

NOAA, National Geodetic Survey
HEIGHT MODERNIZATION COORDINATION MEETING
DRAFT NOTES (including recent past & upcoming events)
SSMC3, Room 8836

Date: Thursday, November 18, 2010
Time: **3:00-4:30 pm East Coast time**
Call In Number: 877-426-5014, PASSCODE: 8484480

Attendees:

Call-ins from: CA (John Canas), IL (Sheena Beaverson), NGS (Vicki Veilleux,), CO (Tim Wilkins), KY (Wolfgang Ziegler), LA (Roy Dokka), MO (Darrell Pratte, Rick Reese), NC (Gary Thompson, Dave Zilkoski), NM (Earl Burkholder), OR (Ken Bays), SC (Matt Wellslager), WI (Dave Moyer)

Silver Spring: NGS (Gilbert Mitchell, Renee Shields, Sonita Tiwari, Michael Dennis, Christine Gallagher, Ross Mackay)

Advisors/Coordinators: Pam Fromhertz (CO), Dave Newcomer (FL), Curt Smith (ID/MT), Dave Zenk (MN), Scott Lokken (NC), Monroe Rivers (KS), Mark Armstrong (OR), Cliff Middleton (TX), Dave Steele (WA), John Ellingson (WI)

Budget status:

- There is no budget. We are on a continuing resolution (CR) that will be in effect until at least February, perhaps April, perhaps for the entire fiscal year.
- There will be no grant funding opportunities until December of next year (2011) at the earliest. Even if a budget was passed, a June funding opportunity would be too late. Partners are encouraged to seek if other agencies still have funding opportunities available this year.

Infrastructure, Models and Tools, Standards, Specs, and Guidelines
Software developments

GRAVD

- Vicki Childers emailed in a report that the GRAV-D airborne team completed its Alaska surveying this week and will close down operations for the remainder of the calendar year. The GRAV-D has flown nearly 150 flight hours aboard the Bureau of Land Management's Pilatus PC-12 aircraft that is based out of Fairbanks. The GRAV-D team worked primarily from Ft. Wainwright in Fairbanks and moved back to Anchorage for the final week of flying. The airborne survey will resume the first week of January in Sacramento, CA. The team will survey much of the state of California during the first two months of the year before returning to Alaska for the remainder of the fiscal year.
- Follow-up questions arose, and Renee will check with Vicki to determine what parts of CA will be flown and where the most current maps can be found that illustrate what areas have been flown.
- **RE: CA update – Vicki reported we had to change our plans because the aircraft we're using can only fly offshore about half the distance we need. The previous plan for Florida had never been finalized and would have been impractical because of the long**

transit to and from AK. We've been coordinating for the past month or 6 weeks with Marti Ikehara for our Sacramento effort. Because the shelf edge is close to the shoreline there, we can fly out as far as we need with the BLM aircraft we're using. This plan also has a reasonable transit and better weather going for it, as well.

- See last page for updated map of areas flown. The graphic shows where GRAV-D has flown and where the next several months of flying are planned. All areas that show actual lines were flown in FY08-09. The solid polygons in Alaska were flown this summer and fall (FY10 & 11). The outlined polygons represent the GRAV-D planned flights for Jan - June, 2011. The airborne team will work from Sacramento for January and February, then start in Juneau in late March and work through June. Plans for the remainder of the fiscal year will be finalized after we know which aircraft we will acquire.

LOCUS

- LOCUS was discussed at the November 18th Products and Services Committee (PSC) meeting, and it seems it is nearing full release. There are still some issues pulling in gravity data and collecting feedback that is not purely internal.
- LOCUS was down (non-functioning) this week, but it was not intentional. There were changes made with the beta site, and this was an unanticipated consequence.

Stream gage projects

- Dave Zenk inquired about the status of the stream gage projects that were mentioned a few months ago, and he inquired if there were tools or resources (e.g. databases) available to deal with local stream gage issues that arise.
- Renee briefed the group on a working group with USGS/NWS/NGS that has now expanded to include partners in NC, MO, and MI. The partners at the state level are trying to implement pilots of changing NGVD29 elevations to NAVD88 on USGS stream gages. The process established through the pilots and subsequent lessons learned will feed into a guidance document so local offices across the country can implement this strategy.
- Renee briefed the group on the working group with NOAA/COE/USGS that is focused on coastal water level gages and is concerned with connecting to tidal datums in addition to geodetic datums. A pilot is moving forward in TX because of the technical/geographic issues in the area combined with the amount of infrastructure, partners, and expertise that is already in the region.
- Renee also described the COE U-SMART tool that is an online GIS application. Here is the link to U-SMART (<http://www.agc.army.mil/ndsp/usmart.asp>). This has NGS control, NOAA gages, USGS gages, and USACE project listed. If you are not USACE then use the Open to general public link to view this info.

Outreach and Education (see end of notes for full list of events, updated since agenda)

- Gary Thompson is already planning on attending the ESRI/ACSM conference in July
- Renee is still exploring a Height Mod or New Datum workshop for the ESRI/ACSM conference in July
- NGS will be attending the February Surveying and Mapping Conference in Alaska. Dan Roman and Vicki Childers will give a workshop on GRAVD/geoid, Steven White will be

giving a remote sensing workshop with another presentation to be determined, and Chris Pearson will be giving a workshop with Jeff Freymueller (University of Alaska, Fairbanks) on HTDP

- Great Lakes Region spring meeting will be in PA, likely Harrisburg, this spring. Brad Foltz is the POC and will be looking for NGS assistance.
- Illinois Height Mod events are updated below. They recently presented at the Geological Society of America meeting and also at Illinois GIS Association Fall Conference.

NGS/CO-OPS Project Activities

- **Table Mountain Geophysical Observatory (TMGO): Mission, International Gravimeter Comparison – Timothy Wilkins**
- Tim Wilkins reported that the International Intercomparison of Absolute Gravimeters at TMGO went very well and was a success
- Nine gravimeters were compared, and a report is expected out with the results by end of FY11. Absolute gravimeters must be compared because they cannot actually be calibrated.
- TMGO has undergone extensive renovations, looks great, and is set-up to be a remotely monitored lab ready to do research, but maintained out of David Skaggs in Boulder, CO.

Updates from States – e.g. outreach, projects

- SC (Wellslager): Spartensburg county project continues to move forward as recon is wrapping up this month. Marks to be set in Dec. and observations in Jan.
- KY (Ziegler): They have completed work at 19 sites across state with elevations at CORS ARPs. About half are already accepted at NGS, and the rest are being worked on. (Discussion ensued about strategies to “level to CORS ARPs.” Briefly, it is important to note that when people refer to "leveling to CORS" they don't always mean "leveling." In some, perhaps many, cases, they are just communicating a way to "transfer accurate heights" to the CORS).
- NC (Thompson): Trig/leveling/GPS project to CORS ARPS has not been processed by NGS yet, but the results were very good so could produce a great paper.
- TX (Middleton): Collecting data to establish a CORS at world's deepest extensometer at Clear Lake. Also with respect to Height Mod activities in Jefferson County, marks are set and some CORS will be installed with TexDOT. TX plans to publish data from PAMJ stations. (Brief discussion ensued about different policies taken in publishing restricted heights in TX vs. LA. Additional discussion continued about the Height Modernization Projects in LA – 2004, 2006, and 2010.)
- CO (Fromhertz): CDOT recently began Height Mod project in CO, observations to be completed in the first week or two of December.
- IL (Beaverson): Finalizing current year leveling project, everything is submitted to NGS and Chris Pearson is shepherding those through the process. Mike Bloomhoff is spec'ing leveling lines west and south of Chicago. Dr. Lumen will be going to International LIDAR conference in February.
- MN (Zenk): 3 county Height Mod project near Red River with Corps of Engineers diversion project, 700 marks to achieve 3 mi grid spacing.

Other Business

- CORS backlog has been cleared, and you should get online 1 month after submission. Let Renee know if this is not the case, for whatever reason.
- Discussion of IGLD85 and VDATUM...

Next meeting: NOTE: Date and Time change –
Thursday, December 16, 2010; 3-4:30 East Coast Time

As of January we return to the schedule of meeting the 2nd Thursday of each month from 2-3:30 East Coast Time

Recent past events – Height Mod and other

October 18-22, Longmont, CO – 2010 International Intercomparison of Absolute Gravimeters

October 20-21, in Naperville, Illinois - Illinois GIS Association Fall Conference (Bill Henning keynote, half day workshop on GPS for GIS professionals, presentation on RTNs in Chicago, panel on GIS coordination of activities across state, and lightning showcase of Illinois LiDAR).

October 20-21, Columbus, OH – Great Lakes Height Modernization Consortium workshop and meeting.

October 31-November 3, Denver, CO - Geological Society of America meeting. IL Height Mod speakers/presentations included: (1) Donald Lumen/Comparison of Airborne LIDAR elevation data and USGS National Elevation Dataset... and (2) W. William/Application of LIDAR data to mapping Glacial Landform/Sediment Associations.

October 26-28, Corbin, VA – NGS Digital Geodetic Leveling Workshop

October 31-November 3, Denver, CO - Geological Society of America meeting. IL Height Mod speakers/presentations included: (1) Donald Lumen/Comparison of Airborne LIDAR elevation data and USGS National Elevation Dataset... and (2) W. William/Application of LIDAR data to mapping Glacial Landform/Sediment Associations.

November 1-5, Corbin, VA – Astronomic Azimuth Class

November 5, Chillicothe, OH – (PLSO) Fall CPD Workshop, Height Modernization

November 8-11, Las Vegas, NV – Trimble Dimensions, Real Time Positioning Workshop

November 13-16, Orlando, FL – ACSM Fall MO and Committee Meetings

November 17, Hershey, PA – PSLS

November 20, York, PA – PA-PLS-LSV

Upcoming events

December 8 (webinar) – State Plane Coordinates webinar

January 12-14, Indianapolis, IN – Indiana Society of Professional Land Surveyors Annual Convention (ISPLS) Height Modernization and GNSS Derived Heights workshop

January 19-21, Verona, NY – New York State Association of Professional Land Surveyors Annual Conference (NYAPLS) Best Methods for RT GNSS Positioning: A Field Guide

February 2-5, Honolulu, HI - Hawaii Land Surveyors Association Annual Conference

February 2-5, Atlantic City, NJ – (NJSPLS) Height Modernization workshop

February 7-9, New Orleans, LA – International LiDAR Mapping Forum (Illinois Height Mod will send one participant to attend and submit poster)

February 17, Springfield, IL – Illinois Society of Professional Land Surveyors (ISPLS) annual meeting, Modernization of the NSRS

February 21-25, Anchorage, AK – Alaska Surveying and Mapping Conference

February 24, Morgantown, WV – WV Society of Professional Surveyors Annual meeting, Best Methods of RT GNSS Positioning: a Field Guide

March 3-5, Aurora, CO – Professional Land Surveyors of Colorado Rocky Mountain Surveyor Summit

March 11, Ames, IA – Society of Land Surveyors in Iowa

March 21-24, Houston, TX - SPAR

March 28-30, Hershey, PA - GIS-T

April 14-15, Little Rock, AR – Arkansas Society of Professional Surveyors Spring Conference and Meeting

April 19-21, La Vista, NE – Nebraska GIS Symposium

July 7-15, San Diego, CA – ACSM sponsors Survey Summit in conjunction with ESRI

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

