

# Laila M. Sturgis

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## Core Skills

- ▶ Water Resource Management
- ▶ Regional Water Planning
- ▶ Project Management
- ▶ Meeting Facilitation
- ▶ Water Rights Development, Transfer and Litigation
- ▶ Regulatory Permitting
- ▶ ArcGIS, Excel, Access, Google Earth, Adobe Illustrator

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## Professional Summary

Ms. Sturgis is currently the Aquifer Mapping Program Manager for the New Mexico Bureau of Geology and Mineral Resources, a division of New Mexico Tech. The Aquifer Mapping Program works collaboratively with homeowners, private industry, municipalities, and government agencies to monitor the groundwater across New Mexico. One ground-breaking project is the development of three-dimensional aquifer maps in ArcGIS, and the release of these map packages to planners and consultants to increase knowledge in the region. Ms. Sturgis assists in the coordination of this research team, and in the securing and managing of grants to fund these activities.

From 2003-2019 Ms. Sturgis worked in water resource management and consulting in a variety of roles ranging from field technician to project manager. From 2013 to 2019 she served as the Project Manager on multiple projects to upgrade the Alamo Navajo Chapter drinking water and wastewater systems as well as promoting planning efforts within that community.

## Education

New Mexico Tech – Master of Science in Hydrology, 2003

New Mexico Tech – Bachelor of Science in Geology with Environmental Geology Option, 2000 (with honors)

## Employment History

**New Mexico Bureau of Geology and Mineral Resources** Socorro, NM 2019-present  
**Aquifer Mapping Program Manager** – The Aquifer Mapping Program is working on several key projects across New Mexico. One is the Collaborative Groundwater Monitoring Network that monitors water level in nearly 700 wells across the state, a portion of this data is supplied to the U.S. Geological Survey’s National Groundwater Monitoring Network. Another key project is the 3D mapping of aquifers across the state of New Mexico, utilizing existing hydrology and geology data, including geology and hydrologic maps, water quality reports, geophysical logs, and data from the USGS and NMOSE. These maps are created in ArcGIS and are posted on our website as ArcGIS map packages to download. Management roles include securing and managing grants to fund staff, coordinating research efforts, and hiring and direct management of 5-7 staff.

**Wood Environment and Infrastructure Solutions** (formerly Amec Foster Wheeler) Socorro, NM 2013-2019  
**Senior 1 Hydrogeologist** – Project Manager for 6 years on multiple projects developing water and wastewater infrastructure for the Alamo Chapter of the Navajo Nation, including securing over \$6 million in grant funds and creating and facilitating a Technical Advisory Committee to increase community planning. As the project manager the responsibilities included coordinating staff and subcontractors on projects such as preliminary engineering reports of the water and sewer systems, a hydrogeology review of the Chapter, drilling a new municipal well, and conducting a site feasibility analysis for a new health clinic.

Assistant Manager on a multi-year project creating an ACCESS database that documented all wells, springs and impoundments on the Little Colorado River portion of the Navajo Nation. This project included combining data from sources such as the USGS, Navajo EPA, Navajo Tribal Utility Authority, and converting 10 years of hard-copy drilling permits into a verified and searchable database and ArcGIS dataset.

As part of a small team of consultants, assisted the New Mexico Interstate Steam Commission complete the New Mexico Regional Water Plans in 2016. Directly responsible for facilitating the Lower and Middle Rio Grande and Lower Pecos Regions by coordinating meeting locations and advertisements, developing steering committee and outreach contact lists, evaluating regional water priorities and concerns and synthesizing that information in the State plan template.

### **InterAct PMTI**

Ventura, CA 2012-2013

**Regulatory Specialist** – Developed environmental permits for projects such as drilling new wells, installing new oilfield equipment, defining and expanding pipeline easements, and renewing land use permits. Converted historic drilling logs and repair records for deep oil wells into electronic drawings and databases.

### **AMEC Foster Wheeler** (formerly Hydrosphere) (part-time)

Socorro, NM 2010-2012

**Staff Hydrogeologist** – Summarized hydrological resources for multiple Chapters of the Navajo Nation into regional water plans. Digitized geologic and environmental data for groundwater development support.

### **Hydrosphere**

Socorro, NM 2003-2008

**Staff Hydrogeologist** – Led several multi-year groundwater monitoring projects including the installation of observation wells, installing and maintaining data loggers, and collecting water quality and soil samples. Used PHREEQC, MapInfo GIS, and Surfer to create monthly reports on groundwater conditions. Project Manager for a Valencia County project to understand the impact of a proposed housing development on the local hydrology.

### **New Mexico Institute of Mining and Technology**

Socorro, NM 2000-2003

**Graduate Research Asst.** – Managed the joint Sandia Labs/New Mexico Tech vadose zone research site while completing a hydrology master's degree. A finely controlled infiltration site was used to compare the imaging capability of ground penetrating radar, downhole EM, time domain reflectometry, and electrical resistivity tomography.

### **New Mexico Institute of Mining and Technology**

Socorro, NM 1998-1999

**Soils Laboratory Asst.** – Bulk density and particle size analysis for the New Mexico Tech soils lab.

### **United States Geological Survey**

Bakersfield, CA 1996-1997

**Field Technician** – collected daily suspended sediment samples and maintained the gage station at Calleguas Creek in Camarillo CA.

### **Training**

Defensive Driver & Passenger Van Training, 2019

First Aid and CPR Training, 2018

Project Management Training, 2017, 2018, 2019

Rio Grande Water Law CLE Conference, 2014 & 2006

OSHA Passport Training, 2012

Health and Safety Officer 2008-2009, 2013-2019.

Introductory, Intermediate and Advanced MAPINFO training courses, 2005

[Top Publications \(Ms. Hall changed names to Sturgis in 2007\)](#)

Cikoski, Colin; Fichera, Marissa; Mamer, Ethan; Sturgis, Laila, 2020, A Three-Dimensional Hydrogeologic Model from the Pecos Slope to the Southern High Plains, Southeastern New Mexico, New Mexico Bureau of Geology Mineral Resources, Open-file Report, v. 0614

Hall, L. M., Bowman, R. S., Brainard, J. R., and Hendrickx, J. M. H., November 2004. Determination of Solute Distributions in the Vadose Zone Using Downhole Electromagnetic Induction, Vadose Zone J; 3: 1207

Hall, L. M., May 2003, Measuring Salinity Changes in the Vadose Zone Using Electromagnetic Induction. Master's Thesis, New Mexico Institute of Mining and Technology.