

LiDAR and Height Modernization
August 18, 2011
Silver Spring, MD



Speaker biographies

Ms. Juliana Blackwell, Director, NGS

Ms. Juliana P. Blackwell is the Director of NOAA's National Geodetic Survey. Ms. Blackwell moved into the Director's chair in January 2009 after serving as the Deputy Director and three years prior as chief of the National Geodetic Survey's Observation and Analysis Division where she managed a wide variety of geodetic activities. Prior to that assignment she successfully managed NOAA's height modernization program, which has improved the efficiency and accuracy of height information used in surveying, mapping and modeling nationwide.

Ms. Blackwell received a master's in business administration from the University of Maryland's Robert H. Smith School of Business in 2007 and is a 1988 graduate of Tufts University where she earned a Bachelor of Science degree in mathematics.

Ms. Blackwell joined NOAA in 1990 as an officer of the NOAA Corps. In her NOAA Corps career she served on the NOAA Ship *Ferrel* as a junior officer, and as fourth officer on board the NOAA Ship *Whiting* where she managed hydrographic survey operations prior to joining the National Geodetic Survey full time in 1996.

Mr. Dave Doyle, Chief Geodetic Surveyor, NGS

Mr. Dave Doyle joined the National Geodetic Survey in 1972, and currently holds the positions of chief geodetic surveyor. He is responsible for the development, technical design and management of plans and programs that enhance the United States National Spatial Reference System. He provides technical assistance in Geodesy to International, Federal, State and local surveying, mapping and GIS agencies. Since joining NGS his experiences have included all phases of geodetic triangulation, astronomic positioning, leveling, GPS data collection, data analysis, datum transformations, network adjustments, and data publication.

Dr. David Maune, Senior Remote Sensing Project Manager, Dewberry

Dr. David Maune is Senior Remote Sensing Project Manager at Dewberry, headquartered in Fairfax, VA. He is the editor and principal author of the 1st and 2nd editions of "Digital Elevation Model Technologies and Applications: The DEM Users Manual" published by ASPRS. He is the principal author of elevation data guidelines and specifications published by ASPRS, FEMA, and the National Digital Elevation Program. He is Dewberry's Project Manager for the National Enhanced Elevation Assessment (NEEA) currently in progress. Before joining Dewberry in 1992, he was the Commander and Director of the U.S. Army Topographic Engineering Center (TEC), now the U.S. Army Geospatial Center (AGC).

Mr. Amar Nayegandhi, Project Manager, Jacobs Technology – US Geological Survey

Mr. Amar Nayegandhi is a Project Manager / LiDAR Remote Sensing Specialist with Jacobs Technology, Inc. contracted to the US Geological Survey Coastal and Marine Geology Program in St. Petersburg, FL. He has a Bachelors in Electrical Engineering and a Masters in Computer Science. He has developed the Airborne LiDAR Processing System (ALPS) to process LiDAR data and imagery acquired by the waveform-resolving, green-wavelength EAARL system. Mr. Nayegandhi will be moving to a new job starting next month with Dewberry as 'Manager of Elevation Technologies'.

Dr. Christopher Parrish, Remote Sensing Division Lead Physical Scientist, NGS

Dr. Christopher Parrish is the Lead Physical Scientist in the Remote Sensing Division of NOAA's National Geodetic Survey (NGS). In his current position, Chris is responsible for conducting research into remote sensing systems, platforms, and software in support of NOAA programs and serves as NGS' Project Manager for Integrated Ocean and Coastal Mapping (IOCM). He holds an appointment as an Affiliate Professor in the University of New Hampshire (UNH) Earth Sciences Department and is currently based at the NOAA-UNH Joint Hydrographic Center (JHC) – Center for Coastal and Ocean Mapping (CCOM).

Dr. Christopher Parrish academic background includes a Ph.D. in Civil and Environmental Engineering with an emphasis in Geospatial Information Engineering from the University of Wisconsin, an M.S. in Civil Engineering from the University of Florida, and a B.S. in Physics from Bates College.

Dr. Parrish's primary research interests include full-waveform LiDAR, sensor modeling and calibration, uncertainty analysis, and coastal mapping applications. He is active in the American Society for Photogrammetry and Remote Sensing (ASPRS), currently serving as President of ASPRS Potomac Region.

Ms. Renee Shields, Height Modernization Manager, NGS

Ms. Renee Shields is a geodesist in the Geodetic Services Division of the National Geodetic Survey. Renee is currently serving as the Project Manager for the Height Modernization Program, an effort that has 17 states as regular participants and additional activities in a number of other states. Ms. Renee Shields has been with NGS since 1980, and has been heavily involved in the geodetic adjustments for the North American Datum of 1983, and integration of new GPS projects into the National Spatial Reference System (NSRS). She has extensive experience in GPS and Geoid Height analysis, and has successfully used this experience to develop and conduct workshops around the country on incorporation of data into the NSRS. Ms Shields received a B.A. in Mathematics from the University of Massachusetts, Boston.

Mr. Greg Snyder, Manager, LiDAR Program Development, US Geological Survey

Mr. Greg Snyder coordinates long-term LiDAR program development within US Geological Survey's Land Remote Sensing Program. Previously he helped implement US commercial remote sensing space policy across Federal civil agencies. He received a BA in Geography from

the University of Oregon and a Masters of Science in Mapping Science from the Department of Geodetic Science and Surveying at Ohio State University.

Mr. Kenneth E. Sorrels, LS, Tuck Mapping Solutions, Inc.

Mr. Kenneth E. Sorrels has been employed as a surveyor since 1971; with the Virginia Department of Transportation (VDOT) for ten years, Adkins Surveyors and Associates, Inc. for six years, and finally, joining Tuck Mapping Solutions, Inc. in December 1989.

Mr. Sorrels is currently serving as the project coordinator to consultants for VDOT and TDOT contracts and for TMSI's Shoreline Mapping contract with NOAA.

Mr. Sorrels teaches a continuing education course on the location and history of the VA/TN line. This is a result of a condemnation case requiring the establishment of a portion of the line in Lee County, VA. Examination of the history of the line and the resultant surveys with emphasis on the Supreme Court case continues.

Mr. Gary Thompson, Director, North Carolina Geodetic Survey

Mr. Gary W. Thompson is the Director of the North Carolina Geodetic Survey (NCGS). He currently holds a professional license for the Professional Land Surveyor (PLS) in North Carolina (L2694). Mr. Thompson has held the presidency and still belongs to the American Association of State Surveyors, National Society of Professional Surveyors (NSPS) and North Carolina Society of Surveyors (NCSS); and is currently serving as a board member of the North Carolina Board of Examiners for Engineers and Surveyors (NCBELS).

Dr. Kirk Waters, Coastal Remote Sensing Program Manager, Coastal Services Center

Dr. Waters earned a geography degree from UC Santa Barbara with an emphasis on remote sensing and optical oceanography. Since coming to NOAA in 1996 to develop bio-optical satellite algorithms, he has shifted focus and moved on to manage the Coastal Remote Sensing program at the Coastal Services Center. The CRS program focuses primarily on mapping land cover, elevation, and benthic habitat, as well as developing tools to bring geospatial information to coastal management applications. He has been working with lidar data, particularly efforts to acquire and distribute coastal lidar, since 2000. Kirk is currently the NOAA representative to the National Digital Elevation Program, which promotes federal project coordination and elevation technical specifications.