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

October 16, 2025, from 1:00 pm – 3:00 pm

Fairbanks: DGGS Main Office, 3354 College Rd

Anchorage: Geologic Materials Center, 3651 Penland Pkwy

CONVENE Session (Chair) Call to order, logistics, roll call **1:00 pm**

Present – Matt Hanson, Caixia Wang, Mischa Ellanna, Rob Retherford, Kyle Brennan, Scott Digert, Paul McCarthy, Russ Kirkham

Review and approve agenda - Approved

Review and approve minutes – Approved

(Not Recorded)

Old Business

DGGS news and status of federal programs (Campbell/Athey) **1:15 pm**

Three anticipated positions were filled this quarter: Director, Safety Officer, and Hyperspectral Program Lead. Geologic Hazards is still working with LAW to formalize DGGS' role in emergency response.

New Business

FY23 West Susitna Surficial & Bedrock Mapping (Walser) **1:30 pm**

Current Schedule: December 29, 2025, Map sent to peer review, and March 13, 2026, PIR published and data package submitted to USGS

(Recording Started)

FY23-FY24 GeMS Compilation, Geochronology (Macpherson/Goodfellow) **1:45 pm**

Developing a standards-based Alaska Geologic Mapping System and having a formal governance body (Geologic Data Inquiry council) enhanced efficiency. The publication of AK GeMS Multimap Database Repository (DDS) is near completion. Establishing a Geologic Map Digitizing Master Agreement with our contractor (Kinney Engineering) and implementing advanced capabilities has greatly improved productivity for both parties.

Geochronology Plans (Goodfellow)

The objective is to update the National USGS Geochronology Database with the most recent Alaska data. Our goal is to complete the Geochronology Database in full by the end of September and submit it to USGS.

FY25 and FY26 STATEMAP Funding Status (Athey) **2:00 pm**

In the past we received capital project funding for STATEMAP. In 2024 we did not have a CIP to support the program, we used general funds to do the digitization side of this project. We couldn't meet the match on the mapping side of the STATEMAP proposal. USGS Grants said that because we could not meet the whole match, the entire proposal was disallowed. DGGS could not do either the GEMs mapping or the regular mapping. We will know by June of 2026 whether we have a capital project.

Q - Hanson: Is there a match you could get from AIDEA or even private funding from, Nova or US Gold Mining at Whistler.

A - Athey: Yes, it is possible to be able to get funding. We can pretty much match any funding as long as it's not federal funds.

Q - Ellanna: What's the exclusion of federal matching?

A - Athey: The rule is that you're not allowed to match federal money with federal money. You must get the matching funds from somewhere else.

FY26 and Future Proposed STATEMAP Projects (Wartes, Nieminski,) **2:15 pm**

FY26 Mapping Projects (Wartes)

The massive Castle Mount Fault system and a major unmapped fault zone Bruin Bay Fault. Possible sources of matching funds include GF salary, geothermal UGF, and industry receipts.

Energy Stratigraphic Chart, we propose to focus on the Brookian on the North Slope and have the main objective be to

build and publish a revised chronostratigraphic chart. Possible sources of matching funds include GF salary, ASTAR CIP (energy), and industry receipts.

Q – Hanson: I think they're both important, I guess I'm always more in favor of field work and getting stuff filled in, but the Brookian would that be more desktop work?

A – Wartes: I think we're allowed on the terms of the Stratigraphic Chart to acquire some new data, but for the most part, it would probably be desktop.

C – Hanson: Ideally both, but I'd really like to see more about the Castle Fault.

(Gillis) No one's really looked at Hatcher Pass seriously, the closest bedrock to that geothermal anomaly. Whether Castle Mountain reflects active tectonics or not, we don't know. The potential Bruin Bay Fault was shocking to stumble upon; it is like a 5-kilometer-wide damage zone. It's a big structure and it's not mapped.

C – Hanson: Bruin Bay or Hatcher Pass… Rob, what do you think?

C- Retherford: The last few times we've met, we've talked a lot about fault activity, I'm really on board with that aspect.

C – Campbell: DGGS is one year into the three-year geothermal funding. Due to hiring freezes, we have one single person representing the entire state of Alaska's geothermal. We have money sitting there that we could use as match, that's something to consider as well.

C – Retherford: Drilling such an anomaly would be very expensive. Are we thinking that you might be able to generate a project where you would do some relatively extensive or expensive geophysics?

A – Wartes: We have a proposal we submitted in March to the Department of Energy's Geothermal Technology Office and haven't heard anything back yet.

C – Digert: If you're looking at doing geothermal power in the hundreds of megawatts range for the Rail Belt energy system, it requires really high temperatures and a lot of energy. Before we head down an expensive data acquisition path, you just need to be clear on what your objective is and whether it even has the potential to supply what you're trying to deliver. I think the idea of scoping this is great, I just don't know how big is big in this case?

C – Retherford: Just from a practical point of view, possibly focus on the Brooks.

C – Digert: That's kind of where I'm at. The geothermal anomaly is interesting. When you have other sources kind of in the Cook Inlet rail belt area, whether it's mount Spur or Mount Augustine, those to me have a higher potential to deliver something at rail belt energy scale.

FY27 Future Projects and beyond (Wartes): Mapping candidates include North Slope, Tanana Basin, Upper Cook Inlet/ Susitna Basin and Lower Cook Inlet/ Alaska Peninsula.

(Nieminski) Surficial Geologic Mapping of the Lower Kuskokwim River would serve seven riverine communities. This work can dovetail with flooding and erosion risk assessment work that is already planned and funded through a different Coastal Hazards Program. In addition, it could provide the opportunity for sand and gravel data collection in the region.

Q – Retherford: Has anybody in the state looked at the impact of global rising sea level?

A – Nieminski: The State is not addressing that, but our program is working very closely with the US Geological Survey. There is a team in Santa Cruz at the Pacific Coastal and Marine Science Center who already have a well-developed model that incorporates sea level rise into forward casting models.

Q –: If you are looking at existing terrain models, can't this be just more than a few communities? Perhaps the whole Delta River?

A – Nieminski: It could, once we collect that pertinent data for this region, which we have not done yet, we've done more work thus far in coastal communities, but not as much in riverine communities.

NGGDPP Current and Future Proposed Projects (Goodfellow) 2:45 pm

(Goodfellow) UAF Sample Rescue project: completed metadata curation and re-boxing of all but 4 pallets, barcoded and connected to their associated metadata. The Projected Goal is to work with GMC warehouse staff and complete final pallets in winter 2025-2026. The Minerals Industry Database goal: completion of the full database by end of December and publication online shortly thereafter. Hyperspectral Scanner News: The GMC is currently working with DOT&PF to finalize the electrical contract.

2026 NGGDPP Project Ideas: Wishbone Hill/Chickaloon Papers (Small Archival Preservation) National Petroleum Reserve-Alaska Shothole Database (Energy and Construction Materials) Municipality of Anchorage Landslide Archival Database and the proposal of compiling historical avalanche records as well (public safety) Bureau of Mines/Bureau of Land Management Archival Digitization (Coal and Critical REE) GMC Core Re-Boxing (Hyperspectral Scanner Support)

Q - I understand that landslides belong in the realm of geomorphology. But for avalanches, I wonder if that's more in the

realm of climate and weather rather than division of geological and geophysical surveys.
A – Wikstrom Jones: The mission of the division is also public safety, and safety of infrastructure. Assessment and mitigation of avalanches is critical. I think it's a project that would be worth considering.
Q – LLM is a type of AI, I was wondering if the state of Alaska has any policy or guidelines on the use of AI.
A – Athey: This particular AI was vetted by the state's Office of Information Technology.

Public Comments- None	3:10 pm
Closed, Executive Board Business	3:45pm
ADJOURN	3:50 pm