4215 Red Fox Drive Helena, MT 59602 406-443-0275 mkjsredfox@earthlink.net

EDUCATION

Montana State University, B.S. in Civil Engineering, May 1978 with highest honors Montana State University, M.S. in Civil Engineering, March 1985.

PROFESSIONAL LICENSES

Registered Professional Engineer, Montana, licensed in 1982.

EXPERIENCE:

WGM Group, Inc. Design Engineer January 2002 to Present

Duties include design of hydraulic structures for highway projects, storm drainage collection, CLOMR application to FEMA and providing technical support for subdivision projects. Responsible for hydraulic design of seven Montana highway projects, including bridge opening design, rural drainage and irrigation design.

Hydrometrics, Inc. Senior Engineer

December 2000 to January 2002

Duties include design of hydraulic structures for highway projects, hydraulic analysis of pipelines, storm drainage collection and treatment and water and sanitary sewer line design. Project manager for hydraulic design of three Montana highway projects, including bridge opening design, rural drainage and irrigation design. Responsible for surface water analysis and collection system on a smelter remediation project in El Paso, Texas. Responsible for surface water collection and treatment, roadway design and site grading for a smelter remediation project in Tacoma, Washington.

Montana Department of Environmental Quality Environmental Engineer, Subdivision Section May 1998 to December 2000

Duties include review of proposed subdivision water supply, sewage treatment and disposal, and storm drainage to assure compliance with current regulations. Duties also include preparing changes to technical components of existing regulations for adoption and providing technical training to county sanitarians.

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Independent Consultant July 1998 to December 2000

Provide highway hydraulic expertise to consultants working for Montana Department of Transportation. Projects have included bridge opening designs for one crossing of the Shields River and three crossings of East Fork of the Bitterroot River, rural drainage and irrigation crossing design for Four Corners West (approximately 11 kilometer rural design), rural drainage design for Ashley Creek to Kalispell, floodplain permit application for Lolo Creek Bridge, and rural drainage design for Florence North (approximately 4 kilometer rural design). Most recent projects included rural design for Hamilton to Victor (approximately 18 kilometers, including seven existing bridges and numerous drainage and irrigation crossings), Polson East (urban drainage and numerous irrigation facilities) and Missoula urban (urban drainage).

Montana Department of Transportation, Helena Civil Engineering Specialist IV, Hydraulics Section July 1991 to May 1998

Responsible for hydraulic design of culverts, bridge openings, storm drains and permanent erosion control features (including environmentally friendly erosion control) for the Billings District (one of five MDT Districts). Required extensive knowledge of hydrology, hydraulics and computer modeling, ability to coordinate with other MDT Sections, and ability to review work of other engineers and Consultants. Also responsible for re-writing MDT Hydraulics Manual, in cooperation with Section Supervisor and his assistant. Bridge opening designs included: Yellowstone River crossings southwest of Big Timber, north of Reedpoint, and north of Pompey's Pillar, Clarks Fork of the Yellowstone River crossings south of Laurel and east of Silesia, Otter Creek northeast of Big Timber, Stillwater River northeast of Absarokee, BBWA irrigation canal southeast of Laurel, Judith River west of Winifred and west of Lewistown, and Ross Fork Creek west of Lewistown and southwest of Lewistown.

Montana Department of Transportation, Helena Civil Engineering Specialist V (Acting Area Engineer, Road Design) August 1994 to February 1995

Acting Area Engineer for the Billings District crew, in the Road Design Section in Helena, (in addition to normal duties in the Hydraulics Section). Responsible for the supervision and road design work of nine other engineers and technicians.

Montana Department of Natural Resources and Conservation, Helena Civil Engineering Specialist IV, Dam Safety Section August 1990 to July 1991

Provided hydraulic and hydrologic expertise in the Dam Safety Section. Duties included hazard classification of new and existing dams, hydrologic studies of Probable Maximum Floods and 100-year floods, flood routing, informing dam owners of requirements of state law through workshops, assisting dam owners in complying with state law, and reviewing work of consultants for dam owners.

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Montana Department of Highways, Helena Civil Engineering Specialist IV, Hydraulics Section February 1988 to August 1990

Responsible for hydraulic design of culverts, bridge openings and storm drains for the Missoula District. Required extensive knowledge of hydrology, hydraulics and computer modeling, ability to coordinate with other MDT Sections, and ability to review work of other engineers and Consultants. Bridge opening designs included: Flathead River west of Polson, Bitterroot Canal northeast of Hamilton, Willow Creek northwest of Augusta, North Fork Willow Creek northwest of Augusta, irrigation canal north of Lonepine, East Fork Bitterroot River northeast of Sula, and West Fork Rock Creek west of Philipsburg.

Christian, Spring, Sielbach and Associates, 2020 Grand Ave., Billings, MT 59102 Civil Engineer and Project Engineer May 1980 to February 1988

Duties included design, specification and project administration of numerous municipal water, sewer and storm drain systems. Required extensive knowledge of all municipal aspects of civil engineering. Water system analysis included complete network analysis of the Colstrip townsite (including design of new lines, water tanks and pressure control valves) and the City of Livingston systems (including recommended improvements to the distribution and pumping systems). Water system design for new developments included Wells Garden Estates in Billings (well supply, pressure tank storage, and distribution), and Valley Garden Estates in Ennis (well supply, storage tank, and distribution). Sanitary sewer system design included numerous SID's in the Billings Heights area, and SID 1268 in northwest Billings (11 bid schedules with 4 different contractors). Water treatment plant design included assisting in design, construction inspection, and startup of a 6 MGD direct filtration plant in Colstrip. Site drainage design included Boys and Girls Club in Billings, Skyview High School in Billings, and a new hospital at Mountain Home AFB in Mountain Home, Idaho.

U.S. Bureau of Reclamation, Billings, MT Planning Engineer May 1979 to May 1980

Prepared appraisal and feasibility level reports for small hydroelectric generation facilities at existing dams. Performed detailed analysis of flow capacity of existing large irrigation canals.

Montana Power Company, Butte, MT Assistant Engineer July 1978 to April 1979

Provided civil engineering capabilities to the Generation Department. Mainly involved with ongoing construction for Colstrip 1 & 2.

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Board of Directors

Treasure State Acres County Sewer District (Sewer district serves approximately 350 residences)

November 1991 to Present

Board of Directors

Treasure State Acres Water Users Association (Water users association serves approximately 190 residences)

September 1989 to Present

CONTINUING EDUCATION:

November 2001, Montana Department of Environmental Quality, Subdivision Review Seminar, Instructor for Storm Drainage Design, 5 hours

April 2001 Design and Retrofit of Culverts in the Northwest for Fish Passage, University of Washington, 1.4 CEU.

May 2000 Contract Review and Revision, DPIC Companies, 0.4 CEU

January 2000 Design of Sand Filter Systems, Northwest On-Site Wastewater Training Center, 0.58 CEU

January 2000 Design of Sand Mound Systems, Northwest On-Site Wastewater Training Center, 0.58 CEU

September 1999 Liability IQ for Architects and Engineers, DPIC Companies, 0.4 CEU

May 1999 On-Site Wastewater Management, Montana State University, 1.3 CEU

November 1998 Stormwater Detention Basin Design, University of Wisconsin-Madison, 2.8 CEU

October 1997 HEC-RAS, River Analysis System, National Highway Institute, 2.7 CEU

December 1996 Highways in the River Environment, National Highway Institute, 3.0 CEU

June 1996, AASHTO Roadside Design Guide, National Highway Institute, 16 hours

June 1995, Fluvial Geomorphology, Dave Rosgen, 32 hours

December 1993, Soils and Foundations, National Highway Institute, 32 hours

May 1992 Stream Stability and Scour at Highway Bridges, National Highway Institute, 28 hours

PUBLICATION:

"Short-Duration Precipitation for Billings, Montana," ASCE Journal of Hydraulic Engineering, Vol. 112, No. 11, November 1986.