

NOAA, National Geodetic Survey
HEIGHT MODERNIZATION COORDINATION MEETING
DRAFT NOTES
SSMC3, Room 8836

Date: Thursday, March 8, 2011
Time: 2:00-3:30 pm East Coast time

Attendees:

Call-ins from: CA (John Canas), ID (Rayce Ruiz), IL (Sheena Beaverson), KY (Wolfgang Ziegler), NGS (Vicki Veilleux, Dan Callahan, Perky Falconer, Tim Wilkins, Dru Smith), NM (Earl Burkholder), SC (Dick Woods, Matt Wellslager); WA (Dave Steele); WI (Leonard Perfetti)

Silver Spring: NGS (Renee Shields, Christine Gallagher, Gilbert Mitchell, Ross Mackay, Michael Dennis); CO-OPS (Michael Michalski); NC (Dave Zilkoski)

Advisors/Coordinators: Brian Ward (AR), Marti Ikehara (CA), Pam Fromhertz (CO), John Ellingson (IL), Monroe Rivers (KS), Scott Lokken (NC), Dave Rigney (MI), Dennis Riordan (MS), Scott Lokken (NC), Dave Conner (OH), Mark Armstrong (OR), Cliff Middleton (TX), Dan Prouty (TX), John Ellingson (WI),

1. NGS/CO-OPS Project Activities

- **Gulf Coast project (Shields)** – Dave Zilkoski and Philippe Hensel are completing a leveling adjustment using recent leveling observations in MS. They have used the recent leveling to update rates from “NOAA Technical Report 50: Rates of Vertical Displacement at Benchmarks in the Lower Mississippi Valley and the Northern Gulf Coast.” The results from the adjustment will be published as a “special case” similar to work completed in LA. (If the adjustment provides a new height for an existing mark, that height will become the published height. If the adjustment does not provide a new height for an existing mark, then the current published height will be suppressed and moved to the superseded section of the datasheet). We will try to minimize the number of marks that will not have published heights, and secondary adjustments must still be completed. Time frame for completion of the adjustment will allow for inclusion (and therefore improvement) of the geoid model.

(Zilkoski) – We are also trying to limit the discontinuities across state borders. There is still a significant discontinuity at the LA and TX border which needs to be resolved for the new geoid model.

Q (Michalski) – When will the Gulf Coast adjustment data be rolled out? CO-OPS will want to update positions accordingly to be consistent.

A (Shields) – We are hoping it will be published in about one month, and we are looking to have reports available online as well as reach out to the local community before/after the adjustment is rolled out.

Q (Middleton) – When will the GPS vertical adjustment be published for the 2010 Southern Louisiana survey project? The adjustment of the Jefferson County project that followed the Southern Louisiana project is complete and will be submitted soon.

A (Shields) – The Southern Louisiana vertical adjustment has not happened yet. To make sure the data could be included in the next geoid model, we carefully hand-picked select points we had confidence in.

A (Zilkoski) – The last leveling data in the Jefferson County area seemed to be from the 1970s. A new level line from Beaumont to the extensometer at Lake Houston would be very helpful. (Cliff will send Dave the b file for the Jefferson County adjustment).

- **WI project (Shields)** – Darin Henkel has completed a state-wide adjustment for WI incorporating all the leveling across the state that has been completed as part of WI height mod. The WI leveling effort has not reached the far north of the state, but the area will be leveled in the next 3-4 years. The adjustment is ready to be loaded into the NGS database. Jeff Oyler (CO-OPS) is happy with the agreement with the water level stations, and they are also looking for agreement across the IL and MN borders. Secondary adjustment with a few more lines may improve the agreement across the MN border.
- **NA 2011 (Dennis)** – The adjustment continues to move forward slowly and improve. Observations pre-1994 have now been removed from the primary adjustment because the orbits were not as good, the antennas were not as good, the MYCS did not re-process data before then, and the data is noisier. The primary adjustment will then be used to constrain the observations that pre-date 1994 (going back as far as 1983). The primary network adjustment (for CONUS and Caribbean) will be completed in April, and then secondary adjustments will be completed. Alaska adjustment will be separate, and there will be a two part (based on tectonic plate), separate adjustment for the Pacific.
- **Height Modernization National and Strategic Plans (Shields)** – We continue working on the national and strategic plans. They will be presented to the NGS Executive Steering Committee in a few weeks. A paper to be presented at FIG includes much information from the plans, and the Height Mod presentation at the Minnesota technical workshop at the end of this month will also include much of the same information.

2. NGS Outreach/Education

- **Events highlighted from longer list at end of notes (Shields)**
 - March 20-22, 2012, Breezy Point, MN - 2012 MNDOT Surveys Technical Workshop
 - May 6-10, 2012, Rome, Italy – International Federation of Surveyors (FIG) Working Week
 - July 22 & 24, San Diego, CA – 2012 Geospatial Summit
- **2012 Geospatial Summit (Shields)** – Planning continues, and information should become available online tomorrow. Esri should send out an email announcement tomorrow.

- **Homeland Infrastructure Foundation-Level Data (HIFLD) Working Group (Shields/Fromhertz)** – Bi-monthly meeting will be held in Silver Spring NOAA Auditorium on April 3-4. NGS may participate by having a panel on datums, and NGS may also pull together a white paper and/or one-pager on datums. The working group serves a diverse audience across federal, state, and local governments. Read more about the working group at <https://www.hifldwg.org/>.
- **California Spatial Reference Center Semi-Annual Coordinating Council Meeting (Canas)** – Meeting is upcoming and will be added to the list of events below.
- **Height Mod Group Submission to Esri Map Gallery (Shields/Beaverson)** – Sheena is still willing to coordinate a group display at the Esri Map Gallery. Information about deadlines and how the map gallery will be set up this year is not yet available. Two years ago, when Sheena last coordinated a group submission, there were 12 panels per display “island,” and Sheena set a deadline in June for partners to send their maps or informational posters. Currently there is interest expressed from WI, SC, IL, LA, MI, NC and NGS. More interest is definitely still desired to fill the 10-12 panels.

3. Updates from States – e.g. outreach, projects

- **South Carolina (Woods)** – SC will begin a 260 station Height Mod project on Monday, and they plan on using TGO. Anyone looking to use John Hamilton’s solution to the TGO issue, contact Dick Woods.
- **Illinois (Beaverson)** – IL is finishing contracts for summer leveling. IL just completed a 2 hour workshop at the Illinois Professional Land Surveyors Association Conference – there was standing room only in the 200 seat room. One of the level lines planned is the first North to South line to be completed in the state.

4. Monthly presentation

Presentation, to start at approximately 2:30 PM:

Geoid Slope Validation Survey of 2011 (GSVS11)
Dru Smith, National Geodetic Survey

NGS completed an extensive survey of a 300 km north-south line from Austin to Corpus Christi, Texas to validate an important component of the latest gravity surface model. Preliminary results show significant benefit is being realized from the GRAV-D survey project.

Dr. Dru Smith has been the Chief Geodesist of NOAA’s National Geodetic Survey since 2005. He first entered NGS in 1995 after receiving his Ph.D. in geodetic science from The Ohio State University. From 1995 until 2000 he performed gravity and geoid research, resulting in the GEOID96, CARIB97, MEXICO97 and GEOID99 geoid models. In 2001 he spent a year working for the Executive Secretariat of the Interagency GPS Executive Board, helping shape government GPS policy. In 2001 he returned to NGS and focused his research on using the CORS network to model the ionosphere.

5. Other Business

Important Links:

Previous months' meeting notes and a list of future meeting presentations can be found at:
<http://www.ngs.noaa.gov/heightmod/MeetingNotes.shtml>

Next meeting: Thursday, April 12, 2011; 2:00-3:30 East Coast Time

*Burt Smith, NGS, will share a presentation on "Updates to the NGS Datasheet format".
Burt is a geodesist and the supervisor of the NGS's Record Management Branch. He has worked for NGS for 35 years.*

Recent Past Events

February 9-10, 2012, St. George, UT – Utah Council of Land Surveyors 2012 Convention

February 9-10, 2012, Lewis Center, OH – Professional land Surveyors of Ohio Annual Conference

February 13-14, 2012, Anchorage, AK – Alaska Surveying and Mapping Conference

February 15-17, 2012, Great Falls, MT – Montana Registered Land Surveyors Conference

February 15-17, 2012, Stevens Point, WI – Wisconsin Land Information Association Annual Conference

February 16-18, 2012, Springfield, IL - Illinois Professional Land Surveyors Association Conference

February 17, 2012, Bloomington, MN - MSPS 60th Annual Meeting 2012

February 21-24, 2012, Ypsilanti, MI – Michigan Society of Professional Surveyors 71st Annual Meeting

February 22-24, 2012, Washington, D.C. – Esri Federal GIS Conference

February 26-29, 2012, Annapolis, MD – National States Geographic Information Council

Upcoming Events

March 2, 2012, Santa Rosa, CA - "Down to Earth: Datums and Reference Systems"

March 5-9, 2012, Honolulu, HI – Hawaii Pacific GIS Conference 2012

March 20-22, 2012, Breezy Point, MN - 2012 MNDOT Surveys Technical Workshop

April 3-4, 2012, Silver Spring, MD - Homeland Infrastructure Foundation-Level Data (HIFLD) Working Group bi-monthly meeting

April 18-19, 2012, Champaign, IL - Illinois GIS Association Spring Conference

May 6-10, 2012, Rome, Italy – International Federation of Surveyors (FIG) Working Week

May 24, 2012, California – California Spatial Reference Center Semi-Annual Coordinating Council Meeting

July 15-18, 2012, Indianapolis, IN - 11th International Conference on Precision Agriculture (ICPA)

July 21-24, 2012, San Diego, CA – Survey Summit

July 22 & 24, San Diego, CA – 2012 Geospatial Summit

July 23-27, San Diego, CA – ESRI User Conference

July 29-Aug1, 2012, Philadelphia, PA – Transportation Research Board Geospatial Data Acquisition Technologies in Design and Construction (AFB80) Committee Summer Conference

October 16-17, 2012, Naperville, IL - Illinois GIS Association Fall Conference