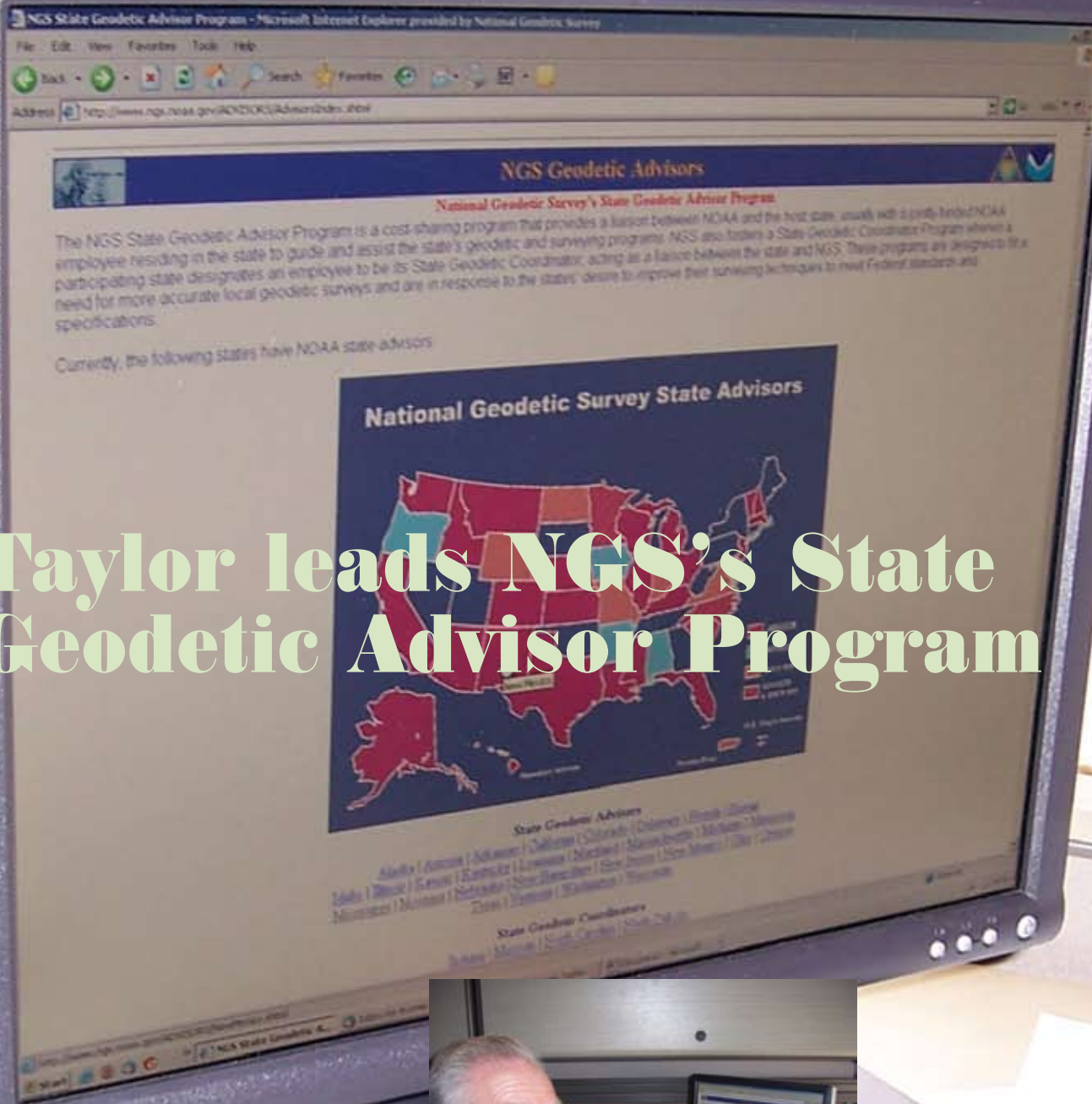


Taylor leads NGS's State Geodetic Advisor Program



—by Ilse Genovese



Long before the geospatial community subscribed to collaborative programs, a partnership was nurtured by the National Geodetic Survey with the states—the Geodetic Advisor Program—that keeps getting stronger and better. In May, Ronnie Taylor, a geodesist with the National Oceanic and Atmospheric Administration and a member of the American Association for Geodetic Surveying (AAGS) was named the new chief of that program.

When exactly the idea was mooted is not clear, but Florida and Arizona both had a collaborative program as early as in 1970. Thirty-seven years later, about two-thirds of all U.S. states have a geodetic advisor or liaison, with Arizona having the first Advisor Program. Taylor believes that the NGS State Geodetic Advisor Program, expanded to cover the entire U.S., is the future in sharing geodetic data.

The program works in support of the National Spatial Reference System (NSRS) and, by extension, the National Spatial Data Infrastructure (NSDI). “We assist the surveyors in the states with any geodetic work they may be involved in,” said Taylor. Providing the Nation with accurate position data is a primary mandate of NOAA/NGS, and although the Advisor Program is a small part of that effort, it plays an important role in the transfer of geospatial information between producers and users. Without rigorous geodetic control it would be difficult to decide which spatial information belongs in the national reference system. Conversely, without complete, accurate geodetic data, it may prove difficult to develop a nationally accessible infrastructure of spatial data.

“We take the technology NGS has for producing reliable position data and bring it to the states, together with the standards developed for using that technology,” Taylor said. “As advisors we work with the public sector—state departments of transportation, environmental protection, natural resources, and disaster response and recovery—as well as with other federal agencies and the private sector. In recent years, the GIS (geographic information systems) communities have become big clients, seeking advice on geodetic control for wetlands delineation, mineral assessment, renewable resource management, public health, urban and regional planning, and homeland security.”

The geodetic advisors are NOAA employees residing in the participating states; they are jointly funded by NOAA and the states. In contrast, the geodetic coordinators are either federal or state employees, and the liaisons are NGS employees. The advisors’ primary responsibility is to facilitate the transfer of technology, the know-how, and standards; the coordinators act primarily as liaisons between the states and NGS. Both functions are designed to assist surveyors in improving their techniques so that local surveys meet federal standards and specifications.

Taylor sees the immense potential of the program but admits that “it’s something that we still have to work at.” His vision is to “lead the program into the next realm of success.” Wearing the hat of the program’s leader is still new to Taylor, but he is quite clear on the direction he wants to take the program in under his leadership. “I want to promote the program and expand it,” said Taylor. “This can mean adding more advisors or expanding the roles of those we now have.” Taylor believes the NGS State Advisor Program is perfect for promoting seamless communication between state agencies and NOAA/NGS. “Geodesy really has no boundaries.”

Seamless sharing of spatial data is one of the fundamental requirements of the NSDI. “The NSDI has several different aspects,” remarks Taylor, “but you need a really accurate geodetic framework for any GIS application to build upon . . . everything comes back to the position on Earth, i.e., to the longitude, latitude, and heights. And that’s where we’re the experts, providing that control, the NSRS, and then transferring relevant geodetic know-how to others so that they may be able to use geodetic tools and data.” The NGS Advisor Program is that direct connection from NOAA to its constituents in the states. “The advisors are on the frontline, if you will, of everything that goes into producing accurate spatial data,” said Taylor. “And once it’s known that NGS is in a state, we are asked questions on various aspects of producing and sharing spatial data—even about NSDI which isn’t part of NOAA/NGS’ direct mandate. Our constituents expect us to answer their questions; we make sure we have the right answers.”

The NGS State Advisor Program is not the only one of its kind within NOAA or the federal government. As an example, the U.S. Geological Survey also has technical advisors working in the regions, it is fairly unique in its coverage and scope. “It’s not only about coordination,” remarked Taylor, “we offer workshops at the local, state, and the national levels, the latter through the ACSM conference. Some of the hot topics currently are NAD 2007 re-adjustment, GPS-derived orthometric heights, ellipsoid heights, and leveling. Leveling workshops are becoming popular in view of surveying activities at the local level and the new emphasis on floodplain mapping.”

With his twenty plus years of experience as a geodetic advisor, Ronnie Taylor is a perfect choice for leading the NGS State Advisor Program. He will miss the people he has worked with in Florida all these years. “Leaving Florida is perhaps the hardest part of relocating to NOAA/NGS’s headquarters in Silver Spring, Md.,” said Taylor. “The Florida state agencies are always on the cutting edge of technology, and the surveyors are just great to work with. They are always ready to push the envelope, try new things. I’m going to miss that enthusiasm,” added Taylor.



His involvement with Florida’s Surveying and Mapping Council has equipped Taylor with great insights on how to coordinate future joint projects while avoiding duplications of effort or disconnects, and how small issues can be resolved before they become big. And, he can look back on a number of successes scored by the Florida Department of Environmental Protection in tidal observations, the Department of Transportation on expanding CORS throughout the state, and other agencies.

“Florida is very flat, and so, even one-tenth-of-a foot change in elevation would cause flooding in areas that you don’t want flooded,” said Taylor. Originally, tidal observations were not connected to the NSRS. They are now. Florida has become “very progressive in geodetic leveling,” thereby connecting local tidal observations to the North American Vertical Datum of 1998 (NAVD 98). “This is very important in reference to mean low and high water levels and, so, to the surveying of the national shoreline,” said Taylor. “One does not need a disaster to drive home the fact that we can’t and should not build too close to the water; we can now tell Floridians where it is safe to build and how high they can build so that they don’t get flooded.”

Besides being Florida’s geodetic advisor, Taylor had been Acting Advisor for Louisiana until that post was filled, and he was actively involved in two other projects implemented in Louisiana. He worked for a year with the U.S. Army Corps of Engineers on the Inter-agency Performance Evaluation Task Force and was Project Manager of the

Southern Louisiana Height Modernization Project implemented in partnership by the Federal Environmental Management Agency (FEMA) and the Louisiana Spatial Reference Center at Louisiana State University.

In Louisiana, the Corps is involved in the development of procedures for levee building and evaluation, and NOAA/NGS has been providing assistance when requested. The NGS National Height Modernization Project is another type of collaborative work often enhanced by the presence of geodetic advisors in the states. And, needless to say, the State Geodetic Advisors play an important role in promoting the new NGS ten-year plan. “Almost anything that NGS wants to accomplish in the next decade depends on accurate geodetic control and, collaboration. The advisors have been promoting the plan by explaining what it entails for the states, what the changes are, and how they can take advantage of the improved CORS, OPUS, OPUS-DB,, and other products developed in support of the NSRS.”

Taylor is likely to travel extensively in the near future, meeting with states and learning about their needs, as well as trying to bring new states into the program. He wants to start a dialogue beyond meeting people physically. “If you have a question, call your state geodetic advisor, or, contact me, if your state does not yet have an Advisor. The Advisor Program is there to assist the public. The website www.ngs.noaa.gov lists advisors by state, together with their contact information. I can be reached at Ronnie.Taylor@noaa.gov or call me at 301-713-1054. Our goal is to support and transfer technology to users in the local communities, as well as other federal agencies, and state and local government.



BR-1 opens up additional reception possibilities for GMS-2

Topcon Positioning Systems’ GMS-2 now has an option that increases real-time correction capabilities of the GMS-2 hand-held receiver—the BR-1 Coast Guard beacon receiver. The GMS-2 GIS mobile GPS receiver can utilize the new BR-1 to receive sub-meter differential correction signals from the Coast Guard beacon in real time for data collection and navigation. The new receiver will automatically select the best correction of the four signals available to send to the Topcon GMS-2, a function making the BR-1 a smart correction option for the GMS-2. I. The BR-1 also has Bluetooth™ wireless communications. The rugged, compact GMS-2 is the industry’s first GIS-GPS product with dual-constellation tracking, an integrated digital camera linking photos to feature locations, and an electronic compass for bearing and direction information. As a result, GMS-2 can be used as a GIS mapping system, an L1 static survey grade receiver or a field controller.