

**TECHNICAL ADVISORY COMMITTEE TO TEXNET
MEETING MINUTES**

October 2, 2018

The Technical Advisory Committee (TAC) to TexNet met on Tuesday, October 2, 2018 at 10:00 am CST at the John H. Reagan State Office Building (JHR, Room 100).

Attendees:

Dan Hill; Chris Hillman; Dana Jurick; Hal Macartney; Kris Nygaard; Brian Stump; Aaron Velasco; Scott Tinker; Peter Hennings; Michael Young; Alexandros Savvaidis; Ellen Rathje; Margo Grace; Mark Blount; and Robert Vaughn, as Chairman.

Apologies:

None; all members present.

AGENDA ITEM 1 - Call to Order

The meeting was called in to order by Chairman at 10:00 am CST.

AGENDA ITEM 2 - Approval of Minutes 2Q2018

Meeting minutes from July 14, 2018 were presented for approval. Motion was made to approve minutes, and the motion was seconded and unanimously adopted.

AGENDA ITEM 3 – Network Update

Dr. Savvaidis explained that the backbone network is complete with additional stations in 4 areas of interest with some in reserve for new activity. Universities are planning extra sensor deployments of 50 temporary nodes over the next 6 months. Dana Jurick brought up concerns that the plan is getting out of scope and there may be shortage of human resources to do data collection. Peter Hennings responded that they are using CISR money to fund the deployment, not TexNet and that other scientists will help out on human resources side. Kris Nygaard asked that the TAC be made aware of studies and publications and be involved more actively and frequently than quarterly meetings. Brian Stump requested that there be an experiment plan associated with each of the portable local networks.

Action Items.

- Project background materials will be placed on the website for studies and publications and to address scope creep.
- BEG will organize a subcommittee for forward looking planning and collaboration, and host a seismology workshop early in 2019 with outside experts on the methods used by TexNet, and report progress/status in future meetings.

AGENDA ITEM 4 – Quick-look Analyses using the TexNet Catalog

- Dana Jurick covered seismology data available on TexNet website showing filtering and time period capability, and showed an example of time series analysis. He discussed the possibility for high-school and undergraduate classroom use. The toolset has the capability to do simple data analysis using excel and other tools. Question was raised with regards to analyzing seismological activity using USGS catalog to understand what was happening before TexNet. There are concerns that older data has errors. Dana said that he found this simple analysis valuable for his management. Peter Hennings added that new tools are being developed including a historical catalog and a third tool to aid analysis, with faults for example, and injection wells and stress state. It was decided to review published and presented material along with manuscripts in review for next meeting.

Action Items.

- Distribute copies of accepted publications ahead of meeting to provide feedback.

AGENDA ITEM 5 – Progress on development of the Texas Historical Earthquake Catalog

Dr. Savvaidis presented ongoing research on historical earthquakes across different time periods and areas with data from a long-established Lajitas TXAR array that preceded TexNet. Examples are the earthquakes around Alpine in 1995, quarry blasts in Crockett County, and an increase since 2010 in Pecos/Reeves counties. A question is posed as to why there is a distinct increase in seismicity beginning in 2009 and if it is related to human activity. Hennings added that the earthquake data that will be used in the historical catalog will be kept distinct by source, mainly published information and, as such, preferred earthquake event locations and magnitudes will not be provided.

AGENDA ITEM 6 – Preview of other research completed or nearing completion

Hennings reviewed the Texas A&M paper that was published at SPE annual conference. Using modeling and error analysis, researchers found that fault reactivation and earthquakes are explained by unbalanced pore pressure conditions on one side of the fault to the other. An implication is this sort of analysis needs to be done by trained specialists. It took over 2 years to complete this analysis and involved many contributors. Hennings also reviewed the upcoming BEG publication on fault slip potential in the Fort Worth Basin and the recent Walter et al. publication on Texas Panhandle seismicity.

AGENDA ITEM 7 – TexNet monitoring and operational seismology Review Plan

Dr. Savvaidis reviewed seismology events and methods at various site locations. In process of updating technical supplement that is available on the website. Dr. Savvaidis has submitted a manuscript to a technical journal with a goal to publish by the end of the calendar year. 3rd leg of the review process is the workshop in Austin. TexNet is applying for Authoritative Source status with the USGS-ANSS: Advanced National Seismic System. TAC members expressed concern over possible confusion of information provided by the USGS and TexNet catalogs. Hal Macartney stated that while USGS will publish TexNet events, they would not change their own to match, but he would confirm with USGS.

AGENDA ITEM 8 – Discussion of Legislative funding

Scott has been meeting with senators and house representatives on communicating that TexNet is a state service and trying to make the case that funding should go back into the budget, hopefully as a stand-alone item in General Appropriations, independent of BEG funding. There are upcoming meetings with senators and corporate entities to explain how TexNet has developed and is helping the state.

AGENDA ITEM 9 – Update on Governor’s/Legislature Draft Report

Hal Macartney and Chris Hillman suggested that the report should point to specific advances from TexNet that have made the public safer. Plan is to have a draft by the end of the month.

Action Items.

- Bullet points around results need to be added to the upfront executive summary.

AGENDA ITEMS 10 – Adjourn

The meeting was adjourned at 12:00 pm. The next meeting of the Committee will occur December 4th, as a Conference Call, however, welcome to attend at BEG.

N.B. These minutes and previous minutes can be found on the following page:

<http://www.beg.utexas.edu/texnet-cisr/texnet/technical-advisory-committee>, under the ‘Meetings’ tab.