

**Bill Kappel, President/Chief Meteorologist**

**719-488-4311**

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## **Education and Training**

Broadcast Meteorology Degree, Mississippi State University, August 2001

B.S., Physical Science-Geology, Colorado Mesa University, May 1998

A.A., Liberal Arts, Skagit Valley College, June 1992

## **Technical Specialties**

- Probable Maximum Precipitation
- Storm Analysis and Reconstruction
- Hydrometeorology
- Forensic Meteorology
- Operational Meteorology (Forecasting and Observation)
- Climate Reconstruction and Analysis
- Climate Change

## **Experience**

### **Applied Weather Associates • Monument, CO – August 2003-Present**

#### *President/Chief Meteorologist*

Perform all aspects required for Probable Maximum Precipitation studies, including data mining and analysis, storm identification and classification, maximization, transpositioning, GIS analysis, general overview, report compilation, development of presentation materials, NEXRAD analysis and incorporation, and storm analysis. Provide support and analysis for forensic meteorology cases. Provide expert testimony for forensic meteorology cases. Perform peer reviews of PMP studies. Perform detailed storm analysis. Provide data for various Hydrometeorological analyses, including runoff model calibration and timing.

### **KKTV-11 News • Colorado Springs, CO – November 2002-April 2006**

#### *On-Air Meteorologist*

Researched numerous meteorological variables to develop a forecast. Designed graphics which incorporated forecast in an easy to understand, aesthetically pleasing format, then delivered the forecast live on on-air. Worked with local community organizations and schools to present weather information in a fun, informative, and interactive presentation with the goal of increasing station awareness, bringing in additional revenue, and providing complete customer service.

### **Technology Service Corporation – March 2003-February 2005**

#### *Meteorologist/GIS Specialist*

Responsible for delivery of meteorological and geological expertise to various contracts and vendors, including updating current and future conditions and their relevance to the particular project. Work directly with others on various projects to decipher impact of meteorology and geology variables and determine potential outcomes. Help validate and verify outcomes from a meteorological/geological perspective. Provide operational GIS support internally and externally.

*Sensor FOM*

Liaison between various chem/bio sensor manufactures and DTRA. Gathered information on sensor types, functions, and usability within sensor FOM network. Assisted in development and presentation of materials and reports.

*Rain-Check/Water Resources Manager*

Manage all aspects of the Rain-Check program including future enhancements, issue resolving, acquiring and incorporating new volunteers, and presenting potential uses. Assisted in researching, developing, and implementing Rain-Check.org Web site and database. Currently point of contact for the program, providing meteorological and technical expertise, as well as interaction between TSC, public, and government, and other private industry. Continue to identify and develop other areas of business with other customers and agencies. Ongoing quality control of Web interface, meteorological variables, and data display. Continually developing new ideas to fit various customers and end user needs through Rain-Check Web site interface.

*JWID 2004 Trial 1.12*

Responsible for researching GIS symbology and integrating specific symbols into Web Common Operational Picture (WebCOP). Provided GIS support to project team in preparation for and during exercise. Developed various presentations and conducted several meetings to deliver information about background of exercise, TSC's involvement, and capabilities of WebCOP.

**Agilent Technologies • Palo Alto, CA – February 2001-January 2003**

*Marketing/Communications Specialist*

Worked as part of a team to implement an enterprise resource planning system for over 44,000 employees worldwide by communicating information, training employees, and driving change management using numerous communications channels and vehicles. Took an initial vision, developed a strategy and communication plan, then executed the strategy while meeting strict deadlines. Expert with virtual communication activities using the Web, WebEx/Placeware, phone lines, and/or in person. Designed and developed the program Web site used for push and pull types of communication as well as a training resource and information repository. Conducted and analyzed surveys then developed a strategy to execute findings.

**KNTV-NBC3 • San Jose/San Francisco/Oakland CA – May 1999-September 2002**

*On-Air Meteorologist*

Researched numerous meteorological variables to develop a forecast. Designed graphics which incorporated forecast in an easy to understand, aesthetically pleasing format, then delivered the forecast live on on-air. Worked with local community organizations and schools to present weather information in a fun, informative, and interactive presentation with the goal of increasing station awareness, bringing in additional revenue, and providing complete customer service.

**WeatherNews Inc • Sunnyvale, CA – March 1999-March 2000**

*Operational Meteorologist*

Created the USA Today newspaper weather page for both domestic and international publication. Led a team that designed and developed more informative and useful interfaces to increase sales and customer satisfaction.

**WAOW TV-9 • Wausau, WI – July 1998-March 1999**

*On-Air Meteorologist*

Researched numerous meteorological variables to develop a forecast. Designed graphics which incorporated forecast in an easy to understand, aesthetically pleasing format, then delivered the forecast live on on-air. Worked with local community organizations and schools to present weather information in a fun, informative, and interactive presentation with the goal of increasing station awareness, bringing in additional revenue, and providing complete customer service.

**KREX TV • Grand Junction, CO – March 1997-July 1998**

*On-Air Meteorologist*

Researched numerous meteorological variables to develop a forecast. Designed graphics which incorporated forecast in an easy to understand, aesthetically pleasing format, then delivered the forecast live on on-air. Worked with local community organizations and schools to present weather information in a fun, informative, and interactive presentation with the goal of increasing station awareness, bringing in additional revenue, and providing complete customer service.

**Memberships/Professional Certification/Awards**

Member of the American Meteorological Society

Member of the National Weather Association

Member of the Association of State Dam Safety Officials

Member of the National Hydrologic Warning Council

American Meteorological Society Television Seal of Approval

Phi Theta Kappa National Honor Society

Sigma Gamma Epsilon National Earth Sciences Honor Society

Alpha Theta Chi Collegiate Honor Society

Member of the 1996 Summer Olympic Handball Team (1st Alternate)

Honorable Mention All-American, Basketball, 1993-1994

Male Scholar Athlete of the Year 1994-Colorado Mesa University  
Male Scholar Athlete of the Year 1992-NWAACC-Skagit Valley College

## **Conferences/Reports**

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., Lovisone, S., Tomlinson, E.M., and D. McGlone, May 2014: Site-Specific Probable Maximum Precipitation (PMP) Study for the Peach Bottom Power Plant, Pennsylvania.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., and D. McGlone, May 2014: Site-Specific Local Intense Precipitation (LIP) Study for the Exelon Nuclear Station-Illinois.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., Tomlinson, E.M., and D. McGlone, April 2014: Site-Specific Probable Maximum Precipitation (PMP) Study for the North Umpqua Basin, Oregon, prepared for PacifiCorp.

**Kappel, W.D.**, April 2014: Calculating PMP in Complex Terrain-Updating HMR 59, USSD Annual Conference Presentation, San Francisco, CA.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., Tomlinson, E.M., and D. McGlone, March 2014: Site-Specific Probable Maximum Precipitation (PMP) Study for the Duck River Basin, Alabama, prepared for Utilities Board of the City of Cullman.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., and D. McGlone, March 2014: Site-Specific Local Intense Precipitation (LIP) Study for the Columbia Power Station, Washington.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., Lovisone, S., Tomlinson, E.M., and D. McGlone, February 2014: Site-Specific Probable Maximum Precipitation (PMP) and Local Intense Precipitation (LIP) Study for Arkansas Nuclear One.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., Lovisone, S., Tomlinson, E.M., and D. McGlone, January 2014: Site-Specific Probable Maximum Precipitation (PMP) Study for the Beaver Valley Nuclear Generating Station, Pennsylvania.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., and D. McGlone, January 2014: Site-Specific Probable Maximum Windstorm for the Davis Besse Nuclear Generating Station, Ohio.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., and D. McGlone, January 2014: Site-Specific Probable Maximum Windstorm for the Perry Nuclear Power Plant, Ohio.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., Tomlinson, E.M., and T.W. Parzybok, January 2014: Site-Specific Probable Maximum Precipitation (PMP) and Local Intense Precipitation (LIP) Study for the Duane Arnold Nuclear Generating Station, Palo, IA.

**Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., and D. McGlone, December 2013: Site-Specific Local Intense Precipitation (LIP) Study for the Diablo Canyon Nuclear Plant, California.

**Kappel, W.D.**, September 2013: PMP Evaluation Tool and the Arizona Statewide PMP study, ASDSO Annual Conference Presentation, Providence, RI.

**Kappel, W.D.**, July 2013: SPAS Real Time, HydroVision Annual Conference Presentation, Denver, CO.

**Kappel, W.D.**, June 2013: Cool-Season PMP and Meteorological Time Series for Snow Melt Calculation, National Hydrologic Warning Council Annual Conference Presentation, Jacksonville, FL.

**Kappel, W.D.**, Hultstrand, D.M., Tomlinson, E.M., Muhlestein, G.A., and T.P. Parzybok, March 2013: Site-Specific Probable Maximum Precipitation (PMP) Study for the Indian Point Energy Center, Peekskill, NY.

**Kappel, W.D.**, February 2013: Arizona Statewide PMP, USSD Annual Conference Presentation, Phoenix, AZ.

**Kappel, W.D.**, Hultstrand, D.M., Tomlinson, E.M., Muhlestein, G.A., and T.P. Parzybok, March 2013: Site-Specific Probable Maximum Precipitation (PMP) Study for the Vermont Yankee Nuclear Power Plant, Vernon, VT.

**Kappel, W.D.**, Hultstrand, D.M., Tomlinson, E.M., Muhlestein, G.A., and T.P. Parzybok, September 2012: Site-Specific Probable Maximum Precipitation (PMP) Study for the Quad Cities Nuclear Generating Station, Quad Cities, IA.

**Kappel, W.D.**, September 2012: Wyoming Statewide PMP-Replacing Four HMRs, ASDSO Annual Conference Presentation, Denver, CO.

**Kappel, W.D.**, Hultstrand, D.M., Tomlinson, E.M., and G.A., Muhlestein, August 2012: Site-Specific Probable Maximum Precipitation (PMP) Study for the Tarrant Regional Water District-Benbrook and Floodway Basins, Ft Worth, TX.

**Kappel, W.D.**, and Hultstrand, D., February 2012: Real-Time Analysis of Hurricane Irene Rainfall Using The Storm Precipitation Analysis System, National Flood Workshop Presentation, Houston, TX.

Tomlinson, E.M., **Kappel, W.D.**, Hultstrand, D.M., Muhlestein, G.A., S. Lovisone, and T. W. Parzybok, March 2013: Statewide Probable Maximum Precipitation (PMP) Study for Ohio.

Tomlinson, E.M., **Kappel, W.D.**, Muhlestein, G., Hultstrand, D., and T.W. Parzybok, January 2012: Site-Specific Probable Maximum Precipitation (PMP) Study for the Brassua Drainage Basin, Maine.

Tomlinson, E.M., **Kappel, W.D.**, Muhlestein, G., Hultstrand, D., and T.W. Parzybok, February 2011: Site-Specific Probable Maximum Precipitation (PMP) Study for the Tarrant Regional Water District, Texas.

Tomlinson, E.M., **Kappel, W.D.**, Muhlestein, G., Hultstrand, D., and T.W. Parzybok, March 2011: Site-Specific Probable Maximum Precipitation (PMP) Study for the Buckeye FRS Drainage Basin, Arizona.

**Kappel, W.D.**, September 2010: PMP Rainfall Distribution as a Function of Area Size, ASDSO Annual Conference Presentation, Seattle, WA.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, February 2010: Site-Specific Probable Maximum Precipitation (PMP) Study for the Magma FRS Drainage Basin, Arizona.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, January 2010: Site-Specific Probable Maximum Precipitation (PMP) Study for the White Tanks FRS Drainage Basin, Arizona.

Tomlinson, E. M., and **W.D. Kappel**, April 2010: PMP Review and Analysis for the Waterton Dam Basin, Alberta, Canada.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, December 2009: Extreme Storm Analysis and Hydraulic Model Input Meteorological Parameter Analysis for the Northern Sierra, CA.

Tomlinson, E. M., and **W.D. Kappel**, October 2009: Revisiting PMPs, *Hydro Review*, Vol. 28, No. 7, 10-17.

**Kappel, W.D.**, September 2009: Arizona Statewide PMP, Improving HMR 49, ASDSO Annual Conference Presentation, Ft Lauderdale, FL.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, July 2009: Site-Specific Probable Maximum Precipitation (PMP) Study for the Scoggins Dam Drainage Basin, Oregon.

**Kappel, W.D.**, June 2009: Re-analysis of the Smethport, PA July 1942 Extreme Rainfall, ASDSO Northeast Regional Conference Presentation, Happy Valley, PA.

**Kappel, W.D.**, May 2009: Statewide Probable Maximum Precipitation study (PMP) for the state of Arizona, ASDSO Western Regional Conference Presentation, Coeur d'Alene, ID.

Tomlinson, Edward M., **Kappel, W.D.**, and T.W. Parzybok, February 2009: Site-Specific Probable Maximum Precipitation (PMP) Study for the Tuxedo Lake Drainage Basin, New York.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, December 2008: Statewide Probable Maximum Precipitation (PMP) Study for the State of Nebraska.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, October 2008: Site-Specific Probable Maximum Precipitation (PMP) Study for the Magma FRS, Arizona.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, October 2008: Site-Specific Probable Maximum Precipitation (PMP) Study for the Timnoth Drainage Basin, Colorado.

Tomlinson, E. M., **Kappel, W.D.**, September 2008: Statewide Probable Maximum Precipitation study (PMP) for the state of Nebraska, ASDSO National Conference Presentation, Indian Wells, CA.

Tomlinson, E. M. **Kappel, W.D.**, and T.W. Parzybok, August 2008: Site-Specific Probable Maximum Precipitation (PMP) Study for the Florence FRS, Arizona.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, August 2008: Site-Specific Probable Maximum Precipitation (PMP) Study for the Blenheim Gilboa Drainage Basin, New York.

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, June 2008: Site-Specific Probable Maximum Precipitation (PMP) Study for the DeForest Lake Drainage Basin, New Jersey.

Tomlinson, E. M., **Kappel, W.D.**, 2007: Detailed Storm Rainfall Analysis for Hurricane Ivan Flooding in Georgia Using the Storm Precipitation Analysis System and NEXRAD Weather Radar, CEATI Inflow Forecast for Hydropower Conference, Knoxville, TN.

Tomlinson, E.M., **Kappel, W.D.**, 2007: Statewide Probable Maximum Precipitation study (PMP) for the state of Nebraska, Western Regional ASDSO Conference Presentation, Omaha, NE.

Tomlinson, E.M., **Kappel, W.D.**, Parzybok, B. Rappolt, September 2006: Use of NEXRAD Weather Radar Data with the Storm Precipitation Analysis System (SPAS) to Provide High Spatial Resolution Hourly Rainfall Analyses for Runoff Model Calibration and Validation, ASDSO Annual Conference Presentation, Boston, MA

Tomlinson, E. M., **Kappel, W.D.**, and T.W. Parzybok, June 2006: Site-Specific Probable Maximum Precipitation (PMP) Study for the Woodcliff Lake Drainage Basin, New Jersey.

Tomlinson, E.M., **Kappel, W.D.**, Parzybok, T.W., Hultstrand, D, B. Rappolt, 2006: Storm Precipitation Analysis System Description: A New System for Analyzing Precipitation from Storms, Hydro Review, 58-65 pp.

Tomlinson, E. M., W.s, R.A, **Kappel, W.D.**, and T.W. Parzybok, September 2003: Site-Specific Probable Maximum Precipitation (PMP) Study for the Great Sacandaga Lake / Stewarts Bridge Drainage Basin, Prepared for Reliant Energy Corporation, Liverpool, New York.

**Kappel, W.D.**, 2004: “Utilizing Operational GIS to Bridge the Gap between Data and Decision Makers Concerning Colorado’s Water Resources” prepared for GIS in the Rockies Conference, Denver, CO.

**Kappel, W.D.**, 2003: “Operational GIS Support for Emergency Operations”, Prepared for GIS Colorado Fighting Wildfire with GIS Technology, Pueblo, CO.

Association of State Dam Safety Officials Annual Meeting attendee 2006, 2007, 2008, 2009, 2010, 2011

National Hydraulic Warning Council Meeting attendee 2009, 2011

American Meteorological Society Annual Meeting attendee, 1994, 2004

National Weather Association Annual Meeting attendee, 2001

Numerous Department of Defense classified reports

**Security Clearance:** TS – 18 Sept 03