

## MEDIA ADVISORY

### EARTHSCOPE PROJECT TO INSTALL PRECISION GPS MONUMENT AT ALUM CREEK STATE PARK

The National Science Foundation-funded EarthScope Project will install a high-precision Global Positioning System (GPS) monument on August 18 at the Division of Geological Survey's laboratory facilities at Alum Creek State Park. This installation is part of a nationwide program to study the movement and structure of the North American continent and will be the only one in Ohio.

The monument is one of 852 GPS stations that UNAVCO is installing to make up the EarthScope Plate Boundary Observatory. These instruments relay continuous, real-time data to a satellite and track both vertical and horizontal movement of Earth's crust with millimeter precision. This information helps geoscientists to understand the mechanics of the movement of the continent as the Mid-Atlantic ridge accumulates new oceanic crust and pushes North America westward. The stresses generated by this slow movement accumulate in the crustal rocks and lead to periodic earthquakes along ancient zones of weakness when the stress becomes greater than the strength of the rocks. Understanding this stress accumulation is critical to a better understanding of earthquakes in intraplate areas such as Ohio.

The multi-year Earthscope project is being carried out in cooperation with several organizations including the U.S. Geological Survey and consists of two additional components that provide insight about rocks and faults located deep below the surface. One of these components, called the USArray, consists of a mobile array of seismometers that will be deployed in a north-south band across the country. Every two years the array will be moved eastward until it reaches the Atlantic coast. It is currently estimated that the USArray will reach Ohio in the year 2011. Seismic waves from large earthquakes around the world will be recorded by the instruments and provide images of the deep structure of the continent.

Personnel from the Division of Geological Survey and from Earthscope will be on site at Alum Creek during installation and available to answer questions and give interviews. The Division's Alum Creek facility houses laboratories, a repository for Ohio rock core, the headquarters for the Ohio Seismic Network, and the U.S. Geological Survey's Advanced National Seismic System station for Ohio.

Questions and directions:  
Mike Hansen  
Ohio Earthquake Information Center  
3307 South Old State Road  
Delaware, OH 43015  
740-548-5979  
[mike.Hansen@dnr.state.oh.us](mailto:mike.Hansen@dnr.state.oh.us)