Grassroots Carbon Public Benefit LLC (Mike Dillinger)

See attached comment

Grassroots Carbon

Grassroots Carbon Public Benefit LLC | San Antonio, Texas

November 11, 2026

Submitted electronically: https://ww2.arb.ca.gov/lispub/comm/bclist.php

Chair Lauren Sanchez and Members of the Board
California Air Resources Board
c/o Clerks' Office
1001 I Street
Sacramento, California 95814

Re: Proposed California Carbon Capture, Removal, Utilization, and Storage Program Regulations and Associated Regulatory Amendments (Notice of Public Hearing dated October 20, 2026; Hearing January 28, 2027)

Dear Chair Sanchez and Members of the Board:

Grassroots Carbon Public Benefit LLC ("Grassroots Carbon") appreciates the opportunity to comment on the proposed California Carbon Capture, Removal, Utilization, and Storage Program regulation and the related amendments. I submit these comments as Grassroots Carbon's Chief Legal Officer.

Grassroots Carbon works with more than 340 ranching families across roughly three million acres, including in California. These families use regenerative grazing, including adaptive multi-paddock (AMP) grazing, to build carbon in grassland soils. We quantify that carbon by direct measurement. We take soil cores to a depth of one meter and re-measure on a five-year cycle, rely on independent third-party verification, and withhold a buffer of credits at issuance. Since 2022 we have paid more than $40 million directly to ranchers, and we have delivered more than 1.9 million tons of verified carbon removals to buyers that include Microsoft and Boeing. We were also a working-group participant in the Climate Action Reserve's Soil Enrichment Protocol Version 2.0 development process.

We ask the Board to do three things:

1. Confirm, and make workable, the ability of California ranchers who store carbon through regenerative grazing to participate in the CCUS Program, such as under section 95702(d) and the certification process in section 95705.
2. Allow soil carbon removals from grazing lands to be credited in the Cap-and-Invest Program. This can happen now through the section 95705 offset pathway in Appendix A-2, and later through a Compliance Offset Protocol developed in the protocol update required by SB 840.
3. Allow offsets from avoided conversion of grasslands in the Cap-and-Invest Program through the same two routes.

The proposal already contains most of what is needed. Part IV concerns the separate SB 840 protocol update. Every other request below concerns a section listed in the Notice, which states that CARB may consider other changes to the sections affected during this rulemaking. In our view, each request is sufficiently related to the noticed text to be adopted through a 15-day change if the Board agrees. Proposed regulatory text appears in shaded boxes, with additions underlined and deletions struck through. Attachment A summarizes each request by section.

I. The Proposal Provides the Right Framework

Section 95702(d) brings "Nature-based, marine, biomass, and other CO2 removal and storage" within the Program. Section 95701 defines "Nature-Based Carbon Removal" to include restoration, conservation, and land management actions that increase net carbon sequestration or reduce greenhouse gas emissions in natural and working lands. It defines "Natural Lands" to include grasslands and "Working Lands" to include lands used for grazing. Its definition of "Permanent" recognizes that some removals may be reversible and treats them as permanent when mechanisms are in place to replace any reversal. That is the correct standard for biological storage.

Section 95705 opens certification to every project type in section 95702, including subdivision (d), where no CARB-approved protocol covers the project type. Section 95705(d)(1)(A) expressly contemplates "ecological or soil carbon processes" within a project boundary. It also requires quantification based on remeasurement of empirical data rather than models alone. Measurement-based soil carbon programs are built to meet that standard.

Appendix A-2 then connects certified projects to the compliance market:

- A project certified under section 95705 may be issued registry offset credits and ARB offset credits (sections 95970 and 95973).
- Reversals are addressed through the CCUS Buffer Account and a project risk rating (section 95983.1).
- Certified projects in California are considered to provide direct environmental benefits in the State (section 95989(a)).

The Initial Statement of Reasons (ISOR) explains why this matters. AB 1279 requires California to reduce anthropogenic greenhouse gas emissions at least 85 percent below 1990 levels and to achieve carbon neutrality no later than 2045 (ISOR, p. 8). The ISOR states that meeting those goals requires carbon dioxide removal, including nature-based strategies, alongside deep emissions reductions (ISOR, p. 6). It adds that California must scale carbon removal approaches, including "NBS such as improved forest management and soil sequestration" (ISOR, p. 11), and that inclusion in the Program reflects the State's recognition of the full suite of carbon management strategies, including nature-based strategies (ISOR, p. 8).

The first objective CARB lists for the Proposed Regulation is to support overall deployment of CCUS and CDR projects to meet statutory climate targets (ISOR, p. 7). Each request in this letter serves that objective. We urge the Board to retain section 95702(d) and the section 95705 pathway in the final regulation.

II. Requested Clarifications and Amendments to Article 4.5

A. Sections 95701 and 95702: Name grazing-land soil carbon and grassland conservation.

The Notice and the ISOR describe the Program as regulating three activity types: carbon capture, direct air capture, and geologic carbon storage. Section 95702, however, lists five, and the substantive requirements in sections 95703 through 95704.7 are written for the first three. To prevent later disputes, we ask that the Final Statement of Reasons confirm that section 95702(d) includes (1) soil organic carbon storage from improved grazing management on grasslands and rangelands and (2) conservation that avoids the conversion of grasslands and rangelands. We also recommend adding one sentence to the definition of "Nature-Based Carbon Removal."

Proposed amendment, section 95701(a)

> "Nature-Based Carbon Removal" means activities, such as restoration, conservation, and land management actions, that increase net carbon sequestration or reduce greenhouse gas emissions in natural and working lands. Nature-Based Carbon Removal includes improved grazing management that increases soil organic carbon on grasslands and rangelands, and conservation that avoids the conversion of grasslands and rangelands to cropland or development.

B. Section 95701: Align the integrity definitions with section 95705(d)(1).

Section 95705(d)(1) requires a showing that "the GHG reduction or removal enhancement" is real, additional, quantifiable, permanent, verifiable, and enforceable. Appendix A-2 likewise defines a Section 95705 Project reversal in terms of "a GHG emission reduction or GHG removal enhancement."

The section 95701 definitions do not match that language. "Additional," "Real," and "Permanent" refer only to GHG removals, and "Quantifiable" refers only to GHG removal enhancements. Read literally, a conservation project that keeps grassland carbon in the ground could be judged against definitions that do not fit it, because its benefit is an emission reduction. We recommend referring to GHG emission reductions and GHG removal enhancements in each of the four definitions, beginning with "Additional."

Proposed amendment, section 95701(a) (conforming changes to "Real," "Permanent," and "Quantifiable")

> "Additional" means ~~greenhouse gas removals~~ GHG emission reductions and GHG removal enhancements that exceed any ~~greenhouse gas removals~~ GHG emission reductions or GHG removal enhancements otherwise required by law, regulation or legally binding mandate, and that exceed any ~~greenhouse gas removals~~ GHG emission reductions or GHG removal enhancements that would otherwise occur in a conservative business-as-usual scenario.

C. Section 95705(d)(1)(A): Confirm how the empirical measurement requirement applies.

We support the requirement that quantification rely on remeasurement of empirical data. We ask the Board to confirm in the Final Statement of Reasons how that requirement applies to two project types:

1. **Soil carbon projects.** The requirement is met by direct soil sampling with remeasurement at an interval specified in the certified quantification assessment methodology (QAM), such as our five-year cycle. Calibrated models may be used for interim annual reporting, with a true-up at each remeasurement.
2. **Avoided-conversion projects.** The avoided loss cannot be measured directly because it never occurs. For these projects, the requirement is met by empirical measurement of carbon stocks at project start, conversion emission factors derived from empirical data, and periodic monitoring, including remote sensing, confirming that the protected land use is maintained.

D. Sections 95705(d)(1)(B) and 95983.1: State the permanence period and risk-rating method in advance.

Section 95705(d)(1)(B) requires permanence "for the duration claimed." The "Permanent" definition refers to a "specified timeframe," but the proposal does not identify that timeframe for nature-based projects. Section 95983.1 bases buffer contributions on a project "Risk Rating" but does not state how the rating is set for section 95705 projects. Ranchers need both answers before they sign long-term agreements. We ask that CARB:

1. Specify the permanence period for nature-based projects certified under section 95705.
2. Confirm that permanence may be shown through a combination of landowner agreements, recorded instruments such as conservation easements where available, monitoring for the permanence period, insurance, and buffer contributions under section 95983.1.
3. Set the risk rating at certification using the reversal risk analysis in the certified QAM, and state it in the Executive Officer's public certification summary.
4. Consider a separate nature-based sub-account within the CCUS Buffer Account, so that pooled contributions reflect the different reversal risks of biological and geologic storage.

E. Sections 95705(b) and (c)(3): Keep proven methodologies available.

We ask CARB to confirm in the Final Statement of Reasons that methodologies published by the Climate Action Reserve, a CARB-approved Offset Project Registry, may serve as QAMs under section 95705(b)(1) when a project meets the section 95705(d) criteria. Two are directly relevant. The U.S. Soil Enrichment Protocol covers grazing practices on cropland and grassland and fits soil carbon projects. The U.S. Grassland Protocol addresses avoided conversion of grassland to cropland and fits grassland conservation projects. Confirming both would make the pathway usable when the regulation takes effect.

Section 95705(c)(3) also requires that a registry QAM have been approved or updated within five years of the application. These two protocols show why that test needs flexibility. The Reserve adopted Soil Enrichment Protocol Version 1.1 on May 31, 2022 and issued errata and

clarifications on October 21, 2025. It adopted U.S. Grassland Protocol Version 2.1 on February 13, 2020. Both remain available for project submittal while the Reserve revises them.[1] Without an exception, the Grassland Protocol would not satisfy the test unless its pending revision is completed first, and the Soil Enrichment Protocol would not satisfy it after May 31, 2027 unless errata count as updates. We recommend a narrow exception, and we ask that registry errata and clarifications count as updates.

Proposed amendment, section 95705(c)(3) (new sentence at end)

> The Executive Officer may accept a QAM approved or updated more than 5 years before the submittal date if the registry confirms that the QAM remains in active use and the applicant demonstrates that the QAM reflects current science.

We also ask CARB to confirm two points about section 95705(b)(3). First, an applicant may build a QAM on a registry soil carbon methodology using its own measured project data. Second, executed offtake agreements, which section 95705(c)(4)(C) already contemplates, satisfy the financial viability demonstration.

F. Aggregated projects, the Operator, and protections for ranchers.

Working-lands projects aggregate many ranches under one project developer. We ask the Board to confirm that:

1. A project developer holding contractual rights from participating landowners may serve as the Operator of one aggregated project.
2. Additional ranches may be added to a certified project under its certified QAM, subject to Executive Officer review, without a new certification.
3. Reporting, recordkeeping, and penalty exposure under sections 95705 and 95706 rest with the Operator, not with individual landowners.

Many ranchers participate in voluntary programs that will never seek CARB certification. The definition of “Operator” should not reach them. We recommend adding one sentence to section 95702.

Proposed amendment, section 95702 (new sentence at end)

> For project types listed in subdivisions (d) and (e), this article applies only to Operators that apply for or hold certification under section 95705.

We support limiting the section 95703 webpage requirements to subdivisions (a) through (c). Section 95705(c)(2) requires labeled project maps, and sections 95705(e)(3) and (e)(4) provide for public posting of application materials. We ask that parcel boundaries, landowner identities, and rancher financial terms be treated as confidential business information, and that maps may be generalized for public posting.

[1] Climate Action Reserve, U.S. Soil Enrichment Protocol webpage (Version 1.1 adopted May 31, 2022, listed as currently under revision); Soil Enrichment Protocol Version 1.1, Errata and Clarifications (Oct. 21, 2025); Climate Action Reserve, U.S. Grassland Protocol webpage (Version 2.1 adopted Feb. 13, 2020; Version 2.2 program revision under way); Climate Action Reserve, Soil Enrichment Protocol V2.0 Update Public Kick-Off Meeting slides (Oct. 2023) (summarizing the Version 1.1 project definition: project area may be cropland or grassland, and eligible practices include grazing practices).

G. Technical corrections.

- Section 95705(c)(4)(C)3 cross-references "97505(c)(4)(c)(2)," which appears to be a typographical error.
- Section 95705(a) refers to the "Geologic Carbon Sequestration Protocol," while the Notice and Appendix A-2 use "Geologic Carbon Storage Protocol."
- The adopting clause of the Proposed Regulation Order lists sections 95705.1 and 95705.2, which do not appear in the regulation text or in the Notice's list of sections affected.

III. Requested Clarifications to the Cap-and-Invest Amendments (Appendix A-2)

A. Confirm that certified nature-based projects may earn ARB offset credits.

We ask that the Final Statement of Reasons confirm the following. A project certified under section 95705 for soil carbon storage on grazing lands, or for avoided conversion of grasslands, may be listed and issued registry offset credits and ARB offset credits under sections 95970(e)(2) and 95973(a)(1), subject to existing offset usage limits.

B. Section 95977: Close the verification gap for non-forest sequestration projects.

The amendments limit the sequestration verification schedule in section 95977(c) to forest projects, and section 95977(b) covers non-sequestration projects. A certified soil carbon project is a sequestration project but not a forest project, so neither subsection clearly applies. The same gap exists for site visits under section 95977.1(b)(3)(D). We recommend adding the following provision to section 95977.

Proposed amendment, section 95977 (new provision)

> For sequestration offset projects certified by the Executive Officer pursuant to section 95705 that are not forest offset projects, offset verification services, including site visits, must be performed on the schedule specified in the project certification, which must provide for verification at least once every three Reporting Periods.

C. Section 95975.1: Cover landowners of certified nature-based projects.

Section 95975.1 has been amended to cover storage zone owners as well as forest owners. A ranch in a certified soil carbon or grassland conservation project is neither. We recommend adding "or landowner of a project certified pursuant to section 95705" wherever the section refers to a forest owner or storage zone owner. This includes the attestation in section 95975.1(a)(2).

D. Section 95989: Direct environmental benefits and projects outside California.

We support section 95989(a). Rangeland projects in California would provide direct environmental benefits in the State and add in-state supply. The Legislature has directed

CARB's offsets study to recommend how in-state offset projects could be made more attractive for development.[2]

We also ask CARB to confirm that projects elsewhere in the United States may be certified under section 95705 and issued ARB offset credits, subject to section 95989(b). Section 95989(b) already refers to out-of-state projects certified under section 95705. However, the ISOR's economic analysis (p. 44) states that the proposal does not facilitate carbon removal projects outside the State. The Final Statement of Reasons should reconcile the two.

E. Section 95705(a): Transition if a Compliance Offset Protocol is adopted.

Section 95705(a) requires projects covered by a CARB-approved protocol to use that protocol. If the Board later adopts a protocol for these project types, previously certified projects should not be stranded.

Proposed amendment, section 95705(a) (new sentence after the third sentence)

> A project certified under this section before the Board approves a protocol covering that project type may continue under its certification for the remainder of its current crediting period.

IV. Finish the Work in the SB 840 Protocol Update

SB 840 (Limón, Chapter 121, Statutes of 2025) added Health and Safety Code section 38562.3.[3] That section requires CARB to report to the Legislature on offsets by December 31, 2026. The report must include recommendations on how in-state offset projects could be made more attractive for development, and on alternative valuation methods or criteria for in-state projects, particularly projects that support the goals of section 38561.5, the natural and working lands statute enacted by AB 1757.[4] Section 38562.3 also requires CARB to update all existing compliance offset protocols by January 1, 2029 to reflect the best available science, considering protocols in other carbon markets, academic research, and industry best practices. In the same session, AB 1207 (Irwin, Chapter 117, Statutes of 2025) directed CARB to consider developing additional compliance offset protocols for other sectors, including carbon dioxide removal,[5] and extended the Compliance Offsets Protocol Task Force.[6]

The Assembly Natural Resources Committee's analysis of SB 840 reported that compliance offsets have come from only four of the six adopted protocols, with U.S. Forest projects

[2]Health & Saf. Code, § 38562.3, subd. (a)(1)(C), added by Sen. Bill No. 840 (2025-2026 Reg. Sess.), ch. 121, Stats. 2025.

[3]Sen. Bill No. 840 (2025-2026 Reg. Sess.), ch. 121, Stats. 2025, § 2; see Health & Saf. Code, § 38562.3, subds. (a)(1)(C), (a)(1)(D), and (b).

[4]See ISOR, p. 11 and fn. 12 (citing Health & Saf. Code, § 38561.5, for AB 1757 (C. Garcia, Chapter 341, Statutes of 2022)).

[5]Sen. Com. on Environmental Quality, Analysis of Assem. Bill No. 1207 (2025-2026 Reg. Sess.), as amended Sept. 10, 2025, p. 2; Assem. Floor Analysis, Concurrence in Sen. Amendments to Assem. Bill No. 1207 (2025-2026 Reg. Sess.), as amended Sept. 10, 2025, p. 2.

[6]Legislative Analyst's Office, Overview of New Updates to the Cap-and-Invest Program (Feb. 23, 2026), presented to the Joint Legislative Committee on Climate Change Policies.

supplying more than 80 percent.[7] None of the six addresses soil carbon on grazing lands or the conversion of grasslands.

The section 95705 pathway is a valuable bridge. A Compliance Offset Protocol, however, provides standardized rules that let many ranchers participate at reasonable cost. We ask the Board to direct staff to:

1. Include grazing-land soil carbon and avoided grassland conversion in the SB 840 offsets report and protocol update.
2. Develop Compliance Offset Protocols for both, building on established registry protocols such as the Climate Action Reserve's U.S. Soil Enrichment Protocol and U.S. Grassland Protocol, and seek the Compliance Offsets Protocol Task Force's guidance on both.

V. Why Grazing Lands Belong in the Program

The ISOR describes the State's commitment to climate-smart land management and to resilient natural and working lands that support CO2 removal (ISOR, p. 12). Regenerative grazing and grassland conservation put that commitment into practice.

California's rangelands cover tens of millions of acres. Carbon revenue tied to measured soil carbon gives ranching families a reason to keep land in grazing rather than convert it. When grassland is converted to other land uses, part of the carbon stored in its soils is lost to the atmosphere, and conservation keeps that carbon in place. The grazing practices that build soil carbon can also improve water infiltration, drought resilience, and wildlife habitat, and can reduce fine fuels.

Soil science increasingly distinguishes particulate organic carbon from mineral-associated organic carbon, which is generally more persistent. Deep measurement helps show where durable gains occur. The safeguards CARB has already written into section 95705 are the right tools for these projects: empirical remeasurement, independent verification, reversal accounting, and buffer contributions.

VI. Conclusion

We respectfully ask the Board to retain section 95702(d) and the section 95705 pathway, adopt the clarifications and amendments described above, and respond to each request in the Final Statement of Reasons. Grassroots Carbon would welcome the opportunity to share our measurement methods, data, and field experience with staff. Thank you for considering these comments.

Respectfully submitted,

Mike Dillinger
Chief Legal Officer
Grassroots Carbon Public Benefit LLC

[7] Assem. Com. on Natural Resources, Analysis of Sen. Bill No. 840 (2025-2026 Reg. Sess.), as amended Sept. 10, 2025, for hearing on Sept. 12, 2025.

Attachment A: Summary of Requested Actions

FSOR means the Final Statement of Reasons. Section references are to title 17 of the California Code of Regulations as proposed in Appendices A-1 and A-2.

Section	Request	Action requested
95701; 95702(d)	Confirm that subdivision (d) covers soil carbon storage from improved grazing management and conservation that avoids conversion of grasslands and rangelands. Add one sentence to "Nature-Based Carbon Removal."	FSOR confirmation; amendment
95701	Refer to GHG emission reductions and GHG removal enhancements in "Additional," "Real," "Permanent," and "Quantifiable."	Amendment
95705(d)(1)(A)	Confirm the measurement approach for soil carbon (remeasurement interval set in the QAM, interim modeling, true-up) and for avoided conversion (baseline stocks, empirical emission factors, land-use monitoring).	FSOR confirmation
95705(d)(1)(B); 95983.1	Specify the permanence period; confirm permanence tools; set the risk rating at certification; consider a nature-based buffer sub-account.	Amendment or FSOR confirmation
95705(b), (c)(3)	Confirm that the Climate Action Reserve's U.S. Soil Enrichment Protocol and U.S. Grassland Protocol may serve as QAMs; allow older registry QAMs that remain in active use; confirm the (b)(3) path and that offtake agreements satisfy the viability demonstration.	Amendment; FSOR confirmation
95702; 95705; 95706	Aggregated projects; adding ranches; liability with the Operator; article applies to (d) and (e) projects only if certification is sought.	Amendment; FSOR confirmation
95705(c)(2), (e)(3) and (e)(4)	Confidential treatment of parcel boundaries, landowner identities, and financial terms; generalized maps for public posting.	FSOR confirmation
95705	Technical corrections (cross-reference, protocol name, section numbering).	Amendment
95970(e)(2); 95973(a)(1)	Confirm that certified nature-based projects may be issued registry and ARB offset credits.	FSOR confirmation
95977; 95977.1(b)(3)(D)	Verification schedule and site visits for non-forest sequestration projects certified under 95705.	Amendment
95975.1	Include landowners of projects certified under 95705.	Amendment
95989	Confirm eligibility of out-of-state 95705 projects subject to 95989(b); reconcile ISOR p. 44.	FSOR confirmation
95705(a)	Transition for projects certified before a protocol covering the project type is approved.	Amendment
SB 840 and AB 1207 (separate process)	Include both project types in the offsets report and protocol update; develop Compliance Offset Protocols; seek Task Force guidance.	Direction to staff