Statewide Earthquakes

Total: 514

M 1.7
Statewide Earthquakes

Total: 514

- 44%
- 38%
- 18%
CSTS Alerts

Total: 29

8 in the previous quarter
Earthquakes Within 20 miles

Total: 93

74 in the previous quarter
Finney County

- No located earthquakes
- No subnetwork events
Kiowa County

• 4 located earthquakes
  – M 1.3 to 1.4
  – previously identified clusters

• No subnetwork events
Rice and Ellsworth Counties

- No located earthquakes
- Subnetwork events
  - RC03: 175 (blasts)
  - None elsewhere
McPherson County

- 8 located earthquakes
  - M 0.4 to 1.7
  - > 10 miles from wells
  - persisting near MGA

- 6 subnetwork events
  - MP02: 5
  - MP01: 1
  - M < 0
Reno County

- 59 located earthquakes
  - M 1.2 to M 4.6
  - two M > 4 in August

- 455 subnetwork events at RN01
  - consistent with the Hutchinson cluster
  - about half August 16-18

- Seismicity gradually declining prior to the August events
Sedgwick and Butler Counties

- 22 located earthquakes
  - M 0.9 to M 2.0
  - along known trends

- Subnetwork events
  - BU01: one M 0.6
  - SG02: ten
    - most on August 5th (M < 0)
Johnson County

- No located earthquakes
- No subnetwork events
Discussion and Plans
Enhanced Network

consortium
sub-regional
regional
regional, under construction
Hutchinson Cluster

USGS proposal for a seismic reflection profile of the Hutchinson cluster
Velocity Function

Graduate student research project to improve velocity function around sub-arrays
Abandoned Arbuckle Wells

*KCC increase in activity*

Looking for and plugging abandoned wells

Areas where Arbuckle fluid levels are at or above shallow aquifer
Injection Patterns and Seismicity

*injection patterns in Reno County and temporal (and spatial) earthquake patterns*