



August 3, 2016

Priscilla Martinez-Velez
Division of Transportation Planning, MS-32
California Department of Transportation
P.O. Box 942874
Sacramento, CA 94274-0001

Re: Comments on Draft California Transportation Plan and Regional Transportation Plan Guidelines

Dear Ms. Martinez-Velez:

We are writing on behalf of The Nature Conservancy (TNC) and Sequoia Riverlands Trust (SRT) to comment on the Draft California Transportation Plan (CTP) and Regional Transportation Plan (RTP) Guidelines. TNC is a global nonprofit organization dedicated to conserving the lands and waters on which all life depends. With over 100,000 California members, TNC seeks to achieve its mission through science-based planning and implementation of conservation strategies. SRT is a regional, accredited land trust that conserves habitat and farmland in the Southern Sierra and Southern San Joaquin Valley. To support conservation, compact growth and healthier communities, SRT was an active stakeholder in the development of its region's first Sustainable Communities Strategies (SCSs). TNC and SRT appreciate the California Transportation Commission's (CTC's) hard work on the Draft CTP and RTP Guidelines and we thank you for the opportunity to offer suggestions for their improvement.

Introduction

We strongly support SB 375's stated goal of reducing per capita greenhouse gas (GHG) emissions through "changed land use and improved transportation,"¹ and we believe that

¹ 2008 Cal. Stat. Ch. 728, § 1(c).

conservation of natural and working lands can help meet this goal. A recent study from American Farmland Trust, for example, found that reducing California's rate of farmland conversion by half within a decade "would avoid the emission of a cumulative total of 55 million metric tons of greenhouse gases, equivalent to avoiding emissions from more than 129 billion vehicle miles traveled."² Other studies have found that per-acre emissions from rangeland are up to 217 times lower than those from urbanized areas;³ that more compact patterns of development are likely to support lower per household vehicle miles traveled (VMT) in seven of the eight metropolitan planning organization (MPO) regions of the San Joaquin Valley;⁴ and that natural landscapes such as oak woodlands can sequester millions of tons of carbon.⁵

Natural and working lands provide other benefits as well. Eight percent of the U.S. food supply by value is produced in California's Central Valley,⁶ and crop receipts alone bring billions of dollars a year into many MPO regions,⁷ underlining the importance of working landscapes to both food security and job creation. Resource areas and farmland also support groundwater recharge, water treatment and wildlife habitat, make communities more livable, and contribute to public health.⁸

² Shaffer, S. and Thompson, E. 2015. A New Comparison of Greenhouse Gas Emissions from California Agricultural and Urban Land Uses. Retrieved from <https://4aa2dc132bb150caf1aa-7bb737f4349b47aa42dce777a72d5264.ssl.cf5.rackcdn.com/AFTCrop-UrbanGreenhouseGasReport-Feburary2015.Edited-May2015.pdf>.

³ Jackson, L., Haden, Van R., Hollander, A.D., Lee, H., Lubell, M., Mehta, V.K., O'Geen, T., Niles, M., Perlman, J., Purkey, D., Salas, W., Sumner, D., Tomuta, M., Dempsey, M., and Wheeler, S.M. 2012. Adaptation Strategies for Agricultural Sustainability in Yolo County, California. California Energy Commission. Publication number: CEC-500-2012-032. Retrieved from <http://www.energy.ca.gov/2012publications/CEC-500-2012-032/CEC-500-2012-032.pdf>.

⁴ Niemeier, D., Bai, S., and Handy, S. 2011. The impact of residential growth patterns on vehicle travel and pollutant emissions. *The Journal of Transport and Land Use* 4(3): 65-80. Retrieved from <https://www.jtlu.org/index.php/jtlu/article/download/226/192>.

⁵ Gaman, T. 2008. Oaks 2040: Carbon Resources in California Oak Woodlands. (Tables 1 and 2.) Report for the California Oak Foundation. Retrieved from http://www.forestdata.com/oaks2040_carbon.pdf.

⁶ U.S. Geological Survey California Water Science Center. 2013. California's Central Valley. Retrieved from <http://ca.water.usgs.gov/projects/central-valley/about-central-valley.html>.

⁷ California Department of Food and Agriculture. 2015. California Agricultural Production Statistics. Retrieved from <https://www.cdffa.ca.gov/statistics/PDFs/2015Report.pdf>.

⁸ For spatially explicit mapping of some of these benefits across eight of California's MPO regions, see Thorne, J.H., Roth, N.E., Boynton, R.M., and Woodard, N. 2014. The San Joaquin Valley Greenprint State of the Valley Report. Retrieved from <http://www.fresnocog.org/san-joaquin-valley-greenprint-program>. See also Gies, E. 2006. The Health Benefits of Parks: How

In this letter, we offer overarching recommendations, as well as specific comments on portions of the CTP and RTP Guidelines. Our proposed language on best management practices (BMPs) draws on a report commissioned by The Nature Conservancy, entitled Sustainable Communities Strategies and Conservation: Results from the First Round and Policy Recommendations for Future Rounds.⁹ The report reviews each SCS and, based on extensive research and stakeholder input, identifies BMPs to support conservation in future SCSs. We invite you to highlight these BMPs, and to incorporate the report by reference in the CTP, RTP and RTPA Guidelines. To that end, 1) suggested language for the RTP Guidelines is included in the specific recommendations below, 2) sample language, implementation steps and performance measures for use by MPOs are included in Appendix A, and 3) the report itself is included as Appendix B.

Overarching Recommendations

Both TNC and SRT signed on to the Principles to Guide the Update of the RTP Guidelines, and we strongly support the recommendations set forth in that document. We also respectfully recommend the following:

Incorporate Conservation into Transportation Planning and Project Development Early and Robustly

Protecting natural and working lands is a state planning priority, as well as a strategy to achieve other climate and health policy goals. In transportation planning and project development, incorporating conservation early and robustly can yield more effective project delivery, better project outcomes, reduced risk, shortened environmental review, and protection of critical natural resources. We therefore recommend that the CTP and RTP Guidelines reflect the work that transportation interests and research institutions have done on this subject.

Examples of relevant reports include the Federal Highway Administration's Eco-Logical: An Ecosystem Approach to Implementing Infrastructure Projects,¹⁰ and the Transportation

Parks Help Keep Americans and Their Communities Fit and Healthy. Retrieved from http://www.lchc.org/wp-content/uploads/01_LCHC_ParksRec.pdf.

⁹ Livingston, A. 2016. Sustainable Communities Strategies and Conservation: Results from the First Round and Policy Recommendations for Future Rounds. Retrieved from <http://www.southernsierrapartnership.org/scs-policy-report.html>.

¹⁰ U.S. Department of Transportation (Federal Highway Administration). 2006. Eco-Logical: An Ecosystem Approach to Implementing Infrastructure Projects. Retrieved from https://www.environment.fhwa.dot.gov/ecological/eco_index.asp.

Research Board's Practitioner's Guide to the Integrated Ecological Framework, which helps agencies at the state, regional and local levels achieve their project delivery goals and conservation goals.¹¹ Our recommendation is also consistent with provisions in SAFETEA-LU,¹² MAP-21¹³ and the FAST Act¹⁴ requiring early consultation with environmental agencies and stakeholders.

Examples of where this strategy can be incorporated include the following:

- RTP Guidelines Section 2.7: Include in the Transportation Concept Reports integration and alignment with the SWAP, habitat conservation plans and regional greenprints (where applicable).
- RTP Guidelines Section 2.7: Highlight opportunities to develop programmatic mitigation plans as described in Section 1311 of MAP-21 and refined in the FAST Act.
- RTP Guidelines Section 2.8: Add a box in the flowchart to say, *“Interagency coordination begins with state and federal agencies (CDFW, USFWS, Army Corps of Engineers, USEPA, NOAA) on natural resource issues. Consider developing programmatic mitigation plans, habitat conservation plans or Regional Advance Mitigation Plans.”*
- RTP Guidelines Section 4.10 (page 112): Add the California Ocean Protection Council to the list.
- RTP Guidelines Section 4.10 (bottom of p. 111): Add *“The FHWA’s Eco-Logical and Integrated Ecological Framework and the state’s Regional Advance Mitigation Planning model provides a process by which early consultation with resource agencies and conservation non-profit organizations to develop regional greenprints or conservation plans that identify of areas of conservation value can satisfy federal requirements for early consultation and result in benefits for both transportation agencies and environmental protection. Programmatic mitigation plans, Natural Communities Conservation Plans and Habitat Conservation Plans can provide early consultation and identification of natural resources that need to be avoided or minimized in order to*

¹¹ Transportation Research Board. 2014. Practitioner’s Guide to the Integrated Ecological Framework. Retrieved from <http://www.trb.org/Main/Blurbs/169516.aspx>.

¹² Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, 119 Stat. 1144 (2005) (Public Law 109-59).

¹³ Moving Ahead for Progress in the 21st Century Act, 126 Stat. 405 (2012) (Public Law 112-141).

¹⁴ Fixing America’s Surface Transportation Act, 129 Stat. 1312 (2015) (Public Law 114-94).

reduce risk and streamline project delivery,” and add as a best practice SCAG’s recently approved SCS Appendix on Natural and Farm Lands.¹⁵

Ensure Consistency with State Law and Policy

The CTP and RTP Guidelines should go beyond simply requiring compliance with the law by actively incorporating California’s planning priorities and climate, health and equity goals. Along with many other participants in the CTC’s workshop kicking off the Guidelines Update process, we believe that transportation has a tremendous impact on the ability to achieve these goals.

Currently, however, some RTPs include legacy projects that conflict with the state’s climate, conservation, health, equity and affordable housing policies. To avoid this disconnect in the future, we respectfully recommend that the CTP and RTP Guidelines stress the importance of aligning transportation projects and plans with state policy goals.

Executive Order B-30-15

An excellent place to start is Executive Order B-30-15 (EO 30-15),¹⁶ which we are pleased to see is explicitly referenced in the Draft CTP and RTP Guidelines. The Governor’s Office of Planning and Research, in consultation with Caltrans and other state agencies, is developing guidance on implementation of this Executive Order, including direction on prioritizing natural infrastructure in addressing climate impacts. We respectfully recommend that this guidance be incorporated into the final version of the RTP Guidelines or amended into them when complete. In addition, we respectfully recommend expanding the “key language” from EO 30-15 in Section 2.2 of the Draft RTP Guidelines to include the seventh and eighth sections of the Executive Order:

7. *State agencies' planning and investment shall be guided by the following principles:*
 - *Priority should be given to actions that both build climate preparedness and reduce greenhouse gas emissions;*
 - *Where possible, flexible and adaptive approaches should be taken to prepare for uncertain climate impacts;*

¹⁵ See Southern California Association of Governments. 2016. 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (Appendix on Natural and Farmlands). Retrieved from scagrtpsc.net/Documents/2016/final/f2016RTPSCS_NaturalFarmLands.pdf.

¹⁶ California Office of the Governor. Executive Order B-30-15 (2015). Retrieved from <http://gov.ca.gov/news.php?id=18938>.

- *Actions should protect the state's most vulnerable populations; and*
 - *Natural infrastructure solutions should be prioritized.*
8. *The state's Five-Year Infrastructure Plan will take current and future climate change impacts into account in all infrastructure projects.*

Similarly, the “General” subsection of the RTP Checklist in Appendix C (starting on page 201 of the Draft RTP Guidelines) should include the following question: “*How does the RTP and its projects align with the specific principles and direction in Executive Order B -30-15?*”

The RTP Guidelines should also note that natural infrastructure, which ranges from wetland, floodplain and riparian restoration¹⁷ to urban forestry, bioswales and stormwater capture, can help solve transportation infrastructure problems efficiently—and often more cost effectively than new built infrastructure—while minimizing greenhouse gas (GHG) emissions, providing a suite of companion public benefits and enhancing quality of life and property values. Along with urban greening and complete streets, these approaches can bring the cost-effectiveness, efficiency, and multiple-benefit outcomes of natural infrastructure to urban areas where the environmental impacts of transportation investments are most strongly felt.

Safeguarding California Plan

We also recommend that the CTP and RTP Guidelines be harmonized with the Safeguarding California Plan¹⁸ and its companion Safeguarding California Implementation Action Plans.¹⁹ As the most recent articulation of state policy on climate adaptation and resilience addressing the transportation sector, Safeguarding California should be integrated into Section 2.6 of the RTP Guidelines. In addition, the “Consultation/Cooperation” section of the RTP Checklist in Appendix C (starting on page 202 of the RTP Guidelines) should include the following question:

¹⁷ The role of natural infrastructure is currently being explored in a joint demonstration project with Caltrans and TNC in Monterey County. Along with the Association of Monterey Bay Governments and Transportation Agency of Monterey County, Caltrans and TNC are working to investigate sea level rise impacts to Highway 1 and Elkhorn Slough, and to find the best solutions for both transportation infrastructure and ecosystem health.

¹⁸ California Natural Resources Agency. 2016. Safeguarding California: Reducing Climate Risk. Retrieved from resources.ca.gov/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf

¹⁹ California Natural Resources Agency. 2016. Safeguarding California: Implementation Action Plans. Retrieved from <http://resources.ca.gov/docs/climate/safeguarding/Safeguarding%20California-Implementation%20Action%20Plans.pdf>.

“Does the RTP reflect consultation with the Natural Resources Agency on conformity with the relevant provisions in the Safeguarding California plan and its companion Implementation Action Plans?”

AB 498

We further recommend consistency with the state’s policy on wildlife corridors as expressed in AB 498 (Levine).²⁰ This statute articulates a statewide policy of protecting wildlife corridors and habitat strongholds in order to enhance their resilience to climate change, and of encouraging voluntary steps to protect the functioning of wildlife corridors.

By referencing AB 498, the CTP and RTP Guidelines could help knit together local conservation efforts and transportation planning to support habitat connectivity, an ecological function that is particularly damaged by transportation facilities. This revision could also help to create an awareness of habitat connectivity among transportation planners who understand that climate change is a significant threat to biodiversity in California, but are less aware of opportunities to work toward connectivity enhancements that will build resilience in natural systems.

Consistent with AB 498, we recommend that the CTP Guidelines provide guidance on protecting habitat connectivity and wildlife movement to increase safety, reduce animal-vehicle collisions and ensure healthy wildlife populations. Similarly, Chapters 2, 5 and 6 of the RTP Guidelines should emphasize the following approaches:

- Explicitly map habitat connectivity corridors (referencing the Essential Habitat Connectivity Project²¹ and/or regional habitat connectivity plans and projects where applicable, such as those used by SC Wildlands²²);
- Invest in culverts, overpasses, fencing and other transportation project elements to enhance connectivity for wildlife movement and climate adaptation; and
- Ensure consistency with habitat conservation plans, regional greenprints, and other regional conservation plans.

²⁰ AB 498, 2015 Cal. Stat. 625 (codified at Cal. Fish & Game Code §§ 1797.5, 1930, and 1930.5).

²¹ California Department of Fish and Wildlife. 2010. California Essential Habitat Connectivity Project. Retrieved from <https://www.wildlife.ca.gov/conservation/planning/connectivity/CEHC>.

²² See SC Wildlands (<http://www.scwildlands.org/>).

Other Policies and Plans

Other state policies and plans that should be referenced in the CTP and RTP Guidelines include the Draft Environmental Goals and Policy Report (EGPR)²³ and the State Wildlife Action Plan (SWAP).²⁴ The Draft EGPR identifies five elements of the state's strategy for a sustainable future, including stewarding natural and working landscapes and incorporating climate adaptation into plans and investments. The SWAP, updated in 2015, identifies the state's ecoregions and conservation goals and strategies. It also includes companion plans for the transportation and land use sectors, as well as strategies such as Regional Advance Mitigation Planning and Natural Community Conservation Plans that can be incorporated into individual regions' RTPs. To ensure that MPOs can benefit from this guidance, we respectfully recommend that the Draft EGPR and SWAP be integrated into Section 2.6 of the RTP Guidelines.

Specific Recommendations for the Draft CTP and RTP Guidelines

Include Performance Metrics that Measure Impacts to Natural and Working Lands

We recommend that the Draft CTP and RTP Guidelines include performance metrics that measure impacts to natural and working lands so that transportation projects can avoid and minimize these impacts. Transportation systems and facilities are among the biggest threats to the health of ecosystems that sustain life for nature and people. Caltrans and regional transportation agencies should establish performance metrics, such as habitat loss, degradation, and fragmentation; riparian corridors, seeps, and springs impacted; groundwater recharge areas impacted; and wildlife corridors protected or enhanced. These metrics can be used to track progress toward state and national goals.

For the CTP Guidelines, we suggest a recently published Transportation Research Board report that identifies environmental performance measures for state-level transportation planning.²⁵ For the RTP Guidelines, the TNC-commissioned report attached as Appendix B covers a range of conservation-related metrics that MPOs included in their SCSs.²⁶ We respectfully recommend

²³ Governor's Office of Planning and Research. 2015. A Strategy for California at 50 Million: The Governor's Environmental Goals and Policy Report (Draft). Retrieved from https://www.opr.ca.gov/docs/EGPR_Nov_2015.pdf.

²⁴ California Department of Fish and Wildlife. 2015. State Wildlife Action Plan. Retrieved from <https://www.wildlife.ca.gov/SWAP>.

²⁵ Transportation Research Board. 2015. Environmental Performance Measures for State Departments of Transportation. Retrieved from <http://www.trb.org/main/blurbs/173012.aspx>.

²⁶ Livingston, 2016.

that the RTP Guidelines reference the report, and incorporate the following performance measures into Section 6.18:

Category	Metric	Source of Data/Data Needs
Conserving habitat, open space and working lands	Acres of habitat, open space and working lands lost to conversion	California Protected Areas Database (CPAD) and California Conservation Easement Database, various habitat classifications; FMMP
Ensuring habitat connectivity	Percent of corridors with permeable habitat and infrastructure	California Essential Habitat Connectivity Project; Science and Collaboration for Connected Wildlands data, local linkage mapping
Protecting wetlands	Percent of wetland area protected	National Wetlands Inventory, CPAD, Easement data
Sequestering carbon to reduce greenhouse gas emissions	Tons of carbon sequestered or CO ₂ emissions avoided	NRCS Soil Survey, Woods Hole, CPAD, Easement data
Protecting public health	Percentage of population within 1/2 mile of parks or open space	CPAD, U.S. Census Bureau, TPL

We further recommend that performance measures in Section 6.18 be consistent with national goals set forth in the FAST Act²⁷ and state infrastructure planning priorities specified in AB 857 (Wiggins).²⁸

²⁷ See 23 USC § 150(b) (specifying seven national goals for the federal highway program, including “[t]o enhance the performance of the transportation system while protecting and enhancing the natural environment”).

²⁸ See, e.g., Cal. Gov. Code § 65041.1(b) (identifying as a planning priority the need “[t]o protect environmental and agricultural resources by protecting, preserving, and enhancing the state’s most valuable natural resources, including working landscapes such as farm, range, and forest lands, natural lands such as wetlands, watersheds, wildlife habitats, and other wildlands, recreation lands such as parks, trails, greenbelts, and other open space, and landscapes with locally unique features and areas identified by the state as deserving special protection”).

Ensure that Modeling Takes Conservation and Climate Concerns into Account

To facilitate the inclusion of conservation and land use data into transportation models to identify potential impacts on conservation values, we recommend including the following guidance in Section 3.3 of the RTP Guidelines (starting on page 49):

Consider using models to analyze and evaluate the effects of various land use-related transportation scenarios on changes in biological carbon, such as the Climate Action through Conservation model. Include areas identified in the California Protected Areas Database,²⁹ wetlands and water resource areas, habitat connectivity, habitat conservation plans and regional greenprint layers, where available.

Consider using integrated scenario reporting models to measure and report on impacts of different scenarios to key metrics, such as the Urban Footprint model.

We further recommend that Section 6.24 include examples of best practices for visualization and mapping. For example, Urban Footprint can reveal outcomes ranging from household costs, water and energy use, to loss or retention of open space. In the same section, after the third paragraph under “SCS Planning Assumptions,” we recommend the following additional language:

MPOs should incorporate protected areas identified in the California Protected Areas Database (<http://www.calands.org>) and any other natural resource areas and farmland information gathered in order to avoid impacting or fragmenting areas of high conservation value and to reduce risk to project delivery.

In addition, MPOs should make use of models that predict climate impacts like sea level rise, and that estimate changes in carbon stocks from alternative project or land management activities. Recent research shows that changes in land use and management can generate GHG benefits by avoiding and reducing emissions, and by increasing carbon storage. MPOs are encouraged to refer to the Climate Action through Conservation (CATC) report at http://scienceforconservation.org/downloads/climate_action_through_conservation. The model, method and tool presented in this report is usable at the county or regional scale, and can help MPOs to provide a more comprehensive account of their progress toward meeting the state’s GHG reduction goals.

²⁹ GreenInfo Network. 2016. California Protected Areas Database. Retrieved from <http://www.calands.org/>.

Similarly, after the first paragraph under “Climate Change/GHG Emissions” in Section 5.5, we recommend the following additional language:

Agencies that take actions to control GHG emissions by reducing VMT will likely generate additional GHG reductions in the biological carbon pool. By modeling various scenarios, they will be able to estimate and take full credit for these additional GHG benefits.

The benefits of land use and transportation patterns that avoid and reduce GHG emissions from the biological carbon pool—and the value of models that accurately quantify these benefits—could also be noted in Sections 3.5 (under “Regional Economic & Land Use Model”) and 6.1 (in element 8 of the SCS components listed on page 134).

Incorporate a Regional Open Space and Conservation Area Framework

We recommend the following changes to Section 6.24 of the RTP Guidelines, starting on page 179 (additions in italics):³⁰

As a best practice to comply with the requirements of CA Government Code 65080 (b)(2)(B), MPOs, based on locally and regionally significant considerations, ~~may~~ *are strongly encouraged to develop a ~~regional conservation framework~~ Regional Open Space and Conservation Area Framework* that identifies and considers “resource areas” and “farmland” as defined in Government Code Section 65080.01(a) and (b). To demonstrate consideration of resource areas and farmland, the SCS could 1) identify regional priority areas for conservation and mitigation efforts, based upon existing publicly available information and developed in consultation with the appropriate resource agencies including cities and counties, 2) *adopt a land use forecast structured around spatially explicit, complementary networks of priority conservation areas and priority development areas, and 3) commit discretionary funding for conservation and development incentives for such areas. For an example of this approach, see Plan Bay Area (<http://planbayarea.org/the-plan/adopted-plan-bay-area-2013.html>).*

Another way to demonstrate consideration of resource areas and farmland is to 1) incorporate layers representing all categories of “resource areas” listed in Government Code Section 65080.01(a) and (b), as well as other key resources identified in HCPs, NCCPs and input from leading conservation organizations, and 2) treat these layers as

³⁰ Given their importance to developing a regional economic and land use model, these practices should also be incorporated by reference into Section 3.3.

constraints to development in land use scenarios and the adopted land use forecast. This low-cost, straightforward approach was pioneered by the Santa Barbara County Association of Governments (using a “Regional Greenprint” of GIS layers representing habitat, agricultural resources and other open space areas), and the Tulare County Association of Governments (using layers from the San Joaquin Valley Greenprint). For more information, see Santa Barbara’s 2040 Regional Transportation Plan and Sustainable Communities Strategy (<http://www.sbcaq.org/rtp.html>) and the 2014-2040 Regional Transportation Plan & Sustainable Communities Strategy for Tulare County (<http://www.tularecoq.org/rtp2014/>).

To support and expand upon these practices, MPOs are strongly encouraged to help local jurisdictions integrate HCPs, NCCPs and other conservation plans into their general plans, and incorporate the results into future land use forecasts. Prior to preparing its 2012 MTP/SCS, for example, the Butte County Association of Governments (BCAG) helped four of six local jurisdictions update their general plans to be consistent with one another, and with the Butte Regional Conservation Plan (BRCP) then in development. Based in part on these plans, its 2012 land use forecast directs most new growth into a network of Urban Permit Areas designed to minimize conflict with the BRCP. Thus, by working on a voluntary basis with those who have land use planning authority, BCAG was able to lay the groundwork for a land use pattern that will help protect some of its region’s most important habitat and open space. For more information, see Butte County Metropolitan Transportation Plan & Sustainable Communities Strategy. (<http://www.bcag.org/Planning/RTP--SCS/index.html>).

The following represent ~~additional best practice~~ examples of how MPOs have conducted regional conservation planning efforts focusing on resource areas and farmland:

North County Multiple Habitat Conservation Program (MHCP) coordinated by SANDAG:

<http://www.sandag.org/index.asp?projectid=97&fuseaction=projects.detail>

Rural-Urban Connections Strategy (RUCS) developed by SACOG:

<http://www.sacog.org/rucs/>

Natural and Farm Lands Appendix prepared by SCAG for its 2016 RTP/SCS:

scaqrtpscs.net/Documents/2016/final/f2016RTPSCS_NaturalFarmLands.pdf

Regional Greenprint Analysis prepared by AMBAG for its 2014 MTP/SCS:
<http://www.ambag.org/programs-services/planning/metro-transport-plan>

San Joaquin Valley Greenprint, sponsored by Fresno COG:
www.fresnocoq.org/san-joaquin-valley-greenprint-program

To realize the benefits of natural resource assessments like these, it is essential that they be thoroughly incorporated into land use scenarios and transportation project selection. In addition to the approaches taken by the Bay Area, Santa Barbara County, Tulare County and Butte County, MPOs are encouraged to follow an approach set forth in SLOCOG's first RTP/SCS: "Give conservation plans as much weight as general plans when planning transportation investments." For more information, see <http://www.slocoq.org/programs/regional-planning/2014-rtpscs>.

The following ~~represent possible~~ sources of information ~~to~~ can assist MPOs in gathering and considering the best practically available scientific information regarding resource areas and farmland:

Survey of conservation best practices in SCSs, with sample language, implementation steps and suggested performance measures for specific practices:

Sustainable Communities Strategies and Conservation: Results from the First Round and Policy Recommendations for the Future Round, by Adam Livingston
<http://www.southernsierrapartnership.org/scs-policy-report.html>

Natural Community Conservation and Habitat Conservation Planning Information:

CA Department of Fish and Game Natural Community Conservation Planning information
<http://www.dfg.ca.gov/habcon/nccp/>

...

Encourage Comprehensive Regional Mitigation

Mitigating the impacts of transportation projects on natural and working lands is both a legal requirement and a significant expenditure of taxpayer funds. To help MPOs maximize the predictability, connectivity and long-term effectiveness of mitigation investments, we recommend the following changes to Section 5.5 of the RTP Guidelines, starting with the final paragraph on page 124 (additions in italics):

Voluntarily and thoroughly addressing all of the applicable topics noted above during the preparation of the RTP would be considered as a best practice. As a best practice to comply with the requirements of CA Government Code Section 65080(b)(2)(b) as well as Title 23 CFR Parts 450.3224(f)(710), 450.3224(g)(1) and (2), MPOs ~~may~~ *are strongly encouraged to* 1) develop a Regional Open Space and Conservation Area Framework that identifies and considers “resource areas” and “farmland” defined in Government Code Section 65080.01(a) and (b), *as well as other key resources identified in HCPs, NCCPs and input from leading conservation organizations,* 2) *consider developing an NCCP to aid in streamlining project permitting and delivery,* 3) *use the Regional Open Space and Conservation Area Framework to set priorities for a regional advance mitigation planning (RAMP) program or a programmatic mitigation plan as described in MAP-21, and* 4) *require, as a condition of transportation funding and consistency with the SCS, that projects provide mitigation according to these priorities, including any advance acquisitions and restoration work necessary to avoid temporal gaps in habitat function. Any conservation easements acquired as part of this program should be held by an organization whose mission includes the acquisition and stewardship of conservation easements, such as a Land Trust Alliance-accredited land trust.*

An excellent example of this approach is San Diego’s Environmental Mitigation Program (EMP), which is funded through the region’s TransNet sales tax measure. The EMP directs mitigation resources to habitat identified in adopted conservation plans, leverages funding from conservation partners, and saves additional money by acquiring habitat “early, at lower prices, and in larger parcels” (<http://www.keepsandiegomoving.com/EMP/EMP-intro.aspx>). For more information, please see *San Diego Forward: The Regional Plan* (<http://www.sdforward.com/>).

Encourage Climate Adaptation

We are pleased to see the attention given to climate change in the Draft RTP Guidelines. In addition to incorporating EO-30-15 and other state climate policies as discussed above, we

respectfully recommend that the RTP Guidelines incorporate specific guidance on climate adaptation and suggest models that can predict future conditions, especially sea level rise and increased flooding. Built infrastructure should be planned, designed and constructed to be resilient to climate change impacts for the full use life of the project and to at least 2050 for especially durable projects. Further guidance on scenarios and timeframes will be provided by OPR and should be amended into the RTP Guidelines (and if possible, individual RTPs) at that time. In addition, “full-life cycle accounting” should include an economic estimate of all of the benefits of a project, including those typically considered “non-market.” Strategic retreat, or relocating facilities out of harm’s way if threatened by future inundation due to sea level rise, should be one alternative that is considered where its use is possible. As a step in this direction, we respectfully recommend that the third sentence in the second paragraph under “Context Sensitive Solutions” in Section 2.7 be changed as follows (new text in italics):

When considering the context, issues such as funding feasibility, maintenance feasibility, needs of all users, needs of the community, traffic demand, impact on alternate routes, impact on safety, *predicted climate change impacts* and relevant laws and regulations should be addressed.

Similarly, at the end of the second paragraph under Wetlands in Section 5.5, please add “*Strategic retreat or relocation shall be one alternative to be considered.*”

Expand Key Environmental Considerations for Best Practices

Finally, after the subsection on “Threatened and Endangered Species” in Section 5.5., we respectfully recommend insertion of the following language on habitat connectivity:

Section 1797.5 of the California Fish and Game Code expresses the State’s policy to promote the voluntary protection of wildlife corridors and habitat strongholds in order to enhance the resiliency of wildlife and their habitats to climate change, protect biodiversity, and allow for the migration and movement of species by providing connectivity between habitat lands. In order to further these goals, it is the policy of the State to encourage voluntary steps to protect the functioning of wildlife corridors through various means, such as the acquisition or protection of wildlife corridors as open space through conservation easements; the installation of wildlife-friendly or directional fencing; siting of mitigation and conservation banks in areas that provide habitat connectivity for affected fish and wildlife resources; and the provision of roadway undercrossings, overpasses, oversized culverts, or bridges to allow for fish passage and the movement of wildlife between habitat areas. Transportation facilities should be

designed, engineered, planned, and programmed with habitat connectivity in mind in keeping with these State goals in order to maintain healthy ecological function and climate change resiliency in and between habitat areas.

Conclusion

We appreciate the CTC's work on the Draft CTP and RTP Guidelines and are grateful for the opportunity to comment. Please feel free to contact us if you have any questions.

Sincerely,

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