

Natural and Working Lands Climate Smart Strategy

Appendix A: Opportunity Menu – A Collection of Recommendations to Scale Nature-Based Climate Solutions

April 22, 2022

Managing our lands to address climate change requires urgent and sustained action (time and effort) across all regions and sectors of California. Communities, businesses, farmers and ranchers, land managers, investors, tribal/state/local/federal governments, special districts, youth, philanthropists, scientists, planners, volunteers, and more can all play a role. The pace of implementation depends on the level of our collective commitment and availability of resources.

State agencies have been privileged to hear from partners across California on how best to achieve the vision for nature-based climate solutions in Governor Newsom's Nature-Based Solutions Executive Order (EO N-82-20). Many of these ideas informed our approach to building out the state's near-term priorities to guide our efforts in this sector, and many more are captured here. We hope this appendix can serve as a resource for people seeking to explore ideas that emerged through our public engagement process. They are organized into the following broad categories of opportunity:

- A. Partnerships and Collaboration
- B. Science, Research, Data, and Analysis
- C. Technical Assistance, Capacity, and Outreach
- D. Funding, Finance, and Market Mechanisms
- E. Workforce and Organization
- F. Incentives and Procurement
- G. Policy and Regulation

A. Partnerships and Collaboration

A1. Explore opportunities to partner with California Native American tribes to accelerate nature-based climate solutions through, for example, nature-based workforce development, capacity building, co-management and co-ownership agreements, and land returns.

A2. Collaborate with tribal partners to incorporate tribal expertise and Traditional Knowledges to better inform prescribed burning plans and coordinate healthy forest management activities.

A3. Facilitate and resource local, state, federal and tribal government, private landowner, land trust, and NGO partnerships to increase prescribed burns.

A4. Accelerate healthy forest management actions, and foster increased coordination and information sharing.

A5. Launch a partnership dedicated to greening every school yard in California, prioritizing schools in climate vulnerable communities.

A6. Set climate smart land management goals in partnership with landowners on publicly and privately owned lands.

- A7.** Launch the Healthy Soils Partnership Framework, in which partnerships with the private sector, philanthropy, NGOs and federal government fund training, incentives, and infrastructure for healthy soil management practices.
- A8.** Explore incentivizing climate smart land management through state transportation infrastructure funding programs, as recommended in the Climate Action Plan for Transportation Infrastructure.
- A9.** Convene Nature Based Solutions Leadership Circles that represent the diversity of California to collaborate and support successful and urgent implementation in communities, regions, and sectors across California.
- A10.** Support high road nature-based solutions workforce programs that advance California's environmental, equity, and economic goals.
- A11.** Add collaboration and partnership with California Native American tribes and vulnerable and disadvantaged communities as requirements or priorities in relevant grant funding programs.
- A12.** Work with California Native American tribes to incorporate Traditional Knowledges into innovative and sustainable cropland management plans.
- A13.** Explore opportunities to increase and improve data collection that supports climate smart land management outcomes for interested landowners.
- A14.** Partner with relevant retailers to allow shoppers to add money to their purchase that will support climate smart land management – outdoor apparel industry, supermarkets/co-ops/farmers markets, etc.
- A15.** Collaborate with Visit California and local communities to increase public awareness and contribution to nature-based solutions with tourism-based businesses that rely on healthy natural and working lands (ex. wine, recreation, and hospitality industries).
- A16.** Partner with the federal government and academic institutions to support research that will increase our understanding of the risk mitigation potential of climate-smart strategies on all landscapes. There is currently a lack of research and information to enable many climate smart land management practices to meet FEMA Benefit Cost Analysis requirements. Investments in measurable/quantifiable risk mitigation benefits from climate smart practices that are eligible for FEMA Hazard Mitigation Assistance funding would provide more opportunities to leverage state and federal funding. This research should also incorporate information on future climate risk, not just backward looking risk data.
- A17.** Convene utilities, water districts, and local governments to identify how rate payer and other local funds can be distributed or coordinated in a manner that accelerates urban reforestation.

- A18.** Launch a Manure Products Working Group to address water quality and climate issues and identify alternatives to synthetic fertilizer.
- A19.** Partner with coastal landowners and residents to create collaborative projects that protect and adapt shorelines to sea level rise impacts using nature-based solutions.
- A20.** Update/adopt Local Coastal Program to include and, where appropriate, prioritize nature-based climate solutions.
- A21.** Support communities and local governments to identify opportunities to support climate action on California's natural and working lands that also deliver on local/regional environmental, equity, and economic priorities.
- A22.** Identify and remove barriers for small businesses in nature-based industries and provide new incentives to open new business in these industries.
- A23.** Partner with the nursery industry to develop a broader variety of tree/plant species that are climate smart and locally-adapted.
- A24.** Partner with local health departments, tribal health consortia, community-based organizations, community members, local academic institutions, and other public health partners to maximize the health benefits of nature-based climate solutions.
- A25.** Build and maintain regional approaches to improve the health and resilience of California's diverse landscapes by supporting and utilizing organizations that already work directly with regional partners, understand regional needs and challenges, and support climate action while improving the environmental, economic, and social well-being of the Region's they serve.
- A26.** Develop and extend state/federal partnerships, such as the California Water Quality Monitoring Council to map and measure the health of aquatic resources.
- A27.** Bring together regulators, tribes, water users, public water agencies, NGOs, and other stakeholders to develop innovative, voluntary solutions to water supply, water quality, and ecosystem protection.
- A28.** Support a comprehensive culvert and fish passage improvement program, including along transportation corridors, using the strategy generated by the public-private California Fish Passage Forum and by piloting new approaches with state and federal agencies in coordination with the six regional California Fish Passage Advisory Committees.
- A29.** Evaluate, plan for, and respond to environmental stressors due to climate change, including development of regional drought contingency plans for fish and wildlife and ecosystems and promotion of climate change adaptation projects to prevent species decline.

A30. Support cooperative development of in-stream water quality plans for tributaries in the Bay-Delta Watershed.

A31. Coordinate landscape planning, acquisition, and management at very large scales. Includes existing protected areas, landscape linkages / wildlife corridors, and future protected areas goals. This should include needs for future conservation through fee title acquisition and conservation easements.

A32. Collaborate with private landowners, NGOs, California Native American tribes, and state and local governments to develop a strategy to identify critical habitat linkages and work towards establishing a statewide network of protected areas that enhance carbon storage, repair riparian corridors, and facilitate wildlife movement.

A33. Support collaboration with academics, NGOs, California Native American tribes, and other state and federal agencies with Caltrans, High-Speed Rail, and relevant transportation authorities to assess how transportation infrastructure impacts wildlife movement and incorporate wildlife considerations in project design to reduce the occurrence of wildlife-vehicle collisions and habitat fragmentation through directional fencing, modified culverts and bridges, sound and light modifications, and construction of wildlife overpasses.

A34. Work with local governments to support planning efforts seeking to enhance wildlife connectivity, such as the Ventura County Wildlife Corridors and Los Angeles Wildlife Pilot Study, to create ordinances with a set of land use regulations to maintain wildlife connectivity.

A35. Engage with and support existing collaboratives, such as those through the California Landscape Stewardship Network and regional climate collaboratives, that are already working to scale-up implementation of nature-based solutions. Consider funding for coordination of these effective collaboratives.

A36. Coordinate with State Conservancies, Resource Conservation Districts, and Natural Community Conservation Plan/Habitat Conservation Plan managers to implement conservation goals that meet climate-smart strategies.

A37. Explore funding and expanding the use of partnerships to position the U.S. Forest Service and CAL FIRE to dramatically ramp-up their annual fuels' reduction accomplishment.

A38. Build collaboratives and partnerships to facilitate strong working relationships with federal land managers to ensure the success of implementing nature-based solutions throughout California.

A39. Support a network of Indigenous-led and stewarded biodiversity landscapes, and create a partnership platform between this network of landscapes and researchers/policymakers.

A40. Develop partnerships to drive innovative financial strategies, such as the Yuba Water Agency's multisectoral partnerships with public, private, and non-profit partners to protect their watershed through increased investment in forest and watershed health.

A41. Ensure that local communities, particularly climate-vulnerable frontline communities, are meaningfully involved in planning and implementation of climate smart decision-making to ensure equity, sustainability, and economic resilience.

A42. Launch a partnership between Caltrans and local agencies and organizations to execute Adopt a Highway agreements for litter removal, tree planting and vegetation management for every mile of state highway located in urban areas within the next five years.

A43. Work with willing landowners to open private natural and working lands for sustainable forms of access. These forms of access should include community gardens, community land trusts, waterways, coastal access trails, culturally relevant and ecological educational opportunities, bike paths, foot trails, campsites and nature watching.

A44. Enhance collaboration on grazing lessees, between public land managers and regenerative rangeland practitioners in the non-governmental sector to ensure climate smart grazing practices to reduce wildfire risk and prevent catastrophic fire especially in high severity fire zones.

A45. Create a comprehensive beaver management plan that unifies all beaver restoration practices.

A46. Engage local community members and volunteers in implementing habitat restoration projects.

B. Science, Research, Data, and Analysis

B1. Lands and waters should be evaluated for current and historical carbon storage (including mapping and modeling), the potential for future carbon sequestration with restoration, avoided conversion, or management, and the stability of the stored carbon and risk of carbon loss due to climate change or land use change.

B2. Identify statewide foundational natural and working lands data sets and the staffing and infrastructure needs to support their analysis, use, and appropriate updates. These include high resolution topographic, vegetation, land cover, land use and supporting scientific sampling and should be made openly available to all users when possible.

B3. Align the use of tools such as TerraCount and COMET-Planner with GGRF programs and investments so that more programs can support the implementation of climate action plans integrating nature-based climate solutions.

B4. Work with NRCS to establish compost as a conservation agricultural practice to facilitate increasing compost application projects.

B5. Support tribal elders and cultural practitioners to research Traditional Knowledge and develop baselines of historical conditions.

B6. Expand ongoing utilization of airborne and satellite remote sensing data to assess the efficacy of nature-based solutions and other management measures in providing multi-benefits in the face of a changing climate. Such data should be used in conjunction with on-the-ground field data and modeled information.

B7. Convene experts to develop recommendations on the role of crop insurance and other risk management strategies in incentivizing and disincentivizing climate-smart practices.

B8. Develop new and/or amplify existing tools that will support California Native American tribes and land managers in understanding the impacts of climate change, and that will facilitate resource-sharing in the event of climate disasters.

B9. Research ecosystem services valuation to account for the benefits of nature-based climate solutions in California. For example, ensure that nature-based carbon sequestration projects in critical watersheds account for and utilize the value of resulting water savings. Incorporate pricing strategies into state investment decision making to value land-based systems and benefits not currently captured.

B10. Convene California experts, including tribal representatives, to estimate the funding gap to implement nature-based climate solutions needed to deliver ambitious climate action on our natural and working lands. Additionally, provide an estimate of the cost of not implementing nature-based climate solutions.

B11. Conduct economic analysis of climate smart practices to increase understanding of short and long term economic feasibility and economic benefits of implementing climate smart land management practices.

B12. Use public health, climate change vulnerability, job quality, natural cultural resource, cultural landscape protection, biodiversity, and community benefit indicators to inform climate smart land management decisions, in consultation with a broad suite of stakeholders.

B13. Research the impacts of human activity and disturbances on deserts. Use this information to determine the degree to which protecting the soil, above and below ground vegetation, and inorganic stores of carbon will limit/minimize the impacts from ongoing disturbance or habitat loss and contribute to carbon neutrality and climate resilience.

B14. Collaborate with tribal partners to incorporate tribal expertise and Traditional Knowledges in data collection and research.

B15. Identify research opportunities to accelerate healthy soil management practices.

B16. Research the feasibility and design of a transfer of development rights program in California to mitigate greenhouse gas emissions by preserving landscapes needed for carbon sequestration/storage, protecting natural areas, safeguarding water supplies, and protecting vulnerable communities.

B17. Improve climate and carbon sequestration science related to healthy soils:

- a. Improve documentation on sequestration to support funding and resources, increase understanding about the results of specific practices, the longevity of benefits, and where implementation is most efficient.
- b. Increase soil sampling density and frequency throughout natural and working lands; compile a soil sample database and maps to help set and assess progress toward carbon targets that incorporate soils.
- c. Partner with California Native American tribes to incorporate Traditional Knowledges and tribal expertise into healthy soils practices.

B18. Support studies that analyze impacts of climate change on natural resource availability, especially groundwater.

B19. Research and assess current and future impacts to California's ecosystems, species, and cultural resources due to climate change.

B20. Expand long-term monitoring of key species and habitats, to support multiple priorities in climate smart land management.

B21. Scale up pilot seagrass and seaweed restoration projects, and use results to develop a statewide seagrass and seaweed restoration "toolkit" that includes information on the environmental and ecological circumstances under which various restoration options are likely to be most effective. Develop methods to predict changes in seaweed and seagrass abundance based on known drivers.

B22. Develop an approach for predicting climate-driven changes in rocky intertidal and beach ecosystems, including habitat loss due to sea level rise and species range shifts due to ocean warming. Identify the most endangered rocky intertidal and beach habitats.

B23. Develop a state-wide network of reference sites (for wetlands, seagrasses and kelp) and associated monitoring programs against which restored habitats are compared. Reference analogous, naturally occurring habitats to assess the trajectory of restored habitats.

B24. Improve data collection and dissemination on all natural and working lands to track current management practices as well as the goals of those actions. This effort will help determine how actions and their intended outcome affect carbon stocks through time.

- B25.** Improve and centralize tracking of climate smart land management actions in California.
- B26.** Streamline climate quantification tools required by state programs and provide common metrics and guidance to estimate and track climate benefits associated with climate smart land management actions, where possible and appropriate. This will increase use of these tools, allowing for more consistent and comparable data across programs and accelerated climate action in the natural and working lands sector.
- B27.** Require monitoring and evaluation programs for nature-based solutions to inform best practices.
- B28.** Identify measurable economic or public health benefits to disadvantaged or low-income agricultural workers, including improved safety associated with the use of safer, more sustainable pest management tools and practices or increased wages due to higher organic commodity prices as a result of intersecting conservation and climate efforts.
- B29.** Use the California Coastal Salmonid Monitoring Plan to assess salmon populations and inform recovery actions for watersheds.
- B30.** Develop rapid methodologies to establish regional instream flow metrics through the multi-partner California Environmental Flow Framework. Provide regional training on the environmental flow methods and tools to support local and statewide resource managers. Develop a series of case studies around the state to refine the tools.
- B31.** Conduct and utilize instream flow analyses to further develop instream flow recommendations for ecologically important streams to protect public trust values.
- B32.** Work with universities, California Native American tribes, public water agencies, and nongovernmental organizations to develop new tools for identifying functional ecosystem flows.
- B33.** Develop analytical modeling tools that can be used to rapidly assess streamflow depletion tied to groundwater pumping.
- B34.** Develop a comprehensive program to track wildlife-vehicle collisions on California's roads and highways that incorporate data from Caltrans, CHP, U.C. Davis CROS, California Native American tribes, CDFW, and other entities that collect roadkill information.
- B35.** Identify locations of movement and dispersal patterns of existing populations of species of concern that are at risk from habitat fragmentation or barriers to species movement.
- B36.** Evaluate economic benefits anticipated from protecting wildlife movement and habitat connectivity, including the potential savings from reduced wildlife-vehicle collisions.

B37. Support research on the effects of wildfire on restored and unrestored meadows to better understand the resilience of restored meadows and ability to act as important natural fuel breaks in the face of climate-induced megafires.

B38. Support the meadow carbon protocol.

B39. Track distribution of invasive plants by compiling data from land management agencies and individual community observers, and model range shifts due to changing climate.

B40. Assess the carbon dioxide and methane emissions reduction and carbon sequestration potential of restoring historic coastal wetland areas that have been drained and converted to other uses, as well as reconnecting currently impounded freshwater wetlands with tidal flow.

B41. Launch pilot projects to explore the feasibility of various finance mechanisms, such as payment for ecosystem services and coastal resilience bonds, that would provide incentives for private landowners to engage in coastal wetland restoration and protection of lands that could serve as future coastal habitat areas.

B42. Conduct research on blue carbon ecosystems to evaluate them for current and historical carbon storage, the potential for future carbon sequestration with restoration and/or management, and the stability of the stored carbon and risk of carbon loss due to climate change or land use change and use that data to identify coastal areas suitable for wetland restoration.

B43. Consider investing in the development of Landscape Databases for “data poor” jurisdictions across the state, developing up-to-date maps of terrain, vegetation, and habitats across the State.

B44. Track tribal climate projects (restoration efforts, adaptation plans, studies, etc.).

B45. Establish a programmatic inventory for actions on croplands that emit GHGs and exacerbate climate stressors (carbon, methane, nitrous oxide, and ozone).

B46. Consider funding and supporting a California Seed Strategy based on the National Seed Strategy for Rehabilitation and Restoration.

B47. Support research into sustainability criteria for out-of-state forest biofuels projects to ensure that all forest biofuels supplied into California meet equally high environmental standards.

B48. Analyze the full life cycle of commonly used pesticides, such as fumigants, in California to determine their contribution to GHG emissions, as well as indirect contributions from production, transport, and application.

B49. Conduct research on the carbon sequestration and storage potential in shrublands/chaparral to evaluate this landscape for current and historical carbon storage, the potential for future carbon sequestration with restoration and/or management, and the stability of the stored carbon and risk of carbon loss to set carbon sequestration and storage targets more accurately.

B50. Conduct research on the carbon sequestration and storage potential in sparsely vegetated lands to evaluate this landscape for current and historical carbon storage, the potential for future carbon sequestration with restoration and/or management, and the stability of the stored carbon and risk of carbon loss to set carbon sequestration and storage targets more accurately.

B51. Improve understanding of inorganic carbon in California's deserts.

B52. Conduct research and restoration pilots to further scientific understanding of the benefits of beaver restoration to California.

B53. Identify natural wetlands near disadvantaged communities where habitat restoration could improve groundwater quality while providing public recreational green space.

B54. Develop more comprehensive vulnerability assessments for agricultural lands linking soil health, environmental health and the health of agricultural workers that integrate biophysical and environmental stressors, climate extremes including heat, and socioeconomic factors.

B55. Conduct additional research into adoption of on-farm recharge to meet the strategy's goals and maintain highly efficient and sustainable agricultural production.

C. Technical Assistance, Capacity, and Outreach

C1. Build community capacity, particularly through younger generations. Structural racism has especially impacted the capacity of communities of color to undertake community development projects. Proactively resourcing technical assistance and capacity building in vulnerable communities more generally is a key part of improving community investments. For example, state funded "access" grants should support community organizing across vulnerable communities to address the structural challenges to access. This is particularly important for the younger generations who will inherit the results of many actions taken today and need to be set up with the tools to grow and lead these projects in the future.

C2. Launch a Nature-Based Solutions Technical Assistance Initiative to support and increase the capacity of California landowners, California Native American tribes, land managers, communities, and others to accelerate climate smart land management in California. Specific technical assistance may include:

- a. Facilitating meaningful community engagement.

- b. Identifying opportunities to incorporate nature-based climate solutions into relevant plans, programs, and infrastructure investments, based on community input.
- c. Utilizing relevant tools to quantify climate outcomes.
- d. Connecting funding needs with opportunities.
- e. Building capacity to propose, develop, implement, and maintain nature-based solutions.
- f. Providing guidance and training on management actions to achieve durable climate benefits.
- g. Supporting networks for sharing resources and best practices on climate smart land management.

C3. Partner with community-based organizations, landscape architects, urban foresters, urban agricultural experts, and developers for five years to support the efforts of communities, local and regional governments, California Native American tribes, and others to implement nature-based climate solutions. This support could include technical assistance, training, and comprehensive, community-led planning processes.

C4. Increase culturally-sensitive and relevant technical assistance and ensure an accessible application process for climate smart land management resources.

C5. Reconvene the Climate Smart Infrastructure Working Group to develop design guidance and best practices for priority nature-based climate solutions within infrastructure investments.

C6. Analyze engagement of climate vulnerable communities in efforts to support climate smart land management, to understand whether adjustments in the outreach approach to these partners are needed.

C7. Develop a menu of options and implementation pathways for new planning strategies, policies, and incentives to help direct growth away from natural and working lands, to protect and conserve open space, and critical natural infrastructure at the urban edge.

C8. Develop guidance on ways to elevate climate smart land management strategies in local (City and County) land use and related plans, such as General Plans, Climate Action Plans, transportation and community resilience plans, groundwater sustainability plans, drought response plans, hazard mitigation plans, and housing plans. Link these to state incentives and regulations.

C9. Consider supporting large-scale restoration, conservation, and stewardship of less productive agricultural landscapes for climate resilience through funding and the development of guidance and implementation strategies.

C10. Establish best practices to guide broader application of conservation and cultural easements to support achieving carbon neutrality and/or building climate resilience.

C11. Create a Best Management Practices training for preventative fire management and thinning, working with appropriate state and federal agencies, community colleges, and tribal representatives.

C12. Support, promote, and provide technical assistance for land use analysis tools available in California to help inform complex land use decisions and optimize climate benefits in local jurisdictions.

C13. Create a one-stop shop for California state climate smart land management programs, funding, tools, and information.

C14. Create a California Native American tribal one-stop shop for tribal specific climate smart land management programs, funding, tools, and information.

C15. Host new and expanded natural and working lands data sets on CA Nature as an authoritative clearinghouse of natural and working lands data for local planners.

C16. Build out a robust nature-based solutions public awareness campaign to help people understand the benefits of these actions and empower them to contribute.

C17. Draw connections between the climate benefits of natural and working lands and healthy food, community safety and public health.

C18. Support existing and new demonstration projects to encourage acceptance: farmer-to-farmer, neighbor-to-neighbor, municipality-to-municipality.

C19. Host annual nature-based climate solutions forum to increase public awareness, explore current issues, exchange lessons learned, build networks, address critical challenges, report on progress, etc.

C20. Take into consideration language access needs, including translation of accompanying visuals, handouts, and presentations. Local communities need information in plain, straightforward language, avoiding technical terms as much as possible.

C21. Provide culturally relevant and sensitive messaging, if feasible, with input from our partners (i.e., California Native American tribes, NGOs, CBOs, etc.)

C22. Develop a nature-based solutions curriculum for California public school students.

C23. Support regular and sustained access to nature for California's youth through schools, community-based organizations, recreational opportunities, and more.

C24. Amplify the benefits of healthy soils practices on water quality in Irrigated Lands Regulatory Program guidance.

C25. Work with and advise local governments on strong policies and plans for improved management of urban forests. Facilitate adoption of best management practices to improve long term urban forest outcomes and achieve local and statewide goals.

C26. Under the leadership and guidance of California Native American tribes, create a toolkit to advance inclusion of cultural heritage into climate vulnerability index assessments to create more holistic, intersectional, and larger landscape tools to inform climate action decisions.

C27. Support pathways for California Native Americans to effectively share traditional practices with the next generations.

C28. Explore the development of a statewide, climate-smart monitoring program.

C29. Assist agricultural operations in developing and implementing climate change mitigation and adaptation plans, such as Carbon Farm Plans.

C30. Support conventional producers, while prioritizing socially disadvantaged farmers, in transitioning to organic farm management in ways that increase biodiversity on-farm and reduce the use of synthetic inputs.

C31. Support historically disadvantaged small-scale farmers in climate smart land management through, for example: farmworker cooperatives and land trusts; first-time farm ownership assistance for former farmworkers, tenant farmers, and historically disadvantaged new and beginning farmers; grants and zero/low-interest loans and capital assistance programs; tribally-led land-based projects; and additional financial and technical assistance programs. Such programs should be shaped by farmworker priorities and engagement, in addition to farm owners.

C32. Create planning units within the Water Board and California Department of Fish and Wildlife to protect instream flow for human health and safety and fish and wildlife in dry years.

C33. Build capacity and support communities and watershed groups in developing watershed management plans.

C34. Expand the scope and capacity of existing multi-agency post-fire assessment teams to evaluate anticipated impacts to aquatic life and drinking water sources.

C35. Explore ways to make water rights information easily available to the public by rebuilding the state's water right data base to include digital place of use, diversion, and case history information, made available on an easy-to-use geospatial platform.

C36. Work with Division of State Architects to provide technical assistance for design and stewardship of green schoolyards.

C37. Provide baseline information and templates to increase co-management with California Native American tribes.

C38. Educate stewards of croplands on non-lethal wildlife management and encourage the use of wildlife friendly fencing in areas important for wildlife movement.

C39. Include outreach efforts to change how people define a 'beautiful' or 'healthy' home landscape or yard to include locally adapted and native plants.

C40. Increase the acreage of prescribed burns through landowner outreach and public education.

C41. Maximize participation of socially disadvantaged farmers in existing programs through prioritization and focused outreach.

C42. Make state-owned lands models of ecosystem restoration.

C43. Scale technical assistance, rancher-to-rancher networks, and demonstration projects to accelerate the uptake of nature-based climate solutions.

D. Funding, Finance, and Market Mechanisms

D1. Reduce barriers to accessing state funds, such as rolling applications, extra points for cooperation of multiple participants, increased capacity building, uniform advanced payments where appropriate, paying invoices sooner, simpler and shorter applications, lessening match requirements, streamlining and aligning grant programs, shortening grant cycles, extended encumbrance and expenditure periods, application templates for small projects, training and technical assistance for applications, and increasing dedicated grant review and management staff in relevant State agencies.

D2. Explore opportunities to fund project phases of nature-based solutions in addition to implementation, including: planning, education, outreach, permitting, monitoring, and maintenance.

D3. Leverage the investment programs at IBank to attract private capital providers with an interest in supporting climate-smart land strategies.

D4. Include paid opportunities for community members, such as mini-grant programs, to participate and contribute to climate smart land management such as native species planting, landscape restoration, and community science initiatives.

D5. Explore targeted loan guarantees to community lenders that support nature-based solutions, particularly for those traditionally excluded from investment opportunities.

D6. Support park projects in disadvantaged communities, including in rural and unincorporated communities, including for operations and maintenance.

- D7.** Increase the portfolio of nature-based solutions in California's federal hazard mitigation funding.
- D8.** Support interagency teams to expedite the permitting of multi-benefit restoration projects, while still ensuring best practices are employed to mitigate social and environmental impacts.
- D9.** Explore potential new funding sources for nature-based climate solutions, such as restoring a portion of tidelands revenues for natural and working lands; leveraging insurance products to increase stability of annual expenditures and facilitate proactive investments; etc.
- D10.** Identify, amplify, and access federal funds to deliver urban nature-based climate solutions in California.
- D11.** Explore long-term stable and dedicated funding sources for natural climate solutions; target and prioritize resources for tribal governments and historically disadvantaged communities; re-examine current funding regimes and modify them as needed to prioritize funding for community organizing and engagement. It is important to recognize and address the barriers that may limit access to funds, such as processes that require extensive application knowledge and time, as well as funding through reimbursement that limits the opportunity to only those who are able to fund up front.
- D12.** Explore the potential to include endowment funding for state nature-based climate solution investments.
- D13.** Support California Native American tribes and smaller landowners with initial costs associated with developing an offset project, which are often a barrier.
- D14.** Explore funding for demonstration projects aimed at improving measurement and verification practices for nature-based climate solutions as a way to scale climate smart management and share lessons learned, prioritizing those projects led by California Native American tribes and disadvantaged communities.
- D15.** Explore tribal set asides, such as tribal-only grants, formula, and non-grant funding opportunities to support tribes as partners in implementing nature-based solutions.
- D16.** Work with insurance companies to lower rates for landowners, affordable housing developers, and tenants implementing nature-based climate solutions that reduce risk.
- D17.** Work with philanthropy to create a fund that issues recoverable grants for rural climate smart green infrastructure and nature-based solutions. Prioritize adding value to regionally grown materials and bridging historic wealth gaps through job creation.
- D18.** Explore development of a new Nature-Based Solutions Bank, potentially building off of the Catalyst Fund at iBank, or how to build greenhouse gas carbon sequestration into existing conservation banking. Coordinate with efforts to create carbon mitigation banks that integrate nature-based solutions.

D19. Advance the combined use of conservation easements and carbon markets, using the Buckeye Forest as a replicable approach.

D20. Consider providing additional capital to IBank's Catalyst Fund expressly for purposes of flexible, low-interest lending across the practices in this strategy.

D21. Reduce cost share requirements, if any, for projects on natural and working lands owned or managed by California Native American tribes and socially disadvantaged farmers and ranchers.

D22. Launch a public-private partnership to facilitate the development of new markets for nature-based climate solutions where appropriate, and identify opportunities for existing ecosystem services markets to scale nature-based climate solutions in California.

D23. Consider inclusion of a wetland restoration protocol as part of California's cap-and-trade program.

D24. Develop viable financial frameworks that address the current misalignment between nature-based solution project structures and investment needs through, for example:

- a. California Native American tribes, project developers and local governments could bundle and/or diversify nature-based climate actions to achieve investment scale and reduce risk.
- b. Local governments and insurers could develop innovative insurance models to bring private investment and community approaches to nature-based resilience and climate solutions.
- c. The California Department of Insurance could develop mechanisms to increase the insurability of forest assets.

D25. Public pension leaders could promote investment in nature-based climate action that aligns with long-term funding goals.

D26. Use reverse auctions in grantee selection processes to reveal price points for nature-based climate solutions.

D27. Explore the development of a "Debt for Natural and Working Lands Program" to protect critical landscapes and acquire community parcels that can become greenspace.

D28. Provide guidance to local governments on how to treat urban forests/greenspaces like essential infrastructure (rather than amenities) to increase access to existing local government budgets.

- D29.** Identify and consider whether landowners eligible for climate smart land management funds live in disadvantaged communities rather than simply location of company offices, and whether investment will directly benefit the local community.
- D30.** Consider funding groundwater recharge and small-scale storage projects with multiple benefits.
- D31.** Prioritize state grants to nonprofits, local governments, tribes and underserved communities that lead on progressive climate policy and action and have plans and practices that encourage climate smart land management, including protecting larger intact natural and working landscapes.
- D32.** Explore funding to conduct cross-landscape, long-term scientific monitoring to evaluate effectiveness of actions as climatic conditions change. These funds should not only be tied to project implementation funds.
- D33.** Consider creating grant program(s) for livestock farmers transitioning to plant-based agriculture.
- D34.** Support state land managers to accelerate climate smart management of state lands.
- D35.** Create a state equivalent of U.S. Department of Agriculture's Natural Resources Conservation Service Environmental Quality Incentives Program for climate smart land management.
- D36.** Explore funding opportunities for capacity building among those that will be the primary practitioners of this strategy, including land trusts, tribes, landowners, resource conservation districts as well as counties and cities.
- D37.** Increase native plant materials available to the public.
- D38.** Provide financial incentives for farmers that voluntarily decide to fallow land and create desired wildlife habitat.
- D39.** Develop financing mechanisms to achieve supply chain and processing infrastructure improvements for nature-based products, such as an infusion of new grants, tax incentives, and low interest loans. Community-based lenders could be a supportive vehicle for these types of investments.
- D40.** Consider funding greenprints and other such conservation planning tools as a sound bottom-up approaches to driving climate action and supporting communities.
- D41.** Set up an escrow account and develop a strategy plan with California Native American tribes for acquiring culturally significant natural and working lands as they go on the market.

D42. Recognize tribal expertise and Traditional Knowledges as professions, including providing contracting opportunities and comparable pay to other consultants (e.g. engineers, biologists, etc).

D43. To ensure that direct benefits reach people of color, low-income residents, tribal communities, and other marginalized populations in both rural and urban communities, establish a 50% investment baseline for these communities across all programs and ecosystems identified in the Strategy.

D44. Amend state grant criteria to reflect public health, climate, and biodiversity goals more robustly in project prioritization, including weighted scoring for projects that yield additional co- benefits for disadvantaged communities and prioritized funding for programs and projects that offer clear articulations and accounting mechanisms for tracking equity.

D45. Ensure at least 50% of agricultural conservation projects support socially disadvantaged farmers.

D46. Adopt a forest-to-fuels pathway under the Low Carbon Fuel Standard. The existing California Biomass Residue Emissions Characterization (C-BREC) developed by Humboldt State University researchers is a readily available option.

D47. Partner with U.S. Environmental Protection Agency to revise key definitions and take other administration actions that can improve the accessibility of federal Renewable Fuel Standard credits for forest biomass projects in California.

D48. Support the establishment of regional wood waste management entities (i.e., "CAL FRAME") that enable long-term feedstock supply of biomass residues from forested lands in California.

D49. Support the exploration of additional markets and products from wood biomass and other organic materials.

D50. Consider directed funds for school districts (and other agencies) to propel quick action on greening schoolyards and other climate adaptation initiatives. Funding allocation along with template plans pre-approved by State Architects will allow for quick and efficient transition to living schoolyards across the state.

D51. Explore establishing 3-6 demonstrations of tribally-directed Indigenous biodiversity stewardship endowment funds to support Indigenous land management and Indigenous peoples' inherent efforts to protect and enhance biodiversity. Creating Tribal endowments from a portion of university endowment's annual growth would be just considering the portion of these endowments that arose from the destruction to and taking of Native lands.

D52. Provide incentives to land trusts to cover the cost of monitoring and enforcement of easements that deliver climate benefits.

D53. Provide financial incentives to increase adoption of compost practices amongst large and medium scale California farmers.

E. Workforce and Organization

E1. Explore the development of a Nature-Based Solutions Workforce Development Program that is connected to regional and sector strategies and prioritizes job-seekers from climate vulnerable communities. Convene regional roundtables to identify opportunities that support local priorities as well as the hiring needs of nature-based solutions employers offering quality jobs.

E2. Explore the development of a program for justice involved individuals to get training for careers in the nature-based solutions industries through classroom-based learning, apprenticeships, industry-recognized certifications, hands-on community greening projects, and job application skills.

E3. Create and expand pathways for restoration economy workers; expand apprenticeship opportunities and High Road Training Partnerships in these sectors; and prioritize local job-seekers from climate vulnerable communities.

E4. Support the addition of wraparound services for youth nature-based solutions workforce development programs, including state and state-certified local conservations corps. Examples of wraparound services include tutoring, family support, transportation, mental health services, and connections to key community resources.

E5. Invest in organizational diversity and capacity of nature-based solution organizations. Elevate voices by further diversifying state and regional conservancies and conservation corps and build partnerships with those underrepresented or missing from nature-based solutions coalitions.

E6. Create an advisory council or taskforce to support identification of any structural inequities in state nature-based solutions initiatives, and opportunities to address them in a time-bound and accountable manner. Require training and resources for state staff to understand the history of racism and inequity in the natural resource sector.

E7. Include measurable metrics and targets to ensure support for efforts of climate vulnerable communities to scale nature-based climate solutions.

E8. Explore creating an Office of Small Farms within CDFA to support implementation of nature-based climate solutions on lower-acreage operations.

E9. Support, align, and leverage existing workforce development programs, such as the local and state conservation corps, and California Climate Action Corps, to urgently scale climate smart land management. Identify opportunities to expand successful efforts; close gaps; engage educational institutions, community-based organizations and the public workforce system; expand apprenticeships and create linkages to High Road Training Programs; and leverage federal funding.

E10. Partner with Labor Workforce Development Agency, the state's education partners, and state and state-certified local conservations corps to work with high school, undergraduate and graduate work study programs and California Native American tribes to support nature-based solution work job opportunities, work-based learning, and career pathways at the community level.

E11. Support financial incentives and mentorship programs for native students majoring climate smart land management fields in California Community College, California State University, and University of California schools.

E12. Expand relevant education programs to increase volume along pathways to higher education disciplines in the natural sciences. Support universities and community colleges with programs that build and support the climate smart land management workforce and increase diversity within these professions. Create new apprenticeships and training pathways for these roles.

E13. Explore opportunities to increase recruitment of and training/support for registered professional foresters, including through the creation of an apprenticeship program.

E14. Coordinate all state programs that support urban forestry and greening – to utilize best planting and management practices, follow state guidance on best urban forestry practices, ensure quality job creation and connection to sustainable careers, and consult or coordinate with CAL FIRE for technical assistance – the state's designated authority on urban forestry.

E15. Support the California Conservation Corps and state-certified local conservations corps' urban programs to maintain urban greenspaces and trees and to implement Adopt a Highway Projects for vegetation management along Caltrans right-of-way in urban areas.

E16. Provide training and certification for community and on farm compost development; and prioritize local job-seekers from climate vulnerable communities.

E17. Increase training and apprenticeship programs that train farmworkers to become farm managers or farm owners. Such programs need to be shaped by farmworker priorities.

E18. Develop community workforce agreements to scale nature-based climate solutions.

E19. Include more experts in Traditional Knowledge and nature-based climate solutions in decision-making bodies.

E20. Inventory unmaintained, dilapidated buildings and vacant lots to identify opportunities for replacement with community greenspace.

E21. Expand education programs to retrain workers in climate change-causing jobs to support California's restoration economy.

E22. Consider developing and funding certification curriculum, training centers, and job pathways for prescribed and cultural fire practitioners to build needed prescribed natural fire capacity that are separate from and equal to wildland fire fighters.

E23. Launch Ecosystem Restoration Camps. Well-organized networks of camps can connect people who know how to restore degraded land with people who want to learn by working at degraded host sites. They function as local cooperative ventures loosely connected to be able to share expertise in all needed subject matter areas. Skills are developed toward good-paying jobs creating the value of sequestering carbon as well as revenue streams. The outcome is nurseries for reforestation, water harvesting and revegetation.

E24. Support and scale natural and working lands education and training programs at the state's polytechnical institutions and vocational colleges that can provide the trained staff needed by key technical service providers to realize their potential to support state capacity to identify, design and implement climate smart land management activities at scale, in both the near and long term.

F. Incentives and Procurement

F1. Review existing incentives to identify and amend those that have unintended consequences for the health of our natural and working lands.

F2. Explore financial incentives for nature-based climate solution investments that prioritize increasing equity and economic opportunity. For example:

F3. Incentivize private landowners and local governments to enter into access and co-management agreements with California Native American tribes.

F4. Incentive-based monitoring pilot program for climate smart land managers.

F5. Incentivize urban landowners to undertake climate smart land management actions such as creating urban landscapes that sequester carbon, utilizing drought-resistant and/or native plants, lawn removal, and protecting large, established trees.

F6. Incentivize biological agricultural production practices and inputs (such as organic fertilizers) to support healthy soils, water, and air resources and to improve health outcomes, particularly for rural agricultural communities.

F7. Incentivize solar developers and farmers/ranchers to partner in development of large-scale solar projects that would protect prime farmland and diversify landscapes prioritized for solar installations, provide shade to livestock, cool soils, and provide renewable energy to the grid.

F8. Incentivize shading along critical waterways to cool water and protect native fish.

F9. Partner with banks and credit unions to identify, create, and package lending programs that incentivize small businesses to grow in the innovative wood sector.

- F10.** Incentivize large industrial landowners to employ climate smart practices.
- F11.** Create and promote land lease models that support and reward climate smart land management.
- F12.** Incentivize small timber-based businesses and foresters to provide thinning and other fire prevention services.
- F13.** Develop a climate smart certification program for products, suppliers, and purchasers that support multi-benefit nature-based climate solutions.
- F14.** Explore changes to the Williamson Act to support farmers who fallow under the Sustainable Groundwater Management Act (or pursuant to forbearance agreements or otherwise in response to drought conditions), are not penalized for doing so, and address climate change. Tools like TerraCount and COMET-Planner could be used to support implementation by counties and landowners.
- F15.** Make organic certification easier and stronger through a program like the Renewable Portfolio Standard for organic land managers.
- F16.** Support fee-to-trust applications for parcels owned by tribes within their ancestral territories and strive to waive all state tax requirements for these applications.
- F17.** Financial incentives for implementing climate smart land management should include requirements that benefit workers and nature. These actions must be intentional, with agreements developed to ensure communities are benefiting from projects as intended.
- F18.** Explore preferential buying/procurement requirements that support nature-based climate solutions. For example:
- F19.** Establish procurement requirements for nature-based acquisitions to achieve, over time, 100% "carbon friendly/climate resilient" status; include labor, workforce, and employer/contractor standards in procurement contracts to ensure job quality, job access, and quality of work.
- F20.** Establish contracting requirements or preferential bid awards that incorporate nature-based solutions, increase the uptake of low-carbon materials derived from natural and working lands, support high road employers and jobs, etc.
- F21.** Utilize the purchasing power of State food programs such as school lunches, state-funded hospitals and prisons to prioritize procurement of climate smart agricultural products.
- F22.** Explore developing sole-sourcing relationships with tribes and their entities for cultural resource identification, cultural monitoring, restoration, etc.

- F23.** Utilize the market power of school food/EBT/SNAP programs through requiring a certain percentage of socially disadvantaged farmers get preference.
- F24.** Explore the potential for universal regenerative organic school meals in California.
- F25.** Incentivize small-scale, dry-season water storage for water users in coastal salmonid bearing watersheds.
- F26.** Incentivize stream restoration actions as part of Timber Harvest Plans.
- F27.** Ensure SGMA implementation is managing groundwater to protect public trust resources, such as riparian habitats in working landscapes.
- F28.** Explore innovative strategies--through new or existing programs--to address disparities in farmland ownership that can assist in conservation efforts. These may include: funding for farmworker cooperatives and land trusts; first-time farm ownership assistance for former farmworkers, tenant farmers, and new and beginning BIPOC farmers; grants and zero/low-interest loans and capital assistance programs; indigenous-led land-based projects; and additional financial and technical assistance programs that support BIPOC small-scale farmers in accessing long-term land for conservation and agroecological farming.
- F29.** Provide incentives and enhance circular economies for forest biomass, including through promising options such as low-carbon and carbon-negative forest biofuels.
- F30.** Incentivize organic transition that expands beyond "organic system plans." Such support should include direct financial incentives during the transition period and more technical assistance providers with a specialization in organic and agroecology – with priority to serving socially disadvantaged farmers.
- F31.** Provide direct incentives to farmers and ranchers to reduce harmful pesticide use on-farm.
- F32.** Incentivize the shift to more local food security and sovereignty and less carbon intensive diets.
- F33.** Incentivize conservation ranching and regenerative grazing, including setting measurable standards for participating ranching operations to reduce emissions, improve soil health and carbon sequestration, and enhance the ecological values of the rangelands.
- F34.** Incentivize the transition away from erosive farm crop and tree row planting layouts and practices and incentivize the use of contour and keyline plowing to infiltrate water. Incentives are also needed for farmers to transition from annual to perennial crops and regenerative orchard systems with mowed perennial cover crops.
- F35.** Incentivize local land use planning to protect and enhance high-value lands adjacent to developed lands.

F36. Offer vegetarian entrees at every meal in public schools, state-funded hospitals, and prisons.

G. Policy and Regulation

G1. Convene an internal working group to identify opportunities to integrate nature-based solutions into existing efforts and review existing nature-based solution efforts to ensure they are contributing to our collective climate change goals.

G2. Increase the number of climate smart properties that are SITES certified, and consider adopting this certification program into capital construction programs.

G3. Incorporate nature-based solutions, including green schoolyards and gardens, that achieve multiple benefits into the Education Department's Construction Division regulations. Outcomes include reduced school energy costs and pollution exposure; cooler indoor and outdoor environments for schoolkids; expanded stewardship and education through food garden construction; increased access to nature.

G4. Establish an equity framework for climate smart land-related resource allocation. This would involve identifying climate vulnerable communities and prioritizing resources for them (ex. funding, loans, incentives, facilities, training, jobs, and leadership/decision-making opportunities).

G5. Support park and greenspace development and maintenance in low-income affordable housing developments.

G6. Add job creation, job access, and responsible employer/contractor measures (e.g., standards and targets) and job quality to procurement contracts that support climate smart land management in California.

G7. Integrate climate smart land management practices and partnership into state land leases, particularly with California Native American tribes.

G8. Require clean energy developers and project owners to consider alternatives to clear-cutting vegetation under infrastructure and on project property, as well as opportunities for climate smart land management throughout the project's lifetime.

G9. Prohibit or strongly disincentivize large-scale clearing of native habitats. When large areas must be cleared for public safety, set standards to ensure fuel breaks, transmission line corridors, and other large, cleared areas are managed to protect watershed health, prevent expansion of invasive weeds into natural areas, and avoid large areas of bare soil.

G10. Evaluate how to phase out and ban chemicals (like glyphosate and many others) that cause biodiversity loss, chronic illness, and widespread pollution in our air and waterways. Such phase outs should be prioritized in the most impacted, disadvantaged communities.

G11. Implement new policies that acknowledge and respect tribal jurisdiction and rights for traditional, cultural, subsistence, and commercial harvesting, gathering, and management in all state lands, including coastal waters and state parks.

G12. Explore opportunities to include California Native American tribes in the management and decision making for state lands, waters, coastlines, and resources within their ancestral territories and coastal waters. This can be done through joint powers agreements, memoranda of understandings, and co-management agreements.

G13. Streamline compost production regulations to minimize organic waste in landfills and build healthy soils, while ensuring food safety.

G14. Amend composting policies to clarify and simplify the regulations for on-farm composting; allow for compost to be moved from one farm to another; increase compost supply; and evaluate mammalian composting.

G15. Explore opportunities to better evaluate climate smart land management activities through revisions to the CEQA statute and the CEQA greenhouse gas emissions guidelines. For example:

- a. Require project proponents evaluate and mitigate the greenhouse gas emission impacts associated with conversion of natural and working lands, and outline a greenhouse gas mitigation hierarchy that prioritizes mitigation locally, as consistent with the Scoping Plan.
- b. Require CEQA analyses to include impacts to biological carbon and loss of carbon sequestration.
- c. Establish a standardized mitigation program for land use conversion, subdivision, and down-zoning of resource lands to smaller ownership minimum acreages.

G16. Provide a regulatory "credit" in the Irrigated Lands Regulatory Program for climate smart land management practices.

G17. Amend scoring of Integrated Regional Water Management Program application scoring to award higher points for priority nature-based solutions in grant applications.

G18. Ensure policies and programs support non-federally recognized tribes' ability to implement nature-based climate solutions.

G19. Amend Public Resources Code and Fish and Game Code to allow tribes to participate as conservators of lands, similar to non-profits and public agencies.

G20. Incorporate California Native American tribal considerations into the work of the Regional Water Boards.

G21. Consider recommendations from the cap-and-trade offset task force established by AB 398 that align with AB 32 requirements. Some of the recommendations include: making the program more accessible for smaller forest landowners and tribal governments to participate; reviewing ways to reduce monitoring and verification costs; allowing for aggregation of projects to add newly acquired parcels into compliance projects; providing mechanism for swaps in buffer lands to increase flexibility in which parcels are held as buffers and which are used for carbon offsets; and implementing cost-saving measures, specifically regarding the verification of credits.

G22. Increase the use of natural and working lands easements to deliver climate outcomes; develop common easement language, guidance, and model terms that could accelerate this recommendation.

G23. Expand safer, more sustainable pest management alternatives to harmful pesticides that build climate resilience, protect workers, and increase public health. Scale up training for integrated pest management technical assistance providers.

G24. Address barriers for implementing climate-smart practices for farmers, particularly historically underserved farmers, who lease land on agricultural land owned by non-operating landowners.

G25. Require use of local native, pollinator-friendly plants in state-funded projects involving landscaping and/or plants, with the opportunity to provide exceptions if clearly justified (for example, for urban forestry programs and the Healthy Soils Program).

G26. Where appropriate and applicable, Departments should rely on the Class 33 categorical exemption for small habitat restoration projects in the CEQA Guidelines.

G27. Consider stricter density in local planning and zoning requirements to safeguard undeveloped land and promote infill development that increases affordable housing, adjacent to jobs, transit, and services.

G28. Elevate the role of climate smart land management in SB 375.

G29. Continue to reduce permitting barriers ("cut the green tape") for nature-based solutions and streamline existing programs to encourage cross agency and media innovation. These efforts should be informed by and meet the needs of diverse stakeholders including California's Native American communities.

G30. Streamline reporting for the Irrigated Lands Regulatory Program and other environmental compliance requirements to incentivize implementation of healthy soil management and biodiversity practices (e.g. riparian planting).

G31. Consolidate mitigation requirements through the Department of Conservation for any state required agricultural mitigation, building on their administration of HSRA's Agricultural Lands Mitigation Program.

G32. Coordinate all relevant vegetation treatment permits under the CAL VTP including permits from WaterBoards, CDFW, and any other relevant agencies or departments to ensure wildfire resilient activities have an ecologically sound and efficient path to environmental oversight.

G33. Explore a regulatory process that combines all relevant permit processes (e.g., Water, Coastal, and Fish and Wildlife permits) into a single application to promote nature-based solution projects.

G34. The Department of Fish and Wildlife should continue to explore and advance options for permitting large-scale restoration projects by means of a combined approach to a Section 2081 (a) take authorization under the California Endangered Species Act and a lake and streambed alteration agreement authorization pursuant to Section 1600, et seq and look for opportunities to ensure consistency with the SWRCB's General Order.

G35. Shorten permitting timelines, lower permitting costs, and focus on better ecological outcomes.

G36. Simplify the permitting process for small-scale restoration projects.

G37. Provide an avenue for restoration projects within marine protected areas projects and nature-based solutions.

G38. Accelerate state permitting of projects that protect and enhance fish and wildlife and water supply reliability and support the development of expedited and cost-effective permitting mechanisms for common types of restoration and enhancement projects.

G39. Clarify and streamline the regulatory and jurisdiction issues that California Native American tribes face in cultural burn projects.

G40. Develop permitting pathways for composting operation to address regional and local district barriers to minimize organic waste in landfills and build healthy soils, while ensuring food safety.

G41. Develop tools to assist composters comply with regulations and encourage on-farm composting.

G42. Prioritize agroecological practices in agricultural climate smart land management efforts; maximize climate, public health, and economic benefits to climate vulnerable communities:

G43. Prioritize programs and projects that promote safer, more sustainable pest management practices and tools and reduce the use of harmful pesticides, promote healthy soils, improve water and air quality, and reduce public health impacts. In addition, support strategies that achieve co-benefits of safer, more sustainable pest management practices and the health and preservation of ecosystems.

G44. Prioritize programs and projects with measurable reductions in fertilizer runoff and leaching to reduce groundwater contamination in rural communities.

G45. Prioritize programs and projects that provide co-equal benefits of health and safety improvements for farmworkers exposed to extreme heat, wildfire smoke, dust, harmful pesticides, and other workplace hazards. These programs should be shaped by farmworker priorities and feedback.

G46. Establish terrestrial-freshwater protected areas and management plans at the watershed scale. Conservation planning at the watershed scale will help to ensure that actions can effectively address the stressors that threaten, and protect the natural processes that support ecosystem health and services.

G47. Support policies that expedite the removal of non-functional dams and restore connectivity of inland waters.

G48. Protect, restore, and manage for environmental flows.

G49. Consider establishing a community retrofitting fund to help ensure that all existing development in FHSZs includes (1) ember-resistant vents; (2) fire-resistant roofs; (3) external sprinklers with an independent water source; and (4) irrigated defensible space buffers immediately adjacent to structures of a maximum of 100-feet. Include community scale clean energy microgrids.

G50. Expand the use of state lands for grazing by issuing more grazing permits where consistent with the ecological purposes of those state lands, especially permits explicitly for the reduction of fuel to mitigate the impacts of wildfire.

G51. Strengthen regulatory policies for blue carbon habitats to improve compliance with mitigation requirements ensuring that development activities prioritize avoidance and minimization of adverse impacts to the structure and function of these ecosystems, and where impacts can't be avoided, that ecosystem services and functions are fully replaced, cumulative impacts are evaluated and addressed, and suitable and future habitats are protected.

G52. Incorporate measures in the state's soon-to-be-developed comprehensive kelp restoration and management plan that would protect and enhance the role kelp plays in ameliorating the impacts of climate change. This could include, for example, the establishment of kelp reserves in areas with acute ocean acidification, or the adoption of policies that exclude large-scale industrial kelp harvest and instead prioritize kelp's ability to provide ecosystem and climate services.

G53. Strengthen the regulatory framework for coastal development activities and projects to avoid, minimize, and mitigate impacts to important blue carbon habitats, including upland areas that can accommodate coastal wetland migration. This could include development restrictions, stronger guidance on avoidance of impacts, and

mitigation strategies for the loss of carbon storage in impacted habitats.

G54. Provide incentives for water that is used for the maintenance of urban forests on residential properties.

G55. Protect Bear River Ridge and the Cape Mendocino Grasslands and ensure their continued use as significant culturally and ecologically important lands.

G56. Provide incentives for early adopter farmers with successful biodiversity-based farming systems to do periodic farm tours for their neighboring farmers and the community.

G57. Create a model ordinance for permitting agrivoltaics.

G58. Prevent displacement when implementing nature-based solutions in communities by undertaking affirmative protections and plans to reduce the risk of inadvertently excluding and harming the very residents they intend to benefit.

G59. Reclassify beaver from “destructive” in order to facilitate their reintroduction.

G60. Create a Northern California Land Stewards Network to steward and protect small to medium-sized parcels of land that support California's climate goals.

G61. Develop a new program to incentivize local governments to develop companion Natural and Working Lands Climate Smart Strategies for their jurisdictions modeled after this Strategy.

G62. Call on the Office of the State Architect along with other agency and industry partners to increase nature-based solutions on public school grounds.

G63. Adopt a statewide target of transitioning 30 percent of California's agricultural acreage to organic by 2030.

G64. Modify the Williamson Act to incentivize more systematic conservation activities and best practices as outlined in the Strategy. Consider increasing the tax subventions paid to local government when landowners rank at a minimum level in a continuum of increasing soil organic matter and biodiversity.

G65. Leverage the Williamson Act to offset tax impacts of Williamson Act contracts or otherwise incentivize counties to reinvigorate this program.

G66. Implement a state commitment to provide a quality park space within a 10-minute (¼ mile) walk for all Californians.

G67. Consider revising state laws related to land appraisal by County Assessors so that property owners with trees on their land outside of defensible space requirements that sequester carbon and reduce community temperatures can be “credited” with lower

valuations (and thus property tax obligations).

G68. Develop policies to require baseline and long- and short-term monitoring of specific outcomes, the evaluation of whether projects are producing the expected outcomes, a feedback loop to incorporate that information into future decisions, and clear assignments of responsibilities for implementing agencies to ensure that this report will be a living document that is woven into the state's operations.

G69. To facilitate tracking and measurement, require project/partner data sharing on a set of core indicators, including quantitative carbon outcomes, in addition to relevant process measurements.

G70. Create a permitting pathway to utilize beaver relocation in watersheds where beaver have been extirpated or co-existence strategies have been exhausted.

G71. Support greater enforcement of California State Concurrent Resolution Number 17: Oak Woodlands, which directs state agencies with responsibility for land use planning and the management of native oak woodlands to preserve and protect them to the maximum extent feasible or to provide for the replacement and long-term survival of plantings where oaks are removed.

G72. Improve land use planning and decision-making to avoid loss of open space and greenfields and to avoid developing in high-climate-risk areas.

G73. Implement and enforce a no net loss policy for interior wetlands. In addition, ensure compliance with existing local, state and federal wetland protections and regulations.

G74. Implement a no net loss state policy for grasslands that provide important climate resilience and ecological value. The State should identify areas for protection by easements or public acquisition from willing sellers to reduce land use conversion on ecologically valuable grasslands.

G75. Restore riparian forest ecosystems by establishing groundwater management criteria that are protective of groundwater-dependent riparian forests under SGMA in our working landscapes. In natural landscapes, introduce permitting rules, such as density rules and stream setbacks, to help ensure forests have enough water to make it through dry summers and drought periods.

G76. Explore policy opportunities to reduce the loss of eelgrass, such as:

- a. Update the California Eelgrass Mitigation Policy (CEMP).
- b. Ensure consistent application of the CEMP by agencies and Coastal Development Permit applicants.
- c. Produce a CEMP Implementation Guide for agency staff. The Guide would enhance the ability of agencies to ensure the CEMP is robustly implemented

when reviewing permit applications and in communications with applicants as they develop their environmental documents required under CEQA.

- d. Produce a checklist for permit applicants proposing new or continued mariculture, dredging, or dock-building projects. The checklist would help ensure clarity and consistent application of CEMP guidelines and state requirements for consultants as well as individual project applicants.

G77. Increase urban agriculture through amending agriculture zoning ordinances to allow potential, small organic and regenerative farmers to access associated benefits.

G79. Develop policies to advance Biomass Carbon Removal and Storage (BiCRS) – i.e., the permanent sequestration of biogenic CO₂ from natural and working lands – as a climate solution in California to support the achievement of net-zero and net-negative GHG emissions goals.