



Publication Date: Friday, February 3, 2023

OFFICIAL NOTICE OF PUBLIC MEETING

THE STATE MINING AND GEOLOGY BOARD

**Will Conduct a Joint Committee Meeting of the
SMARA Compliance Committee and the
Policy & Administration Committee on:**

Thursday, February 16th, 2023 at 10:00 a.m.

This meeting will be held via video conference and will be recorded.

To avoid any background noises while the meeting is in session, we ask that you mute your device. To join the meeting, please download the latest version of MS Teams by visiting their website at <https://aka.ms/getteams> or install the MS Teams app on your phone. After installing MS Teams on your device click on the [Microsoft Teams Meeting](#) link to join the meeting (**Meeting ID: 275 736 860 650 and Passcode: ViXMCF**). You may also join us by phone by dialing (916) 318-8892 and entering the Phone Conference ID Number: **742 480 581#**.

For questions or comments regarding this Agenda, please contact the Board by email at smgb@conservation.ca.gov. This Notice, the agenda, and all associated staff reports can be accessed at the SMGB's web site at: <https://www.conservation.ca.gov/smgb>.



PUBLIC MEETING AGENDA

1. **Call to Order (Landregan)**
2. **Pledge of Allegiance**
3. **Roll Call and Declaration of Quorums**
4. **Review of the Agenda (Landregan)**
5. **Chair Report (Landregan)**
6. **Chair Report (Kenline)**
7. **Public Comment Period**

This time is scheduled to provide the public with an opportunity to address non-agenda items. Those wishing to speak should do so at this time. All persons wishing to address Committees are encouraged to complete a virtual speaker card via chat on the MS Teams platform. Speaker testimony is limited to three minutes except by special consent of the Chair.
8. **Consent Items**

All the items appearing under this section will be acted upon by the committees by one motion and without discussion; however, any Board member wishing to discuss any item may request the Chair to remove the item from the Consent Calendar and consider it separately.

 - A. Consideration and Approval of the Minutes for the September 15, 2022, SMARA Compliance Committee Meeting.
 - B. Consideration and Approval of the Minutes for the December 16, 2021, Policy and Administration Committee Meeting.
9. **Discussion Item**

Climate Opportunities in Minerals, Mining and Reclamation
10. **Announcements and Future Meetings**
11. **Adjournment**

THE STATE MINING AND GEOLOGY BOARD

THE BOARD

The State Mining and Geology Board (Board) serves as a regulatory, policy, and hearing body representing the State's interests in the reclamation of mined lands, geology, geologic and seismologic hazards, and the conservation of mineral resources.

The Board was established in 1885 as the Board of Trustees to oversee the activities of the State Mineralogist and the California Division of Mines and Geology (now the California Geological Survey). It is the second oldest Board in California. Today's Board has nine members appointed by the Governor and confirmed by the State Senate, for four-year terms. By statute, Board members must have specific professional backgrounds in geology, mining engineering, environmental protection, groundwater hydrology and rock chemistry, urban planning, landscape architecture, mineral resource conservation, and seismology, with one member representing the general public.

Mission Statement

The mission of the Board is to provide professional expertise and guidance, and to represent the State's interest in the development, utilization, and conservation of mineral resources, the reclamation of mined lands and the development and dissemination of geologic and seismic hazard information to protect the health and welfare of the people of California.

STATUTORY AND REGULATORY AUTHORITY

The Board operates within Department of Conservation under the Natural Resources Agency and is granted responsibilities and obligations under the following acts:

Surface Mining and Reclamation Act of 1975

Under this Act, *Public Resources Code Sections 2710 et seq. and its regulations at 14 California Code of Regulations Section 3500 et seq.*, the Board provides a comprehensive surface mining and reclamation policy to assure that adverse environmental impacts are minimized, and mined lands are reclaimed. SMARA also encourages the production, conservation, and protection of the State's mineral resources.

Alquist-Priolo Earthquake Fault Zoning Act

Under this Act, *Public Resources Code Section 2621 through Section 2630, and its regulations at 14 California Code Regulations Section 3600 et seq.*, the Board is authorized to represent the State's interests in establishing guidelines and standards for geological and geophysical investigations and reports produced by the California Geological Survey, public sector agencies, and private practitioners. The Board is also authorized to develop specific criteria through regulations to be used by Lead Agencies in complying with the provisions of the Act to protect the health, safety and welfare of the public.

Seismic Hazards Mapping Act

Under this Act, *Public Resources Code Section 2690 through Section 2699.6 and its regulations at 14 California Code of Regulations Section 3720 et seq.* the Board is authorized to provide policy and guidance through regulations for a statewide seismic hazard mapping and technical advisory program to assist cities, counties, and State agencies in fulfilling their responsibilities

for protecting the public health and safety from the effects of strong ground shaking, liquefaction or other ground failure, landslides and other seismic hazards caused by earthquakes, including tsunami and seiche threats.

GENERAL PROCEDURAL INFORMATION ABOUT BOARD MEETINGS

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- (2) Describe in the Agenda specific items to be transacted or discussed
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- (4) Call a closed session by the Chair to discuss litigation and other matters
- (5) Make all testimony, files, and documents are made a part of the administrative record

Other Agenda material and reports will be available approximately one week prior to the scheduled Board meeting. All Board related information is available at <https://www.conservation.ca.gov/smgb>.

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**State Mining and Geology Board
715 P Street, MS 1909
Sacramento, CA 95814**



Agenda Item No. 8A

February 16th, 2023

Consideration and Approval of Minutes for the September 15, 2022, SMARA Compliance Committee Meeting

INTRODUCTION:

Approve the Conformed Minutes for the State Mining and Geology Board's September 15, 2022, SMARA Compliance Committee Meeting.

SUGGESTED MOTION:

Committee Chair and Members, in light of the information before the SMARA Compliance Committee today, I move that the Committee approve the Conformed Minutes for the September 15th, SMARA Compliance Committee Meeting.

Respectfully submitted:

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke.

Jeffrey Schmidt,
Executive Officer



DRAFT

CONFORMED MINUTES

THE STATE MINING AND GEOLOGY BOARD

Will Conduct a SMARA Compliance Committee Meeting on:

Thursday, September 15th, 2022, at 9:30 a.m.

This meeting will be held via video conference and will be recorded.

To avoid any background noises while the meeting is in session, we ask that you mute your device. To join the meeting, please download the latest version of MS Teams by visiting their website at <https://aka.ms/getteams> or install the MS Teams app on your phone. After installing MS Teams on your device click on the [Microsoft Teams Meeting](#) link to join the meeting (**Meeting ID: 263 603 700 104 and Passcode: u74QxQ**). You may also join us by phone by dialing (916) 318-8892 and entering the Phone Conference ID Number: **905 891 517#**.

The executive session will be held via an alternate MS Teams line, which will be provided to Board members prior to the meeting. The primary conference line will remain open during the executive session and members of the public may remain on the line. Board members will re-join the main teleconference after the conclusion of the executive session.

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PUBLIC MEETING AGENDA

1. **Call to Order (Anderson)**
Meeting was called to order at 9:30 a.m. by Chair Anderson.
2. **Pledge of Allegiance**
3. **Roll Call and Declaration of a Quorum**
Roll was called with Members Landregan, Vice Chair Kenline and Chair Anderson present and a quorum was declared.
4. **Review of the Agenda (Anderson)**
Chair Anderson made his general announcements and switched the order of 8A and 9A.
5. **Chair Report (Anderson)**
Chair Anderson reported that since February's meeting, the Board's Lead Agency Portal has been completed and a draft model ordinance will be presented.
6. **Public Comment Period**
There were no public comments.
7. **Consent Items**
All the items appearing under this section will be acted upon by the Board by one motion and without discussion; however, any Board member wishing to discuss any item may request the Chair to remove the item from the Consent Calendar and consider it separately.
 - A. Consideration and Approval of the February 17, 2022, Minutes for the SMARA Compliance Committee Meeting.
 - ❖ Member Landregan motioned and Vice Chair Kenline seconded approval of the February 17, 2022, minutes. Motion passed with a unanimous roll call vote.
8. **Discussion Items**
 - A. Solano County: Updated Mining Ordinance
 - Paul Fry provided a brief update on Solano County's updated mining ordinance and thanked Nash for all his work. The board discussed their concerns and Paul stated that he would schedule a meeting with Nash to take care of the issues.
9. **Presentations**
 - A. SMGB Model Ordinance Guidance Document: Discussion and Project Status (Fry, SMGB)
 - Paul Fry gave a presentation on the SMGB model ordinance guidance document and status of the project. Paul thanked Greg Tenorio for all his work.
10. **Announcements and Future Meetings**
February minutes will be voted on at the next meeting, possibly in early December.
11. **Adjournment**
 - ❖ Member Landregan motioned, Chair Anderson called a unanimous roll call vote and meeting was adjourned at 10:45 a.m.

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**State Mining and Geology Board
715 P Street, MS 1909
Sacramento, CA 95814**



Agenda Item No. 8B

February 16th, 2023

Consideration and Approval of Minutes for the December 16, 2021, Policy and Administration Committee Meeting

INTRODUCTION:

Approve the Conformed Minutes for the State Mining and Geology Board's December 16, 2021, Policy and Administration Committee Meeting.

SUGGESTED MOTION:

Committee Chair and Members, in light of the information before the Policy and Administration Committee today, I move that the Committee approve the Conformed Minutes for the December 16th, Policy and Administration Committee Meeting.

Respectfully submitted:

A handwritten signature in blue ink, appearing to be "Jeffrey Schmidt".

Jeffrey Schmidt,
Executive Officer



*****DRAFT*****

CONFORMED MINUTES

THE STATE MINING AND GEOLOGY BOARD

Will Conduct a Policy and Administration Committee Meeting on:

Thursday, December 16th, 2021 at 9:00 a.m.

This meeting will be held via video conference and will be recorded.

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PUBLIC MEETING AGENDA

- 1. Call to Order (Landregan)**
Meeting was called to order at 9:02 a.m. by Chair Landregan.
- 2. Pledge of Allegiance**
- 3. Roll Call and Declaration of a Quorum**
Roll was called with Members Kenline, Los Huertos, Zafir, Vice Chair Kappmeyer and Chair Landregan present and a quorum was declared.
- 4. Review of the Agenda (Landregan)**
Chair Landregan reviewed the agenda.
- 5. Chair Report (Landregan)**
Chair Landregan had nothing to report.
- 6. Public Comment Period**
There was no Public Comment.
- 7. Consent Items**
All the items appearing under this section will be acted upon by the Board by one motion and without discussion; however, any Board member wishing to discuss any item may request the Chair to remove the item from the Consent Calendar and consider it separately.
 - A. Consideration and Approval of Minutes for the Policy and Administration Committee Meeting held on November 21, 2019.
 - ❖ Vice Chair Kappmeyer motioned and Member Kenline seconded approval of the November 21, 2019 minutes. Member Los Huertos abstained, and motion passed with a unanimous roll call vote.
- 8. Action Items**
 - A. Consideration and Review of the 2020 -2021 Annual Report
 - Board Members discussed amendments to the Annual Report and thanked Jeffrey for all his work. Jeffrey made notes of the amendments and will send the revised Annual Report for final review.
 - ❖ Member Kenline motioned and Vice Chair Kappmeyer seconded the approval of the 2020-2021 Annual Report with the amendments discussed today. Motion was passed with a unanimous roll call vote.
- 9. Presentations, Reports, and Informational Items**
- 10. Announcements and Future Meetings**
No future meetings planned.
- 11. Adjournment**
Member Kappmeyer motioned adjournment and Chair Landregan called a unanimous second. Meeting was adjourned at 9:13 a.m.

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SPECIALTY	MEMBER NAME	TERM
Non-specialized public member	Larry Sheingold, Chair	2018-2022
Mining Engineer with background and experience in mining in California	George Kenline, Vice-Chair	2021-2025
Mineral resource conservation, development, or utilization	Brian Anderson	2019-2023
Environmental protection or the study of ecosystems	Vacant	2021-2025
Registered Geologist with background and experience in mining geology	Janet Kappmeyer	2021-2025
Landscape Architect	Stephanie Landregan	2018-2022
Registered Geologist, Geophysicist, or Civil Engineer with background and experience in seismology	Zia Zafir	2021-2025
Groundwater hydrology, water quality, or rock chemistry	Marc Los Huertos	2021-2025
Representative of local government with background and experience in urban planning	Vacant	2021-2025

*Board member terms effectively terminate January 15 of the term-ending year.

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**State Mining and Geology Board
801 K Street, MS 20-15
Sacramento, CA 95814**

Agenda Item No. 9

February 16th, 2023

Discussion Item: Minerals, Mining and Reclamation as Climate Opportunities

BACKGROUND:

The State Mining and Geology Board (Board) represents the State's interest in the development, utilization, and conservation of the mineral resources of the State and the reclamation of mined lands. The Board determines, establishes, and maintains an adequate mineral conservation, surface mining, and reclamation policy for the State.

During the Board's December 2022 regular business meeting, the Department of Conservation provided a presentation on "*Mines as Climate Opportunities, An Overview from the Department of Conservation, Natural and Working Lands Framework, Hazards Pillar Action Team.*" (Attachment 1) As a result of this presentation, the Board indicated a desire to further explore this topic.

According to the World Bank's "*Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition*" dated 2020, (Attachment 2):

- "A low-carbon future will be very mineral intensive because clean energy technologies, need more materials than fossil-fuel-based electricity generation technologies."
- "While the recycling and reuse of minerals can play a key role in reducing emissions, mining will still be required to supply the critical minerals needed to produce these low-carbon technologies, even with large future increases in recycling rates."
- "Limiting the carbon footprint of minerals needed for the clean energy transition may offer double wins, helping to boost economic growth and reduce environmental risks..."
- "Innovation is necessary to reduce the amount of energy, water, and land needed to extract these minerals and reduce the sector's carbon and environmental footprints. Without putting into place measures that address these challenges, such as adapting climate-smart mining practices, it will be difficult for the mining sector to position itself as a champion and enabler of the clean energy transition."

STATUTORY AUTHORITY:

PRC Section 672: The Board shall represent the state's interest in the development, utilization, and conservation of the mineral resources of the state and the reclamation of mined lands, as provided by law, and federal matters pertaining to mining, and shall determine, establish, and maintain an adequate surface mining and reclamation policy.

PRC Section 2759: The state policy shall be continuously reviewed and may be revised. During the formulation or revision of the policy, the Board shall consult with, and carefully evaluate the recommendations of, the supervisor, any district technical advisory committees, concerned federal, state, and local agencies, educational institutions, civic and public interest organizations, and private organizations and individuals.

DISCUSSION:

The Board intends to solicit public feedback and collect information on the topic of minerals, mining and reclamation as climate opportunities. The Board may exercise its authority to review, carefully evaluate, and update mineral conservation, surface mining and reclamation policy.

Board staff prepared discussion topics (Attachment 3) designed to stimulate public discussion relative to mineral conservation, mining and reclamation policy as promulgated in the Surface Mining and Reclamation Act and in the associated regulations, and guidelines.

Respectfully submitted:



Jeffrey Schmidt,
Executive Officer

Attachments:

1 – *“Mines as Climate Opportunities, An Overview from the Department of Conservation, Natural and Working Lands Framework, Hazards Pillar Action Team,”* by the Department of Conservation presented to the Board on December 15, 2022.

2- *“Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition,”* by the World Bank, dated 2020, <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>.

3- *“Discussion Topics, Potential Climate Resiliency Opportunities in Minerals, Mining and Reclamation,”* by Board Staff, dated February 16, 2023.

Mines as Climate Opportunities

*An Overview from the Department of Conservation, Natural and Working Lands Framework,
Hazards Pillar Action Team*

I. The Natural and Working Lands Framework and the Hazards Pillar Action Team

The Natural and Working Lands Framework was designed to better integrate the Department of Conservation's programmatic divisions, in order to improve and expand upon its services to the state and galvanize innovation as a result of sharing ideas, methodologies, data, and experiences across the organization. The Framework is organized around four pillars: watershed, carbon, hazards, and sustainable economies. Each pillar has a diverse staff team assigned to it, called a Pillar Action Team, or PAT, including members from all four of the Department's programmatic divisions, as well as policy, administrative, and support staff with complementary expertise.

The Hazards PAT addresses issues ranging from induced seismicity at well injection sites to support for prescribed burn associations, addressing wildfire risk throughout California's forests. Looking at these diverse issues with representatives of the DOC's diverse divisions has resulted in innovations around measuring success, as well as giving additional political capital to the high-priority projects coming out of the Framework's projects list. As these projects are implemented, PAT members expect to identify gaps in the Department's work, including both programmatic focus as well as geographic investment.

This document was created as a product of the Hazards PAT and is an extension of conversations around AML and SMARA statutory implementation, though the memo focuses on opportunities in reclamation plan implementation, which are exclusive to SMARA mine sites.

II. Mines as Climate Mitigation Opportunities

In conversations over the last several years (most in the last year), a number of opportunities have surfaced that combine climate resilience with mine reclamation. These are detailed below.

- a) Biochar application in tailings: the abandoned mine lands unit (AMLU) within DMR has been piloting this approach in partnership with the USFS and The Sierra Fund for a number of years. Biochar is a by-product of energy production utilizing woody biomass, often from California's forests, and is near-elemental carbon that can stay as such for many dozens, if not hundreds, of years. The AMLU has worked out an appropriate mix of mostly biochar, along with clay and compost, to ensure long-term carbon sequestration as well as soil health improvements to facilitate native plant repopulation and habitat regeneration.
- b) Carbon storage in open pits: the DOC has been approached with inquiries regarding the use of open pits (from active, inactive, reclaimed, and/or abandoned/pre-SMARA mines) for carbon storage in the form of forest biomass. This activity would involve burying unprocessed slash from forest treatment activities, including full trees, and storing them in a moisture-free environment, with off-gassing sensors, for long-term carbon storage.
- c) Making cement with mine tailings: We have been contacted with an inquiry about the use of mine tailings from active, inactive, reclaimed, and/or abandoned/pre-SMARA mines for creating low-carbon cement.
- d) Carbon storage in old asbestos mines: The DOC has been contacted by the USDOE, through LLNL, for participation in a pilot project utilizing an old asbestos mine. LLNL is running a 3-year pilot looking at asbestos and whether it can sequester/pull out CO₂, to

see whether it's an option for carbon capture, including both 1) mining the asbestos and creating filters for direct air capture of CO₂, or 2) potential capture-in-place.

III. Integrating Climate Responses into Reclamation Plans

Reclamation plans play a key role at mitigating the possible harmful effects of mining by ensuring mined lands are returned to a usable condition that is readily adaptable for alternate land uses, while posing no danger to public health or safety. There are approximately 1,100 active SMARA mines with reclamation plans in California, permitted and approved through local jurisdictions. Within the contents of a reclamation plan, there may be opportunities to include climate resilience measures to align with the state's ambitious climate resilience goals. However, since local governments play a lead role in permitting and approving reclamation plans for mines within their respective jurisdictions, facilitating the inclusion of climate resilience measures may need to be addressed at the local level.

SMARA currently contains provisions allowing for the construction and operation of a renewable energy generation facility on disturbed mined lands as an interim use (prior to the reclamation plan being completed), without requiring an amendment to an approved reclamation plan if, among other things, the renewable facility does not adversely affect the eventual reclamation of the site (Public Resources Code section 2777.3). The renewable energy facility would require an additional operating permit and a decommissioning plan from the local permitting lead agency and the facility must be closed prior to the completion of reclamation of the mined lands.

Once reclamation of a mine site is complete in accordance with an approved reclamation plan, the mine operator can walk away from the site. If climate mitigation measures are included within a reclamation plan, they may require a subsequent use of the land with additional oversight, depending on the activity. Permitting the subsequent land use may also require the input of multiple other governmental agencies with jurisdiction over the use. It may be possible for local lead agencies to implement a streamlined permitting approval process for mining permits that include aspects of climate resilience to incentivize more climate resilience integration through revising the requirements in their local mining ordinances.

IV. Next steps:

Next steps include answering some initial questions, including:

- a) Is the DOC/SMGB interested in further pursuing this line of inquiry?
- b) If yes, what are the policy tools the DOC/SMGB might utilize to incentivize climate resilience integration?
- c) Is there research needed that could support this line of questioning?
 - i) Are there additional sites/how much additional acreage could be suitable for carbon sequestration and climate resilience?
 - ii) Does CGS/DMR have the capacity to do this analysis?
- d) Are there regulatory and/or statutory changes that could support this work?
- e) What are additional DOC-SMGB collaboration opportunities?



Agenda Item Number 9

Attachment 2

Link to Agenda Item Number 9, Attachment 2
“Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition”
by the World Bank, dated 2020

<https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>

Discussion Topics

Potential Climate Resiliency Opportunities in Minerals, Mining and Reclamation

- a. Can state mining and reclamation policy criteria be updated to consider climate resiliency opportunities?
 - i. [PRC § 2755-2764 State Policy for the Reclamation of Mined Lands](#)
- b. Can reclamation plan requirements, objectives and elements be revised with new practices and techniques that consider climate resiliency opportunities?
 - i. [CCR § 3502 Reclamation Plan Objectives, Elements & Adequacy](#)
 - ii. [PRC § 2772 Reclamation Plans](#)
- c. Can surface mining and reclamation practices be revised with new practices and techniques that consider climate resiliency opportunities?
 - i. [CCR § 3503 Surface Mining and Reclamation Practice](#)
- d. Can reclamation standards be revised with new practices and techniques that consider climate resiliency opportunities?
 - i. [CCR § 3700-3713 Reclamation Standards](#)
- e. What subject matter experts could the Board engage, for future consideration of research under PRC [§ 675](#) and [§ 2759](#), to gather emerging information for potential climate resiliency opportunities in mineral conservation, mining, and reclamation?
 - i. Are potential grants or other funding sources available that could aid in research for emerging technologies/best practices relative to climate resiliency opportunities?
- f. Can the carve out for solar/photovoltaic projects that are sited on mined lands be expanded to include other climate resilient technologies under [PRC § 2777.3](#)?
- g. Should the Board update the [Mineral Classification and Designation Guidelines](#) (dated 2000)?
 - i. Updating the guidelines may require the development of new regulations.
 - ii. Should the California Geologic Survey consider pursuing classification of minerals that have climate benefits and are critical to green technology?
 1. Lithium, Cobalt, Copper, Molybdenum, Boron and Graphite
 2. Pozzolan
 3. Rare Earths and other critical minerals
 - iii. Should the Board consider designating minerals of [statewide significance](#) that have climate benefits and that are critical to green technology?