

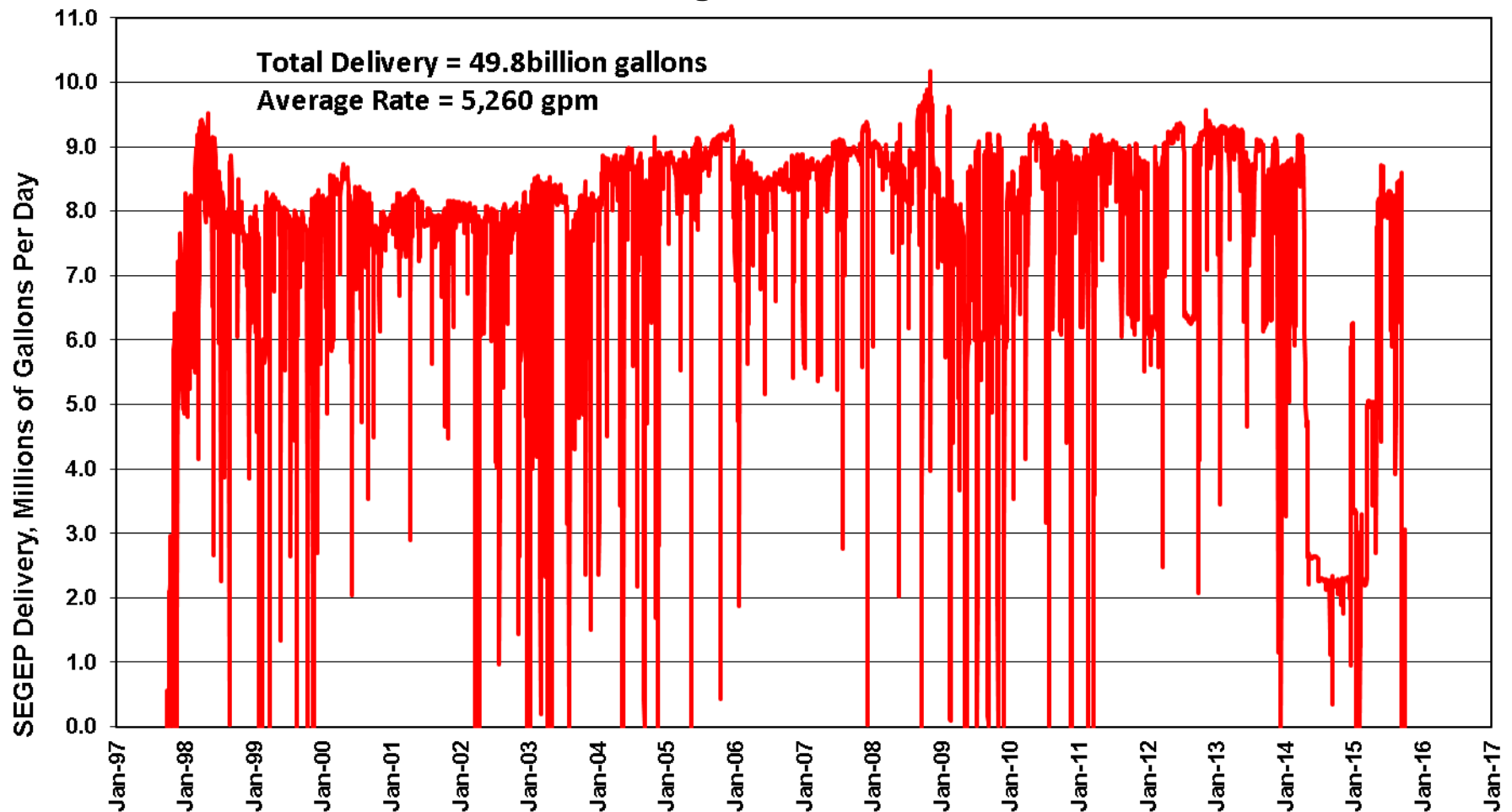
2015 SMAC Meeting

Nov 11, 2015

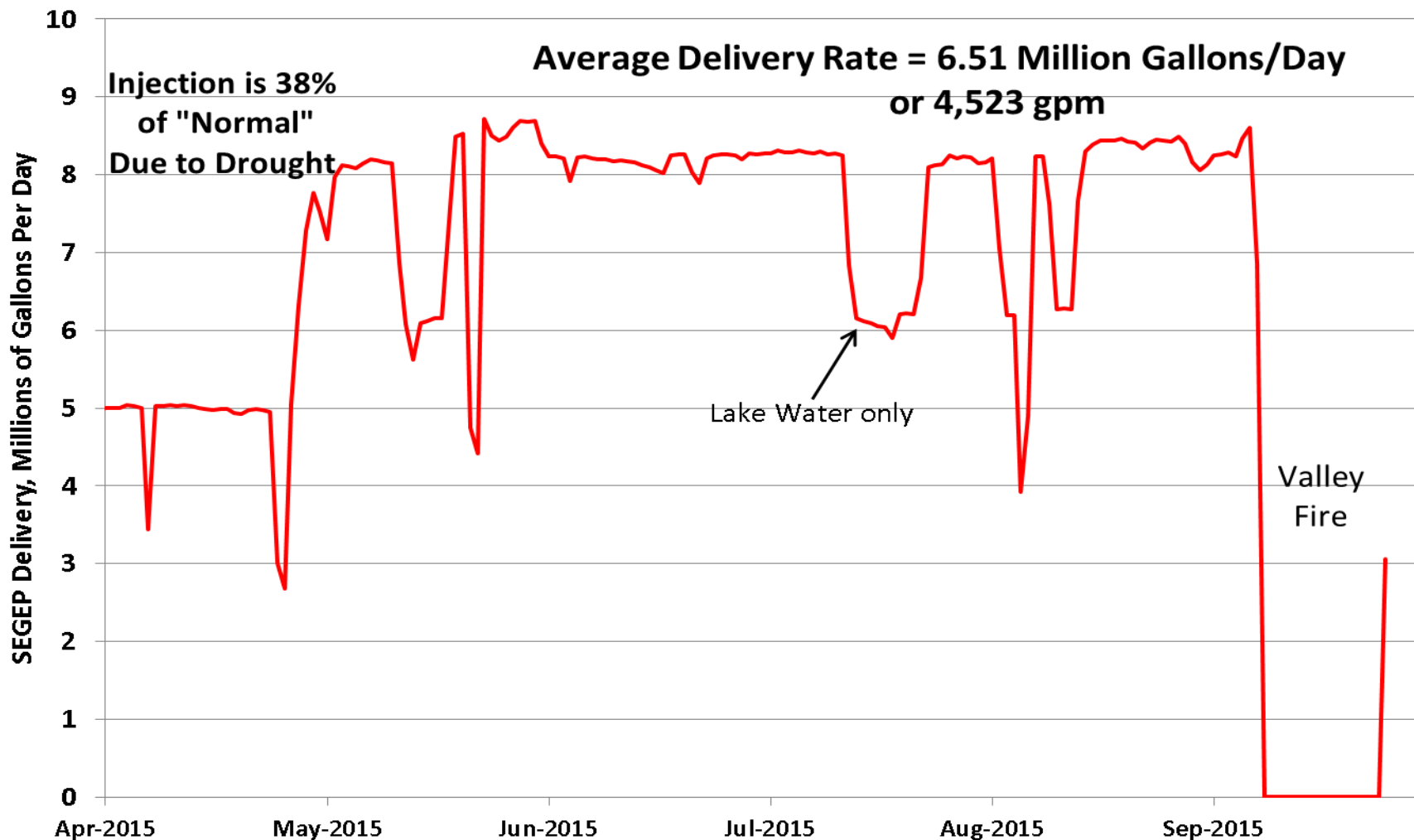


Historical SE Geysers Effluent Pipeline Deliveries to The Geysers

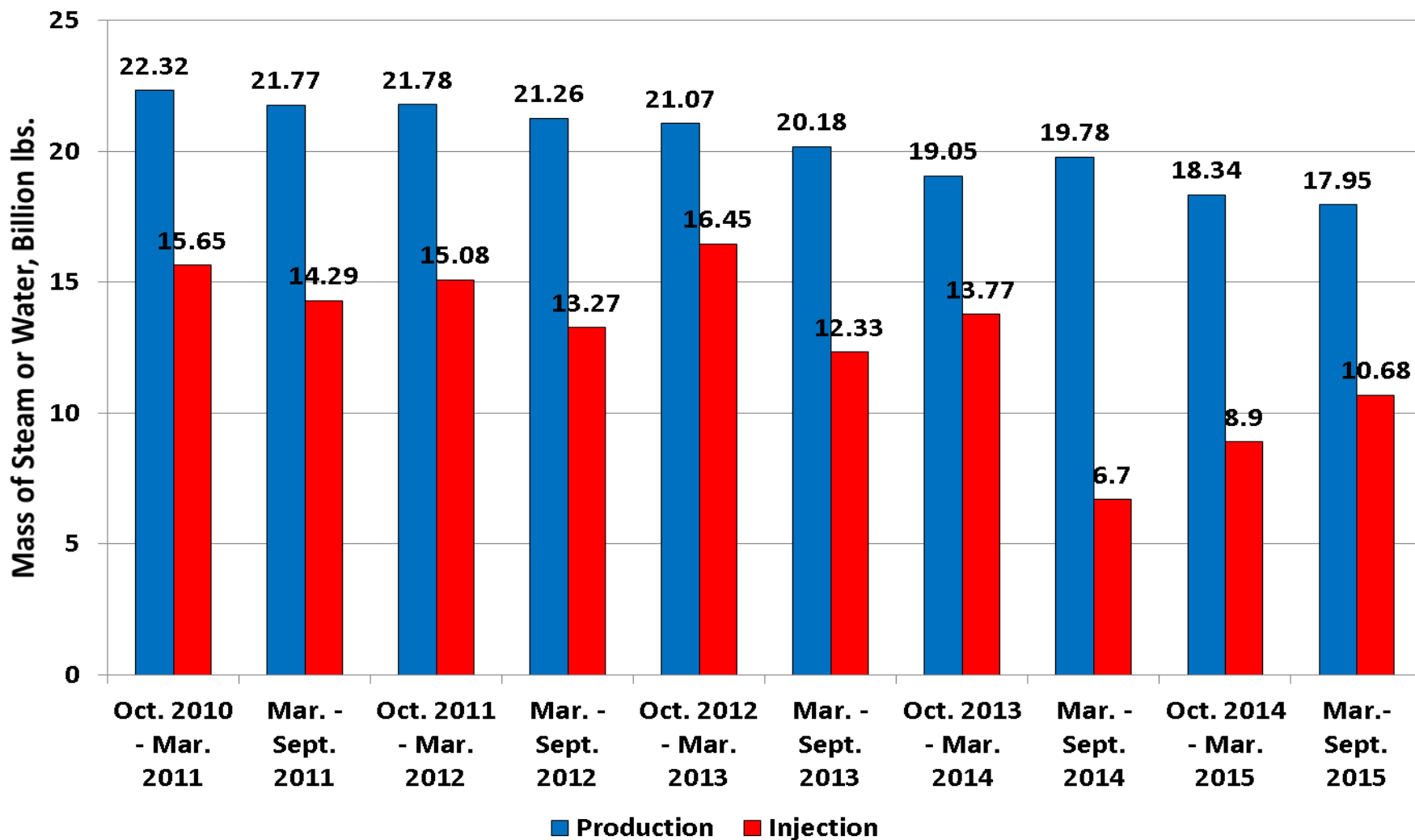
Figure 1



Southeast Geysers Effluent Pipeline Delivery April 1, 2015 through Sept 30, 2015 Figure 2



SE Geysers Production and Injection
Figure 3

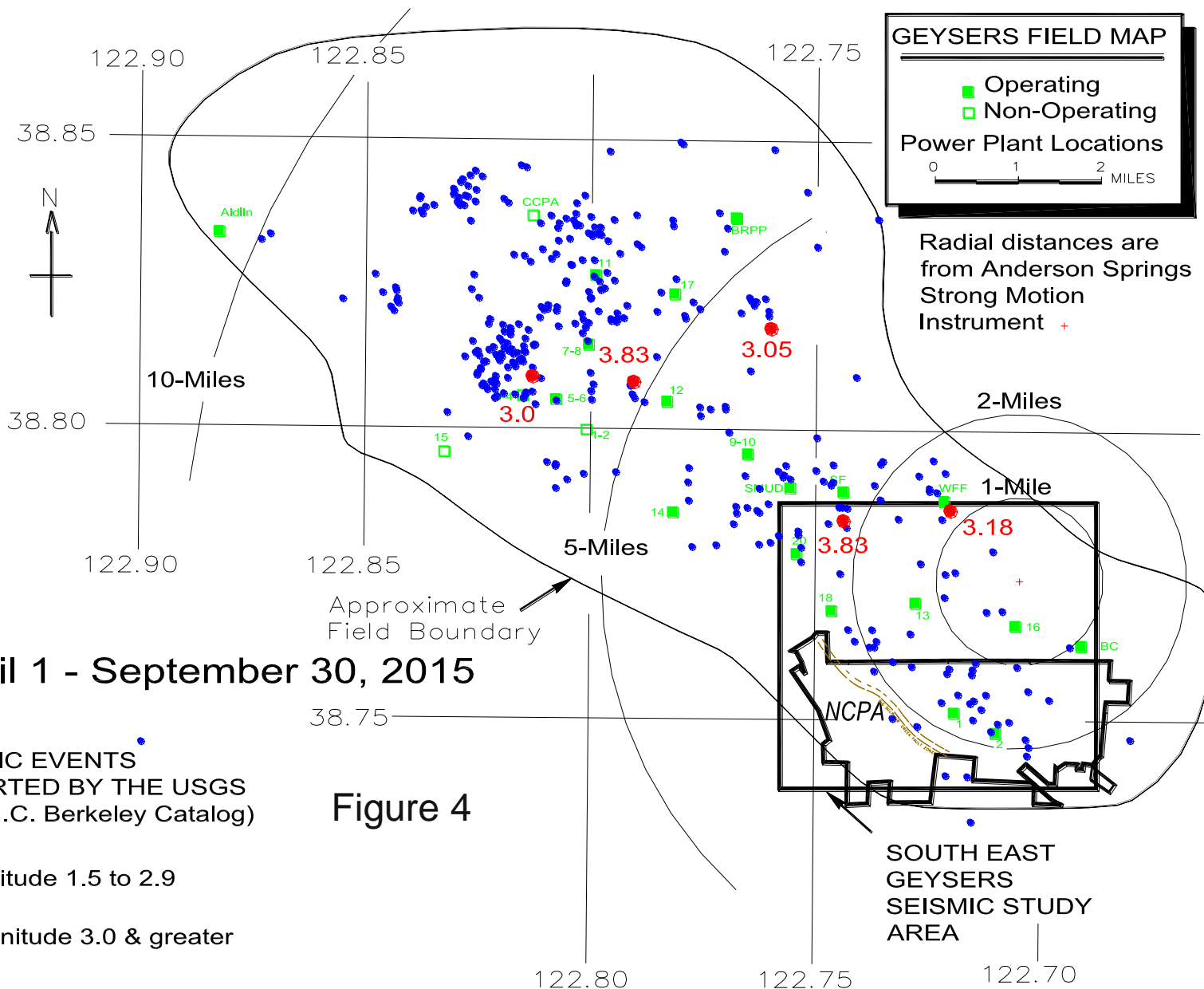


GEYSERS FIELD MAP

- Operating
 - Non-Operating
- Power Plant Locations

0 1 2 MILES

Radial distances are from Anderson Springs Strong Motion Instrument +



Southeast Geysers Seismic Study Area

SEISMIC EVENTS
REPORTED BY THE USGS
(from U.C. Berkeley Catalog)

- Magnitude 1.5 to 2.9
- Magnitude 3.0 & greater

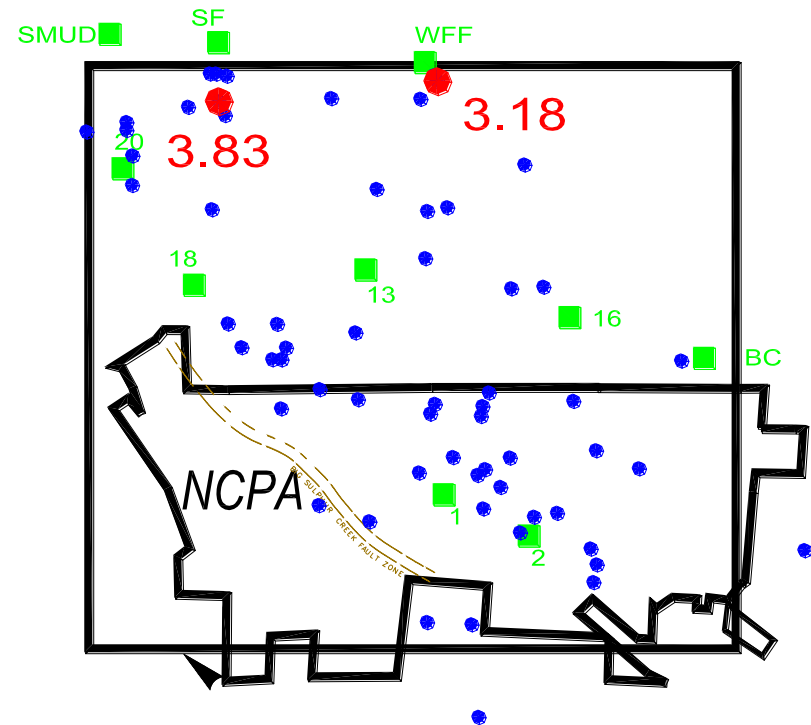
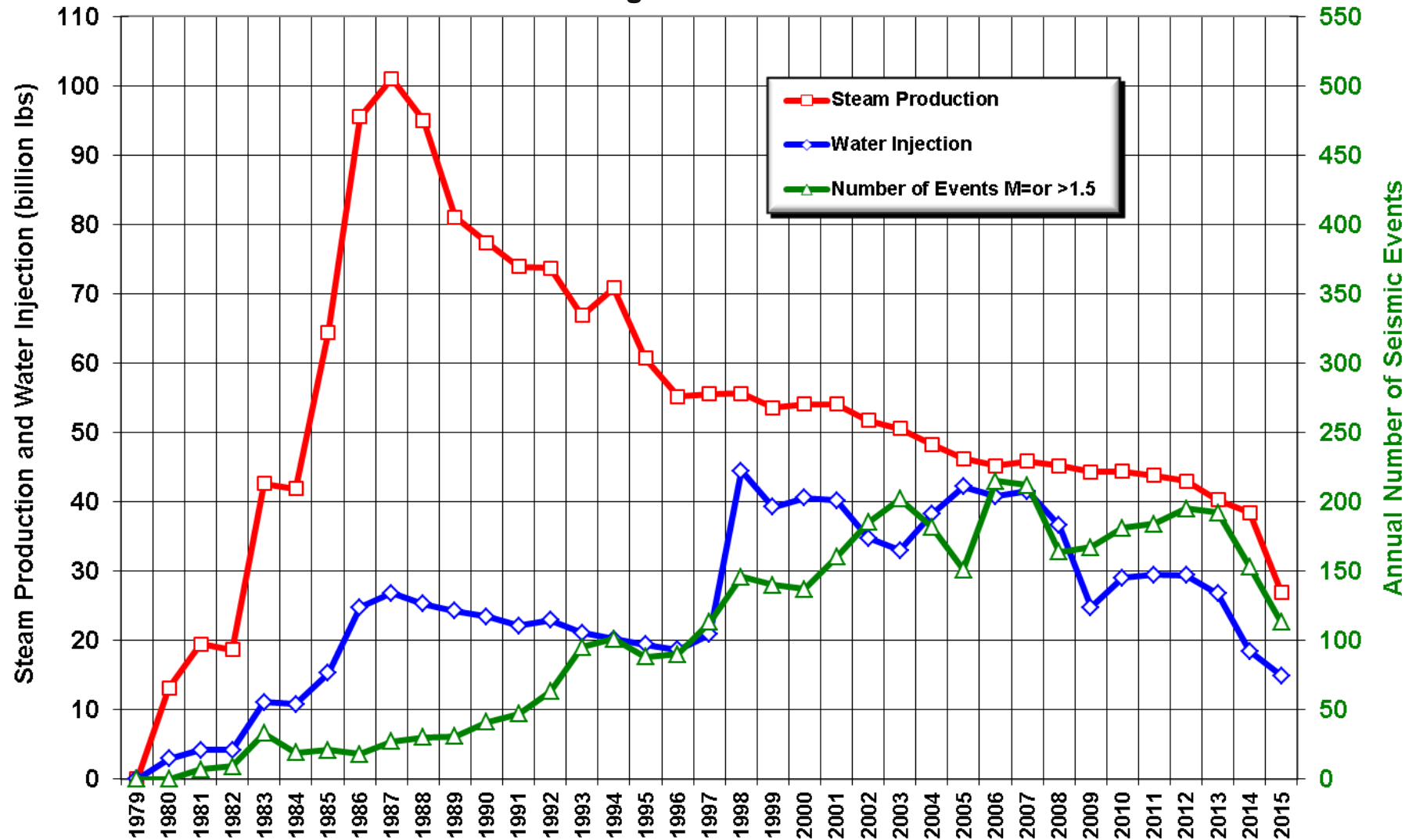
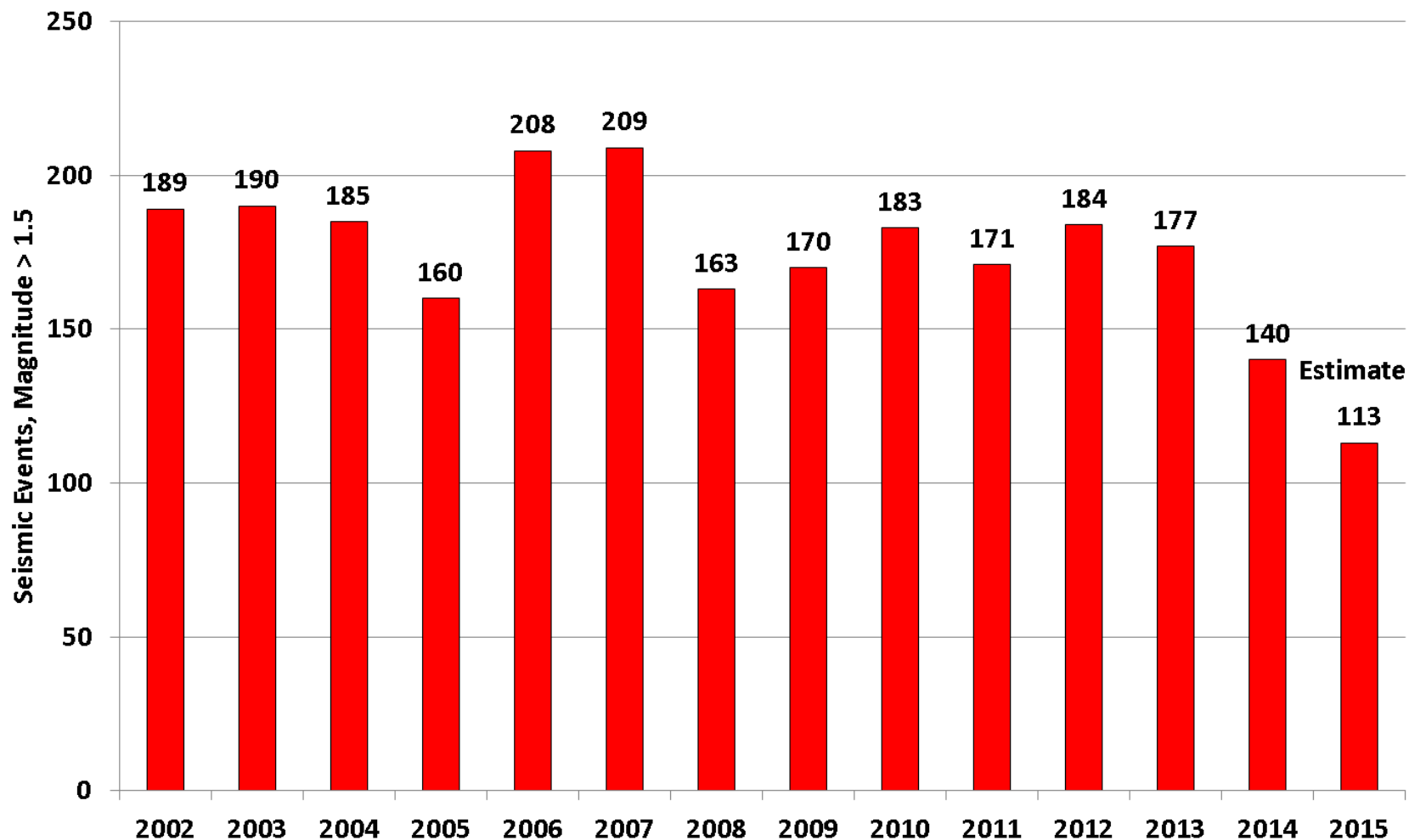


Figure 5

**Comparison of Annual Steam Production, Water Injection and
Recorded Seismicity in the SE Geysers Area
Figure 6**

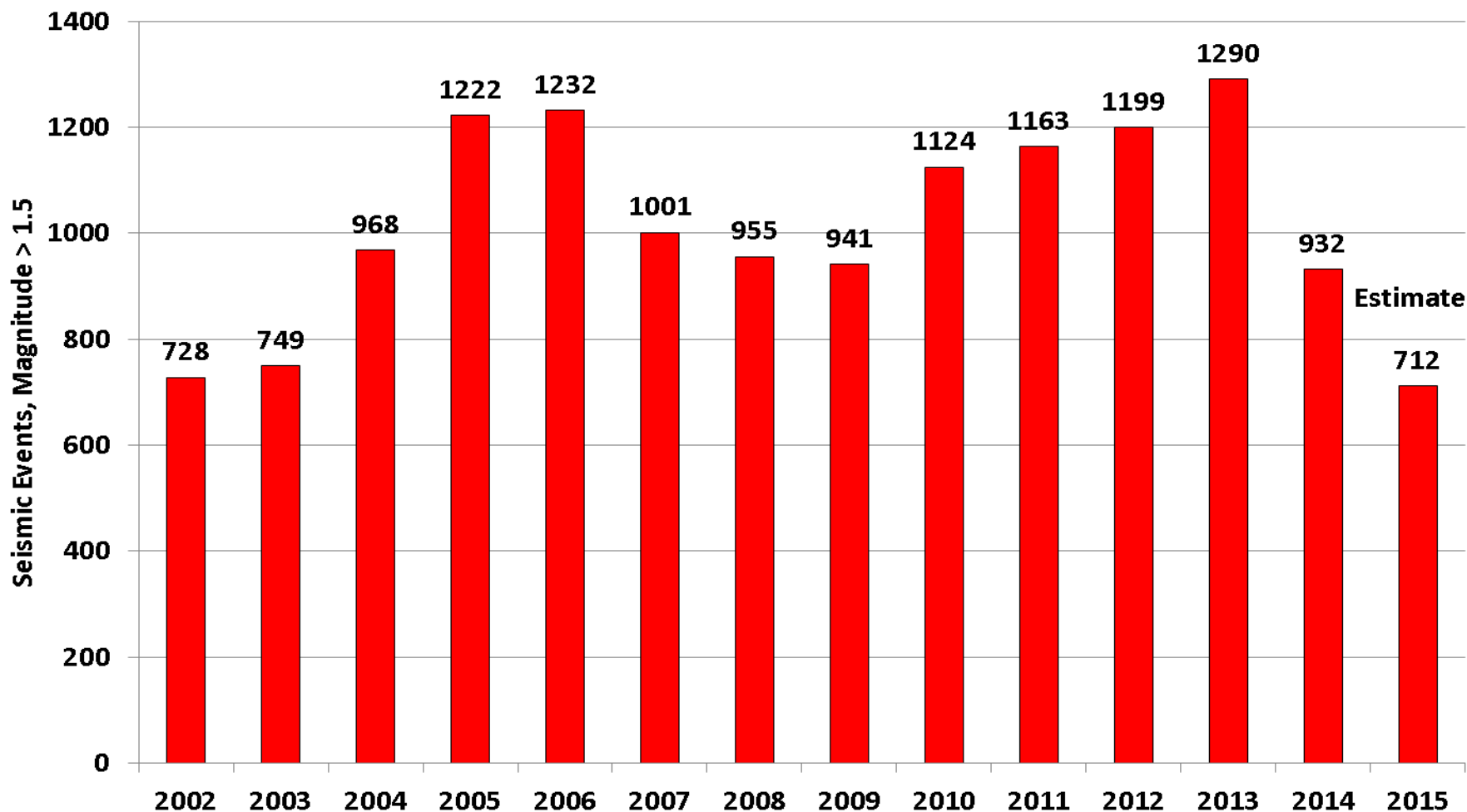


Southeast Geysers - Historical Seismic Activity
Magnitude > 1.5
Years 2002 - 2015
Figure 7



The Geysers (KGRA) - Historical Seismic Activity **Magnitude > 1.5** **Years 2002 - 2015**

Figure 8



Summary

- **Average SEGEP injection – 6.51 million GPD**
- **Normal SEGEP flow rates resumed May 1**
- **Flow resumed after an 18 day outage following the Valley Fire**
- **Above average flow rate variations during this period**
- **Water injection and seismic activity are up approximately 20%.**
- **Steam production is slightly down from previous 6 months.**

Summary

- **In SE Geysers, March 1, 2015 – Oct 1, 2015**
 - **66 seismic events during the last 6 months magnitude 1.5 or greater, compared to 54 the previous 6 months**
 - **2 seismic events with magnitude 3.0 or greater**