

Division of Geological & Geophysical Surveys Geologic Mapping Advisory Board – Spring Meeting

May 6, 2024, from 1 pm – 3:45 pm

Fairbanks: DGGs Main Office, 3354 College Rd

Anchorage: Geologic Materials Center, 3651 Penland Pkwy

[Microsoft Teams](#)

CONVENE Session (Chair)

1:00 pm

Call to order, logistics, roll call

Present – Matt Hanson, Jamey Jones, Russ Kirkham, Mischa Ellanna, Rob Retherford, Nic Kinsman, Kyle Brennan

Absent - Paul McCarthy

Resigning - Tom Homza

Review and approve agenda -Approved without objection

Old Business

M. Werdon:

1:10 pm

Status of STATEMAP program funding and other DGGs news

OMB declared no more long-term projects under a CIP, these will go into operating budget instead. DGGs submitted four FY25 operating requests: DGGs Building lease increase, EarthMRI, STATEMAP, and Geothermal Initiative. We received funding for the DGGs Building lease increase, but EarthMRI and STATEMAP were not put into the Governor's budget. Since STATEMAP is not going to be advanced, we need to take out the geologic mapping portion of this and keep the GeMS portion. The Geothermal bill is still in play in the amended FY25 budget.

Feedback from the STATEMAP review panel for our requested grants had areas of strengths and areas for improvement, overall, it was very well received.

As of December 2023, Melanie Werdon is officially the new Director. Ken Papp departed DGGs March 2024. Section chiefs (Mike and Jen) are sharing acting duty in the interim.

DNR Forestry dispatch is going to be conducting flight following for all non-AVO federal projects. All the DNR agencies will be conducting flight following with Forestry.

Questions/Comments

J. Jones: Who is funding the Airborne EM Survey out in the Kuskokwim region?

M. Werdon: The State of Alaska is, it's part of our match money for EarthMRI

New Business

M. Larsen:

1:30 pm

Fieldwork, bedrock mapping continues, submitted rock and soil samples for testing, uploaded sample locations to the online DGGs sample database. Refine mapping, bedrock and surficial deposits, preliminary interpretive report, publish data files, draft map and PIR for internal review. Map and PIR will be submitted to USGS for publication September 2025.

Questions: No questions, very exciting work.

FY22-FY23 GeMS Compilation, Geochronology Plans

1:50 pm

M. Hendricks:

Publication of Alaska Geologic Mapping system status report, rolling out version two of AK GeMS data and symbology standards, attendance at the annual geologic mapping conference, STATEMAP FY 22 & 23 map production on schedule.

24 Publications - STATEMAP FY22 – due 09/14/2024

19 Publications – STATEMAP FY23 - due 09/04/2025

57 projects in production

55 new and converted maps in AK GeMS – Available online now

FY23 West Susitna Surficial & Bedrock Mapping Plans

2:00 pm

T. Hubbard:

Bedrock mapping scientific objectives include testing whether the Susitna highlands overlay a low-angle thrust fault or are controlled by high-angle faults, map relations, and collect structural data on NNW-trending faults in the Dickason Highlands. Surficial geology objectives are to get a better understanding of glacial history within the map area, describe geologic materials, assess material resources, and better understand geologic hazards and slope instabilities. Schedule and Deliverables: Lidar acquisition planned for May thru June pending snow melt, Surficial Investigation, bedrock, and paleoseismic investigation in July.

Questions/Comments

R. Retherford: In the early images you showed it looks as though there are no faults near the Big Lake area, I'm assuming you haven't worked in that area yet?

T. Hubbard: We won't get over as far as Big Lake.

R. Retherford: Can you define "paleoseismic"?

T. Hubbard: What Barrett Salisbury is looking for is evidence of earthquake activity in the last 10,000 years and in some cases more recently. We want to know how recently some of these faults have been active and what the potential for them to be active again is. Bob Gillis is looking at some of the older fault structures and how that plays into the hydrocarbon potential and some of the bedrock structures.

R. Retherford: I think I understand you're collecting any kind of evidence that shows past seismic events.

B. Salisbury: Correct, those new Talachulitna Lake and the Kahiltna River faults have only had a few earthquakes on them, and they were the most recently active in the whole area.

R. Retherford: And those are northwest-trending structures.

B. Salisbury: That's correct, down in the basin sediments east of where this map shows.

BREAK

2:10 pm

FY24 Proposed StateMap Projects

2:25pm

Nieminski: Lower Kuskokwim Surficial Mapping

This project addresses the direct request to map the Lower Kuskokwim to serve the needs of seven nearby communities and in general, the growing needs for Alaskan Native communities in the region. The project has gained traction and additional support from the Yukon Kuskokwim Regional Tribal Government, in addition to the Calista Corp. to whom GMAB suggested we reach out to. This plan would nicely dovetail another project proposal that was submitted to a NOAA funding opportunity. Addressing both projects, we would provide new geologic mapping for the entire area of interest and be able to collect baseline data and higher resolution data for the seven communities to address flood and erosion risk at a community-specific level.

I also wanted to put forth a new mapping need, Kwethluk was the original community that reached out to DGGS with the mapping request, the community has increasing riverbank erosion over the last couple of years. There are two potential oxbow lakes to form very close to the Kwethluk community.

Questions: No questions

Goodfellow: GeMS Compilation

2:35 pm

FY24 STATEMAP proposal for priority 2: We applied for funding to support ongoing work in several critical areas including state economic development in Alaska Native-interest lands and hazard surveys. GeMS map conversions submission to USGS was to digitize six sets of maps in the Yukon Tanana Uplands, our Southwest Alaska application included ten legacy maps to be digitized in the Kuskokwim mineral belt, and Seward Peninsula we applied for 16 legacy maps to be digitized to the GeMS standard.

Our Coastal Hazards Program put forth map conversions to support assessment and community resilience mapping projects across coastal western Alaska. The Landslide Hazards Program suggested map conversions in regions of Southeast Alaska and Prince William Sound, which may be at risk of landslide or mass wasting events. AVO put in to conduct map conversions on the Alaska Peninsula and the Aleutian Island to support their programs in the region.

J. Athey: For clarification, the GeMS portion of the FY24 project will be able to borrow authority over the 2 years, in conjunction with us being able to use general funds from current salary. Unfortunately, we cannot use general

funds to maintain the mapping portion of the project. I think it would be useful to discuss what that means to support STATEMAP in upcoming years.

Questions: No questions

Proposed STATEMAP projects for FY25

2:40 pm

J. Athey: The surficial geologic mapping of the lower Kuskokwim River that Nora was discussing is a good potential project with a lot of support from the community and already has support for the STATEMAP program.

M. Larsen: Geologic, Surficial, and Seafloor Mapping of Valdez and Chugach Mountains, Southcentral Alaska
During this meeting, I got an email from a representative of the City of Valdez. They received the NOAA grant to do bathymetry data collecting for the spring of 2025, so we can incorporate our lidar information into that. There is a big push and need for mapping and data collection in this area to identify any geologic hazards in the submarine and subaerial information we get.

T. Hubbard: Construction Materials Resource

Discussions with DOT, Mitch McDonald, about the South Coast Region were fruitful, and we can think about DGGS and DOT collaborating and pulling our resources to do some geologic mapping in these communities. Theoretically the information DGGS would gather and publish could then be used by DOT to identify material resource sites. It facilitates work getting done and potential for corporations in these communities bidding on some of the projects. We could collect information that would potentially be built into a database. The idea would be to integrate DGGS' potential database and DOT's existing database. Future meetings and discussions are in the works.

Questions/Comments

M. Hanson: I think that the lower Kuskokwim should be a priority, and I like the construction material resources. That's a big thing Doyon is a part of as well. Valdez would be 3 in my opinion.

J. Jones: Number 1 Kuskokwim 2 Valdez and 3 Construction Materials, but they all have tremendous value.

R. Kirkham: I agree with Jones, Kuskokwim, Valdez, Construction Materials

Kyle at the GMC: I think the lower Kuskokwim and Valdez projects seem to make more sense for serving the public life, health, and safety.

J. Jones: EarthMRI is being encouraged to consider a long-term plan that could involve data collection around construction resources. There may be some funding opportunities through EarthMRI for T. Hubbard's proposal.

J. Jones: STATEMAP funding will this be a problem again next year? Where do we go from here?

J. Athey: My take on the funding was that for many years we have included STATEMAP and EarthMRI as a capital project request. EarthMRI has had a few different hats over the years, StateMap we've had since 1993. The new OMB director said because it has been a long-term request of DGGS, it needed to be an operating budget request. When it was pushed forward, it was not in the Governor's budget. This will be a problem for FY26 funding. There isn't much we can do besides talk to the Commissioner and tell him what our priorities are. Next year we will most likely still have this struggle between EarthMRI and STATEMAP.

J. Athey: Geologic Hazards Emergency Response

3:00 pm

The Geologic Hazards Section is working on procedures and planning, and documenting needs. Also met with Commissioner Boyle regarding SE landslide and emergency response. Proposing a FEMA Alaska geologic, weather, and climate hazards workshop.

M. Werdon: The DMVA Emergency Services offered to set up workshops, cross training, and trial runs on things if that was desired on our part.

M. Larsen: The workshop is to bring all these entities together and discuss how we would collaborate.

Public Comments- Time was given, no public comments

3:10 pm

Closed, Executive Board Business

3:20 pm

Board member vacancies and potential candidates

Format of board meetings

Other ad-hoc business

ADJOURN

3:30 pm