

**DRAFT NOTES FROM THE 11 JUL 2011 FEDERAL GEODETIC CONTROL  
SUBCOMMITTEE MEETING (SAN DIEGO, CA)**

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

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**FGCS Membership and Attendance**

Department of Agriculture

**US Forest Service – [absent]**

*Farm Service Agency – David Davis*

Department of Commerce

*US Census Bureau – Frederick Malkus*

**National Institute of Standards and Technology – [absent, but not expected to have a contribution or interest at this time]**

*National Geodetic Survey – Juliana Blackwell, Ed Carlson, Michael Dennis, Dave Doyle, Lucy Hall, Mark Eckl, Joe Evjen, Christine Gallagher, Zelda Lecoat, Bill Henning, Dan Martin, Jeremy McHugh, Brian Shaw, Renee Shields, Monica Stich, Ronnie Taylor*

Department of Homeland Security

*US Coast Guard – LCDR Guillermo Vega*

*Federal Emergency Management Agency – Paul Rooney*

Department of Defense

*National Geospatial-Intelligence Agency – Nathaniel Ovans*

*US Army Corps of Engineers - James Garster*

*US Naval Observatory – Brian Luzum*

Department of the Interior – Deanna Archuleta (senior advisor to the Secretary of the Interior)

*Bureau of Indian Affairs – Doug Haywood (BLM)*

*Bureau of Land Management – Mike Londe*

*Bureau of Ocean Energy, Management, and Enforcement – Steven Schwartz*

*Fish and Wildlife Service – David Hills, Richard Kosior, Charles Leon McGee, Mike Hayden*

*National Park Service – Tim Smith*

*Office of Surface Mining, Reclamation, and Enforcement – Robert Welsh and Thomas Mastaller*

*US Bureau of Reclamation – Cory Stolsig*

**US Geological Survey – [absent, Larry Hothem let me know in advance that he had a conflict]**

Department of State

*International Boundary Commission – Kyle Hipsley*

**International Water and Boundary Commission – [absent]**

**Department of Transportation – [absent]**

Independent Agencies

*National Aeronautics and Space Administration – Susan Hulse*

**Environmental Protection Agency – [absent]**

National Executive Committee for Space Based Position, Navigation, and Timing – Milo Robinson (DOI rep.  
and Knute Berstis (DOC rep.)

**Tennessee Valley Authority – [absent]**

Federal Communications Commission - Don Campbell (excused himself from the presentation by Knute  
Berstis)

Others

California Department of Transportation – Mark Turner and James Harcharik

GPS World – Eric Gakstatter

National Society of Professional Surveyors – Rich Barr

North Carolina Geodetic Survey – Gary Thompson

Orange County, CA Department of Public Works – Art Andrew

Parsons Brinckerhoff – Larry Gill

TerraSurv Inc. - John Hamilton

[?] – Bob Packard

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**Juliana Blackwell (NGS) – Welcome, Introductions**

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**[Joe Evjen \(NGS\) - New Geometric Datum: plans](#)**

Tim Smith (NPS) – Concerns: (1) will passive control be adjusted with the new datums? I encourage NGS to not abandon passive control. (2) It is critical that geodetic datums be tied to local tidal datums.

Dave Doyle (NGS) – (1) The issue with passive control will almost certainly be an agenda item at the 2012 Geospatial Summit (to be held in San Diego in July, 2012). (2) NGS is developing a Sentinel Sites program that is integrating tidal datums with geodetic datums, GPS, and gravity.

Juliana Blackwell (NGS) – We understand your concern about passive control. NGS does not abandon anything very quickly.

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**[Mark Eckl \(NGS\) – New Geopotential Datum: plans, status, GRAV-D \(Gravity for the Redefinition of the American Vertical Datum\) update](#)**

Tim Smith (NPS) – There is a need for multiple techniques and guidelines for determining differential ellipsoid heights.

Deanna Archuleta (DOI) – Can we submit comments and input now to shape the planning of the 2012 Geospatial Summit that you mentioned?

Juliana Blackwell (NGS) – Of course, please contact the project managers of the Geometric and Geopotential datums, [joe.evjen@noaa.gov](mailto:joe.evjen@noaa.gov) and [mark.eckl@noaa.gov](mailto:mark.eckl@noaa.gov), respectively.

Jim Garster (USACE) – The transformation tools will be critical. More sensitive tools will need to be developed. People need official tools to transform horizontal and vertical between datums (old, current, and future).

Juliana Blackwell (NGS) – NGS is committed to providing all these types of tools and guidance to ease the transition to new datums.

Dave Doyle (NGS) - It is important to NGS to hear from Federal agencies and users about what they want. The transition to these new datums represents a major challenge.

Tim Smith (NPS) - I think the trainings NGS provides at Corbin, VA (and on the Web) are wonderful and priceless.

Juliana Blackwell (NGS) – Outreach will be crucial to make this transition and we will continue using Webinars as an outreach tool.

Tim Smith (NPS) – Be sure to reach out to private companies like Trimble. Recommend users look at how to change their workflow in preparation for projects and new datums of the future.

Milo Robinson (DOI/PNT) – Collaborate and do outreach with other Federal agencies via pilot projects.

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**[Michael Dennis \(NGS\) – NAD 83 \(2011\) adjustment / Multi-Year CORS Solution](#)**

Tim Smith (NPS) – Will OPUS-DB account for the changes associated with the Multi-Year CORS Solution?

Michael Dennis (NGS) – Yes, it will.

Tim Smith (NPS) – Will the Multi-Year CORS Solution be for classically-controlled points?

Michael Dennis (NGS) – No, it is for points controlled with GPS observations.

Tim Smith (NPS) – How can the National Park Service adjust its passive control to the new realization of NAD 83?

Michael Dennis (NGS) – First, the passive control would need to be observed with GPS.

Joe Evjen (NGS) – Then OPUS would be able to handle it from there.

Michael Dennis (NGS) – OPUS will automatically and rigorously update coordinates to NAD 83 (2011).

**< Donald Campbell (FCC) disconnected from the meeting >**

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**[Knute Berstis \(DOC/PNT\) - PNT's involvement in testing of the potential interference to GPS from LightSquared's terrestrial network](#)**

Bill Henning (NGS) – Does LightSquared have a deployment plan for transmitter towers?

Eric Gakstatter – Yes, they plan to utilize existing towers and focus on building out in urban areas first and then move into the rural areas.

Dan Martin (NGS) – Was the interference encountered in the testing thus far found to be acceptable or not?

Knute Berstis (DOC/PNT) – Please visit the pnt.gov Web site for more information on interference testing.

Mike Londe (BLM) – I am not comfortable with the testing and results.

Knute Berstis (DOC/PNT) – More testing should be done after LightSquared comes up with an engineering solution.

Eric Gakstatter (*GPS World*) – It is physically impossible to mitigate for all receivers in the lower band.

Tim Smith (NPS) – LightSquared is trying to change the laws of physics. I think it is a very sad situation.

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### **Discussion/Questions/Comments**

Paul Rooney (FEMA) – FEMA publishes flood maps and in a digital world, we want to put digital boundaries on those maps. I am trying to determine which version of NAD 83 we should use. If we are using passive control, how do we deal with the many realizations of NAD 83?

Renee Shields (NGS) – You need to make sure you have good metadata.

Jim Garster (USACE) – We try to refer to ‘current NSRS’ instead of ‘NAD 83’ or ‘NAVD 88’. You need to look at what accuracy you want or need for horizontal and vertical positioning.

Paul Rooney (FEMA) – I need to be able to tell people to produce the data in specific datums. There are ~10,000 communities in the US with populations under 5000. Those smaller communities may not be using GPS to survey.

David Hills (FWS) – Most rural areas have surveyors using GPS. That is very common.

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### **[Renee Shields \(NGS\) – Vertical Reference Systems Work Group: activities, outreach, and education](#)**

Milo Robinson (DOI/PNT) – With regard to stream and water level gauges, who do you work with at the USGS besides Larry Hothem?

Renee Shields (NGS) – Jim Kolva

David Hills (FWS) – Has the USGS been able to digitize their control data (third order)?

Dave Doyle (NGS) – We keep it all in paper format, but would like to have resources to scan it all.

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### **[Bill Henning \(NGS\) followed by Tim Smith \(NPS\) – Real Time Networks \(RTN\); data streaming from Continuously Operating Reference Stations \(CORS\)](#)**

Tim Smith (NPS) – I want NGS to continue streaming data from CORS.

David Hills (FWS) – What is your position or role in the National Park Service?

Tim Smith (NPS) – I am the National GPS Coordinator based in Denver, CO.

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### **Juliana (NGS) – Let’s wrap up the FGCS meeting and now take any general questions you have**

Mike Londe (BLM) – I think it would be inappropriate for NGS to validate the RTNs and NGS should be very careful about doing so.

Juliana Blackwell (NGS) – yes, but NGS would like to provide guidance to RTN operators and users about the degree to which RTNs are aligned to the National Spatial Reference System. The NGS is not a regulatory agency.

Jim Garster (USACE) – The RTNs could be handled in a way that is similar to how antennae are certified as calibrated.

Tim Smith (NPS) – If you allow streaming more broadly, the problems associated with RTNs may solve themselves.

Juliana Blackwell (NGS) – I am not convinced of that, but let's not discuss that here and now. Thank you all for your participation! Jeremy will post the presentations and some meeting notes soon. The next FGCS meeting will be in January 2012 – specific date and time to be determined. The FGCS will provide its annual report to the FGDC coordination Group on September 13. I am also responding to a request for updates to the FGDC's annual report. We will forward that request to FGCS members for feedback.