

MULTI-CHANNEL ANALYSIS OF SURFACE WAVES(MASW) SURVEYS HIGH-RESOLUTION GEOPHYSICAL TECHNOLOGIES

ARM Geophysics provides Multi-Channel Analysis of Surface Waves (MASW) surveys for many applications. MASW is a new seismic technique that can be used in many places where conventional seismic refraction methods can not be used. Data collection typically consists of a seismograph, geophones and a sledgehammer for a source. Rather than analyzing the primary (P) wave as in refraction surveys the MASW method uses shear wave or S waves that are generated in a surface seismic wave. MASW is typically effective to a depth of approximately 30 meters.



MASW Provides:

- Void Mapping
- Abandoned Mine Location
- Top of Bedrock
- Shear Wave Data
- Earthquake Design Data
- Bedrock Fracture Zones

ARM has utilized MASW data to provide shear wave maps of the subsurface for earth quake design site classification (Site class E, D, or C) per the 2003 International Building Code.

ARM has also utilized MASW to map voids, top of bedrock, and soft or weaker bedrock zones. The figure below depicts a MASW profile showing top of bedrock and areas of weaker or less competent bedrock. This information is important in both geotechnical and environmental applications.

