# NOAA, National Geodetic Survey HEIGHT MODERNIZATION COORDINATION MEETING DRAFT NOTES – Sept. 8, 2011

#### **Attendees:**

*Call-ins from:* AK (Tom Heinrichs), IL (Sheena Beaverson and Amy Eller), NM (Earl Burkholder), TX (Greg Hauger, Gary Jeffress), NC (Gary Thompson), NGS (Perky Falconer, Vicki Veilleux, Dan Winester), SC (Matt Wellslager, Dick Woods), WA (Dave Steele), WI (Dave Moyer, Darin Henkel, Matt Hawpetoss)

Silver Spring: NGS (Renee Shields, Ross Mackay, Dave Doyle, Gilbert Mitchell, Christine Gallagher, Michael Dennis, Neil Weston, Denis Riordan)

Advisors/Coordinators: Brian Ward (AR), Marti Ikehara (CA), Monroe Rivers (KS), Dave Zenk (MN), Scott Lokken (NC), John Ellingson (WI), Mark Armstrong (OR),

## 1. NGS/CO-OPS Project Activities

## **Multi-Years CORS Solution or MYCS (Weston)**

As of Sept. 6 the new coordinates from the MYCS are now available. NGS tools (e.g. OPUS, OPUS RS, OPUS-Projects) all support the new coordinates. OPUS allow you to choose what coordinates you want [e.g. NAD83(CORS96) or NAD83(2011)], and OPUS-DB allows you to select which you will submit.

**Q** (**Doyle**): Is it correct when you use OPUS and the MYCS coordinates, you will not get orthometric heights?

**A** (Weston): Yes, the orthometric height will be commented out with a warning. However if you would like to see what the coordinates are, you can use GEOID09 in the Toolkit to compute an orthometric height from the ellipsoid height.

**Q** (**Shields**): Has this been announced through the NGS list-serve yet?

**A** (Weston): No. When you visit the OPUS webpage, instead of the upload screen, you will have the option to select which reference frame you want to use with some FAQs.

**Q** (Mackay): Who should we contact with problems or questions? **A** (Weston): For CORS, contact the CORS helpdesk via email (visit <a href="http://www.ngs.noaa.gov/CORS/contact.shtml">http://www.ngs.noaa.gov/CORS/contact.shtml</a> to find email addresses). For OPUS, email NGS.OPUS@noaa.gov

**Q** (**Dennis**): Will accuracies be available for MYCS?

**A (Weston):** The CORS has those values now, and the CORS team will make them available at a later date on the coordinate pages in the same format the coordinates are now available – there will just be an additional column for the accuracies.

# **National Adjustment of 2011 (Dennis)**

The project continues to move along, and the August 31 deadline for submitting projects to be included has passed. All projects submitted before 8/31 are guaranteed to be included, and NGS will try to include projects that are still being submitted now until the last pull from the database occurs, which will likely be the last week of September. All the links for the NA2011to the MYCS pages should be switching from the MYCS beta pages to the MYCS live pages.

## Geoid Slope Validation Survey of 2011 or GSVS11 (Hauger, Winester)

GPS observations are complete. Leveling is half-way complete. Camera work is nearly complete. Gravity in progress, but may not be done by the end of FY11.

**Q** (**Dennis**): Was there approval to collect zenith camera observations at closer spacing (e.g. 100 m rather than 1 km)?

**A** (Winester): Conversation is ongoing because they are finishing ahead of schedule. Additionally, the airborne gravity may be reflown.

**Q** (**Shields**): Is the LiDAR complete?

**A** (Winester): Unsure.

#### **GRAV-D** (Shields)

The Alabama data has been released and is available online as promised. It can be found online at http://www.ngs.noaa.gov/GRAV-D/data\_products.shtml

## **RTN Guidelines (Shields for Henning)**

User guidelines for Single-base RTN are waiting for final approval from the FGCS and then would move to the FGDC.

## VI Datum (Doyle)

The draft report has been completed for Virgin Islands Vertical Datum of 2009 and is being internally reviewed. Then, there will be a federal register notice, and the heights should be published in a couple of weeks.

## 2. NGS Outreach/Education

(Shields) Recent past events were the LiDAR and Height Modernization Workshop and the Height Mod partner meeting. About 60 people attended the workshop in person, and about 40 more people attended online. We are finalizing the notes and report, which will then be reviewed by the presenters and posted online. The powerpoints are still available online via the NGS Corbin website, and we are working on syncing the recorded audio with the slides (the afternoon sessions were not recorded). The partner meeting notes are also being completed.

(Jeffress) The workshop was very worthwhile and well-run.

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

#### IL (Eller)

Illinois DOT in conjunction with Illinois State Geological Survey has received FHWA State Planning and Research Funds (SPR) to continue Illinois Height Mod, so this year will have \$3.5M. The funds will help ramp up the number of level lines to be observed and bench marks to be set (5 lines, multi-segmented, 714 miles and re-visit or elevate 811 monuments). Also, IL will contract to fill in missing LiDAR data in addition to normal meetings and trainings.

#### TX (Jeffress)

TX is finishing the height mod project for Jefferson County, and are waiting for Dan Prouty and Cliff Middleton to wrap up work with the GSVS11 to complete the adjustment for the observations. A new project is also beginning with the USACE to re-observe bench marks and bring up to blue-book standards and NAVD 88 elevations.

#### SC (Woods)

SC is completing a 390 station height mod project. The observations are complete, and they we are working on a free adjustment. It may or may not make it into NA2011 by end of September.

## NE/MO (Richardson)

Antennas used during the MO height mod project were calibrated at Corbin, but the results will not be posted until Charlie Geoghagen returns from GSVS11 fieldwork. Jim also suggests that when completing height mod surveys, you may also want to check the part number of the antennae you are using to make sure it's in NGS database.

## WI (Moyer, Henkel)

Information for the Great Lakes Regional meeting on October 13-14 has been distributed to the Great Lakes partners. Ohio will distribute to local attendees. NGS speakers should be able to attend the event. WI is also getting rid of the backlog of projects for 4 phases of the state by end of the year.

## NC (Thompson)

NC is working on four Height Mod projects, and wrapping up working with NOAA on the impacts of Hurricane Irene.

#### 4. Updates on future meetings

There has been a change in the invited speaker schedule. Michael Dennis will present on the Arizona state-wide adjustment in December, Julie Prusky will still present on an online project submission process in November, and in October Mark Huber from USACE will demo U-SMART, a web based map interface with database information.

## 5. Monthly presentation

Presentation:

DSWorld Demonstration Malcolm Archer-Shee, National Geodetic Survey DSWorld plots NGS network points by state, county and type (vertical or horizontal) in Google Earth. Malcolm Archer-Shee, the developer of DSWorld, is currently working as a subcontractor for NGS as a software developer and instructor.

Link to DSWorld: <a href="http://www.ngs.noaa.gov/PC\_PROD/PARTNERS/index.shtml">http://www.ngs.noaa.gov/PC\_PROD/PARTNERS/index.shtml</a>

#### 6. Other Business (Shields)

ACSM hosts a radio hour every Monday, and on September 5 guest Greg Helmer, a former co-chair of the California Spatial Reference Center, talked about the origins of Height Modernization in the state and the development of a National Program during a longer discussion about the impacts on surveying activities caused by earthquakes out West. You can listen at http://www.radiosandysprings.com/showpages/ACSM.php.

On a personal note, one of our colleagues, Dr. Roy Dokka, passed away on August 1 at his home in St. Fancisville, LA. He was executive director of the Center for GeoInformatics, director of the Louisiana Spatial Reference Center and Fruehan Endowed Professor of Engineering at LSU, Baton Rouge. He will be missed, and the university if still behind Louisiana Spatial Reference Center activities, including Gulfnet, and his legacy will go on.

# **Important Links:**

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

Next meeting: Thursday, October 13, 2011; 2:00-3:30 East Coast Time

#### **Recent Past Events**

July 17-21, Chicago, IL – Coastal Zone 2011

**August 16 & 18, Webinar** – Geodetic and Tidal Vertical Datums

**August 18, Silver Spring, MD** – Lidar Height Modernization workshop

August 19, Silver Spring, MD – National Height Modernization Partner meeting

## **Upcoming Events**

**September 15-16, Stowe, VT** – Vermont Society of Land Surveyors (VSLS)

**September 23-24, Hyannis, MA** – Massachusetts Assoc. of Land Surveyors and Civil Engineers (MALSCE)

September 26-29, Boise, ID – National States Geographic Information Council

September 26-30, Corbin, VA – Astronomic Azimuth Class (CLASS FULL)

October 13-14, Columbus, OH - Great Lakes Region Height Modernization Consortium Meeting

October 12-13, Silver Spring, MD – GeoTech 2011

October 18-20, New Orleans, LA – 2011 USACE Geospatial Community of Practive Technical Meeting

October 25-27, Corbin, VA – Geodetic Leveling Class (CLASS FULL)

November 12 (Elizabeth City, NC) and 14 (Goldsboro, NC) – Height Modernization Workshop

**November 18, Providence, RI** - Rhode Island Society of Professional Land Surveyors (RISPLS)

**December 2 (Shelby, NC) and December 9 (NewBern, NC)** – Floodplain Mapping (Elevation Certificates)

**December 5-9, San Francisco, CA** – AGU Fall Meeting

For additional events, see the NGS Events Calendar at: http://www.ngs.noaa.gov/INFO/conferences.shtml