

## Kimberly Baker, PE

Engineer III – Water Resources



Kimberly has over 10 years of experience in water resources engineering. She specializes in hydraulic and hydrologic (H&H) computer modeling using a variety of stormwater management softwares. Her past projects include developing and updating H&H models to characterize watershed hydrology, determine flooding extents in both rural and urban settings, establish network deficiencies, and evaluate flood risk reduction opportunities. She has managed hydraulic, hydrologic, and water quality projects and assisted industrial and municipalities in determining effective water management solutions. Her software experience includes XPSWMM, PCSWMM, InfoSWMM, HydroCAD, P8, HECHMS, WaterGEMS, ArcGIS, and ArcGIS Pro.

### Areas of Expertise

- Hydraulic and Hydrologic Modeling
- Water Quality Modeling
- Alternatives Analysis
- Future Rainfall Modeling
- GIS

### Education

Civil Engineering, Case  
Western Reserve University,  
BS, MS

### Certifications

PE (MN)

### Project Experience

**Apple Valley, Minnesota\***. Created a P8 model for a subwatershed assessment of the Keller Lake watershed to identify potential projects for the City to achieve its wasteload allocation. The water quality modeling assisted the City in developing a feasibility study for potential projects (Redwood Pond).

**City of Farmington, Minnesota\***. Served as project manager as well as performed hydraulic and hydrologic modeling analysis utilizing the City's XPSWMM model to determine a solution to flood inundation in Farmington Industrial Park.

**Blue Line Extension, Minneapolis, Minnesota**. Analyzed potential flood mitigation solutions using the City of Minneapolis' existing XPSWMM model to eliminate inundation along the proposed track alignment.

**State Highway 59, Waukesha, Wisconsin**. Converted and updated an existing XPSWMM 2D model to PCSWMM 2D to analyze the impact of proposed highway design for stormwater management.

**Cole County, Missouri\***. Created a PCSWMM model from City data and survey to analyze existing conditions and determine effective stormwater management options to reduce inundation throughout the county.

**Marathon Petroleum, Mandan, North Dakota\***. Managed water quality and PCSWMM modeling for Marathon's Mandan refinery. The analysis determined the refinery's lagoon overflow risk and expected water quality treatment for a variety of simulated events.

*\*Completed with a previous employer*