

**CEA ACTION PROPOSAL**

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Per California Code of Regulations, title 2, section 548.5, the following information will be posted to CalHR's Career Executive Assignment Action Proposals website for 30 calendar days when departments propose new CEA concepts or major revisions to existing CEA concepts. Presence of the department-submitted CEA Action Proposal information on CalHR's website does not indicate CalHR support for the proposal.

**A. GENERAL INFORMATION**

1. Date

2020-07-21

2. Department

Conservation

3. Organizational Placement (Division/Branch/Office Name)

Executive Office/Directorate

4. CEA Position Title

Carbon Management Policy Advisor

5. Summary of proposed position description and how it relates to the program's mission or purpose. (2-3 sentences)

This CEA proposal will further the mission of the Department to create carbon management policies and practices that help the state meet its 2045 carbon neutrality goal and protect the environment and the health and safety of the citizens of the State. The CEA will identify and foster negative emissions projects via intelligent, sustainable, and efficient use of California's surface and subsurface natural resources. The CEA will have responsibility to develop data, information, and strategies that catalyze (1) natural and mechanical capture carbon, (2) surface and subsurface carbon storage, and (3) utilization of carbon.

6. Reports to: (Class Title/Level)

Director - Governor's Appointee

7. Relationship with Department Director (Select one)

- Member of department's Executive Management Team, and has frequent contact with director on a wide range of department-wide issues.
- Not a member of department's Executive Management Team but has frequent contact with the Executive Management Team on policy issues.

(Explain):

8. Organizational Level (Select one)

- 1st
- 2nd
- 3rd
- 4th
- 5th (mega departments only - 17,001+ allocated positions)

**CEA ACTION PROPOSAL****B. SUMMARY OF REQUEST****9. What are the duties and responsibilities of the CEA position? Be specific and provide examples.**

The CEA will coordinate and oversee all Departmental-related carbon management programs. These Programs are new to the Department and the State. With the appointment of a new Director, State Oil and Gas Supervisor, and State Geologist, the Department has been tasked with assisting the State in its carbon management goals. This CEA will lead the Department's initiatives going forward by facilitating all of the various Division work internally and with external entities.

The State is trying to reach carbon neutrality as soon as possible, but no later than 2045 per Executive Order B-55-18, and the Department will play an integral part in those efforts. This includes initiatives that enable negative carbon emissions. This is of vital importance to the State and the environment. Negative emissions include three key steps: capturing, transporting, and securely storing or utilizing carbon dioxide. Storage occurs in surface and subsurface natural and working land include underground depleted oil and gas fields, deep saline aquifer formations, or soil and vegetation. These storage opportunities relate to expertise and programs housed at DOC and the deployment and expansion of those assets will be the focus of responsibilities for this CEA position.

The CEA will work with our various Divisions to facilitate this work on a statewide level. Specifically, the CEA will work with our Division of Land Resource Protection on surface level capture and storage and their partnering agencies. This will entail working with federal, state, and local agencies to identify areas of the state that are the most adaptable to surface capture and storage projects and then developing grant programs to incentivize such projects.

The CEA will work with our California Geological Survey on subsurface mapping areas around the state for potential storage and work with partnering agencies and local governments to identify these areas and methods that maximize storage. This mapping is a valuable tool to properly identifying where storage can be accomplished most logically and efficiently in the State. This will require work with the USGS and their mapping programs with the potential to utilize federal lands, as well.

The CEA will also work with our California Geologic Energy Management Division that regulates oil and gas production to utilize abandoned oil wells for subsurface storage. These depleted reservoirs also have good potential to be viable and strategic storage sites for the State. Data collection and analysis of abandoned wells and other subsurface features will be critical to identifying opportunities and aligning those with information from CGS.

The CEA will work with our Division of Mine Reclamation to research the options of using old mine sites for storage of carbon and managing the carbon in the State. Reclaimed mine sites have potential for long term storage in pits where the soil and rocks have the ability to store the carbon under certain circumstances. The CEA will work to determine which mines sites might be able to effectively store carbon and work the local jurisdictions on reclaiming sites in the proper manner and prepping for potential storage.

The CEA will help the divisions create standalone programs as needed with emphasis on determining the proper programs, permitting, and regulations in place for safe capture and storage and protection of public and environmental health and safety. The CEA will also need to work with transportation leaders to ensure safe passage from one location to another. The CEA's main function is to make sure all of the Department programs are working together for one common goal, negative emissions and carbon neutrality. The CEA will represent the Department in this work with various other State agencies such as the Air Resources Board, Department of Water Resources, State Water Quality Control Board, CalEPA, Office of Planning and Research, Natural Resources Agency, the Legislature, and the Governor's Office. The CEA will be responsible for proposing any legislative and regulatory changes to ensure safe and effective negative emissions throughout the State.

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**B. SUMMARY OF REQUEST (continued)**

10. How critical is the program's mission or purpose to the department's mission as a whole? Include a description of the degree to which the program is critical to the department's mission.

- Program is directly related to department's primary mission and is critical to achieving the department's goals.
- Program is indirectly related to department's primary mission.
- Program plays a supporting role in achieving department's mission (i.e., budget, personnel, other admin functions).

Description: The Department of Conservation's mission is to balance today's needs with tomorrow's challenges and foster intelligent, sustainable, and efficient use of California's energy, land, and mineral resources. Furthermore, we strive to provide a safe, sustainable environment for all Californians.

Carbon management meets all of the Department's mission and goals including effectively managing energy production, using land for beneficial uses, protecting mineral resources and identifying those resources and geologic areas to assist with effective negative carbon emissions, and protecting the environment for the future. Fostering the effective management of carbon emission in the oil and gas production process is a vital first step toward carbon neutrality. The industry has been in decline in California for 35 years, but production continues, so proper oversight of extraction practices is critical. Simultaneously, find locations and methods for negative carbon emissions will set the stage for many more options for the State to reach carbon neutrality. The CEA will work with all of our Programs to ensure they are synced in their goals and objectives and that all efforts are coordinated from the Directorate's Office.

The California Geologic Energy Management Division (CalGEM) within the Department has a new name and mission to mitigate reduction and mitigation of greenhouse gas emissions associated with the development of hydrocarbon and geothermal resources in a manner that meets the energy needs of the state. Carbon management is critical to the future of the organization. It impacts CalGEM programming in the decarbonization of the upstream oil and gas industry, expansion of geothermal energy production statewide, and the establishment of permanent geological carbon sequestration wells.

Carbon sequestration, emissions avoidance, and carbon accounting are required parts of multiple sources of funding for the division, specifically, the Greenhouse Gas Reduction Fund and Prop 68, which amount to over a quarter billion dollars of the funding it administers. The division's agricultural land conservation programs protect high quality lands and the carbon stored in their soils, agricultural planning grants help regions protect agricultural lands and influence higher density land use, and Watershed Coordinators and Regional Forest and Fire Capacity program grantees lead landscape planning and project development to increase the resiliency of forests and grasslands to fire and other mortality. Finally, the Transformative Climate Communities program funds multiple natural and built infrastructure project types that all seek to reduce a community's cumulative GHG emissions.

**CEA ACTION PROPOSAL****B. SUMMARY OF REQUEST (continued)**

11. Describe what has changed that makes this request necessary. Explain how the change justifies the current request. Be specific and provide examples.

Climate warming is driving rapid changes across California's land surface and water system. The impacts of rapid change depend largely on geology. Because of the historical, narrow focus and balkanized geoscience data gathering, sometimes without digitization, the state lacks the tools needed to plan and respond as change accelerates. This jeopardizes the future economic viability of the state and the ability to address key policy goals in already place such as carbon neutrality. The needed integration is the role – heretofore unrecognized or unaccepted – of the Department and its Divisions.

AB 1057 was the state legislation that changed the mission and added the need for the carbon management change in CalGEM. There are also several congressional proposals for federal funding that could assist CalGEM with the establishment of a carbon management program. Additionally, the US Department of Energy has either funded or considering funding several carbon management projects in California related to CalGEM, such as the California Resources Corporation CO2 Injection Project Feasibility Study and Climeworks Direct Air Capture Demonstration Project.

Carbon management of the state's natural and working lands will be an essential piece of the state's strategy to be carbon neutral by 2045 per Executive Order B-55-18. Accordingly, the Division of Land Resource Protection's California Climate Investment and Proposition 68 Bond funded programs have added components that would actively sequester carbon, including management plans and land and riparian corridor restoration practices. Quantification of these activities is required by both GGRF and Prop 68 and while the department has received support for limited quantification activities in the past, division currently lacks the expertise to quantify or maximize these avoided or reduced emissions.

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**C. ROLE IN POLICY INFLUENCE**

12. Provide 3-5 specific examples of policy areas over which the CEA position will be the principle policy maker. Each example should cite a policy that would have an identifiable impact. Include a description of the statewide impact of the assigned program.

1. Develop new policies and processes for a statewide overall geologic review of the suitability for a geologic site for deep sequestration of CO<sub>2</sub> that includes establishment of induced seismicity monitoring and management standards and protocols for seismic safety. These policies will need to focus on efficiency, safety, and effectiveness in various areas throughout the State. New policies must be developed with criteria to designate various locations and cost benefit for each designated area as well as the health and safety of those living in close proximity to the proposed storage.
2. Develop policies and processes for review and approval of carbon storage long-term reservoir surveillance technologies and plans. In the short term, depending on the purpose of the project, CO<sub>2</sub> can be stored in different geological sites, including deep saline formations, depleted oil or gas reservoirs, deep unmineable coal seams, and shale formations. Examining the long-term viability of these types of storage and proper surveillance to monitor the success is instrumental to ensuring safe storage of carbon. Policies and processes to implement long-term storage must be completed and vetted through various State and local agencies. Many of these policies will require Governor Office approval and Agency approval.
3. Development of maps and strategies for carbon uptake by Mg-rich rocks in the state. Mineral CO<sub>2</sub> sequestration is a proposed greenhouse gas mitigation technology whereby CO<sub>2</sub> is disposed of by binding it with calcium or magnesium to form a solid magnesium or calcium carbonate product. The reaction offers virtually unlimited capacity to permanently store CO<sub>2</sub> in an environmentally benign form via a process that takes little effort to either verify or monitor. The CEA will focus on statewide policy development for map and strategy development including review processes, stakeholder input, external review, professional review, and potentially academic or peer review. This will ensure maps and strategies undergo proper scientific and peer review prior to release.
4. The Department, and specifically, CalGEM will need to seek underground injection control regulatory primacy for Class VI wells from the US EPA to inject carbon dioxide permanently in subsurface geological reservoirs (40 CRF Part 124 – 147). The regulatory effort includes state and federal policy development for a highly unique and technical endeavor. The impact would be the establishment of carbon injection system statewide and potential expansion of non-California generated carbon dioxide to mitigate global warming (AB 32). The state policy work must align with other state agencies, such as California Energy Commission, CARB, State Waterboard, and multiple Department of Conservation Divisions. The CEA will work with these entities to develop statewide policies and processes to ensure injection is performed safely for the environment and for the local communities that may be affected by the newly proposed work. These policies must be implemented in a transparent and scientific manner to alleviate any concerns on the local level.
5. This position would lead Department support for Proposition 68 grantees implementing Terra Count Implementation Pilots to establish regional carbon management plans. These duties will largely entail helping grantees develop regionally specific quantification policies, methods, and strategies while ensuring that they align with state supported methodologies. Further, this position would lead the development and deployment of policies for use of spatial and other carbon analysis tools for regional and project specific application for ecosystem restoration and land conservation programs. This will include leadership of application of the Department developed tools such as Terra Count and the California in Riparian Ecosystems Evaluator for California tools. Specific policies for the tools and their use must developed and implemented statewide

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**C. ROLE IN POLICY INFLUENCE (continued)****13. What is the CEA position's scope and nature of decision-making authority?**

The proposed CEA's scope will be all carbon management related policies and procedures within the Department. The CEA will be responsible for coordinating all policies and procedures for the four Program Division's to be consistent in their approach and implementation. The CEA will ensure all Divisions are working in coordination with each other and our policies and procedures do not conflict with each other. The CEA will also be responsible for ensuring all policies and procedures meet the State's objectives and goals and work within the constraints or other State entities. The CEA will coordinate all Departmental policies and procedures with other state entities, the private sector, stakeholders, the Legislature, and the Governor's office.

The CEA will report to the Chief Deputy Director, a Governor's appointee. All decision-making authority lies with the Chief Deputy Director and the Director but either may delegate some of this to the CEA.

**14. Will the CEA position be developing and implementing new policy, or interpreting and implementing existing policy? How?**

The CEA will work with the Director, and the Division Directors on implementation of policies related to carbon management. Because negative carbon emissions is a new initiative for the State, most of the policies will be new and will be interpreting the available science to create new policies for the State. As such, this is a very valuable position to ensure the State adopts clear and concise policies going forward for the safe and effective capture and storage of carbon.