



SB 27 California Carbon Sequestration and Climate Resiliency Project Registry

Concept Discussion Draft

March 29, 2023

Pursuant to Senate Bill 27 (Skinner, 2021), the California Natural Resources Agency (CNRA) is currently developing a registry of natural and working lands projects that drive climate action in California and are seeking funding. We envision this registry largely operating as a website, though CNRA must also adopt regulations governing how projects may be listed, what methodologies are used to account for carbon reductions, and other related matters.

CNRA invites your early input on this Concept Discussion Draft through May 30, 2023. Please submit comments electronically to naturebasedsolutions@resources.ca.gov with the subject line "SB 27 Concept Discussion Draft Public Comment". CNRA staff have identified several specific discussion questions that have arisen in developing the registry, but ideas and suggestions on any aspect of the regulation or website are welcome. While CNRA will not formally respond to comments made at this stage of the process, all information provided will be reviewed and considered. Additional opportunities for public comment will be available during the formal rulemaking process, which is estimated to begin in summer 2023, and comments made through that process will be responded to as required under the California Administrative Procedure Act.

From an information technology (IT) perspective, the registry website will not be static, but will undergo iterative and continuous improvements. Suggested improvements will be welcome at any time, and applicable and feasible changes will be made on an ongoing basis. Any feedback that necessitates further rulemakings will be compiled and catalogued. CNRA will periodically review such feedback and undertake further rulemakings as necessary.

Background

Reducing emissions in transportation, industry and buildings are not enough to help avert catastrophic climate change – lands must be part of the climate solution. Our lands are a critical yet undervalued sector in California's urgent effort to achieve carbon neutrality and build resilience to the impacts of climate change. Healthy landscapes can sequester and store carbon, limit future greenhouse gas emissions into the atmosphere, protect people and nature from the impacts of climate change, and build resilience to future impacts of climate change. Unhealthy landscapes have the opposite effect – they release more greenhouse gases than they store, worsen climate risks to people and nature, and are more vulnerable to future climate change impacts.

In October 2020, Governor Newsom outlined a comprehensive and results-oriented agenda to expand nature-based solutions across California through [Executive Order \(EO\) N-82-20](#). The executive order called for restoring nature and landscape health to deliver on our climate change goals and other critical priorities, including improving public health and safety, securing our food and water supplies, and achieving greater equity across California.

To help implement EO N-82-20, in April 2022, CNRA finalized the Natural and Working Lands Climate Smart Strategy. Among other things, this strategy defines California's natural and working landscapes, describes how investment in those landscapes advances our climate goals, and identifies priority nature-based climate solutions to address the climate crisis.

EO N-82-20 also called on the California Air Resources Board (CARB) to take into consideration the Natural and Working Lands Climate Smart Strategy and science-based data to update the target for the natural and working lands sector in achieving the State's carbon neutrality goal as part of the 2022 Scoping Plan process. California's 2022 Climate Change Scoping Plan was the first time the state conducted a detailed analysis to understand how natural and working lands greenhouse gas emissions and sequestration support California's climate goals.

Recent legislation (AB 1757, Garcia, 2022) raised the bar for this sector in California, outlining a comprehensive portfolio of new initiatives including setting targets, quantifying and reporting progress, updating state strategy, engaging experts, and more. While there is a growing understanding of the importance of managing our lands to deliver climate benefits, there is limited funding to do so. To help identify projects with carbon removal and resilience benefits, and to help attract private, philanthropic, and government investment in such projects, [Senate Bill \(SB\) 27](#) (Skinner, 2021) calls on CNRA to establish the California

Carbon Sequestration and Climate Resiliency Project Registry (“Registry”). The Registry will provide a centralized, publicly accessible database with detailed information about such projects but in no way regulates those projects, creates any entitlement, or guarantees grant eligibility.

CNRA held public listening sessions and consultations with California Native American tribes regarding the Registry throughout 2022. Interested partners from multiple disciplines participated and provided useful input. For example, some feedback included requesting the registry to cover the entire lifecycle of a project; funding technical assistance; using the registry to find California Environmental Quality Act (CEQA) mitigation opportunities; providing tracking for projects; and including useful filters, spatial overlays and maps, and educational information. Participants also discussed options for funders to help with segments of a project and ways for funders and project proponents to connect on the Registry to accelerate project implementation. Participants discussed the need for early, frequent, and meaningful engagement with underserved groups. Questions included how to protect against more than one entity claiming the same project benefit, how to achieve CEQA compliance with projects registered, how to conduct project monitoring, and how to ensure that projects are implemented as described.

Purpose and Contents

This Concept Discussion Draft was developed in collaboration with multiple state agency partners, including the California Air Resources Board (CARB), California Department of Food and Agriculture (CDFA), and the Governor’s Office of Planning and Research (OPR). It was informed by public input provided in the engagement and outreach described above. The Concept Discussion Draft:

- Summarizes key provisions of SB 27.
- Identifies CNRA’s policy objectives in establishing the Registry.
- Describes the website that will host the Registry.
- Discusses the draft regulation (Appendix A) which will be modified based on public comments and engagement. The final regulation will identify the minimum requirements for listing projects on the Registry, and other topics related to the regulation.

Most importantly, the Concept Discussion Draft poses key questions state agencies are seeking public input on.

Summary of SB 27

As noted above, SB 27 tasks CNRA with establishing the Registry. Specifically, the legislation provides two paths by which natural and working lands and

direct air capture projects may be listed. Natural and working lands projects include actions such as those contained in the [Natural and Working Lands Climate Smart Strategy](#), [California's Climate Change Scoping Plan](#), and the [California Climate Adaptation Strategy](#). See Appendix B for a list of illustrative examples.

The first path (Pathway A) allows projects to be listed if they applied for, and met all requirements for, programs funded from the Greenhouse Gas Reduction Fund (GGRF) or other funding sources, but were not funded due to a lack of sufficient funding. Projects that sought state funds will be subject to further minimum requirements set by CARB.

The second path (Pathway B) allows proponents of projects in California to apply to CNRA to have a project listed on the Registry. SB 27 includes several minimum criteria for projects to be listed under this path, including quantification of expected carbon removal benefits and monitoring and reporting.

Projects will be removed from the Registry once they are funded. Projects must provide monitoring and reporting data over time to CNRA. CNRA is required to track the carbon removal benefits derived from all projects funded through the Registry over time.

Notably, SB 27 prohibits projects listed on the Registry from creating credits for market-based compliance mechanisms developed or administered by CARB pursuant to the California Global Warming Solutions Act of 2006. Projects listed on the Registry also cannot be used by any state or private entity to offset a statutory or regulatory obligation to reduce emissions under that Act.

The full text of SB 27 can be found [here](#).

Our Vision of the Registry

While SB 27 includes some specific requirements, CNRA is seeking your input on the Registry's design and functions. Our intent is for the Registry to provide all necessary information regarding proposed projects so that funders can search through many potential projects to identify those that may best fit their objectives. To that end, this section describes the policy goals that are guiding CNRA in developing the Registry. It also describes the vision for the website that will house the Registry and the regulations that will govern how the Registry operates.

Policy Goals

First, we hope the Registry will help drive increased climate action on California's natural and working lands and facilitate direct air capture projects.

Second, we want the Registry to advance projects that deliver credible benefits such as carbon sequestration, reduced future greenhouse gas emissions, climate resilience, economic opportunity, improved public health, and access to nature, among others.

Third, while structural injustices have influenced land protection, ownership and access, and has placed disproportionate burdens on vulnerable communities who endure increased concentrations of pollution, limited access to nature, loss of sacred lands and more, this Registry aims to support California's commitment to equitable access to funding by facilitating more projects by disadvantaged communities and California Native American tribes.

Finally, we are seeking to create a Registry that is as automated as possible given limited funding and staff for operations.

For CNRA, a successful Registry will deliver the following outcomes:

- More funding flowing to project development and implementation, and more specifically, funding for projects developed and led by individuals and organizations from California Native American tribes and disadvantaged communities.
- A clearer picture of the type and location of potential climate smart land management and direct air capture opportunities in California.
- An improved process for tracking and monitoring the success and benefits of nature-based climate solutions over time.
- Identification of improvements to quantification methodologies.
- An easy-to-use, automated system that increases the pace and scale of climate smart land management in California.

Website

A key component of the Registry will be a website that catalogs project information. While this component is still under development, we do not expect that the Registry will just be a list of projects. Rather, we anticipate it will be an interactive, spatially explicit tool that allows users to sort according to project location, project type, project duration, project benefits, project proponent (ex. California Native American tribe) and estimated amount of carbon removal benefits the project will achieve, for example. Users should then be able to click on a project link to see more detailed information describing, for example, the methods used to estimate the project's activities, carbon removal benefits, and project cost, among others.

Projects listed on the Registry will have successfully met all requirements called for in SB 27. The information provided would allow funders to conduct their own

due diligence and evaluate project opportunities according to any additional criteria and monitoring requirements they may have.

Regulation

Another key component of the Registry will be the regulations that govern its operation. The regulations will address, for example, the minimum project listing criteria, requirements regarding which information must be publicly accessible, and procedures for removing projects from the Registry and tracking their progress over time. A draft of the regulation is contained in Appendix A of this document.

Discussion Questions

We hope to hear from interested parties regarding several issues that will influence both the design of the website and content of the regulation. Those issues, and specific discussion questions, are set forth below. Please note, this document is intended as a preliminary draft to generate discussion and facilitate input. Public input will improve the draft that will ultimately be proposed as part of the rulemaking process.

1. Projects that Sought Funding Through State Programs (Pathway A)

Projects that meet the requirements of state grant programs, such as the ones supported by GGFR, and applied for funding through those programs but did not receive an award due to lack of funding, may be eligible for listing on the Registry. CARB will establish program requirements in a separate process for projects that are listed on the registry through Pathway A. Projects listed through Pathway A will need to have applied to a state grant *after* the creation of the Registry. In determining eligibility going forward, CNRA can specify a limit for time passed after projects were considered for state funding. Therefore, we seek input on the following:

1.1: Should the California Natural Resources Agency accept projects for listing, regardless of when they originally applied for state funding (as long as it was after the creation of the Registry)? If not, what is an appropriate time range, and why?

2. Measuring Carbon Removal Benefits: Quantification Methodologies

To be listed on the Registry through Pathway B (direct application), a project must “[a]chieve greenhouse gas reduction or carbon removal.” (Health & Safety Code, § 39740.5, subd. (a)(1).) The applicant must also provide documentation regarding the “amount of greenhouse gases reduced or

carbon sequestered by the proposed project.” (*Id.* at subd. (a)(4)(A).) SB 27 requires CNRA to prioritize quantification methodologies approved by CARB. (*Id.* at subd. (c).) Further, the application must also indicate “[w]hether the proposed project provides greenhouse gas reduction or carbon removal benefits that are real, verifiable, quantifiable, additional, and permanent. This determination shall be verified by a third party accredited by the state board.” (*Id.* at subd. (a)(4)(F))

Those projects wishing to verify that their project provides carbon removal benefits that is real, verifiable, quantifiable, additional, and permanent have the option to do so. Such projects shall be verified by a third party accredited by the California Air Resources Board.

Various methodologies and tools exist to quantify carbon removal benefits. We have heard feedback that some tools include a great deal of analytical rigor and that funders could have a high degree of confidence that estimated carbon removal benefits will actually occur. We have also heard that some tools are very complex, requiring highly specialized consultants.

In other words, leaving the choice of quantification methodology completely to the applicant’s discretion may mean that projects are listed that may not produce the estimated carbon removal benefits that they advertise or be incomparable with other projects. Requiring applicants to use the most rigorous methodologies, however, may be prohibitively challenging for some applicants.

Section 3(b)(ii) of the draft regulations in Appendix A addresses quantification.

With the above considerations in mind, we seek feedback on the following questions related to quantifying carbon benefits:

2.1: CNRA is considering requiring that projects seeking to enter the Registry through Pathway B use the [quantification methodologies](#) developed for the Climate Change Investments (CCI) programs (funded by GGRF) by CARB to determine carbon removal benefits and their duration. CNRA appreciates any feedback on this proposed approach.

2.2: Other than the quantification, is there other information that CNRA should require to make estimates of carbon removal benefits derived from funded Projects understandable to the public? Would funders need different information?

2.3: How can the information that the Registry collects support transparency so that the flow of finance and funding for projects is tracked

in a way that avoids double counting of carbon removal benefits among project funders?

2.4: How might the Registry support projects that do not have the resources/capacity to meet SB 27's listing requirements?

3. Climate Resilience and Other Benefits

For Pathway B (direct application) projects, CNRA must ensure that projects listed on the Registry "improve the state's resilience to climate change." (Health & Safety Code, § 39740.5, subd. (a)(3).) Projects must provide documentation identifying "project benefits, including, but not limited to, adaptation to sea level rise, fire, heat, and drought, biodiversity benefits, water security and watershed restoration benefits, and benefits to disadvantaged and low-income communities." (Health & Safety Code, § 39740.5, subd. (a)(4)(E).)

California released a *Natural and Working Lands Climate Smart Strategy* ([Natural and Working Lands Climate Smart Strategy \(ca.gov\)](https://www.ca.gov/natural-and-working-lands-climate-smart-strategy)), which details the many benefits provided by climate smart land management, including climate resilience benefits. CNRA has heard from interested parties that climate resiliency and other benefits could make projects more attractive and could lead to more financial support for these projects.

Section 3(b)(iii) and (iv) of the draft regulations addresses resilience and project benefits.

We seek feedback on the following questions related to climate resilience and environmental benefits:

3.1: What information, beyond yes/no selections, should applicants provide to enable funders to evaluate the project's ability to improve resilience to climate change?

- ***3.1(a): Is it helpful to list the impacts to which the project intends to build resilience?***
- ***3.1(b): Is it helpful to list the state climate adaptation and resilience strategies with which the project aligns?***
- ***3.1(c): Is it helpful to list the regional and local climate adaptation and resilience strategies with which the project aligns?***
- ***3.1(d): Is it helpful to identify the [California Climate Adaptation Strategy priorities](#) with which the project aligns?***

- **3.1 (e): Would it be useful to provide space for the applicants to explain any selections made related to resilience and other benefits?**
- **3.1 (f): Should applicants be required to analyze the climate risk(s) their project might face using [Cal-Adapt](#) or other climate impact tools and explain how their project will build resilience to those impacts?**

3.2: What information and level of detail should applicants provide regarding a project’s non-climate related benefits?

4. Direct Air Capture Project Requirements

The 2022 Scoping Plan update states that “Carbon capture and sequestration (CCS) will be a necessary tool to reduce GHG emissions and mitigate climate change while minimizing leakage and minimizing emissions where no technological alternatives may exist.” (At p. 84.) In 2022, Governor Newsom signed SB 905, which requires CARB to establish a Carbon Capture, Removal, Utilization, and Storage Program to evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and carbon dioxide removal technologies and facilitate the capture and sequestration of carbon dioxide from those technologies.

Some community partners and interested parties have raised concerns related to the technological readiness of direct air capture, as well as costs, related greenhouse gas emissions, and exacerbated adverse public health impacts in communities facing environmental injustices.

SB 27 expressly allows direct air capture projects to be listed on the Registry, and requires CNRA to consider the environmental and public health impacts of such projects before listing them.

Section 3(c) of the draft regulation addresses requirements for direct air capture projects.

With the above considerations in mind, we seek feedback on the following questions related to Direct Air Capture projects:

4.1: Recalling that one of CNRA’s policy goals is for the Registry to be as automated as possible, one way for CNRA to efficiently consider the environmental and public health impacts of direct air capture projects is to require that such projects have been evaluated by a lead agency pursuant to CEQA. To avoid adverse impacts, CNRA could further require

that project impacts be mitigated to a less-than-significant level. Requiring projects to have undergone CEQA review may be a significant barrier to potential applicants, however. Are there existing protocols or processes other than CEQA that address environmental and public health impacts that would be better for CNRA to rely on?

5. Monitoring and Tracking Projects

To be listed on the Registry, project proponents must indicate that they will monitor and report carbon removal benefits once a project is funded (Health & Safety Code, § 39740.5, subd. (a)(2), § 39740.6, and § 39740.7 subd. (a).)

Monitoring and tracking of these projects over time is essential to ensuring that projects not only achieve their intended goals, but that any challenges to the success of the activity can be addressed, adaptively, early on. This is critical considering the increasingly frequent and compounding climate events that are impacting California's natural and working lands and the projects occurring on them. However, project monitoring and tracking can be resource-intensive and technically challenging.

CNRA recognizes that this monitoring and tracking is complicated. This information will be important to those who fund these projects to ensure that they can demonstrate the value of their investment. As noted above, while CNRA will not conduct independent assessments of listed projects, it is committed to building a registry that provides data and information to enable others to understand outcomes of projects.

With the considerations above in mind, we seek feedback on the following questions related to monitoring and tracking:

5.1: What monitoring and reporting data should be required for CNRA to track carbon removal benefits derived from projects funded through the Registry? For example, should all projects be required to validate estimated carbon removal benefits based on final project implementation by re-running the quantification methodology used to estimate the amount of carbon removal benefits delivered by the proposed project?

5.2: Should projects be required to monitor climate resilience benefits? If so, what should be included in this monitoring?

5.3: Are there other components that should be included in all monitoring programs?

5.4: At what cadence should monitoring and reporting information be provided to CNRA?

5.5: All monitoring and tracking information required by CNRA can be made public through a Public Records Act request. Should certain information be automatically published on the website? If so, what information?

6. Partially Funded Projects

Section 39740.7, subdivision (c) of the Health and Safety Code states that CNRA may assign project value proportionally across multiple project funders. Due to the dynamic and complex nature of projects, including multiple funders over time and the potential need for project maintenance or retreatments, keeping track of payments and financial transactions could require specific types of information to be collected.

Section 4 of the regulations draft address partially funded projects. We seek specific input on the following:

6.1: What types of information should applicants provide regarding a project funding stream (i.e., separable or independently fundable component) and overall value proposition in order to assign worth to certain funders or partial project support?

6.2: How long should a project stay on the registry if it is not fully funded? CNRA is considering requiring that listed projects annually update their listings to ensure projects are still viable and that cost estimates, carbon removal benefits calculations, and other project parameters are up-to-date.

7. Equity

SB 27 contains numerous minimum requirements for projects to be listed on the Registry. CNRA has heard from interested parties that some of those requirements, such as quantification of estimated carbon removal benefits, may be cost prohibitive. As a result, potential project developers, such as California Native American tribes, as well as individuals and organizations from disadvantaged communities may have a difficult time getting projects listed on the Registry. In order to support such potential projects, CNRA is considering including a link to CARB's [Community Connections](#) tool where such groups

could find partners in developing a project for potential listing on the Registry. CNRA seeks input on the following:

7.1: Are there aspects of the Registry that raise equity concerns?

7.2: Are there ways that the draft regulation could be improved to promote equity?

7.3: What actions can CNRA take to improve outcomes and funding opportunities for California Native American tribes and disadvantaged communities as well as avoid bias in project funding that has historically resulted in underinvestment in these communities?

8. CEQA Mitigation

The California Environmental Quality Act, or CEQA, requires that all public agencies consider the potential adverse environmental impacts of proposed projects (Public Resources Code § 21065), and to mitigate those impacts if they are significant. The CEQA Guidelines specifically require analysis and mitigation of project-related greenhouse gas emissions. (Cal. Code Regs, tit.14, § 15064.4.) They further state that measures to mitigate such impacts may include “[m]easures that sequester greenhouse gases.” (Cal. Code Regs, tit. 14 § 15126.4, subd. (c)(4).)

Some interested parties raised the idea of using projects listed on the Registry as a potential source of mitigation under CEQA. SB 27 is silent on that issue.

CNRA cannot deem whether projects listed on the Registry serve as appropriate mitigation pursuant to CEQA. Rather, lead agencies must determine what is appropriate CEQA mitigation. (Cal. Code Regs, tit. 14 § 15126.4, subd. (c).) Under CEQA, mitigation measures may be adequate if they are feasible (meaning “capable of being accomplished in a successful manner within a reasonable period of time...”) and capable of being monitored over time. The information required for projects to be listed on the Registry may provide evidence that a lead agency might use to assess which projects would serve as appropriate CEQA mitigation. For example, protocols governing the quantification of carbon removal benefits may constitute substantial evidence supporting a lead agency’s determination of feasibility. Further, monitoring required for the Registry may be incorporated into a lead agency’s mitigation monitoring and reporting program. Thus, we anticipate that lead agencies and project developers may look to the Registry as a potential source of CEQA mitigation.

Given that the CEQA Guidelines already contain specific rules governing CEQA mitigation, our preliminary view is that the regulations for the Registry need not specifically address this issue other than to say that such projects may be used as mitigation provided that they meet all of CEQA's requirements, as determined by the lead agency. CNRA, nevertheless, seeks input on the following:

8.1: Should the regulations for the Registry include any other requirements related to using listed projects as mitigation under CEQA?

9. Website

As described above, a key component of the Registry will be a website that lists projects and their key information. At a minimum, it will contain the information specifically required for listing on the Registry in Health and Safety Code Section 39740.5.

We anticipate that the Registry website will include the application form, checklists, dropdown menus, and reference links. Links to, for example, multiple relevant tools to find locations, or overlays, may also be included. CNRA seeks input on the following:

9.1: How can CNRA design the registry to be user friendly?

9.2: Are there specific attributes or functions you would like to see built into the Registry website? (e.g., filtering mechanisms, maps, chat tools)

9.3: How should CNRA ensure supporting documentation is easy to access?

9.4: How should project location data be collected and displayed (e.g., address, latitude/longitude, county, etc.)

9.5: Are there other specific geographic or informational data that you would like to see incorporated into the registry? (e.g., locations of disadvantaged communities, ecoregions, county boundaries).

10. Potential Funders

A successful Registry will be a useful tool for potential funders. CNRA is seeking to understand who those funders might be and how best to ensure the Registry meets their needs.

10.1: Which funders should the Registry attract (ex. philanthropic funders, CEQA mitigation funders, for-profit corporations, etc.) and how might CNRA support their engagement?

Next Steps

CNRA invites input on this Concept Discussion Draft through May 30, 2023. Please submit comments electronically to naturebasedsolutions@resources.ca.gov with the subject line "SB 27 Concept Discussion Draft Public Comment". The specific questions included above have been identified by CNRA staff as important discussion points, but ideas and suggestions on any aspect of the regulation are welcome. While CNRA will not formally respond to comments made at this stage of the process, all information provided will be reviewed and considered. Additional opportunities for public comment will be available during the formal rulemaking process, which is estimated to begin in summer 2023, and comments made through that process will be responded to as required under the California Administrative Procedure Act.

CNRA encourages and welcomes robust engagement in the development of the Registry.

Friendly Reminder:

Comments must be received within the timeline established in the notice. If you are unclear on the timelines or seek further information, please contact CNRA at naturebasedsolutions@resources.ca.gov or visit <https://resources.ca.gov/Initiatives/Expanding-Nature-Based-Solutions>

Things to consider:

- Note that your original thoughts are more effective than a boilerplate set of comments.
- We recommend clearly identifying the specific issues on which you are commenting.
- We recommend when you are commenting on a particular word, phrase, or sentence, please provide the page number, paragraph citation, and/or question number.
- If you wish to be contacted by staff, include your contact information, (i.e., your name, phone, street mailing address, email address).
- Please submit comments electronically to naturebasedsolutions@resources.ca.gov with the subject line "SB 27 Concept Discussion Draft Public Comment"

Language services may be provided upon request. To ensure availability of these services, please make sure your request is submitted at least 15 business days prior to the comment period deadline by contacting outreach@resources.ca.gov.