

**Edward M. Tomlinson, PhD**

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Dr Tomlinson is President and Chief Meteorologist of Applied Weather Associates (AWA) in Monument, Colorado. Dr Tomlinson received a BA in Mathematics from the University of Richmond in 1966, and MS and PhD degrees in Meteorology from the University of Utah in 1974 and 1980. He served in the US Air Force for 21 years, was the research coordinator for the Cooperative Institute for Research of the Atmosphere at Colorado State University for three years and Chief Scientist for North American Weather Consultants for six years. The focus of activity at AWA has been site-specific probable maximum precipitation, extreme storm analysis, forensic meteorology, weather modification, and reservoir management and hydrology. Dr Tomlinson has been the project manager for numerous PMP studies starting with the FERC approved Michigan/Wisconsin study in 1993 and more recently completed PMP studies including the Cherry Creek Reservoir south of Denver, the Great Sacandaga Lake and Blenheim Gilboa drainage basins in New York, the state of Nebraska, and Waterton Dam basin, Alberta. Dr Tomlinson has previously taught at the University of Colorado in Colorado Springs and is a member of the ASDSO Affiliate Member Advisory Committee.

**William D. Kappel**

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Mr. Kappel is Vice President and Senior Meteorologist of Applied Weather Associates (AWA) in Monument, Colorado. Mr. Kappel received an AA from Skagit Valley College in 1992, a BS in Physical Science from Mesa State College in 1998 and a BS in Broadcast Meteorology from Mississippi State University in 2002. He served as an on-air meteorologist for 10 years at various television stations across the country prior to joining AWA in 2003. The focus of activity at AWA has been site-specific probable maximum precipitation and extreme storm analysis. Mr. Kappel has worked extensively in the development, analysis, and publication of numerous PMP studies including recently completed Blenheim Gilboa drainage basins in New York, Lake Wanahoo in Nebraska, Magma FRS in Arizona, the statewide PMP for the state of Nebraska, Waterton Dam basin, Alberta, as well as numerous others. Mr. Kappel has also been heavily involved in several forensic meteorology cases, hydrologic model calibration, and reservoir inflow management projects. Mr. Kappel has been a guest instructor at the University of Colorado in Colorado Springs and is a member of the ASDSO, AMS, NHC, and NWA.

**Douglas M. Hultstrand**

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Mr. Hultstrand is a Senior Hydrometeorologist of Metstat Inc. in Windsor, CO. Mr. Hultstrand received a Bachelor's Degree from the University of Colorado at Boulder (CU) (Physical Geography, and Hydrology Certificate), a Master of Science degree from Colorado State University (CSU) (Watershed Science), and is currently pursuing a Doctorate degree in Earth Sciences at Colorado State University (CSU). Mr. Hultstrand has worked with U.S. Geological Survey (USGS) Alpine Hydrology Research Group (AHRG), the Institute of Arctic and Alpine Research (INSTAAR), and the U.S. Forest Service Rocky Mountain Research Station (RMRS). Mr. Hultstrand has a passion for scale and spatial variability in precipitation processes as related to hydrology and hydrometeorology. His research and expertise are in modeling the spatial variability in snowpack processes and rainfall as function of terrain parameters and atmospheric energy to better understand and model hydrologic regimes.

**Geoffrey A. Muhlestein**

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Mr. Muhlestein is a Geographic Information Systems (GIS) Consultant to Applied Weather Associates (AWA). Mr. Muhlestein has earned an AS from Dixie State College in St. George, Utah, a BS in Geology and GIS Certificate from Southern Utah University in Cedar City, Utah, and is currently pursuing a MA in Geography and Environmental Studies (with an emphasis on physical systems and applied GIS) from the University of Colorado at Colorado Springs. Mr. Muhlestein has contributed to numerous hydrometeorological studies in coordination with AWA with a specialty in geospatial analysis, cartographic production, and customized GIS applications. Prior to his work with AWA, Mr. Muhlestein interned as a GIS technician with the Utah Geologic Survey (UGS) and spent 9 years as a whitewater raft guide in Grand Canyon. Mr. Muhlestein is enthusiastic about applying evolving geospatial technologies to the scientific evaluation of surface and atmospheric processes.

**Patrice C. Sutter**

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Ms. Patrice Sutter is a Meteorologist and Technical Writer with JRS Consultants, Inc.. She received her B.S. in Meteorology from Metropolitan State College, Denver, CO in 1988. As an Associate Scientist at the National Center for Atmospheric Research, she field-tested wind shear and microburst detection algorithms, and analyzed single and multiple Doppler radar data in the development of wind shear detection algorithms. She served as a forecaster in the National Weather Service before accepting a position with NOAA's Forecast Systems Laboratory in Boulder, CO, where, for 12 years, she participated in nearly every aspect of the development, testing and implementation of the Advanced Weather Interactive Processing System (AWIPS) display workstation, now in

operation at all of the NWS forecast centers, offices and many U.S. military bases. She was the Lead Trainer for the AWIPS workstation to NOAA and NASA forecasters and to foreign users which required extended stays in Taiwan and South Korea. Prior to joining JRS Consultants, Ms. Sutter conducted air quality and toxic assessments for commercial clients using Environmental Protection Agency's (EPA) Industrial Source Complex (ISC3) and AERMOD dispersion models. The focus of her activity at AWA has been to support the site-specific probable maximum precipitation and extreme storm analyses. Ms. Sutter has been a guest instructor at Metropolitan State College and is a member of the AMS and NWA.

**Tye W. Parzybok**

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Mr. Parzybok, President and Chief Meteorologist of Metstat, Inc, is a Certified GIS Professional (GISP) with a bachelor's degree from Oregon State University (OSU), has nearly 20 years of GIS and meteorological/climatological experience. Author of "Weather Extremes of the West", as well as several other technical articles, Mr. Parzybok has been a weather hobbyist since childhood. His expertise in spatial interpolation, GIS, meteorology/climatology, quality control and storm analysis have played key roles in several projects for the National Center for Atmospheric Research (NCAR), National Climatic Data Center (NCDC) , USDA Natural Resources Conservation Service (NRCS), National Forest Service and NOAA's National Weather Service (NOAA/NWS). Mr. Parzybok is also lead programmer/developer of the Storm Precipitation Analysis System (SPAS) and a cost-effective derivation algorithm used to spatially interpolate precipitation frequency estimates as part of NOAA Atlas 14.