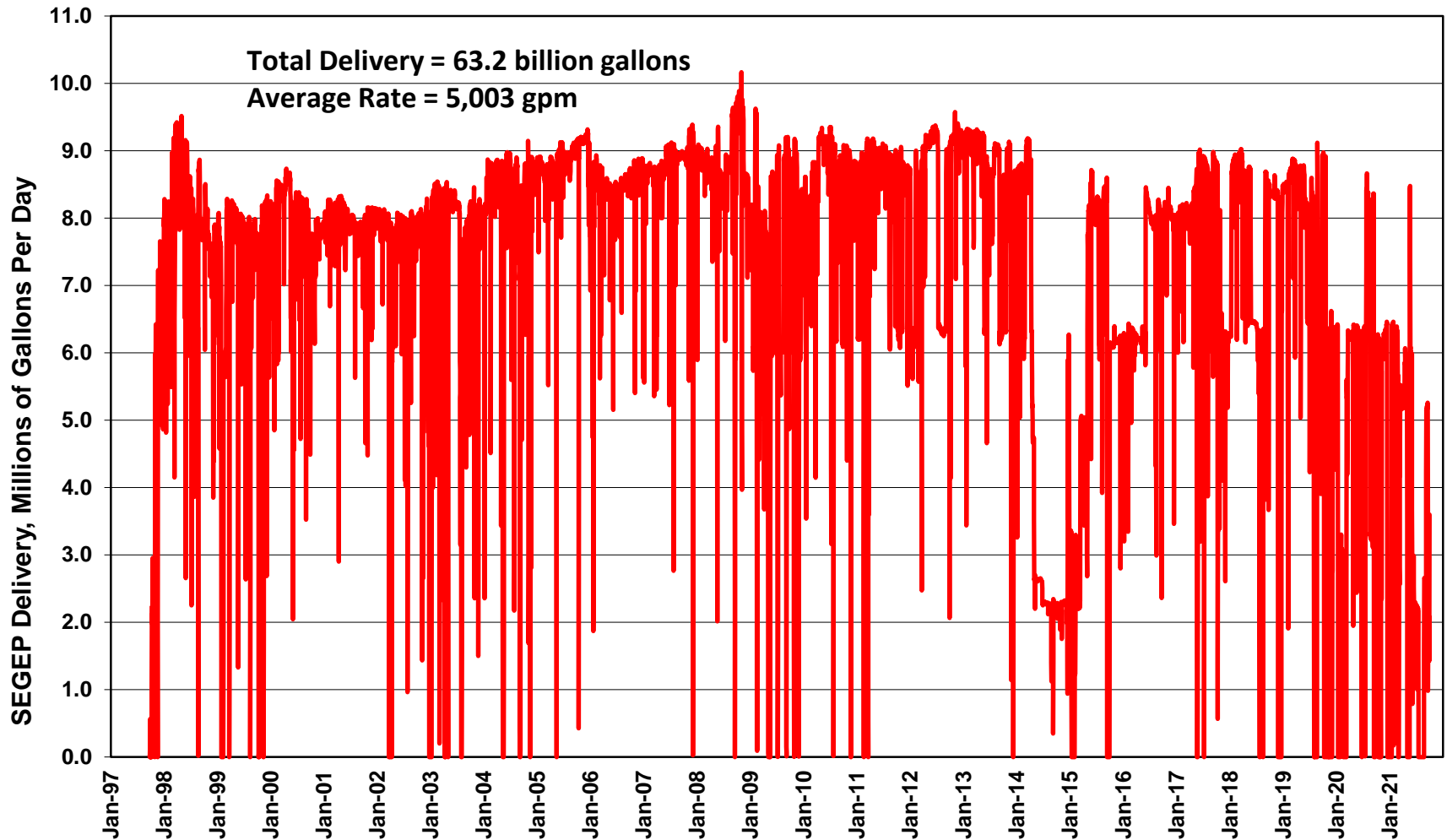




SMAC Report – Fall 2021

Ed Voge
NCPA Reservoir Engineer
November 8, 2021

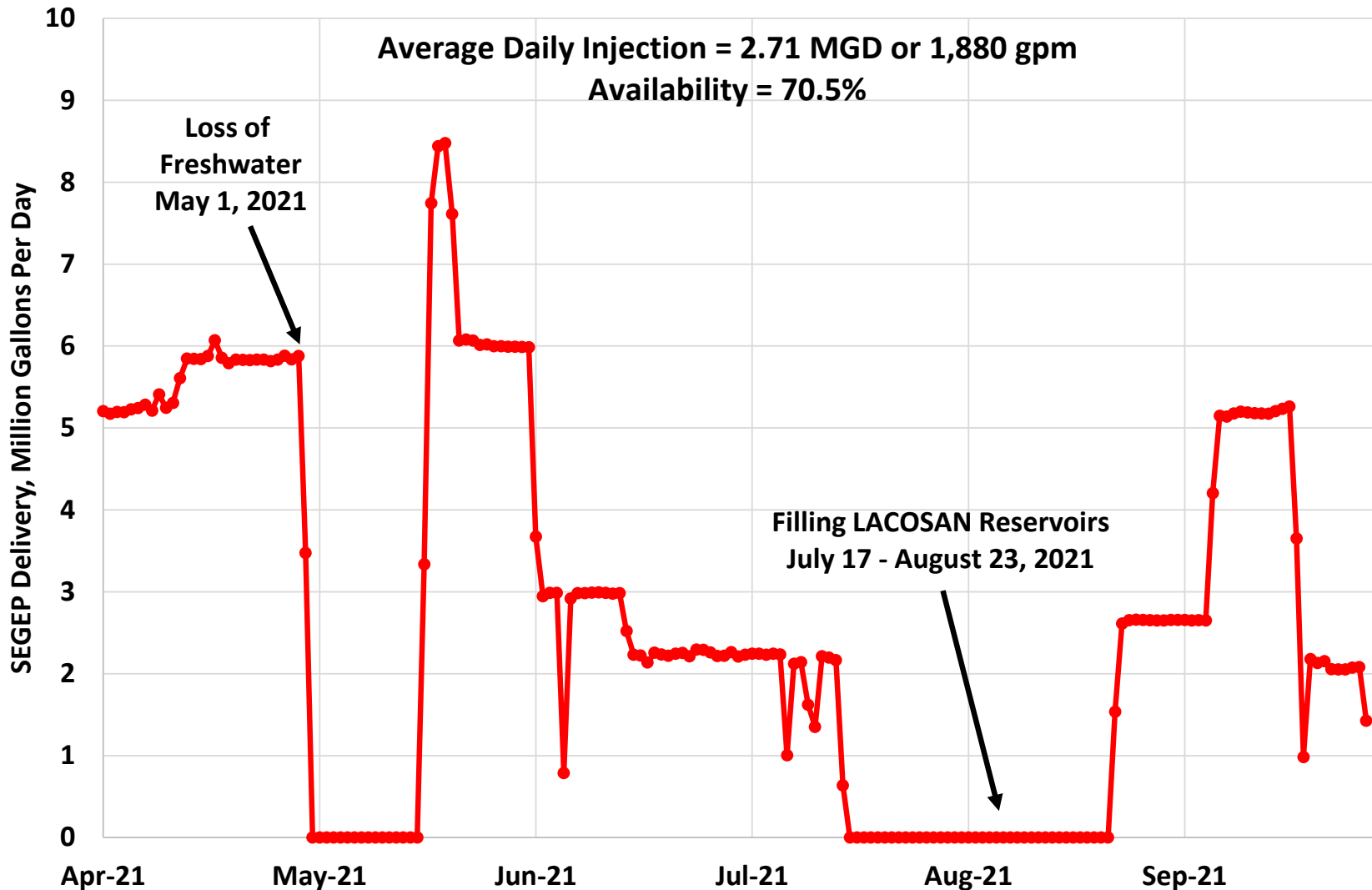
Historical SE Geysers Effluent Pipeline Deliveries to The Geysers
Figure 1



Southeast Geysers Effluent Pipeline Delivery

April 1 - September 30, 2021

Figure 2



Southeast Geysers - Historical Seismic Activity

Magnitude > 1.5

Figure 3

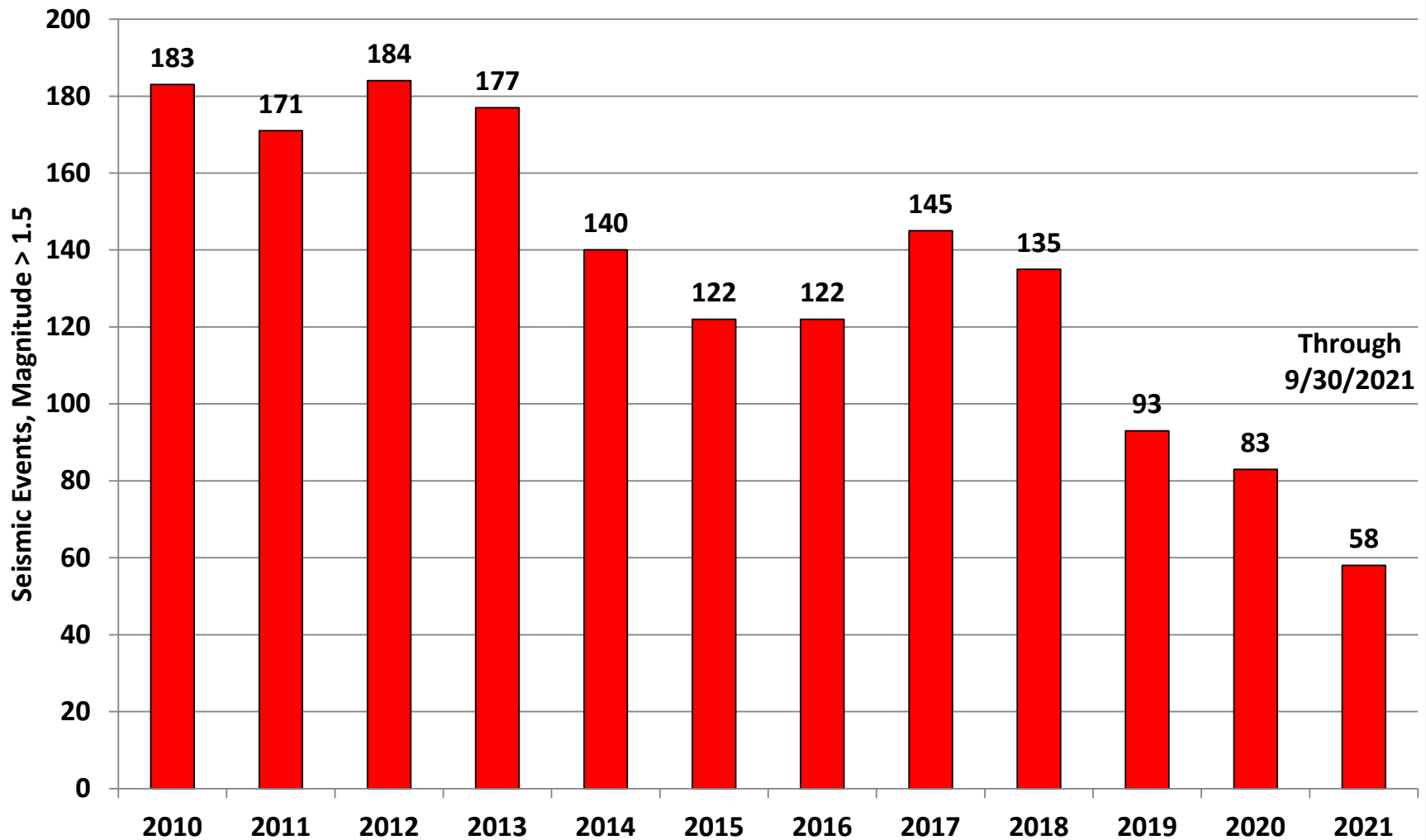
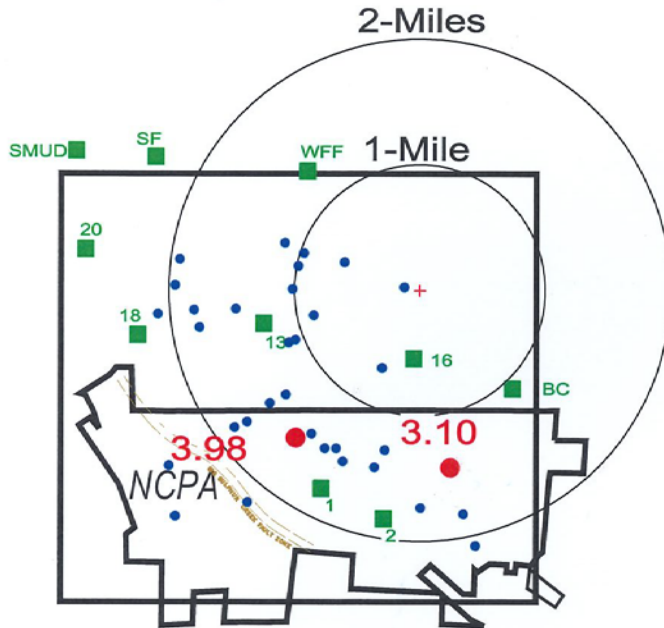


Figure 4



Radial distances are from Anderson Springs Strong Motion Instrument

Apr. 1 - Sept. 30, 2021

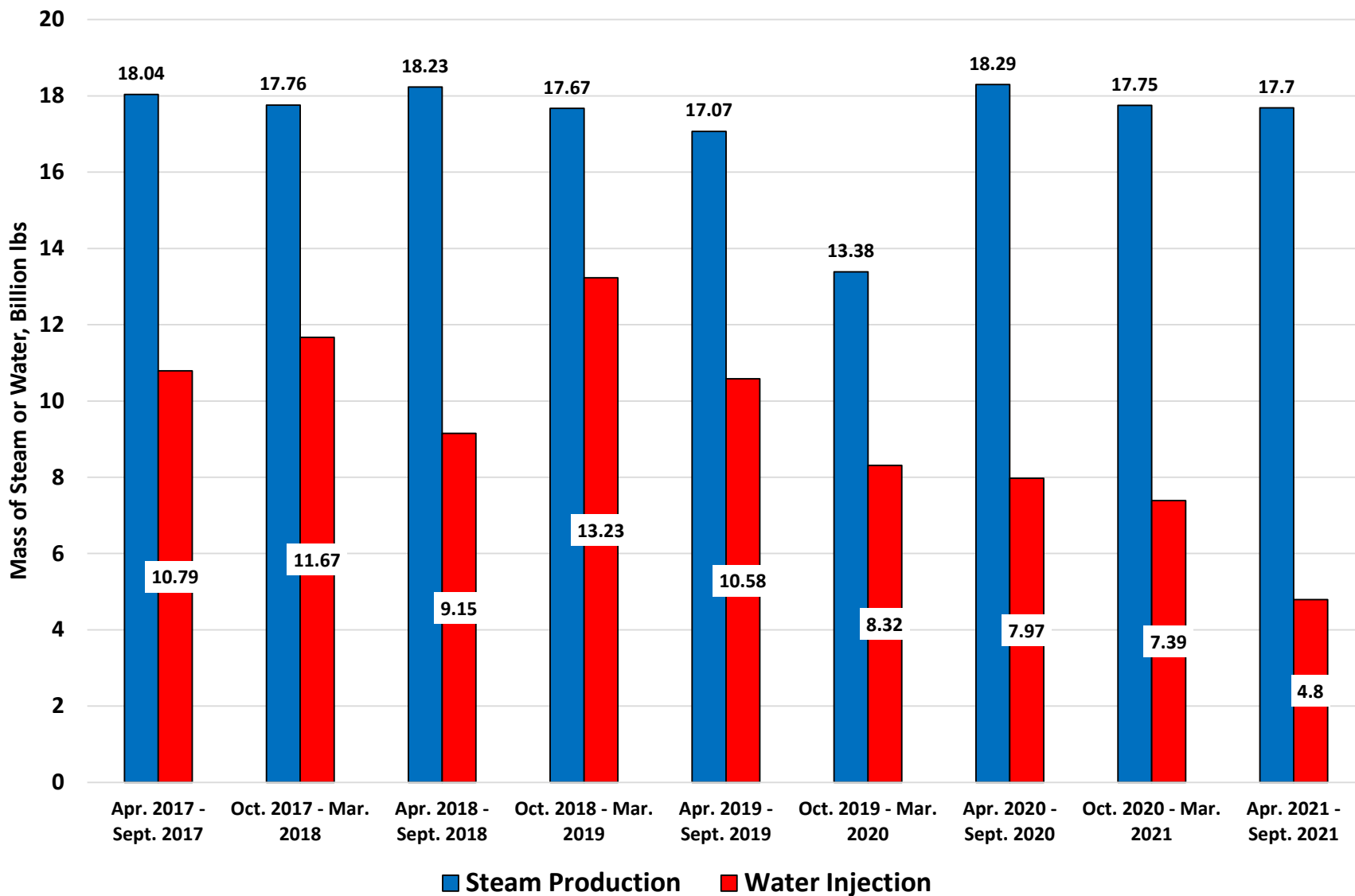
Magnitude > 1.5 - 34 Events

Magnitude > 3.0 - 2 Events

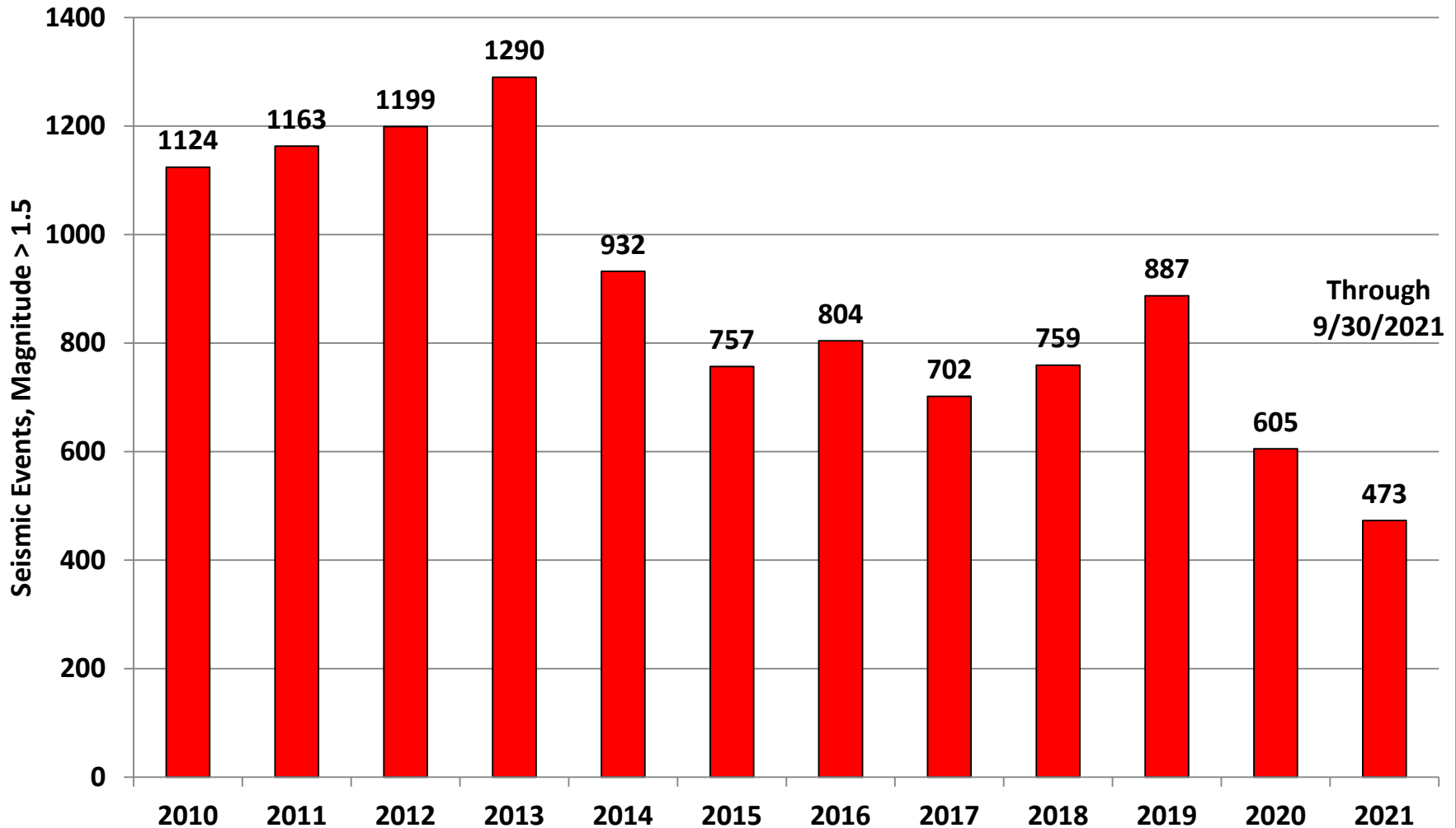
SOUTH EAST
GEYSERS
SEISMIC STUDY
AREA

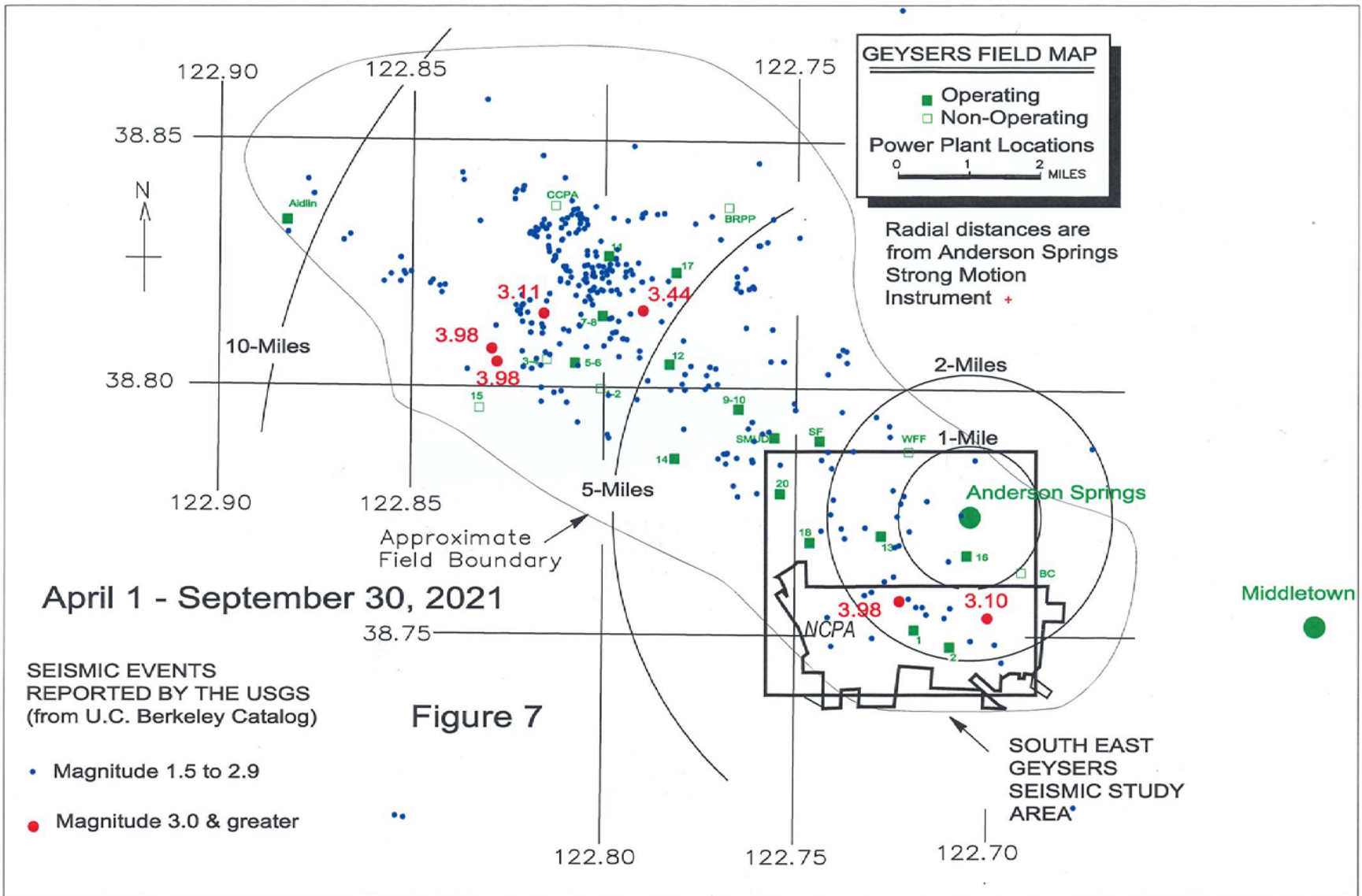
SEISMIC EVENTS
REPORTED BY THE USGS
(from U.C. Berkeley Catalog)

SE Geysers Production and Injection
Figure 5



The Geysers (KGRA) - Historical Seismic Activity Magnitude > 1.5 Figure 6





Summary

- **SEGEP Operation**
 - Injection Rate – 1,880 gpm
 - Pipeline availability – 70.5%
 - Reduced injection on NCPA lease, maintenance, & PSPS events
- **Southeast Production & Injection**
 - Production – 17.7 Glbs
 - Injection – 4.8 Glbs
- **Seismic Activity – SE Geysers**
 - 34 Events > Magnitude 1.5
 - 2 Events > Magnitude 3.0
- **Seismic Activity – Geysers**
 - 319 Events > Magnitude 1.5
 - 6 Events > Magnitude 3.0
 - Highest Event – Magnitude 3.98