

Geospatial Location: Enabling Safe Corridor Utility Distribution

It is said that the pipelines in the United States could encircle the Earth 25 times. The American Public Works Association estimates that an underground utility line is hit somewhere in the United States every 60 seconds. Geospatial information directly influences all aspects of Accurate Safe Utility Location (ASUL) risk assessment and emergency management. Advanced location surveying technologies, including light detection and ranging (LiDAR), sonar, radar and imagery, provide input into Geographic Information System (GIS) data and other geospatial assets are of most critical value in emergency response during the initial hours and days immediately following any incident. When utilized in the field at specific incident response locations, ASUL maps can be effective and life-saving tools. In California, a utility's disastrous gas pipeline incident brought forth an emergency plan from an independent review panel, the National Transportation Safety Board (NTSB), industry associations and regulators such as Pipeline and Hazardous Materials Safety Administration (PHMSA), California Public Utilities Commission (CPUC), former NTSB leadership, American Gas Association (AGA), Interstate Natural Gas Association of America (INGAA) and others.

Over the past decade, many deaths, injuries, and billions of dollars in repairs to the utilities and damaged property have been associated with poorly mapped or maintained distribution systems. Millions of dollars in environmental cleanup, countless road and facility closures, and dozens of evacuations are the additional results of these breakdowns. It is important to note that these systems most often physically parallel and work in tandem with existing transportation corridors, such as railroad and highway structures. These systems connect nearly every household to a common grid, often exposing citizens to unsafe and potentially explosive conditions. Because Federal, state and local governments control the corridor rights-of-way, report, and react to incidents (through state One Call, Miss Utility, or 811 systems), and issue permits for projects surrounding these systems, accurate geolocation surveying and mapping must be in place so that these facilities are not damaged or be allowed to further deteriorate.



Federal officials, transportation designers, telecom, and utilities and pipeline operators, as well as government, need accurate location information to manage existing underground infrastructure and plan for future growth and development. Surveys and maps of underground utilities are often inaccurate. In many cases, they don't even exist. The lack of location data is often cited by the National Transportation Safety Board (NTSB), Government Accountability Office (GAO), and other authorities as a factor in pipeline and other utility accidents. The inaccuracy of location data, unmarked utilities, and crowding within rights of way are major factors contributing to disruption to underground infrastructure. Digging, drilling or excavating in the vicinity of unknown, unmarked, unmapped, or incorrectly located utilities can be costly in terms of wasted excavation time, service disruption and utility downtime, environmental damage, and—worst of all—personal injury or loss of life. One Call, Miss Utility, or 811 systems are often nonresponsive to surveyors.

An Accurate Safe Utility Location + Infrastructure Mapping Reform (ASUL+IMR) is needed for accurate location of America's underground utilities. This data partnership program will save lives, time, and money. Such a partnership should begin with current private sector protocols and practices and be open to evolving standards and technologies. This initiative should include both management of physical infrastructure, the information technology systems used to manage our most basic daily consumption of power, water, communications, transportation and natural gas, and be compatible with One Call, Miss Utility, or 811 systems. Accurate geospatial location can enable safe corridor utility distribution through surveying and mapping data sets provided by and for terrestrial and mobile LiDAR; acoustical sounding; ground penetrating radar data; GPS; structures and topography; critical infrastructure; cadastral; airborne imagery and elevation; and transportation and pipeline. Small businesses providing surveying, mapping and geospatial data, products and technologies can work closely with utilities, end users, and government to provide innovation and flexibility in the planning, mitigation, response, and remediation phase.

Representative Jackie Speier (D-CA) will soon re-introduce a new version of H.R. 22, the "Pipeline Safety and Community Empowerment Act" from the 112th Congress. This bill will recognize the importance of surveying and mapping data and asset information in ensuring pipeline safety, and assist in the creation of accurate asset inventories.

ACTION REQUESTED:

MAPPS and NSPS respectfully urge Representatives to cosponsor the "Pipeline Safety and Community Empowerment Act" which will enable safe corridor utility distribution. To cosponsor, please contact Miriam Goldstein in Representative Speier's office at 5-3531. MAPPS and NSPS respectfully urge Senators to sponsor companion legislation to H.R. 22 in the 114th Congress. For more information, contact John Byrd, MAPPS and NSPS Government Affairs Manager, at jbyrd@jmpa.us or (703) 787-6665.