

PROJECT UPDATES – May 2016

Summary – Since Governor Abbott signed HB 2 into law on June 22, 2015, project personnel at the Bureau, along with our UT Austin, SMU, and Texas A&M University (TAMU) research partners, have been working to create the foundation for a successful program. Effort thus far has focused on several main areas – acquisition, recruitment, partnerships, research, and outreach – some of which are described below in greater detail.

Acquisition:

- Deliveries of TexNet seismic station equipment to the Bureau have begun.
- Locations of permanent seismic station deployment are continuing to be refined and we are in the process of requesting land use permission from public and private landowners.
- Scouting and initial testing of proposed permanent station sites continue, estimate 30% completion to date.
- Final site testing and deployment of the permanent stations will begin in July.
- Deployment of the portable stations will also begin in July, with placements in the Ft. Worth Basin area.

Recruitment:

- Research Scientist Associates Bissett Young and Tania Murkherjee have been hired for the TexNet Station monitoring system and both will begin employment in June.

Partnerships:

- The TAMU Petroleum Engineering Department has begun TexNet collaboration and research on reservoir and geomechanical modeling and induced seismicity, focusing on the area of Azle, TX.
- Members of the TexNet research team from UT met with TAMU Petroleum Engineering researchers to plan collaborative research on the topic of reservoir and geomechanical modeling.
- Members of the TexNet research team from UT met with members of the SMU North Texas Seismicity Study Group to plan collaborative research on the topics of seismology and subsurface characterization in the Ft. Worth Basin area.

Research:

- JP Nicot and Bridget Scanlon of the Bureau Water Resources team have joined TexNet-CISR for total fluid budget assessments and hydrologic modeling.
- A three-dimensional (3D) geologic model of the Ft. Worth Basin area has been initiated. This 3D model will be used for evaluating injection intervals, assessing reservoir connectivity, and characterizing faults.
- The CISR Seismic Risk Social Science team has developed a survey on seismic risk awareness and knowledge-seeking behavior and an initial 1,200 surveys have been mailed out to a sampling of residents in Texas communities chosen for variance in seismicity experience and history.

Outreach:

- TexNet website development is in process. The TexNet Seismic Monitoring Program site can be found at: <http://www.beg.utexas.edu/texnet>. The TexNet Research site will become operational in June.
- CISR-TexNet principal investigators Hennings, Savvaidis, and Rathje and BEG Director Tinker presented the TexNet Monitoring and Research program to the Texas Commission on Environmental Quality.
- *A Historical Review of Induced Earthquakes in Texas* based on research conducted prior to the establishment of TexNet-CISR was published in *Seismological Research Letters* v. 87, n. 4, 2016 (doi: 10.1785/0220160016) by Frohlich and co-authors.