**Jill Marie Pohjonen**

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**EDUCATION**

**B.S., Natural Resources and Environmental Studies (University of Minnesota - December, 1996)**

**M.S. GIS and Web Map Programming, (University of Wisconsin - In progress)**

**RELEVANT COURSEWORK**

Geographic Information Systems; Remote Sensing; Geography; Topographic Map Interpretation; Web Design; Web Fundamentals/HTML; Fundamentals of Computer Programming in Python; Database Management Fundamentals; Statistics; Meteorology; Computer Applications in Natural Resources; Ecology; Forest Hydrology; Silviculture; Soil Resources; Geology; Groundwater Hydrology

**PROFESSIONAL EXPERIENCE**

**GIS Hydrologist II**

**State of Minnesota, Department of Natural Resources, Division of Ecological and Water Resources**

**April, 2007 – March, 2015**

**November, 2016 - current**

Utilize GIS applications (ArcMap, 3D Analyst, Spatial Analyst) to determine impacts of various activities in floodplain areas and perform floodplain mapping

Develop ArcGIS Online applications to distribute FEMA’s flood insurance and flood risk spatial data

Develop and populate geodatabases that adhere to FEMA's Flood Insurance Rate Map (FIRM) spatial and attribute standards

Serve as a subject matter expert on different versions of database schema for FIRM products and databases

Coordinate with federal, local, and private sector project partners to ensure timely and accurate analysis on floodplain projects and data management throughout project process

Work with FEMA Region 5, other state and federal agencies, as well as local governments to develop flood reduction actions and spatial products to mitigate flood risk in Minnesota communities

Complete floodplain engineering analyses using hydrologic & hydraulic data and analytical techniques

Perform spatial analysis using LIDAR and other topographic data utilizing ArcGIS to determine impacts of various activities in floodplain areas and perform floodplain mapping

Utilize ArcGIS Model Builder to create tools to automate large, repetitive processes such as floodplain delineations or geo-processing tasks involving large datasets or databases

Utilize software such as the Microsoft Office suite of programs (MS Word, MS Access, MS Excel) to assist in analysis of database and tabular data for use in GIS Analysis

Synthesize spatial data from different formats, coordinate systems, projections, and vertical datum

Troubleshoot and install GIS software for other users

Manage GIS and other technical data requests from stakeholder partners such as other government agencies or consultants

Serve as a training and guidance outreach resource to technical partners who need assistance with GIS tasks, data acquisition, or hydraulic modeling tasks

Document processes and procedures for multi-phased GIS and engineering tasks

Assist division staff with GIS data acquisition, software, and other computer or software requests

Continually strive to improve efficiency of work flow and tasks by researching, developing, and implementing GIS ModelBuilder tools to accomplish common, detailed, or repetitive tasks

**Hydrologist II**

**State of Minnesota, Department of Natural Resources, Division of Ecological and Water Resources**

**March, 2015 – November, 2016**

Manage Observation Well Network PostgreSQL database

Execute queries into database with SQL to do maintenance and quality control of obwell data collection and historical data

Work with Information Technology staff to upgrade website external partners use to upload data into central database

Work with other Hydrologists to maintain flow of data into data management application used for maintaining time-continuous surface water data

Perform analyses and synthesize groundwater and surface water data to investigate potential interactions

Provide guidance and technical assistance to staff in development of HEC-RAS hydraulic models to predict higher flows at stream flow gage locations where those data have not been measured.

**Hydrologist II**

**State of Minnesota, Department of Transportation**

**January, 2001 - April, 2007**

Created and maintained ArcIMS mapping site to share the hydraulic infrastructure data

Helped to direct information management and data stewardship responsibilities

Served as a front line of technical support and guidance for unit’s GIS users

Served as a primary technical expert for implementation, application, and use of GIS in work unit

Coordinated storm sewer inventory into a GIS format by consolidating GPS, Microstation, and paper formats

Used GIS geoprocessing tools for drainage area delineation, wetland site monitoring, drainage structure inventories, and spatial analysis for selection of potential ponding or wetland sites

Assisted in development, implementation, and maintenance of data and applications so that automation needs were met

Conducted database queries and produced maps and layouts of data

Performed spatial analysis of data sets with geoprocessing functions and tabular manipulation for scoping and design projects