

## Cheryl A. Thurman, GISP Senior GIS Analyst

### Education

BS, Geosciences – emphasis  
Hydrology,  
University of Arizona

Associates of Business  
Administration,  
Pima College

### Affiliations

Certified Geographic  
Information Systems  
Professional (GISP) by the  
GIS Certification Institute

Tucson Area GIS Cooperative  
member

Southern Arizona Geographic  
Information Systems  
Consortium

### 14 Years Experience

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*Ms. Thurman* has been a practicing GIS professional for over ten years, and an environmental professional using the technology in the area of natural resource planning and modeling for an additional five years. Prior to founding TerraSystems Southwest, Inc. with Mr. Howard Ward, Ms. Thurman was employed by Pima Association of Governments as a Water Quality Planner/Hydrologist. She conducted various regional water quality planning activities as well as hydrologic studies in Pima County, AZ. An area of special interest is the preservation of riparian habitat and determination of depth to groundwater using riparian vegetation as determining factors in rural and difficult terrain. Ms. Thurman was instrumental in bringing GIS into the PAG organization. She produced countless datasets used by local jurisdictions, as well as high quality cartographic products for internal and public presentations and distribution. She was the Project Manager for the PAG Sonoran Desert Conservation Plan (SDCP) GIS Hydrologic Coverage supplied to Pima County in support of their SDCP planning efforts, and sat on several related regional planning committees.

Ms. Thurman is proficient with all components of the ArcGIS Desktop Suite through the current 10.0 version. She provides technical GIS and strategic planning support for governmental agencies, planning and engineering firms, non-profit groups, as well as other for-profit entities. She has managed scores of projects involving data acquisition, creation, and complex conversion, as well as created high quality cartographic products and graphic displays. Ms. Thurman has extensive experience working on all aspects of vegetation, natural resources and land use mapping, including complex spatial analyses, model and application development. Ms. Thurman provided the NASA funded Spatial Growth Model team with hydrologic and water resources related design expertise. She is experienced in the use of 3-D modeling and the application of ESRI collaborative technology with Google Earth.

### Project Experience

*La Plata County, CO Future Land Use Plan, GIS Support Services.* As a subcontractor with Community by Design, a nationally recognized sustainable development planning firm, Ms. Thurman has provided GIS support services for all aspects of the Future Land Use Plan (FLUP) planning process, including highly technical analyses, evaluation of hundreds of datasets related to natural resources for input as a possible source for Resource Conservation designations, hundreds of publication quality cartographic products for use in public meetings, to 3D visualization also used in public meetings. Final comprehensive FLUP dataset is comprised of over 20 input layers which, through a series complex processing protocols developed by Ms. Thurman, result in the comprehensive FLUP product.

*Community by Design, New Mexico, GIS Support Services.* Ms. Thurman provides Community by Design with GIS Support Services for numerous projects including Galisteo, New Mexico; Los Duranes Sector Development Plan (Alb, NM); Lovington Downtown Master Plan (NM); and Virden Comprehensive Plan (a comprehensive plan for a rural native community in southwestern NM). Ms. Thurman provides data acquisition, database design and creation, spatial analyses and high quality cartographic products for public presentation at community involvement forums and jurisdiction meetings.

Cheryl Thurman  
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**Raul Duato**  
GIS Data/Programmer/Analyst  
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\* Coordinating Town Staff from  
1999-2003, is no longer with the  
Town and current contact  
information is unknown. The  
subsequent GIS Analyst for the  
Town from 2003-2005 was Raul  
Duato. His contact information  
is listed

*Arizona State Land Department, Conceptual Land Use Planning.* Over the past nine years, Ms. Thurman and TerraSystems have provided GIS data conversion and technical support for numerous Arizona State Land Department Conceptual Land Use projects. As a sub-consultant to Community By Design and The WLB Group, she has researched, collected, processed, analyzed, created high quality maps, and documented GIS data sets for ASLD projects in the Arroyo Grande, Peoria, Marana, Rincon and greater Tucson areas.

*Town of Oro Valley, Arizona, Environmentally Sensitive Lands Ordinance.* Ms. Thurman is currently providing GIS analytical and modeling support for this critical project. The Town of Oro Valley is balancing their concerns for the Sonoran Desert environment with their desire for quality sustainable development. Ms. Thurman is using highly accurate mapping techniques together with spatial analyses and modeling to define environmental sensitive lands, as well as other defined project goals, while also integrating strong community input. TerraSystems is one member of a team of professionals headed by Willdan Associates. The results of this project will include new Environmental Sensitive Land Ordinances drafted and approved by the Town Council, vast areas of soon to be annexed lands will be accurately mapped for natural resources and habitat, and areas of critical habitat and wildlife corridors will be defined. Areas of Open Space important to community constituents will also be determined through public meetings and decision support techniques.

*Town of Oro Valley, Arizona, GIS Support Services.* Ms. Thurman provided the Town of Oro Valley with GIS Support services from 1999-2005. Ms. Thurman worked closely with the Town's GIS Analyst to complete a variety of data creation, conversion and update projects related to their Environmentally Sensitive Lands planning effort, as well as on a file management and reorganization system for GIS data. Datasets created or updated included archaeology, trails, specifically defined ESL datasets such as saguaros, ironwood, rock outcrops, riparian areas, habitat, common area/open space/conservation easements; zoning, planned area developments, and general plan updates. Ms. Thurman became an extension of their GIS Services operations, being able to respond on short notice to the demands placed on their GIS services staff.

## **GIS Software and Natural Resources Experience**

**General GIS Software.** Fourteen years of applying ESRI and AutoDesk technology for the creation, conversion and analysis of various types of data used in natural resource and land use planning.

**ArcGIS/ArcInfo.** Ten years experience in all aspects of ArcGIS Desktop through current version 10, including extensions, as well as ArcInfo Workstation prior to the release of ArcGIS. This includes various types of advanced data conversion including hardcopy and screen digitizing using orthophotography; complex spatial analyses and modeling; extensive database design, creation and management; as well as high-end, publication ready cartographic and graphic design skills.

**ArcView 3.x.** Six years of extensive ArcView experience for mapping, analyses and decision support, including experience with Avenue programming, Spatial Analyst and 3D Analyst.

**AutoCAD/ArcCAD.** Six years of experience with data creation, automation and conversion projects using AutoCAD and AutoCAD Map. Three years respectively of experience using ArcCAD to facilitate the extraction of data from AutoCAD to ArcInfo coverages and ArcView shapefiles.

**Other.** Ten years experience with various types of Internet mapping software from both AutoDesk and ESRI. Extensive experience using a variety of orthophotography and satellite imagery for use in natural resource and land use mapping purposes.

