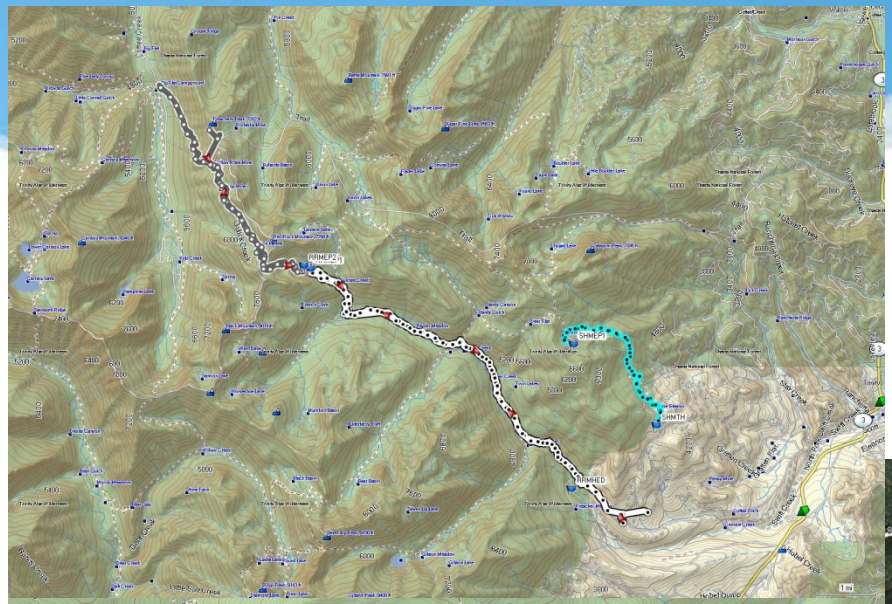
Rhone Tower at Stanislaus Meadows

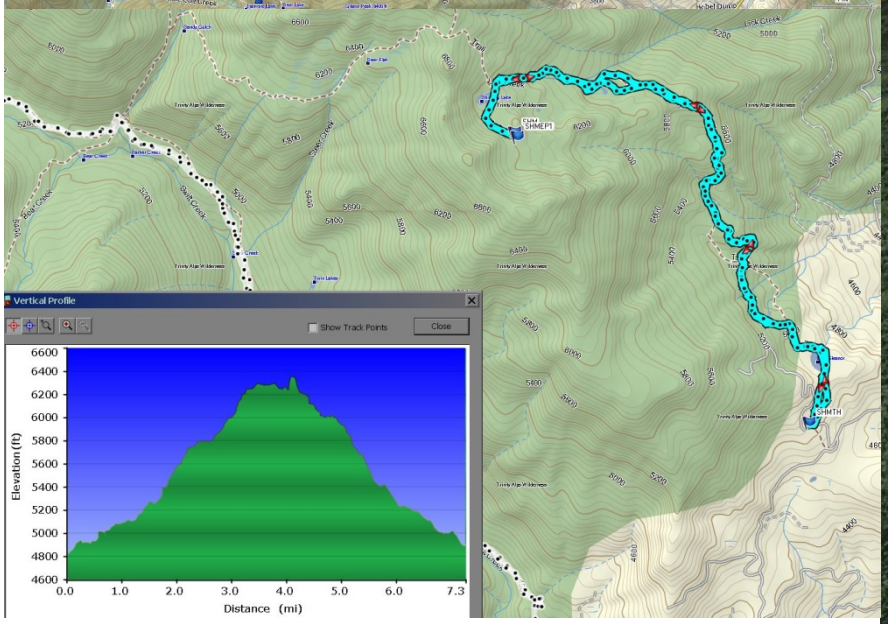
Day 1
10/2/13

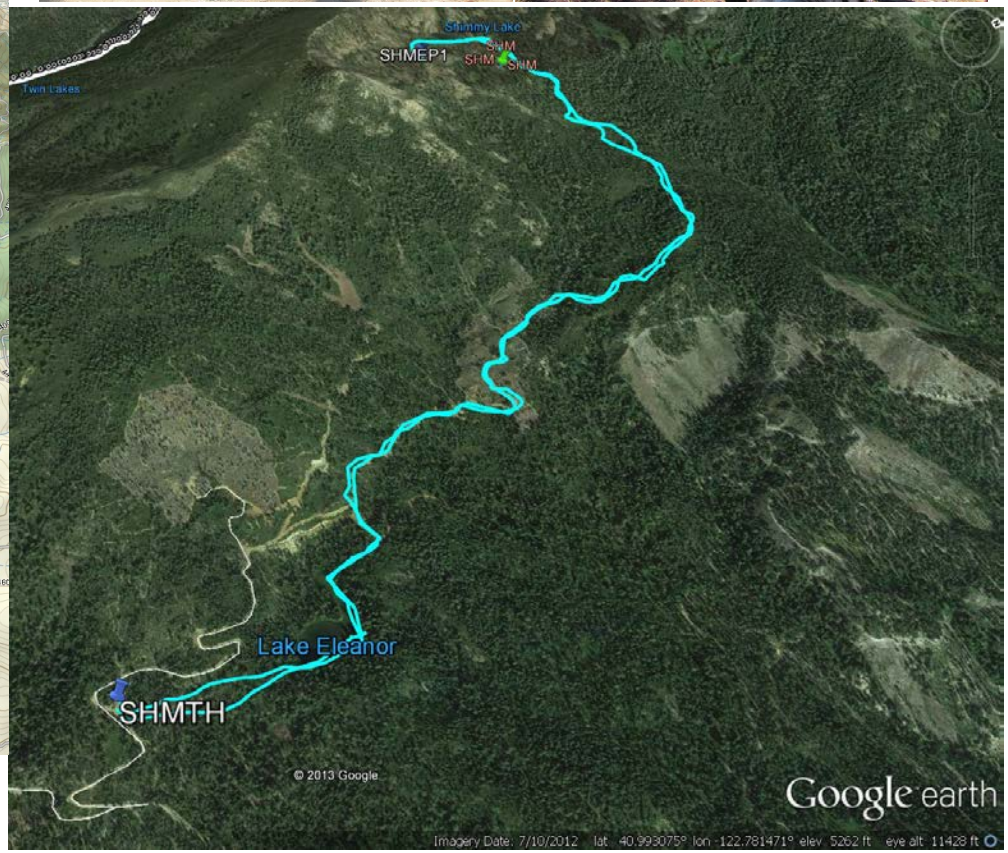
Rhone Tower at Stanislaus Meadows

Day 2
10/3/13

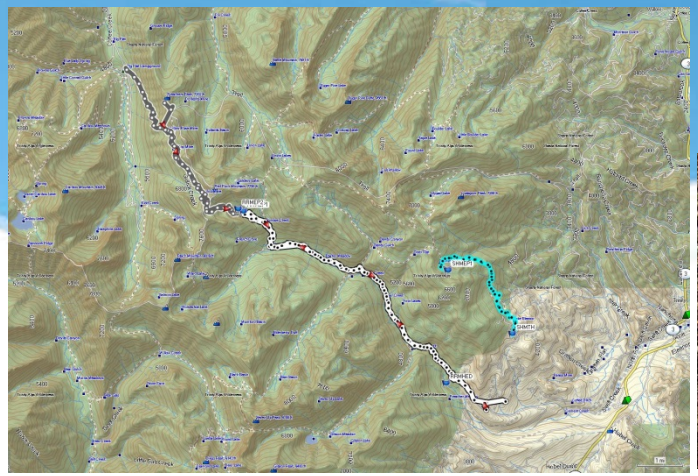
Wilderness sites Packers and Horses

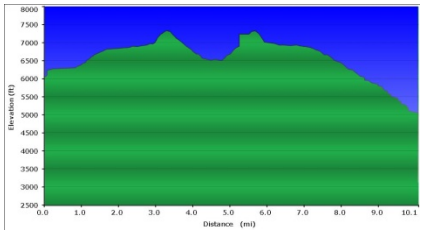


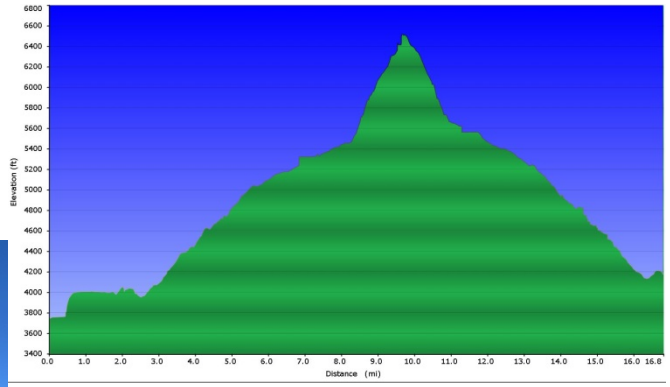


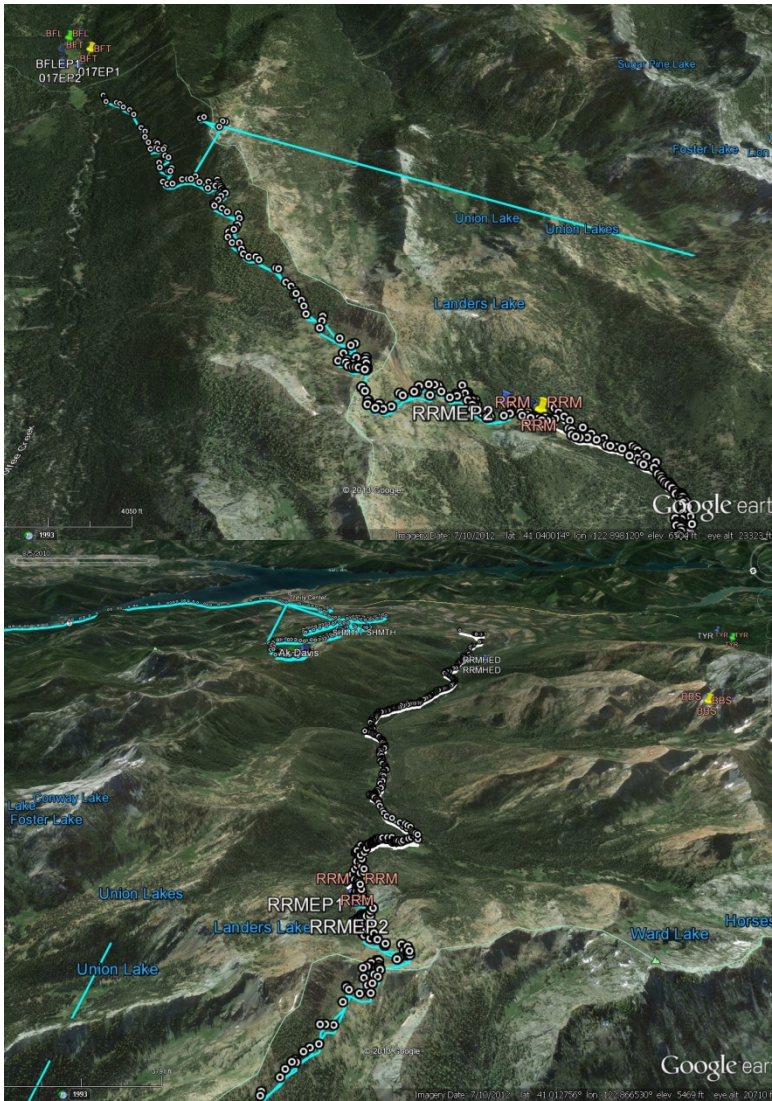


Shimmy Lake, SHM

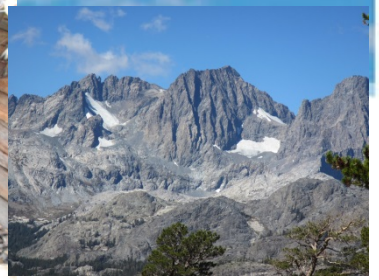


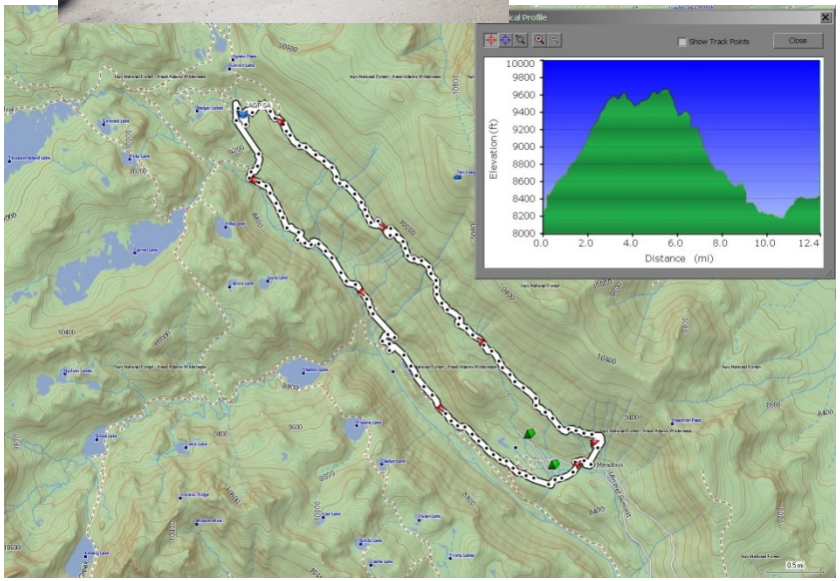




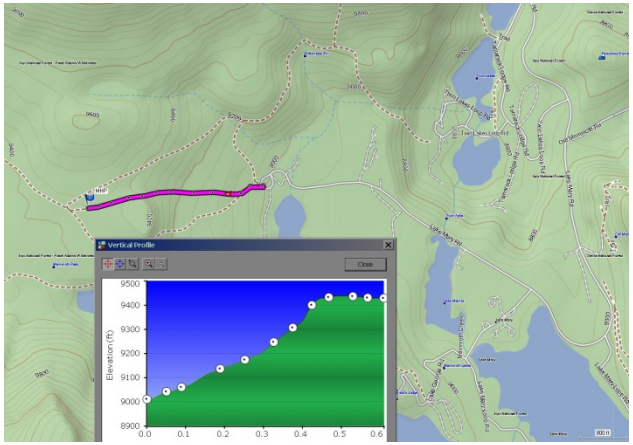


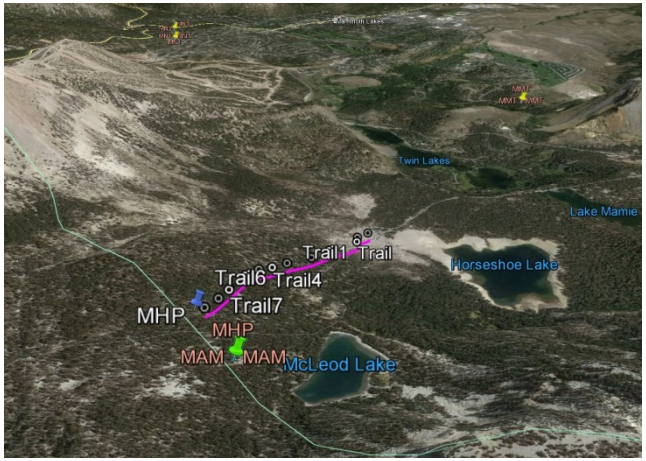
Red Rock Mountain, RRM



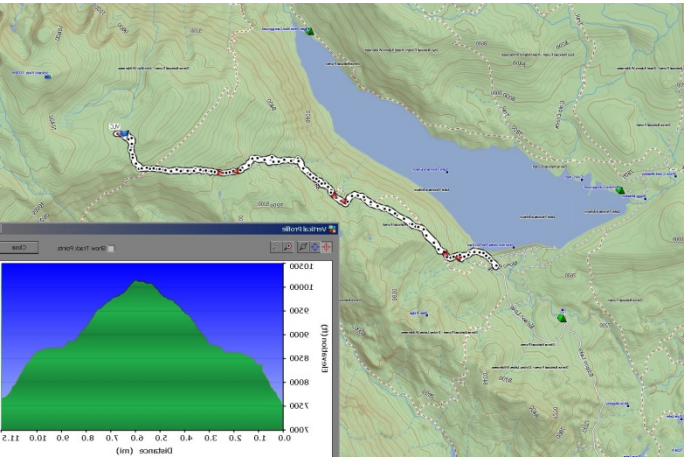


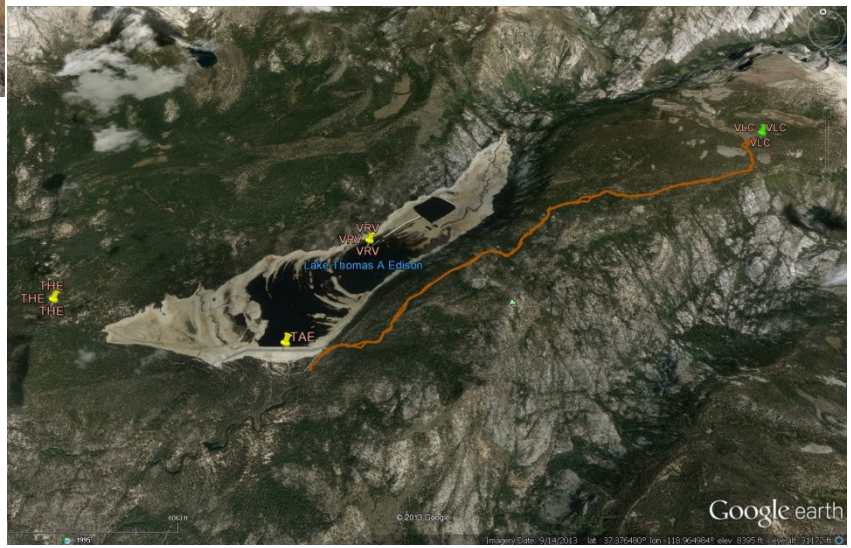
Agnew Pass, AGP





Mammoth Pass, MHP





Volcanic Knob, VLC

Pau hana, ready to drive home…