

# **Nevada State Mapping Advisory Committee (SMAC)**

## **Meeting Notes**

May 10, 2011

Location: Atlantis Casino Resort Spa  
3800 South Virginia Street  
Reno, Nevada 89502

The open meeting was held in conjunction with the 21<sup>st</sup> Annual Nevada Geographic Information Society (NGIS) 2011 State Conference in Reno, Nevada.

For further information, please contact Jennifer Mauldin, Nevada Bureau of Mines and Geology (NBMG), 775-682-8759, [mauldin@unr.edu](mailto:mauldin@unr.edu) or Jon Price, NBMG, 775-682-8746, [jprice@unr.edu](mailto:jprice@unr.edu)

## **3:30 PM, MEETING CALLED TO ORDER**

### **Opening remarks and welcome, Nevada State Mapping Advisory Committee by Jon Price (NBMG), Committee Chair.**

The Governor of Nevada established the State Mapping Advisory Committee (SMAC) to advise the U.S. Geological Survey (USGS) on state priorities for map products and to inform map users about the status of mapping programs and the availability of map products. In its early years SMAC advised the USGS on priorities for completion of 1:24,000-scale, 7.5-minute topographic maps throughout the state. With all these maps having been printed by about 1990 and with development of digital maps and Geographic Information Systems, SMAC evolved. The USGS no longer explicitly seeks the advice of the state with regard to its mapping priorities but does request input from bureaus within the U.S. Department of Interior. SMAC now serves as a forum for discussion and review of state, local, and federal agency and private sector priorities for mapping.

Membership in SMAC and its subcommittees is open to anyone interested in mapping in Nevada. Participants have included representatives of numerous local, state, and federal agencies, community colleges and universities, and the private sector.

## **OLD and NEW BUSINESS**

**Jon Price** explained that the SMAC Geologic Mapping Subcommittee usually meets in August to discuss geologic map coverages that may be proposed for federal mapping funds from the USGS.

Jon welcomed Tom Sturm and thanked him for his service to SMAC over the years.

**Tom Sturm (Nevada State Liaison, U.S. Geological Survey)** announced his retirement and that Carol Ostergren will be his replacement as the Nevada liaison. Tom added that Carol has been with the USGS since 1984 and a liaison for 12 years and that she will bring a lot to the table for SMAC.

Tom also updated the committee on the 2012 National Agricultural Inventory Program (NAIP) contract for aerial photography. The new contract in 2012 will include new features. Use of ground control will now be a permanent part of the program; therefore, a much more accurate and consistent dataset overall should result. Options will include buy-ups for 4<sup>th</sup> band (IR), 0.5-meter resolution, and stereo imagery. All buy-ups will be statewide only. Tom expressed that the base program (3-band, 1-meter) will likely stay federally funded and the cost of IR buy-up is based on 2010 experience (approximately \$170k). The USGS does not know how much stereo and 0.5-meter resolution buy-ups will cost (Tom's guess is that estimates will be based on the highest potential cost). He added that the USDA's NAIP budget for 2012 and future years could impact the schedule and that it is uncertain what will happen with the USDA's budget since NAIP in Nevada was acquired in 2010 (a year early). Tom explained that in 2011, they are filling in and doing states that they didn't do in 2010, and that it is uncertain how that will affect the schedule. Tom concluded the NAIP discussion by suggesting that Nevada may get NAIP in 2012 or 2013 and that we need to prepare if we are looking for buy-up options.

Tom also discussed the National Enhanced Elevation Assessment (NEEA) project and provided a handout about the project. The project is sponsored by member agencies of the National Digital Elevation Program (NDEP) committee. Funding partners include as the U.S. Geological Survey (managing partner), the National Geospatial-Intelligence Agency, the Federal Emergency Management Agency (FEMA), and the Natural Resources Conservation Service. In-kind partners are the National Oceanic and Atmospheric Administration (NOAA) and many federal agencies, state agencies and other study participants. The contractor is Dewberry. Tom presented a map slide to show that 80 percent of elevation data in the country and Nevada is more than 30 years old and will not meet accuracy requirements for many applications. The technologies of choice for the project are Light Detection and Ranging (LiDAR) and Interferometric Synthetic Aperture Radar (IfSAR, also called InSAR). The purpose of the project is to develop and refine requirements for a national program, to identify program implementation alternatives, costs and benefits of meeting priority Federal, State and other national needs, and to quantify answers to questions concerning cost effectiveness and national or agency benefits of Government management through a national program. Steps for the project include documentation of business uses and inventory of existing elevation data, business use aggregation and analysis, assessment of emerging elevation data collection technology and related issues, technology infrastructure alternatives, and development of program scenarios. Additionally, online questionnaires need to be administered to identify functional activities which require enhanced elevation data, to document the benefits which are enabled by having access to enhanced elevation data, and to identify enhanced elevation data quality level and geographic area needs. Workshops or interviews also need to be performed to pick the top functional activities, to fill in missing information from the online questionnaires, and to validate results. The idealized schedule was to establish a project team and management oversight, initiate NEEA, and build on partnerships with FEMA, NGA, states and others in 2010. In 2011, perform NEEA and begin developing multi-year National Enhanced Elevation Plan. In 2012, develop supporting documents (alternatives, analysis, design, implementation plan, etc.) and develop organizational approaches. Program implementation would begin in 2013. During the discussion of the NEEA, Jon Price offered the assistance of SMAC to help with inventory compilation. Matt Forrest (Carson City) can provide a grid of the area covered in township, range and section with metadata and emphasized that government agencies would provide that kind of information. Jon Price noted that it is important to know who the contact person in each agency is for the inventory. It was added that the inventory compilation doesn't need to be LiDAR only and that it is ok to

provide data derived from other sources as long as it meets accuracy standards. It was agreed to send the inventory of what already is out there to the SMAC mailing list for additions/updates.

Tom also discussed the Beta Maps and US Topo for Nevada. The current Nevada maps were part of a series of prototypes produced in 2009. Those maps had limited content, covered primarily BLM managed lands, and had no coverage over Forest Service and DOD lands. These maps are available from the USGS Online Store (<http://store.usgs.gov/>) and Keck website (<http://keck.library.unr.edu/>). The US Topo series was launched in 2010 with expanded content, full coverage and with Nevada planned for 2012. The new 2013 maps will have contours. In regard to PLSS data being included, PLSS content for the maps would have to come from the BLM. The BLM's GCDB data were delivered to the USGS this spring. The USGS is funding a development task in 2012 to identify data integration issues and to develop the production process for including PLSS in US Topo maps. The plan is to include PLSS on US Topo maps beginning in 2013. PLSS will be scheduled for inclusion on the 2015 editions of US Topo maps for Nevada.

**Carol Ostregren (Nevada State Liaison, U.S. Geological Survey)** began by thanking Tom Sturm and wished him well in his retirement, then made an announcement in regard to the 2010 NAIP, stating that she has the images on a drive at her desk and will load them if anyone wants to send her a drive. She then gave a follow up on the Federal Geographic Data Committee (FGDC) grant proposal that was rejected earlier this year. She suggested that a strategic planning group may be necessary, and that California's strategic planning approach was not to do a CAP grant but to instead hire a contractor who set up workshops around the state. The contractor helped everybody determine what themes were important to collect into a data infrastructure. For the next phase, existing data layers were taken and recommendations were made for data sources, stakeholders, etc. The third phase was a result of the strategic planning documents and involved the formation of a government task force to organize the information. Carol explained that a by-product of the 3-step process is that they now have very valuable documents for planning and bringing together stakeholders as well as other grounded resources for going forward. Tom Sturm asked about the order of priority for needs with the example of needing a Geographic Information Officer (GIO) for the State and how to get there, and Carol explained that state agencies need to self-analyze how the community requirements fit into a business case. Jon Price explained that Nevada has the highest percentage of federal land out of all states and that the federal government has always needed to be involved. Jon asked about the UNLV proposal and Carol suggested putting together a team. Jon added that UNLV should be involved to find out how to move forward. Tom Sturm added that we develop constituency instead of simply putting through another proposal. Carol added that it would be good to identify individuals who can put time toward the process for cost share reasons. Tom was concerned that the opportunity for this is coming to an end. Ron Hess suggested that it might be more appropriate to have SMAC move the proposal forward this time, and Carol agreed that it would be a good strategy and added that stakeholders need to be identified and state agencies need to be brought on board. Jon added that if it is proposed through SMAC, then people from state agencies that participate in meetings could count as match. Tom Sturm noted that there are also advantages and disadvantages to hiring a consultant. Jon Price introduced Jennifer Mauldin as the new Executive Secretary for SMAC and offered her help with organization for a proposal in the fall.

**Zachary Newell (Keck Library, University of Nevada, Reno)** presented improvements made with the Keck website with regard to the 2010 NAIP datasets, which are available on the website. There is now one dataset, NAIP 2010, with 4 bands (red, green, blue and near infrared), and 1.26 Terabytes in total size. The 2006 NAIP project contains one set of images that contain the natural color bands (blue, green, and red) and a second set of images that contain the color infrared or CIR bands (green, red, near infrared) with a combined file size of 1.81 Terabytes. Both projects also include compressed county wide mosaics. The 2010 NAIP data covers more area in Southern Nevada, particularly around the Nevada Test Site and Nellis Air Force Range. Site improvements include better performance and speed since the data is now housed on Google Storage (12-20 Mb/s), which should be faster for off-campus users. For data that can't be moved to Google Storage, NAIP imagery is now available by FTP to HTTP for web hyperlinks. The interface has improved by becoming completely open-source (GeoDjango, PostGIS, UMN Mapserver with Openlayers), and a spatial search has been added so users can draw a box or an odd-shaped polygon over an area of interest, and the returned results will include anything that the Keck Library has for that area. The overall interface is much more dynamic. When many files are returned, it will let you download a "w" script to download them all at once instead of many individual files. Zach noted that they are also trying to crowdsource data to make the site more interactive and to encourage people to update. When data are updated, they go directly to Google storage. Zach announced he has accepted another job and all future requests will need to be directed to Duncan Aldrich ([duncan@unr.edu](mailto:duncan@unr.edu), (775) 682-5569).

## **Open Discussion and Comments**

Jon Price encouraged people to participate in the panel discussion at the conference the following morning. He emphasized the need to coordinate and share data to avoid duplication of effort and data.

**Eric Warmath (NV Dept. of Transportation)** requested to recognize with a round of applause Ron Hess and Tom Sturm for their many years of service to SMAC.

Jon Price explained that LiDAR is important for many geologic applications such as landslides, floods, earthquakes, and that it has basically substituted for low sun-angle photography for earthquake fault studies. He explained how Nevada fault mapping is inaccurate based on NAD27 topographic maps and that LiDAR acquisition would be important for these needs.

**Luke Oppinger (NV Dept. of Water Resources)** noted that FEMA has a tool to prioritize mapping needs. Luke will be working with Tom to get an inventory of what LiDAR has been flown, etc.

Jon Price added that USGS earthquake hazards people should be in on a LiDAR discussion.

**Craig Hale (Southern NV Water Authority)** has collected a lot of LiDAR data and has been doing a land classification in the Las Vegas valley. He encouraged people to attend Art Ehrenburg's presentation at the conference.

**Matthew Krock (City of Henderson, NGIS president)** offered a *GeoSpeak* newsletter article/NGIS database mailer to get the word out about the elevation data inventory request and compilation efforts.

**Bill Stone (National Geodetic Survey)** introduced himself and wanted to let people know he is a resource and willing to assist with SMAC.

Jon Price mentioned that SMAC sometimes has impromptu meetings and always has one annual meeting at the NGIS conference. He announced that next year's meeting will be held in Las Vegas, and that we will send out emails about any additional meetings.

**5:00 PM: MEETING ADJOURNED**

**Respectfully submitted by Jennifer Mauldin, Executive Secretary for SMAC**

**Nevada State Mapping Advisory Committee Web Site:  
<http://www.nbmjg.unr.edu/smac/smac.htm>**