

Summary of the 30 July 2013 Federal Geodetic Control Subcommittee Meeting

Meeting Chair: Juliana Blackwell, Chair, FGCS; Director of the National Geodetic Survey

FGCS Membership and Attendance

Department of Agriculture

~~US Forest Service~~—~~Bill Belton~~ (on leave), ~~Everett Hinkley~~

~~Farm Service Agency~~ – David Davis

Department of Commerce

~~US Census Bureau~~ – Frederick Malkus

~~National Geodetic Survey~~ – Juliana Blackwell, Steve Breidenback, Dave Conner, Michael Dennis, Mark Eckl, Joe Evjen, Rick Foote, Pam Fromhertz, Christine Gallagher, Jake Griffiths, Ross Mackay, Jeremy McHugh, Giovanni Sella, Brian Shaw, Dru Smith, Tom Soler, William Stone, Neil Weston

~~Center for Operational Oceanographic Products and Services (CO-OPS)~~ - Michael Michalski

Department of Homeland Security

~~US Coast Guard~~—~~LCDR Guillermo Vega~~

~~Federal Emergency Management Agency~~—~~Paul Rooney~~ (on leave)

Department of Defense

~~National Geospatial-Intelligence Agency~~ – ~~Nikolaos Pavlis~~, Michael Harbaugh, Dan Mullaney, Nathan Ovans

~~US Army Corps of Engineers~~ - Mark Huber, ~~James Garster~~

~~US Naval Observatory~~—~~Brian Luzum~~

Department of the Interior

~~Bureau of Indian Affairs~~—~~Daniel Ontiveros~~

~~Bureau of Land Management~~ – Mike Londe

~~Bureau of Ocean Energy, Management~~ – ~~Steven Schwartz~~, Doug Vandegraft

~~Fish and Wildlife Service~~ – David Clark, Ron Salz

~~National Park Service~~ – ~~Tim Smith~~, Karl Brown, Neil Winn

~~Office of Surface Mining, Reclamation, and Enforcement~~—~~Robert Welsh~~

~~US Bureau of Reclamation~~ – Cory Stolsig

~~US Geological Survey~~ – Larry Hothem

Department of State

~~International Boundary Commission~~—~~Kyle Hipsley~~

—~~International Water and Boundary Commission~~—~~Duane Price~~

Department of Transportation – Dominic Menegus, ~~Steve Lewis~~

~~Federal Aviation Administration~~ - ~~Mike McNeerney~~ (out of the office), Terry Rhea

Independent Agencies

—~~National Aeronautics and Space Administration~~—~~John LaBrecque~~

Juliana Blackwell (Chair, NGS) – Welcome, Introductions

Personnel updates: Ross Mackay is the acting chief of the Geodetic Services Division at NGS. Christine Gallagher has taken the place of Renee Shields as the lead of Height Modernization at NGS. Brett Howe is the acting Deputy Director for NGS. Neil Weston is the chair of the fixed reference station work group for FGCS. Mark Eckl is the chair of the vertical reference system work group. Brian Shaw is our acting State Advisor Branch chief.

Dru Smith (NGS) - NGS Ten-Year strategic plan

(Dru presented his slides and highlighted the parts of the NGS strategic plan that may specifically impact the FGCS.) Updating standards and specifications is one important area that impacts the FGCS.

Doug Vandegraft - Are the educational materials for k-12 that you mentioned going to be available on your Web site?

Dru Smith - Those materials are not available on the Web yet, but we can help you get them.

Karl Brown - I did not see anything in the plan about the NGS role in the FGCS.

Dru Smith - You are right, we did not specifically call it out. I think we take it for granted that we will continue to engage and lead the FGCS.

Karl Brown- I think that if you are taking a project management approach, you should put it in the plan so that you can plan to have the resources to lead the FGCS.

Juliana Blackwell - It is not part of the plan. We are mandated to lead the FGCS. In that sense, it surpasses all other things that we are responsible for this. We do take the leadership of FGCS seriously. It is and will be resourced here in NGS and will continue as a very important activity that we lead.

Juliana Blackwell (Chair, NGS) - FGDC Geodetic Control Theme

(Juliana presented her slides.) We are a subcommittee of the FGDC - Federal Geographic Data Committee. I want to highlight how we fit under the broader management scheme of the FGDC. We are one of the 16 data themes in the FGDC's portfolio management system. The goals of that system are to help people discover data and to get agencies who provide data to collaborate and cooperate. Geodetic control has been called out as a topic for federal coordination since the 1950s and 1960s. Around 2002, Geodetic Control was established as an FGDC theme. It was reaffirmed as a theme in the FGDC's current portfolio management system.

Michael Dennis - Why use datasheets as an official FGDC Geodetic Control theme dataset. I think the database itself may be a better dataset.

Dru Smith and Juliana Blackwell - There is not a perfect way to decide how to categorize our data for this purpose, but for now, this works OK for us. We are open to changing our list of datasets.

Jake Griffiths - You might consider orbits as a dataset.

Juliana Blackwell - We had orbits on the list previously and can consider it again.

Mark Eckl (NGS) and Joe Evjen (NGS) - New geopotential and geometric datums- progress and plans

Mark Eckl - Replacement of NAVD 88 (with a new geopotential datum).

(Mark presented his slides). This is one objective in the new NGS strategic plan. There are several strategies that we plan to use to reach this objective (covered in the slides). Part of the definition for success of this new datum is the approval and adoption of the new datum by the FGCS. I plan to work with the FGCS's vertical reference system work group to establish absolute and relative standards and specifications.

Juliana Blackwell - The next step is for us to use the GRAV-D data to build experimental gravimetric geoid models to provide to the public every couple years. People can use these new gravimetric geoid models to see changes in the geoid in areas of interest over which we have already acquired GRAV-D data.

Joe Evjen - new geometric datum

We are tracking along with the geopotential datum's progress and have some of the same issues. (Joe presented his slides.)

Mike Londe - I recall from feedback garnered at the NGS Geospatial Summit in 2010, that day-to-day operational surveyors want a plate-fixed datum.

Dru Smith - We will know the motion of the tectonic plates very well. It sounds like we should lock a datum to a plate at a certain time (epoch). Then people can calculate changes in position from plate drift models and data.

Neil Weston - We should add an educational slide to this kind of presentation to help people understand the benefits and implications of using these new datums.

Mike Londe - You will need to decide if you are supporting an international community or a North American community.

Joe Evjen - The many different native systems that will be available may cause users confusion in the future.

Joe Evjen - OPUS Projects (Beta) – status and plans

(Joe presented his slides.)

Michael Dennis - We expect OPUS-projects to be released next week.

Dru Smith- We are responsible for providing trusted coordinates and needed to ensure that coordinates from OPUS-projects match other coordinates we provide.

Neil Winn - I think this is a very very handy tool, but I have had sessions that were as long as 6 hours that did not make it into OPUS-projects.

Neil Weston - There are several phases to data ingestion and processing in OPUS-projects.

Joe Evjen- I think OPUS will still be the gateway to OPUS-projects.

Dru Smith - Keep this conversation going. We would love to improve this product to meet more user needs.

Mark Huber - What will the publishing process be for OPUS-projects?

Neil Weston - There is not an automatic way to publish files for bluebooking to get the data into the database. We are working on an automatic way to do this but can't provide an estimated date when it will be ready.

Mike Londe - When will OPUS-projects be able to publish to OPUS-database?

Dru Smith - We need to make sure we can get identical coordinates first before we make that an automatic process.

Joe Evjen- There has been a significant number of users who are using this tool in the private sector and in the government.

Pam Fromhertz - I think most users would prefer not to go through the bluebooking process.

Juliana Blackwell - When people start going back and resurveying points, what do we do with the slight differences in positions that we get for those different coordinates for the same point.

Dru Smith- We need to ask if people want a fixed coordinates or if they want coordinates that change over time.

Neil Weston - CORS - status and plans

(Neil presented his slides.)

Mike Londe - What is the status of CORS being able to upload non-GPS, GNSS data in User-Friendly CORS?

Neil Weston - We plan to release that capability in about a week.

Secretariat - GAO Study update

GEOSPATIAL INFORMATION: OMB and Agencies Need to Make Coordination a Priority to Reduce Duplication. GAO-13-94, Nov 26, 2012. That report prompted us to identify specific actions to develop a plan for geodetic control theme standards. Here are the actions we took.

- (1) Inventory and review existing geodetic control standards, specifications, and guidelines documents (Q2, FY2013).
- (2) Determine what updates are needed for existing documents and standards (Q2, FY20 13).
- (3) Prioritize the updates (Q3, FY2013).
- (4) Identify needs for the creation of new standards (Q3, FY2013).
- (5) Prioritize the creation of new standards (Q4, FY2013).

What was done?

The list of existing documents was compiled and categorized. Category leads were identified. The leads reviewed the documents and determined what updates and needed, and in what FY and quarter the updates could be made. You were all notified via email of this plan of action and you were all invited to participate. We did not get any participation from outside NGS.

Additionally, we have designated Neil Weston and Mark Eckl as alternate NOAA representatives to the INCITS L1 Technical Committee. That INCITS committee serves as the US Technical Advisory Group to the ISO Technical Committee 211 (Geographic Information/Geomatics).

Juliana Blackwell - We invite your input on these documents as we move forward with our efforts to update them.

Larry Hothem - Thanks for helping get NGS engaged in international standards. I am quite willing to come and meet with Mark and Neil and get them up to speed. There are two active projects you may want to get involved in.

Juliana Blackwell - Thank you Larry. That is a great idea. We will get something setup.

Larry Hothem - Elevation is one of the other FGDC themes. They do not seem to be connected to the new vertical datum that is coming in ~2022. It is important for us to have a common understanding of terminology. In the future, elevation will be directly connected to geodetic data and the new geopotential datum.

Juliana Blackwell - Elevation is co-led by NOAA and the USGS. We have NGS's remote sensing division plugged into elevation issues. We are also involved and, in fact, leading development of a tool called V-Datum which helps transform data between and among various geodetic and tidal datums.

Juliana Blackwell (NGS) – Closing remarks

Are there any ideas for agenda topics for our next meeting in January? You are welcome to provide those now. The work groups are welcome to meet as issues arise. You are welcome to contact work group chairs to instigate any work or to get questions answered.

Action items:

[1] Secretariat will document some rationale to be used for the selection of what to list as FGDC geodetic control theme datasets.

[2] Neil Weston or Joe Evjen will solicit feedback from OPUS users about how well OPUS serves their needs.

[3] Mark Eckl and Joe Evjen will develop and add an education slide or two to presentations NGS gives about new datums. The slide(s) should help people understand the implications of these new datums.

[4] Mark Eckl and Neil Weston will follow up with Larry Hothem to get a briefing on international standards activities.

[5] FGCS community will send any updates or input to the secretariat on the spreadsheet listing geodetic control standards, specifications, and guidelines documents. We are on a schedule to update those documents. Terry Rhea can help discover the status of the FAA AC 150/5300-16.

Thank you for your participation today! Our next meeting will be in January. Please send any ideas for the next meeting to the secretariat.