

HOWARD L. WARD, GISP

Principal, Developer, GIS Manager

30+ YEARS OF GIS EXPERIENCE

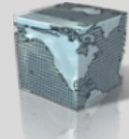
TerraSystems Southwest, Inc.

1998-2022

Principal, Developer, GIS Manager

- Conducted numerous GIS support projects since 1998 ranging from strategic planning/implementation or complex application development
- Active in several local & statewide GIS professional organizations
- Extensive network of public and private GIS data providers & experts throughout Arizona and the US; Az Address Ecosystem Founder
- Managed, architected & implemented multifaceted GIS Projects including:
 - ⇒ **ADHS Medical Mapping Project** - developed workflows and complex QA/QC procedures for creating statewide street network and address point geolocators to facilitate geocoding of large volume (1 million + records) medical based records requiring 100% geocoding accuracy. Research tools, cross-reference techniques and data management methodology developed highlight Mr. Ward's expert ability to use innovative techniques to solve geospatial problems.
 - ⇒ **NC9-1-1 Project** - played a critical role in the State of Arizona's migration to Next Generation 9-1-1, providing GIS support services for the State of Arizona 9-1-1 Program Office related to the assessment, development and enhancement of 9-1-1 GIS data layers including street centerlines, ESN/ESZ boundaries and community boundaries for all 15 counties. An important part of this effort includes identifying and correcting GIS errors with 9-1-1 GIS data layers to ensure conformance with the Attribute Accuracy Requirements section of the Arizona 9-1-1 GIS Standards. Vigorous quality control and assurance procedures were developed and applied, allowing for the correction of many errors in the addressing and street naming components of the dataset, which is critical in E911 emergency response applications.
 - ⇒ **EMergency Address Portal (EMAP)** - integral in the design, development & implementation of this web-based address editing application hosted by AZGEO, allows users to add, delete, move and edit address points and associated attributes. EMAP was developed to resolve the need for better, faster and more comprehensive ways to build and edit a statewide address data ecosystem.
 - ⇒ **Arizona Broadband Project** - a leading-edge nationwide project in which TSSW was recognized by the GIO of the Federal Communications Commission (FCC) for notable contributions to the development and maintenance of the National Broadband Map.

TSSW



CONTACT

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EDUCATION

- University of Arizona - MBA
- Humboldt State University - BS

CERTIFICATION/ AFFILIATIONS

- **Certified GIS Professional (GISP) - since inception: 2009** Cert #: 21989
- Arizona Geographic Information Council (AGIC) - Private Sector Rep (2007-2012)
 - ⇒ Data Committee Co-Chair
 - ⇒ 9-1-1 Committee Member
 - ⇒ AZGEO Work Group
 - ⇒ AZGIV Advisory Committee Chair
- Past President, AZ Chapter of Geospatial Information Technology Association

SKILLSETS

- GIS Software Design/ Automation/Spatial Integration
- Advanced Spatial Analyses
- Application Development/ Toolbox/Scripting
- Complex Data Conversion Workflow Design & Implementation
- Geolocators Creation/ Complex Geocoding
- Address Pt Development/ Workflows & QA/QC
- Street Network Creation/ Maintenance Workflow QA/QC
- Geodatabase Design
- ArcGIS 10.x, ArcGIS Pro, ArcGIS Server, ArcSDE, ArcGIS Online
- Python
- VB.NET