

Draft Regional Advanced Mitigation Program Policy Framework

Regional Advanced Mitigation Program Advisory Technical Group (RAMP-ATG)

February 18, 2022

Contents

Background 1

Policy Framework for Advance Mitigation..... 2

 Regional Advance Mitigation Program & Advisory Task Group 2

 Regional Policy Foundation: Connect SoCal Goals and PEIR Requirements..... 3

 Connect SoCal Goals 3

 Natural and Farm Lands Conservation and Climate Resolution 21-628-1..... 4

 PEIR Mitigation Measures 5

 RAMP Opportunity & Challenge Areas 6

 Goals for Regional Advanced Mitigation 7

Data Needs & Resources to Support RAMP..... 8

 Science Based Approach 8

 Data Policies..... 8

 Governance Standards..... 9

 User Guidelines 9

 Data Selection Criteria: 10

 Data Parameter Requirements 11

Appendix A - Established RAMPs in SCAG Region 13

Background

As the SCAG region's population and economy continue to grow, new housing units, employment facilities, water, energy, and transportation infrastructure are needed to accommodate the nearly two million residents that are forecasted to call Southern California home by 2050.¹ With an over 10 million additional jobs forecast in the region by 2050², strategies that expedite transportation infrastructure delivery are critical to keep people and goods moving.

Framing this regional growth are the diverse natural and agricultural landscapes of Southern California. These invaluable assets ensure a robust economy, clean drinking water, improved air quality, and essential recreation activities for all of the region's residents. In addition to desert, mountain and coastal habitats, some of the highest concentrations of native plant and animal species on the planet are found within our region. Recognized as part of the California Floristic Province, Southern California is one of the planet's top twenty-five biodiversity hot spots.³

Given the sensitive natural habitats of the Southern California region, many essential development projects will have environmental impacts that require compensatory mitigation due to federal mandates under the Clean Water Act, Endangered Species Act, Federal Wild and Scenic Rivers Act, as well as state requirements under the California Environmental Quality Act, California Endangered Species Act, California Wild and Scenic Rivers Act, and the Habitat Restoration and Enhancement Act.

Addressing environmental impacts can be accomplished in a number of ways, as defined in Title 14, Section 15370 of the California Code of Regulations (commonly known as the "CEQA Guidelines"):

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action;
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- (e) Compensating for the impact by replacing or providing substitute resources or environment.

Mitigating environmental impacts can often be expensive and increase total project costs significantly. Alongside mitigation, uncertainty in timing can also contribute to significant project costs. For transportation investments broadly, "the permitting process under federal and state legislation constitutes a major component of the project development and delivery process for transportation

¹ *Connect SoCal 2024 Preliminary Regional and County Growth Projections* retrieved from <https://scag.ca.gov/sites/main/files/file-attachments/rc020322fullpacket.pdf?1643342099>.

² *Ibid*

³ Myers, N., R.A. Mittermeier, C.G. Mittermeier, G.A.B. da Fonseca, J. Kent. (2000). Biodiversity Hotspots for Conservation Priorities

projects. Over \$3.3 billion is spent annually on compensatory mitigation under the Clean Water Act (CWA) and Endangered Species Act programs.”⁴

Traditionally, environmental mitigation has been handled by lead agencies during the CEQA process on a project-by-project basis, “usually near the end of a project’s environmental review...where permitting delays can occur when appropriate mitigation measures cannot be easily identified and agreed upon, and the cost of mitigation often increases between the time the project is planned and funded and the time mitigation land is acquired. As a result, infrastructure agencies end up paying top dollar to satisfy mitigation requirements.”⁵ The practice of identifying mitigation measures at the end of a project’s environmental review often results in delays in project delivery and uncertainty in the development process. This is often due to the costs incurred to conduct biological studies after project plans have been created, especially in instances where impacts are discerned that were not foreseen and mitigation costs increase unexpectedly. A national study identified that nearly two thirds of departments of transportation (DOTs) surveyed had experienced delays from environmental issues, often of 12 months or more.⁶

In California, researchers estimate that mitigation costs for transportation projects initiated between 2014 and 2019 ranged from two percent to twelve percent of total project costs – to a sum of roughly four billion dollars.⁷ While the exact length and causes of delay from environmental review are varied, some reports suggest the current process may add 10 to 15 years to project delivery.⁸ Continued cost escalations over the past two decades have prompted Caltrans to consider strategic planning for consolidated advance mitigation opportunities.

Policy Framework for Advance Mitigation

Regional Advance Mitigation Program & Advisory Task Group

California state law allows agencies to establish voluntary advanced mitigation programs in selected areas, providing an opportunity for infrastructure project leads to identify potential impacts early in the planning stages and work with regulatory agencies to reduce permitting costs, improve certainty, and expedite project delivery.⁹ Regional advance mitigation programs (RAMP) allow state and federal agencies to consider the environmental impacts and mitigation needs of multiple planned infrastructure projects and urban development all at once, and satisfy those mitigation requirements early in the project planning and environmental review process. In cases where compensatory mitigation is needed, advanced mitigation can help agencies purchase larger parcels for mitigation at a lower unit cost to

⁴ Overman, J. H., Storey, B., Kraus, E., Miller, K., Walewski, J., Elgart, Z., & Atkinson, S. (2014). Maximizing mitigation benefits-making a difference with strategic inter-resource agency planning: year one technical report (No. FHWA/TX-13/0-6762-1). Texas. Dept. of Transportation. Research and Technology Implementation Office.

⁵ Ibid

⁶ Ibid

⁷ Sciarra, G. C., Bjorkman, J., Stryjewski, E., & Thorne, J. H. (2017). Mitigating environmental impacts in advance: Evidence of cost and time savings for transportation projects. *Transportation Research Part D: Transport and Environment*, 50, 316-326.

⁸ Sciarra, G. C., Bjorkman, J., Lederman, J., Thorne, J. H., Schlotterbeck, M., & Wachs, M. (2015). Task 2 Report: Setting the Stage for Statewide Advance Mitigation in California.

⁹ Cal. F&G Code sec. 1850 et seq

offset impacts¹⁰. Further, RAMP can result in better collaboration between regulatory and infrastructure agencies, better project delivery, and better mitigation outcomes.¹¹

Regional advance mitigation also presents opportunities to improve quality of life in the region, as it relies on a science-based approach to anticipate and identify mitigation needs for multiple development projects early in the planning process, facilitating the prioritization of sites for conservation and/or restoration with the highest ecological benefits and providing mitigation efficiencies to transportation, land use and other development projects. This approach contrasts with project-by-project mitigation, which “often overlooks regional conservation needs and ecosystem-scale impacts to sensitive species and habitat, thereby missing critical opportunities for efficient, reliable, and biologically relevant mitigation. Additionally, the opportunity for greater benefits to water and air quality and public health are lost.”¹²

There are many established advanced mitigation programs in various locales within the SCAG region, and project applicants in these areas can take advantage of advanced mitigation benefits if they choose. Appendix A of this outline includes a summary of some RAMP programs in the SCAG region. Areas without established programs do not have these efficiencies in the environmental review process. A large percentage of the SCAG region’s land area is not covered by an existing program. As a result, environmental impacts for discretionary projects in these areas would need to be mitigated on a project-by-project basis.

Recognizing the opportunities that a RAMP can present to reduce project costs and improve certainty for project delivery, Connect SoCal and its corresponding Program Environmental Impact Report (PEIR) direct SCAG to collaborate with stakeholders to establish a RAMP initiative to preserve habitat and offset impacts of transportation and other development projects. To help define potential advanced mitigation efforts, the Connect SoCal plan and PEIR also anticipate development of the SoCal Greenprint mapping tool to help municipalities, conservation groups, developers and researchers prioritize lands for conservation based on the best available scientific data.

To increase clarity and further guide this work, SCAG’s Regional Council voted on October 7, 2021 for staff to develop a white paper and work with a Regional Advance Mitigation Planning Advisory Task Group (RAMP-ATG) on establishing a policy framework for advanced mitigation in the SCAG region to ensure the SoCal Greenprint tool is aligned with policy objectives.

Regional Policy Foundation: Connect SoCal Goals and PEIR Requirements

Connect SoCal Goals

As discussed, Connect SoCal expects a RAMP planning initiative to support the establishment or supplement the region’s established advanced mitigation programs, mitigation banks, and other

¹⁰ Sciara, G. C., Bjorkman, J., Stryjewski, E., & Thorne, J. H. (2017). Mitigating environmental impacts in advance: Evidence of cost and time savings for transportation projects. *Transportation Research Part D: Transport and Environment*, 50, 316-326.

¹¹ Overman, J. H., Storey, B., Kraus, E., Miller, K., Walewski, J., Elgart, Z., & Atkinson, S. (2014). Maximizing mitigation benefits-making a difference with strategic inter-resource agency planning: year one technical report (No. FHWA/TX-13/0-6762-1). Texas. Dept. of Transportation. Research and Technology Implementation Office.

¹² Ibid

approaches to more effectively address impacts for projects that support reduction of per-capita vehicle miles traveled. The initiative would also support long term management and stewardship of mitigated properties. SCAG can support partner implementing agencies to establish advanced mitigation programs that reflect local priorities, expand regional growth opportunities, and advance regional conservation goals.

Importantly, use of RAMP is voluntary. Cities, counties, and transportation agencies retain authority for decisions on future development, and there is no obligation for a jurisdiction to change its land use policies or infrastructure priorities to be consistent with a future RAMP. Similarly, project leads do not have to participate in a RAMP and can opt for a project-by-project environmental review process as appropriate.

The RAMP planning initiative is part of SCAG’s comprehensive effort to implement the vision outlined in Connect SoCal to advance the region’s economic vitality, improve mobility options, and grow in a sustainable way that builds healthy and vibrant communities. It is intended to advance several of Connect SoCal’s specified goals, namely to:

- Enhance the preservation, security, and resilience of the regional transportation system;
- Reduce greenhouse gas emissions and improve air quality;
- Support healthy and equitable communities;
- Adapt to a changing climate and support an integrated regional development pattern and transportation network; and
- Promote conservation of natural and agricultural lands and restoration of habitats.¹³

Connect SoCal also includes specific strategies to support implementing the region’s adopted Sustainable Communities Strategy (SCS). Several strategies are directly tied to supporting related greenhouse gas (GHG) reductions while others support the broader Plan goals. RAMP can help implement several “Green Region” SCS strategies, including:

- Preserve, enhance and restore regional wildlife connectivity;
- Reduce consumption of resource areas, including agricultural land; and
- Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration;
- Promote more resource efficient development focused on conservation, recycling and reclamation;
- Identify ways to improve access to public park space.¹⁴

Natural and Farm Lands Conservation and Climate Resolution 21-628-1

Connect SoCal includes a Natural and Farm Lands Conservation Technical Report that outlines an integrated land use and conservation planning approach that seeks to protect the environment and reduce GHG emissions while meeting the needs of current and future populations. Policies in the Technical Report direct SCAG to:

- Promote best practices in advanced mitigation;

¹³ Connect SoCal p. 9

¹⁴ Connect SoCal p. 50

- Facilitate partnerships and collaboration;
- Provide incentives for jurisdictions to work across county lines;
- Expand data sharing amongst partner agencies;
- Align support for local actors with funding opportunities;
- Support innovative land use policies;
- Improve natural corridor connectivity;
- Encourage urban greening and green infrastructure; and
- Connect the benefits of natural lands to public health – including air quality, recreation, and carbon sequestration.¹⁵

Within the Plan, specific next steps are included to further a regional conservation strategy, including development of the SoCal Greenprint regional mapping tool that can help stakeholders identify the areas with the highest potential conservation value and encourage advance mitigation programs.¹⁶

Connect SoCal’s policy goals and next steps related to RAMP were reaffirmed by the Regional Council in Resolution 21-628-1, which was adopted unanimously on January 7, 2021 and recognized a climate emergency in the SCAG region. The Resolution committed SCAG to “develop a regional advanced mitigation program (RAMP) as envisioned in Connect SoCal for regionally significant transportation projects to mitigate environmental impacts.”¹⁷

PEIR Mitigation Measures

Establishing a RAMP planning initiative fulfills required mitigation measures of Connect SoCal’s Program Environmental Impact Report (PEIR), which state that SCAG will support advanced mitigation efforts in the region (SMM AG-2) through the establishment of data tools (i.e. the SoCal Greenprint) that can provide an easily accessible resource to help municipalities, conservation groups, developers and researchers prioritize lands for conservation based on the best available scientific data (SMM BIO-2). As a result, the RAMP initiative is both a project feature (as described above) and part of SCAG’s mitigation measure obligations.

Importantly, these mitigation measure apply only to SCAG. Nothing in the PEIR supersedes or applies to existing regulations pertaining to land use and policies of individual local jurisdictions, who fully retain their local authority to approve, deny or condition projects. Indeed, SCAG has no authority to impose these mitigation measures on jurisdictions; as a result, mitigation measures implemented by local jurisdictions in their own processing of projects are fully subject to a lead agency’s independent discretion. Lead agencies are under no obligation, legal or otherwise, to use measures identified in the PEIR. The determination of significance and identification of appropriate mitigation under the California Environmental Quality Act (CEQA) is solely the responsibility of the lead agency.

The specific PEIR mitigation measures referencing the need to establish a RAMP initiative are:

- *SMM AG-2: SCAG shall develop a Regional Greenprint, which is a strategic web-based conservation tool that provides the best available scientific data and scenario visualizations to help cities, counties and transportation agencies make better land use and transportation*

¹⁵ Connect SoCal Natural and Farm Lands Conservation Technical Report pp. 21-22

¹⁶ Connect SoCal Natural and Farm Lands Conservation Technical Report p. 22

¹⁷ [Resolution 21-628-1](#)

infrastructure decisions and conserve natural and farm lands. SCAG shall use the Greenprint to identify priority conservation areas and work with [County Transportation Commissions] CTCs to develop advanced mitigation programs or include them in future transportation measures by (1) funding pilot programs that encourage advanced mitigation including data and replicable processes, (2) participating in state-level efforts that would support regional advanced mitigation planning in the SCAG region, and (3) supporting the inclusion of advanced mitigation programs at county level transportation measures.

SMM BIO-2: SCAG shall continue to develop a regional conservation strategy in coordination with local jurisdictions and other stakeholders, including the county transportation commissions. The conservation strategy will build upon existing efforts including those at the sub-regional and local levels to identify potential priority conservation areas. SCAG will also collaborate with stakeholders to establish a new Regional Advanced Mitigation Program (RAMP) initiative to preserve habitat. The RAMP would establish and/or supplement regional conservation and mitigation banks and/or other approaches to offset impacts of transportation and other development projects. To assist in defining the RAMP, SCAG shall lead a multi-year effort to SCAG shall develop new regional tools, like the Regional Data Platform and Regional Greenprint that will provide an easily accessible resource to help municipalities, conservation groups, developers and researchers prioritize lands for conservation based on best available scientific data. The Regional Greenprint effort shall also produce a whitepaper on the RAMP initiative, which includes approaches for the RAMP in the SCAG region, needed science and analysis, models, challenges and opportunities and recommendations.

SCAG continues to pursue the development of a regional conservation strategy through regular convenings of its Natural & Working Lands Regional Planning Working Group, and through interviews and other engagements with stakeholders. The RAMP planning initiative is an important element of this strategy and, as guided by the RAMP policy framework, supports the region in achieving Connect SoCal's goals.

RAMP Opportunity & Challenge Areas

To identify opportunities and challenges associated with developing and launching a RAMP planning initiative for the expansive SCAG region, interviews were conducted with local transportation agencies with project mitigation needs, as well as with other stakeholders involved in related programs. These interviews were conducted from April through December 2021 to gather initial feedback on potential program needs and benefits, and are currently ongoing.

Interviewees conveyed that a RAMP planning initiative could help address data gaps and facilitate data sharing between land use authorities and transportation entities. A RAMP planning initiative could also enhance cross-jurisdictional and cross-county collaboration to address mitigation project-by-project and at a county scale. Further, SCAG could foster local action by identifying incentives to spur advanced mitigation, and also provide solutions for reducing project impacts. SCAG could also incorporate an analysis of future mitigation needs and provide a menu of mitigation options and approaches for each county, rather than a one-size-fits-all approach, as specific project needs differ across the region and within each county. Importantly, a RAMP could foster engagement with the California Coastal Commission, US Army Corps of Engineers, and Water Board to incorporate a focus on water resources in addition to biological resources. Overall, transparent engagement with CTCs, partner agencies, utilities, and communities throughout RAMP development would be important for the program's success.

Concerns included that a RAMP could have potential duplication and/or conflicting mitigation efforts between regional, county, and local approaches, and that a RAMP also may have gaps in direct application to local conditions.

In addition to interviewing CTCs across the SCAG region, SCAG staff engaged with other partners experienced in mitigation. These included Caltrans Districts #7 and #8, Brightline West, as well as Land Veritas – the largest mitigation bank in California. Feedback from these entities included that establishment of a RAMP planning initiative could bring private and public entities together towards a common goal and increase public awareness of environmental resources. These organizations also expressed support for a multi-county approach, especially when collaborating across Caltrans Districts for development of multi-species regional plans. They also encouraged development of a credit system that could provide consistency across management of multiple mitigation banks. Finally, they were interested in collaborating on advanced mitigation, specifically multi-agency advance mitigation projects.

Goals for Regional Advanced Mitigation

Considering the potential advantages and concerns for expanding regional advanced mitigation planning in Southern California, a policy framework for advance mitigation positions SCAG to foster collaboration between programs across the region and support local implementing agencies to:

1. Expedite project delivery;
2. Improve predictability for project funding;
3. Examine potential environmental impacts at the early stages of project development, utilizing the SoCal Greenprint tool, to help expedite the CEQA process;
4. Reduce costs, risks, and permitting time for responsible development;
5. Improve and reinforce regulatory agency partnerships;
6. Balance future growth and economic development with conservation and resilience; and
7. Achieve meaningful, regional-scale conservation outcomes.

To implement these goals, SCAG will seek to:

1. Be a resource for local partners to consider actions in a regional context;
2. Focus on the transportation sector, and consider opportunities to expedite and streamline mitigation needs for other sectors including housing, energy and utilities;
3. Identify ways to establish or supplement regional conservation and mitigation banks and other approaches to more effectively address impacts for projects that support reduction of per-capita vehicle miles traveled;
4. Support long term management and stewardship of conserved properties;
5. Pursue a study to assess RAMP governance structures that will complement existing advanced mitigation efforts in the region, fill gaps where programs do not exist, and ascertain best ways to collaborate with partner agencies and permitting entities;
6. Pursue partnerships and collaborative resource development with state agencies and other MPOs to leverage funding and align efforts beyond SCAG's jurisdictional boundaries;
7. Be a data resource with widely accessible data tools to assist in defining a RAMP that can provide the best available scientific data to help municipalities and transportation agencies

- make better land use and transportation infrastructure decisions and conserve natural and farm lands, consistent with Connect SoCal’s PEIR Mitigation Measure AMM AG-2 and SMM BIO-2; and
8. Identify potential partnerships to foster the long-term maintenance of the SoCal Greenprint tool.

These goals and actions are intended to advance policies established in Connect SoCal and support proactive implementation of required mitigation measures in Connect SoCal’s Program Environmental Impact Report (PEIR).

Data Needs & Resources to Support RAMP

Science Based Approach

Utilizing a science-based approach to understand the comprehensive biological and resource needs of a given area to discern potential impacts from development projects at the early planning stages is an essential element of regional advanced mitigation. As shared through interviews with CTCs and other practitioners, data access and sharing is a key benefit of a RAMP planning initiative. As noted by an Federal Highway Administration (FHWA) funded study looking at advanced mitigation nation-wide, “improved environmental information is needed on the front end of the project delivery process. Under the current process, state DOTs retrieve environmental data from a variety of sources and then assess environmental impacts and constraints. A central data clearinghouse—similar to those that MPOs developed in the [US Environmental Protection Agency’s] Eco-Logical grants—could improve assessment processes and mitigation outcomes.”¹⁸

Consistent with Connect SoCal’s PEIR Mitigation Measure AMM AG-2 and SMM BIO-2, SCAG shall develop a web-based SoCal Greenprint tool to assist in defining a RAMP that provides the best available scientific data to help municipalities and transportation agencies make better land use and transportation infrastructure decisions and conserve natural and farm lands. The SoCal Greenprint will provide an easily accessible web mapping resource to help other regional stakeholders as well, including conservation groups, developers, and researchers prioritize lands for conservation. However, the SoCal Greenprint tool, and the data layers within, is not a strategic conservation plan; rather, it is an information resource for partner agencies as well as SCAG to support their conservation planning efforts.

To ensure that data provided through the tool aligns with advanced mitigation opportunities and fulfillment of the Connect SoCal PEIR mitigation measures, establishment of the SoCal Greenprint tool will adhere to the following data policies, governance standards, user guidelines, data selection criteria, and data parameters preceding, during, and subsequent to launch:

Data Policies

1. SCAG will continue to promote data-driven decision making, government transparency, and data as a public engagement tool to accelerate progress toward achieving regional planning goals consistent with policies included in the Agency’s final Future Communities Framework;

¹⁸ Overman, J. H., Storey, B., Kraus, E., Miller, K., Walewski, J., Elgart, Z., & Atkinson, S. (2014). Maximizing mitigation benefits-making a difference with strategic inter-resource agency planning: year one technical report (No. FHWA/TX-13/0-6762-1). Texas. Dept. of Transportation. Research and Technology Implementation Office.

2. Data included in the SoCal Greenprint tool must be publicly available, meaning that existing datasets are available online or can be accessed if requested and/or licensed;
3. Data available through the SoCal Greenprint tool will not be identified, qualified, or defined as constraints on future development or growth, or in any way endorsed by the regional council as official policy of the agency;
4. Publicly available data to be made accessible through the SoCal Greenprint are not adopted by SCAG and are not an expression of regional policy;
5. The SoCal Greenprint will utilize the best available scientific data and will be vetted for inclusion by a selection of scientists across the region with regional knowledge and expertise;
6. Scientists providing vetting will be drawn principally from regional colleges and universities, public agencies, and non-governmental organizations for their expertise in natural science, climate science, energy resources, and water resources;
7. A timeline and process for periodically updating datasets will be established to ensure continuous use of the best available scientific data;
8. SCAG will seek feedback broadly on all proposed data layers for inclusion in the tool to identify, investigate, and address valid data security concerns;
9. Data elements will be regionally comprehensive to the extent feasible, and data depicted will not be altered from their original source;
10. Consistent with policies included in SCAG's final Future Communities Framework, SCAG will continue to promote data-driven decision making, government transparency, and data as a public engagement tool to accelerate progress toward achieving regional planning goals;
11. SCAG will endeavor to increase the availability of civic data and information to reduce costs and increase the efficiency of public services; and
12. SCAG will support development and use of data tools to increase opportunities for public engagement and advocacy to inform local and regional policy.

Governance Standards

1. To convey limitations and foster its proper use as well as emphasize to users that the SoCal Greenprint tool is a non-regulatory tool with no legal effect on land-use decisions made by local agencies or property owners, the final, publicly available version of the tool will include a "pop-up screen" displaying disclosure language and will require user acknowledgment of the data's limitations; and
2. Prior to using the tool, users will be required to acknowledge and agree to the terms of use, containing the aforementioned disclosures and data limitations, through a "clickwrap" statement that is reasonably and prominently visible to all users. This will require the active, affirmative acknowledgement of each user; and will be written to be easily understood by the average user.

User Guidelines

1. The SoCal Greenprint will be web-based and easily accessible; and
2. The SoCal Greenprint will help identify potential priority conservation areas based on user needs using the best available scientific data to support decision making for municipalities, transportation agencies, conservation groups, developers, and researchers.

Data Selection Criteria:

1. SCAG staff will prioritize selection of data accessible through the tool by rigorously applying the foregoing data policies, governance standards, and user guidelines;
2. SCAG staff shall explicitly instruct scientists providing vetting to identify data that supports regional advance mitigation planning for cities, counties and transportation agencies as the highest priority for inclusion in the tool;
3. SCAG staff shall actively engage with local partners through an open and transparent process and in consultation with established Regional Planning Working Groups, the Technical Working Group, as well as other strategic advisors representing key users to help inform data selection ensuring that the SoCal Greenprint tool can support decision making for municipalities, transportation agencies, conservation groups, developers, and researchers as required by Connect SoCal's PEIR mitigation measure;
4. Data will be organized in seven thematic areas, which are aligned with feedback from stakeholders and based on local planning needs in support of RAMP:
 - a. Agriculture and Working Lands;
 - b. Built Environment;
 - c. Environmental Justice, Equity and Inclusion;
 - d. Habitat and Biodiversity;
 - e. Vulnerabilities and Resilience;
 - f. Water Resources;
 - g. Context;
5. Through outreach conducted with municipalities, transportation agencies, conservation groups, developers, and researchers, the following data topics have been identified as valuable for land use and transportation infrastructure decisions as well as conserving natural and farm lands, and are listed under each thematic area:
 - a. Agriculture and Working Lands:
 - i. Prime agricultural land, Williamson Act contracts, soil ratings, irrigation , groundwater recharge areas for agricultural land;
 - b. Built Environment:
 - i. Impervious surfaces, vehicle miles traveled (VMT), light pollution, noise, public transit facilities, sewer network, airports, entitlements, clusters of parcels meeting CEQA streamlining definitions;
 - c. Environmental Justice, Equity and Inclusion:
 - i. Gentrification and displacement, historic redlining areas, tribal nations, affordable housing opportunity areas, park access equity, sea level rise impact areas, tsunami inundation zones;
 - d. Habitat and Biodiversity:
 - i. Habitat connectivity (including resilience considerations), fish passage barriers, soil/above ground/wildland carbon production, species biodiversity, species requiring mitigation, areas with least conflict for solar energy development, existing conservation plans;
 - e. Vulnerabilities and Resilience:
 - i. Urban heat islands, earthquake hazard zones, earthquake shaking potential, fire hazard severity zones and risks to communities, historic wildlife perimeters,

- landslide zones, liquefaction zones, projected high heat days, sea level rise impact areas and vulnerabilities;
- f. Water Resources:
 - i. Water districts, altered streams, water quality monitoring sites, groundwater recharge areas, points of diversion, runoff, wells and change in groundwater levels, water stress, watersheds, water quality index;
- g. Context:
 - i. Land cover, land use, zoning, protected open space areas.
- 6. A timeline and process for periodically updating data sets will be established to ensure continuous use of the best available scientific data.

Data Parameter Requirements

Consistent with SCAG's past and current practice, all data layers included in the SoCal Greenprint will feature individual background information on methods, limitations, sourcing, as well as guidance on their proper use, including:

1. The SoCal Greenprint shall feature a glossary and methods section that will provide full transparency to users on data elements featured, and will include:
 - a. Narrative definitions that cite the data sources, explain the data in accurate and user-friendly terms, and offer guidance on how the information can be used;
 - b. A description of the methodology, reporting framework, and processing methods used to develop the data;
 - c. Dataset names and URLs of original data sources;
 - d. Data creation date and anticipated update schedules;
 - e. Geographic constraints identifying the geographic unit of accuracy for the dataset. In some instances, data is accurate at larger areas but is not accurate when zoomed in to a smaller geography. For these instances, the minimum reporting size, or minimum level of geographic accuracy, will be displayed alongside the glossary entry (note that this reporting threshold will be used in the tool to hide reporting for measures that are not precise enough for a given area of interest report);
2. Layers will be consolidated in a single database for download and the database will include metadata consistent with the Geospatial Metadata Standards and Guidelines established by the Federal Geographic Data Committee (FGDC):
 - a. Identification information (originator, publication date, title, abstract, purpose, time period for content, currentness, progress, maintenance, etc.);
 - b. Data quality information (attribute accuracy, completeness, positional accuracy, etc.);
 - c. Spatial data organization information (indirect spatial reference for locating data without using coordinates);
 - d. Spatial reference information (geographic coordinate system, latitude and longitude, etc.);
 - e. Entity and attribute information (detailed description of dataset, overview description, attribute domain values, etc.);
 - f. Distribution information (contact information for the individual or organization that distributes the data, a statement of liability assumed by the distributing individual or organization); and

- g. Metadata reference information (date metadata was written, contact information for the metadata author, metadata standard, metadata access constraints, metadata use constraints).

Appendix A - Established RAMPs in SCAG Region

Mitigation Banks

A conservation or mitigation bank is privately or publicly owned land managed for its natural resource values. In exchange for permanently protecting, managing, and monitoring the land, the bank sponsor is allowed to sell or transfer habitat credits to permittees who need to satisfy legal requirements and compensate for the environmental impacts of developmental projects ([CDFW](#)). There are several mitigation banks in the SCAG region:

I. Soquel Canyon Mitigation Bank, City of Chino Hills

The Soquel Canyon Mitigation Bank, an over 300-acre property located predominantly within the City of Chino Hills, San Bernardino County and includes a few acres located in Orange County. The bank is owned by Land Veritas, a California-based mitigation bank owner. The southern boundary of the bank, the Chino Hills State Park, is an open space area that straddles the junction of San Bernardino, Orange, Riverside and Los Angeles Counties and is a critical link in the Puente-Chino Hills biological corridor.¹⁹

II. Peterson Ranch Mitigation Bank, Los Angeles County

The Petersen Ranch Mitigation Bank, covering over 4,000 acres within the boundaries of the proposed San Andreas Rift Zone Significant Ecological Area in Los Angeles County, is the largest bank in California and one of the largest banks in the United States. The bank is owned by Land Veritas and offers compensatory mitigation across a large part of Southern California.²⁰

III. Santa Paula Creek Mitigation Bank, Ventura County

The Santa Paula Creek Mitigation Bank includes over 200 acres across Northern Ventura and Los Angeles counties and was the first mitigation bank of its kind in the area, established in 2011. The bank's service area covers the combined watersheds of the Santa Clara and Ventura Rivers. Property was previously owned by Santa Paula Water Works LTD and then purchased by SPC Environmental Holdings, Inc.²¹

IV. Chiquita Canyon Conservation Bank, Orange County

The Chiquita Canyon Conservation Bank covers 1,182 acres in Orange County, just east of the City of Mission Viejo. The bank was established in 1996 with Foothill/Eastern Transportation Corridor Agency as its sponsor.²²

V. Barry Jones Wetland Mitigation Bank, Riverside County

The Barry Jones Wetlands Mitigation Bank is located in western Riverside County and incorporates the 33-acre Skunk Hollow Vernal Pool Preserve, the second largest vernal pool in the state, along with 107

¹⁹ Land Veritas, <https://landveritasmitigationbanks.com/soquel.html>

²⁰ Land Veritas, <https://landveritasmitigationbanks.com/petersen.html>

²¹ California Department of Fish and Wildlife, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=180663;https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109831>

²² Federal Regulatory in-lieu Fee and Bank Information Tracking System, https://ribits.ops.usace.army.mil/ords/f?p=107:10::NO::P10_BANK_ID:668

acres of the pool's upland watershed. The bank was established in 1997 and is managed by the Center for Natural Lands Management.²³

VI. Black Mountain Conservation Bank, San Bernardino

The Black Mountain Conservation Bank, located in the western Mojave Desert of San Bernardino County, spans over 1,940 acres. The bank was established in 2018 and is managed by Wildlands, a conservation and mitigation bank.²⁴

VII. Cajon Creek Habitat Conservation Management Area, San Bernardino

The Cajon Creek Conservation Bank was first established in 1996 and was expanded to cover over 1,300 acres in 2017. The bank, managed by Vulcan Materials Company, is located in Cajon Wash and Lytle Creek in San Bernardino County.²⁵

VIII. Mojave Desert Tortoise Conservation Bank, San Bernardino County

The Mojave Desert Tortoise Conservation Bank covers 4,658 acres of preserved habitat and includes 8 sites across San Bernardino County. The bank was authorized in May 2020 and is one of the largest tortoise conservation banks in the state.²⁶

IX. Riverpark Mitigation Bank, Riverside County

Riverpark Mitigation Bank serves western Riverside and portions of San Bernardino Counties and is located at the southern terminus of the California State Water Project that moves water to Southern California from the San Francisco Bay Delta. The bank is sited in one of the priority areas designated by the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP).²⁷

Regional Conservation Plans

Local agencies throughout the region have worked together to form Regional Conservation Plans (RCPs) that can span multiple jurisdictions, recognizing that important habitats do not routinely line up with jurisdictional borders. Additionally, RCPs efficiently address mitigation mandates pursuant to CEQA by anticipating transportation projects and “banking” potentially threatened endangered-species habitats. Multiple Species Habitat Plans (MSHCPs) allow the county, its cities and special districts to more effectively make local land use decisions regarding development, while adhering to state and federal endangered species acts regulations and environmental mandates. Under an MSHCP, wildlife agencies grant authorization for public and private development that is potentially detrimental to individual species, in return for assembling and managing a coordinated Conservation Area. Similar to the MSHCP,

²³ California Department of Fish and Game, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=151451>; McCollum & Sweetwater, Mitigation and Conservation Banks, <https://mccollum.com/mitigation/>

²⁴ Wildlands, <https://www.wildlandsinc.com/banks/black-mountain-conservation-bank-2/>

²⁵ Vulcan Materials Company, <https://westerncsr.vulcanmaterials.com/2019/01/08/protecting-our-endangered-species/>

²⁶ The Mojave Desert Tortoise Conservation Bank, <https://deserttortoisebank.com/>

²⁷ McCollum & Sweetwater, <https://mccollum.com/mitigation/>; Ecosystem Investment Partners, <https://ecosystempartners.com/project/riverpark/>

Natural Communities Conservation Plan/Habitat Conservation Plans (NCCP/HCP) acquire and manage large conservation areas that can be made up of several distinct jurisdictions. An NCCP/HCP takes a broad-based ecosystem approach, focusing on the long-term protection of wildlife and plant species while also allowing for development. There are five established RCPs in the SCAG region:

I. Coachella Valley MSHCP

This plan aims to preserve 240,000 acres of natural habitat and 27 plant and animal species in the Coachella Valley region of Riverside County. Since receiving its state and federal permits in 2008, about 40% of the land (89,000 acres) has been acquired. A major amendment is that includes the entire City of Desert Hot Springs was approved in August 2016.

II. Lower Colorado River MSCP

Established in 2005, this program is a multi-state plan to balance use of the Colorado River's water resources and conservation of native species and their habitats along the lower Colorado River in compliance with the Endangered Species Act. The program area covers over 400 miles of the lower Colorado River across Arizona, Nevada, and California and aims to preserve over 8,100 acres of habitat, produce over 1.2 million native fish, and benefit at least 27 species, most of which are state or federally listed as endangered, threatened, or sensitive.

III. Orange County Central-Coastal NCCP/HCP

Approved in 1996, this plan was one of the first regional HCPs in the country. The planning area covers 208,000 acres, protecting habitats for 39 species, six of which are federally listed endangered species. Participating organizations include seven cities, the County of Orange, Irvine Company, Metropolitan Water District, the Transportation Corridor Agencies and UC Irvine.

IV. OCTA Measure 2 NCCP/HCP

Approved in 2017, this plan protects threatened plant and wildlife species and covers routine maintenance for preserve areas. It is funded by OCTA's Measure M2 Environmental Freeway Mitigation Program. An extension of Measure M (1990), Measure M2 is a voter-approved half-cent sales tax increase to fund transportation improvements. Over thirty years, the Environmental Mitigation Program will allocate about \$300 million to acquire natural lands and fund habitat restoration projects, while enabling a more streamlined approval process for freeway improvement projects. Since the initial funding round in 2010, 1,300 acres of natural lands have been acquired and twelve restoration projects have been funded. The total land in the planning area is 510,000 acres.

V. Western Riverside MSHCP

Half a million acres of land are designated for conservation under this plan, the largest habitat conservation plan in the United States. When the MSHCP was enacted in 2008, nearly 70 percent of the land already had public or quasi-public status. Since then, the Regional Conservation Authority (RCA), the plan's facilitating agency, has been active in acquiring the remaining 153,000 acres. To date, 42 percent of the total land has been acquired.

Regional Conservation Investment Strategies

Established by Assembly Bill 2087, the California Department of Fish and Wildlife created the Regional Conservation Investment Strategy (RCIS) program in 2017 to encourage regional approaches for advance mitigation and conservation. The program is a voluntary, non-regulatory conservation assessment and strategy to benefit species and habitats of concern and to provide a more efficient and effective approaches to mitigation and conservation. An RCIS can be used as the basis for advance mitigation and have the benefit of streamlining. There is one approved RCIS in the SCAG region:

VI. Antelope Valley Regional Conservation Investment Strategy

Approved in 2021 by the California Department of Fish and Wildlife, the Antelope Valley RCIS (AVRCIS) covers over 707,000 acres in northern Los Angeles County. The AVRCIS uses the best available science to identify conservation goals and objectives, conservation actions, habitat enhancement actions, and conservation priorities. It is a voluntary non-regulatory conservation strategy intended to guide conservation investments and advance mitigation, as well as help species and their habitats adapt to climate change and other pressures, in the AVRCIS area.