

John F. Henz

Senior Project Manager, Atmospheric Science Group Leader

Professional Experience

Mr. John Henz has been a successful consulting meteorologist nationally since 1973. He has been acknowledged as an expert in hydro-meteorology, climate impacts on water supply and flood prediction. He has developed flood warning and prediction systems in Nevada, Arizona, Colorado, Texas and Virginia. Mr. Henz has developed original radar-rainfall algorithms and is a leader in the application of radar-derived rainfall in basin calibration and flood prediction. Recently he has focused on the development of original water supply prediction techniques based on hydro-climate indices and the application of radar data to the development of enhanced design storm concepts for floodplain studies and the analysis extreme precipitation events for dam safety projects. His recent work has included impacts of climate change on water supply, design storms and floodplain delineation.

HDR Project Experience

Bay Delta Conservation Project EIS/EIR, Sacramento, CA. Climate Change Task Manager. HDR's Atmospheric Science Group was tasked with providing a detailed description of the climate change interaction with the project and alternatives. Available information will be reviewed to determine if it is adequate for use in the Environmental Setting/Affected Environment section for Climate Change. Specific issues to be addressed include:

Climate variability effects on precipitation systems and tributary runoff that affect the Delta

Potential man-made climate effects on precipitation systems and tributary runoff that affect the Delta

Climate variability effects on sea level variability, especially high tide levels that affect Delta

Potential man-made climate effects on sea level variability, especially high tide levels that affect the Delta

A gap analysis will be performed that summarizes the data gaps that will require additional data collection and/or analysis to fill the identified data gaps required for the Climate Change Environmental Setting/Affected Environment section. Contractor will prepare and submit a task order to obtain or prepare information to fill those data collection and/or analyses gaps. Additional steps will be followed as the project develops.

Bureau of Indian Affairs, BIA Flathead Drought Mitigation Plan, Flathead Indian Reservation, MT. Hydro-Climate Task Manager. HDR developed a Drought Mitigation Plan (DMP) for Flathead Lake taking into account the

Education

Master of Science, Atmospheric Science,
Colorado State University, 1974

Bachelor of Science, Atmospheric Science
(Meteorology), University of WI Madison,
1968

Professional Registrations

Certified Consulting Meteorologist, No. 270
Issued: 06/01/1980, Expires: None Listed

Professional Affiliations

American Society of Dam Safety Officers,
Member

American Meteorological Society, Member,
1968-Present

Colorado Association of Stormwater and
Floodplain Managers (CASFM), Member,
1992-Present

Association of State and Floodplain
Manager (ASFPM), Member, 2002-Present

Geological Society of America, Member,
2005-Present

HDR Tenure

9 Years

Industry Tenure

40 Years

Professional Recognition

Member, Board of Certified Consulting
Meteorologists (CCM), American
Meteorological Society 2008-2013.

Member, Board of Economic Enterprise
Development, (BEED), American
Meteorological Society 2008-2013.

HDR Recognition

Senior Professional Associate, 2007-
present

Professional Associate, 2005-present

National Hydro-Meteorological Technical
Advisor, 2006-present

various stakeholders in the area. Responsible for examining cause-effect relationships of extreme meteorological and hydrological drought in the basin. In the process, HDR examined the relationships between precipitation, various climatic and other physical factors on the peak spring-summer runoff season. Phase II of the project encompassed utilizing more information in further refining and improving on the accuracy of proactive drought recognition. These results were combined with efforts in modeling, economic analysis and environmental impact.

City of Boulder, Boulder South Boulder Creek Climatology, Boulder, CO.

Climatology Task Manager. Developed a flood climatology of South Boulder Creek, evaluation, a quantitative assessment of historical extreme precipitation events on the South Boulder Creek watershed, provided re-construction of rain events for basin calibration and developed an original application of historical radar data to provide an enhanced spatial and temporal definition of the basin design storm for floodplain delineation. Also developed a climate change component for the evaluation of the 100-yr design storm.

CO River Water Conservation District, CRWCD Hydro Climate Index, CO.

Senior Project Manager. HDR completed three primary interrelated hydro-climate tasks to enhance the understanding of and the risk assessment for future droughts in the specific basins affecting the supply of water to the CRWCD and in neighboring basins in the state.

CO River Water Conservation District, CRWCD Water Supply Forecasting, CO.

Project Manager. Developed an original water supply prediction technique based on the application of hydro-climate indices to anticipate snow-pack snow water equivalent, the volume of the seasonal runoff and the timing of the runoff peak for watersheds in the Upper Colorado River watershed.

Colorado Springs Utilities, CSU Climate Predictor, Colorado Springs, CO.

Project Manager. Developed an original water supply prediction technique based on the application of hydro-climate indices to anticipate snow-pack snow water equivalent, the volume of the seasonal runoff and the timing of the runoff peak for watersheds in the Upper Arkansas River and the Pikes Peak regional watersheds.

Colorado Water Conservation Board, CWCB 2001-2007 Colorado Flood Task Force and Water Availability Task Force, Denver, CO.

Project Manager. Provides monthly assessments of climate change impacts on precipitation, mountain snow pack, flooding potential and water supply to numerous state agencies that participate in the task forces. Reports directly to the Colorado Water Conservation Board of Directors on matters of extreme precipitation impacts on Colorado water supplies. The forecasts are made available statewide on the Internet and account for thousands of seasonal hits.

Colorado Water Conservation Board, CWCB Drought Summary Report, Denver, CO.

Project Manager. Project included summarizing scientific research that encompassed meteorological and tree-ring records to assess the

occurrence and severity of drought periods in Colorado and the larger Great Plains region for the past several centuries. The 2002 drought was evaluated and placed in the context of previous Colorado droughts. Material was presented in a manner acceptable for understanding by the general public.

County of Fairfax, Fairfax Automated Flood Warning System, Fairfax, VA.

Project Manager. Automated flood response, monitoring and signalization system design to develop an initial pilot flood detection network for the Pohick and Cameron Run basins in Virginia. Project includes water depth monitors, rain gages and stream gages. As the system is expanded across the Fairfax's 43 watersheds, automated weather stations (AWOS) will be integrated with a flood response plan and the other detection network components into an effective flood warning system.

South Washington Watershed District, SWWD Watershed Outlet and Plan, Flood Emergency Planning and Civil Design, Woodbury, MN.

Meteorologist. HDR was selected by the South Washington Watershed District (SWWD) to provide engineering and planning services with regards to an existing watershed model of watershed-designated floodplain areas in the District and to provide a flood outlet.

TXU Business Service Co., TXU Martin Creek Lake - Sabine River Pump Station and Pipeline, Tatum, TX.

Meteorologist. HDR Engineering evaluated several alternatives to alleviate or mitigate lake level concerns in Martin Creek Lake to take advantage of TXU Power's water rights in the Sabine River, located eight miles from Martin Creek Lake. Developed an effective 3-year prediction for the water supply into Martin Creek Lake using hydro-climate relationships.

Non-HDR Project Experience

ARCO Coal Marketing, ARCO Long Range National Weather Outlook

Program, Denver, CO. Project Manager. Developed a climatological-coal usage relationship that formed the foundation for short and long range (five years) national weather outlooks for use in strategic marketing planning.

State Farm Insurance, State Farm Long Range Regional Weather Hazards Outlook Program, FL, CO, WY, MT, and Upper Midwest.

Project Manager. Developed a climatological-hail, drought and hurricane relationships that formed the foundation for short and long range (six months to five years) regional weather outlooks for use in strategic marketing planning of insurance products. Five year county-specific outlooks were prepared for Florida, Colorado, Wyoming, Montana and the Upper Midwest.

United States Fidelity & Guaranty Company, USF&G Long Range National Weather Hazards Outlook Program, TX, OK, NM, FL, CO, WY, MT, and AZ.

Project Manager. Developed a climatological-severe weather relationship that formed the foundation for short and long range (six months to five years) national weather outlooks for use in strategic marketing planning of insurance products. Five year county-specific outlooks were prepared for Texas,

Oklahoma, New Mexico, Florida, Colorado, Wyoming, Montana and Arizona.