# Video Transcript for: Geophysics Training for USGS Groundwater Studies

USGS Office of Groundwater, Branch of Geophysics

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| Narrator | Video Description |
| [Silence] | USGS logo |
| Within the USGS Water Mission Area, geophysics is used to support and enhance many of our local and regional groundwater studies.  | Title: Geophysics Training for USGS Groundwater Studies Video clip: USGS scientists conduct seismic survey using sledge hammer as active source. |
| The Office of Groundwater’s Branch of Geophysics conducts short-courses and workshops each year to train USGS hydrologists on the use of geophysical methods for groundwater investigations.  | [no title]Video clip: USGS scientists discuss GEM2 equipment in the field.Photo: USGS scientists work on equipment in the field. |
| Courses focus on applications of surface,  | Title: Horizontal-to-Vertical Spectral Ratio (HVSR) Seismic Survey Photo: Scientists set up HVSR equipment. |
| waterborne, and  | Title: Fiber-Optic Distributed Temperature Sensing Photo: Scientists set monitors computer on a boat. |
| borehole geophysical techniques to support Science Center studies. | [no title]Video: Scientists measure water level in a well.  |
| Some courses provide training on a specific geophysical method. Others focus on a particular hydrogeological field setting or water-resources question. For example, recent course topics have included  | Title: Borehole Nuclear Magnetic Resonance (NMR) Logging Video: Scientists discuss borehole NMR method during a training class. |
| the use of fiber optics to study groundwater/surface-water interactions,  | Title: Fiber-Optic Distributed Temperature Sensing Photo: Scientists deploy fiber optic cable. |
| geophysical techniques for characterizing alluvial groundwater systems, and  | Title: Electromagnetic Flowmeter Tool Calibration Video: Scientist demonstrates how to calibrated EM flowmeter borehole logging tool. |
| the HVSR passive seismic method.  | Title: Horizontal-to-Vertical Spectral Ratio (HVSR) Seismic Survey Photo: Scientists receive training on how to conduct a seismic survey. |
| Typically, classes last four or five days.  | [no title]Photo: Scientists use computers in classroom while receiving instruction. |
| First, attendees are introduced to the geophysical methods in the classroom. | [no title]Photo: Scientists set up equipment in classroom while receiving instruction. |
| Then, students use the equipment in the field, gaining hands-on experience with data collection. | Title: Broadband multi-frequency electromagnetic (EM) induction survey Video: Scientists use GEM2 in the field. |
| After the field exercises, participants return to the classroom for data processing and analysis, using their own field data or sample data sets. | [no title]Video: Scientists use computers in classroom while instructor demonstrates 2D electrical resistivity inversion software. |
| Students leave the course with an understanding of how state-of-the-art geophysical tools and methods can be applied to support Water Science Center activities | [no title]Photo: Students monitor water flowing into bucket during field test. |
| and how to contact the Branch for further assistance.  | [no title]Photo: Class particiapnts pose in front of USGS sign. |
| To learn more about options for hydrogeophysics training and support for your USGS office, you can contact the Branch of Geophysics at any time. | For more information, contact: John Lane, Chief, OGW Branch of Geophysicsjwlane@usgs.govhttp://water.usgs.gov/ogw/bgas/ |
| [Silence] | USGS logo. |